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Commonwealth of Pennsylvania, County of Schuylkill

Account # 653379
Order # 82836451
Ad Price: 1452.34

LIBERTY PROCESSING & SOILS, LLC
SUITE 401
411 NW PARK AVE. PORTLAND OR 97209

LEGAL NOTICE PURSUANT TO

Being duly sworn according to law deposes and says that (s)he is Billing clerk for The Republican-Herald, owner and publisher of The Republican-Herald, a newspaper of general circulation, established in 1884, published in the city of Pottsville, county and state aforesaid, and that the printed notice or publication hereto attached is exactly as printed in the regular editions of the said newspaper on the following dates:

01/11/2025 01/18/2025 01/25/2025

Affiant further deposes and says that neither the affiant nor The Republican-Herald is interested in the subject matter of the aforesaid notice or advertisement and that all allegations in the foregoing statement as time, place and character or publication are true Michelle Menichetti.

Sworn and subscribed to before me
this 27th day of January A.D., 2025

Danielle Campbell
(Notary Public)

Commonwealth of Pennsylvania - Notary Seal
Danielle Campbell, Notary Public
Lackawanna County
My commission expires December 18, 2027
Commission number 1441244
Member, Pennsylvania Association of Notaries

LEGAL NOTICE

Pursuant to PA Code Title 25, Environmental Protection, Chapter 271.141, notice is hereby given that Liberty Soils, LLC of Portland, OR, has submitted an application to the Pennsylvania Department of Environmental Protection Bureau of Waste Management Northeast Regional Office for a major permit modification for the Liberty Soils Biosolids Management Facility f/k/a Blackwood Farms Biosolids Management Facility.

The Liberty Soils Biosolids Management Facility (facility) is located on a 9.9-acre area within the 1847.6-acre Blackwood, Inc. mine site, which is located in Reilly, Branch and Tremont Townships, Schuylkill County. The facility is permitted to stabilize municipal wastewater treatment plant biosolids by mixing it with quicklime, coal ash and/or lime kiln dust. The facility accepts up to 300 wet tons per day of dewatered biosolids. The end product is a soil-like material that is marketed for use as a soil additive or soil substitute for agricultural use, reclamation of abandoned mine lands, or landfill cover material.

For the permit modification, Liberty Soils, LLC proposes the following:

1. To accept a monthly average of 300 tons per day of biosolids, with a daily maximum of 500 tons per day.
2. To rename the curing building and covered product storage area to Storage Buildings and redefine the function of the Storage Buildings for product curing and storage.

A copy of the application is available for public inspection at the Department of Environmental Protection, Northeast Regional Office, 2 Public Square, Wilkes-Barre, PA between the hours of 8:00 a.m. and 4:00 p.m. Monday through Friday. Fees for copying may be charged by DEP. DEP will accept and consider comments from the public, host municipalities and county during the permit review period. Written comments, objections, or a request for a public hearing or informal conference may be submitted to the Department of Environmental Protection, Northeast Regional Office, 2 Public Square, Wilkes-Barre, PA 18711-0790, for a period of sixty (60) days following the date of this Notice, which will be March 26, 2025 and must include the persons name, address, telephone number and a brief statement as to nature of the objection(s). The host municipalities and county may submit comments to the Department within 60 days of receipt of the application, recommending conditions upon, revisions to and approval or disapproval of the permit, with the specific reasons described in the comments.



Transmitted Via OnBase Electronic Upload & Electronic Mail

January 10, 2025

Roger Bellas
Waste Management Program Manager
DEP Northeast Regional Office
2 Public Square
Wilkes-Barre, PA 18711-0790

Re: PADEP Permit No. 603455
Application for Major Modification
Liberty Soils Biosolids Management Facility

Dear Mr. Bellas:

The enclosed submittal is provided by Liberty Processing & Soils, LLC for the Liberty Soils Biosolids Management Facility, in support of a major modification to the facility's solid waste processing permit.

PURPOSE OF APPLICATION:

The applicant, Liberty Soils, LLC, proposes the following modifications:

1. Accept a monthly average of 300 wet tons of biosolids per receiving day, with a daily maximum of 500 wet tons of biosolids. The current permit allows the facility to accept a daily maximum of 300 wet tons of biosolids. The requested modification allows a daily surge of up to 500 wet tons of biosolids and keeps the monthly average to 300 wet tons of biosolids per receiving day (Monday – Saturday). There will not be an increase in the total annual wet tons of biosolids received.
2. Rename the “curing building” and “covered product storage area” to “Storage Buildings” and redefine the function of the Storage Buildings for product curing and storage.

The application includes the following documents:

GENERAL INFORMATION FORM

Form A	Application for Municipal or Residual Waste Permit
Form B	Professional Certification
Form B1	Application Form Certification
Form D	Environmental Assessment for Municipal and Residual Waste Management Facilities
Form L	Contingency Plan for Emergency Procedures
Form MRW-C	Compliance History
Form P	Incinerators and Other Processing Facilities

PROOF OF PUBLIC NOTICE:

Proofs of publication/public notice as required by §271.141 will be provided to DEP when all proofs have been received.

Liberty Soils has received a letter of support for the permit modification from the host municipality, Reilly Township. A copy is attached.

PERMIT FEE:

The application fee of \$700.00 will be submitted via PADEP's OnBase Electronic Forms Upload system.

If you have any questions or comments, please contact me via email: shrywnak@third-oak.com.

Sincerely,



Sarah Hrywnak
THIRD OAK, INC.
LIBERTY SOILS, LLC

cc: Christian Cochran, P.E., Equilibrium
John Battaglia, P.E., EnSol, Inc.
Kristin Price, EnSol, Inc.
Matthew Zehring, Third Oak, Inc.

Enclosures



Reilly Township
Spruce Street, PO Box 1
Branchdale, PA 17923

December 18, 2024

Re: Letter of Support for Liberty Soils Permit Modification

To Whom It May Concern:

Reilly Township ("Reilly") is the host community of Liberty Soils, LLC ("Liberty"), an Exceptional Quality biosolids processing facility.

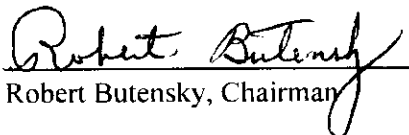
Liberty is submitting a permit modification request to Pennsylvania Department of Environmental Protection ("PA DEP"). Liberty is requesting a modification to the methodology used to calculate its maximum biosolids processing capacity.

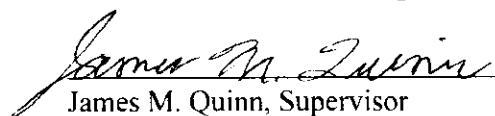
Reilly is aware that Liberty intends to submit the permit modification application to the PA DEP for a Major Modification of Solid Waste Permit No. 603455 to modify Liberty's daily biosolids processing volume from a *maximum of 300 wet tons per day* to an *average of 300 wet tons per day averaged over a month, but no more than 500 tons per day*. The biosolids receiving days will remain as Monday through Saturday.

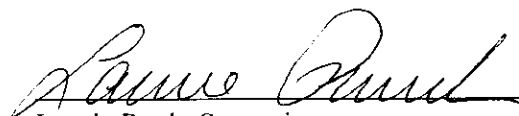
Upon PA DEP permit modification approval, Liberty will provide a biosolids tonnage report to the Township at the end of each month.

This letter memorializes Reilly's support for Liberty's desired permit modification and confirms that Reilly has no objection to the proposed permit modification.

Thank you,


Robert Butensky, Chairman


James M. Quinn, Supervisor


Laurie Ruch, Supervisor

**Major Permit Modification
PADEP Permit No. 603455**

for:

**Liberty Soils Biosolids Management Facility
500 Blackwood Road
Tremont, PA 17981**

prepared for:

**Liberty Soils, LLC
411 NW Park Avenue, Suite 401
Portland, OR 97209**

prepared by:



ENGINEERING +
ENVIRONMENTAL

EnSol, Inc.
3000 Alt. Blvd.,
Grand Island, NY 14072
716.285.3920

ensolinc.com

January 9, 2025

PN 040-A0013

Liberty Soils, LLC
Major Permit Modification
PADEP Permit No. 603455
January 9, 2025

COVER LETTER

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Application Part 1

GENERAL INFORMATION FORM

- Form A** Application for Municipal or Residual Waste Permit
Form B Professional Certification
Form B1 Application Form Certification

Application Part 2

- Form D** Environmental Assessment for Municipal and Residual Waste
Management Facilities

Application Part 3

- Form L** Contingency Plan for Emergency Procedures
Preparedness, Prevention, and Contingency (PPC) Plan
Form MRW-C Identification of Interests & Compliance History

Application Part 4

- Form P** Incinerators and Other Processing Facilities
Operations and Maintenance Manual

GENERAL INFORMATION FORM – AUTHORIZATION APPLICATION

Before completing this General Information Form (GIF), read the step-by-step instructions provided in this application package. This form is used by the Department of Environmental Protection (DEP) to inform our programs regarding what other DEP permits or authorizations may be needed for the proposed project or activity. This version of the General Information Form (GIF) must be completed and returned with any program-specific application being submitted to the DEP.

Related ID#s (If Known)		DEP USE ONLY
Client ID#	372094	Date Received & General Notes
Site ID#	780639	
Facility ID#	634876	
APS ID#		
Auth ID#		

CLIENT INFORMATION

DEP Client ID#	Client Type/Code	Dun & Bradstreet ID#	
372094	LLC	NA	
Legal Organization Name or Registered Fictitious Name		Employer ID# (EIN)	Is the EIN a SSN?
Liberty Soils, LLC		82-1216232	☐ Yes ☒ No
State of Incorporation or Registration of Fictitious Name	☐ Corporation ☒ LLC ☐ Partnership ☐ LLP ☐ LP ☐ Sole Proprietorship ☐ Association/Organization ☐ Estate/Trust ☐ Other		
Delaware			
Individual Last Name	First Name	MI	Suffix
Additional Individual Last Name	First Name	MI	Suffix
Mailing Address Line 1		Mailing Address Line 2	
411 NW Park Avenue, Suite 401			
Address Last Line – City	State	ZIP+4	Country
Portland	OR	97209	USA
Client Contact Last Name	First Name	MI	Suffix
Gobel	Michaele		
Client Contact Title	Phone	Ext	Cell Phone
Principal/CFO	971-352-8430		
Email Address	FAX		
Gobel@eq-cap.com			

SITE INFORMATION

DEP Site ID#	Site Name				
780639	Liberty Soils Biosolids Management Facility				
EPA ID#	Estimated Number of Employees to be Present at Site				
	5				
Description of Site					
Biosolids processing facility					
Tax Parcel ID(s): 24-07-0009.000					
County Name(s)	Municipality(ies)	City	Boro	Twp	State
Schuylkill	Reilly	☐	☐	☒	PA
		☐	☐	☐	
		☐	☐	☐	

	☐	☐	☐	
Site Location Line 1 500 Blackwood Rd.	Site Location Line 2 N40 38' 11" W76 19' 39"			
Site Location Last Line – City Tremont	State PA	ZIP+4 17981-1907		
Detailed Written Directions to Site I-81 to exit 104, make right into Ravine then 1/4 mile; make a left onto Rt. 125N. Entrance will be about 2-1/2 to 3 miles on the right. There will be a sign that says "Liberty Processing & Soils"; take the gravel road about 3 miles to the site.				
Site Contact Last Name Hrywnak	First Name Sarah	MI	Suffix	
Site Contact Title Asset Manager		Site Contact Firm Third Oak, Inc.		
Mailing Address Line 1 3000 Alt Blvd.		Mailing Address Line 2		
Mailing Address Last Line – City Grand Island		State NY	ZIP+4 14072	
Phone 716-628-5656	Ext	FAX	Email Address shrywnak@third-oak.com	
NAICS Codes (Two- & Three-Digit Codes – List All That Apply) 339, 562			6-Digit Code (Optional)	
Client to Site Relationship OWNOP				

FACILITY INFORMATION

Modification of Existing Facility		Yes	No
1.	Will this project modify an existing facility, system, or activity?	☒	☐
2.	Will this project involve an addition to an existing facility, system, or activity?	☒	☐
<i>If "Yes", check all relevant facility types and provide DEP facility identification numbers below.</i>			
Facility Type	DEP Fac ID#	Facility Type	DEP Fac ID#
☐ Air Emission Plant		☐ Industrial Minerals Mining Operation	
☐ Beneficial Use (water)		☐ Laboratory Location	
☐ Blasting Operation		☐ Land Recycling Cleanup Location	
☐ Captive Hazardous Waste Operation		☐ Mine Drainage Treatment / Land Recycling Project Location	
☐ Coal Ash Beneficial Use Operation		☒ Municipal Waste Operation	634876
☐ Coal Mining Operation		☐ Oil & Gas Encroachment Location	
☐ Coal Pillar Location		☐ Oil & Gas Location	
☐ Commercial Hazardous Waste Operation		☐ Oil & Gas Water Poll Control Facility	
☐ Dam Location		☐ Public Water Supply System	
☐ Deep Mine Safety Operation -Anthracite		☐ Radiation Facility	
☐ Deep Mine Safety Operation -Bituminous		☐ Residual Waste Operation	
☐ Deep Mine Safety Operation -Ind Minerals		☐ Storage Tank Location	
☐ Encroachment Location (water, wetland)		☐ Water Pollution Control Facility	
☐ Erosion & Sediment Control Facility		☐ Water Resource	
☐ Explosive Storage Location		☐ Other:	

Latitude/Longitude Point of Origin	Latitude			Longitude												
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds										
Facility Center	40	38	11	76	19	39										
Horizontal Accuracy Measure	Feet			--or--	Meters											
Horizontal Reference Datum Code	☒	North American Datum of 1927														
	☐	North American Datum of 1983														
	☐	World Geodetic System of 1984														
Horizontal Collection Method Code	ITPMP															
Reference Point Code	CENTER															
Altitude	Feet	860	--or--	Meters												
Altitude Datum Name	☒	The National Geodetic Vertical Datum of 1929														
	☐	The North American Vertical Datum of 1988 (NAVD88)														
Altitude (Vertical) Location Datum Collection Method Code	TOPO															
Geometric Type Code	POINT															
Data Collection Date	1944															
Source Map Scale Number	1	Inch(es)	=	2000	Feet											
	--or--	Centimeter(s)	=		Meters											

PROJECT INFORMATION

Project Name

Liberty Soils, LLC

Project Description

Application for permit modification to: 1. Accept a monthly average of 300 wet tons of biosolids per receiving day, with a daily maximum of 500 wet tons of biosolids. The current permit allows the facility to accept a maximum of 300 wet tons of biosolids per day. The requested modification allows a daily surge of up to 500 wet tons of biosolids and keeps the monthly average to 300 wet tons of biosolids per receiving day (Monday-Saturday). There will not be an increase in the total annual wet tons of biosolids received.

2. Rename the "curing building" and "covered product storage area" to "Storage Buildings" and redefine the function of the Storage Buildings for both product curing and product storage.

The facility processes biosolids under existing solid waste permit 603455.

Project Consultant Last Name	First Name	MI	Suffix
Battaglia	John	B	PE
Project Consultant Title	Consulting Firm		
Engineer & Principal	EnSol, Inc.		
Mailing Address Line 1	Mailing Address Line 2		
3000 Alt Blvd.			
Address Last Line – City	State	ZIP+4	
Grand Island	NY	14072-+1246	
Phone	Ext	FAX	Email Address
716-570-1295		716-285-3928	jbattaglia@ensolinc.com
Time Schedules	Project Milestone (Optional)		
NA			

Application

1. Is the project located in or within a 0.5-mile radius of an Environmental Justice community as defined by DEP? ☒ Yes ☐ No

To determine if the project is located in or within a 0.5-mile radius of an environmental justice community, please use the [online PennEnviroScreen tool](#). To see specific EJ areas, select the appropriate year of your submittal from the themes box on the right.

2. Have you informed the surrounding community prior to submitting the application to the Department? ☒ Yes ☐ No

Method of notification: Asset Manager & Facility Manager have conducted site visits and meetings w/ Reilly Township officials. Liberty Soils has received a letter of support for the permit modification from the host municipality, Reilly Township. A copy is attached.

3. Have you addressed community concerns that were identified? ☒ Yes ☐ No ☐ N/A

If no, please briefly describe the community concerns that have been expressed and not addressed.

4. Is your project funded by state or federal grants? ☐ Yes ☒ No

Note: If "Yes", specify what aspect of the project is related to the grant and provide the grant source, contact person and grant expiration date.

Aspect of Project Related to Grant

Grant Source: _____

Grant Contact Person: _____

Grant Expiration Date: _____

5. Is this application for an authorization on Appendix A of the Land Use Policy? (For referenced list, see Appendix A of the Land Use Policy attached to GIF instructions) ☐ Yes ☒ No

Note: If "No" to Question 5, the application is not subject to the Land Use Policy.

If "Yes" to Question 5, the application is subject to this policy and the Applicant should answer the additional questions in the **Land Use Information** section.

LAND USE INFORMATION

Note: Applicants should submit copies of local land use approvals or other evidence of compliance with local comprehensive plans and zoning ordinances.

1. Is there an adopted county or multi-county comprehensive plan? ☐ Yes ☐ No
2. Is there a county stormwater management plan? ☐ Yes ☐ No
3. Is there an adopted municipal or multi-municipal comprehensive plan? ☐ Yes ☐ No

4. Is there an adopted county-wide zoning ordinance, municipal zoning ordinance or joint municipal zoning ordinance? ☐ Yes ☐ No

Note: If the Applicant answers "No" to either Questions 1, 3 or 4, the provisions of the PA MPC are not applicable and the Applicant does not need to respond to questions 5 and 6 below.

If the Applicant answers "Yes" to questions 1, 3 and 4, the Applicant should respond to questions 5 and 6 below.

5. Does the proposed project meet the provisions of the zoning ordinance or does the proposed project have zoning approval? If zoning approval has been received, attach documentation. ☐ Yes ☐ No
6. Have you attached Municipal and County Land Use Letters for the project? ☐ Yes ☐ No

COORDINATION INFORMATION

Note: The PA Historical and Museum Commission must be notified of proposed projects in accordance with DEP Technical Guidance Document 012-0700-001 [at PHMC's online portal, PA-SHARE](#).

If the activity will be a mining project (i.e., mining of coal or industrial minerals, coal refuse disposal and/or the operation of a coal or industrial minerals preparation/processing facility), respond to questions 1.0 through 2.5 below.

If the activity will not be a mining project, skip questions 1.0 through 2.5 and begin with question 3.0.

1.0	Is this a coal mining project? If "Yes", respond to 1.1-1.6. If "No", skip to Question 2.0.	☐	Yes	☒	No
1.1	Will this coal mining project involve coal preparation/processing activities in which the total amount of coal prepared/processed will be equal to or greater than 200 tons/day?	☐	Yes	☐	No
1.2	Will this coal mining project involve coal preparation/processing activities in which the total amount of coal prepared/processed will be greater than 50,000 tons/year?	☐	Yes	☐	No
1.3	Will this coal mining project involve coal preparation/processing activities in which thermal coal dryers or pneumatic coal cleaners will be used?	☐	Yes	☐	No
1.4	For this coal mining project, will sewage treatment facilities be constructed and treated waste water discharged to surface waters?	☐	Yes	☐	No
1.5	Will this coal mining project involve the construction of a permanent impoundment meeting one or more of the following criteria: (1) a contributory drainage area exceeding 100 acres; (2) a depth of water measured by the upstream toe of the dam at maximum storage elevation exceeding 15 feet; (3) an impounding capacity at maximum storage elevation exceeding 50 acre-feet?	☐	Yes	☐	No
1.6	Will this coal mining project involve underground coal mining to be conducted within 500 feet of an oil or gas well?	☐	Yes	☐	No
2.0	Is this a non-coal (industrial minerals) mining project? If "Yes", respond to 2.1-2.6. If "No", skip to Question 3.0.	☐	Yes	☒	No
2.1	Will this non-coal (industrial minerals) mining project involve the crushing and screening of non-coal minerals other than sand and gravel?	☐	Yes	☐	No
2.2	Will this non-coal (industrial minerals) mining project involve the crushing and/or screening of sand and gravel with the exception of wet sand and gravel operations (screening only) and dry sand and gravel operations with a capacity of less than 150 tons/hour of unconsolidated materials?	☐	Yes	☐	No
2.3	Will this non-coal (industrial minerals) mining project involve the construction, operation and/or modification of a portable non-metallic (i.e., non-coal) minerals processing plant under the authority of the General Permit for Portable Non-metallic Mineral Processing Plants (i.e., BAQ-PGPA/GP-3)?	☐	Yes	☐	No
2.4	For this non-coal (industrial minerals) mining project, will sewage treatment facilities be constructed and treated waste water discharged to surface waters?	☐	Yes	☐	No

2.5	Will this non-coal (industrial minerals) mining project involve the construction of a permanent impoundment meeting one or more of the following criteria: (1) a contributory drainage area exceeding 100 acres; (2) a depth of water measured by the upstream toe of the dam at maximum storage elevation exceeding 15 feet; (3) an impounding capacity at maximum storage elevation exceeding 50 acre-feet?	☐	Yes	☐	No
3.0	Will your project, activity, or authorization have anything to do with a well related to oil or gas production, have construction within 200 feet of, affect an oil or gas well, involve the waste from such a well, or string power lines above an oil or gas well? If "Yes", respond to 3.1-3.3. If "No", skip to Question 4.0.	☐	Yes	☒	No
3.1	Does the oil- or gas-related project involve any of the following: placement of fill, excavation within or placement of a structure, located in, along, across or projecting into a watercourse, floodway or body of water (including wetlands)?	☐	Yes	☐	No
3.2	Will the oil- or gas-related project involve discharge of industrial wastewater or stormwater to a dry swale, surface water, ground water or an existing sanitary sewer system or storm water system? If "Yes", discuss in <i>Project Description</i> .	☐	Yes	☐	No
3.3	Will the oil- or gas-related project involve the construction and operation of industrial waste treatment facilities?	☐	Yes	☐	No
4.0	Will the project involve a construction activity that results in earth disturbance? If "Yes", specify the total disturbed acreage.	☐	Yes	☒	No
4.0.1	Total Disturbed Acreage				
4.0.2	Will the project discharge or drain to a special protection water (EV or HQ) or an EV wetland?	☐	Yes	☐	No
4.0.3	Will the project involve a construction activity that results in earth disturbance in the area of the earth disturbance that are contaminated at levels exceeding residential or non-residential medium-specific concentrations (MSCs) in 25 Pa. Code Chapter 250 at residential or non-residential construction sites, respectively?	☐	Yes	☐	No
5.0	Does the project involve any of the following: water obstruction and/or encroachment, wetland impacts, or floodplain project by the Commonwealth/political subdivision or public utility? If "Yes", respond to 5.1-5.7. If "No", skip to Question 6.0.	☐	Yes	☒	No
5.1	Water Obstruction and Encroachment Projects – Does the project involve any of the following: placement of fill, excavation within or placement of a structure, located in, along, across or projecting into a watercourse, floodway or body of water?	☐	Yes	☐	No
5.2	Wetland Impacts – Does the project involve any of the following: placement of fill, excavation within or placement of a structure, located in, along, across or projecting into a wetland?	☐	Yes	☐	No

5.3	Floodplain Projects by the Commonwealth, a Political Subdivision of the Commonwealth or a Public Utility – Does the project involve any of the following: placement of fill, excavation within or placement of a structure, located in, along, across or projecting into a floodplain?	☐	Yes	☐	No
5.4	Is your project an interstate transmission natural gas pipeline?	☐	Yes	☐	No
5.5	Does your project consist of linear construction activities which result in earth disturbance in two or more DEP regions AND three or more counties?	☐	Yes	☐	No
5.6	Does your project utilize Floodplain Restoration as a best management practice for Post Construction Stormwater Management?	☐	Yes	☐	No
5.7	Does your project utilize Class V Gravity / Injection Wells as a best management practice for Post Construction Stormwater Management?	☐	Yes	☐	No
6.0	Will the project involve discharge of construction related stormwater to a dry swale, surface water, ground water or separate storm water system?	☐	Yes	☒	No
6.1	Will the project involve discharge of industrial waste stormwater or wastewater from an industrial activity or sewage to a dry swale, surface water, ground water or an existing sanitary sewer system or separate storm water system?	☐	Yes	☒	No
7.0	Will the project involve the construction and operation of industrial waste treatment facilities?	☐	Yes	☒	No
8.0	Will the project involve construction of sewage treatment facilities, sanitary sewers, or sewage pumping stations? If “Yes”, indicate estimated proposed flow (gal/day). Also, discuss the sanitary sewer pipe sizes and the number of pumping stations/treatment facilities/name of downstream sewage facilities in the <i>Project Description</i>, where applicable.	☐	Yes	☒	No
8.0.1 Estimated Proposed Flow (gal/day)					
9.0	Will the project involve the subdivision of land, or the generation of 800 gpd or more of sewage on an existing parcel of land or the generation of an additional 400 gpd of sewage on an already-developed parcel, or the generation of 800 gpd or more of industrial wastewater that would be discharged to an existing sanitary sewer system?	☐	Yes	☒	No
9.0.1	Was Act 537 sewage facilities planning submitted and approved by DEP? If “Yes” attach the approval letter. Approval required prior to 105/NPDES approval.	☐	Yes	☐	No
10.0	Is this project for the beneficial use of biosolids for land application within Pennsylvania? If “Yes” indicate how much (i.e. gallons or dry tons per year).	☐	Yes	☒	No
10.0.1	Gallons Per Year (residential septage)				
10.0.2	Dry Tons Per Year (biosolids)				

11.0	Does the project involve construction, modification or removal of a dam? If "Yes", identify the dam.	☐ Yes	☒ No
11.0.1	Dam Name		
12.0	Will the project interfere with the flow from, or otherwise impact, a dam? If "Yes", identify the dam.	☐ Yes	☒ No
12.0.1	Dam Name		
13.0	Will the project involve operations (excluding during the construction period) that produce air emissions (i.e., NOX, VOC, etc.)?	☐ Yes	☒ No
13.0.1	If "Yes", is the operation subject to the agricultural exemption in 35 P.S. § 4004.1?	☐ Yes	☐ No
13.0.2	If the answer to 13.0.1 is "No", identify each type of emission followed by the estimated amount of that emission. Enter all types & amounts of emissions; separate each set with semicolons.		
14.0	Does the project include the construction or modification of a drinking water supply to serve 15 or more connections or 25 or more people, at least 60 days out of the year? If "Yes," check all proposed sub-facilities.	☐ Yes	☒ No
14.0.1	Number of Persons Served		
14.0.2	Number of Employee/Guests		
14.0.3	Number of Connections		
14.0.4	Sub-Fac: Distribution System	☐ Yes	☐ No
14.0.5	Sub-Fac: Water Treatment Plant	☐ Yes	☐ No
14.0.6	Sub-Fac: Source	☐ Yes	☐ No
14.0.7	Sub-Fac: Pump Station	☐ Yes	☐ No
14.0.8	Sub-Fac: Transmission Main	☐ Yes	☐ No
14.0.9	Sub-Fac: Storage Facility	☐ Yes	☐ No
15.0	Will your project include infiltration of storm water or waste water to ground water within one-half mile of a public water supply well, spring or infiltration gallery?	☐ Yes	☒ No
16.0	Is your project to be served by an existing public water supply? If "Yes", indicate name of supplier and attach letter from supplier stating that it will serve the project.	☐ Yes	☒ No
16.0.1	Supplier's Name		
16.0.2	Letter of Approval from Supplier is Attached	☐ Yes	☐ No
17.0	Will this project be served by on-lot drinking water wells?	☐ Yes	☒ No
18.0	Will this project involve a new or increased drinking water withdrawal from a river, stream, spring, lake, well or other water bod(ies)? If "Yes," reference Safe Drinking Water Program.	☐ Yes	☒ No
18.0.1	Source Name		

19.0	Will the construction or operation of this project involve treatment, storage, reuse, or disposal of waste? If "Yes," indicate what type (i.e., hazardous, municipal (including infectious & chemotherapeutic), residual) and the amount to be treated, stored, re-used or disposed.	☒	Yes	☐	No
19.0.1	Type & Amount	Processing of a monthly average of 300 tons per day with a daily maximum of 500 tons of municipal biosolids under existing permit 603455. See Project Description on Page 3. Product is used for agricultural use. Approximately 27,000 cyd (21,600 tons) of product can be stored at the facility.			
20.0	Will your project involve the removal of coal, minerals, contaminated media, or solid waste as part of any earth disturbance activities?	☐	Yes	☒	No
21.0	Does your project involve installation of a field constructed underground storage tank? If "Yes," list each Substance & its Capacity. Note: Applicant may need a Storage Tank Site Specific Installation Permit.	☐	Yes	☒	No
21.0.1	Enter all substances & capacity of each; separate each set with semicolons.				
22.0	Does your project involve installation of an aboveground storage tank greater than 21,000 gallons capacity at an existing facility? If "Yes," list each Substance & its Capacity. Note: Applicant may need a Storage Tank Site Specific Installation Permit.	☐	Yes	☒	No
22.0.1	Enter all substances & capacity of each; separate each set with semicolons.				
23.0	Does your project involve installation of a tank greater than 1,100 gallons which will contain a highly hazardous substance as defined in DEP's Regulated Substances List, 2570-BK-DEP2724? If "Yes," list each Substance & its Capacity. Note: Applicant may need a Storage Tank Site Specific Installation Permit.	☐	Yes	☒	No
23.0.1	Enter all substances & capacity of each; separate each set with semicolons.				
24.0	Does your project involve installation of a storage tank at a new facility with a total AST capacity greater than 21,000 gallons? If "Yes", list each Substance & its Capacity. Note: Applicant may need a Storage Tank Site Specific Installation Permit.	☐	Yes	☒	No
24.0.1	Enter all substances & capacity of each; separate each set with semicolons.				
NOTE: If the project includes the installation of a regulated storage tank system, including diesel emergency generator systems, the project may require the use of a Department Certified Tank Handler. For a full list of regulated storage tanks and substances, please go to www.dep.pa.gov search term storage tanks					
25.0	Will the intended activity involve the use of a radiation source?	☐	Yes	☒	No

CERTIFICATION

I certify that I have the authority to submit this application on behalf of the applicant named herein and that the information provided in this application is true and correct to the best of my knowledge and information.

For applicants supplying an EIN number: I am applying for a permit or authorization from the Pennsylvania Department of Environmental Protection (DEP). As part of this application, I will provide DEP with an accurate EIN number for the applicant entity. By filing this application with DEP, I hereby authorize DEP to confirm the accuracy of the EIN number provided with the Pennsylvania Department of Revenue. As applicant, I further consent to the Department of Revenue discussing the same with DEP prior to issuance of the Commonwealth permit or authorization.

Type or Print Name Jared Sperry

Jared Sperry

Signature

Principal

Title

January 14, 2025

Date

Reilly Township
Spruce Street, PO Box 1
Branchdale, PA 17923

December 18, 2024

Re: Letter of Support for Liberty Soils Permit Modification

To Whom It May Concern:

Reilly Township ("Reilly") is the host community of Liberty Soils, LLC ("Liberty"), an Exceptional Quality biosolids processing facility.

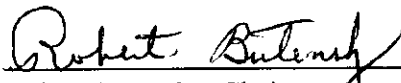
Liberty is submitting a permit modification request to Pennsylvania Department of Environmental Protection ("PA DEP"). Liberty is requesting a modification to the methodology used to calculate its maximum biosolids processing capacity.

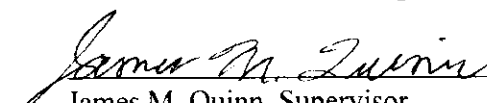
Reilly is aware that Liberty intends to submit the permit modification application to the PA DEP for a Major Modification of Solid Waste Permit No. 603455 to modify Liberty's daily biosolids processing volume from a *maximum of 300 wet tons per day* to an *average of 300 wet tons per day averaged over a month, but no more than 500 tons per day*. The biosolids receiving days will remain as Monday through Saturday.

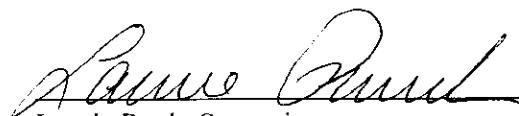
Upon PA DEP permit modification approval, Liberty will provide a biosolids tonnage report to the Township at the end of each month.

This letter memorializes Reilly's support for Liberty's desired permit modification and confirms that Reilly has no objection to the proposed permit modification.

Thank you,


Robert Butensky, Chairman


James M. Quinn, Supervisor


Laurie Ruch, Supervisor



FORM A

APPLICATION FOR MUNICIPAL OR RESIDUAL WASTE PERMIT

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided herein. Replacement/substitution of or attachment to this form is prohibited. Improperly completed forms may be rejected by the Department, may be considered to be violations of the Department's Rules and Regulations, and may result in assessment of fines and penalties.

SECTION A. APPLICANT IDENTIFIER (Check one of the boxes and identify both)

☒ Owner	Name: Liberty Soils, LLC	Phone #: 971-352-8430
	Address: 411 NW Park Avenue, Suite 401, Portland, OR 97209	Email: ccochran@eq-cap.com
☐ Operator	Name: Liberty Processing & Soils, LLC	Phone #: 971-352-8430
	Address: 411 NW Park Avenue, Suite 401, Portland, OR 97209	Email: ccochran@eq-cap.com

SECTION B. TYPE OF FACILITY

Municipal Waste Landfill..... ☐	Residual Waste Landfill ☐
Construction/Demolition Waste Landfill..... ☐	Class I ☐
Municipal Waste Composting Facility..... ☐	Class II ☐
Municipal Waste Incinerator or Resource Recovery Facility... ☐	Class III ☐
Municipal Waste Demonstration Facility..... ☐	Residual Waste Disposal Impoundment
Municipal Waste Transfer Facility..... ☐	Class I ☐
Municipal Waste Processing Facility ☒	Class II ☐
Other, Specify..... ☐	Residual Waste Composting Facility..... ☐
	Residual Waste Demonstration Facility..... ☐
	Residual Waste Transfer Facility..... ☐
	Residual Waste Incinerator or Other Processing Facility ☐
	Residual Waste Agricultural Utilization..... ☐
	Residual Waste Land Reclamation ☐
	Oil and Gas Wastewater Storage Impoundment..... ☐
	Other, Specify ☐

SECTION C. MAP LOCATION

U.S.G.S. Map Location of Facility (attach the map and identify location on the USGS map)

7.5" Map Name Minersville, Swatara Hill and Pine Grove Quadrangles

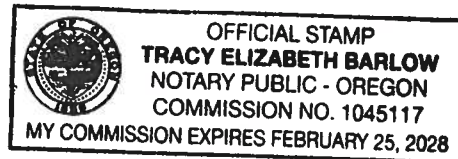
Center of Facility:

Latitude N40 ° 38 ' 11 " Longitude W76 ° 19 ' 39 "

SECTION D. GENERAL INFORMATION

Number of New Acres Proposed for Permit (Issued)	Number of Acres Proposed for Permit (New)
<u>0 • 0</u>	<u>NA •</u>
Total Acres of the Property	
<u>548 • 3</u>	
Number of Previously Permitted Acres	Current Permit ID Number(s) <u>603455</u>
<u>9 • 9</u>	

SECTION E. AFFIDAVIT

COMMONWEALTH/STATE OF OregonSS: N/ACOUNTY OF MultnomahSworn and subscribed to before me this fourteenth (14) dayof January ^{to} 19 2025Tracy BarlowTracy Barlow
NOTARY PUBLIC

My Commission Expires

February 25, 2028Print or type name to be Signed: William Campbell Date January 14, 2025Date: January 14, 2025I, William Campbell do hereby certify pursuant to the penalties of 18 Pa. C.S.A.
(Signature of Applicant)

Section 4904 to the best of my knowledge, information, and belief that the information contained in this application is true and correct and is in conformance with 25 PA. Code Chapters 271 or 287, whichever is applicable, of the rules and regulations of the Department of Environmental Protection.

SECTION F. APPLICATION FEE

A. Municipal Facilities

i. Application for new permit, or repermitting. (ref. 271.128)

- ☐ \$18,500 - Municipal Waste Landfill
- ☐ \$19,250 - Construction/Demolition Waste Landfill
- ☐ \$4,400 - Transfer Facility
- ☐ \$1,900 - Incinerator or Resource Recovery Facility
- ☐ \$4,000 - Other Municipal Waste Processing Facility, including Composting Facility
- ☐ \$17,300 - Demonstration Facility

ii. Application for a major permit modification.

- ☐ \$300 - Addition of types of waste not approved in the permit
- ☐ \$7,800 - Municipal Waste Landfill and Construction/Demolition Waste Landfill
- ☐ \$700 - Transfer Facility
- ☐ \$1,500 - Incinerator or Resource Recovery Facility
- ☒ \$700 - Other Municipal Waste Processing Facility, including Composting Facility
- ☐ \$6,700 - Demonstration Facility

iii. ☐ \$300 - Permit Reissuanceiv. ☐ \$300 - Permit Renewalv. ☐ \$300 - Minor Permit Modification

SECTION F. APPLICATION FEE (Continued)**A. Residual Facilities****i. Application for new permit, or repermitting. (ref. 287.141)**

- ☐ \$25,900 – Residual Waste Landfill
- ☐ \$8,500 – Residual Waste Disposal Impoundment
- ☐ \$5,200 – Residual Waste Transfer Facility
- ☐ \$8,300 – Residual Waste Noncaptive Incinerator
- ☐ \$2,200 – Residual Waste Captive Incinerator
- ☐ \$5,200 – Other Waste Processing Facility, including Composting Facility
- ☐ \$8,500 – Residual Waste Demonstration Facility
- ☐ \$5,100 – Residual Waste Land Reclamation
- ☐ \$5,100 – Residual Waste Agricultural Utilization
- ☐ \$8,500 – Oil and Gas Wastewater Storage Impoundment

ii. Application for a major permit modification.

- ☐ \$600 – Addition of types of waste not approved in the permit
- ☐ \$7,800 – Residual Waste Landfill
- ☐ \$600 – Residual Waste Agricultural Utilization
- ☐ \$1,900 – Residual Waste Land Reclamation
- ☐ \$1,500 – Residual Waste Incinerator Facility
- ☐ \$700 – Residual Waste Transfer or Other Processing Facility, including Composting Facility
- ☐ \$5,800 – Residual Waste Demonstration Facility
- ☐ \$4,600 – Residual Waste Disposal Impoundment
- ☐ \$4,600 – Oil and Gas Wastewater Storage Impoundment

iii. ☐ \$400 – Residual Waste Permit Reissuance**iv. ☐ \$300 – Residual Waste Permit Renewal****v. ☐ \$300 – Residual Waste Minor Permit Modification****SECTION G. PUBLIC NOTICE - SECTION 271.141 (MUNICIPAL), 287.151 (RESIDUAL)**

For a new permit, major permit modification, permit renewal, permit reissuance, and submission of a closure plan, attach the proof of public notice for each of the following:

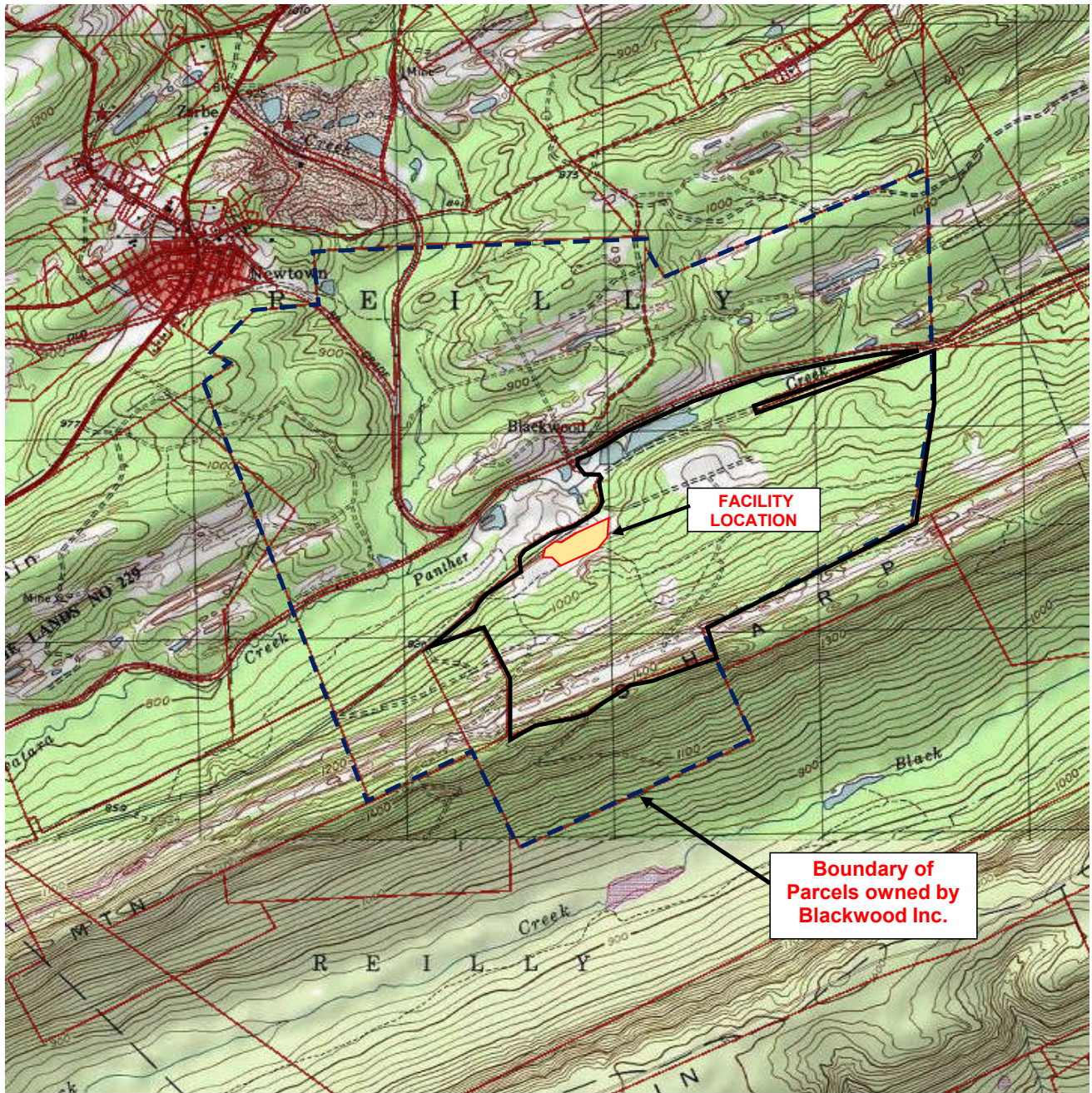
1. Newspaper - Attach the name of the newspaper, circulation location, copies of the notice, and dates of publication.
2. Municipality - Attach copies of the written notices sent to the host township and host county, and copies of the returned certified mail signature cards.
3. Contiguous Landowners - Attach copies of the written notice(s) sent to each landowner and copies of the returned certified mail signature cards.

SECTION H. MUNICIPAL WASTE MANAGEMENT PLANS AND PERMITS

For a new permit, major permit modification, permit renewal, or permit reissuance of a municipal waste landfill or resource recovery facility permit, is the proposed facility located in a county that has an approved municipal waste management plan that complies with Section 513 of Act 101? Yes ☐ No ☐

If the above answer is "yes", the applicant must complete form 46 - Relationship between Municipal Waste Management Plans and Permits.

NOTE: For each permit application, please submit the original (mark as such) and additional copies as requested by the Department's regional office.



NTS

Source: <https://store.usgs.gov/map-locator>

EnSol, Inc.

661 Main Street, Niagara Falls, NY 14301
Ph: 716-285-3920 Fax: 716-285-3928

Prepared By: KLP
Date: 11/28/24

**LIBERTY SOILS, LLC
MAJOR PERMIT MODIFICATION APPLICATION**

LIBERTY SOILS BIOSOLIDS MANAGEMENT FACILITY
500 Blackwood Rd.
Tremont, PA

FIGURE 1

**USGS SITE LOCATION
MAP**

Publisher: The notice outlined below is to be published once a week for three consecutive weeks. Please provide proof of publication for each week.

Pursuant to PA Code Title 25. Environmental Protection, Chapter 271.141, notice is hereby given that Liberty Soils, LLC of Portland, OR, has submitted an application to the Pennsylvania Department of Environmental Protection Bureau of Waste Management Northeast Regional Office for a major permit modification for the Liberty Soils Biosolids Management Facility f/k/a Blackwood Farms Biosolids Management Facility.

The Liberty Soils Biosolids Management Facility (facility) is located on a 9.9-acre area within the 1847.6-acre Blackwood, Inc. mine site, which is located in Reilly, Branch and Tremont Townships, Schuylkill County. The facility is permitted to stabilize municipal wastewater treatment plant biosolids by mixing it with quicklime, coal ash and/or lime kiln dust. The facility accepts up to 300 wet tons per day of dewatered biosolids. The end product is a soil-like material that is marketed for use as a soil additive or soil substitute for agricultural use, reclamation of abandoned mine lands, or landfill cover material.

For the permit modification, Liberty Soils, LLC proposes the following:

1. To accept a monthly average of 300 tons per day of biosolids, with a daily maximum of 500 tons per day.
2. To rename the “curing building” and “covered product storage area” to “Storage Buildings” and redefine the function of the Storage Buildings for product curing and storage.

A copy of the application is available for public inspection at the Department of Environmental Protection, Northeast Regional Office, 2 Public Square, Wilkes-Barre, PA between the hours of 8:00 a.m. and 4:00 p.m. Monday through Friday. Fees for copying may be charged by DEP. DEP will accept and consider comments from the public, host municipalities and county during the permit review period. Written comments, objections, or a request for a public hearing or informal conference may be submitted to the Department of Environmental Protection, Northeast Regional Office, 2 Public Square, Wilkes-Barre, PA 18711-0790, for a period of sixty (60) days following the date of this Notice, which will be* _____ and must include the person’s name, address, telephone number and a brief statement as to nature of the objection(s). The host municipalities and county may submit comments to the Department within 60 days of receipt of the application, recommending conditions upon, revisions to and approval or disapproval of the permit, with the specific reasons described in the comments.

* **Publisher:** Insert date, which will be 60 days from the date of first publication



January 9, 2025

County Commissioners
Schuylkill County
401 North Second Street
Pottsville, PA 17901]

Dear Commissioners:

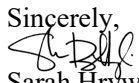
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Sincerely,

Sarah Hrywnak
LIBERTY SOILS, LLC

cc: PADEP



January 9, 2025

Robert Butensky
Reilly Township Chairman
11 St. Mary's Ave., P.O. Box 55
Branchdale, PA 17923

Dear Mr. Butensky:

Pursuant to PA Code Title 25. Environmental Protection, Chapter 271.141, notice is hereby given that Liberty Soils, LLC of Portland, OR, has submitted an application to the Pennsylvania Department of Environmental Protection Bureau of Waste Management Northeast Regional Office for a major permit modification for the Liberty Soils Biosolids Management Facility f/k/a Blackwood Farms Biosolids Management Facility.

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Sincerely,

A handwritten signature in black ink, appearing to read "S. Hrywnak", is written over the word "Sincerely,".

Sarah Hrywnak
LIBERTY SOILS, LLC

cc: PADEP



January 9, 2025

Nolan A. Perin
Blackwood Inc.
PO Box 639
Wind Gap, PA 18091

Dear Mr. Perin:

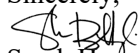
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Sincerely,

Sarah Hrywnak
LIBERTY SOILS, LLC

cc: PADEP



**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT**

Date Prepared/Revised
1/9/2025

DEP USE ONLY

Date Received

FORM B PROFESSIONAL CERTIFICATION

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form B, reference the item number and identify the date prepared. The "date prepared/revised" on any attached sheets needs to match the "date prepared/revised" on this page.

General References: Section 271.122, 287.122

SECTION A. SITE IDENTIFIER

Applicant/permittee: Liberty Soils, LLC

Site Name: Liberty Soils Biosolids Management Facility

Facility ID (as issued by DEP): 634876

SECTION B. REGISTERED PROFESSIONAL ENGINEER

I, John B. Battaglia, P.E.

(Engineer's Name – Print or Type)

being a Registered Professional Engineer in accordance with the Pennsylvania Professional Engineer's Registration Law, do hereby certify to the best of my knowledge, information, and belief that the information contained in the accompanying application, plans, specifications, and reports has been prepared in accordance with accepted practice of engineering, are true and correct, and are in accordance with the Rules and Regulations of the Department of Environmental Protection. I also certify that those individuals indicated in the following paragraphs prepared this application under my supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Signature _____ Date _____

License Number PE-050871-E Expiration Date 9/30/2025

Address EnSol, Inc.
3000 Alt Blvd.
Grand Island, NY 14072

Telephone No. (716) 285-3920



SECTION C. SOIL SCIENTIST PROVIDING SOILS INFORMATION

NA

I, _____ do hereby certify
(Soil Scientists Name – Print or Type)

to the best of my knowledge, information, and belief that the soils information contained in this application has been prepared in accordance with accepted practices of soil science and in accordance with the Rules and Regulations of the Department of Environmental Protection. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Signature _____ Date _____

Address _____

Telephone No. (____) _____

SECTION D. REGISTERED PROFESSIONAL GEOLOGIST

NA

I, _____ being a
(Hydrogeologist's Name – Print or Type)

Registered Professional Geologist in accordance with the Pennsylvania Professional Geologists Registration Law, do hereby certify to the best of my knowledge, information, and belief that the hydrogeology information contained in this application has been prepared in accordance with the accepted practices of hydrogeology and in accordance with the Rules and Regulations of the Department of Environmental Protection. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Signature _____ Date _____

License Number _____ Expiration Date _____

Address _____

Professional
Seal

Telephone No. (____) _____



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
1/9/2025

DEP USE ONLY

Date Received

FORM B1 APPLICATION FORM CERTIFICATION

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form B1, reference the item number and identify the date prepared. The "date prepared/revised" on any attached sheets needs to match the "date prepared/revised" on this page.

SECTION A. SITE IDENTIFIER

Applicant/permittee: Liberty Soils, LLC

Site Name: Liberty Soils Biosolids Management Facility

Facility ID (as issued by DEP): 634876

SECTION B. CERTIFICATION

Professional Engineer

I, John B. Battaglia, P.E.

(Engineer's Name -Print or Type)

being a Registered Professional Engineer in accordance with the Pennsylvania Professional Engineer's Registration Law, do hereby certify that the forms used in the accompanying application have been reproduced under my supervision and have the same exact content and the same format as the forms prepared by the Department. I am aware that there are significant penalties for altering the content of the Department's forms, including the possibility of fines and imprisonment.

Signature _____

Date _____

License Number PE-050871-E

Expiration Date 9/30/2025

Address EnSol, Inc.

Professional
Seal

3000 Alt Blvd.

Grand Island, NY 14072

Telephone No. (716) 285-3920





FORM D ENVIRONMENTAL ASSESSMENT FOR MUNICIPAL AND RESIDUAL WASTE MANAGEMENT FACILITIES

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form D, reference the item number and identify the date prepared. The "date prepared/revised" on any attached sheets needs to match the "date prepared/revised" on this page.

General References: 271.126, 271.127, 287.126 and 287.127

SECTION A. SITE IDENTIFIER

Applicant/permittee Liberty Soils, LLC

Site Name Liberty Soils Biosolids Management Facility

Facility ID (as issued by DEP) 634876

ENVIRONMENT ASSESSMENT CRITERIA

A. Geologic

1. Is the proposed facility within an area with a 10% or greater probability that a maximum horizontal acceleration will exceed 0.10g in 250 years as mapped by the Pennsylvania Geologic Survey or the United States Geological Survey? If yes, the applicant shall specify design measures necessary to withstand potential seismic events, and the Department will determine whether the proposed design measures provide adequate protection from earthquake damage. **Yes – See Figure A-1 from 2011 permit application, attached.**
Facility buildings and structures are designed to meet local building codes.

2. Are there any potential geologic hazards, foundation problems, or groundwater conditions which require site investigation? **No.** If yes, identify and describe.

Note: The Bureau of Topographic and Geologic Survey does not certify whether any site has potential geologic problems, but will provide lists of published geologic reports that will aid the applicant to determine the nature of the site. Design measures to withstand potential seismic events are specified in EPA/600/R-95/051, RCRA Subtitle D (258), Seismic Design Guidance for Municipal Solid Waste Landfill Facilities, 1995.

B. Scenic Rivers - Describe any affirmative responses and proposals to minimize or mitigate any environmental impact.

1. Is the project located in the waterway or corridor of a stream or river designated as a Pennsylvania Scenic River or a waterway included in the National Wild and Scenic River System? **No**
2. Is the project located within one mile of the stream or river bank of a 1-A priority waterway, as identified by the Department of Conservation and Natural Resources? **No**
3. Is the project located within one mile of the stream or river bank of a waterway under study for designation as a Pennsylvania Scenic River or inclusion in the National Wild and Scenic River System? **No**
4. Is the project located in the drainage area (watershed) of a stream or river designated as a Pennsylvania Scenic River or a National Wild and Scenic River? **No**
5. Will the project result in discharges of any kind to the waterway or corridor of a stream or river designated as a Pennsylvania Scenic River or National Wild and Scenic River? **No**
6. Will the project result in increased railroad or highway traffic having an adverse impact upon a waterway designated as a Pennsylvania Scenic River or a National Wild and Scenic River? **No**

7. Can the project be seen from the waterway or corridor of a stream or river designated as a Pennsylvania Scenic River or National Wild and Scenic River? **No**
8. Does the project impact, visually or physically, the aesthetic environment or recreational activities or opportunities of a stream or river designated as a Pennsylvania Scenic River or National Wild and Scenic River? **No**
9. Are remedial or mitigating measures necessary to make the project conform to land and water management guidelines that were developed for this specific Pennsylvania Scenic River or National Wild and Scenic River? **No**
10. Is the project located within a Special Protection Watershed, as designated in Chapter 93 (relating to Pennsylvania's Stream Water Quality Criteria) of the Rules and Regulations of the Pennsylvania Department of Environmental Protection? **No** If yes:
 - a. Identify the stream and watershed, and the distance of the stream from the project.
 - b. Describe the characteristics of the project which might create adverse impacts on the stream.
 - c. Describe measures to be taken to minimize adverse impacts on the stream.
11. Will the project, absent control measures, result in an increase in the peak discharge rate for storm water drainage from the project site? **No** If yes:
 - a. Describe the amount of increase in the peak discharge rate for storm water drainage. **NA**
 - b. Describe adverse impacts that might result from the increase in peak discharge rate for stormwater drainage. **NA**
 - c. Describe measures to be taken to minimize adverse impacts from the increase in the peak discharge rate for storm water drainage. **NA**
12. Are remedial or mitigating measures required as part of the implementation and management plans for this project? **No** If yes, identify and demonstrate the degree of mitigation.

C. Wetlands

1. Are wetlands present within the facility or adjacent areas? **No** If yes, Wetlands must be identified by using the 1987 Corp of Engineers Wetland Delineation Manual for the Department's regulatory purposes. Current wetland identification and delineation procedures are available from DEP Regional Offices. Direct impacts to wetlands (changing their cross section by grading or excavating) will require a Chapter 105 permit. A Chapter 105 permit will not be issued until the applicant demonstrates that impacts have minimized or avoided to the greatest extent practicable and approved plans for mandatory replacement of wetlands have been submitted. A determination must be made as to whether the wetlands are Exceptional Value (EV) according to Chapter 105. These wetlands have a higher level of protection.
2. An environmental assessment shall be included with the permit application. It shall evaluate the wetland's functions and values. According to application requirements an assessment of the functions and values of wetlands may include, but not limited to, the items listed below. (Proposed indirect impacts to wetlands, which do not include a change in the wetland cross section, such as an alteration in hydrology alone, will not require a Chapter 105 permit, but will require an environmental assessment.)
 - a. Do the wetlands serve an important natural biological function, including food chain production; providing general habitat; and providing nesting, spawning, rearing and resting sites for aquatic or land species?
 - b. Are the wetlands set aside for study of the aquatic environment or as sanctuaries or refuges?
 - c. Would alteration or destruction of the wetlands detrimentally affect natural drainage characteristics, sedimentation patterns, salinity distribution, flushing characteristics, natural water filtration process, current patterns or other environmental characteristics?
 - d. Are the wetlands significant in shielding other areas from wave action erosion, or storm damage?
 - e. Do the wetlands serve as valuable storage areas for storm and flood waters?
 - f. Are the wetlands prime natural recharge areas (i.e., locations where surface and groundwater are directly interconnected)?

- g. To assist with an assessment of the functions and values please provide a description of the wetland classification according to the Cowardin classification system, including the wetland's water regime.

D. Parks

1. Is the project located within one mile of: a unit of the National Parks System; a state, county, local or municipal park; a recreation facility operated by the U.S. Army Corps of Engineers; a state forest picnic area; a national landmark; or the Allegheny River Reservoir in the Allegheny National Forest? **No.** If yes:
 - a. Identify the park or other area and its distance from the project.
 - b. Conduct visual and traffic analyses.
 - c. Describe the characteristics of the project which might create adverse environmental, visual, or traffic impacts on or in the vicinity of the park or other area.
 - d. Describe measures to be taken to minimize adverse impacts on the park or other area.
2. Is the project within one mile of the foot path of the Appalachian Trail? **No.** If yes:
 - a. Indicate the distance from the project to the Appalachian Trail.
 - b. Conduct visual and traffic analyses.
 - c. Describe the characteristics of the project which might create adverse environmental, visual, or traffic impacts on the Appalachian Trail.
 - d. Describe measures to be taken to minimize adverse impacts on the Appalachian Trail.
3. Is the project located within one mile of a national natural landmark designated by the U.S. National Park Service; or of a natural area, or of a wild area designated by the Pennsylvania Environmental Quality Board? **No.** If yes:
 - a. Identify the natural landmark, natural area, or wild area and its distance from the project.
 - b. Conduct visual and traffic analyses.
 - c. Describe the characteristics of the project which might create adverse environmental, visual, or traffic impacts on the natural landmark, natural area, or wild area.
 - d. Describe measures to be taken to minimize adverse impacts on the natural landmark, natural area, or wild area.

E. Fish, Game and Plants

1. Is the project located within one mile or within an identified potential impact area of a national wildlife refuge, national fish hatchery, or national environmental center operated by the U.S. Fish and Wildlife Service? **No.** If yes:
 - a. Identify the wildlife refuge, fish hatchery, or environmental center and its distance from the project.
 - b. Conduct visual and traffic analyses.
 - c. Describe the characteristics of the project which might create adverse environmental, visual, or traffic impacts on the wildlife refuge, fish hatchery, or environmental center.
 - d. Describe measures to be taken to minimize adverse impacts on the wildlife refuge, fish hatchery, or environmental center.
2. Is the project located within 1/4 mile of the boundary of a state forest or state game land; or of the proclamation boundary of the Allegheny Natural Forest? **Yes.** If yes:
 - a. Identify the forest or game land and its distance from the project. **The access road to the facility goes through State Game Land #229. See Attachment E.**
 - b. Describe the characteristics of the project which might create adverse impacts on the forest or game land. **Increased traffic and resulting dust, noise, odors and road deterioration from facility-related vehicles.**

- c. Describe measures to be taken to minimize adverse impacts of the project on the forest and game land. **The road is kept passable and well-maintained. Road maintenance includes daily inspections for any damage, litter and materials that may have fallen from vehicles. Tarps are used on all waste vehicles to contain odors and material. If necessary, trucks and trailers carrying biosolids or finished product may be washed prior to leaving the permit area. Due to the characteristics of the road (surface, curvature, width), slow speeds are required. Truck drivers are advised to keep speeds low. During the winter months, snow and ice are removed as needed. Water may be sprayed on the road to minimize dusty conditions if necessary.**
3. Is the project located within an area which supports endangered, threatened, rare plant or animal species listed under the Federal Endangered Species Act, 16 U.S.C.A. §1531 et seq. (1973); the Act of June 23, 1982 (P.L. 597, No. 170), as amended, known as the Wild Resources Conservation Act, 32 P.S. §5301 et seq.; the Act of October 16, 1980 (P.L. 996, No. 175), as amended, known as the Pennsylvania Fish and Boat Code, 30 Pa. C.S.A. §101 et seq. or the Act of July 8, 1986 (P.L. 442, No. 93), as amended, known as the Pennsylvania Game and Wildlife Code, 34 Pa. C.S.A. §101 et seq. or located in exemplary natural communities as defined by the Pennsylvania Natural Diversity Inventory? **No.** If yes:
 - a. Identify the species and the habitat area or natural community and the location of the project within the area.
 - b. Describe the characteristics of the project which might create adverse impacts on the species, habitat, or natural community.
 - c. Describe measures to be taken to minimize adverse impacts on the species, habitat, or natural community.
 - d. Describe any contact you have had with the Pennsylvania Fish and Boat Commission, Pennsylvania Game Commission, U.S. Fish and Wildlife Service, or the Pennsylvania Department of Environmental Protection (Plant Program) about the project.
4. Does the proposed project impact critical and unique wildlife habitats (deer wintering areas, caves, denning sites, rock outcrops, or similar habitats)? **No.** If yes, please identify these habitats and describe proposals to minimize or mitigate these impacts.
5. Is the facility within 1/4 mile of a water resource listed as stocked waters by the Pennsylvania Fish and Boat Commission? **No.**
6. Is the facility within 1/4 mile of a water resource designated as a wild trout stream by the Pennsylvania Fish and Boat Commission? **No.**
7. Is the facility within 1/4 mile of a High Quality or Exceptional Value stream listed in 25 Pa. Code Ch. 93? If yes, indicate stream classification. **No.**
8. Is there any perennial stream(s) within or directly hydrologically connected to the project? **No.** if yes:
 - a. Identify the streams and watershed and the location of the stream(s) in relation to the project.
 - b. Identify the fish species present within the perennial stream(s).
 - c. Identify the protected uses, as designated in 25 Pa. Code Ch. 93 (relating to Pennsylvania's Stream Water Quality Criteria), that are listed for the stream(s)/watershed(s).
 - d. Describe the characteristics of the project which might create adverse impacts on the stream(s).
 - e. Describe measures to be taken to minimize adverse impacts on the stream(s).
9. Is the facility within one mile of a stream commonly used for recreational activities? **No.** If yes:
 - a. Describe the characteristics of the project which may create adverse visual and traffic impacts.
 - b. Describe measures to be taken to minimize the adverse impacts.

F. Water Uses

1. Is the project located within the watershed or aquifer, and within one mile, of a public water supply facility dependent on groundwater sources; or upstream, within the watershed, and within three miles of a public water supply facility dependent on surface sources? **No.** If yes:

- a. Identify the public water supply facility and its supply sources, locate both on a topographic map, and indicate their distances from the project.
 - b. Briefly describe the public water supply facility, including capacity and population served.
 - c. Describe measures to be taken to protect the public water supply facility from any potential harm.
2. Is the project within the groundwater recharge area for any public or private water supplies? **No.** If yes, provide the following:
- a. Delineate the position of the proposed permit area within relevant groundwater flow systems.
 - b. Identify public and private water supplies which may potentially be adversely affected by groundwater flow associated with the proposed facility, including a detailed hydrogeologic study addressing the potential effect of the proposed facility on the water supplies.
 - c. Does the hydrogeologic study mentioned above indicate adverse affects on any public or private water supplies? If yes, provide the following: feasibility of permanently replacing or restoring the water supply to like quantity and quality with the existing supply and at no additional cost to the owner. A description of the means to restore or replace the water supply shall also be provided.
3. Is the project located within a high quality or exceptional value watershed? **No.** If yes:
- a. Identify the stream segment.
 - b. List any physical or chemical parameters that would be associated with the discharge or runoff from the facility.

G. Recreation

Is there a potential impact the facility will have on recreational areas or facilities within one mile of the proposed project? **Yes.** If yes, identify any mitigation proposals to eliminate or reduce adverse impacts and any mitigation proposals to enhance these areas. **The access road to the facility goes through State Game Land #229. See Attachment E.**

H. Historic/Archaeologic

1. Is the project located within one mile of an historic or archaeological property owned by the Pennsylvania Historical and Museum Commission? **No.** If yes:
 - a. Identify the historic or archaeological property and its distance from the project.
 - b. Conduct visual and traffic analyses and impact on the historic or archaeological property.
 - c. Describe the characteristics of the project which might create adverse environmental, visual, or traffic impacts on the historic and archeological properties.
 - d. Describe measures to be taken to minimize adverse impacts on the historic and archeological properties.
2. Is the project located within 1/4 mile of a historic site listed in the National Register of Historic Places or the Pennsylvania Inventory of Historic Places or an archaeological site listed in the Pennsylvania Archaeological Site Survey? **No.** If yes:
 - a. Identify the historic or archaeological site and its distance from the project.
 - b. Describe the characteristics of the project which might create adverse impacts on the historic or archaeological site.
 - c. Describe measures to be taken to minimize adverse impacts on the historic or archaeological site.
 - d. Indicate any contact you have had with the Pennsylvania Historical and Museum Commission about the project.

I. Airports (applies to landfill only)

1. Is the proposed landfill located within 6 miles of a public airport and subject to 49 U.S.C. §44718(d) (relating to limitation on construction of landfills)? If yes:

- a. Has the public airport received grants under Chapter 471 and is primarily served by general aviation aircraft and regularly scheduled flights of aircraft designed for 60 passengers or less?
 - b. Has the Pa. State aviation agency requested the FAA Administration to exempt the landfill from the application of Section 44718(d) and the FAA Administration has issued the exemption in writing stating that the facility will have no adverse impact on aviation safety?
2. Is the existing landfill or proposed expansion within 6 miles of an airport runway? If yes:

Attach Proof of Notice to the Bureau of Aviation of the Pennsylvania Department of Transportation, the Federal Aviation Administration and the airport and the response received to each notification.

J. Traffic

The following information is requested, in part, to assist the Department of Environmental Protection, in consultation with the Department of Transportation or their designee or other appropriate reviewers, in determining whether further traffic and/or roadway studies are necessary as part of this permit application. The information will also assist in determining the scope of such a study, should one be required. Department of Transportation guidelines and criteria are available to advise the applicant of the scope and manner in which such studies shall be conducted and presented.

1. Identify routes from the nearest limited access (or major) highway used by vehicles traveling to and from the facility ('approach routes'). Submit PennDOT Type 10 maps clearly showing the location of the facility, approach routes and the nearest limited access (or other major) highway. Highlight all municipalities on approach routes on these maps. Submit a site plan showing the location of all existing or proposed driveways to the facility.
2. Identify daily and hourly traffic volumes that will result along each approach route, hourly and daily, from construction and operation of the facility. Identify the traffic volumes by the number, direction (to or from the site), type (use AASHTO vehicle designations), size, weight and distribution of vehicles used for construction and operation of the facility. Project the same data out for each of the next ten years.
3. Identify locations on approach routes where bridge and/or roadway conditions (e.g., weight limits, vertical clearance restrictions, one-lane or narrow bridges, insufficient lane widths, or roadway surfaces) may require repair or improvement to accommodate traffic related to the proposed facility. Describe necessary improvements.
4. Identify sections of roadway along the approach routes that are congested (e.g., that experience traffic backups or queuing), or are expected to be congested within the next ten years. Identify the impact that the additional facility traffic will have on traffic flow, and describe measures to mitigate related congestion.
5. Identify, by location, land uses along the approach routes, such as residential, commercial, industrial and agricultural, and identify residences fronting the roadways (50 feet setback or less), schools, hospitals, nursing homes and other significant buildings. Describe potential adverse impacts of increased facility traffic volumes and recommend countermeasures.
6. Identify locations on approach routes where intersection turning radii are insufficient to allow turns to be made within the physical boundaries of the roadway pavement and without encroaching on opposing travel lanes. Describe necessary improvements.
7. Identify locations on approach routes where horizontal alignment, lane width, and other factors would result in encroachment onto sidewalk areas, or opposing/adjacent travel lanes, or onto shoulder areas. Identify locations of shoulder drop-offs, and of potential shoulder deterioration caused by the volume of traffic from the facility. Describe proposed solutions.
8. Identify locations on approach routes where shoulders or a roadside clear zone are not present and a combination of factors such as curvature, lane width, etc. would result in off-tracking or run-off-the-road concerns. Describe necessary improvements.
9. Identify locations on approach routes where long steep grades, hazardous grade speed limits, truck pull off areas or truck escape ramps exist.
10. Identify locations on approach routes where substantial lengths of grade, without climbing lanes or passing lanes, would impede truck speed. Describe countermeasures.
11. Identify locations on approach routes which may present under clearance problems. Describe countermeasures.

12. Identify locations on approach routes where sight distance or turning, acceleration or deceleration lane lengths are inadequate for the type, size and weight of vehicles that will be generated by the proposed facility. Describe mitigation measures.
13. Identify other safety-related considerations relative to waste facility traffic on approach routes. Assess impacts on school bus traffic. Describe countermeasures.
14. Does the applicant have a Highway Occupancy Permit for this facility issued by PennDOT or by the local municipality? **Yes.** If yes, please attach the permit and any conditions. **See Attachment J-1. The permitted work (installation of low volume driveway and roadway improvement) was completed in September 2020. See attached correspondence from PADOT (Attachment J-2) stating that the HOP issued in 2019 does not need to be modified, since the anticipated weekday trips will generally be similar to the permitted ADT. which was based on the 2018 traffic study (see response to 15).** If no, please explain.
15. Has a traffic impact study previously been completed for this project? **Yes.** If yes, attach the study. **See attached 2018 Blackwood Farms Biosolids Facility Transportation Impact Assessment (Attachment J-3).**
16. Identify potential adverse environmental impacts to parks, playgrounds, recreation areas, forests, picnic areas, natural landmarks, wild areas, rivers, wetlands, public water supplies, historic sites, or other areas, that may result from traffic to and from the proposed facility. Take into account exhaust fumes, odors, noise, and other environmental factors. Describe measures to be taken to minimize or mitigate potential adverse impacts which you identify.

K. Zoning and Land Use

1. Does the county where this project is located or proposed have a comprehensive local land use plan? **Yes.**
2. Does the municipality where this project is located or proposed have a comprehensive local land use plan? **No.**
3. Does the county or municipality where your project is located have a zoning ordinance? **Yes.**
 - a. Provide a copy of the local zoning ordinance and land use plans adopted by the county or local government. **See Attachment K-1, Schuylkill County Zoning Ordinance and K-2 Deed of Restricted Use**
 - b. Identify possible conflicts the new facility will have with local zoning ordinances and land use plans **No potential conflicts have been identified.**
 - c. Submit copy of the expanded notice sent to county and local government asking information if the permit application conflicts with their zoning ordinances and land use plans. **NA. Project received county Land Development approval in 2018 - See Attachment K-4, and county zoning permit in 2009 - See Attachment K-5.**
 - d. Identify measures that have or will be taken to obtain municipal approval. **A Settlement Agreement between WeCare Organics, LLC (the original permittee and facility operator) and Blackwood Inc. and Reilly Township (with the approval and consent of the Zoning Hearing Board of Schuylkill County) was reached in December 2009. Reilly Township agreed that WeCare Organics, LLC and Blackwood Inc. may construct and operate a Class A biosolids processing facility on the Blackwood site. See Attachment K-3. For this permit modification, Liberty Soils' Asset Manager & Facility Manager have conducted site visits and meetings w/ Reilly Township.**
 - e. If municipal approval is already secured, provide copies of such land-use approvals. **Schuylkill County Planning Commission Plan Approval - See Attachment K-4. Schuylkill County Zoning Permit - See Attachment K-5.**
4. Is the project located on preserved farmland that is restricted to agricultural use by (a) an agricultural conservation easement under the authority of the Act of June 30, 1981 (P.L. 128, No. 43), as amended, known as the Agricultural Area Security Law, 3 Pa. C.S.A. §901 et seq. or (b) deed restrictions that have been imposed under the authority of the Act of January 19, 1967 (P.L. 992, No. 442) as amended, known as the Open Space Law, 53 P.S. §5001 et seq. and that have been recorded in the appropriate county land records office (c) easements owned by any other "qualified conservation organization," as that term is defined at Section 170(h)(3) of the Internal Revenue Code? If yes, identify the location and acreage of preserved farmland and an explanation on how the facility can be located on this area and still be in compliance with the conservation easement. If the project is located adjacent to preserved farmland: identify the location and acreage of preserved farmland, the location of the project and the potential impact the project may have on the preserved farmland. **No.**

5. Is the project located on farmland in agricultural security areas that have been approved by local government units after public review and comment according to the procedure in the act of June 30, 1981 (P.L. 128, No. 43), as amended, known as the Agricultural Area Security Law, 3 Pa. C.S.A. §901 et seq.? If yes, identify the location and acreage of farmland in agricultural security areas and the location of the project. Secure and attach comments and recommendations from the township Agricultural Security Area advisory committee. **No.**
6. Is the project located on farmland that is enrolled for preferential tax assessments as land in “agricultural use” under the Act of December 19, 1974 (P.L. 973, No. 319), as amended, known as the Pennsylvania Farmland and Forest Land Assessment Act of 1974, 72 P.S. §5490.1 et seq. Or as “farmland” under the Act of January 13, 1966 (1965 P.L. 1292, No. 515), as amended, known as “An act enabling certain counties of the Commonwealth to covenant with land owners for preservation of land in farm, forest, water supply, or open space uses.” If yes, identify the location and acreage of farmland enrolled for preferential tax assessments and the location of the project. **No.**
7. Is the project located on farmland planned for agricultural use, subject to agricultural use and subject to agricultural zoning under the authority of the Act of July 31, 1968 (P.L. 805, No. 247), as amended, known as the Pennsylvania Municipalities Planning Code, 53 P.S. §10101 et seq.? If yes, identify the location and acreage of this farmland and the location of the project. Include comments and recommendations from the county planning commission and/or the local planning commission. **No.**
8. Is the project located on active farmland? If yes, does the active farmland include land capability classes designated as I, II, III, IV or unique? If yes, identify possible alternatives to avoid these classes of soils and measures taken to minimize impacts. Attach recommendations from the local Cooperative Extension Service or the county Natural Resources Conservation Service. **No.**
9. If the project is not located on active farmland, will the project affect land identified as prime farmland, farmland of state-wide importance, or farmland of local importance? If yes, attach comments and recommendations from the Natural Resources Conservation Service. **No.**

L. Planning

1. Will disposal of the waste at this facility be inconsistent with municipal, county, regional or state solid waste plans or laws in the area where the waste is generated? **No. Waste will not be disposed.**
2. For municipal waste disposal and processing facilities, list the approved municipal, county, regional or state solid waste plans or laws that will be implemented by the proposed facility. Provide the name and telephone number of a contact person from the agency that approved the plan as well as relevant documentation for each plan. List the waste streams that are affected by the planning laws in place where the waste is generated. **NA: There have been no changes in local waste laws or accepted waste types for this type of facility since the prior submittal of Form D for initial facility permitting in 2011.**

M. Air Quality Impact

1. Describe briefly the impacts on ambient air quality. This includes the emissions of volatile organic compounds, toxic air compounds, fugitive particulate emissions and other air pollutants. **An Odor Modeling Report and Request for Determination (RFD) for Changes of Minor Significance and Exemption from Plan Approval/Operating Permit Requirements were previously included with the Form D for initial facility permitting in 2011.**
2. Based upon site specific meteorological data describe the prevailing wind direction and speed and describe potential adverse air impacts to the surrounding community. **See above.**
3. Describe the control measures to be taken to mitigate or minimize the potential adverse air impacts that you identify. **In response to PADEP and community concerns regarding odor, an odor neutralizing system was installed at the facility in March 2022. The facility also instituted an odor complaint program. Both measures are described in the Nuisance Minimization and Control Plan, Attachment M-1.**
4. Does this facility have an existing air program? If yes, please attach. **See the Nuisance Minimization and Control Plan, Attachment M-1.**
5. Has an air plan approval application been submitted for this project? **No.** If yes, identify when and where this application was submitted.

N. Benefits and Harms: Environmental, Social and Economic

NA: there are no changes to the Benefits and Harms Analysis as included in the previously submitted Form D for initial facility permitting in 2011.

Complete this section for municipal waste landfills, construction/demolition waste landfills, municipal waste resource recovery facilities, noncaptive residual waste landfills, noncaptive residual waste disposal impoundments and residual waste incinerators and other facilities where a known and/or potential environmental harm exists after mitigation.

1. Environmental benefits of the project, both on-site and off-site.
2. Benefits to local businesses.
3. Benefits to local economy.
4. Benefits of local employment.
5. Benefits to local residents and local government.
6. Benefits from host agreements.
7. Benefits based on demographics.
8. Harms and potential harms to property values.
9. Harms and potential harms to aesthetics/community character of the surrounding community.
10. Harms and potential harms to the health and safety of the surrounding population.
11. Impacts on environmental justice communities.
12. Harms and potential harms associated with uncompensated losses to local government (i.e. road maintenance).
13. Harms and potential harms associated with the quality of life within the local area.

14. Harms and potential harms on the local economy.

15. Harms and potential harms on the quality of the surrounding environment.

MW:

MW Landfill
CD Landfill
RRF

or

Other if K or P env. Harms remain despite mitigation

RW:

Noncaptive landfill
Disposal impoundment
Incinerator

or

Other if K or P env. Harm remains despite mitigation

Liberty Soils Biosolids Management Facility

FORM D ENVIRONMENTAL ASSESSMENT FOR MUNICIPAL AND RESIDUAL WASTE MANAGEMENT FACILITIES

Attachments

A. Geologic

Figure A-1 Seismic Probability

E. Fish, Game and Plants

Attachment E State Game Land Map

J. Traffic

Attachment J-1 Highway Occupancy Permit #05055171
Attachment J-2 PA DOT 6/13/22 email re: no permit modification required
Attachment J-3 July 2018 Transportation Impact Assessment

K. Zoning and Land Use

Attachment K-1 Zoning Ordinance for Schuylkill County Pennsylvania
Attachment K-2 Deed of Restricted Use
Attachment K-3 Settlement Agreement
Attachment K-4 Schuylkill County Planning Commission Approval
Attachment K-5 Schuylkill County Zoning Permit

M. Air Quality Impact

Attachment M-1 Nuisance Minimization and Control Plan

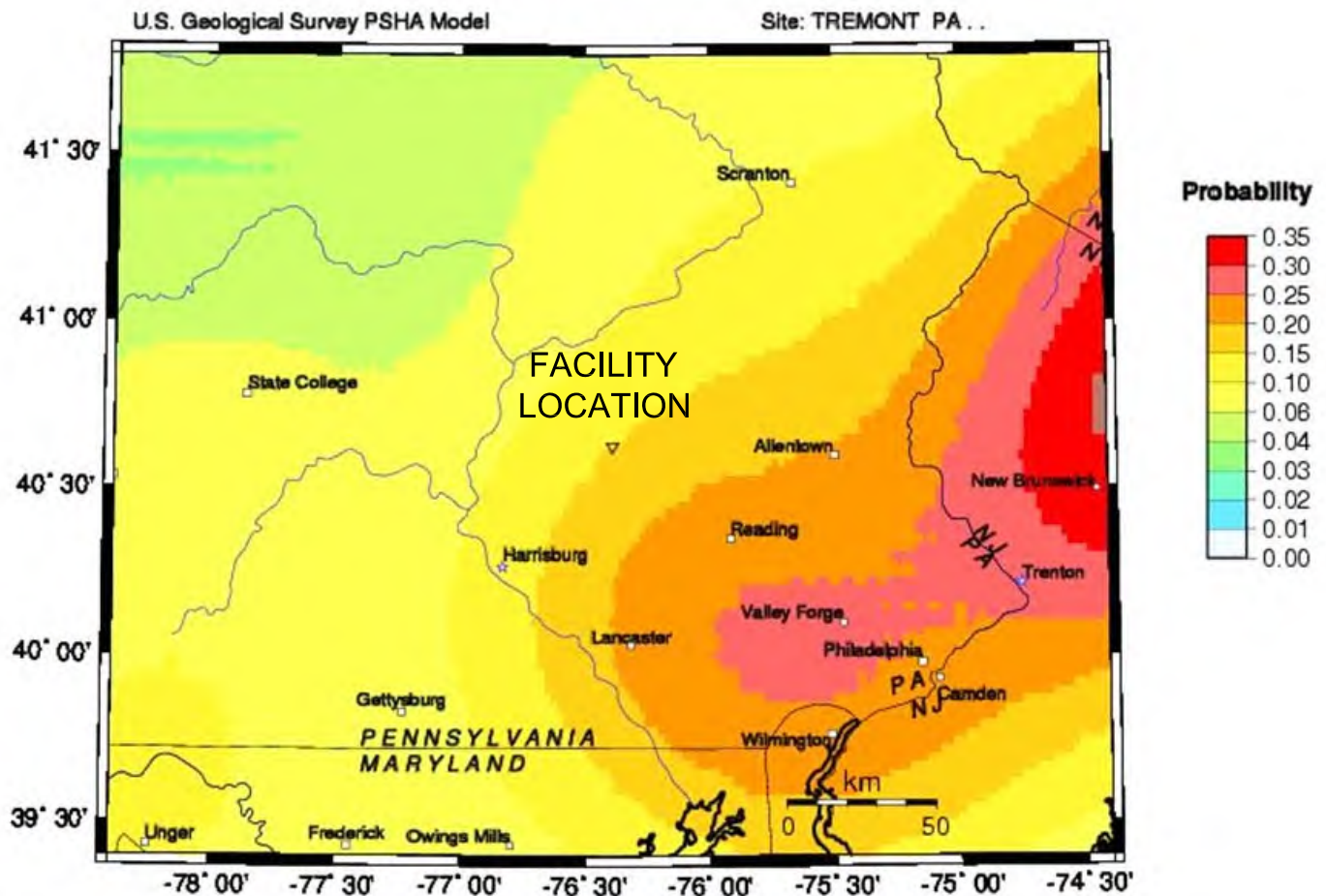
Attachment A

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

Figure A-1 Seismic Probability

Probability of earthquake with $M \geq 4.75$ within 250 years & 50 km



GMT 2011 Jan 4 21:29:24 Earthquake probabilities from USGS OFR_02-420 PSHA, 50 km maximum horizontal distance. Site of Interest: triangle. Epicenters mb-S black circles; rivers blue.

SEISMIC PROBABILITY BLACKWOOD FARMS CLASS A BIOSOLIDS MANAGEMENT FACILITY

WECARE ORGANICS ,LLC

EnSol, Inc.
Environmental Solutions

661 MAIN STREET
NIAGARA FALLS, NY 14301
PHONE (716) 285-3920
FAX (716) 285-3928

FEBRUARY 2011

PN: 02-0015

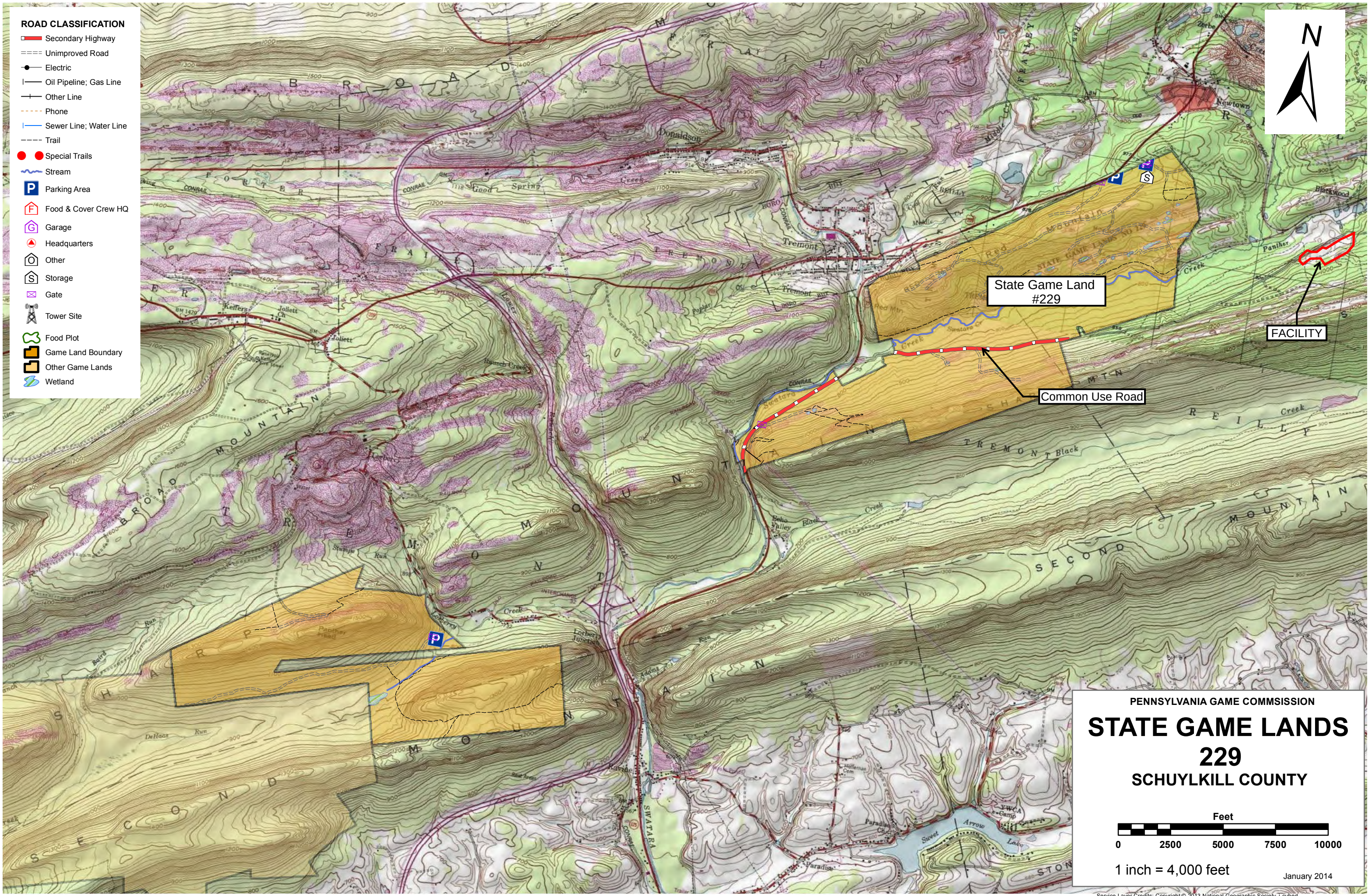
**FIGURE
A-1**

Attachment E

EnSol, Inc.

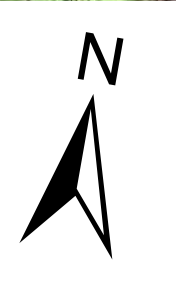
ENGINEERING + ENVIRONMENTAL

State Game Land Map



ROAD CLASSIFICATION

- Secondary Highway
- Unimproved Road
- Electric
- Oil Pipeline; Gas Line
- Other Line
- Phone
- Sewer Line; Water Line
- Trail
- Special Trails
- Stream
- Parking Area
- Food & Cover Crew HQ
- Garage
- Headquarters
- Other
- Storage
- Gate
- Tower Site
- Food Plot
- Game Land Boundary
- Other Game Lands
- Wetland

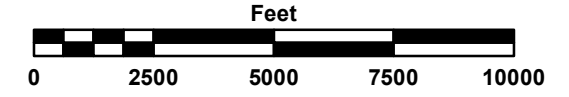


State Game Land
#229

FACILITY

Common Use Road

PENNSYLVANIA GAME COMMISSION
STATE GAME LANDS
229
SCHUYLKILL COUNTY



1 inch = 4,000 feet
January 2014



Each time a hunter buys a hunting license, the money he spends goes toward many facets of wildlife management. Since 1920, close to a million and a half acres of State Game Lands have been acquired with these funds. Each year nearly \$7,000,000 is spent to improve wildlife habitat. Habitat improvements enhance living conditions for non-game birds and mammals as well as those species which are hunted. Pennsylvania hunters willingly share these lands with the non-hunting public, and with few exceptions, State Game Lands are open for general use year round. Surveys indicate that hunting accounts for only thirty-five percent of game land usage. The remaining sixty-five percent is used by the general public for non-hunting purposes.

“Working Together for Wildlife” is a Game Commission program providing everyone an opportunity to help support wildlife management in the areas for endangered and non-game animals. Monies derived from the “Working Together for Wildlife” Program are being used in Pennsylvania to re-introduce the osprey, river otter, bald eagle, peregrine falcon and provide habitat for other birds and mammals indigenous to the Commonwealth. Construction placement of blue bird houses on State Game Lands provides needed homes for this beautiful songbird. Islands in the Susquehanna River have been set aside as propagations areas for non-game shore birds. Numerous other projects are planned on State Game Lands and other public

SPORTSMEN'S RECREATION MAP



STATE GAME LANDS
No. 229
SCHUYLKILL COUNTY

COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA GAME COMMISSION

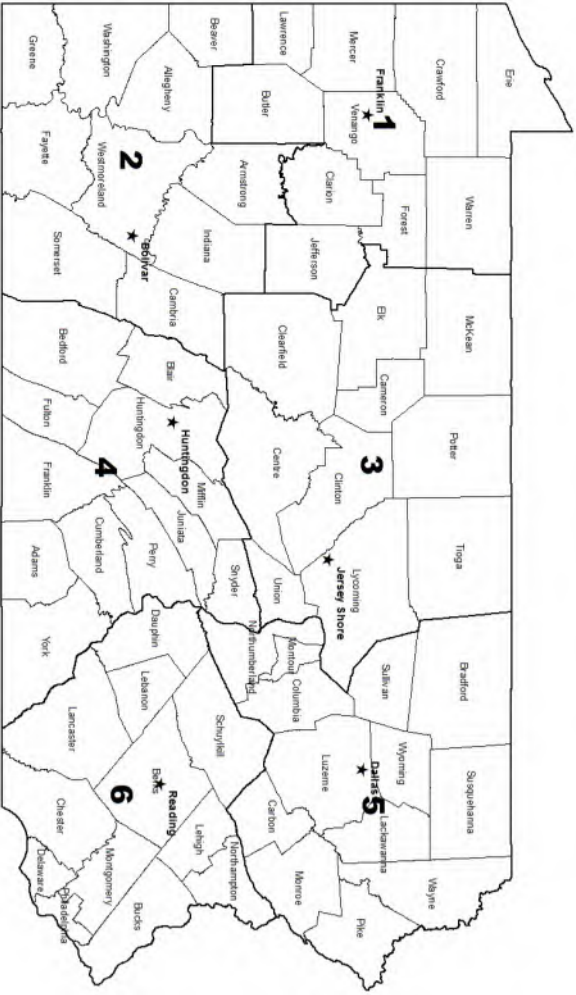
SGL 229 is 2,891 acres located in Western Schuylkill County in the townships of Pine Grove, Reilly and Tremont Townships. State Game Lands 229 is located in the Pennsylvania Game Commission's Southeast Region Wildlife Management Unit 4C.

The Game Land's two separate compartments are easily accessed via state roads and township roads. The Pennsylvania Game Commission currently maintains one parking lot on the western parcel of SGL 229 and five lots on the eastern section. There are 6.8 miles of maintained administrative roads providing for public access to the game lands by foot and vehicles. There are no designated routes for horseback riding, mountain biking or snowmobiling.

The property is situated along high ridges and deep valleys. Red Mountain and Sharp Mountain are divided by the Swatara Creek drainage at the eastern section while Loreberry Creek separates Second Mountain and Sharp Mountain in the western parcel. Elevation ranges from 1300 feet at the summit of Second and Sharp Mountains to 700 feet in both stream drainages.

This Game Land is situated entirely in Wildlife Management Unit 4C. Both big game and small game are hunted on SGL 229. Deer, stocked pheasants, black bear, turkey, grouse, rabbits and squirrels are found here. Coyotes, foxes and raccoons are actively trapped on the game lands.

Public utilization of this game lands is very extensive. Sport hunting for game species is not the only major activity. Intensive public activity can be found year round. Hiking and bird watching are the primary non-consumptive activities that take place on the game lands.



	FOR FURTHER INFORMATION CONTACT THE FOLLOWING:
1	NORTHWEST REGIONAL HEADQUARTERS MPOH tUláóúúú wR, FRANKLIN, PA 16323 814-432-3187 814-432-3188
2	SOUTHWEST REGIONAL HEADQUARTERS 4820 ROUTE 711, BOUCAR, PA 15923 724-238-9523 724-238-9524
3	NORTCENTRAL REGIONAL HEADQUARTERS MPCC { w2húúú m l ðë, JERSEY SHORE, PA 17740 570-398-4744 570-398-4745 814-643-1831 814-643-1835
4	SOUTHCENTRAL REGIONAL HEADQUARTERS 8627 WILLIAM PENN HWY, HUNTINGDON, PA 16652 570-675-1143 570-675-1144
5	NORTHEAST REGIONAL HEADQUARTERS 3917 MEMORIAL HWY, DALLAS, PA 18612 610-926-3136 610-926-3137
6	SOUTHEAST REGIONAL HEADQUARTERS 253 SNYDER RD, READING, PA 19605

Attachment J-1

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

Highway Occupancy Permit #05055171

Highway Occupancy Permit

Permit No.: **05055171**

Name and Address of Permittee: WeCare Organics Northeast, LLC 661 Main Street Niagara Falls, NY 14301	County: Schuylkill	Issue Date: 8/27/2018
	County Contact No.: (570) 385-0811	Expiration Date: 8/27/2019
	Issuing District Office: 5-0	Application No.: 155110
	District Contact No.: (610) 871-4167	Account No.:
	Municipalities: Tremont Township	Permit Fee: \$ 50.00

Immediately upon completion of the work Permittee shall notify the permit office where application was made. Subject to all the conditions, agreements, restrictions, and regulations prescribed by the Pennsylvania Department of Transportation, (see in particular 67 Pa. Code, Chapter 212, 441 and 459 and State Highway Law, 36 P.S. Section 670 - 411, 420 and 421) and subject to the plans, special conditions, or restrictions herein set forth or attached hereto. This permit shall be located at the work site and shall be available for inspection by any police officer or Department representative.

Location and Description of Work		Permit No.: 05055171
1 of 2	State Route #: 0125 Segment(s): From 0120 To 0120 Offset(s): From 2728 To 2728	521: Install Low Volume Driveway
2 of 2	State Route #: 0125 Segment(s): From 0120 To 0120 Offset(s): From 2594 To 2966	171: Perform Roadway Improvement

Permit Conditions		Permit No.: 05055171
1 of 27	MATERIAL CERTIFICATIONS MUST BE PROVIDED, BY AN APPROVED MANUFACTURER LISTED IN THE DEPARTMENTS PUBLICATION 35 BULLETIN 15, FOR ALL MATERIALS AND STRUCTURES WITHIN PENN DOT R/W.	
2 of 27	THIS PERMIT IS LIMITED TO AN ANTICIPATED ADT OF 132, OR 66 VEHICLES PER DAY. WHEN THE TRAFFIC ENTERING AND EXITING THE PROPERTY EXCEEDS THIS AMOUNT, A NEW PERMIT MUST BE OBTAINED. IF THE USE OF THE PROPERTY CHANGES, A NEW PERMIT MUST BE OBTAINED.	
3 of 27	IF THE PROPERTIES ARE SOLD, THE PERMIT MUST BE TRANSFERRED INTO THE NEW PROPERTY OWNER NAMES.	
4 of 27	PERMITTEE MUST NOTIFY THE COUNTY PERMIT OFFICE AT 570-385-0811 AT LEAST FOURTEEN (14) BUSINESS DAYS IN ADVANCE OF ANY LANE RESTRICTION OR DETOUR.	
5 of 27	ALL PERMANENT SIGNS ERECTED MUST BE FABRICATED BY AN APPROVED SIGN MANUFACTURER LISTED IN THE DEPARTMENTS PUBLICATION 35, BULLETIN 15.	
6 of 27	PERMITTEE IS RESPONSIBLE FOR ENSURING THAT MUD, SILT AND OTHER DEBRIS IS REMOVED FROM VEHICLES AND TIRES (BY POWER WASH, ETC.) BEFORE ENTERING ONTO THE HIGHWAY.	
7 of 27	DEPARTMENT MUST BE NOTIFIED IN WRITING TWO WEEKS IN ADVANCE OF PRE-CONSTRUCTION MEETING.	
8 of 27	GUIDE RAIL MUST BE INSTALLED IN ACCORDANCE WITH DEPARTMENT'S ROADWAY CONSTRUCTION STANDARDS.	

Highway Occupancy Permit

Permit No.: **05055171**

Permit Conditions		Permit No.: 05055171
9 of 27	LANE CLOSURES WILL NOT BE PERMITTED DURING THE FOLLOWING PERIODS: EASTER WEEKEND - FRIDAY 6:00AM TO TUESDAY 9:00AM; MEMORIAL DAY WEEKEND - FRIDAY 6:00AM TO TUESDAY 9:00AM; FOURTH OF JULY HOLIDAY - REQUEST INFORMATION FROM DISTRICT OR COUNTY PERMIT OFFICE; LABOR DAY WEEKEND - FRIDAY 6:00AM TO TUESDAY 9:00AM; COLUMBUS DAY WEEKEND FRIDAY 6:00AM TO MONDAY 9:00AM; THANKSGIVING WEEKEND -WEDNESDAY 6:00AM TO MONDAY 9:00AM; CHRISTMAS HOLIDAY-DECEMBER REQUEST INFORMATION FROM DISTRICT OR COUNTY PERMIT OFFICE; NEW YEARS HOLIDAY - REQUEST INFORMATION FROM DISTRICT OR COUNTY PERMIT OFFICE. THERE MAY BE ADDITIONAL TRAFFIC RESTRICTIONS FOR SPECIAL EVENTS THAT ATTRACT LARGE VOLUMES OF TRAFFIC IN THE AREA OF THE HOP.	
10 of 27	NO LANES MAY BE RESTRICTED BETWEEN THE HOURS OF 6:00 AM TO 9:00 AM OR BETWEEN THE HOURS OF 3:00 PM TO 6:00 PM.	
11 of 27	MINIMUM WORK ZONE TRAFFIC CONTROL TO BE IN ACCORDANCE WITH PUB. 213, FIGURE(S): 101, 102, 201. SEE PUB 212 FOR ADDITIONAL DETAILS.	
12 of 27	ALL DISTURBED AREAS OUTSIDE THE PAVEMENT OR SHOULDER SHALL BE RESTORED TO A CONDITION AT LEAST EQUAL TO THAT WHICH EXISTED BEFORE THE START OF WORK.	
13 of 27	ACCESS SIGNING AND PAVEMENT MARKINGS MUST BE MAINTAINED BY PERMITTEE.	
14 of 27	PERMITTEE MUST MAINTAIN ACCESS FROM THE PAVEMENT EDGE TO AT LEAST 20 FEET OUTSIDE THE HIGHWAY RIGHT OF WAY.	
15 of 27	THIS PERMIT DOES NOT AUTHORIZE DRAIN PIPE TO BE INSTALLED ACROSS ANY DRIVEWAY.	
16 of 27	SURFACE DRAINAGE MAY NOT BE DIRECTED ONTO STATE HIGHWAY RIGHT OF WAY.	
17 of 27	DEPARTMENT MUST BE NOTIFIED IN WRITING UPON COMPLETION OF WORK.	
18 of 27	IT IS THE PERMITTEE'S RESPONSIBILITY TO KEEP VEGETATION TRIMMED IN ORDER TO MAINTAIN MINIMUM SIGHT DISTANCE. NO OBJECTS MAY BE PLACED WITHIN THE LINE OF SIGHT.	
19 of 27	GUIDE RAIL END TREATMENTS MUST BE INSTALLED IN ACCORDANCE WITH DEPARTMENT R.C.54 STANDARDS ON THE SAME DAY AS EXISTING GUIDE RAIL IS REMOVED.	
20 of 27	THIS PERMIT AUTHORIZES WORK ONLY IN DEPARTMENT HIGHWAY RIGHT OF WAY.	
21 of 27	AN INSPECTOR, WHEN AVAILABLE, WILL BE ASSIGNED ON MORE THAN A SPOT INSPECTION BASIS. PERMITTEE WILL BE CHARGED ALL INSPECTION COSTS INCURRED BY THE DEPARTMENT.	
22 of 27	A CERTIFICATE OF INSURANCE SHALL BE SUBMITTED TO THE DEPT. BY THE PERMITTEE OR ITS CONTRACTOR 30 DAYS PRIOR TO START OF WORK.	
23 of 27	PERMITTEE SHALL PROVIDE SECURITY IN A FORM ACCEPTABLE TO THE DEPARTMENT, IN THE AMOUNT OF: \$179,219.00 PRIOR TO START OF WORK WITHIN THE RIGHT OF WAY.	
24 of 27	CONTACT COUNTY PERMIT INSPECTOR AT LEAST 3 WORK DAYS IN ADVANCE OF PAVING A DRIVEWAY/LOCAL ROAD OR POURING CURB OR SIDEWALK AT 570-385-0811.	
25 of 27	CONTACT COUNTY PERMIT INSPECTOR AT LEAST 3 WORK DAYS PRIOR TO START OF WORK AT 570-385-0811.	

Highway Occupancy Permit

Permit No.: 05055171

Permit Conditions		Permit No.: 05055171
26 of 27	PERMITTEE'S CONTRACTOR MUST PROVIDE PROPOSED WORK SCHEDULE 3 DAYS BEFORE START OF WORK. ALSO, PROVIDE AN EMERGENCY PHONE CONTACT NUMBER TO THE DEPARTMENT.	
27 of 27	PERMITTEE MUST NOTIFY THE DISTRICT CRC OFFICE AT 610-871-4555 THREE (3) DAYS IN ADVANCE OF A LANE CLOSURE OR DETOUR.	

Acknowledgement of Completion Permit work has been completed: Date: By:	Leslie S. Richards
	Secretary of Transportation
	Michael W. Rebert, P.E.
	District Executive

Highway Occupancy Permit Supplement

Supplement No.: **05055171- 01**

The original permit, bearing number shown on this supplement, was issued to: WeCare Organics Northeast, LLC 661 Main Street Niagara Falls, NY 14301	Original Permit No.: 05055171	Supplement Type: Time Extension
	County: Schuylkill	Supplement Issue Date: 8/5/2019
	Issuing District Office: 5-0	Permit Expiration Date: 8/27/2020
	District Contact No.: (610) 871-4167	Application No.: 155110-01
	Municipalities: Tremont Township	Account No.: Supplement Fee: \$ 20.00

Commonwealth of Pennsylvania

Under and subject to all the minimum conditions and regulations prescribed by the PA Department of Transportation (see in particular 67 PA Code, Chapter 441 and 459) and on the original permit.

Supplement Description : Time Extension	Supplement No.: 05055171-01
Extend HOP 05055171 for 12 months. Current Expiration Date: 08/27/2019. New Expiration Date: 08/27/2020.	

Leslie S. Richards

Secretary of Transportation

Michael W. Rebert, P.E.

District Executive

Attachment J-2

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

***PA DOT 6/13/22 email re: no permit modification
required***

Funk, Jarrod

From: Boyer, Brian (District 5) <BRIBOYER@pa.gov>
Sent: Monday, June 13, 2022 2:12 PM
To: Hoffman, Rob
Cc: Funk, Jarrod; Klingel, Brett M
Subject: RE: [External] Blackwood Biosolids-#05055171

CAUTION: External email - do not click links or open attachments unless you recognize the sender and know the content is safe.

Rob,

I apologize for this request being lost and no comment being provided previously.

In response, the Department does not have any comments/issues with the proposed tonnage increase for the facility given the traffic counts for the existing facility and trip projections based on that rate. The Department agrees that the anticipated weekday trips will generally be similar to the permitted ADT and the permit does not need to be modified. We will make this part of the permanent file. Thanks.

Brian J. Boyer | Assistant District Traffic & Operations Manager
PA Department of Transportation
Engineering District 5-0
1002 Hamilton Street | Allentown, PA 18101
Phone: 610-871-4477 | Fax: 610-871-4614
www.dot.state.pa.us

From: Hoffman, Rob <rhoffman@trafficpd.com>
Sent: Tuesday, January 25, 2022 8:37 AM
To: Boyer, Brian (District 5) <BRIBOYER@pa.gov>
Cc: Klingel, Brett M <bklingel@pa.gov>; Funk, Jarrod <jfunk@trafficpd.com>
Subject: [External] Blackwood Biosolids-#05055171

ATTENTION: This email message is from an external sender. Do not open links or attachments from unknown sources. To report suspicious email, forward the message as an attachment to CWOPA_SPAM@pa.gov.

Brian,

Following up on our previous conversation regarding the WeCare Organics Northeast, LLC Blackwood's Farms Biosolids Facility in Tremont Township, Schuylkill County I have compiled the attached information for your review. As noted in previous correspondence, the attached permit (05055171) was issued for this site in 2019 for a low volume driveway. The permit was issued based on an anticipated ADT of **132 trips (66 vehicles)** per day. The driveway has been constructed and the site is now operational. Based on discussions with the applicant it is our understanding that the site is currently operating on a lower tonnage basis than what was assumed in the traffic study for the project.

Attached is a spreadsheet from the applicant labeled "Traffic Study Projections". I have provided a summary of that information below:

1. The existing WOF site transports approximately 420 tons of product on an average day and based on that tonnage, the applicant estimates approximately **92 trips per day/46 vehicles** per day for the site.
2. The expansion is proposing to transport an additional 240 tons (total of 660 tons) of product on an average day, in which the applicant estimates approximately **150 trips per day/75 vehicles per day**.
3. It should be noted that the applicant indicated that there are occasionally days when the site needs to “play catch up”, due to lower days associated with issues such as bad weather. However, even on those days, it’s a slight uptick in traffic as the applicant estimates the number of trips per day would be approximately **200 trips per day / 100 vehicles per day**. This is **not** considered an average typical day and will occur on an infrequent basis.

Existing Traffic Count

TPD conducted 24-hour traffic counts at the Blackwood’s Farms Biosolids Existing Site Driveway located along S.R. 0125. The table below summarizes the traffic counts at the existing site driveway. It should be noted that TPD conducted counts on two (2) average typical days for the facility (counts attached).

EXISTING TRIP GENERATION

24-Hour Count Date	Existing Blackwood Farms Biosolids Facility		
	Enter	Exit	Total
Wednesday, December 15, 2021	53	53	106 ¹
Thursday, December 16, 2021	50	50	100

1= highest day used in calculations (106 trips / 53 vehicles per day)

As shown in the table, the site generates approximately 106 trips per day (53 vehicles). Based on the existing tonnage (420 tons) per day. This equates to approximately **0.252 trips/ton**.

If we apply the above rate (0.252) to the proposed expansion (660 total tons), this equates to approximately **166 trips per day (83 vehicles)** on a typical average day with the expansion. With the overall planned expansion, the site driveway would see a slight increase in traffic on a daily basis above the permitted driveway volume of 132 trips (66 vehicles) per day, to approximately 166 trips (83 vehicles) per day. In our opinion, this is a minimal increase in traffic and still well within the limits of a low volume driveway. The increased operations result in only 34 additional trips per day.

Based on this information, can you please confirm if any additional action is required with respect to the permit? If you have any questions, please do not hesitate to contact me.

Thanks,

Rob

Robert Hoffman, P.E., PTOE, Regional Manager



TRAFFIC PLANNING AND DESIGN, INC.

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Attachment J-3

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

July 2018 Transportation Impact Assessment



TRAFFIC PLANNING AND DESIGN, INC.



Blackwood Farms Biosolids Facility

Transportation Impact Assessment

Tremont Township, Schuylkill County, PA

For Submission to:

PennDOT District 5-0 & Tremont Township

BLACKWOOD FARMS BIOSOLIDS FACILITY TRANSPORTATION IMPACT ASSESSMENT

FOR SUBMISSION TO:

Tremont Township, Schuylkill County, PA

Prepared For:

WeCare Organics Northeast, LLC
9289 Bonata Bridge Road
Jordan, NY 13080
P: (716) 285-3920

February 26, 2018

April 18, 2018

Last Revised: July 31, 2018

TPD # ENSI.00001

PennDOT ePS #155110



TRAFFIC PLANNING AND DESIGN, INC.

Prepared By:

Traffic Planning and Design, Inc.
812 W. Hamilton Street, Suite 402
Allentown, PA 18101

Phone: (610) 625-4242

E-mail: TPD@TrafficPD.com

Web Site: www.trafficpd.com



Robert Hoffman, P.E., PTOE

Senior Project Manager

Pennsylvania License Number PE 075571

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Appendix B:	Traffic Count Data Worksheets
Appendix C:	Traffic Volume Development Worksheets
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Appendix E:	Auxiliary Turn Lane Warrant Analysis Worksheets

EXECUTIVE SUMMARY

The purpose of this study is to examine the potential traffic impact associated of the proposed Blackwood Farms Biosolids Facility on the surrounding roadway network in Tremont Township, Schuylkill County, PA. It should be noted that this Traffic Impact Assessment was prepared under the guidance of the PADEP From D(M), Section J and in accordance with PennDOT's Publication 282, Appendix A, dated July, 2017. Based on this evaluation, the following conclusions were reached:

1. The site for the proposed facility is located on the eastern side of Tremont Road (S.R. 0125), approximately 2.6 miles north of Molleystown Road (S.R. 3013). Access to the site will be provided by one full-access driveway on Tremont Road (SR 0125);
2. Truck traffic generated by the proposed site will access S.R. 3013 from the Interstate 81 northbound and southbound on/off ramps. Trucks traveling from the I-81 southbound on/off ramps perform a right-turn movement onto eastbound S.R. 3013. At approximately 0.5 miles, S.R. 3013 intersects with the I-81 northbound on/off ramps, and trucks traveling to the site which utilize the I-81 northbound on/off ramps also perform a right-turn movement onto eastbound S.R. 3013. Trucks travel on S.R. 3013 to the intersection with Tremont Road (S.R. 0125) and perform a left-turn movement onto Tremont Road (SR 0125). The segment of Tremont Road (S.R. 0125) between S.R. 3013 and the site driveway is approximately 2.6 miles. From Tremont Road (S.R. 125), trucks perform a right-turn movement into the site driveway;
3. The proposed site will generate 54 new truck-trips and 12 new employee passenger cars for a total of **66 trips** during the weekday A.M. peak hour (**approximately 1 new vehicle-trip every minute**) and 54 new truck-trips and 12 new employee passenger cars for a total of **66 trips** during the weekday P.M. peak hour (**approximately 1 new vehicle-trip every minute**);
4. The proposed site driveway will exceed PennDOT's Safe Stopping Sight Distance (SSSD) criteria requirements.
5. Under the 2020 projected conditions, all approaches and turning movements at the site driveway intersection with the external roadway network will operate at **LOS B or better** during weekday A.M. and weekday P.M. peak hours. All overall intersection levels of service (ILOS) will operate at an acceptable **ILOS A** during the 2020 projected condition scenarios;
6. Traffic Planning and Design Inc. (TPD) recommends the following roadway improvements as outlined at the Site driveway:

Tremont Road (S.R. 0125) & Blackwood Road/Proposed Site Driveway

- o Realign the driveway to intersect Tremont Road (S.R. 0125) at a 90 degree angle.
 - o Modify the existing site driveway to improve pavement structure per PennDOT standards and pavement markings to delineate ingress and egress lanes. Intersection turning radii should be maintained to facilitate safe and efficient right-turn movements for vehicles traveling northbound on Tremont Road (S.R 0125) and accessing the site;
 - o Provide a stop sign (PennDOT designation R1-1) to control traffic.
7. Levels of Service (LOS) for the study area intersections have been summarized in matrix form in **Table I**. Likewise, the 95th percentile queue lengths for the study are intersection have been summarized in **Table II**.

TABLE I
LEVELS OF SERVICE SUMMARY

Intersection	Movement	Weekday A.M. Peak Hour		
		Existing Conditions	Year 2020	
			Base	Projected
Tremont Road (S.R. 0125) & Blackwood Road/Proposed Site Driveway	WB L/R	A	A	B
	SB L/T	A	A	A
	ILOS	A (0.0)	A (0.0)	A (1.1)
Intersection	Movement	Weekday P.M. Peak Hour		
		Existing Conditions	Year 2020	
			Base	Projected
Tremont Road (S.R. 0125) & Blackwood Road/Proposed Site Driveway	WB L/R	A	A	A
	SB L/T	A	A	B
	ILOS	A (0.1)	A (0.1)	A (1.2)

Base = No-Build scenario / Projected = Build scenario

TABLE II
95TH PERCENTILE QUEUE ANALYSIS

Intersection	Movement	Weekday A.M. Peak Hour		
		Existing Conditions	Year 2020	
			Base	Projected
Tremont Road (S.R. 0125) & Blackwood Road/Proposed Site Driveway	WB L/R	0	0	5
	SB L/T	0	0	0
Intersection	Movement	Weekday P.M. Peak Hour		
		Existing Conditions	Year 2020	
			Base	Projected
Tremont Road (S.R. 0125) & Blackwood Road/Proposed Site Driveway	WB L/R	0	0	8
	SB L/T	0	0	0

Base = No-Build scenario / Projected = Build scenario

INTRODUCTION

Traffic Planning and Design, Inc. (TPD) has completed a Transportation Impact Assessment (TIA) for the proposed Blackwood Farms Biosolids Processing Facility in Tremont Township, Schuylkill County, PA. The project site is located on the eastern side of Tremont Road (S.R. 0125), approximately 2.6 miles north of Molleystown Road (S.R. 3013), at the former Blackwood Mining site as shown in **Figure 1**. The land use context of the site and surrounding area is defined as Rural in the Smart Transportation Guidebook, dated March 2008. The proposed development will consist of a biosolids processing facility, as shown in **Figure 2**.

This report has been prepared in accordance with PennDOT's *Policies and Procedures for Transportation Impact Studies*, found in PennDOT's Publication 282, Appendix A, dated July, 2017. The project scope and the extent of the study area were confirmed with representatives of PennDOT. All relevant correspondence pertaining to this project has been included in **Appendix A**.

Site Access Locations

Access to the site is currently provided by one full-access driveway on Tremont Road (S.R. 0125), located approximately 2.6 miles north of the intersection of Molleystown Road (S.R. 3013). This driveway is located at the former Blackwood Mining site driveway and will utilize the existing alignment. The existing driveway should be realigned to intersect Tremont Road (S.R. 0125) at a 90 degree angle. The turning radii should be maintained to facilitate safe and efficient right-turn movements for vehicles traveling northbound on Tremont Road (S.R. 0125) and accessing the site. It should be noted that the pavement structure of the existing driveway is deteriorated.

APPROACH ROUTES FOR TRUCKS ENTERING/EXITING THE SITE

Truck traffic generated by the proposed site will access Molleystown Road (S.R. 3013) from the Interstate 81 northbound and southbound on/off ramps.

Trucks Entering the Site

From the I-81 southbound on/off ramps and traveling to the site, trucks will perform a right-turn movement onto eastbound S.R. 3013 at the unsignalized intersection. At approximately 0.5 miles, S.R. 3013 intersects with the I-81 northbound on/off ramps to form an unsignalized intersection. Trucks traveling to the site which utilize the I-81 northbound on/off ramps also perform a right-turn movement onto eastbound S.R. 3013.

Trucks travel on S.R. 3013 to the unsignalized intersection with Tremont Road (S.R. 0125). Vehicles perform a left-turn movement onto Tremont Road (S.R. 0125). The segment of Tremont Road (S.R. 0125) between S.R. 3013 and the site driveway is approximately 2.6 miles. From Tremont Road (S.R. 0125), trucks perform a right-turn movement into the site driveway.

Trucks Exiting the Site

From the site driveway, trucks perform a left-turn movement onto southbound Tremont Road (S.R. 0125) and continue toward S.R. 3013. At the intersection of Tremont Road (S.R. 0125) and S.R. 3013, trucks perform a right-turn movement toward the I-81 ramps. Trucks desiring to travel northbound on I-81 perform a left-turn movement onto the northbound I-81 On ramps, while trucks desiring to travel southbound on I-81 continue approximately 0.5 miles on S.R. 3013 and perform a left-turn movement onto the southbound I-81 On ramp.

EXISTING ROADWAY NETWORK

A field review of the existing roadway system in the study area was conducted. The existing roadway characteristics within the study area are summarized in **Table 1**.

TABLE 1
ROADWAY CHARACTERISTICS WITHIN STUDY AREA

Roadway	Ownership	Functional Classification/ Roadway Type	Predominant Directional Orientation	Average Daily Traffic ¹	Posted Speed Limit
Tremont Road (S.R. 0125)	State	Rural Collector Roadway	North-South	3,839 (Bi-directional) ¹	55 mph

¹= ADT information taken from PennDOT's ITMS website in January, 2018.

Land Use Context

In Chapter 4 of the *Smart Transportation Guidebook*, dated March 2008, there is guidance pertaining to defining the land use context(s) for a given area. Based upon review of this information, the land uses

Rural, "consists of few houses and structures dotting a farm or forest landscape. The areas are predominately wetlands, woodlands, meadow or cultivated land. Small markets, gas stations, diners, farm supplies, convenience grocers, etc. are often seen at the intersections of arterial or collector road . . . Once the population of the settled area exceeds 250, it should be classified in the town/village context."

Roadway Type

In Chapter 5 of the *Smart Transportation Guidebook*, there is guidance pertaining to defining the transportation context(s) for a given area. Comparing the existing condition roadway characteristics to the various options presented in Table 5.1 of the *Smart Transportation Guidebook*, the study area roadways best fit the following categories, as described below:

Community Collector, traffic volumes of 5,000 to 15,000 vehicles per day, intersection spacing of 300 to 660 feet, a desired operating speed of 25-55 mph, and a description as follows: "often similar in appearance to a community arterial. Typically classified as Major Collector."

- Tremont Road (S.R.0125).

EXISTING TRAFFIC CONDITIONS

Manual Turning Movement Counts

Manual traffic counts were conducted on 15-minute intervals during the weekday morning (7:00 to 9:00 A.M.) and weekday evening (4:00 to 6:00 P.M.) peak periods. Data pertaining to heavy vehicles, pedestrians and transit vehicles were observed during the manual counts. Peak hours and count dates for the study

area intersections are identified in **Table 2**. Existing condition traffic volumes for the weekday A.M. and the weekday P.M. peak hours are illustrated in **Figure 3**.

TABLE 2
MANUAL TRAFFIC COUNT INFORMATION

Intersection	Date of Traffic Counts	Time Period	Intersection Peak Hour ¹
Tremont Township (S.R. 0125) & Blackwood Road/Proposed Site Driveway	Tuesday, October 31 st , 2017	Weekday A.M.	7:00 to 8:00 A.M.
		Weekday P.M.	4:30 to 5:30 P.M.

¹=Peak Hour consists of the four consecutive 15-minute intervals where the highest traffic volumes occur.

BASE (NO-BUILD) CONDITIONS

Annual Background Growth

A background growth factor for the roadways in the study area was developed based on growth factors for September 2017 to July 2018 obtained from the PennDOT Bureau of Planning and Research (BPR). The PennDOT BPR suggests using a background growth trend factor of 0.36% per year in Schuylkill County for rural non-interstate roadways. As such, the background growth factor was applied annually to yield overall growth percentages of 1.011% (0.36% per year, compounded over 3 years) for the 2020 opening year.

The additional traffic volumes due to background growth were added to the 2017 existing traffic data to produce 2020 base (no-build) condition traffic volumes. Base condition volumes for the weekday A.M. and weekday P.M. peak hours are illustrated in **Figure 4** for the 2020 opening year conditions.

SCHEDULED ROADWAY IMPROVEMENTS

Based on a review of the Pennsylvania Transportation Improvement Program (TIP), there are programmed roadway improvements in the vicinity of the proposed site. There are programmed improvements scheduled for the PA 125 / Swarta Creek Bridge. The project involves a replacement / Rehabilitation of the bridge that carries Tremont Road (SR 0125) over Swarta Creek in Tremont Township Schuylkill County, PA. These improvements are expected to cost a total of \$2,485,175 and are estimated to begin in August, 2021.

PROPOSED SITE ACCESS

Access to the site is currently provided by one full-access driveway on Tremont Road (S.R. 0125), located approximately 2.6 miles north of the intersection of Molleystown Road (S.R. 3013). This driveway is located at the former Blackwood Mining site driveway and will utilize the existing alignment. The existing driveway should be realigned to intersect Tremont Road (S.R. 0125) at a 90 degree angle. The wide turning radii should be maintained to facilitate safe and efficient right-turn movements for vehicles traveling northbound on Tremont Road (S.R. 0125) and accessing the site. It should be noted that the pavement structure of the existing driveway is deteriorated.

Sight Distance Analysis

Safe Stopping Sight Distance (SSSD)

A sight distance analysis was prepared for the proposed site driveway. In general, recommended safe sight distances depend upon the posted speed limit and roadway grades. The existing sight distances at the proposed driveways were measured in accordance with PennDOT Publication 282 Highway Occupancy Permit Guidelines and compared to PennDOT's desirable sight distance standard, which is identified in 67 PA Code Chapter 441.8(h), "Access to and Occupancy of Highways by Driveways and Local Roads." In addition, measured sight distances at the proposed driveways were compared to PennDOT's safe stopping sight distance standard, which is calculated by the following equation:

$$SSSD = 1.47VT + V^2/[30(f \pm g)]$$

SSSD = safe stopping sight distance (acceptable sight distance)

V = Vehicle Speed

T = Perception Reaction Time of Driver (2.5 seconds)

f = Coefficient of Friction for Wet Pavements

g = Percent of Roadway Grade Divided by 100

Intersection Sight Distance (ISD)

In addition, a sight distance analysis was prepared for the proposed site driveway in accordance with the intersection sight distance (ISD) standards in A Policy on Geometric design of Highways and Streets, an AASHTO publication. The required intersection sight distance was calculated based upon the 2011 AASHTO book, Chapter 9. For the proposed site driveway intersection, TPD calculated intersection sight distance (ISD). The required intersection sight distance was calculated for Case B1 (left turns from major road), Case B2 (right turns from major road) and Case F (left-turn from major road).

Tables 3 show the measured, acceptable (Safe Stopping Sight Distance (SSSD)), intersection sight distance (ISD) requirements at the site driveways for vehicles entering and exiting the site.

TABLE 3
SIGHT DISTANCE ANALYSIS
UNSIGNALIZED SITE DRIVEWAY TO TREMONT ROAD (S.R. 0125)

	Direction	Speed	Grade ¹ (SSSD)	Grade ² (ISD)	Sight Distances (feet)		
					ISD ³	SSSD	EXIST
Exiting Movements	To the left	55 mph	-2%	+3%	(Case B1) 990'	562	806'
	To the right	55 mph	+1%	+3%	(Case B2) 990'	527	605'
Entering Left Turns	Approaching same direction	55 mph	+1%	+3%	--	527	540'
	Approaching opposite direction	55 mph	-2%	+3%	(Case F) 610'	562	600+

DES = PennDOT Desirable Sight Distance

SSSD = PennDOT Acceptable Sight Distance

EXIST = Existing (measured) Sight Distance

ISD = Intersection Sight Distance

1 = Roadway Grade for Approaching Roadway (SSSD)

2 = Roadway Grade for Site Driveway approach (ISD)

3 = ISD for Combination Trucks (worst case)

As shown in **Tables 3** above, the measured sight distances at the site driveways exceed PennDOT's safe stopping sight distance requirements.

TRIP GENERATION

TPD determined trip generation for the proposed Blackwood Farms Biosolids Facility based upon information obtained from the client. The following activities are anticipated to be performed at the proposed site, and the associated truck traffic, are shown in **Table 4**. It should be noted that **each truck is anticipated to accommodate a maximum of 22 tons per load.**

TABLE 4
ITE TRIP GENERATION DATA
BIOSOLIDS PROCESSING FACILITY

Operation	Activity	Tons	Total Trucks
Biosolids Processing Facility	Biosolids / Admixtures (Drop-off)	500	*23
Biosolids Processing Facility	Biosolids / Admixtures (Pick-Up)	375	*17
Placement Activities	Paper Sludge	300	*14
Total		1,175	*54

** = Number of Trucks Generated based on 22 tons per truck load*

In addition to the above-referenced truck traffic, additional trips will be generated due to the anticipated employee traffic for each of the activities at the proposed site. **Table 4** indicates the anticipated weekday, weekday A.M and weekday P.M peak hour trip generation of the proposed Blackwood Farms facility. The client provided information on when the trucks would be arriving and departing the site. Likewise, the estimated number of employees/guests was also provided to TPD.

It should be noted that truck traffic is expected to be fairly evenly distributed throughout the day. However, for the purposes of the trip generation, TPD assumed that approximately 50% of the total daily truck traffic would be entering and exiting the site during both the weekday A.M and weekday P.M. peak hours, which will result in a conservative analysis. Based on the information provided to TPD, the estimated number of employees/guests per day is between 9-12 total employees/guests. Again to be conservative, TPD assumed that all the employees/guest would arrive in the A.M. peak hour and would leave the site during the P.M. peak hour.

Table 5 summarizes the number of trips that will be generated by the proposed development.

TABLE 5
TRIP GENERATION SUMMARY
BIOSOLIDS PROCESSING FACILITY

Time Period	Type of Trip	Enter	Exit	Total
Weekday	Employees/Guest	12	12	24
	Truck Trips	54	54	108
	Total	66	66	132
Weekday A.M.	Employees/Guest	12	0	12
	Truck Trips	27	27	54
	Total	39	27	66
Weekday P.M.	Employees/Guest	0	12	12
	Truck Trips	27	27	54
	Total	27	39	66

As indicated in **Table 5**, the site will generate **66 new vehicles-trips** during the weekday A.M. peak hour and the weekday P.M. peak hour (approximately 1 new vehicle trip every minute). It should be noted that this trip generation is based upon the permitted capacity (tons per day) of the facility and the number of employees that work at the facility.

TRIP DISTRIBUTION

TPD previously worked on this site and in the previous traffic study, the distribution of the trips generated by the proposed development were distributed based on the local road network, the existing traffic patterns, the proposed use of the site, the site driveway location, types of vehicles accessing the site and information obtained from the client. The employee trips will be distributed to the local roadway network based and the existing traffic patterns. It is assumed that all truck trips will be distributed to and from Interstate 81. The following trip distribution percentages are preliminary in nature and will be updated if necessary after the new count data is completed.

<u>Direction From/To</u>	<u>Passenger Vehicles</u>	<u>Trucks</u>
North via S.R. 0125	55%	---
South via S.R. 0125	45%	100% to/from I-81 (south of site)

The assignment of site-generated trips for the proposed Biosolids Processing Facility during the weekday A.M. and weekday P.M. peak hours are shown in **Figure 5**.

PROJECTED (BUILD) CONDITION TRAFFIC VOLUMES

The site-generated trips for the proposed expansion were added to the 2020 base (no-build) traffic volumes to develop 2020 projected (build) traffic volumes. Projected condition traffic volumes for the 2020 projected conditions are shown in **Figure 6**.

The traffic volume development spreadsheets are included in **Appendix C**.

LEVELS OF SERVICE FOR AN INTERSECTION

For analysis of intersections, level of service is defined in terms of delay, which is a measure of driver discomfort and frustration, fuel consumption, and lost travel time. LOS criteria is stated in terms of control delay per vehicle for a one-hour analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped

delay, and final acceleration delay. The criteria are shown in **Table 6**. Delay, as it relates to level of service, is a complex measure and is dependent upon a number of variables. For signalized intersections, these variables include the quality of vehicle progression, the cycle length, the green time ratio, and the volume/capacity ratio for the lane group in question. For unsignalized intersections, delay is related to the availability of gaps in the flow of traffic on the major street and the driver's discretion in selecting an appropriate gap for a particular movement from the minor street (straight across, left or right turn).

TABLE 6
LEVEL OF SERVICE CRITERIA
UNSIGNALIZED AND SIGNALIZED INTERSECTIONS¹

Level of Service	Control Delay Per Vehicle (Seconds)	
	Signalized	Unsignalized
A	< 10	< 10
B	> 10 and < 20	> 10 and < 15
C	> 20 and < 35	> 15 and < 25
D	> 35 and < 55	> 25 and < 35
E	> 55 and < 80	> 35 and < 50
F	> 80 or v/c > 1.0	> 50 or v/c > 1.0

¹ Obtained from Exhibits 18-4 and 19-1 of the Transportation Research Board's Highway Capacity Manual 2010

CAPACITY ANALYSIS METHODOLOGY

Capacity analyses were conducted for the weekday A.M. and weekday P.M. peak hours at the study area intersections. These analyses were conducted according to the methodologies contained in the 2010 *Highway Capacity Manual* (HCM) using *Synchro 10* software, a Trafficware product.

The following conditions were analyzed, as applicable:

- » Existing conditions;
- » 2020 Base Conditions (Opening Year Without Development);
- » 2020 Projected Conditions (Opening Year With Development);

It should be noted that based on methodologies contained in Chapter 10 of PennDOT's Publication 46, TPD adjusted the following 2010 HCM default values in the *Synchro 8* capacity analysis. These adjustments were made at the study intersection for all time periods based on the study area location being classified as Suburban. Worksheets related to the calculated critical and follow-up headways are included in the appendix containing the capacity analysis worksheets. T

The capacity analysis worksheets and are included in **Appendix D**.

LEVELS OF SERVICE IN THE STUDY AREA

Level of service (LOS) matrices for the study area intersections are shown in **Table 7** for the weekday A.M., and weekday P.M. peak hours. Level of Service figures for the weekday A.M. and weekday P.M. peak hours are shown for the Existing, Base and Projected Conditions in **Figures 7-9, respectively**.

95TH PERCENTILE QUEUE ANALYSIS

Queue analyses were conducted at the study area intersections using *Synchro 10* software. The queue analysis results are summarized in **Table 8** for the analyzed peak hours.

TABLE 7
LEVEL OF SERVICE DELAY (SECONDS) SUMMARY

Intersection	Movement	Weekday A.M. Peak Hour		
		Existing Conditions	Year 2020	
			Base	Projected
Tremont Road (S.R. 0125) & Blackwood Road/Proposed Site Driveway	WB L/R	A	A	B
	SB L/T	A	A	A
	ILOS	A (0.0)	A (0.0)	A (1.1)
Intersection	Movement	Weekday P.M. Peak Hour		
		Existing Conditions	Year 2020	
			Base	Projected
Tremont Road (S.R. 0125) & Blackwood Road/Proposed Site Driveway	WB L/R	A	A	A
	SB L/T	A	A	B
	ILOS	A (0.1)	A (0.1)	A (1.2)

Base = No-Build scenario / Projected = Build scenario

As shown in **Table 7**, under the 2020 projected conditions, all approaches and turning movements at the site driveway intersection with the external roadway network will operate at **LOS B or better** during weekday A.M. and weekday P.M. peak hours. All study area intersections will operate at the same overall intersection level of service (ILOS) under 2020 base conditions (no-build) and 2020 projected conditions (build). All overall intersection levels of service (ILOS) will operate at an acceptable **ILOS A** during the 2020 projected condition scenarios.

All overall intersection levels of service (ILOS) will operate at an acceptable **ILOS A** during the 2020 and projected condition scenarios. Furthermore, all overall intersection delays fall within PennDOT's allowable 10-second variance between base (no-build) and projected (build) condition scenario.

TABLE 8
95TH PERCENTILE QUEUE ANALYSIS

Intersection	Movement	Weekday A.M. Peak Hour		
		Existing Conditions	Year 2020	
			Base	Projected
Tremont Road (S.R. 0125) & Blackwood Road/Proposed Site Driveway	WB L/R	0	0	5
	SB L/T	0	0	0
Intersection	Movement	Weekday P.M. Peak Hour		
		Existing Conditions	Year 2020	
			Base	Projected
Tremont Road (S.R. 0125) & Blackwood Road/Proposed Site Driveway	WB L/R	0	0	8
	SB L/T	0	0	0

Base = No-Build scenario / Projected = Build scenario

As shown in **Table 8**, there are no significant queues at the study intersection with the construction of the full build-out of the proposed development. Queue analysis worksheets are included with the capacity analysis worksheets provided in **Appendix C**.

AUXILIARY TURN LANE WARRANT ANALYSIS

Methodology

TPD evaluated auxiliary turn lane warrants at the existing/proposed Site Driveway location along Tremont Road (S.R. 0125) to determine if auxiliary turn lanes for vehicles entering the site were warranted. The warrant analysis was conducted according to the methodologies contained in Chapter 11 of PennDOT's *Publication 46* and Strike-Off Letter 470-0 8-07, and where warrants were satisfied the turn lanes were provided.

Findings:

Tremont Road (S.R. 0125) & Blackwood Road/Existing-Proposed Driveway

Based on the aforementioned methodology, TPD analyzed the southbound left-turn lane and the northbound right-turn lane warrants at this intersection. Based on results of the turn lane warrant analysis the southbound left-turn lane warrant **is not satisfied** during both the weekday A.M. and weekday P.M. peak hours for this location. The northbound right-turn lane warrant **is not satisfied** either during the weekday A.M. and weekday P.M. peak hours. **Therefore, TPD does not recommend the installation of auxiliary turn lanes at this proposed driveway location.**

Auxiliary turn lane warrant analysis worksheets are contained in **Appendix E**.

RECOMMENDATIONS AND CONCLUSIONS

Based on the results of the transportation impact assessment, TPD offers the following recommendations and conclusions:

- Traffic Planning and Design Inc. (TPD) recommends the following roadway improvements as outlined at the Site driveway:

Tremont Road (S.R. 0125) & Blackwood Road/Proposed Site Driveway

- o Realign the driveway to intersect Tremont Road (S.R. 0125) at a 90 degree angle.
 - o Modify the existing site driveway to improve pavement structure per PennDOT standards and pavement markings to delineate ingress and egress lanes. Intersection turning radii should be maintained to facilitate safe and efficient right-turn movements for vehicles traveling northbound on Tremont Road (S.R. 0125) and accessing the site;
 - o Provide a stop sign (PennDOT designation R1-1) to control traffic.
- The site for the proposed facility is located on the eastern side of Tremont Road (S.R. 0125), approximately 2.6 miles north of Molleystown Road (S.R. 3013). Access to the site will be provided by one full-access driveway on Tremont Road (SR 0125);
- Truck traffic generated by the proposed site will access S.R. 3013 from the Interstate 81 northbound and southbound on/off ramps. Trucks traveling from the I-81 southbound on/off ramps perform a right-turn movement onto eastbound S.R. 3013. At approximately 0.5 miles, S.R. 3013 intersects with the I-81 northbound on/off ramps, and trucks traveling to the site which utilize the I-81 northbound on/off ramps also perform a right-turn movement onto eastbound S.R. 3013. Trucks travel on S.R. 3013 to the intersection with Tremont Road (S.R. 0125) and perform a left-turn movement onto Tremont Road (SR 0125). The segment of Tremont Road (S.R. 0125) between S.R. 3013 and the site driveway is



approximately 2.6 miles. From Tremont Road (S.R. 125), trucks perform a right-turn movement into the site driveway;

- The proposed site will generate 54 new truck-trips and 12 new employee passenger cars for a total of **66 trips** during the weekday A.M. peak hour (**approximately 1 new vehicle-trip every minute**) and 54 new truck-trips and 12 new employee passenger cars for a total of **66 trips** during the weekday P.M. peak hour (**approximately 1 new vehicle-trip every minute**);
- The proposed site driveway will exceed PennDOT's Safe Stopping Sight Distance (SSSD) criteria requirements.
- Under the 2020 projected conditions, all approaches and turning movements at the site driveway intersection with the external roadway network will operate at **LOS B or better** during weekday A.M. and weekday P.M. peak hours. All overall intersection levels of service (ILOS) will operate at an acceptable **ILOS A** during the 2020 projected condition scenarios;



● = STUDY INTERSECTION

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FIGURE 1

PROJECT LOCATION

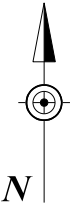
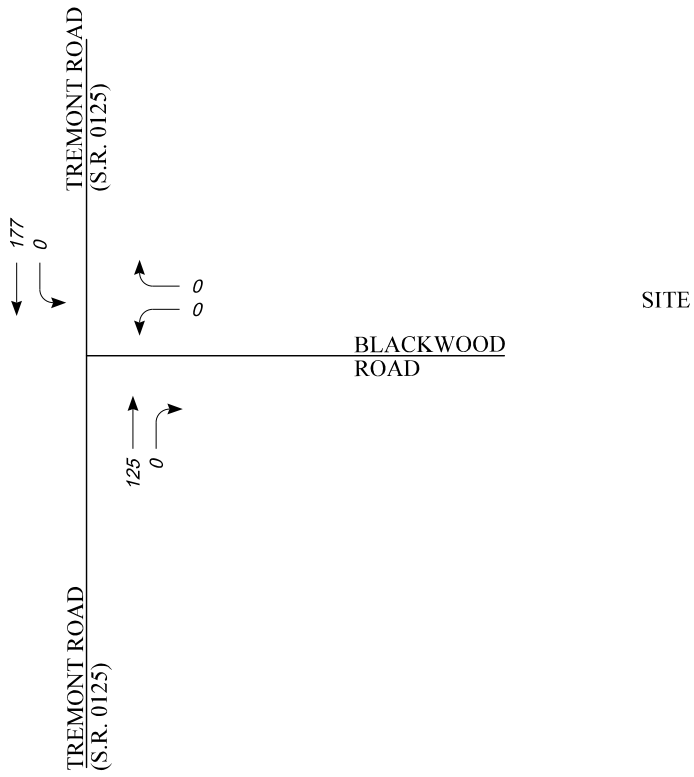


FIGURE 2

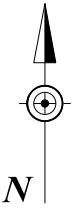
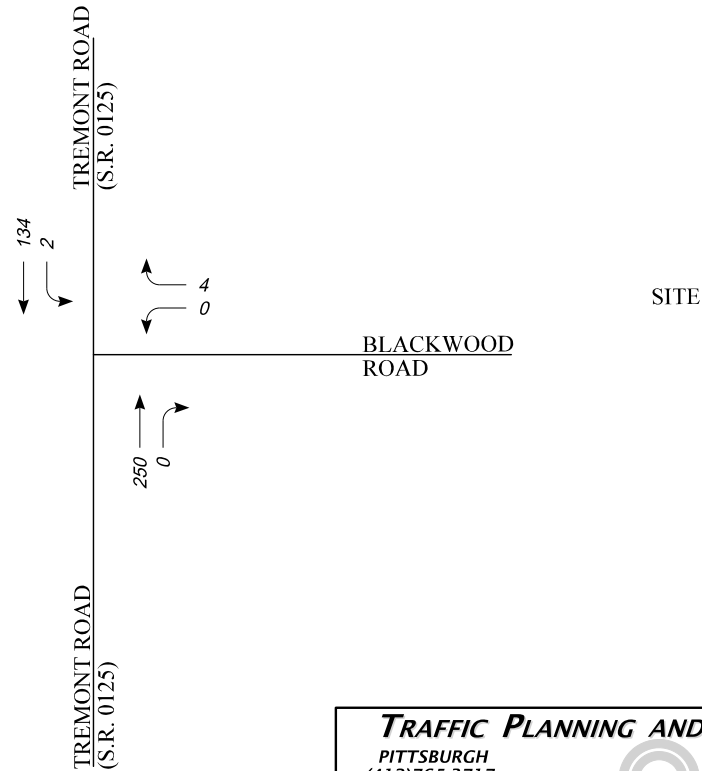
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WEEKDAY AM PEAK HOUR



WEEKDAY PM PEAK HOUR



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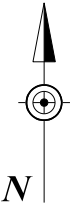
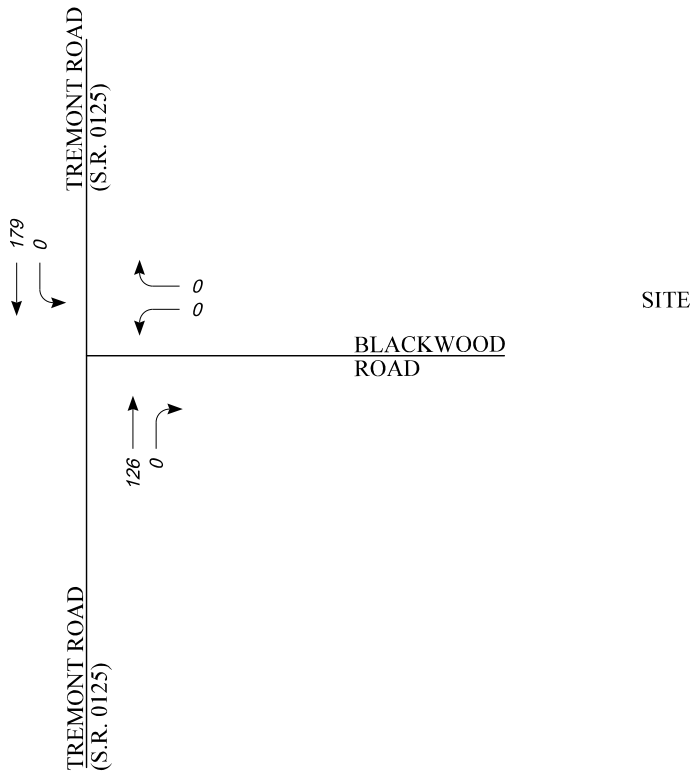
FIGURE 3

2017 EXISTING CONDITIONS
WEEKDAY AM & PM PEAK HOURS
TRAFFIC VOLUMES

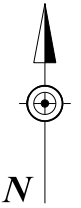
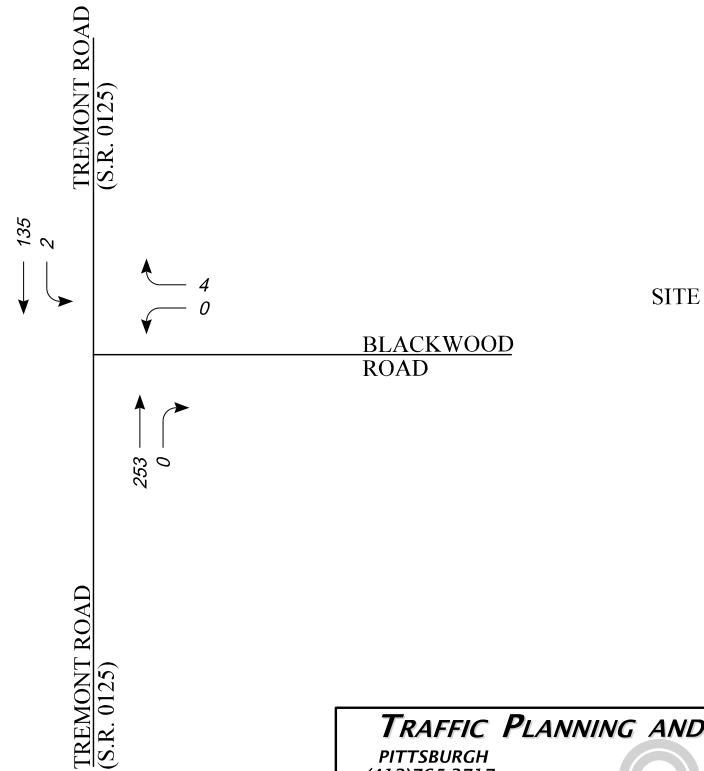
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WEEKDAY AM PEAK HOUR



WEEKDAY PM PEAK HOUR



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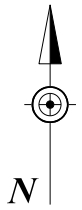
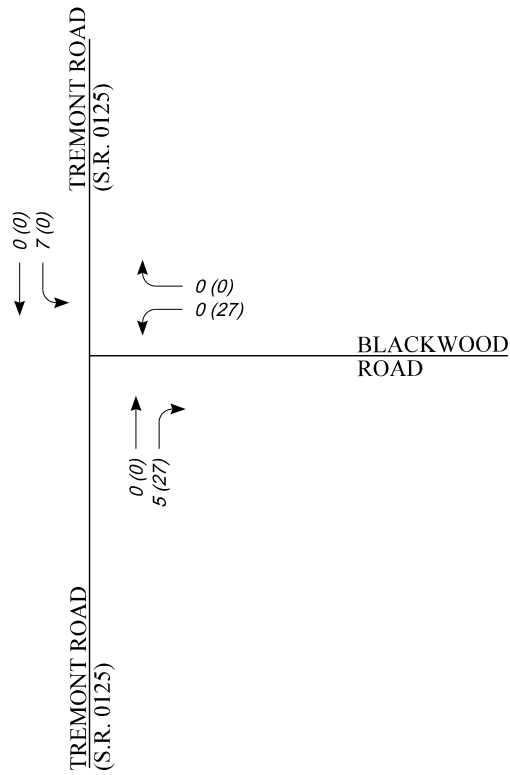
FIGURE 4

2020 BASE CONDITIONS
WEEKDAY AM & PM PEAK HOURS
TRAFFIC VOLUMES

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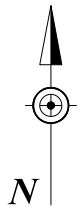
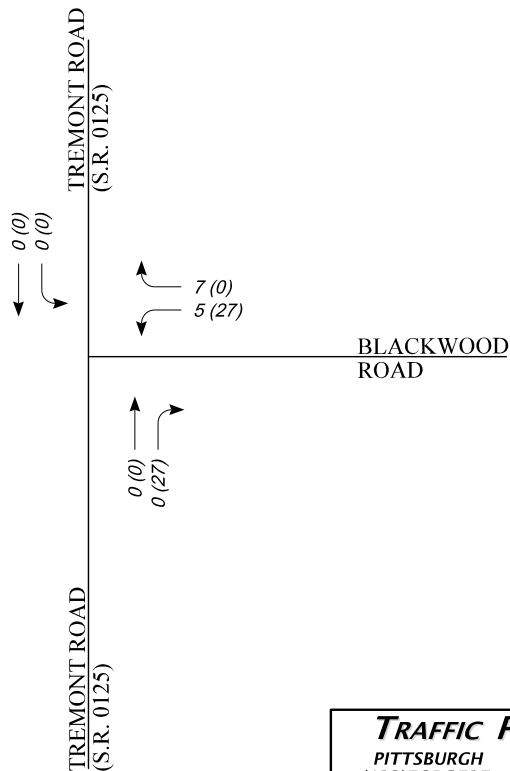
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WEEKDAY AM PEAK HOUR



SITE
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EXIT = 0 (27)

WEEKDAY PM PEAK HOUR



SITE
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EXIT = 12 (27)

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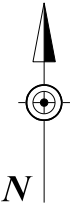
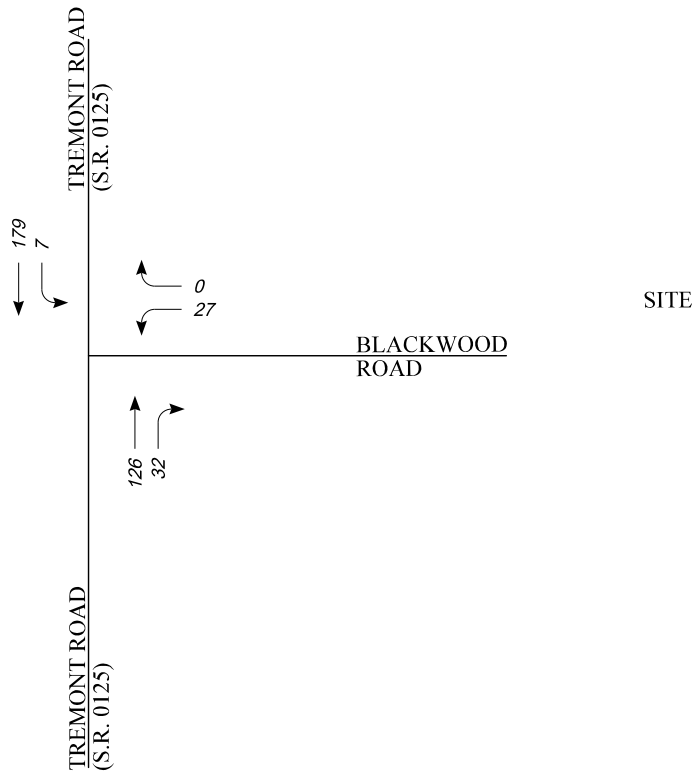
FIGURE 5

TRIP GENERATION
WEEKDAY AM & PM PEAK HOURS
TRAFFIC VOLUMES

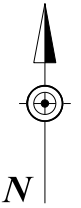
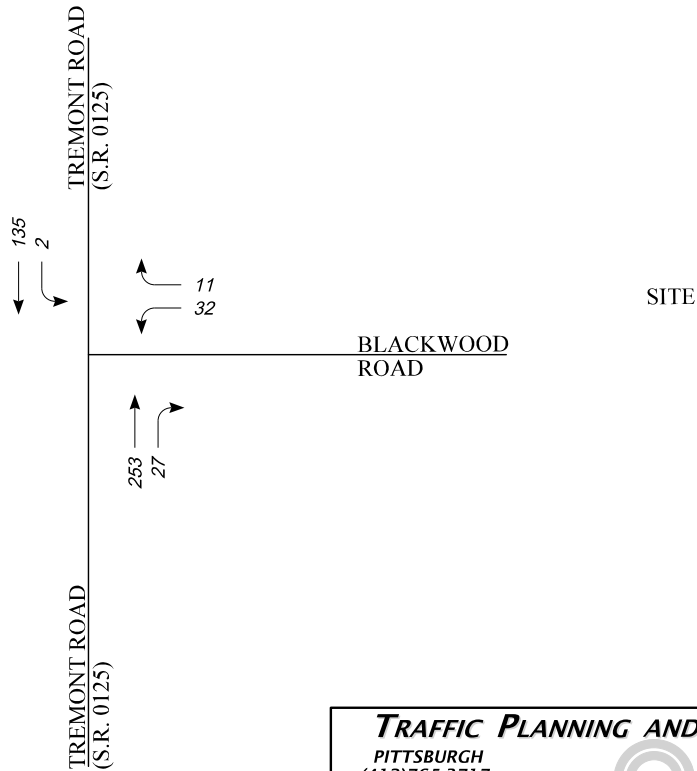
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WEEKDAY AM PEAK HOUR



WEEKDAY PM PEAK HOUR



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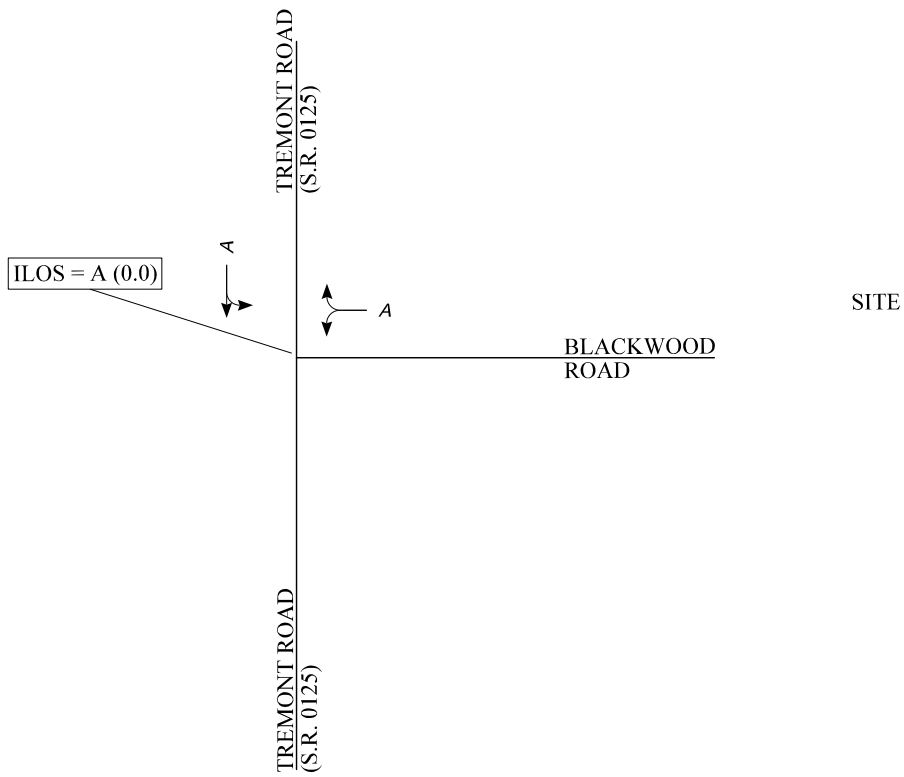
FIGURE 6

2020 PROJECTED CONDITIONS
WEEKDAY AM & PM PEAK HOURS
TRAFFIC VOLUMES

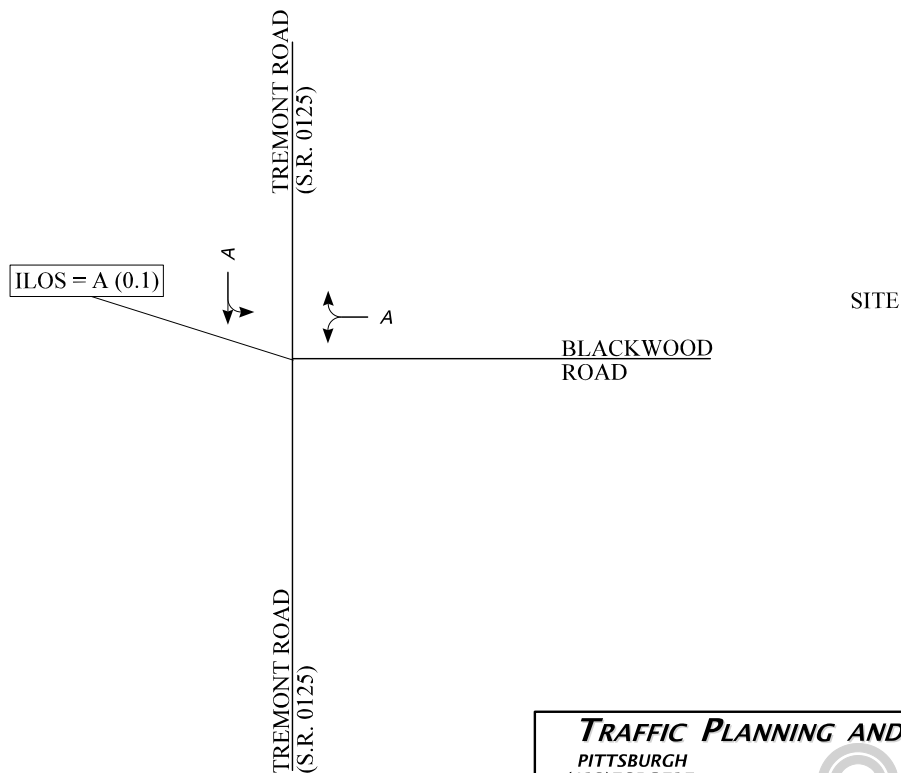
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WEEKDAY AM PEAK HOUR



WEEKDAY PM PEAK HOUR



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FIGURE 7

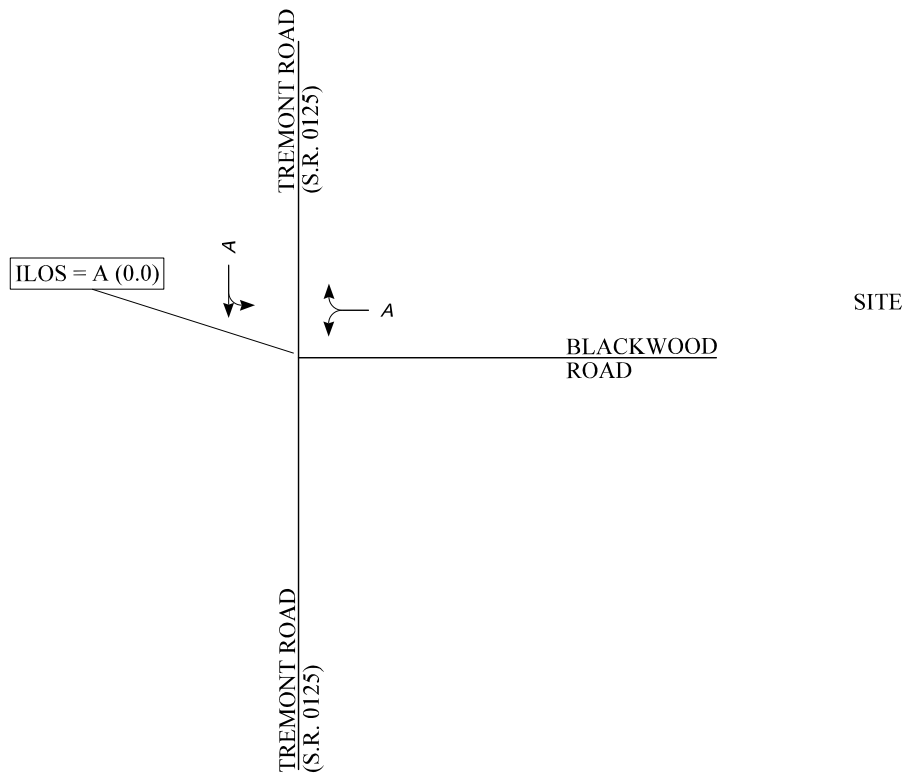
EXISTING CONDITIONS
WEEKDAY AM & PM PEAK HOURS
LEVEL OF SERVICE

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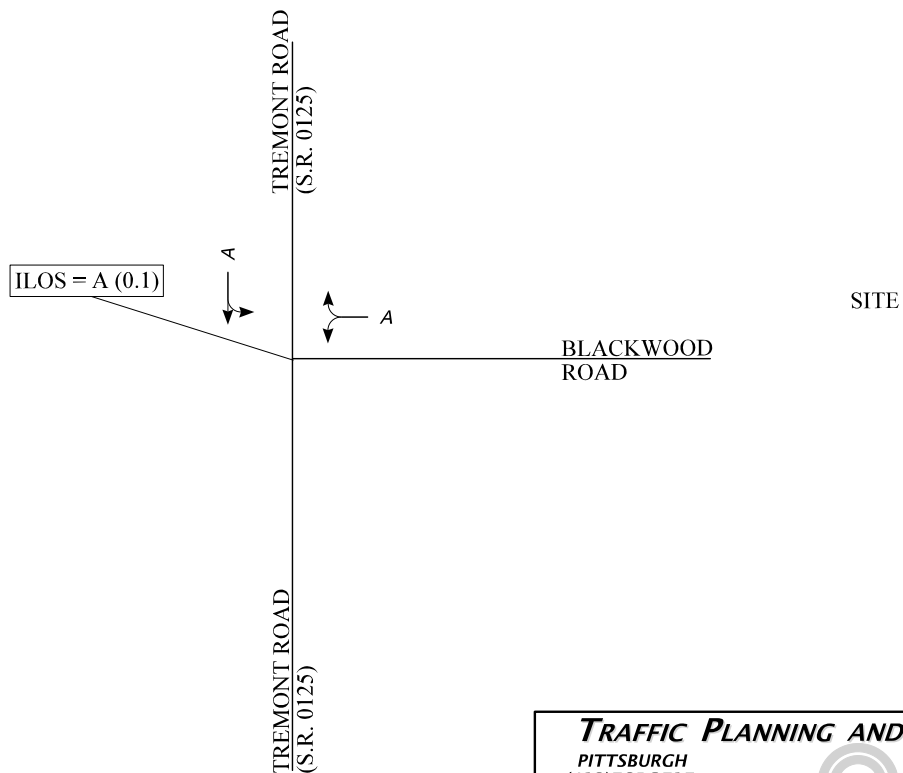
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WEEKDAY AM PEAK HOUR



WEEKDAY PM PEAK HOUR



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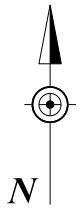
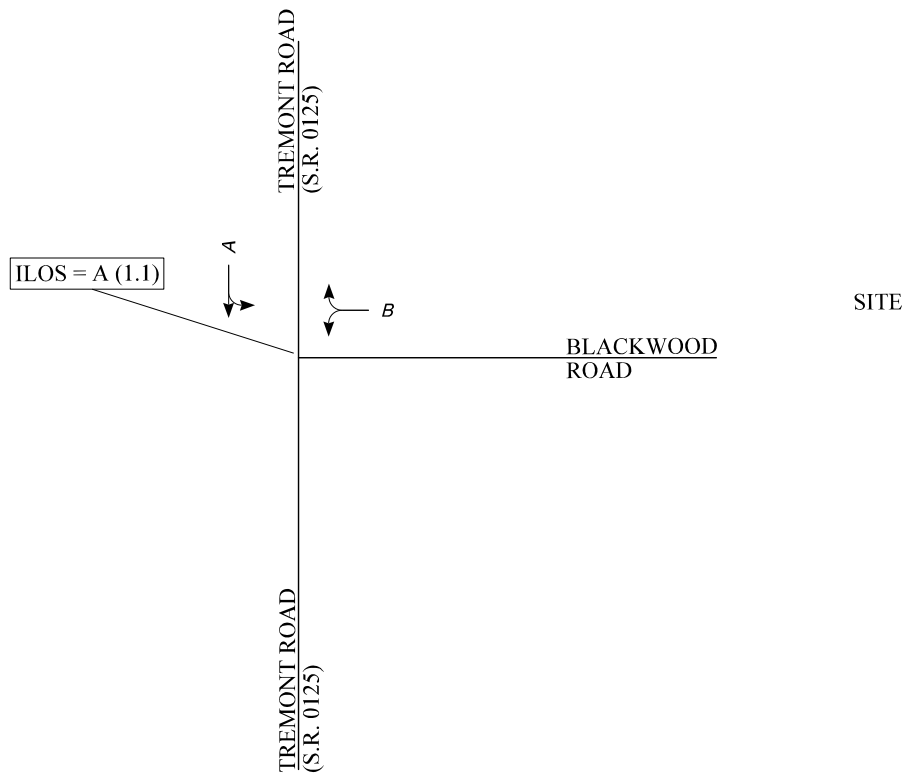
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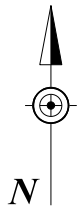
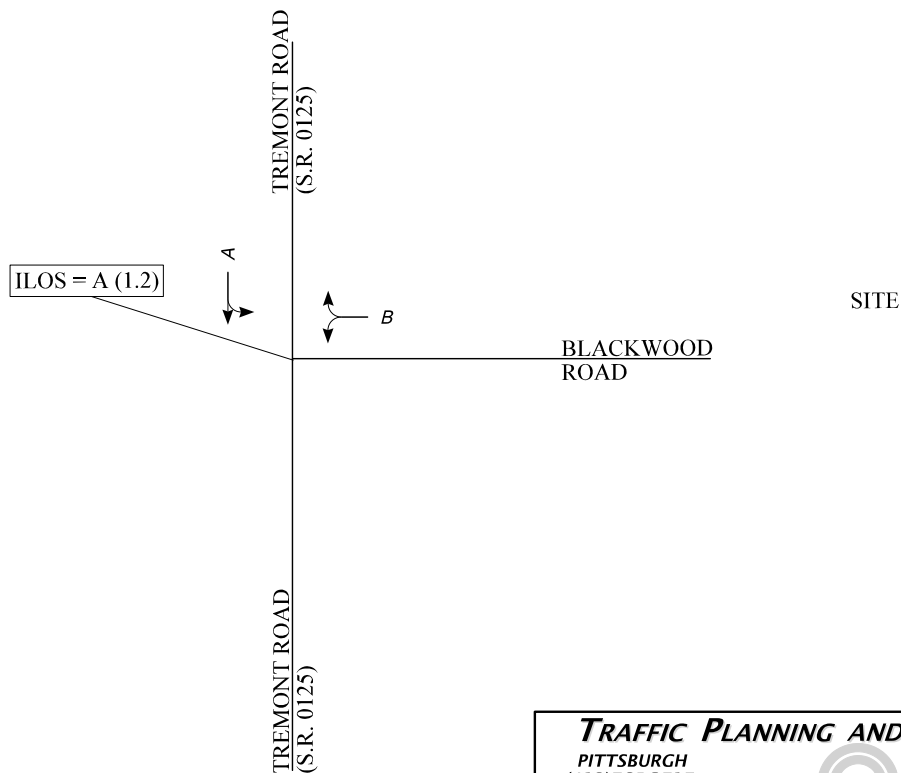
FIGURE 8
2020 BASE CONDITIONS
WEEKDAY AM & PM PEAK HOURS
LEVEL OF SERVICE

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WEEKDAY AM PEAK HOUR



WEEKDAY PM PEAK HOUR



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FIGURE 9

2020 PROJECTED CONDITIONS
WEEKDAY AM & PM PEAK HOURS
LEVEL OF SERVICE

APPENDIX A:

Project Correspondence (PDOT Scoping Documentation)

November 9, 2017

Jeramiah Shirock
District Permits Manager
PennDOT District 5-0
1002 Hamilton Street
Allentown, PA 18101

RE: TRANSPORTATION IMPACT STUDY (TIS) SCOPING MEETING APPLICATION

Blackwood Farms Biosolids Facility
Tremont Township, Schuylkill County
TPD No. ENSI.00001

Dear Jeremy:

On behalf of Blue Heron Construction, Traffic Planning and Design, Inc. (TPD) has prepared the following TIS Scoping Meeting Application for the above referenced project. This scoping application has been compiled in accordance with the application procedures outlined in Strike-Off Letter 470-09-4, dated February 12, 2009.

Scoping Meeting Date: To be determined
Applicant: Don Gentilcore, Blue Heron Construction
Applicant's Consultant: Traffic Planning and Design, Inc. (TPD)
Applicant's Primary Contact: Robert Hoffman, PE, PTOE

1. **LOCATION OF PROPOSED DEVELOPMENT:**
PennDOT Engineering District: 5-0 County: Schuylkill
Municipality: Tremont Township
State Route(s) (SR): Tremont Road (S.R. 0125)

Please refer to the attached **Figure 1** which shows the project location and study intersection. The site plan is shown in **Figure 2**.

2. **DESCRIPTION OF PROPOSED DEVELOPMENT:**

- Proposed Site Access: The site will be served by one driveway (Blackwood Road) to Tremont Road (S.R. 0125).
- Land Uses: The proposed development will consist of the following land uses:
 - Biosolids processing facility
- Community Linkages (access to neighboring properties, cross easements, pedestrian and transit accommodations): N/A

3. *DEVELOPMENT SCHEDULE AND STAGING:*

- Anticipated Opening Date: 2020
- Full Build-out Date: N/A
- Proposed Development/Staging: N/A

4. *TRIP GENERATION:*

Trip generation for the proposed development will be based on:

☐ ITE Trip Generation Manual.

☒ Other independent surveys.

TPD determined trip generation for the proposed Blackwood Farms Biosolids Facility based upon information obtained from the client. The following activities are anticipated to be performed at the proposed site, and the associated truck traffic, are shown in **Table 1**. It should be noted that **each truck is anticipated to accommodate a maximum of 22 tons per load.**

Table 1
ITE Trip Generation Data

Operation	Activity	Tons	Total Trucks
Biosolids Processing Facility	Biosolids / Admixtures (Drop-off)	500	*23
Biosolids Processing Facility	Biosolids / Admixtures (Pick-Up)	375	*17
Placement Activities	Paper Sludge	300	*14
Total		800	*54

*= number trucks generated based on 22 tons per truck load

In addition to the above-referenced truck traffic, additional trips will be generated due to the anticipated employee traffic for each of the activities at the proposed site. **Table 2** indicates the anticipated weekday, weekday A.M and weekday P.M peak hour trip generation of the proposed Blackwood Farms facility. The client provided information on when the trucks would be arriving and departing the site. Likewise, the estimated number of employees/guests was also provided to TPD.

It should be noted that truck traffic is expected to be fairly evenly distributed throughout the day. However, for the purposes of the trip generation, TPD assumed that approximately 50% of the total daily truck traffic would be entering and exiting the site during both the weekday A.M and weekday P.M. peak hours, which will result in a conservative analysis. Based on the information provided to TPD, the estimated number of employees/guests per day is between 9-12 total employees/quests. Again to be conservative, TPD assumed that all the employees/guest would arrive in the A.M. peak hour and would leave the site during the P.M. peak hour.

Table 2 summarizes the number of trips that will be generated by the proposed development.

Table 2
Trip Generation Summary

Time Period	Type of Trip	Enter	Exit	Total
Weekday	Employees/Guest	12	12	24
	Truck Trips	54	54	108
	Total	66	66	132
Weekday A.M.	Employees/Guest	12	0	12
	Truck Trips	27	27	54
	Total	39	27	66
Weekday P.M.	Employees/Guest	0	12	12
	Truck Trips	27	27	54
	Total	27	39	66

As indicated in **Table 2**, the site will generate 66 new vehicles-trips during the weekday A.M. peak hour and the weekday P.M. peak hour (approximately 1 new vehicle trip every minute). It should be noted that this trip generation is based upon the permitted capacity (tons per day) of the facility.

5. *ESTIMATED DAILY TRIP GENERATION/DRIVEWAY CLASSIFICATION:*

- Estimated Daily Trip Generation of Proposed Development: 132 trips per day (66 vehicles/day).
- Driveway Classification Based on Trip Generation and one (1) access point: Low Volume Driveway.

6. *TRANSPORTATION IMPACT STUDY REQUIRED?*

- ☒ No
- ☐ Yes, based on:
- ☐ 3,000 or more vehicle trips/day generated
 - ☐ During any one-hour time period, 100 or more new (added) vehicle trips generated entering or 100 or more new (added) vehicle trips generated exiting development.
 - ☐ Other considerations as described below:

7. *TRAFFIC IMPACT ASSESSMENT REQUIRED?* ☐ No ☒ Yes

8. *TIA TUDY AREA:*

Given the minimal traffic generation associated with this facility an access analysis is proposed to evaluate the site access to Tremont Road (S.R. 0125).

9. *STUDY AREA TYPE:*

Urban ☐ Rural ☒

Within the study area Tremont Road (S.R. 0125) is classified as a Rural Major Collector Roadway.

10. *TIA ANALYSIS PERIOD AND TIMES:*

The TIA will include analysis of the following time periods:

- Weekday A.M. peak hour (peak hour within the 7:00-9:00 A.M. peak period);
- Weekday P.M. peak hour (peak hour within the 4:00-6:00 P.M. peak period).

The following study years will be evaluated:

- 2017 Existing Conditions;
- 2020 Base Conditions (Opening Year Without Proposed Development);
- 2020 Projected Conditions (Opening Year With Proposed Development).

11. *TRAFFIC ADJUSTMENT FACTORS:*

- a. *Seasonal Adjustment:* None
- b. *Annual Base Traffic Growth:* 0.36%/year based on PennDOT Bureau of Planning and Research (BPR) data pertaining to rural non-interstate roadways in Schuylkill County.
- d. *Pass-By Trips:* None
- e. *Captured Trips for Multi-Use Sites:* None
- f. *Modal Split Reductions:* None
- g. *Other Reduction:* None

12. *OTHER PROJECTS WITHIN STUDY AREA TO BE ADDED TO BASE TRAFFIC:*

To be determined through the scoping process.

13. *TRIP DISTRIBUTION AND ASSIGNMENT:*

TPD previously worked on this site and in the previous traffic study, the distribution of the trips generated by the proposed development were distributed based on the local road network, the existing traffic patterns, the proposed use of the site, the site driveway location, types of vehicles accessing the site and information obtained from the client. The employee trips will be distributed to the local roadway network based and the existing traffic patterns. It is assumed that all truck trips will be distributed to and from Interstate 81. The following trip distribution percentages are preliminary in nature and will be updated if necessary after the new count data is completed.

<u>Direction From/To</u>	<u>Passenger Vehicles</u>	<u>Trucks</u>
North via S.R. 0125	55%	---
South via S.R. 0125	45%	100% to/from I-81

14. *APPROVAL OF DATA COLLECTION ELEMENTS AND METHODOLOGIES:*

Manual traffic counts will be conducted at the study area intersection (Site Driveway access) during the weekday morning (7:00-9:00 A.M.) and weekday evening (4:00-6:00 P.M.) peak periods.

15. *CAPACITY/LOS ANALYSIS:*

The capacity analyses will be conducted according to the methodologies contained in the 2010 Highway Capacity Manual (HCM) using Synchro software utilizing the Pennsylvania default values.

16. *ROADWAY IMPROVEMENTS/MODIFICATIONS BY OTHERS TO BE INCLUDED:*

None.

17. *OTHER NEEDED ANALYSES:*

- a. *Sight Distance Analysis:* A sight distance analysis will be performed for the proposed driveway location along Tremont Road (S.R. 0125)
- b. *Signal Warrant Analysis:* N/A

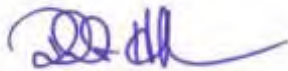
- c. *Required Signal Phasing/Timing Modifications:* N/A
- d. *Traffic Signal Corridor/Network Analysis:* N/A
- e. *Analysis of the Need for Turning Lanes:* An auxiliary turn lane analysis will be performed for the proposed site driveway.
- f. *Turning Lane Lengths:* The required turn lane lengths will be based upon the methodology contained within Chapter 11 of PennDOT's Publication 46 or the results of the 95th percentile queue analysis (greater of the two).
- g. *Left Turn Signal Phasing Analysis:* N/A
- h. *Queuing Analysis:* The TIA will include an analysis of 95th percentile queues. This analysis will be completed using Synchro software based on the methodologies contained in the 2010 Highway Capacity Manual (HCM), as well as queues calculated using Publication 46 methodology.
- i. *Gap Studies:* None
- j. *Crash Analysis:* None
- k. *Weaving Analysis:* None
- l. *Other Required Studies:* None

18. *ADDITIONAL COMMENTS OR RECOMMENDATIONS RELATIVE TO THE SCOPE OF THE TIS:* None

We appreciate your review of the enclosed information and if deemed necessary by the Department, would like to schedule a meeting to confirm the scope at your earliest convenience. If there are any questions or comments, please do not hesitate to contact me.

Respectfully submitted,

TRAFFIC PLANNING AND DESIGN, INC.



Robert Hoffman, P.E., PTOE
Senior Project Manager

rhoffman@TrafficPD.com

Attachments: Figure 1– Project Location
Figure 2 – Site Plan
1-Mile Radius Map
2-Mile Radius Map
5-Mile Radius Map

cc: Kristin Price, EnSol, Inc,
John Battaglia, Blue Heron Construction
Tremont Township
TPD File



● = STUDY INTERSECTION

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PITTSBURGH
(412) 765-3717
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(610) 623-4242
WWW.TRAFFICPD.COM

POTTSTOWN
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SOUTH JERSEY
(856) 966-4242

FIGURE 1

PROJECT LOCATION

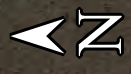


FIGURE 2

KEY:
SCHEMATIC DRAWING:NOT TO SCALE

1- Mile Radius Map

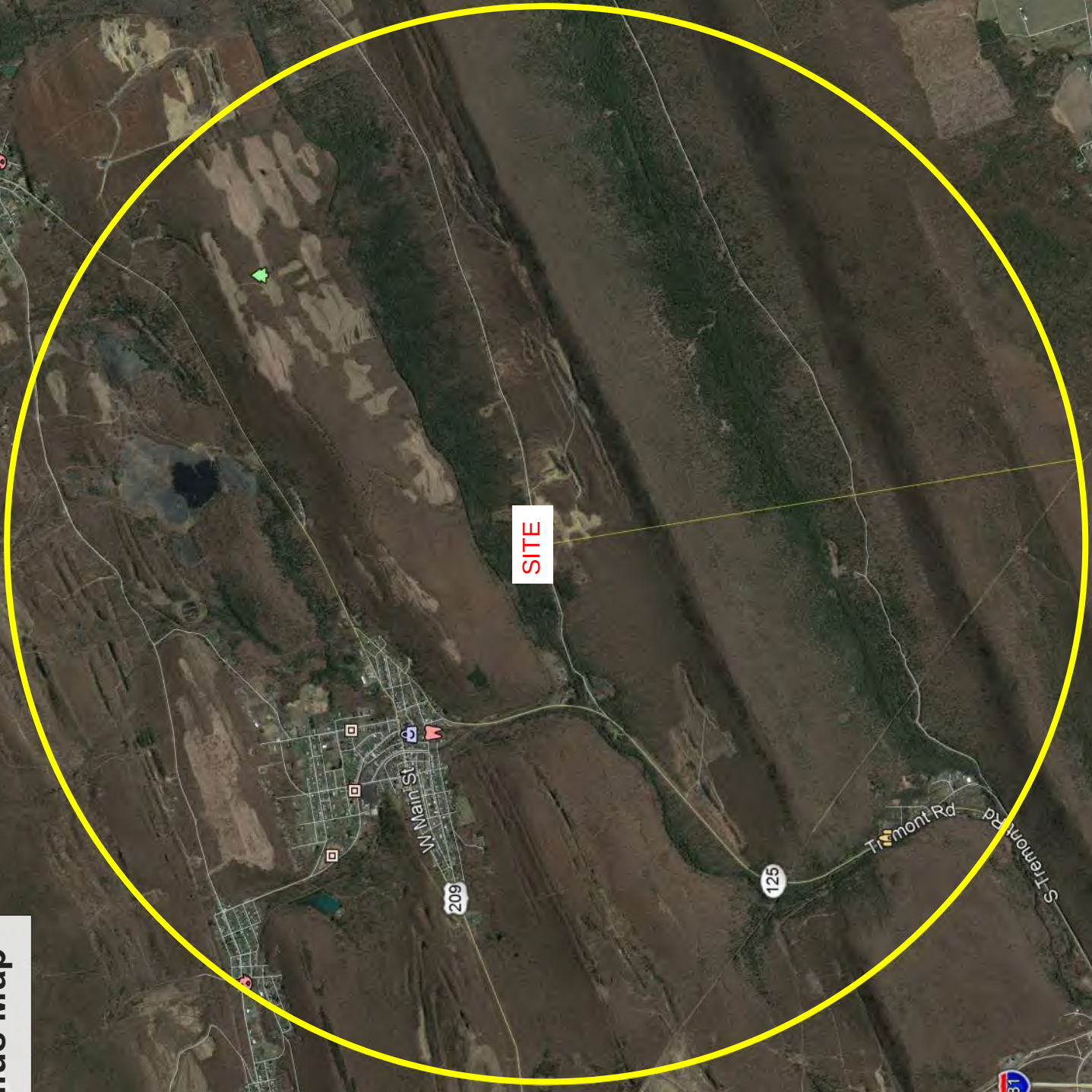
Legend



1 mi

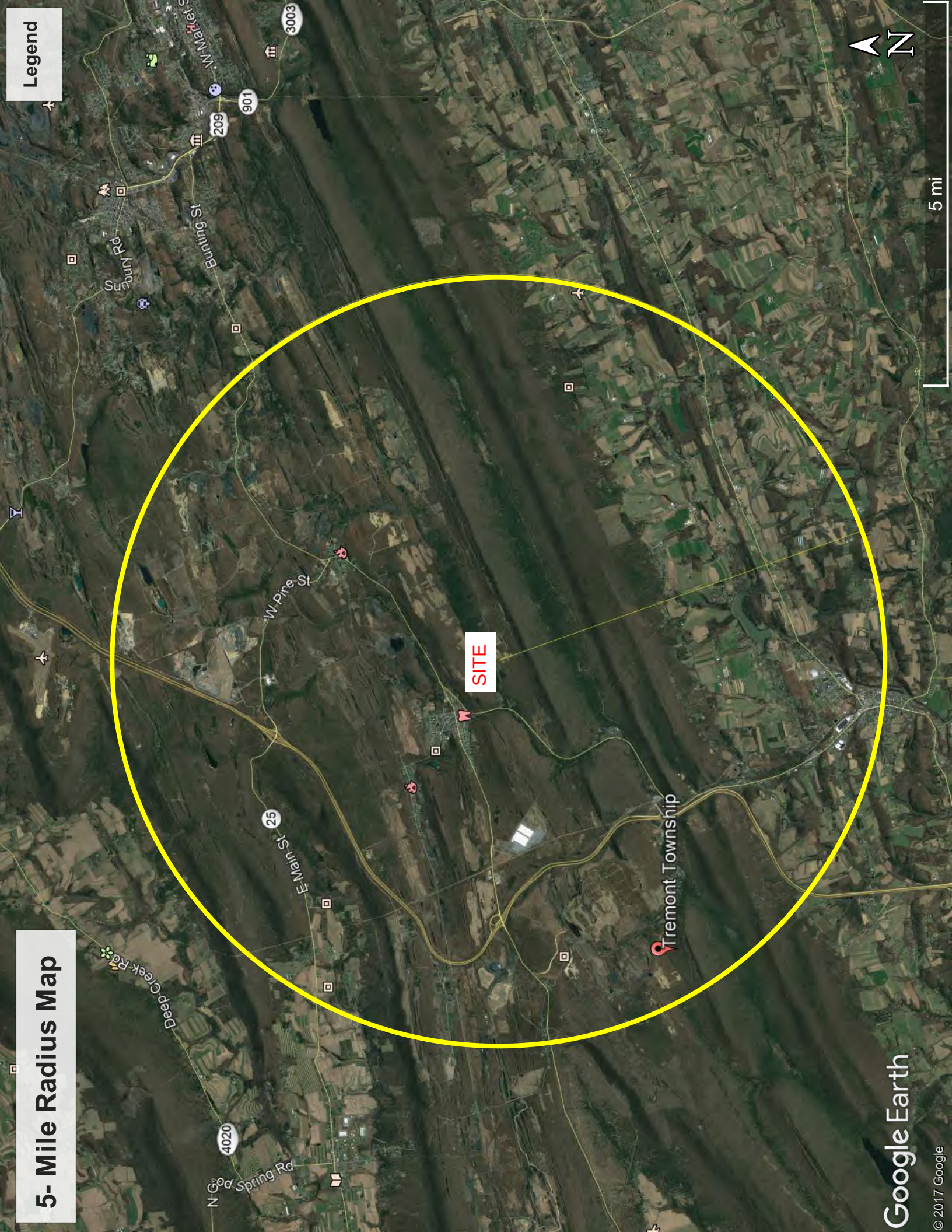
2- Mile Radius Map

Legend



5- Mile Radius Map

Legend



From: Shirock, Jeremiah <jshirock@pa.gov>
Sent: Thursday, December 14, 2017 11:32 AM
To: Funk, Jarrod
Cc: Hoffman, Rob
Subject: RE: Blackwood Biosolids Scoping App

Hi Jarrod,

The Department has completed review of the scoping application and offers the following comments:

1. Please identify the ownership of Blackwood Road and clarify who will be the applicant for this HOP application. This may require you to reach out to the township. From our research, it was unclear as to whether or not Blackwood Road is under township ownership.
2. The Department has concerns about the sharp angle that Blackwood Rd forms with SR 0125. For two-way driveways, the angle must be as close to 90 degrees as possible per Pa. Code, Title 67, Chapter 441.8(b)(1).
3. The posted speed limit for SR 0125 (Tremont Rd) is 55 mph at the access location. It appears that intersection sight distance for trucks will be required for Blackwood Road.

The Department will not require a scoping meeting for this project, therefore you may proceed with the EPS application submission. If you or the applicant wish to meet, we can provide potential meeting dates.

Thank you,

Jeremy

Jeremiah Shirock | District Permit Manager for Berks, Lehigh, and Schuylkill Counties
PA Department of Transportation
Engineering District 5-0
1002 Hamilton Street | Allentown PA 18101
Phone: 610.871.4465 | Fax: 610.871.4614
jshirock@pa.gov | www.dot.state.pa.us

From: Funk, Jarrod [mailto:jfunk@trafficpd.com]
Sent: Monday, December 11, 2017 3:14 PM
To: Shirock, Jeremiah
Cc: Hoffman, Rob
Subject: RE: Blackwood Biosolids Scoping App

Jeremy,

Following up on the status of the referenced scoping application we submitted to the department on 11/9/2017.

Can you please provide an estimated timeline as to when the scoping review might be complete?

Thanks Jarrod

Jarrod Funk, TOPS
Transportation Planning Analyst

From: Hoffman, Rob
Sent: Thursday, November 09, 2017 11:04 AM
To: 'Shirock, Jeremiah' <jshirock@pa.gov>
Cc: Funk, Jarrod <jfunk@trafficpd.com>
Subject: Blackwood Biosolids Scoping App

Jeremy,

Attached is a scoping application for a biosolids treatment facility in Tremont Township, Schuylkill County. Upon your review, please let me know if there are any questions or comments.

Thanks,
Rob

Robert L. Hoffman, P.E., PTOE
Senior Project Manager



Traffic Planning and Design, Inc.
812 West Hamilton Street
Suite 402
Allentown, PA, 18101
610.625.4242
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Connect with us!



TPD Responses to PennDOT scope comments.

1. Property information has been included in *Appendix A* of the TIS.
2. So noted. The driveway design addresses this comment.
3. So noted.

Funk, Jarrod

From: Kris Price <kprice@ensolinc.com>
Sent: Friday, February 09, 2018 12:38 PM
To: Funk, Jarrod
Cc: John Battaglia; jleblanc@wecareorganics.com; Hoffman, Rob; cw.gregory@wecarecompanies.com
Subject: FW: Tremont Township properties
Attachments: Scan0001.pdf

Jarrod,

Attached is a tax map scan showing all properties adjacent to the entrance that are owned by Nolan Perin. See below for his descriptions.

Let me know if you have any questions.

Thanks, Kris

Kristin Price
EnSol, Inc.
716-285-3920 ext 211

From: John Battaglia
Sent: Wednesday, February 07, 2018 10:28 PM
To: Kris Price
Subject: Fwd: Tremont Township properties

Sincerely,

John B. Battaglia, PE
(716) 570-1295
jbattaglia@ensolinc.com

Begin forwarded message:

From: "Nolan A. Perin" <nap@napadev.com>
Date: February 7, 2018 at 6:26:43 PM EST
To: 'John Battaglia' <jbattaglia@ensolinc.com>
Subject: Tremont Township properties

John, at the Blackwood Road entrance, referencing the attached by Tax Parcel Number:

29-02-0033.000 is located on the west side of SR 125.

29-02-0032.000 is located on the northeast side of SR 125 where the mailbox is located.

29-02-0031.001 is located on the southeast side of SR 125 and is the beginning of Blackwood Road.

29-02-0040.002 is located on the north side of Blackwood Road and abuts 29-02-0032.000 and the Tremont Sewer Plant property.

29-02-0039.000 is located south of the Parcel above, abuts Blackwood Road, and is surrounded to the south by 29-02-0031.001.

29-02-0011.000 is south of Blackwood Road and abuts 29-02-0031.001 and abuts the State Game Lands.

I believe that ought to do it for purposes of the HOP and general property familiarity. Nolan

1832, long: -76.37912

29-02-0038.000

29-02-0037.000

29-02-0034.001

29-02-0033-009

TREMONT RD

29-02-0032.000

29-02-0040.000

29-02-0031.001

29-02-0040.002

29-02-0039.000

29-02-0016.000

29-02-0011.000

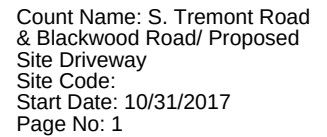
29-02-0031.000

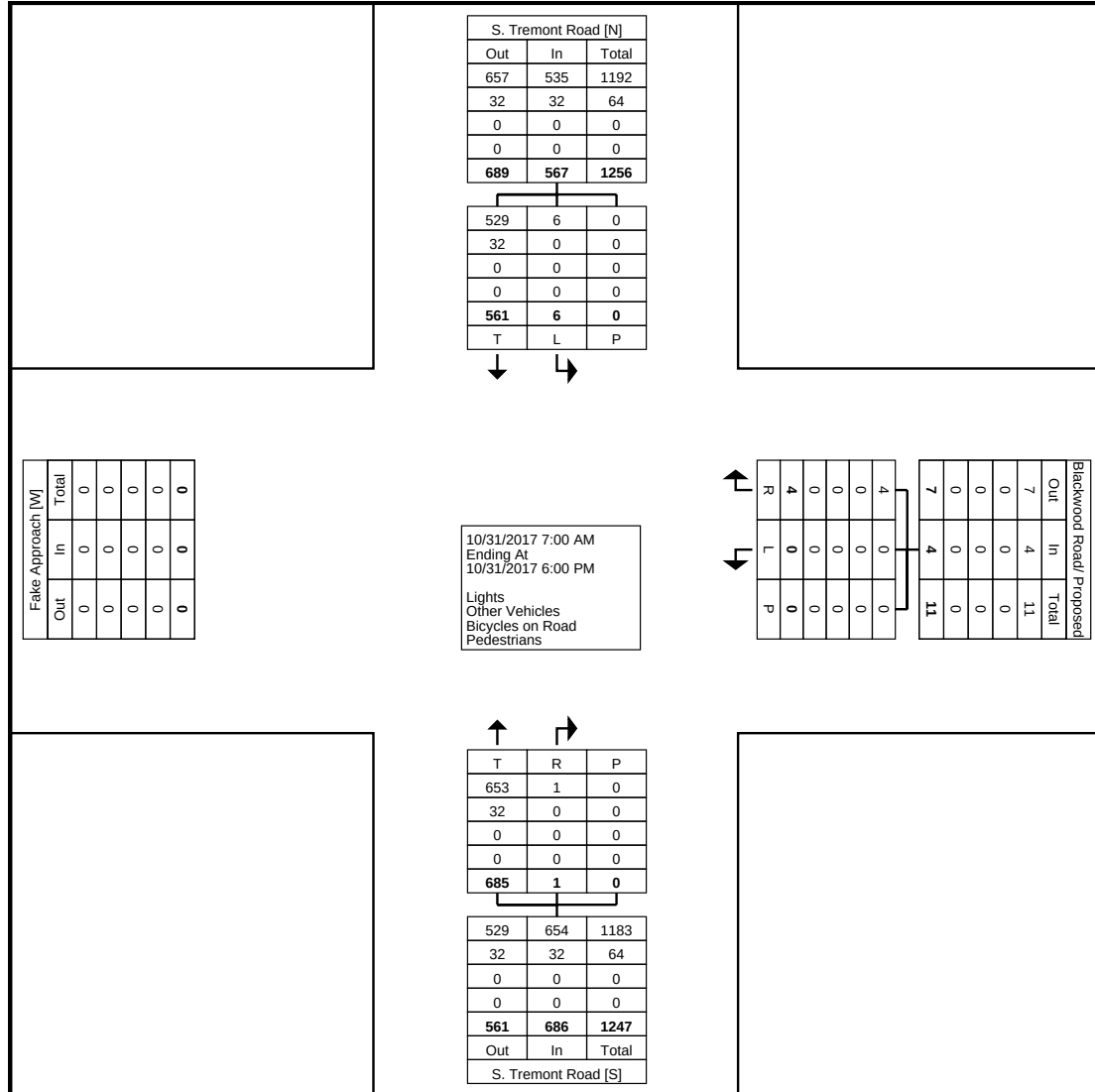
BLACKWOOD R

APPENDIX B:

Traffic Count Data Worksheets

***Tremont Road (SR 0125) & Blackwood Farms Road / Existing-
Proposed Driveway***



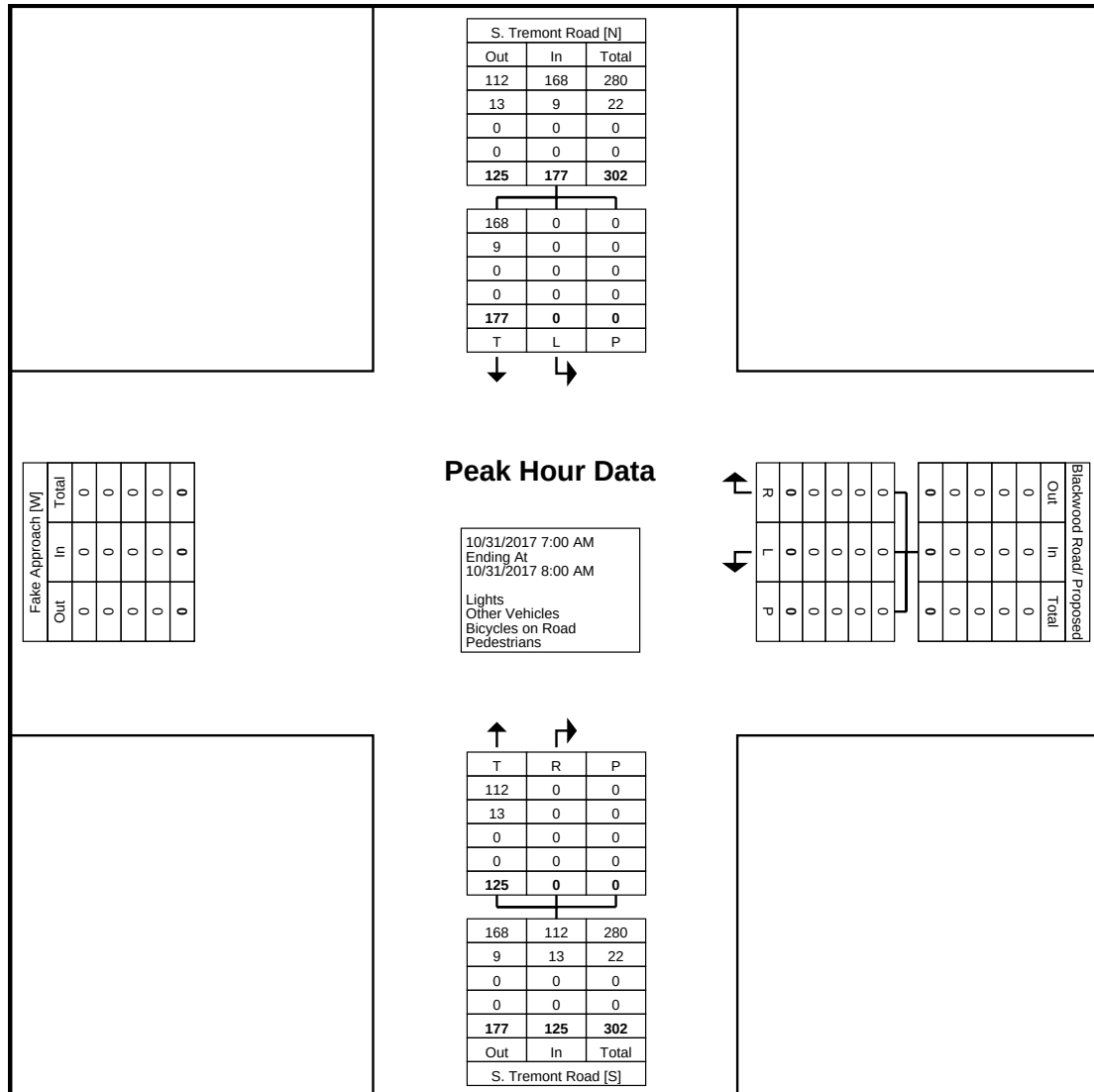


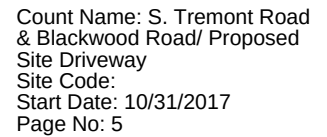
Counted By: Mio:
Set Up By: JH:
Weather: Clear:

Count Name: S. Tremont Road
& Blackwood Road/ Proposed
Site Driveway
Site Code:
Start Date: 10/31/2017
Page No: 3

Turning Movement Peak Hour Data (7:00 AM)

[illegible]



[illegible]

APPENDIX C:
Traffic Volume Development Worksheets

TPD# ENSI.004
1/8/2018
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Tremont Road (SR 0125) & Blackwood Rd/ Proposed Site Driveway											
1	Adjacent intersections:	West	0	East	2	North	0	South	0		

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts				0		0		125	0	0	177		302
Balancing													0
Existing Volumes (Balanced)	0	0	0	0	0	0	0	125	0	0	177	0	302
Base growth (0.36% compounded for 3 yrs)	0	0	0	0	0	0	0	1	0	0	2	0	3
													0
Near-bys (none)													0
													0
													0
													0
2020 Base Volumes	0	0	0	0	0	0	0	126	0	0	179	0	305
Employees Trips									5	7			12
Truck Trips				(27)					(27)				54
Total Trip Distribution	0	0	0	27	0	0	0	0	32	7	0	0	66
2020 Projected Volumes	0	0	0	27	0	0	0	126	32	7	179	0	371

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts				0		4		250	0	2	134		390
Balancing													0
Existing Volumes (Balanced)	0	0	0	0	0	4	0	250	0	2	134	0	390
Base growth (0.36% compounded for 3 yrs)	0	0	0	0	0	0	0	3	0	0	1	0	4
0													0
Near-bys (none)													0
0													0
0													0
0													0
2020 Base Volumes	0	0	0	0	0	4	0	253	0	2	135	0	394
Employees Trips				5		7							12
Truck Trips				(27)					(27)				54
Total Trip Distribution	0	0	0	32	0	7	0	0	27	0	0	0	66
2020 Projected Volumes	0	0	0	32	0	11	0	253	27	2	135	0	460

APPENDIX D:

Capacity Analysis Worksheets & Calculated Critical and Follow-up Headway Calculations

Calculated Critical and Follow-up Headway Calculations

PRHC.A.00001

Major Road:

Tremont Road (SR 0125)

Minor Road:

Blackwood Road / Proposed Driveway

2020 Proposed Cond.

Type Intersection:

3 - leg Intersection (minor stop controlled)

Critical Headway

			tc base	tc hv	phv	t cg	G	t 3lt	Base Crit
major left- SB	AM	SBL	4.3	1	0%	0	2	0	4.30
	PM	SBL	4.3	1	0%	0	2	0	4.30
minor right- WB	AM	WBR	6.2	1	0%	0.1	0	0	6.20
	PM	WBR	6.2	1	0%	0.1	0	0	6.20
minor left- WB	AM	WBL	7.1	1	100%	0.2	0	0.7	7.40
	PM	WBL	7.1	1	84%	0.2	0	0.7	7.24

Follow-up headway

			t fbase	t fhv	phv	Follow-up
major left- SB	AM	SBL	3	0.9	0%	3.00
	PM	SBL	3	0.9	0%	3.00
minor right- WB	AM	WBR	3.1	0.9	0%	3.10
	PM	WBR	3.1	0.9	0%	3.10
minor left- WB	AM	WBL	3	0.9	100%	3.90
	PM	WBL	3	0.9	84%	3.76

Existing Conditions Capacity Analysis

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	125	0	0	177
Future Vol, veh/h	0	0	125	0	0	177
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-2	-	-	2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	10	0	0	5
Mvmt Flow	0	0	145	0	0	206

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	351	145	0
Stage 1	145	-	-
Stage 2	206	-	-
Critical Hdwy	6.4	6.2	-
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3	3.1	-
Pot Cap-1 Maneuver	742	962	-
Stage 1	1025	-	-
Stage 2	959	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	742	962	-
Mov Cap-2 Maneuver	742	-	-
Stage 1	1025	-	-
Stage 2	959	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1071	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0	-

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	125	0	0	177
Future Volume (vph)	0	0	125	0	0	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	11	11	11	11
Grade (%)	0%		-2%			2%
Link Speed (mph)	25		55			55
Link Distance (ft)	685		458			412
Travel Time (s)	18.7		5.7			5.1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	10%	0%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	4	250	0	2	134
Future Vol, veh/h	0	4	250	0	2	134
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-2	-	-	2
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	2	0	0	4
Mvmt Flow	0	4	278	0	2	149

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	431	278	0
Stage 1	278	-	-
Stage 2	153	-	-
Critical Hdwy	6.4	6.2	-
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3	3.1	-
Pot Cap-1 Maneuver	664	809	-
Stage 1	886	-	-
Stage 2	1016	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	663	809	-
Mov Cap-2 Maneuver	663	-	-
Stage 1	884	-	-
Stage 2	1016	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	809	965
HCM Lane V/C Ratio	-	-	0.005	0.002
HCM Control Delay (s)	-	-	9.5	8.7
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	4	250	0	2	134
Future Volume (vph)	0	4	250	0	2	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	11	11	11	11
Grade (%)	0%		-2%			2%
Link Speed (mph)	25		55			55
Link Distance (ft)	685		458			412
Travel Time (s)	18.7		5.7			5.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	2%	0%	0%	4%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

2020 Base Conditions Capacity Analysis

1: Tremont Rd (SR 0125)/Tremont Road (SR 0125) & Blackwood Road 2020 Base Conditions

Timing Plan: AM Peak Hour

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	126	0	0	179
Future Vol, veh/h	0	0	126	0	0	179
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-2	-	-	2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	10	0	0	5
Mvmt Flow	0	0	147	0	0	208
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	355	147	0	0	147	0
Stage 1	147	-	-	-	-	-
Stage 2	208	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.3	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	737	960	-	-	1070	-
Stage 1	1023	-	-	-	-	-
Stage 2	957	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	737	960	-	-	1070	-
Mov Cap-2 Maneuver	737	-	-	-	-	-
Stage 1	1023	-	-	-	-	-
Stage 2	957	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	1070	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

1: Tremont Rd (SR 0125)/Tremont Road (SR 0125) & Blackwood Road 2020 Base Conditions

Timing Plan: AM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	126	0	0	179
Future Volume (vph)	0	0	126	0	0	179
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	11	11	11	11
Grade (%)	0%		-2%			2%
Link Speed (mph)	25		55			55
Link Distance (ft)	685		458			412
Travel Time (s)	18.7		5.7			5.1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	10%	0%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

1: Tremont Rd (SR 0125)/Tremont Road (SR 0125) & Blackwood Road 2020 Base Conditions

Timing Plan: PM Peak Hour

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	4	253	0	2	135
Future Vol, veh/h	0	4	253	0	2	135
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-2	-	-	2
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	2	0	0	5
Mvmt Flow	0	4	281	0	2	150
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	435	281	0	0	281	0
Stage 1	281	-	-	-	-	-
Stage 2	154	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.3	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	660	806	-	-	962	-
Stage 1	883	-	-	-	-	-
Stage 2	1015	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	659	806	-	-	962	-
Mov Cap-2 Maneuver	659	-	-	-	-	-
Stage 1	881	-	-	-	-	-
Stage 2	1015	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.5	0		0.1		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	806		962	-	
HCM Lane V/C Ratio	-	0.006		0.002	-	
HCM Control Delay (s)	-	9.5		8.8	0	
HCM Lane LOS	-	A		A	A	
HCM 95th %tile Q(veh)	-	0		0	-	

1: Tremont Rd (SR 0125)/Tremont Road (SR 0125) & Blackwood Road 2020 Base Conditions

Timing Plan: PM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	4	253	0	2	135
Future Volume (vph)	0	4	253	0	2	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	11	11	11	11
Grade (%)	0%		-2%			2%
Link Speed (mph)	25		55			55
Link Distance (ft)	685		458			412
Travel Time (s)	18.7		5.7			5.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	2%	0%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

2020 Projected Conditions Capacity Analysis

Intersection

Int Delay, s/veh 1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	0	126	32	7	179
Future Vol, veh/h	27	0	126	32	7	179
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-2	-	-	2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	100	2	10	84	2	5
Mvmt Flow	31	0	147	37	8	208

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	390	166	0
Stage 1	166	-	-
Stage 2	224	-	-
Critical Hdwy	7.4	6.22	-
Critical Hdwy Stg 1	6.4	-	-
Critical Hdwy Stg 2	6.4	-	-
Follow-up Hdwy	3.9	3.1	-
Pot Cap-1 Maneuver	508	936	-
Stage 1	751	-	-
Stage 2	698	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	503	936	-
Mov Cap-2 Maneuver	503	-	-
Stage 1	744	-	-
Stage 2	698	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.6	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	503	1039
HCM Lane V/C Ratio	-	-	0.062	0.008
HCM Control Delay (s)	-	-	12.6	8.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0

1: Tremont Rd /Tremont Road (SR 0125) & Blackwood Road

2020 Projected Conditions

Timing Plan: AM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	27	0	126	32	7	179
Future Volume (vph)	27	0	126	32	7	179
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	11	11	11	11
Grade (%)	0%		-2%			2%
Link Speed (mph)	25		55			55
Link Distance (ft)	685		458			412
Travel Time (s)	18.7		5.7			5.1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	100%	2%	10%	84%	2%	5%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 1.2

Movement WBL WBR NBT NBR SBL SBTLane Configurations   

Traffic Vol, veh/h 32 11 253 27 2 135

Future Vol, veh/h 32 11 253 27 2 135

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage, # 0 - 0 - - 0

Grade, % 0 - -2 - - 2

Peak Hour Factor 90 90 90 90 90 90

Heavy Vehicles, % 84 2 2 100 2 4

Mvmt Flow 36 12 281 30 2 150

Major/Minor Minor1 Major1 Major2

Conflicting Flow All 450 296 0 0 311 0

Stage 1 296 - - - - -

Stage 2 154 - - - - -

Critical Hdwy 7.24 6.22 - - 4.3 -

Critical Hdwy Stg 1 6.24 - - - - -

Critical Hdwy Stg 2 6.24 - - - - -

Follow-up Hdwy 3.8 3.1 - - 3 -

Pot Cap-1 Maneuver 481 789 - - 940 -

Stage 1 660 - - - - -

Stage 2 786 - - - - -

Platoon blocked, % - - - - -

Mov Cap-1 Maneuver 480 789 - - 940 -

Mov Cap-2 Maneuver 480 - - - - -

Stage 1 659 - - - - -

Stage 2 786 - - - - -

Approach WB NB SB

HCM Control Delay, s 12.4 0 0.1

HCM LOS B

Minor Lane/Major Mvmt NBT NBRWBLn1 SBL SBT

Capacity (veh/h) - - 533 940 -

HCM Lane V/C Ratio - - 0.09 0.002 -

HCM Control Delay (s) - - 12.4 8.8 0

HCM Lane LOS - - B A A

HCM 95th %tile Q(veh) - - 0.3 0 -

1: Tremont Rd /Tremont Road (SR 0125) & Blackwood Road

2020 Projected Conditions

Timing Plan: PM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	32	11	253	27	2	135
Future Volume (vph)	32	11	253	27	2	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	11	11	11	11
Grade (%)	0%		-2%			2%
Link Speed (mph)	25		55			55
Link Distance (ft)	685		458			412
Travel Time (s)	18.7		5.7			5.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	84%	2%	2%	100%	2%	4%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

APPENDIX E:
Auxiliary Turn Lane Warrant Analysis

***Tremont Road (SR 0125) & Blackwood Farms Road / Existing-
Proposed Driveway***

Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality: Tremont Township County: Schuylkill County PennDOT Engineering District: 5	Analysis Date: 7/17/2018 Conducted By: JRF Checked By: Agency/Company Name: Traffic Planning and Design, Inc.
Intersection & Approach Description: Tremont Road (SR 0125) & Blackwood Road - SB LT Warrant	
Analysis Period: 2020 Projected (Build) Design Hour: AM Peak Hour Intersection Control: Unsignalized Posted Speed Limit (MPH): 55 Type of Terrain: Level	Number of Approach Lanes: 1 Undivided or Divided Highway: Undivided Type of Analysis: Left Turn Lane Left or Right-Turn Lane Analysis?: Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations					
Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	7	2.0%	N/A
	Through	-	179	5.0%	N/A
	Right	Yes		0.0%	N/A
Opposing	Left	Yes		0.0%	N/A
	Through	-	126	10.0%	N/A
	Right	Yes	32	84.0%	N/A
Advancing Volume: N/A Opposing Volume: N/A Left Turn Volume: N/A % Left Turns in Advancing Volume: N/A					
Right Turn Lane Volume Calculations					
Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes			0
	Through	-	126	10.0%	133
	Right	-	32	84.0%	46
Advancing Volume: 179 Right Turn Volume: 46					

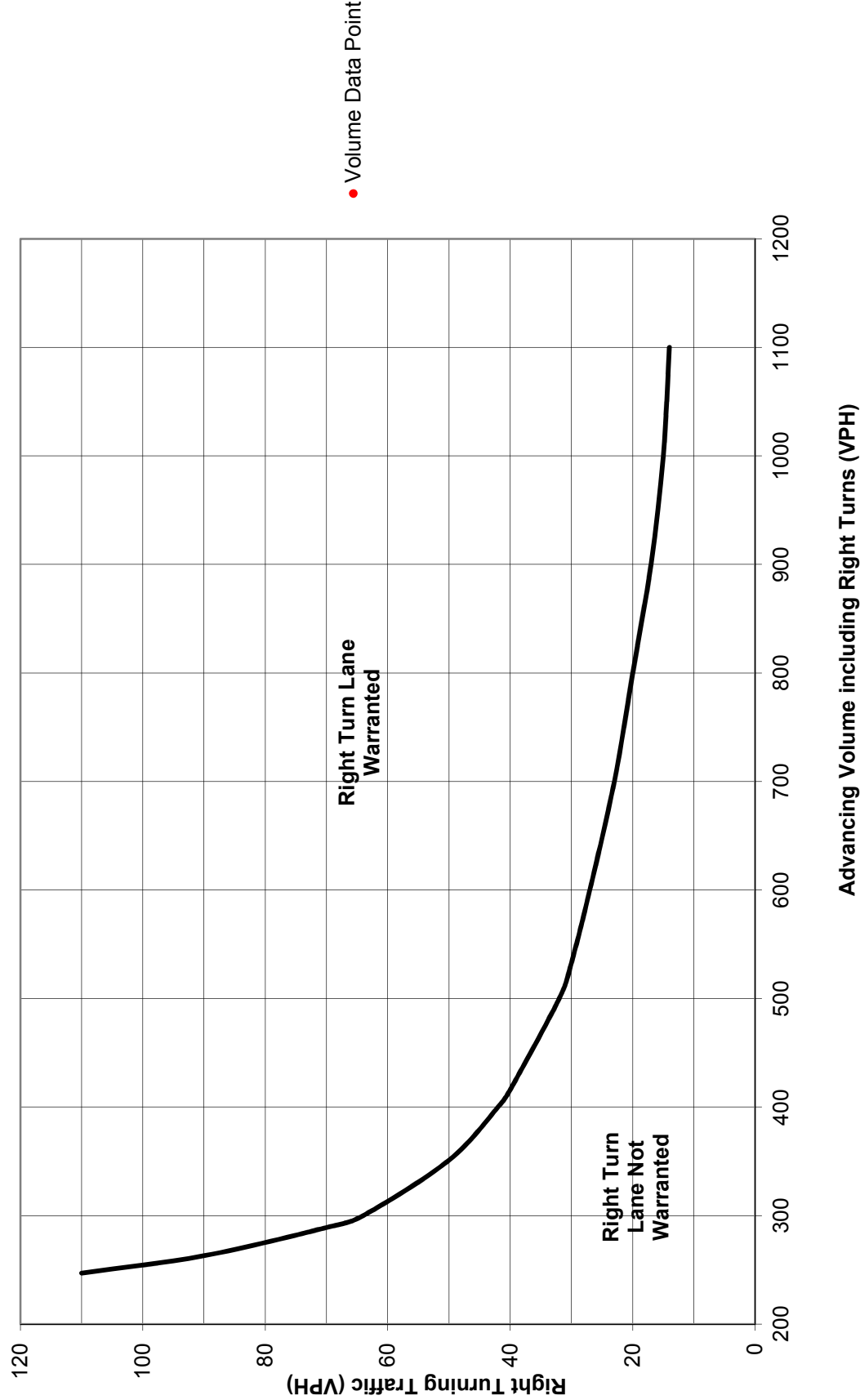
TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings	Right Turn Lane Warrant Findings
Applicable Warrant Figure: N/A Warrant Met?: N/A	Applicable Warrant Figure: Figure 10 Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control: Unsignalized Design Hour Volume of Turning Lane: 46 Cycles Per Hour (Assumed): 60 Cycles Per Hour (If Known):	Average # of Vehicles/Cycle: N/A																																								
PennDOT Publication 46, Exhibit 11-6																																									
<table border="1" style="width: 100%; text-align: center;"> <tr> <th rowspan="3">Type of Traffic Control</th> <th colspan="6">Speed (MPH)</th> </tr> <tr> <th colspan="2">25-35</th> <th colspan="2">40-45</th> <th colspan="2">50-60</th> </tr> <tr> <th colspan="6">Turn Demand Volume</th> </tr> <tr> <td></td> <td>High</td> <td>Low</td> <td>High</td> <td>Low</td> <td>High</td> <td>Low</td> </tr> <tr> <td>Signalized</td> <td>A</td> <td>A</td> <td>B or C</td> <td>B or C</td> <td>B or C</td> <td>B or C</td> </tr> <tr> <td>Unsignalized</td> <td>A</td> <td>A</td> <td>C</td> <td>B</td> <td>B or C</td> <td>B</td> </tr> </table>		Type of Traffic Control	Speed (MPH)						25-35		40-45		50-60		Turn Demand Volume							High	Low	High	Low	High	Low	Signalized	A	A	B or C	B or C	B or C	B or C	Unsignalized	A	A	C	B	B or C	B
Type of Traffic Control	Speed (MPH)																																								
	25-35		40-45		50-60																																				
	Turn Demand Volume																																								
	High	Low	High	Low	High	Low																																			
Signalized	A	A	B or C	B or C	B or C	B or C																																			
Unsignalized	A	A	C	B	B or C	B																																			
Right Turn Lane Storage Length, Condition A: N/A Feet Condition B: N/A Feet Condition C: N/A Feet Required Right Turn Lane Storage Length: N/A Feet																																									
Additional Findings: N/A																																									
Additional Comments / Justifications:																																									

Figure 10. Warrant for right turn lanes on two-lane roadways
(45 mph or greater speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality: Tremont Township County: Schuylkill County PennDOT Engineering District: 5	Analysis Date: 7/17/2018 Conducted By: JRF Checked By: Agency/Company Name: Traffic Planning and Design, Inc.
Intersection & Approach Description: Tremont Road (SR 0125) & Blackwood Road - SB LT Warrant	
Analysis Period: 2020 Projected (Build) Design Hour: PM Peak Hour Intersection Control: Unsignalized Posted Speed Limit (MPH): 55 Type of Terrain: Level	Number of Approach Lanes: 1 Undivided or Divided Highway: Undivided Type of Analysis Left or Right-Turn Lane Analysis?: Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations					
Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	2	2.0%	3
	Through	-	135	4.0%	138
	Right	Yes		0.0%	0
Opposing	Left	Yes		0.0%	0
	Through	-	253	2.0%	256
	Right	Yes	27	100.0%	41
Advancing Volume: 141 Opposing Volume: 297 Left Turn Volume: 3 % Left Turns in Advancing Volume: 2.13%					
Right Turn Lane Volume Calculations					
Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes			N/A
	Through	-	253	2.0%	N/A
	Right	-	27	100.0%	N/A
Advancing Volume: N/A Right Turn Volume: N/A					

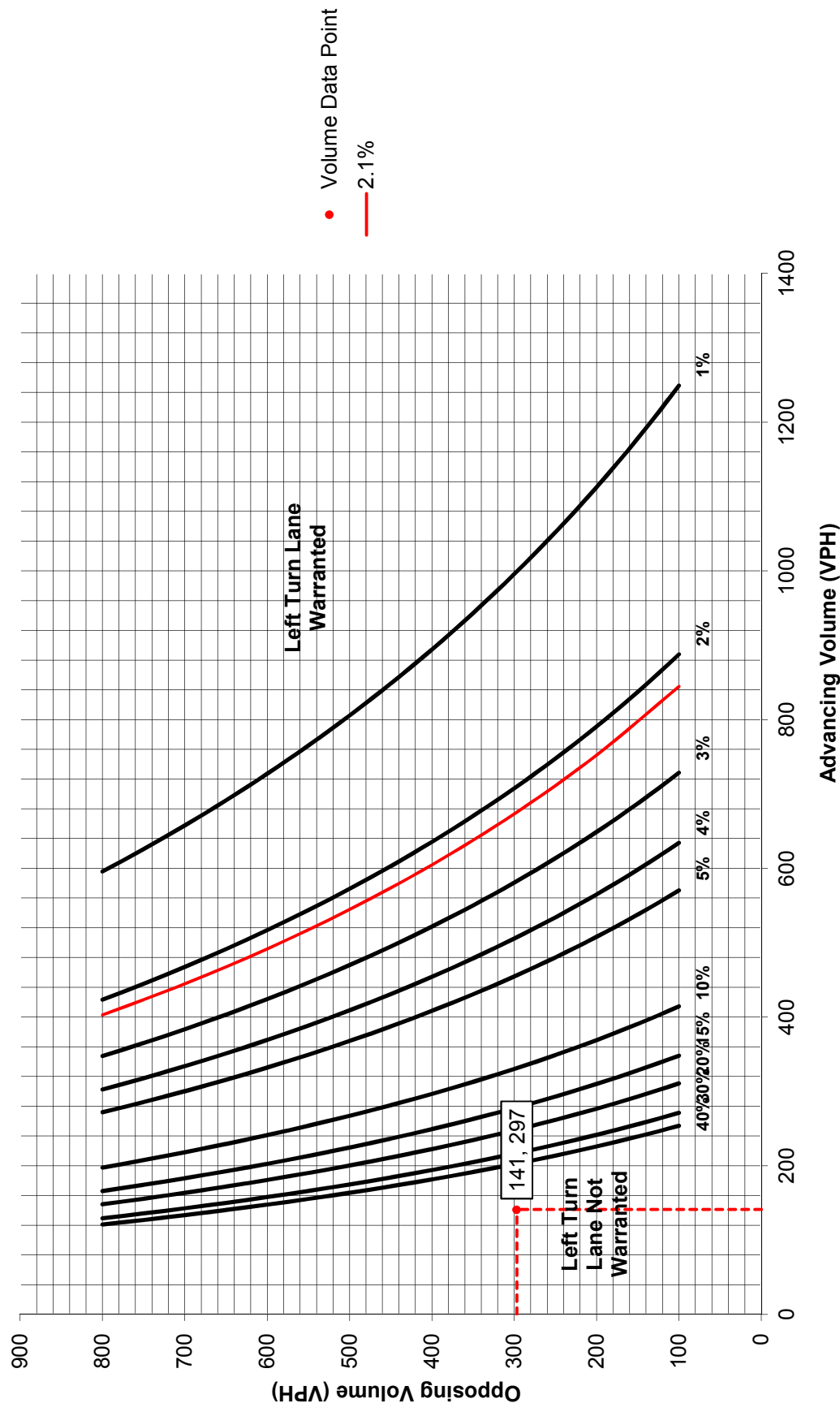
TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings	Right Turn Lane Warrant Findings
Applicable Warrant Figure: Figure 5 Warrant Met?: No	Applicable Warrant Figure: N/A Warrant Met?: N/A

TURN LANE LENGTH CALCULATIONS

Intersection Control: Unsignalized Design Hour Volume of Turning Lane: 3 Cycles Per Hour (Assumed): 60 Cycles Per Hour (If Known):	Average # of Vehicles/Cycle: N/A																																								
PennDOT Publication 46, Exhibit 11-6																																									
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <th rowspan="3">Type of Traffic Control</th> <th colspan="6">Speed (MPH)</th> </tr> <tr> <th colspan="2">25-35</th> <th colspan="2" rowspan="2">40-45</th> <th colspan="2" rowspan="2">50-60</th> </tr> <tr> <th colspan="6">Turn Demand Volume</th> </tr> <tr> <td></td> <td>High</td> <td>Low</td> <td>High</td> <td>Low</td> <td>High</td> <td>Low</td> </tr> <tr> <td>Signalized</td> <td>A</td> <td>A</td> <td>B or C</td> <td>B or C</td> <td>B or C</td> <td>B or C</td> </tr> <tr> <td>Unsignalized</td> <td>A</td> <td>A</td> <td>C</td> <td>B</td> <td>B or C</td> <td>B</td> </tr> </table>		Type of Traffic Control	Speed (MPH)						25-35		40-45		50-60		Turn Demand Volume							High	Low	High	Low	High	Low	Signalized	A	A	B or C	B or C	B or C	B or C	Unsignalized	A	A	C	B	B or C	B
Type of Traffic Control	Speed (MPH)																																								
	25-35		40-45		50-60																																				
	Turn Demand Volume																																								
	High	Low	High	Low	High	Low																																			
Signalized	A	A	B or C	B or C	B or C	B or C																																			
Unsignalized	A	A	C	B	B or C	B																																			
Left Turn Lane Storage Length, Condition A: N/A Feet Condition B: N/A Feet Condition C: N/A Feet Required Left Turn Lane Storage Length: N/A Feet																																									
Additional Findings: N/A																																									
Additional Comments / Justifications:																																									

Figure 5. Warrant for left turn storage lanes on two-lane highways
 (55 mph speed, unsignalized and signalized intersections)
 (L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality: Tremont Township County: Schuylkill County PennDOT Engineering District: 5	Analysis Date: 7/17/2018 Conducted By: JRF Checked By: Agency/Company Name: Traffic Planning and Design, Inc.
Intersection & Approach Description: Tremont Road (SR 0125) & Blackwood Road - NB RT Warrant	
Analysis Period: 2020 Projected (Build) Design Hour: AM Peak Hour Intersection Control: Unsignalized Posted Speed Limit (MPH): 55 Type of Terrain: Level	Number of Approach Lanes: 1 Undivided or Divided Highway: Undivided Type of Analysis Left or Right-Turn Lane Analysis?: Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations					
Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	7	2.0%	N/A
	Through	-	179	5.0%	N/A
	Right	Yes		0.0%	N/A
Opposing	Left	Yes		0.0%	N/A
	Through	-	126	10.0%	N/A
	Right	Yes	32	84.0%	N/A

Advancing Volume: N/A

Opposing Volume: N/A

Left Turn Volume: N/A

% Left Turns in Advancing Volume: N/A

Right Turn Lane Volume Calculations					
Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes			0
	Through	-	126	10.0%	133
	Right	-	32	84.0%	46

Advancing Volume: 179

Right Turn Volume: 46

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings		Right Turn Lane Warrant Findings	
Applicable Warrant Figure:	N/A	Applicable Warrant Figure:	Figure 10
Warrant Met?:	N/A	Warrant Met?:	No

TURN LANE LENGTH CALCULATIONS

Intersection Control: Unsignalized Design Hour Volume of Turning Lane: 46 Cycles Per Hour (Assumed): 60 Cycles Per Hour (If Known):	Average # of Vehicles/Cycle: N/A
---	---

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

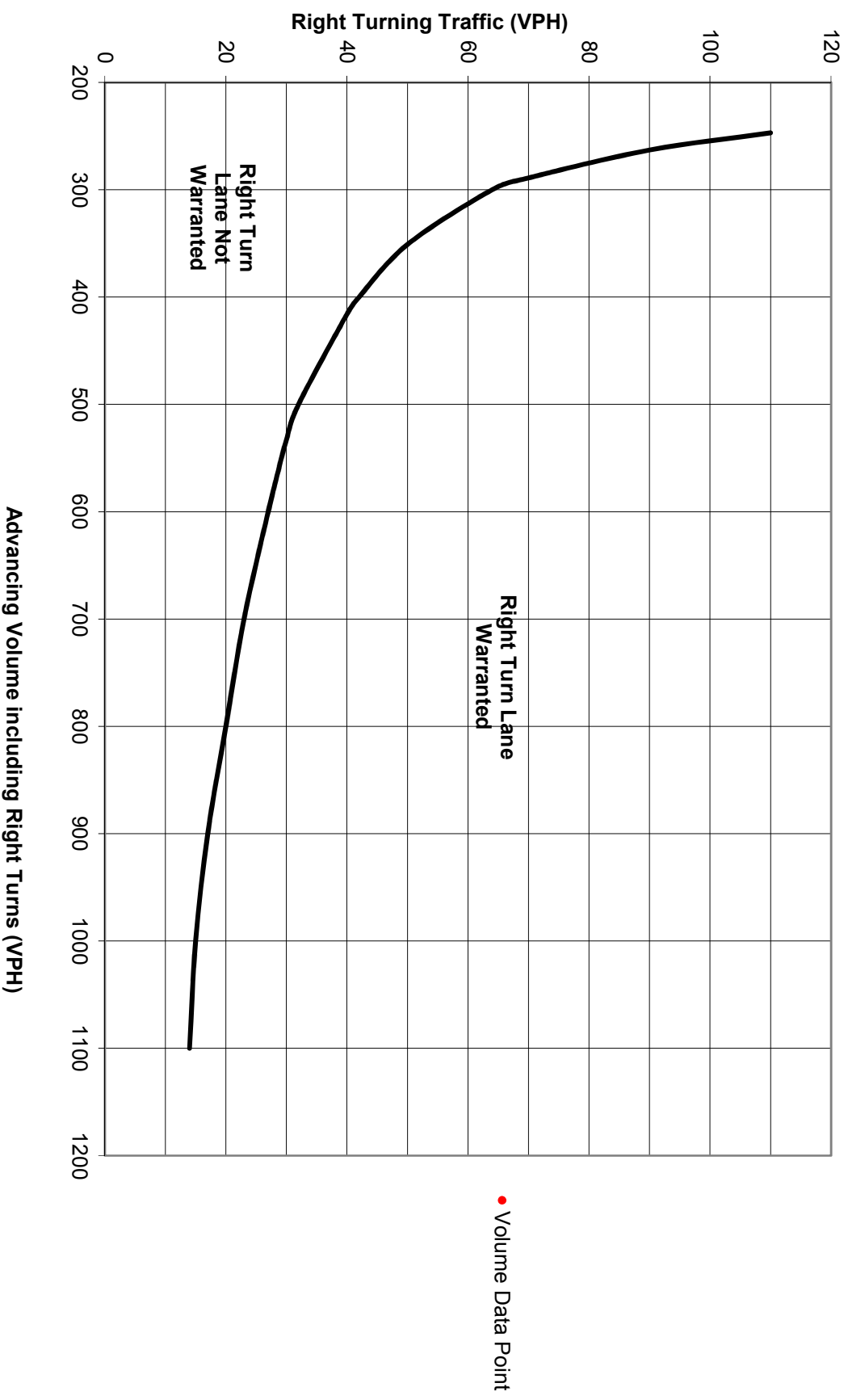
Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings:

N/A

Additional Comments / Justifications:

**Figure 10. Warrant for right turn lanes on two-lane roadways
(45 mph or greater speeds, unsignalized and signalized intersections)**



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality: Tremont Township County: Schuylkill County PennDOT Engineering District: 5	Analysis Date: 7/17/2018 Conducted By: JRF Checked By: Agency/Company Name: Traffic Planning and Design, Inc.
Intersection & Approach Description: Tremont Road (SR 0125) & Blackwood Road - NB RT Warrant	
Analysis Period: 2020 Projected (Build) Design Hour: PM Peak Hour Intersection Control: Unsignalized Posted Speed Limit (MPH): 55 Type of Terrain: Level	Number of Approach Lanes: 1 Undivided or Divided Highway: Undivided Type of Analysis Left or Right-Turn Lane Analysis?: Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations					
Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	2	2.0%	N/A
	Through	-	135	4.0%	N/A
	Right	Yes		0.0%	N/A
Opposing	Left	Yes		0.0%	N/A
	Through	-	253	2.0%	N/A
	Right	Yes	27	100.0%	N/A

Advancing Volume: N/A

Opposing Volume: N/A

Left Turn Volume: N/A

% Left Turns in Advancing Volume: N/A

Right Turn Lane Volume Calculations					
Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes			0
	Through	-	253	2.0%	256
	Right	-	27	100.0%	41

Advancing Volume: 297

Right Turn Volume: 41

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings		Right Turn Lane Warrant Findings	
Applicable Warrant Figure:	N/A	Applicable Warrant Figure:	Figure 10
Warrant Met?:	N/A	Warrant Met?:	No

TURN LANE LENGTH CALCULATIONS

Intersection Control: Unsignalized Design Hour Volume of Turning Lane: 41 Cycles Per Hour (Assumed): 60 Cycles Per Hour (If Known):	Average # of Vehicles/Cycle: N/A
---	---

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

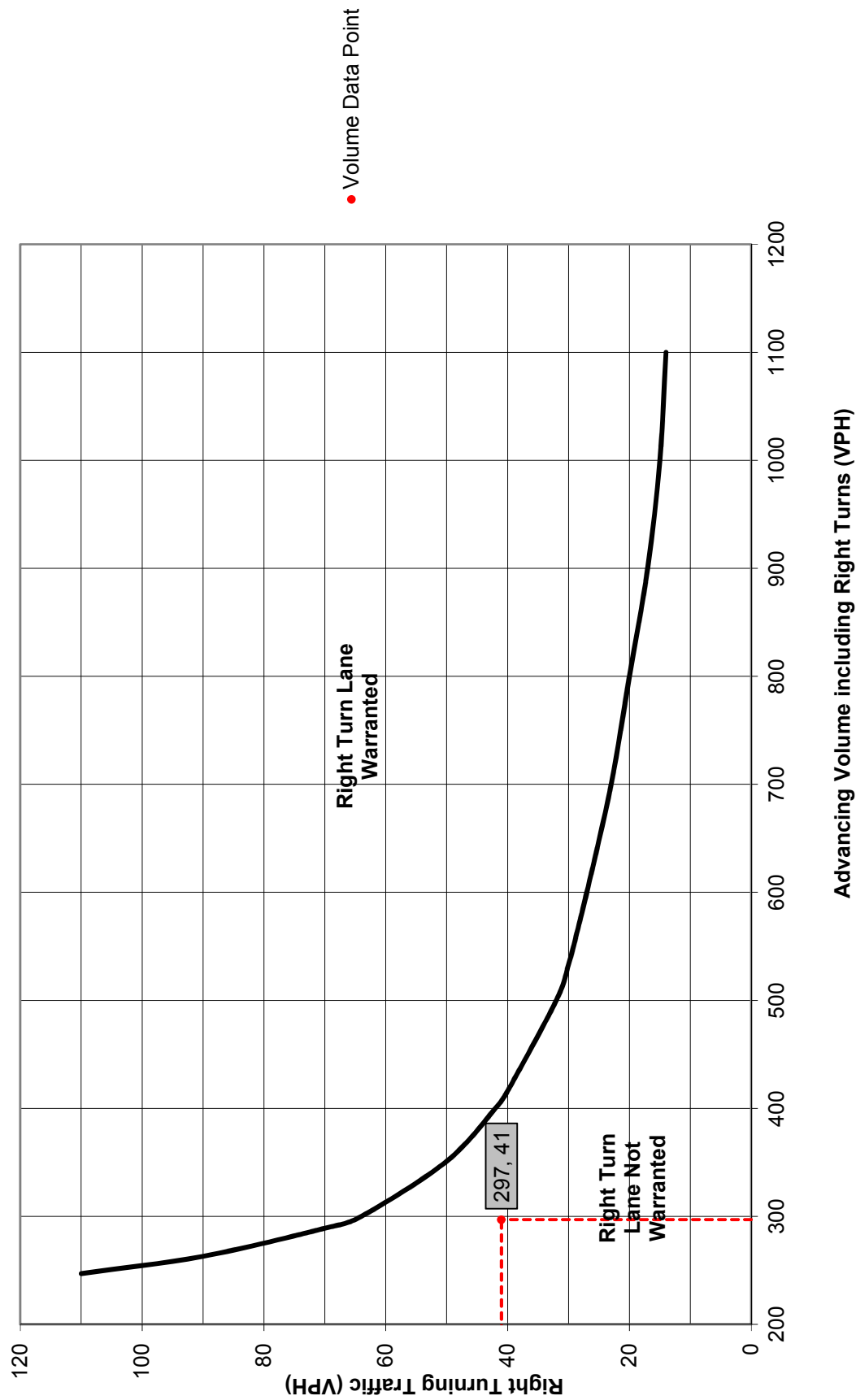
Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings:

N/A

Additional Comments / Justifications:

Figure 10. Warrant for right turn lanes on two-lane roadways
(45 mph or greater speeds, unsignalized and signalized intersections)



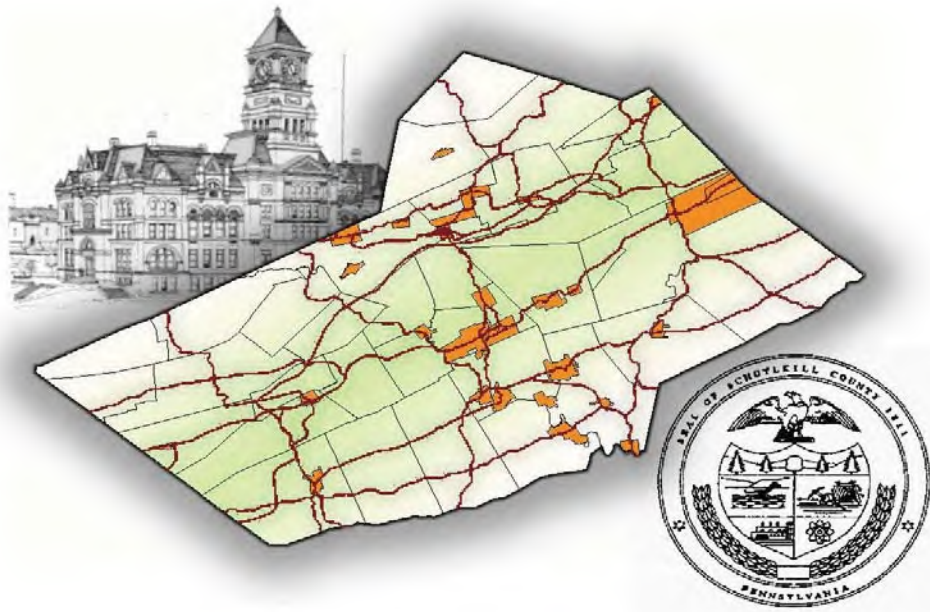
Attachment K-1

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

Zoning Ordinance for Schuylkill County Pennsylvania

Schuylkill County Zoning Ordinance



Schuylkill County, Pennsylvania
Ordinance Number 2010-1

As Adopted by the Schuylkill County Board of Commissioners
On December 22, 2010.

This Ordinance was prepared under the direction of
a Zoning Ordinance Committee of citizens, the County Planning Commission,
and the County Planning, Zoning and Engineering Staff.

This project was partially funded by a Land Use Technical Assistance
Program Grant (LUPTAP) administered by the Pennsylvania
Department of Community and Economic Development

Community Planning and Zoning Consultant

Urban Research and Development Corporation
Bethlehem, Pennsylvania



SCHUYLKILL COUNTY ZONING ORDINANCE

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The Official Zoning Maps and Airport Approach Zone Maps are also enacted as part of this Ordinance.

USING THIS ORDINANCE: AN OVERVIEW

These two pages describe the most efficient way to use this Ordinance. These pages are general descriptions but are not part of the actual Ordinance.

Start by using the following parts of the Zoning Ordinance:

- ! Please contact the Zoning Officer to make sure you have the latest version of the Zoning Ordinance Text and Map. Please check to make sure that the County Zoning Ordinance still applies in your municipality, as opposed to having been replaced by a Township or Borough Zoning Ordinance.
- ! Turn to the **Table of Contents** to find the pages and sections that apply to your particular situation. You may wish to photocopy the Table of Contents to highlight the relevant sections.
- ! Consult the **Zoning Map** to determine the zoning district that includes your lot. Please be aware that the term "assessment property class" as shown on the County assessment records is not a zoning district designation.
- ! Turn to Section 306, **Allowed Uses and Dimensional Requirements in each Zoning District**, which indicates the uses permitted, the required minimum lot size, and the required minimum distance that buildings must be from streets and other lot lines in each zoning district. A use is permitted in two ways:
 - a) by right, or
 - b) by special exception (the County Zoning Hearing Board must approve the use, as described in Section 116).
- ! Regularly refer to the **Definitions** in Section 202 to determine the meaning of specific words.

If a lot is already being legally used for a particular purpose and that use is not permitted in the zoning district according to Section 306 that use may be a "**Non-Conforming Use**". In almost all cases, a lawful Non-Conforming Use can continue, can expand within limits, can change to another use within limits, and can be sold. See Section 805 -"Non-Conformities."

Certain specific uses must comply with **additional regulations**. The "principal uses" (which are the primary use of a property) are listed in alphabetical order in Section 402 and the "accessory uses" (which are secondary uses, such as low-intensity businesses in a home) are listed in alphabetical order in Section 403. For example, additional regulations are listed for sheds, garages and other structures typically found on a residential lot under "Residential Accessory Structures" in Section 403.

If your lot may be flood-prone, see the Township or Borough Floodplain Ordinance and the Federal Floodplain Maps (which can be viewed at most municipal buildings or at www.fema.gov).

Turn to the following sections for regulations concerning parking, signs and buffer yards:

- ! Many uses must provide minimum numbers of off-street **Parking** spaces under Section 601 of this ordinance. The parking standards are listed in a table.
- ! If **Signs** are proposed within public view, Article 7 must be met. This article lists the types, heights and sizes of signs that are permitted.
- ! Certain uses are required to provide an open **Buffer Yard** with **Evergreen Screening** to buffer nearby homes and adjacent residentially zoned land from nuisances. See Section 803.

The following additional considerations should be kept in mind when using this Ordinance:

- ! An applicant may apply to the County **Zoning Hearing Board** for a **Zoning Variance** if he/she is not able to comply with a provision of this Zoning Ordinance. An application fee is required to compensate the County for legal advertisements and other costs. See Section 111, which includes the standards that must be met under State law in order to be granted a variance. Generally, under the PA Municipalities Planning Code, variances are not permitted unless an applicant proves a legal "Hardship".
- ! Generally, if one or more new lots will be created, or existing lot lines will be altered, or one or more new principal non-residential buildings are proposed, then the requirements and approval procedures of the **Subdivision and Land Development Ordinance** (SALDO) will also apply. That is a separate ordinance. Some municipalities are under the County SALDO, while other townships and boroughs have adopted their own SALDO.
- ! If there will be disturbance of the ground, it may be necessary to use certain measures to control **soil erosion**. The County Conservation District oversees these matters.
- ! If there will be impacts upon stormwater runoff, see the applicable Stormwater Management Ordinance.

Any questions concerning this County Zoning Ordinance should be directed to the County's **Zoning Officer**. The Zoning Officer also administers applications for permits.

TITLE; ENACTMENT; SEVERABILITY

Ordinance No. 2010-1

1. **TITLE**. A New Ordinance: a) dividing geographic areas of Schuylkill County, Pennsylvania, where a city, borough or township has not adopted its own zoning ordinance, into zoning districts with varying regulations; b) permitting, prohibiting, regulating and determining the uses of land, watercourses and other bodies of water, the size, height, bulk, location, erection, construction, repair, expansion, razing, removal and use of structures, the areas and dimensions of land and bodies of water to be occupied by uses and structures, as well as yards and other open areas to be left unoccupied; c) establishing the maximum density and intensity of uses; d) providing for the administration and enforcement of this Ordinance in accordance with the Pennsylvania Municipalities Planning Code, including provisions for special exceptions and variances to be administered by a Zoning Hearing Board; and e) establishing provisions for the protection of certain natural features.
2. **SHORT TITLE**. This Ordinance shall be known and be cited as the “Schuylkill County Zoning Ordinance” of 2010.
3. **SEVERABILITY**. It is hereby declared to be the legislative intent that if a court of competent jurisdiction declares any provisions of this Ordinance to be invalid or ineffective in whole or in part, the effect of such decision shall be limited to those provisions which are expressly stated in the decision to be invalid or ineffective, and all other provisions of this Ordinance shall continue to be separately and fully effective. The Board of County Commissioners hereby declares that it would have passed this Ordinance and each section or part thereof, other than any part declared invalid, if it had advance knowledge that any part would be declared invalid. If the entire Zoning Ordinance should be declared invalid, then the Schuylkill County Zoning Ordinance that was in effect immediately prior to the enactment of this new Zoning Ordinance shall automatically be re-instated as the Zoning Ordinance for Schuylkill County.
4. **PROCEDURAL DEFECTS IN ENACTMENT**. Allegations that this Ordinance or any amendment was enacted in a procedurally defective manner shall be appealed as provided in State law and be filed not later than 30 days after the intended effective date of the Ordinance or amendment.
5. **REPEALER**. The pre-existing Schuylkill County Zoning Ordinance, as amended, is hereby repealed, in addition to the repeal of any other County ordinances or resolutions or parts thereof that were adopted prior to this Ordinance that are clearly in direct conflict with this Ordinance.
6. **ENACTMENT**. Under the authority conferred by the Pennsylvania Municipalities Planning Code, as amended, the Board of County Commissioners of Schuylkill County hereby enacts and ordains into an Ordinance the attached document this date of December 22, 2010. This Ordinance shall become effective December 27, 2010.

Date of Planning Commission Public Meeting: August 18, 2010

Date of County Commissioners Public Hearing: December 15, 2010

SCHUYLKILL COUNTY BOARD OF COMMISSIONERS

/s/ Mantura M. Gallagher

Mantura M. Gallagher, Commissioner, Chair

/s/ Francis V. McAndrew

Francis V. McAndrew, Commissioner

/s/ Frank J. Staudenmeier

Frank J. Staudenmeier, Commissioner

Attest: /s/ Darlene Laughlin

Darlene Laughlin, Chief Clerk

Date: December 22, 2010

ARTICLE 1

ADMINISTRATION

101. APPLICABILITY OF THIS ORDINANCE

This Zoning Ordinance shall apply throughout geographic areas of Schuylkill County where a City, Township or Borough does not have a municipal zoning ordinance in effect. Any activity regulated by this Ordinance shall only occur in such a way that conforms with the regulations of this Ordinance.

102. PURPOSES AND COMMUNITY DEVELOPMENT OBJECTIVES

This Ordinance is hereby adopted:

- A. In accordance with the requirements and purposes (including Sections 604 and 605 or their successor section(s), which are included by reference) of the Pennsylvania Municipalities Planning Code, as amended,
- B. in accordance with goals and objectives of the Schuylkill County Comprehensive Plan and Open Space and Greenway Plan, which are hereby included by reference,
- C. to carry out the following major objectives:
 - 1. to make sure that development carefully relates to natural features, and to avoid overly intense development of environmentally sensitive land,
 - 2. to avoid overextending groundwater supplies, and to encourage groundwater recharge, and to protect the quality of groundwater and surface waters,
 - 3. to promote traditional styles of development,
 - 4. to promote compatibility between land uses,
 - 5. to seek coordinated development and roads across municipal borders,
 - 6. to provide for a variety of residential densities and meet legal obligations to provide opportunities for all housing types,
 - 7. to direct higher density development to areas that are physically suitable, accessible by major roads and that have the potential of central water and sewage services,
 - 8. to coordinate development with future central water and sewage service areas,
 - 9. to direct industrial development to locations that will minimize conflicts with homes,
 - 10. to direct commercial businesses to existing commercial areas, while avoiding new strip commercial areas that would cause traffic congestion and safety problems and conflicts with homes,
 - 11. to promote new business development in appropriate areas that will provide additional tax revenue and job opportunities, and
 - 12. to promote public health, safety and general welfare.

103. PERMITS AND CERTIFICATES

A. Applicability.

- 1. Any of the activities listed in Section 103.A.2. or any other activity regulated by this Ordinance shall only be carried out in conformity with this Ordinance.

2. Zoning Permit Required. A Zoning Permit indicates that a zoning application complies with this Ordinance to the best knowledge of the applicable County Staff. A Zoning Permit is required to be obtained from the County prior to the start of any of the following activities (Refer to Article 3 for a complete list):
 - a. erection, construction, movement, placement, enclosing, replacement, relocation or expansion (including adding a story) of a building or structure, including replacement of one manufactured/mobile home with a different manufactured/mobile home
 - b. placement of a free standing sign with an area of 50 or more square feet
 - c. change of the type of use or expansion of the use of a building, structure or area of land
 - d. creation of a new use
 - e. mineral extraction or development of a gas or oil well as defined by Section 202
 - f. establishment of a home occupation
 - g. adding a roof over an area that was not previously under roof (other than a fabric or flexible awning)
 - h. enclosing building space (other than flexible screening around a deck, patio or porch and other than temporary tents)
 - i. deck, patio and porch
 - j. Industrial/commercial accessory use or structure such as a storage shed or other similar structure with a floor area of 100 square feet or greater
 - k. Helipad as an accessory use to an industrial or commercial principal use
 - l. residential accessory uses and structures as follows: (see Section 307. C)
 1. residential accessory structure such as a storage building or shed, pole building, garage, carport, pavilion or other similar structure with a floor area of 100 square feet or greater
 2. signs, as permitted by Article 7. (See sign exemptions in Section 703.A.)
 3. stable, household-See Section 402
 4. in-ground swimming pool, household
 5. wind turbines that are not attached to a building
 6. solar panels that are not attached to a building
 7. such other accessory use or structure that the applicant proves to the satisfaction of the Zoning Officer is clearly customary and incidental to a permitted by right or special exception principal use

3. Zoning Permit Not Required. The following activities shall be exempt from the requirements of this Ordinance and shall not require a zoning permit. “Exempt from this Ordinance” shall mean that the use or activity is allowed everywhere outside of a public street right-of-way, setbacks and other zoning requirements do not apply (except for creation of a new lot), and a zoning permit is not required.
- a. crop farming, other than constructing or expanding a building
 - b. fence, or a wall that is not part of a building
 - c. above ground swimming pool, accessory children’s play equipment or children’s tree house
 - d. governmental use or structure that is exempted by Section 115
 - e. routine accessory occasional garage and yard sales
 - f. keeping of common domesticated household pets
 - g. driveways and walkways
 - h. public utility lines, pipes, poles or towers or underground fuel transmission pipes
 - i. replacing one type of building material with another type of building material
 - j. vending machines, ATM machines as accessory to a commercial business or that are within a principal non-residential building
 - k. keeping of livestock or poultry, unless the use meets the definition of “Intensive Keeping of Livestock or Poultry”
 - l. bus shelters placed at school bus or public transit or shuttle bus stops
 - m. forestry and timber harvesting
 - n. commercial farm tourism and special events, such as farm tours, a corn maze and Halloween activities
 - o. accessory commercial communications antenna
 - p. standard antenna
 - q. adding antennas to an existing communications tower that does not increase the total height
 - r. placement of a free standing sign with an area less than 50 square feet, and all wall and window signs
 - s. recreational facilities, limited to use by residents of a development or students at a primary or secondary school or center for the care and treatment of youth, and their occasional invited guests
 - t. wind turbines and solar panels attached to a building, including the roof
 - u. entertainment, other than adult live entertainment.
 - v. *Temporary Uses and Structures* as follows:
 - 1. temporary retail sales, which may include a tent
 - 2. customary, routine and accessory short-term commercial uses shall be allowed in a non-commercial district if they are operated by a nonprofit organization, fire company, municipality or a place of worship and which serve a charitable, public service or religious purpose or a municipally-sponsored festival/special event
 - 3. temporary storage and office trailers shall be allowed that are necessary to serve on-site construction, while such construction is actively underway

4. Christmas tree sales
 5. a subdivision may include a model home, which is used as a sales office in a development, provided the building is converted to a dwelling or removed when the development is complete
 6. Borough Council or Board of Supervisors or their designee may authorize the use of parts of public sidewalks, public property or streets for sidewalk sales, outdoor cafes, festivals or similar activities, without needing zoning approval
 7. a dwelling unit may be maintained on a lot while a second dwelling unit is actively under construction, provided that the first dwelling shall be completely removed from the lot within 60 days after the second dwelling is habitable
- w. commercial, industrial or institutional accessory uses provided that the use is clearly limited to employees, patients, residents and families of employees of the use and their occasional invited guests as follows:
1. internal cafeteria without drive-through service
 2. day care center
 3. recreational facilities
 4. storage of fuels for on-site use or to fuel company vehicles
4. Prior to receiving a Zoning Permit, certain uses are required to obtain Special Exception Use approval from the Zoning Hearing Board.
- B. Repairs and Maintenance. Ordinary repairs and maintenance to existing structures that do not involve an expansion or change of a use or structure shall not by itself be regulated by this Ordinance. Examples of such work include replacement of a roof or porch that does not involve new enclosure of space and which does not extend further into a setback. (However, a Construction Permit under the Building Code may be needed for such work. Applicants should contact the municipal Building Code official for construction permit matters).
- C. Types of Uses.
1. Permitted by Right Uses. The Zoning Officer shall issue a permit under this Ordinance in response to an application for a use that is "permitted by right" if it meets all of the requirements of this Ordinance, unless this Ordinance states that a zoning permit is not required.
 2. Special Exception Use or Application Requiring a Variance. A permit under this Ordinance for a use requiring a Special Exception or Variance shall be issued by the Zoning Officer only in response to a written approval by the Zoning Hearing Board following a hearing.

D. Applications.

1. Submittal. All applications for a Zoning Permit or a decision by the Zoning Hearing Board shall be made in writing on a form provided by the County. Such completed application, with required fees, shall be submitted to a designated County staff-person.
2. Site Plan. The applicant shall submit a site plan with a non-residential application if the application involves a new building or the expansion of a building. The site plan shall show the following:
 - a. locations, dimensions and uses of existing and proposed structures, parking and loading areas, and locations of existing and proposed uses of areas of land, with existing features clearly distinguished from proposed features
 - b. notes showing the dimensions of all buildings from lot lines and street rights-of-way
 - c. locations of any watercourses and any 100 year floodplain
 - d. proposed lot areas, lot widths and other applicable dimensional requirements
 - e. locations and widths of existing and proposed sidewalks
 - f. a north arrow and scale
3. Additional Information. Any application under this Ordinance shall include the following information, unless the Zoning Officer determines such information is unnecessary to determine compliance with this Ordinance:
 - a. the address of the lot
 - b. name and address of the applicant, and of the owner of the property if different from the applicant
 - c. if the applicant is not the landowner of record, information shall be presented with the application, such as an agreement of sale or lease, to demonstrate that the applicant has the legal right to make the application
 - d. a current deed or evidence of equitable ownership, if the Zoning Officer believes there is a question about ownership by the applicant for the property
 - e. a description of the existing and proposed use(s) of the property, with the proposed use described in sufficient detail for the Zoning Officer to determine compliance with this Ordinance
 - f. all other applicable information listed on the official County application form,
 - g.. if the applicant is incorporated, the legal names and day telephone numbers of officers of the organization/corporation
 - h.. such additional information that the Zoning Officer may determine is reasonably necessary to determine compliance with this Ordinance and
 - i. a listing of all special exception approvals and/or variances which the applicant is requesting and/or a description with a date of any such approvals that were previously granted for this property that relate to this application
4. Submittals to the Board. In addition to the information listed in part "3." above, an application requiring a site plan and action by the Zoning Hearing Board shall also include the following information, unless the Zoning Officer determines that such information is unnecessary to determine compliance with this Ordinance:

- a. the present zoning district and major applicable lot requirements
 - b. for a non-residential use
 - (1) a description of the proposed non-residential operations and storage in sufficient detail to indicate potential nuisances and hazards regarding noise, large truck traffic, glare, odors, dust, fire or toxic or explosive hazards or other significant public health and safety hazards
 - (2) a list of the maximum hours of operation
 - c. a listing of any sections of this Ordinance for which a variance is being requested or another appeal being made, with the reasons for such request
 - d. approximate locations of principal buildings and locations of streets and alleys and zoning district boundaries within 100 feet of the boundaries of the tract, and description of uses of adjoining properties (such as "drug store" or "single family detached dwelling")
 - e. heights, locations, methods of illumination and intensity of exterior lighting and sign lighting
 - f. name and address of person who prepared the site plan
 - g. signed acknowledgment of the application by the applicant, and
 - h. such additional information required under applicable sections of this Ordinance
5. Ownership. No person other than a landowner or their specifically authorized agent or a tenant or lessee of the landowner shall submit a zoning application (see definition of "landowner" in Article 2).

E. Time Limits on Permits and Approvals.

1. The work authorized by zoning permits shall be substantially completed within 24 months after the issuance of the zoning permit, unless specifically stated otherwise on the permit. Failure to comply with the aforementioned time limit, the Zoning Officer shall conclusively presume that the applicant has waived, withdrawn or abandoned approvals, variances and permits under this Ordinance and all such approvals, variances and permits shall be deemed automatically rescinded by the County.
2. Extension. In response to an applicant stating good cause in writing, the Zoning Officer may extend in writing the time limit for substantial completion of work to a maximum total of 48 months after permits are issued.

F. Revocation of Permits; Appeal of Permit or Approval.

1. Revocation. The Zoning Officer shall revoke, withhold or suspend a permit or approval issued under the provisions of the Zoning Ordinance in case of one or more of the following:
 - a. any false statement or misrepresentation of fact in the application or on the plans on which the permit or approval was based; (Note: The Pennsylvania Criminal Code provides for penalties for providing false information to a municipal employee in the carrying out of his/her duties)
 - b. upon violation of any condition lawfully imposed by the Zoning Hearing Board upon a special exception use or variance
 - c. any work being accomplished or use of land or structures in such a way that does not comply with this Ordinance or an approved site plan or approved permit application; and/or

d. for any other just cause set forth in this Ordinance

2. Appeals. A party with legitimate standing, or as otherwise provided by State law, may appeal decisions under this Ordinance within the provisions of the Pennsylvania Municipalities Planning Code. Any such appeal shall occur within the time period established in the Pennsylvania Municipalities Planning Code (As of the adoption date of this Ordinance, such provisions were in Sections 914.1 and 1002.A.).

G. Compliance with Subdivision and Land Development Ordinance. If a application under this Ordinance would also be regulated by the applicable Subdivision and Land Development Ordinance ("SALDO"), then any permit or approval under this Zoning Ordinance shall automatically be conditioned upon compliance with the SALDO. See the definitions of "Land Development" and "Subdivision" in the SALDO.

1. For example, if an applicant applies for a single family detached dwelling on a proposed new lot, the zoning permit for such dwelling shall not be valid until after the lot is granted final subdivision approval and the lot is officially recorded by the County Recorder of Deeds.
2. If approval under the Subdivision and Land Development Ordinance is required, and a zoning variance or special exception approval is needed for the plan to be developed as proposed, then the zoning variance and/or special exception approval shall have been granted before a final subdivision or land development plan submittal shall be considered complete.

104. GENERAL PROCEDURE FOR PERMITS.

- A. After receiving a proper application, the Zoning Officer shall either: 1) issue the applicable permit(s) or 2) deny the application(s) as submitted, indicating one or more reasons.
- B. After the permit under this Ordinance has been issued, the applicant may undertake the action specified by the permit, in compliance with other applicable Ordinances. Any commencement of construction or a use within this 30 day appeal period shall be at the risk of the applicant, in the event of a legal appeal by a challenger.

105. INTERPRETATION AND USES NOT REGULATED.

- A. Minimum Requirements. Where more than one provision of this Ordinance controls a particular matter, the provision that is more restrictive upon uses and structures shall apply.
- B. Uses Not Specifically Regulated. If a use clearly is not permitted by right, or as a special exception use, or otherwise exempted by this Ordinance within any Zoning District, the use is prohibited, except that the Zoning Hearing Board may permit such use as a special exception use if the applicant specifically proves to the clear satisfaction of the Zoning Hearing Board that all of the following conditions would be met:
 1. the proposed use would be no more intensive with respect to external impacts and nuisances than uses that are permitted in the District
 2. the proposed use would be closely similar in impacts and character to uses permitted in that District, considering the standards in Section 805.F.
 3. the use would meet the standards that would apply under Section 116 to a special exception use, and
 4. the use is not specifically prohibited in that District

C. Interpretation of Ordinance Text and Boundaries.

1. The Zoning Officer shall literally apply the wording of this Ordinance and the location of all District boundaries to particular applications. In any case, the Zoning Officer may also request an advisory opinion from the County Solicitor's Office to aid in the Zoning Officer's determination
2. If an applicant disagrees with the Zoning Officer's determination and believes that the Ordinance should be interpreted in the applicant's favor, the applicant may appeal to the Zoning Hearing Board. See Section 111
3. See Section 304

D. Undefined Terms/Interpretation of Definitions. See Section 201.

106. ENFORCEMENT, VIOLATIONS AND PENALTIES.

All of the enforcement, violations and penalty provisions of the Pennsylvania Municipalities Planning Code, as amended, are hereby incorporated into this Ordinance by reference. (Note - As of the adoption date of this Ordinance, these provisions were primarily in Sections 616.1, 617 and 617.2 of such Act.)

A. Violations. Any person who shall commit or who shall permit any of the following actions violates this Ordinance:

1. Failure to secure a zoning permit where required under Section 103.A.2.;
2. Placement of false statements on or omitting relevant information from an application for a zoning permit;
3. Undertaking any action in a manner which does not comply with a zoning permit;
4. Violation of any condition imposed by a decision of the Zoning Hearing Board in granting a variance or special exception or other approval; or
5. Violation of any condition imposed by a decision of a court of competent jurisdiction, where such court has granted zoning approval with conditions.

B. Enforcement Notice. The Zoning Officer is only required to record and investigate an alleged violation of this Ordinance if the Zoning Officer receives a written and signed complaint that includes the name, address and telephone number of the person filing the complaint and a sufficient description of the location. If the Zoning Officer has reason to believe that a violation of a provision of the Zoning Ordinance has occurred, the County may initiate enforcement proceedings by sending an enforcement notice as provided in Section 616.1 of the Pennsylvania Municipalities Planning Code. Prior to sending an official enforcement notice, the Zoning Officer may at his/her option informally request compliance.

C. Time Limits. An official enforcement notice shall state the deadline to complete bringing the property into compliance with this Ordinance, and shall state that the applicant has 30 days from the receipt of the notice to appeal to the Zoning Hearing Board.

D. Causes of Action; Enforcement Remedies. The Causes of Action and Enforcement Remedies provisions of the Pennsylvania Municipalities Planning Code, as amended, are hereby incorporated by reference. (Note: As of the adoption date of this Ordinance, such provisions were in Section 617 of such law.)

1. Violations and Penalties. Any person who has violated or permitted the violation of the provisions of this Ordinance shall, upon being found liable therefore in a civil enforcement proceeding commenced by the County, pay a judgment of not more than five hundred dollars plus all court costs, including the reasonable attorney's fees incurred by the County as a result thereof. No judgment shall commence or be imposed, levied or be payable until the date of the determination of a violation by the District Justice. If the defendant neither pays nor timely appeals the judgment, the County may enforce the judgment pursuant to the applicable rules of civil procedure. Each day that a violation continues shall constitute a separate violation, unless a District Justice determining that there has been a violation further determines that there was a good faith basis for the person violating this Ordinance to have believed that there was no such violation, in which event there shall be deemed to have been only one such violation until the fifth day following the date of the determination of a violation by the District Justice, and thereafter each day that a violation continues shall constitute a separate violation. All judgments, costs and reasonable attorney's fees collected for the violation of this Ordinance shall be paid over to the County for the general use of the County. Imprisonment is not authorized under this Ordinance.
 2. Remedies. In case any building, structure, sign or landscaping is erected, constructed, reconstructed, altered, repaired, converted or maintained; or any building, structure, sign or land is used or maintained in violation of this Ordinance or any conditions imposed upon the grant of a special exception or variance by the Zoning Hearing Board, then, in addition to any other remedies provided by law, any appropriate action or proceeding may be instituted or taken to prevent or restrain such unlawful erection, construction, reconstruction, alteration, repair, conversion, maintenance or use or to prevent any illegal act, conduct, business or use in and about such premises.
- E. Enforcement Evidence. In any appeal of an enforcement notice to the Zoning Hearing Board, the County shall have the responsibility of presenting its evidence first.

107. FEES.

A County fee schedule for permits and applications may be established and amended by written resolution of the County Commissioners. No application or appeal shall be considered filed until all fees are paid.

108. AMENDMENTS TO THIS ORDINANCE.

Within the requirements of the Pennsylvania Municipalities Planning Code, the County Commissioners may amend, or repeal any or all portions of this Ordinance on 1) its own motion or 2) after agreeing to hear a written request of any person, entity, landowner or the Planning Commission or a municipality.

109. CURATIVE AMENDMENTS.

The applicable provisions of the Pennsylvania Municipalities Planning Code shall apply. (Note: As of the adoption date of this Ordinance, these provisions were primarily in Sections 609.1, 609.2 and 916.1 of such Act.)

110. ZONING OFFICER.

- A. Appointment. The Zoning Officer(s) shall be appointed by the County Commissioners. The County may designate other County Staff-persons to serve as Assistant Zoning Officer(s). Assistant Zoning Officers may serve with the same authority and duties as the Zoning Officer. The Zoning Officer shall not hold any elective office within the County, but may hold other appointed offices.
- B. Duties and Powers. The Zoning Officer's duties and powers shall include the following:
1. administer the Zoning Ordinance in accordance with its literal terms, including to receive and examine all applications required under the terms of this Ordinance, and issue or refuse permits within the provisions of this Ordinance
 2. conduct inspections to determine compliance, and receive complaints of violation of this Ordinance as provided in this Ordinance
 3. keep records of applications, permits, certificates, written decisions, and variances granted by the Zoning Hearing Board, and of enforcement orders, with all such records being the property of the County and being available for public inspection
 4. review proposed subdivisions and land developments for compliance with this Ordinance
 5. take enforcement actions as provided by the Pennsylvania Municipalities Planning Code, as amended
 6. maintain available records concerning non-conformities, provided that the County is not required to document every non-conformity; and
 7. serve such other functions as are provided in this Ordinance

111. ZONING HEARING BOARD ACTIONS AND VARIANCES.

- A. Membership of Board. The Zoning Hearing Board shall consist of 3 residents of the County appointed by the Board of County Commissioners. The existing terms of office shall continue, with terms of office being 3 years, and with the terms being so fixed that the term of office of one member shall expire each year. Members of the Board shall hold no other office in the County and shall not be employed by the County in another capacity.
1. Alternate Members. The County Commissioners may appoint alternate members of the Zoning Hearing Board within the applicable provisions of the Pennsylvania Municipalities Planning Code. (Note: As of the adoption date of this Ordinance, such provisions were in Section 903(b) of such Act).
 2. Expenditures. Within the maximum amount of funds appropriated by the County Commissioners, the Zoning Hearing Board may contract for a Solicitor, and may receive compensation authorized by the County.
- B. Vacancies. Appointments to fill vacancies shall be only for the unexpired portion of a term.
- C. Organization. The applicable provisions of the Pennsylvania Municipalities Planning Code, as amended shall apply. (As of the adoption date of this Ordinance, these provisions were in Sections 906(a), (b) and (c) of such Act).

- D. Zoning Hearing Board Jurisdiction and Functions. The Zoning Hearing Board shall be responsible for the following:
1. Appeal of a Decision by the Zoning Officer.
 - a. The Board shall hear and decide appeals where it is alleged by an affected person, entity or the County Commissioners that the Zoning Officer has improperly acted under the requirements and procedures of this Ordinance.
 - b. See time limitations for appeals in Section 111.E.
 2. Challenge to the Validity of the Ordinance or Map. The applicable provisions of the Pennsylvania Municipalities Planning Code, as amended, shall apply. (Note: As of the adoption date of this Ordinance, these provisions were primarily in Sections 909.1 and 916 of such Act).
 3. Variance.
 - a. The Board shall hear requests for variances filed with the County Staff in writing.
 - b. Standards. The Board may grant a variance only within the limitations of State law. As of the adoption date of this Ordinance, the Municipalities Planning Code provided that all of the following findings must be made, where relevant:
 - i) There are unique physical circumstances or conditions (including irregularity, narrowness, or shallowness of lot size or shape, or exceptional topographical or other physical conditions peculiar to the particular property) and that the unnecessary hardship is due to such conditions and not the circumstances or conditions generally created by the provisions of this Ordinance in the neighborhood or district in which the property is located;
 - ii) Because of such physical circumstances or conditions, there is no possibility that the property can be developed in strict conformity with the provisions of the Zoning Ordinance and a variance is therefore necessary to enable the reasonable use of the property;
 - iii) Such unnecessary hardship has not been created by the appellant;
 - iv) The variance, if authorized, will not alter the essential character of the neighborhood or district in which the property is located, nor substantially or permanently impair the appropriate use or development of adjacent property, nor be detrimental to the public welfare; and
 - v) The variance, if authorized, will represent the minimum variance that will afford relief and will represent the least modification possible of the regulation in issue.
 - c. In granting any variance, the Board may attach such reasonable conditions and safeguards as it may deem necessary to implement the purposes of this Ordinance.
 4. Special Exception.
 - a. The Board shall hear and decide requests for all special exceptions filed with the County Staff in writing. The Board shall only permit a special exception that is authorized by this Ordinance. See Section 116.
 - b. Conditions. In granting a special exception, the Zoning Hearing Board may attach such reasonable conditions and safeguards, in addition to those expressed in the

Ordinance, as it may deem necessary to implement the purposes and intent of this Ordinance.

5. Persons With Disabilities. After the Zoning Officer receives a complete written application, the Zoning Hearing Board shall grant a special exception allowing modifications to specific requirements of this Ordinance that the applicant proves to the satisfaction of the Zoning Hearing Board are required under applicable Federal law to provide a "reasonable accommodation" to serve persons who the applicant proves have "disabilities" as defined in and protected by such laws.
 - a. Such reasonable accommodations shall be requested in accordance with the U.S. Fair Housing Act Amendments and/or the Americans with Disabilities Act, as amended.
 - b. If the applicant is requesting a reasonable accommodation under the United States Fair Housing Amendments Act of 1988 or the Americans with Disabilities Act, the applicant shall identify the disability which is protected by such statutes, the extent of the modification of the provisions of this Ordinance necessary for a reasonable accommodation, and the manner by which the reasonable accommodation requested may be removed when such person(s) with a protected disability no longer will be present on the property.
 - c. Any modification approved under this Section may be limited to the time period during which the persons with disabilities occupy or utilize the premises.
6. The Zoning Hearing Board shall also hear any other matters as set forth in the Pennsylvania Municipalities Planning Code, as amended. (Note: As of the adoption date of this Ordinance, such provisions were primarily within Section 909.1 of such law.)
- E. Time Limits for Appeals. The applicable provisions of the Pennsylvania Municipalities Planning Code, as amended, shall apply. (Note: As of the adoption date of this Ordinance, these provisions were in Section 914.1 of such Act.)
- F. Stay of Proceedings. The Stay of Proceedings provisions of the Pennsylvania Municipalities Planning Code, as amended, shall apply. (Note: As of the adoption date of this Ordinance, such provisions were in Section 915.1 of such Act.)

112. ZONING HEARING BOARD HEARINGS AND DECISIONS.

The following requirements shall apply to procedures, hearings and decisions of the Zoning Hearing Board.

- A. Notice of Hearings. Notice of all hearings of the Board shall be given as follows:
 1. Advertisement. Public notice shall be published, as defined by Section 107 of the Pennsylvania Municipalities Planning Code. The notice shall state the time and place of the hearing and the particular nature of the matter to be considered.
 2. Posting. Notice of such hearing shall be conspicuously posted on the affected tract of land at least one week prior to the hearing. The County Staff shall post the property. It is the responsibility of the applicant to make sure that such notice remains posted until the hearing.
 3. Persons Given Notice. The County shall provide written notice to the Applicant of the time and place of the hearing. The County should also provide notice to the primary last known owner of each lot that is abutting or immediately across the street from the

subject lot. Failure to provide such notice shall not be grounds for an appeal or delay. Also, such notice shall be given to any other person or group (including civic or community organizations) who has made a written timely request for such notice. Any such notices should be mailed or delivered to the last known address.

- B. Initiation of Hearings. A hearing required under this Ordinance shall be initiated within 60 days of the date of an applicant's request for a hearing, unless the applicant has agreed in writing to an extension of time.
- C. Decision/Findings.
 - 1. The Board shall render a written decision on each application within 45 days after the last hearing on that application before the Board, unless the applicant has agreed in writing to an extension of time.
 - 2. Where the application is contested or denied, the decision shall be accompanied by findings of fact and conclusions based thereon, together with the reasons for such conclusions.
 - 3. References shall be provided to the most pertinent section(s) of this Ordinance and/or the Pennsylvania Municipalities Planning Code.
- D. Notice of Decision. A copy of the final decision or, where no decision is called for, of the findings, shall be delivered to the applicant personally or mailed to him not later than the day following the date of the final decision. (Note: As of the adoption date of this Ordinance, such provisions were within Sections 908(9) and 908(10) of such Act, including provisions regarding notice to other parties).
- E. See also Section 908 of the Pennsylvania Municipalities Planning Code.

113. APPEALS TO COURT.

The provisions for appeals to court that are stated in the Pennsylvania Municipalities Planning Code, as amended, shall apply. (Note: As of the adoption date of this Ordinance, these provisions were in Sections 1001-A, 1002-A, 1003-A, 1004-A, 1005-A and 1006-A of such Act.)

114. LIMITED PUBLIC UTILITY EXEMPTIONS.

See the provisions of the Pennsylvania Municipalities Planning Code, as amended. (Note: As of the adoption date of this Ordinance, such provisions were within Section 619 of such Act.)

115. APPLICATION TO GOVERNMENT FACILITIES.

- A. This Zoning Ordinance shall not apply to uses or structures owned and/or operated by Schuylkill County or an agency of Schuylkill County or the applicable borough or township within its own boundaries, or by a municipal authority created by the county or such borough or township. This exemption shall apply for uses and structures that are intended for a public utility (including but not limited to electricity generation), stormwater, municipal parking, wastewater, water supply, governmental administration, environmental protection, public recreation or public health and safety, or other governmental purpose.
- B. This Zoning Ordinance shall not apply to uses or structures or other activity owned and/or operated by a governmental agency of the Commonwealth of Pennsylvania or the Government of the United States. This exemption shall not apply to activity that is simply

funded by governmental agencies or that is conducted by entities that are only affiliated with or related to a level of government.

116. SPECIAL EXCEPTION USE PROCESS.

- A. Purpose. The Special Exception Process is designed to allow careful review of uses that have some potential of conflicts with adjacent uses or areas.
- B. Special Exception Procedure.
 - 1. A Site Plan shall be submitted, which shall contain the information required in Section 103.D. If a fully engineered subdivision or land development plan will be required, it may be submitted separately, such as after a special exception is approved.
 - 2. The Zoning Officer should provide a review to the Zoning Hearing Board regarding the compliance of the application with this Ordinance.
 - 3. The Zoning Officer or Zoning Hearing Board may send the application to the County and/or Municipal Planning Commission for any review they may wish to provide.
 - 4. The Zoning Hearing Board shall follow the procedures provided in Section 112.
 - 5. Time Limits. See Section 908 of the Pennsylvania Municipalities Planning Code.
- C. Consideration of Special Exception Applications. When special exceptions are allowed by this Ordinance, the Zoning Hearing Board shall hear and decide requests for such special exceptions in accordance with standards established by this Ordinance, including the following:
 - 1. Compliance with this Ordinance. The applicant shall establish by credible evidence that the application complies with all applicable requirements of this Ordinance. The applicant shall provide the Board with sufficient plans, studies or other data to demonstrate this compliance.
 - 2. Compliance with Other Laws. The approval may be conditioned upon the applicant later showing proof of compliance with other specific applicable County, state and federal laws, regulations and permits. Required permits or other proof of compliance may be required to be presented to the County prior to the issuance of any zoning permit and/or recording of an approved plan.
 - 3. Traffic. The applicant shall establish that the traffic from the proposed use will be accommodated in a safe and efficient manner that will minimize hazards and congestion, after considering any improvements proposed to be made by the applicant as a condition on approval.
 - 4. Site Planning. The application shall include proper site layout, internal circulation, parking, buffering, and all other elements of proper design as specified in this Ordinance.
 - 5. Neighborhood. The proposed use shall not substantially change the character of any surrounding residential neighborhood, after considering any proposed conditions upon approval such as limits upon hours of operation.
 - 6. Safety. The proposed use shall not create a significant hazard to the public health and safety, such as fire, toxic or explosive hazards.
 - 7. Natural Features. The proposed use shall be suitable for the site, considering the disturbance of steep slopes, mature woodland, wetlands, floodplains, springs and other important natural features.

- D. Conditions. In granting a special exception, the Board may require such reasonable conditions and safeguards (in addition to those expressed in this Ordinance) as it determines are necessary to implement the purposes of this Ordinance. Conditions imposed by the Zoning Hearing Board shall automatically become conditions of the building permit issued pursuant thereto, and any failure to comply with said conditions shall be a violation of this ordinance.

117. LIABILITY.

- A. Any review of activity within the floodplain, site plan review, subdivision or land development approval, erosion control review, wetland delineation review, storm water runoff review, review of activity on steep slopes, or any other review, approval or permit under this Ordinance by an officer, employee, board, commission, solicitor, consultant or agency of the County shall not constitute a representation, guarantee or warranty of any kind by the County, or its employees, officials, boards, solicitor(s), consultants or agencies of the practicality or safety of any structure, use or subdivision, and shall create no liability upon nor a cause of action against such entity or person for any damage that may result pursuant thereto.

ARTICLE 2

DEFINITIONS

201. GENERAL INTERPRETATION.

For the purposes of this Ordinance, words and terms used herein shall be interpreted as follows:

- A. Words in the present tense shall include the future tense.
- B. "Used" or "occupied" as applied to any land or building include the words "intended, arranged, or designed to be used or occupied."
- C. "Should" means that it is strongly encouraged but is not mandatory. "Shall" is always mandatory.
- D. "Sale" shall also include rental.
- E. Unless stated otherwise, the singular shall regulate the plural, and the masculine shall include the feminine, and vice-versa.
- F. The words "such as," "includes," "including," and "specifically" shall provide examples. These examples shall not, by themselves, limit a provision to the examples specifically mentioned if other examples would otherwise comply with the provision.
- G. The word "person" includes a firm, company, corporation, partnership, trust, organization or association, as well as an individual.
- H. If a word is not defined, it shall have its plain and ordinary meaning, within the context of the provision.

202. TERMS DEFINED.

When used in this Ordinance, the following words, terms and phrases shall have the following meanings, unless expressly stated otherwise or unless the context clearly indicates otherwise:

Abut or Abutting. Areas of contiguous lots that share a common lot line, except not including lots entirely separated by a street, public alley open to traffic, or a perennial waterway. See definition of "adjacent."

Accessory Apartment. One dwelling unit that is created within part of a principal dwelling or above a vehicle garage on a residential lot.

Accessory Building. An accessory structure that meets the definition of a "building." A portion of a principal building used for an accessory use shall not be considered an accessory building.

Accessory Structure. A structure serving a purpose customarily incidental to and subordinate to the use of the principal use and located on the same lot as the principal use. Accessory structures include but are not limited to a household garage, an individual wind turbine, solar panels, household storage shed, detached carport, a household swimming pool, or an accessory storage building to a business use. See the definition of "Residential Accessory Structure".

Accessory Use. A use customarily incidental and subordinate to the principal use or building and located on the same lot with such principal use.

Adjacent. A state of being side by side, next to, adjoining, contiguous, or abutting one to another.

Adult Bookstore. A use that has over 10% of the total floor area occupied by items for sale or rent that are books, films, magazines, video, coin- or token-operated video, paraphernalia, novelties or other periodicals which are distinguished or characterized by a clear emphasis on matter depicting, displaying, describing or relating to uncovered male or female genitals or "specified sexual activities." This shall include but not be limited to materials that would be illegal to sell to persons under age 18 under State law. If such items are within a separate room, then the 10 percent standard shall apply to the floor area of such room.

Adult Live Entertainment Facility. A use including live entertainment involving persons (which may include, but not be limited to, waiters, waitresses, dancers, clerks, bartenders, contractors or others) displaying uncovered male or female genitals or nude or almost nude female breasts or engaging in simulated or actual "specified sexual activities" to 3 or more persons and which is related to monetary compensation paid to the person or entity operating the use or to persons involved in such activity.

Adult Movie Theater. A use involving the on-site presentation to 3 or more persons at one time of moving images distinguished by an emphasis on depiction of "specified sexual activities" and that is related to monetary compensation paid by the persons viewing such matter.

Adult Use. This term shall mean Adult Bookstore, Adult Movie Theater, Adult Live Entertainment Facility/Use or Massage Parlor. These terms shall be distinct types of uses, and shall not be allowed as part of any other use.

After Hours Club. A use that permits the consumption of alcoholic beverages by 5 or more unrelated persons between the hours of 2 a.m. and 6 a.m. and that involves some form of monetary compensation paid by such persons for the alcohol or for the use of the premises.

Agri-business. Processing of agricultural or animal products beyond what is customarily accessory to an allowed agriculture use, forestry or livestock or poultry operation. This term shall not include bulk manufacture of ethanol or similar fuels. This term shall include but is not limited to the following

- A. commercial animal processing (other than an industrial slaughterhouse),
- B. commercial storage or warehousing of agricultural products,
- C. commercial packing, preserving, canning, processing, drying, and shipping of agricultural products,
- D. commercial aquaculture,
- E. commercial mixing, sale and storage of agricultural fertilizers, herbicides, animal feed, pesticides and seeds, such as a feed mill,
- F. commercial sale and repair of tractors and other agricultural equipment,
- G. commercial wine manufacture and wine tasting, shipping and sales facilities,
- H. commercial yard waste processing, and
- I. commercial sawmill and processing of wood products."

Airport. An area and related support facilities used for the landing and take-off of motorized aircraft. A "Public Airport" shall be an Airport that does not meet the definition of a "Private Airport." A Private Airport, including private landing strips, shall be limited to a maximum of 15 total landings and take-offs in any 7 day period, and shall not be available for use by the general public.

Alley. A motor vehicle accessway that provides access to 2 or more lots and which is typically located to the rear or a side of a lot, and which has right-of-way width of less than 20 feet.

Amusement Arcade. A use involving 15 or more token or coin operated entertainment machines, and where the machines are the principal use of the property. This term shall not include an Adult Use.

Animal Cemetery. A place used for the burial of the remains of 5 or more non-cremated animals, other than customary burial of farm animals as accessory to a livestock use.

Antenna. An exterior device or apparatus designed for cellular, digital, telephone, radio, pager, commercial mobile radio, wireless internet, television, microwave or any other wireless communications through sending and/or receiving of electromagnetic waves, including without limitation, omnidirectional or whip antennas and directional or panel antennas. Unless otherwise stated, this term shall not include "standard antenna."

Antenna, Height. The vertical distance from the base of the antenna support structure at grade to the highest point of the structure, including any antennas attached thereto or forming a part thereof. If the support structure is on a sloped grade, then the average between the highest and lowest grades shall be used in calculating the antenna height.

Antenna, Standard. A device, partially or wholly exterior to a building, that is used for receiving television or radio signals for use on-site, or for transmitting short-wave or citizens band radio signals. See "Commercial Communications Antenna."

Apartment. See "dwelling types."

Applicant. A landowner or developer, as defined in the Pennsylvania Municipalities Planning Code, who has filed an application for development, including his heirs, successors and assigns.

Assisted Living Facility/Personal Care Home. Coordinated and centrally managed rental housing including self-contained units designed to provide a supportive environment and to accommodate a relatively independent lifestyle. Such a development may contain a limited number of supportive services, such as meals, transportation, housekeeping, linen and organized social activities for residents and their invited guests. Such a use shall primarily serve persons 55 and older, persons with physical handicaps and/or the developmentally disabled. This term shall only include facilities licensed as Assisted Living Facilities or Personal Care Centers by the Commonwealth of Pennsylvania.

Auto, Boat and/or Mobile/Manufactured Home Sales. Any area, other than a street, used for the outdoor or indoor display, sale or rental of two or more of the following in operable condition: motor vehicles, recreation vehicles, boat trailers, farm machinery, motorcycles, trucks, utility trailers, construction vehicles, boats, or transportable mobile/manufactured homes in a livable condition. This use may include an auto repair garage as an accessory use provided that all requirements of such use are met. This use shall not include a mobile/manufactured home park or a junkyard. See requirements in Section 402.

Auto Repair Garage. An area where repairs, improvements and installation of parts and accessories for motor vehicles and/or boats are conducted that involves work that is more intense in character than work permitted under the definition of "auto service station." An auto repair garage shall include, but not be limited to, a use that involves any of the following work: major mechanical or body work, straightening of body parts, painting, welding or rebuilding of transmissions. Any use permitted as part of an "auto service station" is also permitted as part of

an "auto repair garage." This use shall not include activity meeting the definition of a "truck stop." See requirements in Section 402.

Auto Service Station. An area where gasoline is dispensed into motor vehicles, and where no repairs are conducted, except work that may be conducted that is closely similar in character to the following: sale and installation of oil, lubricants, batteries and belts and similar accessories and safety and emission inspections, and sale of pre-packaged propane. This use may include a "convenience store," provided that all of the requirements for such use are also met. A business that maintains an accessory use of providing motor fuel only for use by vehicles operated by that business shall not, by itself, be considered to be an auto service station. See storage limits and other requirements in Section 402.

Basement. An enclosed level of a building that is not a "story" and that is entirely or partly underground.

Bed and Breakfast, Inn. A dwelling and/or its accessory structure which includes the rental of overnight sleeping accommodations and bathroom access for temporary overnight guests, and that meets the maximum number of overnight guests specified in Section 402 for this use, and which does not provide any cooking facilities for actual use by guests, and which only provides meals to overnight guests, employees and residents of the dwelling and not to the general public. Overnight stays shall be restricted to transient visitors to the area, employees and their family. See requirements in Section 402.

Betting Use. A place used for lawful gambling activities, including but not limited to off-track pari-mutual betting and any use of electronic gambling devices. This term shall not regulate Pennsylvania Lottery sales or lawful "Small Games of Chance."

Billboard. A type of Off-Premises Sign. See Article 7.

Biomass. Any plant-derived organic matter available on a renewable basis, including but not limited to, dedicated energy crops and trees, agricultural food and feed crops, agricultural crop wastes and residues, wood wastes and residues, and aquatic plants.

Boarding House (Includes "Rooming House"). A residential use in which: a) room(s) that do not meet the definition of a lawful dwelling unit are rented for habitation, or b) a dwelling unit includes greater than the permitted maximum number of unrelated persons. A boarding house shall not include a use that meets the definition of a hotel, dormitory, motel, life care center, personal care center, bed and breakfast inn, group home or nursing home. A college fraternity or sorority house used as a residence shall be considered a type of boarding house. A boarding house may either involve or not involve the providing of meals to residents, but shall not include a restaurant open to the public unless the use also meets the requirements for a restaurant. A boarding house shall primarily serve persons residing on-site for 5 or more consecutive days.

Borough/Township. A municipality under the jurisdiction of this Zoning Ordinance.

Buffer Yard. A strip of land that a) separates one use from another use or feature, and b) is not occupied by any building, parking, outdoor storage or any use other than open space or approved pedestrian pathways. A buffer yard may be a part of the minimum setback distance, but land within an existing or future street right-of-way shall not be used to meet a buffer yard requirement. See Section 803.

Building. Any structure having a roof supported by columns or walls, used or intended to be used for the shelter or enclosure of persons, animals, or property. When a structure is divided into

separate parts by one or more unpierced walls extending from the ground up, each part is deemed a separate building, except as regards to minimum side yard requirements.

Building Coverage. The percentage obtained by dividing the total horizontal area covered by all buildings on a lot by the total lot area of a lot. For the purposes of this definition, building coverage shall include all buildings that are under a roof.

Building Height. The vertical distance from the average of the finished ground level adjoining a building at all exterior walls to the average height of the highest roof surface.

Building, Principal. A building used for the conduct of the principal use of a lot, and which is not an accessory building.

Building Width. The horizontal measurement between 2 vertical structural walls that are generally parallel of one building, measured in one direction that is most closely parallel to the required lot width. For attached housing, this width shall be the width of each dwelling unit, measured from the center of each interior party wall and from the outside of any exterior wall. For detached buildings, this width shall be measured from the outside of exterior walls.

Bulk Recycling Center. A use involving the bulk commercial collection, separation and/or processing of types of waste materials found in the typical household or office for some productive reuse, but which does not involve the actual processing or recycling of hazardous or toxic substances, and which does not primarily involve the processing of non-recycled solid waste, unless the use also meets the applicable requirements for a solid waste transfer facility. This definition shall not include a "junkyard."

Camp. An area that includes facilities and structures for primarily outdoor recreational activities by organized groups, and/or that involves overnight stays within seasonal cabins or temporary tents by organized groups and/or transient visitors to the area. This term shall only include facilities that are primarily used during warmer months, and which have a maximum impervious coverage of 5 percent. This term shall not include a Recreational Vehicle Park.

Campground. A development under single ownership of the land with sites being rented, leased or sold through time-share for use for tents or recreational vehicle sites for transient visitors to the area, and which may include associated recreational facilities.

Cemetery. A place used for the burial of 2 or more non-cremated humans.

Certificate of Use. A form signed by an authorized official that certifies that the use of the property is in compliance with this Zoning Ordinance, to the best knowledge of such official.

Christmas Tree Farm or Tree Farm. A type of crop farming involving the raising and harvesting of evergreen trees for commercial purposes. This may include the retail sale during November and December of trees that were produced on the premises.

Clear Cutting. A logging method that removes all trees or the vast majority of trees from a mostly wooded lot.

Coal Gasification and Liquefaction Facility. Any building, structure or facility used in the mining, collection, development, processing, production, conversion, refinement, transfer and/or storage of materials utilized in the coal gasification and liquefaction process.

Coal Gasification and Liquefaction Process. Any method or process by which coal, coal waste, refinery waste or other carbonaceous materials are utilized to produce liquid fuel.

Commercial Communications Tower. A structure, partially or wholly exterior to a building, used for transmitting or re-transmitting electronic signals through the air, and that does not meet the definition of a "standard antenna" Commercial communications antennas shall include, but are not limited to, antennas used for transmitting commercial radio or television signals, or to receive such signals for a cable system, or to re-transmit wireless telecommunications. A commercial communications tower shall be a structure over 30 feet in height that is primarily intended to support one or more antennas. See standards in Section 402. This term shall not include a "standard antenna."

Commercial District. The TC, C-1, C-3 and C-4 Districts. The I-C district is considered a primarily industrial district, although it does allow commercial uses.

Commercial Use. This term includes but is not limited to: retail sales, offices, personal services, auto sales, auto repair garages and other uses of a similar profit-making non-industrial nature. The sale of goods or services from a vehicle on a lot shall also be considered to be a commercial use.

Community Center. A use that exists solely to provide primarily indoor leisure and educational activities and programs and meeting space to members of the surrounding community and/or certain age groups, and which does not involve substantial use of machinery or noise producing equipment. The use also may include the preparation and/or provision of meals to low-income elderly persons, as accessory to leisure activities. This shall not include residential uses or a "treatment center."

Condominium. A set of individual dwelling units or other areas of buildings each owned by an individual person(s) in fee simple, with such owners assigned a proportionate interest in the remainder of the real estate which is designated for common ownership, and which is created under the Pennsylvania Uniform Condominium Act of 1980 or Uniform Planned Community Act of 1996, as amended.

Conservation Easement. A legal agreement granted by a property owner that strictly limits the types and amounts of development that may take place on such property for the purposes of conserving open space or agricultural uses. Such easement shall restrict the original and all subsequent property-owners, lessees and all other users of the land.

Contiguous Lots. Adjacent parcels of land, including parcels separated by a stream or road.

Convenience Store. A use that primarily sells routine household goods, groceries, prepared ready-to-eat foods and similar miscellaneous items to the general public, but that is not primarily a restaurant, and that includes a building with a floor area of less than 7,000 square feet. A convenience store involving the sale of gasoline shall be regulated as an "auto service station."

Crop Farming. The raising of products of the soil and accessory storage of these products. This term shall include orchards, tree farms, wineries, plant nurseries, raising of fish, greenhouses and keeping of animals in numbers that are routinely accessory and incidental to a principal crop farming use. See also "Raising of Livestock."

Curative Amendment. A process provided in the Pennsylvania Municipalities Planning Code that authorizes certain types of challenges and/or amendments to the Zoning Ordinance.

Day Care Center, Adult. A use providing supervised care and assistance to persons who need such daily assistance because of their old age or disabilities. This use shall not include persons who need oversight because of behavior that is criminal, violent or related to substance abuse.

This use may involve occasional overnight stays, but shall not primarily be a residential use. The use shall involve typical stays of less than a total of 60 hours per week per person.

Day Care, Child. A use involving the supervised care of children under age 16 outside of the children's own home(s) primarily for periods of less than 18 hours per child during the average day. This use may also include educational programs that are supplementary to State-required education, including "nursery school" or "Head Start" programs. See also the definition of "adult day care center."

- A. The following three types of day care are permitted without regulation by this Ordinance: 1) care of children by their own "relatives," 2) care of children within a place of worship during regularly scheduled religious services, and 3) care of 1 to 3 children within any dwelling unit, in addition to children who are "relatives" of the care giver.
- B. Family Day Care Home (or "Child Day Care as an Accessory Use"). A type of "day care" use that: 1) is accessory to and occurs within a dwelling unit, and 2) provides care for 4 to 6 children at one time who are not "relatives" of the primary care giver. See Section 403.
- C. Group Day Care Home. A type of "day care" use that: 1) provides care for between 7 and 12 children at one time who are not "relatives" of the primary care giver, 2) provides care within a dwelling unit, and 3) is registered with the applicable Pennsylvania agency.*
- D. Child Day Care Center. A type of "day care" use that: 1) provides care for 7 or more children at any one time who are not "relatives" of the primary care giver, 2) does not occur within a dwelling unit, 3) does not meet the definition of a Group Day Care Home, and 4) is registered with the applicable Pennsylvania agency.* See Section 402.

* As of 2009, this was the Department of Public Welfare.

Deck, Patio, Porch. A structure that is attached to a building and which serves recreational purposes and which is not enclosed by building walls, but which may have a roof or awning, and which is elevated above the ground level.

Density. The total number of dwelling units proposed on a lot divided by the "lot area," unless otherwise stated.

DEP. Shall mean the Pennsylvania Department of Environmental Protection and its relevant bureaus.

District (or Zoning District). A land area within which certain uniform regulations and requirements apply under the provisions of this Ordinance.

Dormitory. A building used as living quarters for the exclusive use of bona-fide faculty or enrolled students of an accredited college or university or primary or secondary school, and which is owned and/or operated by such college, university or school.

Drive-through Service. An establishment where at least a portion of patrons are served while the patrons remain in their motor vehicles.

Dwelling. A building used as non-transient living quarters, but not including a boarding house, hotel, motel, hospital, nursing home or dormitory. A dwelling may include a use that meets the definition of a "sectional home."

Dwelling Types. This Ordinance categorizes dwellings into the following types:

- A. Conversion Apartment. A new dwelling unit created within an existing building within the standards of Article 4 and where permitted by Article 3 and meeting the floor area requirements of Section 801.
- B. Apartments or Multi-Family Dwellings. Two or more dwelling units within a building that do not meet the definition of a single family detached dwelling, semi-detached dwelling or single family attached dwelling. The individual dwelling units may be leased or sold for condominium ownership. If a building only includes two apartments, it shall be considered to be a Two Family Detached Dwelling.
 - 1. Two Family Detached Dwelling. Two dwelling units accommodating one family each with both dwelling units within a single building on a single lot, and without the dwelling units being completely separated by a vertical wall. The building shall have two side yards.
- C. Sectional or "Modular" Home. A type of dwelling that meets a definition of any dwelling type and which was manufactured off-site and then assembled and completed on the site, and that was constructed under the Pennsylvania Construction Codes and not the Federal requirements for Manufactured Housing.
- D. Semi-Detached Dwelling Unit or Twin Dwelling Unit. A one family dwelling unit accommodating one family that is attached to a second one family dwelling unit by a common vertical wall, with each dwelling unit on a separate lot or held in condominium ownership.
- E. Single Family Attached Dwelling or Townhouse. One dwelling unit that is attached to 2 or more dwelling units, or that is at the end of a row of 3 or more such attached dwelling units, and which has each dwelling unit completely separated from and attached to each other by unpierced vertical fire resistant walls. Each dwelling unit shall have its own outside access. Side setbacks shall be provided adjacent to each end unit. See standards in Section 402.
- F. Single Family Detached Dwelling. One dwelling unit in one building accommodating only one family and having open setback areas on all sides.
 - 1. Mobile/Manufactured Home. For a dwelling constructed after 1977, this term shall mean a dwelling that was constructed under the Federal construction requirements for Manufactured Housing under regulations of the U.S. Department of Housing and Urban Development. For a dwelling constructed before 1977, this term shall mean a transportable single family detached dwelling intended for permanent occupancy that is contained in one unit or two or more units designed to be joined into one integral unit capable of again being separated for repeated towing, which arrives at a site complete and ready for occupancy, except for minor and incidental unpacking and assembly operations, and constructed so that it can be used without a permanent perimeter foundation.

This term is different from a "Sectional home," which is defined above. See standards for "Mobile/manufactured home" in Section 402.

Dwelling Unit. A single habitable living unit occupied by only one "family," as defined herein. Each dwelling unit shall have: a) its own toilet, bath or shower, sink, sleeping and cooking facilities and b) separate access to the outside or to a common hallway or balcony that connects to outside access at ground level. A dwelling unit shall not include two or more separate living

areas that are completely separated by interior walls so as to prevent interior access from one living area to another.

Emergency Services Station. A building for the housing of fire, emergency medical or police equipment and for related activities. This use may include housing for emergency personnel while on-call.

Employees. The highest number of workers (including part-time and full-time, compensated and volunteer, and both employees and contractors) present on a lot at any one time, other than clearly temporary and occasional persons working on physical improvements to the site.

Essential Services or "Essential Public Utility Services." Utility or municipal uses that are necessary for the preservation of the public health and safety and that are routine, customary and appropriate to the character of the area in which they are to be located. Essential services shall include the following and closely similar facilities: sanitary sewage lines, water lines, electric distribution lines, transformers, stormwater management facilities, cable television lines, natural gas distribution lines, fire hydrants, street lights and traffic signals. Essential services shall not include a central sewage treatment plant, a solid waste disposal area or facility, commercial communications towers, a power generating station, septic or sludge disposal, offices, storage of trucks or equipment or bulk storage of materials.

Family. One or more individuals related by blood, marriage or adoption (including persons receiving formal foster care) or up to 4 unrelated individuals who maintain a common household and live within one dwelling unit. A family shall also expressly include numbers of unrelated persons provided by the Group Home provision of Section 402 residing within a licensed group home, as defined herein. Through those provisions and Section 111.D.5, the intent is to comply with the Federal Fair Housing Act, as amended.

Fence. A man-made barrier placed or arranged as a line of demarcation, an enclosure or a visual barrier that is constructed primarily of wood, chain-link metal, vinyl, aluminum or similar materials. Man-made barriers constructed principally of masonry, concrete, cinder block or similar materials shall be considered a "wall." See Section 403.

Financial Institution. An establishment primarily involved with banking, lending and other monetary, not material, transactions and that has routine interactions with the public.

Flag Lot. Also see the definition in the Subdivision and Land Development Ordinance. (Note: A flag lot typically has a pole-like extension of lot area between the street and the main portion of the lot.) See Section 307.G.

Floodplain. See definitions of this term and related terms in the Borough/Township Floodplain Regulations. (Note: The 100-year floodplain is the area expected to be covered by flood waters during the worst storm expected in a 100-year period.)

Floor Area, Total. The total floor space within a building(s) measured from the exterior faces of exterior walls or from the centerlines of walls separating buildings or dwelling units. Floor area shall specifically include, but not be limited to: a) fully enclosed porches, and b) basement or cellar or attic space that is potentially habitable and has a minimum head clearance of at least 6.5 feet. Floor area shall not include unenclosed structures.

Forestry or Timber Harvesting. The management of forests and timberlands when practiced in accordance with accepted silvicultural principles, through developing, cultivating, harvesting,

transporting and selling trees for commercial purposes, and which does not involve any land development.

Garage Sale. The accessory use of any lot for the occasional sale or auction of only common household goods and furniture and items of a closely similar character.

Gas or Oil Well. A well drilled into the ground to produce natural gas or petroleum products. See Sections 402 and 403.

Glare. A sensation of brightness within the visual field which causes annoyance, discomfort or loss in visual performance, visibility and/or ability to focus.

Government Facility. A use owned by a government, government agency or government authority for valid public health, public safety, recycling collection or similar governmental purpose.

Group Home. A dwelling unit operated by a responsible entity with a program to provide a supportive living arrangement for individuals where special care is needed by the persons served due to age, emotional, mental, developmental or physical disability. This definition shall expressly include facilities for the supervised care of persons with disabilities subject to protection under the Federal Fair Housing Act, as amended. A Group Home typically involves an individual residing on the premises for more than 30 days at a time.

- A. It is the express intent to comply with all provisions of the Federal Fair Housing Act, as amended, and regulations promulgated thereunder, in the construction of this term.
- B. A Group Home shall not include a "Treatment Center."
- C. See standards in Section 402.
- D. This use does not include a State-licensed personal care home or assisted living facility.

Hazardous Substances. A product or waste, or combination of substances that because of the quantity, concentration, physical or infectious characteristics, if not properly treated, stored, transported, used or disposed of, or otherwise managed, would create a potential threat to public health through direct or indirect introduction into ground water resources and the subsurface environment which includes the soil and all subsequent materials located below. Such hazardous material includes, but is not limited to materials which are included on the latest edition of one or more of the following lists:

- A. "Hazardous Substances" as defined pursuant to Section 311 of the Federal Clean Water Act, or its successor provisions.
- B. "Hazardous Substances" as defined pursuant to the Federal Comprehensive Environmental Response, Compensation and Liability Act, or its successor provisions.

Hazardous Substances, Extremely. Hazardous substances included on the list of "Extremely Hazardous Substances" in 40 Code of Federal Regulations Part 355, or its successor provisions and that are stored or used in quantities above the threshold reportable limits in such regulations.

Height. See "Building Height." To measure the height of any structure that is not a building, it shall be the total vertical distance from the average elevation of the proposed ground level to the highest point of a structure. For height of signs, see Article 7 entitled "Signs."

Helipad. An area used for the take-off and landing of helicopters. The word helipad is short for helicopter landing pad and provides a clearly marked hard surface away from obstacles where a helicopter can land. Usually a helipad does not have fuel and service facilities for aircraft, as a

heliport does. Helipads are commonly placed on the roof of hospitals and some businesses maintain a helipad on the roof of their office building.

Heliport. An area used for the take-off and landing of helicopters, and related support facilities.

Home Occupation. A routine, accessory and customary non-residential use conducted within or administered from a portion of a dwelling or its permitted accessory building and that meets all of the requirements for a Home Occupation provided in Section 403.

- A. Major Home Occupation. A Home Occupation that does not meet the additional standards for a Minor Home Occupation in Section 403.
- B. Minor Home Occupation. A Home Occupation that meets the additional standards for a Minor Home Occupation as provided in Section 403. A Minor Home Occupation also includes, but is not limited to, a use that meets all of the requirements for a “No Impact Home-Based Business” as provided in the Pennsylvania Municipalities Planning Code.

(Note -In most cases a Minor Home Occupation is permitted by right under Section 306, while in most cases a Major Home Occupation requires Zoning Hearing Board approval as a special exception.)

- 1. No Impact Home-Based Business. A type of Minor Home Occupation that meets the following definition as provided in the Pennsylvania Municipalities Planning Code: A business or commercial activity administered or conducted as an accessory use which is clearly secondary to the use as a residential dwelling and which involves no customer, client or patient traffic, whether vehicular or pedestrian, pickup, delivery or removal functions to or from the premises, in excess of those normally associated with residential use. The business or commercial activity must satisfy the following requirements:
 - a. The business activity shall be compatible with the residential use of the property and surrounding residential uses.
 - b. The business shall employ no employees other than family members residing in the dwelling.
 - c. There shall be no display or sale of retail goods and no stockpiling or inventory of a substantial nature.
 - d. There shall be no outside appearance of a business use, including, but not limited to, parking, signs or lights.
 - e. The business activity may not use any equipment or process which creates noise, vibration, glare, fumes, odors or electrical or electronic interference, including interference with radio or television reception, which is detectable in the neighborhood.
 - f. The business activity may not generate any solid waste or sewage discharge, in volume or type, which is not normally associated with residential use in the neighborhood.
 - g. The business activity shall be conducted only within the dwelling and may not occupy more than 25% of the habitable floor area.
 - h. The business may not involve any illegal activity.

Hospital. A use involving the diagnosis, treatment or other medical care of humans that includes, but is not limited to, care requiring stays overnight. A medical care use that does not involve any

stays overnight shall be considered an "Office." A hospital may involve care and rehabilitation for medical, dental or mental health, but shall not primarily include housing or treatment of the criminally insane or persons actively serving an official sentence after being convicted of a felony. A hospital may also involve medical research and training for health care professionals.

Hotel or Motel. A building or buildings including rooms rented out to persons as clearly transient and temporary living quarters. Any such use that customarily involves the housing of persons for periods of time longer than 90 days shall be considered a "boarding house" and shall meet the requirements of that use. See "bed and breakfast" use. A hotel or motel may also include a restaurant, meeting rooms, nightclub, newsstand, amusement arcade, gift shop, swimming pool, exercise facilities, tavern and similar customary accessory amenities, and provided any such use shall only be allowed as a principal use of the property if such use is allowed by the applicable district regulations.

Hunting and Fishing Club. Land owned by an organized group of persons formed as a club that is used for hunting, fishing, and similar types of passive recreation, and which involves no buildings except those for the recreational, lodging, eating and sanitary facilities for members and invited guests and routinely accessory storage buildings.

Industrial District. The I-C zoning district.

Impervious Coverage. The percentage that results from dividing the land area on a lot covered by all "impervious surfaces" by the total land area of the lot.

Impervious Surfaces. A man-made or man-processed area or material, such as a building, structure, or pavement, which prevents or reduces the absorption of stormwater, thereby impeding groundwater recharge and fostering surface-water runoff. Stone areas used for vehicle movement or parking shall be considered to be impervious for the purposes of this Ordinance.

A. For a townhouse development, the maximum impervious coverage may be measured as a maximum for the entire development after completion, after the deletion of street rights-of-way (or cartway where a street right-of-way where not exist), as opposed to regulating each individual townhouse lot.

Junk Vehicle. Includes any vehicle or trailer that meets any of the following conditions:

- A. cannot be towed, in regards to a trailer designed to be towed,
- B. has been demolished beyond repair,
- C. has been separated from its axles, engine, body or chassis, and/or
- D. includes only the axle, engine, body parts and/or chassis, separated from the remainder of the vehicle.

Junkyard.

- A. Land or a structure used for the collection, storage, dismantling, processing and/or sale, other than within a completely enclosed building, of material of one or more of the following types:
 - 1. Automobile salvage yard
 - 2. A commercial or industrial metal scrap yard.
 - 3. Twenty or more "junk vehicles" that are partly or fully visible from a dwelling on another lot and/or public street, and which are kept for commercial purposes. This shall

not apply to such vehicles customarily stored as part of an auto repair garage or auto service station while they await imminent repairs or after recent damage.

- B. Junk vehicles stored within a completely enclosed building for business purposes shall be considered a warehouse.

Note - A municipality may have a more restrictive junk or junkyard ordinance.

Kennel. The keeping for commercial purposes of 11 or more dogs age 6 months or older. An allowed kennel may also include the keeping of other household pets.

Landowner. The owner of a legal or equitable interest in land, including the holder of a written, signed and active option or contract to purchase; a person leasing the property (if authorized under the lease to exercise the right of the landowner) and if such lease is for a remaining period of at least 12 months; authorized officers of a partnership or corporation that is a “landowner”; or other person having a proprietary interest in land. A person who has clearly received formal notarized powers of attorney relating to a landowner may act in the capacity of the landowner, if legally authorized.

Lighting, Diffused. Illumination that passes from the source through a translucent cover or shade.

Livestock or Poultry, Raising of. The raising and keeping of livestock, poultry or insects beyond which is customarily accessory to a principal “crop farming” use. Raising of livestock or poultry shall not include a slaughterhouse nor a stockyard used for the housing of animals from other farms that are awaiting slaughter.

- A. Livestock or Poultry, Intensive Raising of. A type of Raising of Livestock or Poultry use that involves an average of more than 5 “animal equivalent units” per acre as calculated in State Nutrient Management regulations.

Lot. A piece or parcel of land occupied or intended to be occupied by a principal building or a group of such buildings and accessory buildings, or utilized for a principal use or uses, accessory or incidental to the operation thereof, together with such open spaces as required by this Ordinance.

Lot, Corner. A lot abutting on 2 or more intersecting streets.

Lot Area. The horizontal land area contained within the lot lines of a lot (measured in acres or square feet). For the purposes of determining compliance with the minimum lot area, the following shall be excluded:

- A. Areas within the "existing" legal rights-of-way of: 1) any proposed or existing public streets or alleys or 2) any proposed or existing commonly maintained private streets that serve more than one lot, unless another sections of this Ordinance, such as for Townhouse Development, specifically permits proposed streets to be included in determining density for a specific use.
- B. Areas that are currently or will be required to be dedicated as common or preserved open space on a separate lot, unless another section of this Ordinance specifically permits proposed common open spaces to be included in determining density for a specific use.

Lot Lines. The property lines bounding the lot. Wherever a property line borders a public street, for the purposes of determining setbacks, the lot line shall be considered to be the street right-of-way line that will exist at the time of completion of a subdivision or development.

- A. Front Lot Line (Street Line). A lot line separating the lot from the existing or proposed street right-of-way. Where a lot may be allowed to not be adjacent to a street, the front lot line shall be the lot line closest to a street. For a corner lot, see Section 803.B, which addresses a requirement for a front setback along each street.
- B. Rear Lot Line. Any lot line which is parallel to or within 45 degrees of being parallel to a front street right-of-way line. In the case of a lot having no street frontage, or a lot of an odd shape, or a flag lot, only the one lot line furthest from any street shall be considered a rear lot line. Every lot shall have a rear setback.
- C. Side Lot Line. Any lot line other than a front or rear lot line.

Lot Width. The horizontal distance between the side lot lines measured at the minimum required front setback line, unless otherwise stated. In the event of a curved lot line, such lot width at the minimum prescribed front setback line shall be measured along the curve. Where buildings are permitted to be attached, the lot width shall be measured from the center of the party wall. See lot width exceptions in Section 803.

Massage Parlor. A type of "Adult Use" that is an establishment that meets all of the following criteria:

- A. Massages are conducted involving one person using their hands and/or a mechanical device on another person below the waist, in return for monetary compensation, and which does not involve persons who are related to each other.
- B. The use does not involve a person licensed or certified by the Pennsylvania as a health care professional or a massage therapist certified by a recognized professional organization that requires a minimum of 80 hours of professional training. Massage therapy by a certified professional shall be considered "personal service."
- C. The massages are not conducted within a licensed hospital or nursing home or an office of a medical doctor or chiropractor or as an incidental accessory use to a permitted exercise club or high school or college athletic program.
- D. The massages are conducted within private or semi-private rooms.

Membership Club. An area of land or building routinely used by a recreational, civic, social, fraternal, religious, political or labor union association of persons for meetings and routine socializing and recreation that is limited to members and their occasional guests, and persons specifically invited to special celebrations, but which is not routinely open to members of the general public and which is not primarily operated as a for-profit business.

- A. This use shall not include a target range for outdoor shooting of firearms, boarding house, tavern, restaurant or retail sales unless that particular use is permitted in that District and the requirements of that use are met.
- B. See Section 402. See also definitions (S. 202) of "After Hours Club" and "Hunting and Fishing Clubs," which are distinct uses.

Mineral Extraction. The removal from the surface or beneath the surface of the land of bulk mineral resources using significant machinery. This use also includes accessory stockpiling and processing of mineral resources. "Mineral extraction" includes but is not limited to the extraction of sand, gravel, limestone, sandstone, coal, clay, shale, and iron ore. The routine movement of and replacement of topsoil during construction shall not by itself be considered to be mineral extraction. The reclamation of formerly mined areas or the removal or processing of culm banks or similar waste from past mining is not regulated by this Ordinance. A shale pit of up to 2 acres

or 5 percent of the lot area, whichever is more restricted, is allowed for the personal use of a lot owner without being regulated as mineral extraction. A "Gas or Oil Well" is a separate use.

Mobile/Manufactured Home. See under "Dwelling Types."

Mobile/Manufactured Home Park. A lot under single ownership which includes two or more mobile/manufactured homes for residential use. The individual manufactured homes may be individually owned. A development of mobile/ manufactured homes that is subdivided into individual lots shall be regulated in the same manner as a subdivision of site-built homes, and shall not be considered to be a "mobile home park." See Section 402.

Motor Vehicle. An automobile, recreational vehicle, truck, bus, motorcycle, all-terrain vehicle or similar means of transportation designed to operate carry persons or cargo on roads and that is powered by mechanized means.

Municipalities Planning Code. The Pennsylvania Municipalities Planning Code, as reenacted and amended (53 P.S. 10101 et seq.).

Nightclub. An establishment that offers amplified music and dancing after 12 midnight, sells alcoholic beverages primarily for on-site consumption, has sale of alcoholic beverages composing more than 60 percent of the dollar value of its total business, includes hours open to patrons after 12 midnight, and has a building capacity of over 150 persons. Such use may also include such activities before 12 midnight.

Nonconforming Lot. A lot which does not conform with the minimum lot width or area dimensions specified for the district where such lot is situated, but was lawfully in existence prior to the effective date of this Ordinance, or amendments hereinafter enacted.

Nonconforming Structure. A structure or part of a structure that does not comply with the applicable lot coverage, dimensional and other provisions in this Ordinance, as amended, where such structure lawfully existed prior to the enactment of such Ordinance or applicable amendment(s). Such nonconforming structures include but are not limited to signs. See Section 805.

Nonconforming Use. A use, whether of land or of a structure, which does not comply with the applicable use provisions in this Ordinance or amendment(s), where such use was lawfully in existence prior to the enactment of this Ordinance or applicable amendment(s). See Section 805. A "nonconforming use" shall not be considered to be a permitted by right use or a special exception use.

Nudity or a State of Nudity. The showing of the human male or female genitals, pubic area, vulva, anus, anal cleft or cleavage with less than a fully opaque covering, the showing of the female breast with less than a fully opaque covering of any part of the nipple, or the showing of the covered male genitals in a discernible turgid state. This term shall also include the showing of the uncovered male or female genital area.

Nursing Home. A facility licensed by Pennsylvania for the housing and intermediate or fully skilled nursing care of 3 or more persons. As of 2009, such licensing agency is the Department of Health. See Section 402.

Off-Road Vehicle Park. An area of land used by four-wheel drive vehicles, pickup trucks, all terrain vehicles, motorcycles and off-road vehicles for recreational driving that is not along an improved road.

Office. A use that involves administrative, clerical, financial, governmental or professional operations and operations of a similar character. This use shall include neither retail nor industrial uses, but may include business offices, medical offices, laboratories, photographic studios, and/or television or radio broadcasting studios.

Open Space, Preserved or Common. A parcel or parcels of land within a tract which meets all of the following standards:

- A. is designed, intended and suitable for active or passive recreation by residents of a development or the general public,
- B. will be owned and maintained by the owner of a rental housing development or is covered by a binding property-owners association that ensures perpetual maintenance,
- C. will be preserved by a deed restriction or conservation easement to permanently prevent uses of land other than non-commercial recreation, and
- D. does not use any of the following areas to meet minimum preserved open space requirements:
 - 1. existing street rights-of-way,
 - 2. vehicle streets or driveways providing access to other lots,
 - 3. land beneath building(s) or land within 20 feet of a building (other than accessory buildings and pools clearly intended for noncommercial recreation and other than agricultural buildings and a farmstead which are permitted within land approved by the Borough/Township for agricultural preservation),
 - 4. off-street parking (other than that clearly intended for noncommercial recreation),
 - 5. area(s) needed to meet a requirement for an individual lot,
 - 6. land that includes a stormwater detention basin, except for a basin or portions of a basin that the applicant proves to the satisfaction of the County would: a) be reasonably safe and useful for active or passive recreation during the vast majority of weather conditions or b) serve as a scenic asset resembling a natural pond,
 - 7. portions of land that have a width of less than 30 feet, and
 - 8. areas that are under electric transmission lines that are designed for a capacity of 35 kilovolts or greater.
- E. each square foot of preserved open space that is of 25 percent or greater slopes and each square foot within the 100 year floodplain shall only count as one-half square foot for the purposes of determining the amount of preserved open space.

Ordinance The Schuylkill County Zoning Ordinance, including the Official Zoning Maps, as amended.

PA. The Commonwealth of Pennsylvania.

Parking. Shall mean off-street parking and aisles for vehicle movement unless otherwise stated.

PennDOT. The Pennsylvania Department of Transportation, or its successor, and its subparts.

Permitted By Right Uses. Allowed uses in which zoning matters may be approved by the Zoning Officer, provided the application complies with all requirements of the Zoning Ordinance.

Personal Care Home or Center. See definition of "Assisted Living Facility." For the purposes of this Ordinance, "Assisted Living Facility" and "Personal Care Home" shall have the same meaning.

Personal Service. An establishment that provides a service oriented to personal needs of the general public and which does not involve primarily retail or wholesale sales or services to businesses. Personal services include barber and beauty shops, massage therapy, photography studios, travel agency, shoe repair shops, household appliance repair shops, and other similar establishments, but shall not include any "adult uses," as herein defined.

Pets, Keeping of. The keeping of domesticated animals of types that are normally considered to be kept as pets in conjunction with a dwelling for the pleasures of the resident family. This shall include dogs, cats, small birds, gerbils, rabbits and other animals commonly sold in retail pet shops.

Picnic Grove, Commercial. An area of open space and pavilions that is not publicly owned and is used for group picnics and related outdoor recreation, and which is used on a commercial basis.

Places of Worship. Buildings, synagogues, churches, religious retreats, monasteries, seminaries and shrines used primarily for regularly scheduled religious and/or spiritual worship for 15 or more persons at a time and that are operated for nonprofit and noncommercial purposes. If a religious use is primarily residential in nature, it shall be regulated under the appropriate "dwelling type." See standards in Section 402.

Principal Building. A "Principal Structure" which is also a "building."

Principal Structure. The structure in which the principal use of a lot is conducted. Any structure that is physically attached to a principal structure shall be considered part of that principal structure.

Principal Use. A dominant use(s) or main use on a lot, as opposed to an accessory use.

Prison. A correctional institution within which persons are required to inhabit by criminal court actions or as the result of a criminal arrest.

Public Notice. Notice required by the Pennsylvania Municipalities Planning Code. (See definition in Section 107 of such law.)

Publicly Owned Recreation. Leisure facilities owned, operated or maintained by governmental entities for use by the general public. "Publicly Owned Recreation" is a distinct use from "Indoor Recreation" or "Outdoor Recreation."

Recreation. The offering of leisure-time activities to unrelated persons. This term shall not include any "Adult Use." For the purposes of this Ordinance, recreation facilities shall be permitted by right as an accessory use when clearly limited to residents of a development and their occasional invited guests.

- A. Indoor Recreation. A type of "recreation" use that: a) does not meet the definition of Outdoor Recreation, and b) is used principally for active or passive recreation, such as a bowling alley, roller skating, ice skating, commercial batting practice use, and similar uses. This term shall not include any use listed separately as a distinct use by Section 306.
- B. Outdoor Recreation. A type of "recreation" use that: a) has a total building coverage of less than 15%, and b) is used principally for active or passive recreation, such as a golf driving range, miniature golf course, amusement park and similar uses. This term shall not include any use listed separately as a distinct use by Section 306, such as a firearms target range.

Recreational Vehicle Park. A plot of land upon which 20 or more recreational vehicle sites are located, established or maintained for occupancy by recreational vehicles of the general public as temporary living quarters for recreation or vacation purposes.

Recycling Collection Center. A use for collection and temporary storage of more than 500 pounds of common household materials for recycling, but that does not involve processing or recycling other than routine sorting, baling, and weighing of materials. This term shall not include the indoor storage of less than 500 pounds of household recyclables and their customary collection, which is a permitted by right accessory use in all zoning districts, without additional regulations.

Related or Relative. Persons who are related by blood, marriage, adoption or formal foster relationship to result in one of the following relationships: spouse, brother, sister, parent, child, grandparent, great-grandparent, grandchild, great-grandchild, uncle, aunt, niece, nephew, sister-in-law, brother-in-law, or parent-in-law. This term specifically shall not include relationships such as second, or more distant cousins. See definition of "Dwelling Unit."

Renewable Energy Facility. A facility used for the collection, development, processing, production, conversion, refinement, transfer and/or storage of a renewable energy source. Specific renewable energy facilities such as solar energy, wind turbines and ethanol manufacturing or bulk storage are regulated separately. Renewable energy sources include solar, wind, biomass conversion, methane, geothermal energy, hydroelectric energy and similar energy sources, but shall not include nuclear fusion or fission.

Repair Service. Shops for the repair of appliances, watches, guns, bicycles and other household items.

Residential Accessory Structure (includes "Building") or Use. A use or structure that is clearly accessory, customary and incidental to a principal residential use on a lot, including the following uses and uses that are very similar in nature: Garage (household), Carport, Tennis Court, Household Swimming Pool, Gazebo, Storage Shed, Greenhouse, Children's Playhouse or Children's Play Equipment. No business shall be conducted in a household garage or storage shed that is accessory to a dwelling, except as may be allowed as a home occupation.

Residential District(s). The CR, R-2 and R-3 Zoning Districts.

Residential Lot Lines. The lot line of a lot that: 1) contains an existing residential use on a lot of less than 5 acres, or b) is undeveloped and zoned as a Residential District.

Restaurant.

- A. An establishment that sells ready-to-consume food or drink and that routinely involves the consumption of at least a portion of such food on the premises.
- B. A restaurant may include the accessory sale of alcoholic beverages. However, if such sale is more than 60 percent of the total trade, the requirements of a "tavern" or nightclub as applicable must be met.
- C. See "Drive-Through Service" in this section.

Retail Store. A use in which merchandise is sold or rented to the general public, but not including the following: sales of motor vehicles or boats, adult movie theater, adult bookstore, manufacturing, tavern, car wash, auto service station, auto repair garage, convenience store, or any restaurant.

Right-of-Way. An area or strip of land which is reserved for use by or as a street or by one or more utilities or by the public or by others. The term "Right-of-Way" by itself shall mean the Street Right-of-Way, unless another meaning is otherwise stated or clearly implied from the context in which it is used.

Right-of-Way, Existing or Legal Street. The official established street right-of-way that either the Borough/Township or the Pennsylvania Department of Transportation presently own or hold another interest in the land, or will own after the completion of any proposed subdivision, land development or development of a use under this Ordinance, whether by dedication or otherwise.

Rooming House. See "Boarding House."

School, Public or Private Primary or Secondary School. An educational institution primarily for persons between the ages of 5 and 19 that primarily provides State-required or largely State-funded educational programs. This term shall not include "Trade Schools."

Screening. Year-round plant material of substantial height and density designed to provide a buffer. See requirements in Section 803.D.

Self-Storage Development. A building or group of buildings divided into individual separately accessed units which are rented or leased for the storage of personal and small business property.

Setback. An open area of a specified minimum depth that is required to be unobstructed from the ground to the sky and that is not permitted to be covered by buildings or principal structures and that is on the same lot as the subject structure or use. Each required setback shall be measured inward from the abutting "lot line" or existing street right-of-way (as exists after completion of any subdivision or land development). Regulations of each district prohibit principal and accessory structures within the specified minimum setbacks.

A. See setback exceptions in Section 803.B.

B. Private Streets. For a building setback measured from a private street, the minimum setback shall be measured from the existing street right-of-way/easement, if one exists, or from the edge of cartway, whichever is wider.

Setback, Minimum Front. A "setback" measured from and running parallel to the front lot line or street right-of-way line (as exists after the completion of any subdivision or land development). Such setback area shall extend the full width of the lot from side lot line to side lot line.

A. See Section 803 concerning setbacks along corner lots.

B. No accessory or principal structure shall extend into the required front setback area, except as provided in this Ordinance.

C. Every lot shall include at least one front lot line.

Setback, Minimum Rear.

A. A "setback" extending the full width of the lot and which is measured from along the rear line and which establishes the minimum distance from the rear lot line for placement of the subject structure, and which stretches between the side lot lines parallel to the rear lot line.

B. A principal building shall not extend into the required rear setback for a principal building, and an accessory structure shall not extend into the required rear setback for an accessory structure, except as provided in this Ordinance.

C. Every lot shall include a rear lot line and a rear setback.

Setback, Minimum Side.

- A. A "setback" which establishes the minimum distance from the side line for placement of the closest portion of the subject structure, and which is measured from along the entire length of the side lot line, and which extends from the front setback line to the rear lot line.
- B. A structure shall not extend into the applicable minimum side setback, except as provided for in this Ordinance.
- C. See "Corner Lot" provision in Section 803.B.
- D. A triangular lot shall include one side setback. All other lots shall include at least 2 side setbacks, except for a corner lot.

Setback Line. A line separating a required minimum front, side or rear setback area from the area within which a building or use is allowed. See also "Yard."

Sewage Service, On-Lot. Sanitary sewage service to a building that does not meet the definition of Central Sewage Service, such as but not limited to, an individual on-lot septic system.

Sewage Service, Public. Sanitary sewage service by a sewage collection system owned and/or operated by a municipality or a municipal authority or by a utility company and which serves more than 20 dwelling units or 5 principal uses.

Sight Triangle. An area required to be kept free of certain visual obstructions to traffic. See Section 803.

Sign. See Section 702.

Single and Separate Ownership. The ownership of a lot by one or more persons, partnerships or corporations, which ownership is separate and distinct from that of any abutting or adjoining lot.

Solar Panels. Mechanisms used to capture the energy of the sun, such as to generate electricity or heat water.

Special Exception. A use for which the Zoning Hearing Board may grant permission following a public hearing and findings of fact consistent with this Ordinance, provided the use complies with the conditions and standards required by this Ordinance. See Section 116.

Specified Anatomical Areas. Human genitals, pubic region, anus, buttocks, female breast(s) below a point above the top of the areola, or human male genitals in a discernible turgid state, even if completely covered.

Specified Sexual Activities. One or more of the following:

- A. Human male genitals in a visible state of sexual stimulation.
- B. Acts of human masturbation, sexual intercourse, oral sex or sodomy.
- C. Fondling or other erotic touching of human genitals. See definition of 'Adult Use.'

State. The Commonwealth of Pennsylvania and its agencies.

Story. A level of a building routinely accessible to humans having an average vertical clearance from floor to ceiling of 6.5 feet or greater shall be considered a full story, except as follows: If the floor of a basement level is more than 6 feet below the finished grade level for more than 50 percent of the total building perimeter, it shall not be regulated as a story. Any level of a building having an average vertical clearance from floor to ceiling of less than 6.5 feet shall be considered a "half-story."

Street. A public or private thoroughfare which provides the principal means of vehicle access to 2 or more abutting properties or that is an expressway, but not including an alley or a driveway. A street includes a right-of-way that extends beyond each side of the cartway. The terms "street," "highway," and "road" have the same meaning and are used interchangeably.

Street, Private. A street which is not a public street, and which has not been approved by the municipality for future public dedication.

Street, Public. A street owned by a municipality or the state.

Structure. Any man-made object having a stationary location on land, whether or not affixed to the land. Examples of structures include manufactured homes, signs and in-ground swimming pools. Any structure shall be subject to the principal or accessory setbacks of this Ordinance, as applicable, unless specifically exempted or unless a specific setback is established for that particular type of structure by this Ordinance. For the purposes of this Ordinance, utility lines and poles, stormwater basins, wells, paving, and septic systems shall not be considered structures, and shall not be subject to minimum zoning setback requirements unless stated otherwise.

Subdivision. The definition in the Pennsylvania Municipalities Planning Code shall apply.

Subdivision Ordinance or Subdivision and Land Development Ordinance. The Subdivision and Land Development Ordinance, as amended that is applicable.

Swimming Pool, Household. A man-made area with walls of man-made materials intended to enclose water at least 30 inches deep for bathing or swimming and that is intended to serve the residents of only one dwelling unit and their occasional guests without financial compensation.

Swimming Pool, Non-Household. A man-made area with walls of man-made materials intended to enclose water at least 30 inches deep for bathing or swimming and that does not meet the definition of a "household" swimming pool.

Tavern. A place where alcoholic beverages are served as more than 60 percent of the total trade and which does not meet the definition of an "after-hours club" or a "nightclub." The sale of food may also occur. See the definition of restaurant.

Theater. A building or part of a building devoted to the showing of motion pictures or theatrical or performing arts productions as a principal use, but not including an outdoor drive-in theater or adult movie theater.

Tire Storage, Bulk. The storage of more than 20 used tires on a lot, except that a tire retail store may include the temporary storage of up to 100 used tires awaiting disposal on a lot without being regulated by this term. See "Outdoor Storage" in Section 403.

Townhouse. See "Single Family Attached Dwelling" under "Dwelling Types" in this Section.

Trade/Hobby School or Trade School. A facility that: a) is primarily intended for education of a work-related skill or craft or a hobby, and b) does not primarily provide State-required education to persons under age 16. Examples include a dancing school, martial arts school, cosmetology school, or ceramics school.

Tradesperson. A person involved with building trades, such as but not limited to: plumbing, electrical work, building construction, building remodeling, and roofing.

Treatment Center. A use (other than a prison or a hospital) providing housing for 3 or more unrelated persons who need specialized housing, treatment and/or counseling because of:

- A. criminal rehabilitation, such as a criminal halfway house;
- B. current addiction to a controlled substance that was used in an illegal manner or alcohol; and/or
- C. a type of mental illness or other behavior that causes a person to be a threat to the physical safety of others.
- D. homeless shelter

See standards in Section 402. Also, a group home that exceeds the number of residents allowed by this Ordinance within a Group Home shall be regulated as a Treatment Center, unless approved otherwise under Section 111.D.

Unlicensed Vehicle. Any motor vehicle or trailer that does not display a license plate with a current registration sticker or does not have a valid safety inspection sticker. The requirement for a safety inspection sticker shall not apply to vehicles (such as licensed antique cars and trailers of less than 3,000 pounds gross vehicle weight rating) for which Pennsylvania regulations do not require such a sticker. The term shall not include a motor vehicle displaying an inspection sticker that expired less than 30 days previously.

Use. The purpose, activity, occupation, business or operation for which land or a structure is designed, arranged, intended, occupied or maintained. Uses specifically include but are not limited to the following: activity within a structure, activity outside of a structure, any structure, recreational vehicle storage, or parking of commercial vehicles on a lot.

Variance. The granting of specific permission by the Zoning Hearing Board to use, construct, expand, or alter land or structures in such a way that compliance is not required with a specific requirement of the Zoning Ordinance. Any variance shall only be granted within the limitations of the Pennsylvania Municipalities Planning Code. See Section 111.

Wall. A man-made barrier constructed primarily of masonry, concrete, cinder block or similar materials.

Warehouse. A building or group of buildings primarily used for the indoor storage, transfer, and distribution of products and materials, but not including retail uses or a truck terminal, unless such uses are specifically permitted in that zoning district.

Watercourse. A channel or conveyance of surface water having a defined bed and banks, whether natural or artificial, with perennial or intermittent flow.

Water Service, On-Lot. Water supply service to a building that does not meet the definition of Public Water Service, such as but not limited to an individual on-lot well.

Water Service, Central. Water supply service to a building by a municipally-owned, authority-owned or utility company-owned water supply system that serves more than 30 dwellings or principal uses.

Wetlands. An area of land and/or water meeting one or more definitions of a "wetland" under Federal and/or Pennsylvania law and/or regulations.

Wind Turbine. A device used to convert the energy in natural winds to usable electrical energy on Earth. (Note: This Ordinance treats a single accessory wind turbine differently (see Section 403) from other types of wind turbines (such as a wind farm).

Yard. An area not covered by buildings on the same lot with a structure (or a group of structures) which lies between the structure (or group of structures) and a lot line and which is unoccupied

and unobstructed from the ground upward except as permitted in the applicable Zoning Ordinance.

Yard, Front. A "yard" measured from and running parallel to the front lot line or street right-of-way line (as exists after the completion of any subdivision or land development). Such yard shall extend the full width of the lot from side lot line to side lot line. See also "Lot Line, Front".

Yard, Rear. A "yard" extending the full width of the lot and which is measured from along the rear line, and which stretches between the side lot lines parallel to the rear lot line.

Yard, Side. A "yard" which includes the distance between a side line lot and the closest portion of a principal structure, and which is measured from along the entire length of the side lot line, and which extends from the front setback line to the rear lot line.

Zoning Map. The Official Zoning Maps of Schuylkill County, Pennsylvania.

Zoning Officer. The person charged with the duty of enforcing the provisions of the Zoning Ordinance, and any officially designated assistant.

Zoning Ordinance. The Schuylkill County Zoning Ordinance, as amended.

ARTICLE 3

DISTRICTS

301. DESIGNATION OF DISTRICTS AND PURPOSES.

- A. For the purpose of this Ordinance, the Schuylkill County municipalities that are regulated by this Zoning Ordinance are hereby divided into the following zoning districts, with the following abbreviations:

A	Agricultural District
CR	Conservation Residential District
R-1	Rural Residential District (Reserved for future use)
R-2	Medium Density Residential District
R-3	High Density Residential District
T-C	Town Center Commercial District
C-1	Local Commercial District
C-2	(Reserved for Future Use)
C-3	Highway Commercial District
C-4	Regional Highway Commercial District
I-C	Industrial-Commercial District
CM	Conservation Mining District

- B. For the purposes of this Ordinance, the zoning districts named in Section 301.A. shall be of the number, size, shape and location shown on the “Official Zoning Map.”
- C. Each municipality separately regulates activity within the 100-Year Floodplain. Note to Applicant: See the applicable ordinance of the appropriate Borough / Township.
- D. Purposes of Each District. In addition to serving the overall purposes and objectives of this Ordinance and the County Comprehensive Plan, each zoning district is intended to serve the following purposes:
1. A-Agricultural District. - To promote the continuation and preservation of agricultural activities in those areas most suitable for such activities. This zone also intends to protect and stabilize the County’s viable agricultural economy by eliminating uses that are incompatible with farming, but permitting limited agricultural support businesses. Consequently, the density of residential uses is limited and any future inhabitants in this district must be willing to accept the impacts associated with normal farming practices, and related businesses.
 2. CR-Conservation Residential District. To provide for development with a low average intensity in areas that include significant important natural features, such as wetlands, mountainsides, ridgelines, creeks, flood-prone lands and steeply sloped areas. To vary density based upon the natural features of the land. To protect the water quality and habitats along creeks and around lakes, and promote groundwater recharge.

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3. R-1 - Rural Residential District. Reserved for future use.
4. R-2 - Medium Density Residential District. To serve the same purposes as the R-1 district, but with a medium density suburban density.
5. R-3 - High Density Residential District. To provide for high density residential neighborhoods that are composed of various housing types. To protect these areas from incompatible uses.
6. TC - Town Center Commercial District. To provide business opportunities while seeking to develop a central community focus for historic boroughs. To promote a pedestrian-friendly and bicycle-friendly environment. To promote an appropriate mix of retail, service, office, public, institutional and residential uses. To avoid heavy commercial uses that are most likely to conflict with the historic and scenic character, and most likely to cause conflicts with homes.
7. C-1 - Local Commercial District - To provide for a mix of housing and light business uses in a manner that avoids conflicts between homes and intensive commercial uses. To primarily provide for smaller-scale uses that will not be obtrusive in the landscape and that will not overload the road system.
8. C-2 - Reserved for Future Use
9. C-3 - Highway Commercial District. To provide for a wide range of commercial uses, particularly in areas that are not historic, not within a downtown or not adjacent to residential neighborhoods.
10. C-4 - Regional Highway Commercial District. To allow a wide range of commercial uses and selected industrial uses near highway interchanges.
11. I-C - Industrial-Commercial District. To provide for industrial and commercial development in a manner that is compatible with any nearby homes and the surrounding environment. To carefully control the types of industrial operations to avoid nuisances and environmental hazards. To promote a well-landscaped campus like setting that will help attract new employers and provide compatibility with nearby homes.
12. CM - Conservation Mining District. To recognize the primary areas in the County where there are widespread coal resources. To provide for mineral extraction/quarrying uses and appropriate uses after reclamation in a manner that protects the environment. To consider changes in the future to the zoning map to residential, commercial or industrial development in particular areas where it is shown that there are few recoverable coal resources, or where necessary to support reclamation of older mined areas, or where it is more appropriate to provide for alternative uses. To seek to avoid small pockets of residential development in the middle of mining areas.

302. APPLICATION OF DISTRICT REGULATIONS.

- A. The regulations set by this Ordinance shall apply uniformly to each class or kind of structure or land, except as provided for in this Ordinance.
- B. No structure shall hereafter be erected, used, constructed, reconstructed, structurally altered or occupied and no land shall hereafter be used, developed or occupied unless it is in conformity with the regulations herein specified for the use and district in which it is located.
- C. No yard or lot existing at the time of passage of this Ordinance shall be reduced in dimension or area below the minimum requirements set forth herein. Yards or lots created after the effective date of this Ordinance shall meet at least the minimum requirements established by this Ordinance.
- D. Boundary Change. Any territory which may hereafter become part of the Borough/Township through annexation or a boundary adjustment shall be automatically classified as the CR zoning district until or unless such territory is otherwise classified by amendment of this Ordinance.

303. ZONING MAP.

- A. Maps that are each entitled “Zoning Map” shall accompany this Ordinance and are declared a part of this Ordinance. The Official Zoning Map(s) should bear the adoption date of this Ordinance and the words “Official Zoning Map.” At least one paper copy of each Zoning Map shall be retained in the County Zoning Office, and which should include a signature by the Chairperson of the Board of County Commissioners. The Zoning Map(s) may be updated electronically, provided that an official paper copy is also maintained.
- B. Map Changes. Changes to the boundaries and districts of the Official Zoning Map shall only be made in conformity with the amendment procedures specified in the State Municipalities Planning Code. All changes should be noted by date with a brief description of the nature of the change, either on the map or within an appendix to this Ordinance.
- C. Replacement Map. If the Official Zoning Map becomes damaged, destroyed, lost or difficult to interpret because of changes and additions, or needs to have drafting errors or omissions corrected or to add updated base information, the Board of Commissioners may, by resolution, adopt a new copy of the Official Zoning Map which shall supersede the prior Official Zoning Map. Unless the prior Official Zoning Map has been lost or has been totally destroyed, the prior map or any remaining parts shall be preserved together with all available records pertaining to its previous adoption or amendment.

304. DISTRICT BOUNDARIES.

The following rules shall apply where uncertainty exists as to boundaries of any district as shown on the Zoning Map:

- A. District boundary lines are intended to follow or be parallel to the center line of street rights-of-way, streams and railroads, and lot lines as they existed on a recorded deed or plan of record in the County Recorder of Deeds' office at the time of the adoption of this ordinance, unless such district boundary lines are fixed by dimensions as shown on the Official Zoning Map.
- B. Where a district boundary is not fixed by dimensions and where it approximately follows lot lines, such boundary shall be construed to follow such lot lines unless specifically shown otherwise.
- C. The location of a district boundary on un-subdivided land or where a district boundary divides a lot shall be determined by the use of the scale appearing on the Zoning Map unless indicated otherwise by dimensions.
- D. Where a municipal boundary divides a lot, the minimum lot area shall be regulated by the municipality in which the principal use(s) are located, unless otherwise provided by applicable case law. The land area within each municipality shall be regulated by the use regulations and other applicable regulations of each municipality.

305. SETBACKS ACROSS MUNICIPAL BOUNDARIES.

- A. Intent. To continue the objective of compatible land uses across municipal boundaries.
- B. This Section applies if a use is developed on land under this Ordinance, and the adjacent land is in a municipality that is not regulated by this Ordinance. In such case, if the use is required to provide a larger setback and/or a buffer yard adjacent to a dwelling or a residential district, and the dwelling or residential district is in an adjacent municipality, the use shall still be required to provide the larger setback and/or buffer yard.

306. ALLOWED USES AND DIMENSIONAL REQUIREMENTS IN EACH ZONING DISTRICT.

- A. For the purposes of this Section, the following abbreviations shall have the following meanings:
 - (S. 402) = See Additional Requirements in Section 402
 - (S. 403) = See Additional Requirements in Section 403
- B. Unless otherwise provided by State or Federal law, any land or structure shall only be used or occupied for a use specifically listed in this Ordinance as allowed in the zoning district where the land or structure is located. Such uses shall only be allowed if the use complies with all other requirements of this Ordinance.

See also Section 105.B. which generally provides a process for approval of a use that is not listed - based upon similarity to permitted uses and other criteria. Except as provided in such Section 105.B, any other principal use that is not specifically listed as P or SE in the applicable district in this table is prohibited in that district.

For temporary uses, see Section 103.

For manufacturing uses, the types of uses listed in this Section correspond approximately to the categories of the North American Industrial Classification System, administered by the U.S. Department of Commerce. In case of question about the categorization, such system shall be consulted.

306.C. A Agricultural District.

1. Permitted by Right Uses.

- a. Additional Business Uses on a Farm (S.403)
- b. Agri-business
- c. Agricultural Uses and Buildings
- d. Cemetery, not including a Crematorium (S.402)
- e. Community Center (limited to a government-sponsored or non-profit facility) or Library
- f. Crop Farming (which shall not by itself require a zoning permit unless new or expanded buildings are involved) and Wholesale Greenhouses
- g. Day Care Center accessory to and on the same lot as an existing lawful Place of Worship (S.402)
- h. Emergency Services Station (with an accessory Banquet Hall needing special exception approval)
- i. Food and Beverage Manufacturing and Processing
- j. Forestry (which shall not by itself require a zoning permit unless new or expanded buildings are involved)
- k. Gas or Oil Well (S. 402)
- l. Golf Course with a minimum lot area of 40 acres (S. 402)
- m. Groundwater or Spring Water withdrawal averaging less than 100,000 gallons per day, (which shall not by itself require a zoning permit unless new or expanded buildings or structures are involved) (S. 402)
- n. Groundwater or Spring Water withdrawal facility averaging more than 100,000 gallons per day, which may involve loading, trucking (S. 402)
- o. Group Home within a lawful existing dwelling unit not including a Treatment Center (S. 402)
- p. Home Occupation, Minor (S. 403)
- q. Hunting and Fishing Club, provided that any firearms target range shall need special exception approval
- r. Livestock or Poultry, Raising of Non-Intensive (which shall not by itself require a zoning permit unless new or expanded buildings are involved)
- s. Nature Preserve or Environmental Education Center
- t. Parking Lot (S. 603G.)
- u. Place of Worship (includes Church) (S. 402)
- v. Retail Sales of Agricultural Products (S. 403)
- w. School, Private, Primary or Secondary (S. 402)

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- x. Single Family Detached Dwelling (Note: Manufactured/mobile homes shall meet the additional requirements of Section 402)
- y. Solar Energy Collection and Processing
- z. Stable, Household or Non-Household (includes horse-riding academy) (S. 403)
- aa. Veterinarian Office (S. 402)
- bb. Wind Turbine – Maximum of one on a lot that is designed primarily for on-site electricity use, and which meets the requirements for an Accessory Wind Turbine (S. 403)
- cc. Accessory uses permitted by right (S. 103.A. and 307.C.)

2. Special Exception Uses.

- a. Adaptive Reuse of a Former School, Place of Worship or Industrial Building in compliance with Section 402
- b. Airport (Private), Airport (Public), Helipad, Heliport (S. 402)
- c. Commercial Communications Tower (S. 402)
- d. Composting, Commercial
- e. Day Care as accessory to a dwelling: (S. 403)
 - Family Day Care Home
 - Group Day Care Home
- f. Emergency Services Station which may include Accessory Banquet Hall
- g. Home Occupation, Major (S. 403)
- h. Hunting Grounds, Commercial
- i. Kennel, Commercial (S. 402)
- j. Livestock or Poultry, Raising of – Intensive (S. 402)
- k. Mineral Extraction (S.402) (Note - A Gas or Oil Well is a separate use.)
- l. Membership Club Meeting and Non-Commercial Recreational Facilities, provided that an “After Hours Club”, “Tavern” or uses listed separately in Section 306 shall only be allowed if so listed and if the requirements for that use are also met (S. 402)
- m. Sewage Treatment Plant for Centralized Service
- n. Swimming Pool, Non-Household (S. 402)
- o. Target Range, Firearms, either indoor or outdoor (S. 402)
- p. Wind Turbine(s), other than is allowed as an accessory use (S. 402)

3. Dimensional Requirements.

- a. Minimum lot area:
 - 43,560 square feet without public sewage and without public water service.
 - 35,000 square feet with public sewage or public water service.
 - 10,000 square feet with public sewage and public water services.
- b. Minimum lot width:
 - 150 feet-without public sewage and without public water service
 - 125 feet-with public sewage or public water service
 - 75 feet-with public sewage and public water services
- c. Minimum set backs for principal structure:
 - 25 feet-front yard. See Note D, in Section 307.A.
 - 25 feet- rear yard. See Note ** in Section 307.A.
 - 10 feet-each side yard.
- d. If a lawful lot that existed prior to the adoption date of this Ordinance has a nonconforming lot width, then the minimum side yards for principal and accessory structures may be reduced as follows:
 - lot width is 30 feet or less, both side yard setbacks-0 feet
 - lot width is greater than 30 feet and up to and including 50 feet, both side yard setbacks- 3 feet.
 - lot width is greater than 50 feet, both side yard setbacks- 5 feet.
- e. Maximum percent building coverage shall be 25 percent for all uses.
See Note F in Section 307.A.
- f. Maximum percent impervious coverage shall be 50 percent for all uses.
See Note F in Section 307.A.
- g. Height. See Section 307.B
- h. Accessory Structure Side and Rear Setbacks-3 feet. See Section 307.C.

306.D. CR Conservation Residential District.

1. Permitted by Right Uses.

- a. Additional Business Uses on a Farm (S. 403)
- b. Agri-business
- c. Agricultural Uses and Buildings
- d. Cemetery (see Crematorium listed separately) (S. 402)
- e. Community Center (limited to a government-sponsored or non-profit facility) or Library
- f. Crop Farming (which shall not by itself require a zoning permit unless new or expanded buildings are involved) and Wholesale Greenhouses
- g. Day Care Center accessory to and on the same lot as an existing lawful Place of Worship (S. 402)
- h. Emergency Services Station with any Accessory Banquet Hall needing special exception approval
- i. Forestry (which shall not by itself require a zoning permit unless new or expanded buildings are involved)
- j. Gas or Oil Well (S. 402)
- k. Golf Course, with a minimum lot area of 40 acres (S. 402)
- l. Groundwater or Spring Water withdrawal averaging less than 100,000 gallons per day, (which shall not by itself require a zoning permit unless new or expanded buildings or structures are involved) (S. 402)
- m. Groundwater or Spring Water withdrawal facility averaging more than 100,000 gallons per day, which may involve loading and trucking (S. 402)
- n. Group Home within a lawful existing dwelling unit , not including a Treatment Center (S. 402)
- o. Home Occupation, Minor (S. 403)
- p. Hunting and Fishing Club, provided that any firearms target range shall need special exception approval
- q. Livestock or Poultry, Raising of -Non-Intensive (which shall not by itself require a zoning permit unless new or expanded buildings are involved)
- r. Nature Preserve or Environmental Education Center
- s. Parking Lot (S. 603G.)
- t. Place of Worship (includes Church) (S. 402)
- u. Retail Sales of Agricultural Products (S. 403)
- v. School, Private, Primary or Secondary (S. 402)
- w. Single Family Detached Dwelling (Note: Manufactured/mobile homes shall meet the additional requirements of Section 402)

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- x. Solar Energy Collection and Processing
- y. Stable, Household or Non-Household (includes horse-riding academy) (S. 403)
- z. Veterinarian Office (S. 402)
- aa. Wind Turbine – Maximum of one on a lot that is designed primarily for on-site electricity use, and which meets the requirements for an Accessory Wind Turbine (S. 403)
- bb. Accessory uses permitted by right (S. 103.A. and 307.C.)

2. Special Exception Uses.

- a. Adaptive Reuse of a Former School, Place of Worship or Industrial Building in compliance with Section 402
- b. Commercial Communications Tower (S. 402)
- c. Composting, Commercial
- d. Emergency Services Station which may include Accessory Banquet Hall
- e. Kennel, Commercial (S. 402)
- f. Helipad (S. 402)
- g. Livestock or Poultry, Raising of Intensive (S. 402)
- h. Membership Club Meeting and Non-Commercial Recreational Facilities, provided that an “After Hours Club”, “Tavern” or uses listed separately in Section 306 shall only be allowed if so listed and if the requirements for that use are also met (S. 402)
- i. Sewage Treatment Plant for Centralized Service
- j. Swimming Pool, Non-Household (S. 402)
- k. Target Range, Firearms either indoors or outdoors (S. 402)
- l. Wind Turbine(s), other than is allowed as an accessory use (S. 402)

3. Dimensional Requirements.

- a. Minimum lot area:
 - 87,120 square feet without public sewage and without public water service.
 - 43,560 square feet with non-public central sewage and/or central water service
 - 20,000 square feet with public sewage and public water services.
- b. Minimum lot width:
 - 150 feet-without central sewage and without central water service
 - 125 feet-with central sewage or central water service
 - 75 feet-with central sewage and central water services

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- c. Minimum set backs for principal structure:
 - 25 feet-front yard. See Note D, in Section 307.A.
 - 25 feet- rear yard. See Note ** in Section 307.A.
 - 10 feet-each side yard
- d. If a lawful lot that existed prior to the adoption date of this Ordinance has a nonconforming lot width, then the minimum side yards for principal and accessory structures may be reduced as follows:
 - lot width is 30 feet or less, both side yard setbacks-0 feet
 - lot width is greater than 30 feet and up to and including 50 feet, both side yard setbacks- 3 feet.
 - lot width is greater than 50 feet, both side yard setbacks- 5 feet.
- e. Maximum percent building coverage shall be 25 percent for all uses. See Note F in Section 307.A.
- f. Maximum percent impervious coverage shall be 50 percent for all uses. See Note F in Section 307.A.
- g. Height. See Section 307.B
- h. Accessory Structure Side and Rear Setbacks-3 feet. See Section 307.C.

306.E. R-1 Rural Residential District. Reserved for future use.

306.F. R-2 Medium Density Residential District.

1. Permitted by Right Uses.

- a. Age-Restricted Residential Development (S. 309)
- b. Cemetery (see Crematorium listed separately) (S. 402)
- c. Community Center (limited to a government-sponsored or non-profit facility) or Library
- d. Day Care Center accessory to and on the same lot as an existing lawful Place of Worship (S. 402)
- e. Emergency Services Station, with any Accessory Banquet Hall needing special exception approval
- f. Forestry (which shall not by itself require a zoning permit unless new or expanded buildings are involved)
- g. Golf Course with a minimum lot area of 40 acres (S. 402)
- h. Groundwater or Spring Water withdrawal averaging less than 100,000 gallons per day, (which shall not by itself require a zoning permit unless new or expanded buildings or structures are involved) (S. 402)
- i. Group Home within a lawful existing dwelling unit, not including a Treatment Center (S. 402)
- j. Home Occupation, Minor (S. 403)
- k. Nature Preserve or Environmental Education Center
- l. Place of Worship (includes Church) (S. 402)
- m. School, Private, Primary or Secondary (S. 402)
- n. Semi-Detached Dwelling (side-by-side)
- o. Single Family Detached Dwelling (Note: Manufactured/mobile homes shall meet the additional requirements of Section 402)
- p. Solar Energy Collection and Processing as an accessory use
- q. Townhouse (Rowhouse) (S. 402)
- r. Wind Turbine Maximum of one on a lot that is designed primarily for on-site electricity use, and which meets the requirements for an Accessory Wind Turbine in Section 403
- s. Accessory uses permitted by right (S. 103.A. and 307.C.)

2. Special Exception Uses.

- a. Adaptive Reuse of a Former School, Place of Worship or Industrial Building in compliance with Section 402
- b. Day Care as accessory to a dwelling (S. 403)
 - Family Day Care Home
 - Group Day Care Home
- c. Day Care Center, Adult (S. 402)
- d. Day Care Center, Child (S. 402) (see also as an accessory use) (S. 403)
- e. Emergency Services Station Accessory Banquet Hall
- f. Gas or Oil Well (S. 402)
- g. Home Occupation, Major (S. 403)
- h. Nursing Home or Personal Care Home/Assisted Living (S. 402)
- i. Swimming Pool, Non-Household (S. 402)

3. Dimensional Requirements.

- a. Minimum lot area for single family detached dwellings shall be:
 - 43,560 square feet without public sewage and without public water service.
 - 35,000 square feet with public sewage or public water service.
 - 10,000 square feet with public sewage and public water services.
- b. Minimum lot area of 10,000 per twin/semi-detached dwelling unit and townhouse. There shall be a minimum development tract size of 2 acres for the tract. See Note C, in Section 307.A.
- c. Other allowed use 43,560 square feet. See Note D in Section 307.A.
- d. Minimum lot width:
 - 150 feet-without public sewage and without public water service
 - 125 feet-with public sewage or public water service
 - 75 feet-with public sewage and public water services
 - 35 feet per dwelling unit. See Note B, in Section 307.A.
 - 20 feet per interior townhouse unit See Note B, in Section 307.A.
 - 30 feet for a townhouse on a corner lot See Note B, in Section 307.A.
 - 150 feet other allowed use
- e. Minimum setbacks for principal structure:
 - 25 feet-front yard. See Note D, in Section 307.A.
 - 25 feet- rear yard. See Note ** in Section 307.A.

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- f. Minimum side yard setbacks for principal structure:
 - 10 feet each side for single family detached dwelling.
 - 10 feet except 0 at the shared lot line for attached dwelling unit and twin semi-detached dwelling unit.
 - 15 feet each side-other allowed use. See Note D in Section 307.A.
- g. If a lawful lot that existed prior to the adoption date of this Ordinance has a nonconforming lot width, then the minimum side yards for principal and accessory structures may be reduced as follows:
 - lot width is 30 feet or less, both side yard setbacks-0 feet
 - lot width is greater than 30 feet and up to and including 50 feet, both side yard setbacks- 3 feet.
 - lot width is greater than 50 feet, both side yard setbacks- 5 feet.
- h. Maximum percent building coverage shall be 50 percent for all uses.
See Note F in Section 307.A.
- i. Maximum percent impervious coverage shall be 70 percent for all uses.
See Note F in Section 307.A.
- j. Height. See Section 307.B
- k. Accessory Structure Side and Rear Setbacks-3 feet Setbacks. See Section 307.C.

306.G. R-3 High Density Residential District.

1. Permitted by Right Uses.

- a. Age-Restricted Residential Development in compliance with Section 309
- b. Apartments, see also conversion of an existing building (S. 402)
- c. Cemetery (see Crematorium listed separately) (S. 402)
- d. Community Center (limited to a government-sponsored or non-profit facility) or Library
- e. Day Care Center accessory to and on the same lot as an existing lawful Place of Worship
- f. Day Care as accessory to a dwelling-Family Day Care Home
- g. Emergency Services Station, with any Accessory Banquet Hall needing special exception approval
- h. Forestry (which shall not by itself require a zoning permit unless new or expanded buildings are involved)
- i. Golf Course with a minimum lot area of 40 acres (S. 402)
- j. Groundwater or Spring Water withdrawal averaging less than 100,000 gallons per day, (which shall not by itself require a zoning permit unless new or expanded buildings or structures are involved) (S. 402)
- k. Group Home within a lawful existing dwelling unit, not including a Treatment Center (S. 402)
- l. Home Occupation, Minor (S. 403)
- m. Nature Preserve or Environmental Education Center
- n. Nursing Home or Personal Care Home/Assisted Living (S. 402)
- o. Office (may include medical labs, see also Home Occupation in Section 403)
- p. Parking Lot (S. 603G.)
- q. Place of Worship (includes Church) (S. 402)
- r. School, Private, Primary or Secondary (S. 402)
- s. Semi-Detached Dwelling (side-by-side)
- t. Single Family Detached Dwelling (Note: Manufactured/mobile homes shall meet the additional requirements of Section 402)
- u. Solar Energy Collection and Processing as an accessory use
- v. Townhouse (Rowhouse) (S. 402)
- w. Wind Turbine Maximum of one on a lot that is designed primarily for on-site electricity use, and which meets the requirements for an Accessory Wind Turbine in Section 403
- x. Accessory uses permitted by right (S. 103.A. and 307.C.)

2. Special Exception Uses.

- a. Adaptive Reuse of a Former School, Place of Worship or Industrial Building in compliance with Section 402
- b. Conversion of an Existing Building to Result in an Increased Number of Dwelling Units (S. 402)
- c. Cultural Center or Museum
- d. Day Care as accessory to a dwelling Group Day Care Home (S. 403)
- e. Day Care Center, Adult (S. 402)
- f. Day Care Center, Child (S. 402) (see also as an accessory use) (S 403)
- g. Emergency Services Station Accessory Banquet Hall
- h. Home Occupation, Major (S. 403)
- i. Manufactured/Mobile Home Park (S. 402)
- j. Membership Club Meeting and Non-Commercial Recreational Facilities, provided that an “After Hours Club”, “Tavern” or uses listed separately in Section 306 shall only be allowed if so listed and if the requirements for that use are also met (S. 402)
- k. Swimming Pool, Non-Household (S 402)

3. Dimensional Requirements.

- a. Minimum lot area:
 - 43,560 square feet without public sewage and without public water service.
 - 35,000 square feet with public sewage or public water service.
 - Minimum lot area with public sewage and with public water services:
 - 2,500 square feet. for single family detached dwelling and semi-detached dwelling unit (twin).
 - 2,000 square feet. for townhouse. Per dwelling unit for the tract-2,500 square feet. See Note C and Note G in Section 307.A.
 - 5,000 square feet-other allowed use.
- b. Minimum lot width:
 - 150 feet-without public sewage and without public water service
 - 125 feet-with public sewage or public water service
 - Minimum lot width with public sewage and with public water
 - 25 feet for single family detached dwelling and semi-detached dwelling unit (twin).
 - 25 feet for unit on a corner lot.
 - 20 feet per interior dwelling unit (townhouse)
 - 50 feet for duplex or other apartment dwellings.

50 feet for any other allowed use.

See Note B in Section 307.A.

- c. Minimum setbacks for principal structure without public sewage and without public water:
 - 25 feet-front yard. See Note D, in Section 307.A.
 - 25 feet- rear yard. See Note ** in Section 307.A.
 - 10 feet-each side yard setback:
- d. Minimum setbacks with public sewage and with public water services:
 - 5 feet-front yard setback for all uses.
 - 15 feet-rear yard setback for all uses.
- e. Minimum side yard setback:
 - 3 feet each side for single family detached dwelling.
 - 3 feet one side for twin semi-detached dwelling unit.
 - 3 feet, except 0 at the shared lot line of lawfully attached dwellings.
 - 10 feet for duplex or apartment dwellings.
 - 10 feet-other allowed principal use. See Note ** in Section 307.A.
- f. If a lawful lot that existed prior to the adoption date of this Ordinance has a nonconforming lot width, then the minimum side yards for principal and accessory structures may be reduced as follows:
 - lot width is 30 feet or less, both side yard setbacks-0 feet
 - lot width is greater than 30 feet and up to and including 50 feet, both side yard setbacks- 3 feet.
 - lot width is greater than 50 feet, both side yard setbacks- 5 feet.
- g. Maximum percent building coverage shall be 75 percent for all uses.
See Note F in Section 307.A.
- h. Maximum percent impervious coverage shall be 90 percent for all uses.
See Note F in Section 307.A.
- i. Height. See Section 307.B
- j. Accessory Structure Side and Rear Setbacks-3 feet See Section 307.C.

306.H. TC Town Center Commercial District.

1. Permitted by Right Uses.

- a. Amusement Arcade
- b. Apartments (S. 402), see also conversions of an existing building
- c. Auditorium (Commercial), Arena, Performing Arts Center or Exhibition-Trade Show Center
- d. Bakery, Retail
- e. Bed and Breakfast Inn (S. 402)
- f. Beverage Distributor (wholesale and/or retail)
- g. Business Service Use (such as package delivery drop-off)
- h. Catering, Custom, for Off-Site Consumption
- i. Cemetery (see Crematorium listed separately) (S. 402)
- j. College or University - Educational and Support Buildings (other than environmental education center or residential uses)
- k. Community Center (limited to a government-sponsored or non-profit facility) or Library
- l. Conference Center
- m. Conversion of an Existing Building to Result in an Increased Number of Dwelling Units (S. 402)
- n. Crafts or Artisan's Studio (see also as Home Occupation)
- o. Cultural Center or Museum
- p. Custom Printing, Copying, Faxing, Mailing or Courier Service
- q. Day Care Center accessory to and on the same lot as an existing lawful Place of Worship
- r. Day Care (S. 403) as accessory to a dwelling:
 - Family Day Care Home
 - Group Day Care Home
- s. Day Care Center, Adult (S. 402)
- t. Day Care Center, Child (S. 402) (see also as an accessory use) (S. 403)
- u. Emergency Services Station, which may include an Accessory Banquet Hall
- v. Exercise Club
- w. Financial Institution (includes banks), with any "Drive-through" facilities meeting Section 403
- x. Flea Market/Auction House
- y. Forestry (which shall not by itself require a zoning permit unless new or expanded buildings are involved)

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- z. Funeral Home
- aa. Garden Center, Retail (see also “Wholesale Greenhouses”)
- bb. Groundwater or Spring Water withdrawal averaging less than 100,000 gallons per day, (which shall not by itself require a zoning permit unless new or expanded buildings or structures are involved) (S. 402)
- cc. Group Home within a lawful existing dwelling unit (S. 402), not including a Treatment Center
- dd. Home Occupation, Major or Minor (S. 403)
- ee. Hotel/Motel (S. 402)
- ff. Laundromat
- gg. Membership Club Meeting and Non-Commercial Recreational Facilities, provided that an “After Hours Club”, “Tavern” or uses listed separately in Section 306 shall only be allowed if so listed and if the requirements for that use are also met (S. 402)
- hh. Nature Preserve or Environmental Education Center
- ii. Nursing Home or Personal Care Home/Assisted Living (S. 402)
- jj. Office (may include medical labs, see also Home Occupation in Section 403)
- kk. Outdoor Storage and Display as accessory to a business use shall also comply with Sections 402, 803 and 804
- ll. Parking Garage or Parking Lot (S. 603G.)
- mm. Personal Services (includes tailoring, custom dressmaking, haircutting/styling, travel agency, drycleaning, shoe repair, “massage therapy, certified” and closely similar uses) (see also Home Occupation)
- nn. Place of Worship (includes Church) (S. 402)
- oo. Recording Studio, Music
- pp. Recreation, Commercial Indoor (includes bowling alley, roller or ice skating rink, batting practice, and closely similar uses); other than uses listed separately in Section 306
- qq. Repair Service, Household Appliance
- rr. Restaurant or Banquet Hall without drive-through service (S. 402)
- ss. Retail Store (not including uses listed individually in Section 306) or Shopping Center, and which may include a building occupied by multiple retail stores and which may include drive-through service for a pharmacy
- tt. School, Private, Primary or Secondary (S. 402)
- uu. Semi-Detached Dwelling (side-by-side)
- vv. Single Family Detached Dwelling (Note: Manufactured/mobile homes shall meet the additional requirements of Section 402)
- ww. Solar Energy Collection and Processing
- xx. Swimming Pool, Non-Household (S. 402)

- yy. Theater, Indoor Movie, other than an Adult Use
- zz. Townhouse (Rowhouse) (S. 402)
- aaa. Trade / Hobby School
- bbb. U.S. Postal Service Facility, which may include a leased facility
- ccc. Veterinarian Office (S. 402)
- ddd. Warehousing or Storage as an on-site accessory use
- eee. Wind Turbine Maximum of one on a lot that is designed primarily for on-site electricity use, and which meets the requirements for an Accessory Wind Turbine in Section 403
- fff. Accessory uses permitted by right (S. 103.A. and 307.C.)

2. Special Exception Uses.

- a. Adaptive Reuse of a Former School, Place of Worship or Industrial Building in compliance with Section 402
- b. Boarding House (includes Rooming House) (S. 402)
- c. Construction Company or Tradesperson's Headquarters (including but not limited to landscaping, building trades or janitorial contractor). See also as Home Occupation. Accessory outdoor storage shall be permitted provided it meets the screening requirements of Section 803
- d. Manufacturing, Custom, of Prototypes or Accessory Manufacturing in Combination with Principal Research and Development
- e. Tavern which may include a State-licensed micro-brewery (not including an After Hours Club or Nightclub)

3. Dimensional Requirements. Allowed residential uses shall meet the regulations of the R-3 district. Apartments that are accessory to a commercial use shall have a minimum lot area of 1,000 square feet per dwelling unit.

The following regulations apply for other uses:

- a. Minimum lot area shall be 2,500 square feet. See Note E in Section 307.A.
- b. Minimum lot width shall be 25 feet.
- c. Minimum front yard setback shall be 0 feet. No new vehicle parking shall be located between the front lot line of a State Road and the front of a principal building. See Note D, in Section 307.A. See Section 307.D.
- d. Minimum rear yard setback shall be 10 feet for other allowed uses. See Note ** in Section 307.A.
- e. Minimum side yard setback shall be 0 feet. If an attached building is demolished, then a new building may be attached along the same lot line. See Note ** in Section 307.A.

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- f. If a lawful lot that existed prior to the adoption date of this Ordinance has a nonconforming lot width, then the minimum side yards for principal and accessory structures may be reduced as follows:
 - lot width is 30 feet or less, both side yard setbacks-0 feet
 - lot width is greater than 30 feet and up to and including 50 feet, both side yard setbacks- 3 feet.
 - lot width is greater than 50 feet, both side yard setbacks- 5 feet.
- g. Maximum percent building coverage shall be 90 percent for other allowed uses. See Note F, in Section 307.A.
- h. Maximum percent impervious coverage shall be 95 percent for all uses. See Note F in Section 307.A.
- i. Height See Section 307.B
- j. Accessory Structure Side and Rear Setbacks Side-0 feet, Rear-10 feet. See Section 307.C.

306.I. C-1 Local Commercial District.

1. Permitted by Right Uses.

- a. Amusement Arcade
- b. Apartments, see also conversions of an existing building (S. 402)
- c. Auditorium (Commercial), Arena, Performing Arts Center or Exhibition-Trade Show Center
- d. Bakery, Retail
- e. Bed and Breakfast Inn (S. 402)
- f. Beverage Distributor (wholesale and/or retail)
- g. Business Service Use (such as package delivery drop-off)
- h. Catering, Custom, for Off-Site Consumption
- i. College or University - Educational and Support Buildings (other than environmental education center or residential uses)
- j. Community Center (limited to a government-sponsored or non-profit facility) or Library
- k. Conference Center
- l. Construction Company or Tradesperson's Headquarters (including but not limited to landscaping, building trades or janitorial contractor). See also as Home Occupation.
- m. Conversion of an Existing Building to Result in an Increased Number of Dwelling Units (S. 402)
- n. Crafts or Artisan's Studio (see also as Home Occupation)
- o. Cultural Center or Museum
- p. Custom Printing, Copying, Faxing, Mailing or Courier Service
- q. Day Care Center accessory to and on the same lot as an existing lawful Place of Worship
- r. Day Care as accessory to a dwelling: (S. 403)
 - Family Day Care Home
 - Group Day Care Home
- s. Day Care Center, Adult (S. 402)
- t. Day Care Center, Child (S. 402) (see also as an accessory use) (S. 403)
- u. Emergency Services Station, which may include an Accessory Banquet Hall
- v. Exercise Club
- w. Financial Institution (includes banks), with any "Drive-through" facilities meeting Section 403
- x. Flea Market/Auction House
- y. Funeral Home

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- z. Garden Center, Retail (see also “Wholesale Greenhouses”)
- aa. Groundwater or Spring Water withdrawal averaging less than 100,000 gallons per day, (which shall not by itself require a zoning permit unless new or expanded buildings or structures are involved) (S. 402)
- bb. Group Home within a lawful existing dwelling unit, not including a Treatment Center (S. 402)
- cc. Home Occupation, Major or Minor (S. 403)
- dd. Hospital or Surgery Center
- ee. Hotel/Motel (S. 402)
- ff. Laundromat
- gg. Membership Club Meeting and Non-Commercial Recreational Facilities, provided that an “After Hours Club”, “Tavern” or uses listed separately in Section 306 shall only be allowed if so listed and if the requirements for that use are also met (S. 402)
- hh. Nature Preserve or Environmental Education Center
- ii. Nursing Home or Personal Care Home/Assisted Living (S. 402)
- jj. Office (may include medical labs, see also Home Occupation)
- kk. Outdoor Storage and Display as accessory to a business use shall also comply with Sections 402, 803 and 804
- ll. Parking Garage or Parking Lot (S. 603G.)
- mm. Personal Services (includes tailoring, custom dressmaking, haircutting / styling, travel agency, drycleaning, shoe repair, “massage therapy, certified” and closely similar uses) (see also Home Occupation)
- nn. Photo Processing, Bulk
- oo. Place of Worship (includes Church) (S. 402)
- pp. Printing or Bookbinding
- qq. Recording Studio, Music
- rr. Recreation, Commercial Indoor (includes bowling alley, roller or ice skating rink, batting practice, and closely similar uses); other than uses listed separately in Section 306
- ss. Repair Service, Household Appliance
- tt. Restaurant or Banquet Hall (S. 402), which may include drive-through service (S. 403)
- uu. Retail Store (not including uses listed individually in Section 306) or Shopping Center, and which may include a building occupied by multiple retail stores and which may include drive-through service for a pharmacy
- vv. School, Private, Primary or Secondary (S. 402)
- ww. Self-Storage Development (S. 402)
- xx. Semi-Detached Dwelling (side-by-side)

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- yy. Single Family Detached Dwelling (Note: Manufactured/mobile homes shall meet the additional requirements of Section 402)
- zz. Solar Energy Collection and Processing
- aaa. Swimming Pool, Non-Household (S. 402)
- bbb. Tavern which may include a State-licensed micro-brewery (not including an After Hours Club or Nightclub)
- ccc. Theater, Indoor Movie, other than an Adult Use
- ddd. Townhouse (Rowhouse) (S. 402)
- eee. Trade/Hobby School
- fff. U.S. Postal Service Facility, which may include a leased facility
- ggg. Veterinarian Office (S. 402)
- hhh. Warehousing or Storage as an on-site accessory use
- iii. Water Park
- jjj. Wind Turbine Maximum of one on a lot that is designed primarily for on-site electricity use, and which meets the requirements for an Accessory Wind Turbine in Section 403
- kkk. Accessory uses permitted by right (S. 103.A. and 307.C.)

2. Special Exception Uses.

- a. Adaptive Reuse of a Former School, Place of Worship or Industrial Building in compliance with Section 402
- b. Auto Repair Garage or Auto Service Station (S. 402)
- c. Boarding House (includes Rooming House) (S. 402)
- d. Manufactured/Mobile Home Park (S. 402)
- e. Manufacturing, Custom, of Prototypes or Accessory Manufacturing in Combination with Principal Research and Development
- f. Recreation, Commercial Outdoor (S. 402) (including miniature golf course, golf driving range, archery, paintball and closely similar uses); other than uses listed separately in Section 306
- g. Target Range, Firearms – Completely indoor and enclosed (S. 402)
- h. Wholesale Sales (other than Motor Vehicles)

3. Dimensional Requirements.

- a. Minimum lot area:
 - 43,560 square feet without public sewage and without public water service.
 - 35,000 square feet with public sewage or public water service.

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Minimum lot area with public sewage and public water services:

2,500 square feet. for single family detached dwelling and semi-detached dwelling unit (twin).

2,000 square feet. for townhouse. Per dwelling unit for the tract-2,500 square feet. See Note C and Note G in Section 307.A.

5,000 square feet as other allowed use.

- b. Minimum lot width measured at minimum building setback line shall be:

25 feet for single family detached dwelling and

25 feet for semi-detached dwelling unit (twin).

20 feet per interior dwelling unit (townhouse)

25 feet for unit on a corner lot.

50 feet for duplex or other apartment dwellings.

50 feet for any other allowed use.

See Note B in Section 307.A.

- c. 5 feet-minimum front yard setback for all uses.

- d. 15 feet-minimum rear yard setback for all uses.

- e. Minimum side yard setback:

3 feet each side for single family detached dwelling.

3 feet one side for twin semi-detached dwelling unit.

3 feet, except 0 at the shared lot line of lawfully attached dwellings.

10 feet for duplex or other apartment dwellings.

10 feet as other allowed principal use. See Note ** in Section 307.A.

- f. If a lawful lot that existed prior to the adoption date of this Ordinance has a nonconforming lot width, then the minimum side yards for principal and accessory structures may be reduced as follows:

- lot width is 30 feet or less, both side yard setbacks-0 feet
- lot width is greater than 30 feet and up to and including 50 feet, both side yard setbacks- 3 feet.
- lot width is greater than 50 feet, both side yard setbacks- 5 feet.

- g. Maximum percent building coverage shall be 75 percent for all uses.

See Note F in Section 307.A.

- h. Maximum percent impervious coverage shall be 90 percent for all uses.

See Note F in Section 307.A.

- i. Height. See Section 307.B

- j. Accessory Structure Side and Rear Setbacks-3 feet See Section 307.C.

306.J. C-2 Reserved for Future Use

306.K. C-3 Highway Commercial District.

1. Permitted by Right Uses.

- a. Amusement Arcade
- b. Amusement Park or Water Park
- c. Animal Cemetery (S. 402)
- d. Assembly or Finishing of Products Using Materials Produced Elsewhere (such as products from plastics manufactured off-site)
- e. Auditorium (Commercial), Arena, Performing Arts Center or Exhibition-Trade Show Center
- f. Auto Repair Garage or Auto Service Station (S. 402)
- g. Auto, Boat or Mobile/Manufactured Home Sales (S. 402)
- h. Bakery, Retail
- i. Bed and Breakfast Inn (S. 402)
- j. Beverage Distributor (wholesale and/or retail)
- k. Building Supplies and Building Materials, Wholesale Sales of
- l. Bus Maintenance or Storage Yard
- m. Business Service Use (such as package delivery drop-off)
- n. Car Wash (S. 402)
- o. Catering, Custom, for Off-Site Consumption
- p. Cemetery (see Crematorium listed separately) (S. 402)
- q. College or University - Educational and Support Buildings (other than environmental education center or residential uses)
- r. Community Center (limited to a government-sponsored or non-profit facility) or Library
- s. Conference Center
- t. Construction Company or Tradesperson's Headquarters (including but not limited to landscaping, building trades or janitorial contractor). See also as Home Occupation. Accessory outdoor storage shall be permitted provided it meets the screening requirements of Section 803
- u. Conversion of an Existing Building to Result in an Increased Number of Dwelling Units (S. 402)
- v. Crafts or Artisan's Studio (see also as Home Occupation)
- w. Cultural Center or Museum
- x. Custom Printing, Copying, Faxing, Mailing or Courier Service
- y. Day Care Center, Adult (S. 402)

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- z. Day Care Center, Child (see also as an accessory use) (S. 402)
- aa. Day Care Center accessory to and on the same lot as an existing lawful Place of Worship
- bb. Day Care as accessory to a dwelling: (S. 403)
 - Family Day Care Home
 - Group Day Care Home
- cc. Emergency Services Station, which may include an Accessory Banquet Hall
- dd. Exercise Club
- ee. Financial Institution (includes banks), with any “Drive-through” facilities meeting Section 403
- ff. Flea Market/Auction House
- gg. Forestry (which shall not by itself require a zoning permit unless new or expanded buildings are involved)
- hh. Funeral Home
- ii. Garden Center, Retail (see also “Wholesale Greenhouses”)
- jj. Gas or Oil Well (S. 402)
- kk. Groundwater or Spring Water withdrawal averaging less than 100,000 gallons per day, (which shall not by itself require a zoning permit unless new or expanded buildings or structures are involved) (S. 402)
- ll. Groundwater or Spring Water withdrawal facility averaging more than 100,000 gallons per day, which may involve loading and trucking (S. 402)
- mm. Group Home within a lawful existing dwelling unit, not including a Treatment Center (S. 402)
- nn. Home Occupation, Major or Minor (S. 403)
- oo. Hospital or Surgery Center
- pp. Hotel/Motel (S. 402)
- qq. Industrial Equipment Sales, Rental and Service, other than vehicles primarily intended to be operated on public streets
- rr. Laundromat
- ss. Laundry, Commercial or Industrial
- tt. Lumber Yard
- uu. Manufacture and/or bulk processing of the following, provided manufacturing occurs only indoors:
 - Apparel, Textiles, Shoes and Apparel Accessories (see also Crafts Studio)
 - Electrical Equipment, Appliances and Components
 - Jewelry and Silverware
 - Medical Equipment and Supplies

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- Scientific, Electronic and Other Precision Instruments
- Sporting Goods, Toys, Games, Musical Instruments or Signs
- Wood Products and Furniture (not including raw paper pulp)
- vv. Manufacturing, Custom, or Prototypes or Accessory Manufacturing in Combination with Principal Research and Development
- ww. Membership Club Meeting and Non-Commercial Recreational Facilities, provided that an “After Hours Club”, “Tavern” or uses listed separately in Section 306 shall only be allowed if so listed and if the requirements for that use are also met(S. 402)
- xx. Mineral Extraction limited to coal, and not involving on-site mechanical processing facilities (S. 402)
- yy. Nature Preserve or Environmental Education Center
- zz. Nursing Home or Personal Care Home / Assisted Living (S. 402)
- aaa. Office (may include medical labs, see also Home Occupation) (S. 403)
- bbb. Outdoor Storage and Display as accessory to a business use shall also comply with Sections 402, 803 and 804
- ccc. Package Delivery Services Distribution Center
- ddd. Parking Garage or Parking Lot (S. 603G.)
- eee. Pawn Shop
- fff. Personal Services (includes tailoring, custom dressmaking, haircutting / styling, travel agency, drycleaning, shoe repair, “massage therapy, certified” and closely similar uses) (see also Home Occupation)
- ggg. Photo Processing, Bulk
- hhh. Picnic Grove, Commercial (S. 402)
- iii. Place of Worship (includes Church) (S. 402)
- jjj. Printing or Bookbinding
- kkk. Recording Studio, Music
- lll. Recreation, Commercial Indoor (includes bowling alley, roller or ice skating rink, batting practice, and closely similar uses); other than uses listed separately in Section 306
- mmm. Recreation, Commercial Outdoor (including miniature golf course, golf driving range, archery, paintball and closely similar uses); other than uses listed separately in Section 306 (S. 402)
- nnn. Recreational Vehicle Park, which may include an accessory camp store that is primarily for use by campers (S. 402)
- ooo. Recycling Center, Bulk Processing, provided all operations of an industrial scale occur within an enclosed building (this does not include a solid waste disposal or transfer facility) (S. 402)
- ppp. Repair Service, Household Appliance

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- qqq. Research and Development, Engineering or Testing Facility or Laboratory (other than medical laboratories, which is considered an office use)
- rrr. Restaurant or Banquet Hall (S. 402):
 - with drive-through service (S. 403)
 - without drive-through service
- sss. Retail Store (not including uses listed individually in Section 306) or Shopping Center, and which may include a building occupied by multiple retail stores and which may include drive-through service for a pharmacy
- ttt. Sawmill/Planing Mill
- uuu. School, Private, Primary or Secondary (S. 402)
- vvv. Self-Storage Development (S. 402)
- www. Single Family Detached Dwelling (Note: Manufactured/mobile homes shall meet the additional requirements of Section 402)
- xxx. Solar Energy Collection and Processing
- yyy. Stable, Non-Household, includes horse-riding academy) (S. 402)
- zzz. Swimming Pool, Non-Household (S. 402)
- aaaa. Target Range, Firearms Completely indoor and enclosed (S. 402)
- bbbb. Tavern which may include a State-licensed micro-brewery (not including an After Hours Club or Nightclub)
- cccc. Theater, Indoor Movie, other than an Adult Use
- dddd. Trade/Hobby School
- eeee. U.S. Postal Service Facility, which may include a leased facility
- ffff. Veterinarian Office (S. 402)
- gggg. Warehousing or Storage as an on-site accessory use
- hhhh. Welding
- iiii. Wholesale Sales (other than Motor Vehicles)
- jjjj. Wind Turbine, maximum of one on a lot that is designed primarily for on-site electricity use, and which meets the requirements for an Accessory Wind Turbine in Section 403
- kkkk. Accessory uses permitted by right (S. 103.A. and 307.C.)

2. Special Exception Uses.

- a. Adaptive Reuse of a Former School, Place of Worship or Industrial Building in compliance with Section 402
- b. Commercial Communications Tower (S. 402)
- c. Helipad (S. 402)
- d. Hunting Grounds, Commercial
- e. Kennel, Commercial (S. 402)

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- f. Manufacture and/or bulk processing of Fabricated Metal Products, provided manufacturing occurs only indoors, and/or Machine Shops, but with manufacture of the following being prohibited: Explosives, Fireworks or Ammunition
 - g. Manufactured/Mobile Home Park (S. 402)
 - h. Nightclub
 - i. Off-Road Vehicle Parks (S. 402), which shall include uses operating as a “club” or a business
 - j. Sewage Treatment Plant for centralized service
 - k. Target Range, Firearms – Other than above (S. 402)
 - l. Tattoo or Body Piercing Establishment (other than temporary tattoos or ear piercing, which are personal service uses)
3. Dimensional Requirements.
- a. Minimum lot area
10,000 square feet, except 43,560 if the lot is not served by public water and sewage services. See Note E in Section 307.A.
 - b. Minimum lot width 75 feet, except 150 feet if the lot is not served by public water and sewage services.
 - c. Minimum front yard setback shall be 35 feet. See Note D in Section 307.A.
 - d. Minimum rear yard setback shall be 25 feet. See Note ** in Section 307.A.
 - e. Minimum side yard setback for each shall be 25 feet. See Note ** in Section 307.A.
 - f. If a lawful lot that existed prior to the adoption date of this Ordinance has a nonconforming lot width, then the minimum side yards for principal and accessory structures may be reduced as follows:
 - lot width is 30 feet or less, both side yard setbacks-0 feet
 - lot width is greater than 30 feet and up to and including 50 feet, both side yard setbacks- 3 feet.
 - lot width is greater than 50 feet, both side yard setbacks- 5 feet.
 - g. Maximum percent building coverage-60 percent. See Note F in Section 307.A.
 - h. Maximum percent impervious coverage-90 percent. See Note F in Section 307.A.
 - i. Height. See Section 307.B
 - j. Accessory Structure Side and Rear Setbacks -25 feet See Section 307.C.

306.L. C-4 Regional Highway Commercial District.

1. Permitted by Right Uses.

- a. Amusement Arcade
- b. Amusement Park or Water Park
- c. Animal Cemetery (S. 402)
- d. Assembly or Finishing of Products Using Materials Produced Elsewhere (such as products from plastics manufactured off-site)
- e. Auditorium (Commercial), Arena, Performing Arts Center or Exhibition-Trade Show Center
- f. Auto Repair Garage or Auto Service Station (S. 402)
- g. Auto, Boat or Mobile/Manufactured Home Sales (S. 402)
- h. Bakery, Retail
- i. Bed and Breakfast Inn (S. 402)
- j. Beverage Distributor (wholesale and/or retail)
- k. Building Supplies and Building Materials, Wholesale Sales of
- l. Bus Maintenance or Storage Yard
- m. Business Service Use (such as package delivery drop-off)
- n. Car Wash (S. 402)
- o. Catering, Custom, for Off-Site Consumption
- p. Cemetery (see Crematorium listed separately) (S. 402)
- q. College or University - Educational and Support Buildings (other than environmental education center or residential uses)
- r. Community Center (limited to a government-sponsored or non-profit facility) or Library
- s. Conference Center
- t. Construction Company or Tradesperson's Headquarters (including but not limited to landscaping, building trades or janitorial contractor). See also as Home Occupation. Accessory outdoor storage shall be permitted provided it meets the screening requirements of Section 803
- u. Conversion of an Existing Building to Result in an Increased Number of Dwelling Units (S. 402)
- v. Crafts or Artisan's Studio (see also as Home Occupation)
- w. Cultural Center or Museum
- x. Custom Printing, Copying, Faxing, Mailing or Courier Service
- y. Day Care Center, Adult (S. 402) or Day Care Center, Child (S. 402) (see also as an accessory use) (S. 403)

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- z. Day Care Center accessory to and on the same lot as an existing lawful Place of Worship
- aa. Day Care as accessory to a dwelling: (S. 403)
 - Family Day Care Home
 - Group Day Care Home
- bb. Emergency Services Station, which may include an Accessory Banquet Hall
- cc. Exercise Club
- dd. Financial Institution (includes banks), (S. 402) with any “Drive-through” facilities meeting Section 403
- ee. Flea Market/Auction House
- ff. Forestry (which shall not by itself require a zoning permit unless new or expanded buildings are involved)
- gg. Funeral Home
- hh. Garden Center, Retail (see also “Wholesale Greenhouses”)
- ii. Gas or Oil Well (S. 402)
- jj. Groundwater or Spring Water withdrawal averaging less than 100,000 gallons per day, (which shall not by itself require a zoning permit unless new or expanded buildings or structures are involved) (S. 402)
- kk. Groundwater or Spring Water withdrawal facility averaging more than 100,000 gallons per day, which may involve loading and trucking (S. 402)
- ll. Group Home within a lawful existing dwelling unit, not including a Treatment Center (S. 402)
- mm. Home Occupation, Major or Minor (S. 403)
- nn. Hospital or Surgery Center
- oo. Hotel/Motel (S. 402)
- pp. Industrial Equipment Sales, Rental and Service, other than vehicles primarily intended to be operated on public streets
- qq. Laundromat
- rr. Laundry, Commercial or Industrial
- ss. Lumber Yard
- tt. Manufacture and/or bulk processing of the following, provided manufacturing occurs only indoors:
 - Apparel, Textiles, Shoes and Apparel Accessories (see also Crafts Studio)
 - Electrical Equipment, Appliances and Components
 - Jewelry and Silverware
 - Medical Equipment and Supplies
 - Scientific, Electronic and Other Precision Instruments
 - Sporting Goods, Toys, Games, Musical Instruments or Signs
 - Wood Products and Furniture (not including raw paper pulp)

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- uu. Manufacturing, Custom, or Prototypes or Accessory Manufacturing in Combination with Principal Research and Development
- vv. Membership Club Meeting and Non-Commercial Recreational Facilities, provided that an “After Hours Club”, “Tavern” or uses listed separately in Section 306 shall only be allowed if so listed and if the requirements for that use are also met(S. 402)
- ww. Mineral Extraction limited to coal, and not involving on-site mechanical processing facilities (S. 402)
- xx. Nature Preserve or Environmental Education Center
- yy. Nursing Home or Personal Care Home/Assisted Living (S. 402)
- zz. Office (may include medical labs, see also Home Occupation) (S. 403)
- aaa. Outdoor Storage and Display as accessory to a business use shall also comply with Sections 402, 803 and 804
- bbb. Package Delivery Services Distribution Center
- ccc. Parking Garage or Parking Lot (S. 603G.)
- ddd. Pawn Shop
- eee. Personal Services (includes tailoring, custom dressmaking, haircutting/styling, travel agency, drycleaning, shoe repair, “massage therapy, certified” and closely similar uses) (see also Home Occupation)
- fff. Photo Processing, Bulk
- ggg. Picnic Grove, Commercial (S. 402)
- hhh. Place of Worship (includes Church) (S. 402)
- iii. Printing or Bookbinding
- jjj. Recording Studio, Music
- kkk. Recreational, Commercial Indoor (includes bowling alley, roller or ice skating rink, batting practice, and closely similar uses); other than uses listed separately in Section 306
- lll. Recreational, Commercial Outdoor (including miniature golf course, golf driving range, archery, paintball and closely similar uses); other than uses listed separately in Section 306 (S. 402)
- mmm. Recreational Vehicle Park, which may include an accessory camp store that is primarily for use by campers (S. 402)
- nnn. Recycling Center, Bulk Processing, provided all operations of an industrial scale occur within an enclosed building (this does not include a solid waste disposal or transfer facility) (S. 402)
- ooo. Repair Service, Household Appliance
- ppp. Research and Development, Engineering or Testing Facility or Laboratory (other than medical laboratories, which is considered an office use)
- qqq. Restaurant or Banquet Hall (S. 402):

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- with drive-through service (S. 403)
- without drive-through service
- rrr. Retail Store (not including uses listed individually in Section 306) or Shopping Center, and which may include a building occupied by multiple retail stores and which may include drive-through service for a pharmacy
- sss. Sawmill/Planing Mill
- ttt. School, Private, Primary or Secondary (S. 402)
- uuu. Self-Storage Development (S. 402)
- vvv. Single Family Detached Dwelling (Note: Manufactured/mobile homes shall meet the additional requirements of Section 402)
- www. Solar Energy Collection and Processing
- xxx. Stable, Non-Household; includes horse-riding academy) (S. 402)
- yyy. Swimming Pool, Non-Household (S. 402)
- zzz. Target Range, Firearms-Completely indoor and enclosed (S. 402)
- aaaa. Tavern which may include a State-licensed micro-brewery (not including an After Hours Club or Nightclub)
- bbbb. Theater, Indoor Movie, other than an Adult Use
- cccc. Trade/Hobby School
- dddd. U.S. Postal Service Facility, which may include a leased facility
- eeee. Veterinarian Office (S. 402)
- ffff. Warehousing or Storage as an on-site accessory use
- gggg. Welding
- hhhh. Wholesale Sales (other than Motor Vehicles)
- iiii. Wind Turbine, maximum of one on a lot that is designed primarily for on-site electricity use, and which meets the requirements for an Accessory Wind Turbine in Section 403
- jjjj. Accessory uses permitted by right (S. 103.A. and 307.C.)

2. Special Exception Uses.

- a. Adaptive Reuse of a Former School, Place of Worship or Industrial Building in compliance with Section 402
- b. Adult Use (S. 402)
- c. After Hours Club to the extent the use is not prohibited by State Act 219 of 1990 (S. 402)
- d. Betting Use, other than small games of chance and lotteries allowed under State law
- e. BYOB Club

- f. Commercial Communications Tower (S. 402)
 - g. Helipad (S. 402)
 - h. Hunting Grounds, Commercial
 - i. Kennel, Commercial (S. 402)
 - j. Manufacture and/or bulk processing of the following, provided manufacturing occurs only indoors Fabricated Metal Products (except Explosives, Fireworks or Ammunition) and/or Machine Shops
 - k. Nightclub
 - l. Off-Road Vehicle Parks, which shall include uses operating as a “club” or a business (S. 402)
 - m. Sewage Treatment Plant for centralized service
 - n. Target Range, Firearms Outdoor (S. 402)
 - o. Tattoo or Body Piercing Establishment (other than temporary tattoos or ear piercing, which are personal service uses)
3. Dimensional Requirements.
- a. Minimum lot area
 - 10,000 square feet except 43,560 if the lot is not served by public water and public sewage services. See Note E in Section 307.A.
 - b. Minimum lot width measured at minimum building setback line shall be 75 feet, except 150 feet if the lot is not served by public water and sewage services.
 - c. Minimum front yard setback shall be 35 feet. See Note D in Section 307.A.
 - d. Minimum rear yard setback shall be 25 feet. See Note ** in Section 307.A.
 - e. Minimum side yard setback for each shall be 25 feet.
See Note ** in Section 307.A.
 - f. If a lawful lot that existed prior to the adoption date of this Ordinance has a nonconforming lot width, then the minimum side yards for principal and accessory structures may be reduced as follows:
 - lot width is 30 feet or less, both side yard setbacks-0 feet
 - lot width is greater than 30 feet and up to and including 50 feet, both side yard setbacks- 3 feet.
 - lot width is greater than 50 feet, both side yard setbacks- 5 feet.
 - g. Maximum percent building coverage-60 percent. See Note F in Section 307.A.
 - h. Maximum percent impervious coverage-90 percent. See Note F, in Section 307.A.
 - i. Height. See Section 307.B
 - j. Accessory Setbacks. See Section 307.C.

306.M. I-C Industrial-Commercial District.

1. Permitted by Right Uses.

- a. Amusement Arcade
- b. Amusement Park or Water Park
- c. Animal Cemetery (S. 402)
- d. Assembly or Finishing of Products Using Materials Produced Elsewhere (such as products from plastics manufactured off-site)
- e. Auditorium (Commercial), Arena, Performing Arts Center or Exhibition-Trade Show Center
- f. Auto Repair Garage or Auto Service Station (S. 402)
- g. Auto, Boat or Mobile/Manufactured Home Sales (S. 402)
- h. Bakery, Retail
- i. Bed and Breakfast Inn (S. 402)
- j. Beverage Distributor (wholesale and/or retail)
- k. Building Supplies and Building Materials, Wholesale Sales of
- l. Bus Maintenance or Storage Yard
- m. Business Service Use (such as package delivery drop-off)
- n. Camp (S. 402) other than Recreational Vehicle Park
- o. Car Wash (S. 402)
- p. Catering, Custom, for Off-Site Consumption
- q. Cemetery (see Crematorium listed separately) (S. 402)
- r. Coal Gasification and/or Liquefaction Facility, which may involve fertilizer production and electricity production
- s. College or University - Educational and Support Buildings (other than environmental education center or residential uses)
- t. Commercial Communication Tower (S. 402)
- u. Community Center (limited to a government-sponsored or non-profit facility) or Library
- v. Conference Center
- w. Construction Company or Tradesperson's Headquarters (including but not limited to landscaping, building trades or janitorial contractor). See also as Home Occupation. Accessory outdoor storage shall be permitted provided it meets the screening requirements of Section 803
- x. Crafts or Artisan's Studio (see also as Home Occupation)
- y. Cultural Center or Museum
- z. Custom Printing, Copying, Faxing, Mailing or Courier Service

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- aa. Day Care Center, Adult (S. 402) or Day Care Center, Child (S. 402) (see also as an accessory use)
- bb. Day Care Center accessory to and on the same lot as an existing lawful Place of Worship
- cc. Day Care as accessory to a dwelling(S. 403)
 - Family Day Care Home
 - Group Day Care Home
- dd. Distribution as a principal use (see also Trucking Company Terminal)
- ee. Emergency Services Station, which may include an Accessory Banquet Hall
- ff. Exercise Club
- gg. Financial Institution (includes banks), with any “Drive-through” facilities meeting Section 403
- hh. Flea Market / Auction House
- ii. Forestry (which shall not by itself require a zoning permit unless new or expanded buildings are involved)
- jj. Funeral Home
- kk. Garden Center, Retail (see also “Wholesale Greenhouses”)
- ll. Gas or Oil Well (S. 402)
- mm. Groundwater or Spring Water withdrawal averaging less than 100,000 gallons per day, (which shall not by itself require a zoning permit unless new or expanded buildings or structures are involved) (S. 402)
- nn. Groundwater or Spring Water withdrawal facility averaging more than 100,000 gallons per day, which may involve loading, trucking and bottling (S. 402)
- oo. Group Home within a lawful existing dwelling unit (S. 402), not including a Treatment Center
- pp. Helipad, Heliport (S. 402)
- qq. Home Occupation, Major or Minor (S. 403)
- rr. Hospital or Surgery Center
- ss. Hotel/Motel (S. 402)
- tt. Industrial Equipment Sales, Rental and Service, other than vehicles primarily intended to be operated on public streets
- uu. Laundromat or Laundry, Commercial or Industrial
- vv. Livestock or Poultry, Raising of-Intensive (S. 402).. Livestock or Poultry, Raising of Non-Intensive (which shall not by itself require a zoning permit unless new or expanded buildings are involved)
- ww. Lumber Yard

- xx. Manufacture and/or bulk processing of the following, provided manufacturing occurs only indoors:
- Apparel, Textiles, Shoes and Apparel Accessories (see also Crafts Studio)
 - Ceramics Products (other than Crafts Studio)
 - Clay, Brick, Tile and Refractory Products
 - Computers and Electronic and Microelectronic Products
 - Electrical Equipment, Appliances and Components
 - Ethanol Manufacturing and/or Bulk Storage and provided a 500 feet setback is required from such manufacturing or storage facilities from an R-2 or R-3 district and provided bulk storage shall not be allowed without manufacturing
 - Fabricated Metal Products (except Explosives, Fireworks or Ammunition) and/or Machine Shops
 - Food and Beverage Manufacturing and Processing (S. 402)
 - Gaskets
 - Glass and Glass Products (other than Crafts Studio)
 - Jewelry and Silverware
 - Leather and Allied Products (other than Crafts Studio or Tannery)
 - Machinery
 - Manufactured or Modular Housing Manufacture
 - Medical Equipment and Supplies
 - Paper and Paper Products (including recycling, but not including manufacture of raw paper pulp)
 - Pharmaceuticals and Medicines
 - Plastics, Polymers, Resins, Vinyl, Coatings, Cleaning Compounds, Soaps, Adhesives, Sealants, Printing Ink or Photographic Film
 - Products from Previously Manufactured Materials, such as glass, leather, plastics, cellophane, textiles, rubber or synthetic rubber
 - Scientific, Electronic and Other Precision Instruments
 - Sporting Goods, Toys, Games, Musical Instruments or Signs
 - Transportation Equipment
 - Wood Products and Furniture (not including raw paper pulp)
- yy. Manufacturing, Custom, of Prototypes or Accessory Manufacturing in Combination with Principal Research and Development
- zz. Membership Club Meeting and Non-Commercial Recreational Facilities, provided that an “After Hours Club”, “Tavern” or uses listed separately in Section 306 shall only be allowed if so listed and if the requirements for that use are also met(S. 402)
- aaa. Mineral Extraction (S. 402) limited to coal. See other types under special exception uses.
- bbb. Nature Preserve or Environmental Education Center
- ccc. Nursing Home or Personal Care Home / Assisted Living (S. 402)
- ddd. Office (may include medical labs, see also Home Occupation) (S. 402)
- eee. Outdoor Storage and Display as accessory to a business use shall also comply with Sections 402, 803 and 804

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- fff. Package Delivery Services Distribution Center
- ggg. Packaging
- hhh. Parking Garage or Parking Lot (S. 603G.)
- iii. Personal Services (includes tailoring, custom dressmaking, haircutting / styling, travel agency, drycleaning, shoe repair, “massage therapy, certified” and closely similar uses) (see also Home Occupation)
- jjj. Photo Processing, Bulk
- kkk. Picnic Grove, Commercial (S. 402)
- lll. Place of Worship (S. 402) (includes Church)
- mmm. Printing or Bookbinding
- nnn. Recording Studio, Music
- ooo. Recreational, Commercial Indoor (includes bowling alley, roller or ice skating rink, batting practice, and closely similar uses)
- ppp. Recreational Commercial Outdoor (including miniature golf course, golf driving range, archery, paintball and closely similar uses); other than uses listed separately in Section 306 (S. 402)
- qqq. Recreational Vehicle Park, which may include an accessory camp store that is primarily for use by campers (S. 402)
- rrr. Recycling Center, Bulk Processing, provided all operations of an industrial scale occur within an enclosed building (this does not include a solid waste disposal or transfer facility) (S. 402)
- sss. Renewable Energy Facility, also see Solar Energy, Wind Turbines and other renewable energy uses listed separately (S. 402)
- ttt. Repair Service, Household Appliance
- uuu. Research and Development, Engineering or Testing Facility or Laboratory (other than medical laboratories, which is considered an office use)
- vvv. Restaurant or Banquet Hall (S. 402), which may include drive-through service (S. 403)
- www. Retail Store (not including uses listed individually in Section 306) or Shopping Center, and which may include a building occupied by multiple retail stores and which may include drive-through service for a pharmacy
- xxx. Sawmill/Planing Mill
- yyy. School, Public or Private, Primary or Secondary (S. 402)
- zzz. Self-Storage Development (S. 402)
- aaaa. Solar Energy Collection and Processing
- bbbb. Stable, Non-Household; includes horse-riding academy) (S. 402)
- cccc. Swimming Pool, Non-Household (S. 402)

- dddd. Target Range, Firearms Completely indoor and enclosed (S. 402)
- eeee. Tavern which may include a State-licensed micro-brewery (not including an After Hours Club or Nightclub)
- ffff. Theater, Indoor Movie, other than an Adult Use
- gggg. Trade/Hobby School
- hhhh. Trucking Company Terminal (S. 402)
- iiii. U.S. Postal Service Facility, which may include a leased facility
- jjjj. Veterinarian Office (S. 402)
- kkk. Warehousing or Storage as a principal use or accessory use
- llll. Welding
- mmmm. Wholesale Sales (other than Motor Vehicles)
- nnnn. Wind Turbine, with unlimited number on a lot that are designed primarily for on-site electricity use, and which meets the requirements for an Accessory Wind Turbine in Section 403
- oooo. Wind Turbine(s), other than is allowed as an accessory use in Section 402
- ppppp. Accessory uses permitted by right (S. 103.A. and 307.C.)

2. Special Exception Uses.

- a. Asphalt Plant
- b. Composting, Commercial
- c. Crematorium
- d. Hunting Grounds, Commercial
- e. Junk Yard (S. 402)
- f. Liquid Fuel Storage, Bulk, for off-site distribution, other than: auto service station, retail propane distributor as listed separately, pre-packaged sales or fuel tanks for company vehicles
- g. Manufacture and/or bulk processing of the following, provided manufacturing occurs only indoors:
 - Agricultural Chemicals, Fertilizers or Pesticides
 - Cement Manufacture
 - Chemicals, Manufacture or Bulk Processing of, other than pharmaceuticals and types listed separately
 - Concrete, Cement, Lime and Gypsum Products, other than actual manufacture of cement
 - Explosives, Fireworks or Ammunition
 - Paper Raw Pulp
 - Metal Products, Primary
 - Mineral Products, Non-metallic (other than Mineral Extraction)
 - Paving Materials, other than bulk manufacture of asphalt
 - Roofing Materials and Asphalt Saturated Materials or Natural/Synthetic Rubber

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- h. Mineral Extraction and related processing, stockpiling and storage of materials removed from the site and/or buildings, other than coal mining which is allowed by right. (S. 402)A Gas or Oil Well is a separate use
- i. Motor Vehicle Racetrack (S. 402)
- j. Municipal Solid Waste (MSW) Landfill (which may include but is not limited to a construction and demolition waste landfill), Solid Waste Transfer Facility or Waste to Energy Facility (S. 402)
- k. Nightclub
- l. Off-Road Vehicle Parks include uses operating as a “club” or a business (S. 402)
- m. Pawn Shop
- n. Petroleum Refining
- o. Propane Retail Distributor, other than pre-packaged sales, with a 150 feet minimum setback required between any storage or dispensing facilities and any residential district, and with fire company review
- p. Sewage Treatment Plant for centralized service
- q. Slaughterhouse, Stockyard or Tannery, with a 400 feet minimum setback from all lot lines
- r. Treatment Center (S. 402)

3. Dimensional Requirements.

- a. Minimum lot area
43,560 sq. ft. without public/central water and without public/central sewage
35,000 sq. ft. with public/central water or with public/central sewage,
10,000 sq. ft. with public/central water and with public/central sewage.
See Note E, in Section 307.A.
- b. Minimum lot width measured at minimum building setback line shall be 150 feet, except 75 feet with public/central water and sewage services.
- c. Minimum front yard setback line shall be 10 feet, except 20 feet if a residential district is across the street. See Note D, in Section 307.A.
- d. Minimum rear yard setback shall be 20 feet. See Notes ** and A in Section 307.A.
- e. Minimum side yard setback for each side shall be 15 feet. See Notes ** and A in Section 307.A.
- f. Maximum percent building coverage shall be 60 percent. See Note F, in Section 307.A.
- g. Maximum percent impervious coverage shall be 90 percent. See Note F, in Section 307.A.
- h. Height. Section 307.B.
- i. Accessory Setbacks. See Section 307.C.

306.N. CM Conservation Mining District.

1. Permitted by Right Uses.

- a. Additional Business uses on a Farm (S.403)
- b. Agri-business
- c. Agricultural uses and buildings
- d. Animal Cemetery (S. 402)
- e. Assembly or Finishing of Products Using Materials Produced Elsewhere (such as products from plastics manufactured off-site)
- f. Auditorium (Commercial), Arena, Performing Arts Center or Exhibition-Trade Show Center
- g. Bed and Breakfast Inn (S. 402)
- h. Camp other than Recreational Vehicle Park (S. 402)
- i. Cemetery (see Crematorium listed separately) (S. 402)
- j. Coal Gasification and/or Liquefaction Facility, which may involve fertilizer production and electricity generation
- k. College or University - Educational and Support Buildings (other than environmental education center or residential uses)
- l. Community Center (limited to a government-sponsored or non-profit facility) or Library
- m. Crop Farming (which shall not by itself require a zoning permit unless new or expanded buildings are involved) and Wholesale Greenhouses
- n. Cultural Center or Museum
- o. Day Care Center accessory to and on the same lot as an existing lawful Place of Worship
- p. Day Care as accessory to a dwelling: (S. 403)
 - Family Day Care Home
 - Group Day Care Home
- q. Emergency Services Station, which may include an Accessory Banquet Hall
- r. Ethanol Manufacturing and/or Bulk Storage and provided a 500 feet setback is required from such manufacturing or storage facilities from an R-2 or R-3 district and provided bulk storage shall not be allowed without manufacturing
- s. Forestry (which shall not by itself require a zoning permit unless new or expanded buildings are involved)
- t. Garden Center, Retail (see also “Wholesale Greenhouses”)
- u. Gas or Oil Well (S. 402)

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- v. Groundwater or Spring Water withdrawal averaging less than 100,000 gallons per day, (which shall not by itself require a zoning permit unless new or expanded buildings or structures are involved) (S. 402)
- w. Groundwater or Spring Water withdrawal facility averaging more than 100,000 gallons per day, which may involve loading and trucking. (S. 402)
- x. Group Home within a lawful existing dwelling unit , not including a Treatment Center(S. 402)
- y. Home Occupation, Major or Minor (S. 403)
- z. Manufacture and/or bulk processing of Agricultural Chemicals, Fertilizers or Pesticides, provided manufacturing occurs only indoors
- aa. Manufacturing, Custom, of Prototypes or Accessory Manufacturing in Combination with Principal Research and Development
- bb. Membership Club Meeting and Non-Commercial Recreational Facilities, provided that an “After Hours Club”, “Tavern” or uses listed separately in Section 306 shall only be allowed if so listed and if the requirements for that use are also met (S. 402)
- cc. Mineral Extraction and related processing, stockpiling and storage of materials removed from the site and/or buildings (S. 402) (Note - A Gas or Oil Well is a separate use.)
- dd. Nature Preserve or Environmental Education Center
- ee. Office (may include medical labs; see also Home Occupation)
- ff. Outdoor Storage and Display as accessory to a business use, which shall also comply with Sections 402, 803 and 804
- gg. Parking Lot (S. 603G.)
- hh. Picnic Grove, Commercial (S. 402)
- ii. Place of Worship (includes Church) (S. 402)
- jj. Recreational Vehicle Park (S. 402), which may include an accessory camp store that is primarily for use by campers
- kk. Renewable Energy Facility-also see Solar Energy, Wind Turbines and other uses renewable energy uses listed separately (S. 402)
- ll. Sawmill/Planing Mill
- mm. School, Private, Primary or Secondary (S. 402)
- nn. Single Family Detached Dwelling (Note: Manufactured / mobile homes shall meet the additional requirements of Section 402)
- oo. Solar Energy Collection and Processing
- pp. Stable, Household or Non-Household (S. 402); includes horse-riding academy)
- qq. Swimming Pool, Non-Household (S. 402)
- rr. Target Range, Firearms (S. 402) completely indoor and enclosed

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- ss. U.S. Postal Service Facility, which may include a leased facility
- tt. Veterinarian Office (S. 402)
- uu. Warehousing or Storage as an on-site accessory use
- vv. Wind Turbine(s), other than is allowed as an accessory use in Sections 402 and 403
- ww. Wind Turbine, maximum of one on a lot that is designed primarily for on-site electricity use, and which meets the requirements for an Accessory Wind Turbine in Section 403
- xx. Accessory uses permitted by right (S. 103.A. and 307.C.)

2. Special Exception Uses.

- a. Adaptive Reuse of a Former School, Place of Worship or Industrial Building in compliance with Section 402
- b. Airport (Private), Airport (Public), Helipad, Heliport (S. 402)
- c. Asphalt Plant
- d. Car Wash (S. 402)
- e. Commercial Communications Tower (S. 402)
- f. Composting, Commercial
- g. Crematorium
- h. Hotel or Motel (S. 402)
- i. Hunting Grounds, Commercial
- j. Junk Yard (S. 402)
- k. Kennel, Commercial (S. 402)
- l. Manufacture and/or bulk processing of cement provided manufacturing occurs only indoors
- m. Municipal Solid Waste (MSW) Landfill (which may include but is not limited to a construction and demolition waste landfill), Solid Waste Transfer Facility or Waste to Energy Facility, (S. 402)
- n. Nursing Home or Personal Care Home/Assisted Living, provided the use is served by public sewage service that is owned and/or operated by a Municipality or Authority.
- o. Off-Road Vehicle Parks, which shall include uses operating as a “club” or a business (S. 402)
- p. Recreation, Commercial Outdoor (including miniature golf course, golf driving range, archery, paintball and closely similar uses); other than uses listed separately in Section 306 (S. 402)
- q. Sewage Treatment Plant for centralized service
- r. Target Range, Firearms, either indoors or outdoors (S. 402)

3. Dimensional Requirements.

- a. Minimum lot area for single family detached dwellings shall be:
 - 43,560 square feet without public sewage and without public water service.
 - 35,000 square feet with public sewage or public water service.
 - 10,000 square feet with public sewage and public water services.
- b. Minimum lot width:
 - 150 feet-without public sewage and without public water service
 - 125 feet-with public sewage or public water service
 - 75 feet-with public sewage and public water services
- c. Minimum front yard setback for principal structure-25 feet.
See Note D, in Section 307.A.
- d. Minimum rear yard setback for principal structure-25 feet.
See Note ** in Section 307.A.
- e. Minimum side yard setback: for principal structure-10 feet.
- f. If a lawful lot that existed prior to the adoption date of this Ordinance has a nonconforming lot width, then the minimum side yards for principal and accessory structures may be reduced as follows:
 - lot width is 30 feet or less, both side yard setbacks-0 feet
 - lot width is greater than 30 feet and up to and including 50 feet, both side yard setbacks- 3 feet.
 - lot width is greater than 50 feet, both side yard setbacks- 5 feet.
- g. Maximum percent building coverage shall be 25 percent for all uses.
See Note F in Section 307.A.
- h. Maximum percent impervious coverage shall be 50 percent for all uses.
See Note F in Section 307.A.
- i. Height. See Section 307.B
- j. Accessory Structure Side and Rear Setbacks-3 feet. See Section 307.C.

307. ADDITIONAL USE AND DIMENSIONAL REQUIREMENTS.

A. Notes. The following notes apply to Section 306.

** =The following exceptions shall apply:

For accessory structures and uses, see Section 307.C.

Structures shall not obstruct minimum sight clearance at intersections.

Corner lot setbacks, see Section 803.B.

Extension of nonconforming setbacks, see Section 805

Permitted reductions in setbacks to reflect average setbacks of adjacent buildings, see Section 803.

(Note A) = Except 15 feet side and 30 feet rear for a principal business from a lot in a residential district that is occupied by a principal dwelling. Such side or rear yard shall be increased to 70 feet for any building area or land area used for manufacturing or a tractor-trailer truck loading dock from such a lot.

(Note B) = If an existing rear or side alley is available or could be feasibly extended, it shall be used for access to parking spaces for the lot instead of a front yard driveway. If 2 or more side-by-side off-street parking spaces are located in the front yard of a townhouse or if garage door(s) for 2 or more vehicles face onto the street in the front of the townhouse, then the minimum building width per dwelling along such street shall be a minimum of 24 feet. A maximum of 60 percent of the land area between the front of each townhouse or semi-detached dwelling and the street right-of-way line shall be used for vehicle parking and driveways.

(Note C) = The average density is based upon gross acreage. The average density provisions are intended to allow flexibility in the placement of individual dwelling units, regardless of whether the homes are condominium or fee-simple, and regardless of whether public streets, private streets or parking courts are used. No minimum lot area applies for each individual dwelling unit, provided that the overall density requirements are met. Each twin and townhouse dwelling unit shall still be able to meet the minimum front yard, side yard, rear yard and lot width as if each dwelling was on its own fee simple lot.

- The minimum average lot area per dwelling unit establishes the maximum number of units permitted on a tract of land. The total lot area of the tract prior to development is used. The area occupied by existing street right-of-way of existing streets and alleys is then deleted. The following areas are not required to be deleted from the lot area: right-of-way of proposed streets and alleys and areas of parking courts, common open space and stormwater detention basins. The resulting lot area is then divided by the average lot area per dwelling unit to result in the maximum number of dwelling units allowed on the tract.
- See also the applicable standards in Section 402, which may require common open space for townhouses and apartments.

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- (Note D) = Setbacks shall be measured from the existing street right-of-way. An unenclosed front porch or deck may intrude up to 10 feet into the minimum front yard. This porch or deck may be covered by a roof. Steps and stoops may also intrude into this setback.
- (Note E) = See natural feature regulations in Section 308. If any lot is not served by both public water service and public sewage service, then a minimum lot area of one acre shall apply, unless a more restrictive requirement is stated, and where dwellings are allowed, the lot shall not include more than one dwelling unit.
- (Note F) = For townhouses and semi-detached dwellings, the maximum building and impervious coverage requirements may be met as an average across a tract after development, as opposed to regulating each individual lot.
- (Note G) = The minimum average lot area per apartment dwelling shall be reduced to 2,000 square feet if a lot will include 6 or more dwelling units, and each dwelling unit will be restricted to occupancy by at least one person age 62 or older or a person with physical disabilities, and there is no occupancy by any person under age 18 years old.

Abbreviations: sq. ft. = square feet; min. = minimum; max. = maximum; ft. = feet

- B. Height. Except as provided in subsection “4.” below, or as specified otherwise in this Ordinance for a particular use, the following maximum structure height shall apply in all zoning districts:
1. A vehicle garage placed on a separate lot without a principal use on that lot or any structure that is accessory to a dwelling on a lot of less than 2 acres shall have a maximum height of 25 feet.
 2. In the C-1, C-3, C-4, I-C and CM districts, a maximum building height of 100 feet shall apply, provided that no portion of a building shall exceed a maximum height of 50 feet if it is within 80 feet of the lot line of an existing principal dwelling in a residential district.
 3. The maximum height for any other structure shall be 40 feet.
 4. The maximum building or structure height specified for each district shall not apply to: antennas that meet the requirements of this Ordinance, water towers, clock or bell towers, steeples and religious symbols attached to places of worship, flag poles, electrical transmission lines, elevator shafts, skylights, cupolas, domes, chimneys, outdoor wood burners, mineral extraction structures, utility poles and towers, heating/ventilation/air conditional equipment, smokestacks, monuments, industrial mechanical equipment areas that are not occupied by humans, amusement parks, agricultural buildings and silos or other agricultural appurtenances usually required to be and customarily placed above the roof level and not intended for human occupancy.
 - a. Commercial communications towers may exceed the maximum height as provided in Sections 306 and 402.
 - b. Wind turbines and related testing towers may exceed the maximum height as provided in Sections 306, 402 and 403.

- c. Solar energy collection devices may extend a maximum of 15 feet above the maximum height, including above buildings and signs. Solar energy panels may be placed over vehicle parking areas without the panels being regulated by setbacks or coverage limitations.

5. See also definition of "Building Height" and "Height" in Section 202.

C. Accessory Structures and Uses.

- 1. Accessory structures and uses shall meet the minimum yard setbacks as provided in Section 306, unless otherwise provided for in this Ordinance.
- 2. The minimum side and rear yard setback (including from an alley) for a permitted detached structure that is accessory to a dwelling shall be 3 feet, except in the following cases:
 - a. A side yard setback is not required for a structure that is accessory to a dwelling from a lot line along which two dwellings are attached (such as a lot line shared by semi-detached dwellings). However, such structure shall still meet the minimum side yard on any lot line where the dwellings are not attached.
 - b. A residential deck, patio or porch that is unenclosed may extend a maximum of 15 feet into the required rear setback. Such deck, patio or porch may be covered by a roof or awning. See Note D in 307.A considering front yard setbacks.
 - c. See Section 403 for swimming pools.
- 3. No accessory building and no in-ground swimming pool shall be allowed in the minimum front yard.
- 4. A vehicle garage may be placed on a separate lot in all districts without a principal use on that lot, provided the garage is only used for household storage and vehicle parking. For height of garage see Section 307.B. This subsection 4, shall only allow a garage on a lot that does not have a principal use if the garage has its only vehicle access onto an alley with a right-of-way width of 20 feet or less.
- 5. See also the provisions in various districts that allow smaller setbacks on nonconforming lots.

D. Maximum Building Setback. In the C-1 district, the maximum front yard building setback for a new principal building shall be 30 feet from the street right-of-way that will exist after the completion of the development. This maximum front yard setback may be met with an attached roofed front, outdoor café area or part or all of the principal building.

E. Appalachian Trail Setback. A 300 feet minimum building setback shall apply from each side from the centerline of the Trail. This provision shall not apply to shelters for hikers that are authorized on federally or State owned recreation lands.

F. Reserved.

G. Flag Lot. A lot may be allowed to meet the minimum lot width at a proposed front yard setback line instead of at the minimum front yard setback line if the lot is approved as a

“flag lot.” A minimum 33 feet lot width shall be required along the street right-of-way. The “pole” portion of the flag lot shall not count towards the minimum lot area. A maximum of one flag lot shall be allowed to be created from each 15 acres of existing lot area as of the enactment date of this Ordinance. The driveway of the lot shall be located on the “pole” portion of the lot and shall connect to a public street / road. The pole portion of the lot shall not exceed a distance of 600 feet from the road. No buildings shall be allowed in the “pole” portion of the lot. A minimum front yard setback shall be measured from the point where the lot meets the minimum lot width requirement. See Section 801.A.1, which may be used in combination with one flag lot.

- H. Twin Dwelling Subdivision. If 2 semi-detached (side-by-side) dwelling units exist on one lot, they may be subdivided so that one dwelling unit exists on each lot, without having to meet any dimensional requirements of this Ordinance. (Note to Applicant: See Subdivision and Land Development Ordinance regarding whether the water and sewage provider should be contacted to determine whether separate laterals will be required.)
- I. Accessory Garage on Separate Lot. See Section 307.C.4.
- J. Combination of Dwelling Units. Two attached dwelling units may be combined into one dwelling unit without having to meet any dimensional requirements of this Ordinance.
- K. Mobile Homes as Storage. A former mobile/manufactured home shall only be used for storage if needed as part of a temporary on-site active construction project. A former mobile/manufactured home shall not be used as storage as accessory to an existing dwelling.

308. WETLANDS, LAKES, STEEP SLOPES AND WATERWAY CONSERVATION.

- A. Wetland Studies. It shall be the responsibility of each applicant to determine whether land areas proposed for alteration meet the Federal or State definition of a wetland prior to submittal of development plans to the County. If the Zoning Officer has reason to believe that wetlands may be present on a site proposed for development or subdivision, the Zoning Officer may require that the applicant provide a suitable wetland delineation study prepared by a qualified professional.
- B. Wetland and Lake Setbacks. A minimum setback of 20 feet shall be required between any new principal building for which a building permit is issued after the effective date of this Ordinance and any non-man-made "wetland" that has been delineated or natural lake or pond.
- C. Steep Slopes. See Section 1102.A.1. of the County Subdivision and Land Development Ordinance or applicable Subdivision and Land Development Ordinance. This section shall apply unless development is prohibited by such Ordinance. If a new principal building is proposed to be constructed or placed on an area with a natural slope of 25 percent or greater, the minimum lot size shall be increased to 2 acres, unless a larger lot size is established by another section of this Ordinance. Such 2 acre lot area shall be reduced to a minimum lot area of 30,000 square feet if the lot is served by central sewage services unless a larger lot

size is required by the zoning district under Section 306. If a new lot is proposed, the applicant shall designate the maximum extent of portions of the lot where the principal building is proposed, and if it intrudes into an area of 25 percent or more slope, then the 2 acre minimum lot size shall apply. These steep slope provisions shall not apply to slopes that were clearly man-made prior to the adoption of this Section. This section shall not apply to an intrusion of less than 500 square feet into areas of 25 percent or greater slope.

- D. Setback from Waterways. No new building, no new off-street parking space and no new commercial or industrial outdoor storage shall be allowed within 75 feet from the top of the primary bank of a river and 50 feet from the top of the primary bank of any other perennial creek or waterway. This section shall not apply within the TC, C-1, or R-3 districts or on land areas that were previously occupied by buildings or paving.
1. The US Geological Survey Topographic Maps shall be used to define a perennial river/ creek/ waterway.
 2. Where trees and other natural vegetation are removed within this setback, it is requested that new trees and thick understory vegetation be planted that serve the same environmental purposes.

309. AGE RESTRICTED RESIDENTIAL DEVELOPMENT.

- A. This section provides a density bonus for a residential development that is age restricted in compliance with the Federal requirements for "Housing for Older Persons" as specified in the United States Code. (Note: As of 2009, such provisions were in 42 U.S.C. 3607.) This provision shall not change the allowed dwelling types in the district. This option is available as a by right bonus in any zoning district where dwellings are allowed.
- B. In order to be approved by the County as Age Restricted Residential Development, every dwelling unit (except one dwelling unit for one manager) on a tract of land shall be permanently restricted by deed, by any lease and by notes on the recorded plan to the following occupancy limitations: 1) a minimum of one head of household of each dwelling unit shall be age 55 years or older or who is physically disabled as defined by Social Security disability regulations, and 2) no person under age 18 shall live in the dwelling unit for more than 60 days in any calendar year, unless such person has a disability as defined under Federal fair housing regulations. Any violation of such age restrictions shall be a violation of this Zoning Ordinance. In addition, in order to be approved as Age Restricted Development, the applicant shall establish an appropriate legal entity, such as a property-owner association that has the duty, authority and responsibility to enforce such age restrictions over time. If a household met this requirement at the time of initial occupancy, it shall not be required to move in case of death, divorce or separation of a resident of that same household.
- C. If an entire residential development is approved under this Section 309, then the minimum lot area or the minimum average lot area per dwelling unit, as applicable, shall be reduced by 20 percent. Alternatively, where density is stated in terms of a maximum number of dwelling units per acre, the maximum density may be increased by 20 percent. The minimum side yards may also be reduced by 20 percent. An Age Restricted Residential

Development shall meet all other requirements of applicable zoning and subdivision and land development ordinances, including limitations on the housing types allowed in that zoning district.

310. AGRICULTURAL NUISANCE DISCLAIMER.

- A. Agricultural Nuisance Disclaimer - The following notice, or similar text pre-approved by the Borough/Township, is required to be placed on the deed of any new lot that is created within the A District and shall be disclosed to any buyer of a lot prior to a sale:
 - 1. Agricultural Nuisance Disclaimer - Lands within the A District are located within an area where land is used for commercial agricultural production. Owners and residents may be subjected to inconveniences arising from normal agricultural operations including but not limited to noise, odors, dust, the operation of machinery of any kind including aircraft, the storage and disposal of manure, and the application of fertilizers, soil amendments, herbicides and pesticides. Owners, occupants and users of this property should be prepared to accept such inconveniences, and are hereby put on official notice the Pennsylvania "Right to Farm Law" may bar them from obtaining legal recourse against such normal agricultural operations.

ARTICLE 4

ADDITIONAL REQUIREMENTS FOR SPECIFIC USES

401. APPLICABILITY.

- A. This Article establishes additional specific requirements for certain specific uses, in addition to the sign, parking, environmental and other general requirements of this Ordinance and the requirements of each District. Wherever two requirements conflict, the stricter requirement shall apply.
 - 1. For uses allowed within a specific Zoning District as "Special Exception" Uses, see also the procedures and standards in Section 116.
 - 2. The first part of this Article (402) addresses principal uses and the second part (403) addresses accessory uses.

402. ADDITIONAL REQUIREMENTS FOR SPECIFIC PRINCIPAL USES.

- A. Each of the following uses shall meet all of the following requirements for that use:
 - 1. **Adaptive Reuse of a Former School, Place of Worship or Industrial Building.**
 - a. As a special exception, where authorized by Section 306, the Zoning Hearing Board may approve the adaptive reuse of a building that was previously occupied as a primary or secondary school, place of worship, accessory building to a place of worship (such as a rectory or convent) or a principal industrial use. The Zoning Hearing Board may allow the conversion of the building into apartments, offices, personal service uses, retail sales uses, community center, restaurant, exercise club, wedding chapel, banquet hall, funeral home, a personal care home, a nursing home or other uses that the Zoning Hearing Board determines are similar in impacts. The applicant shall not be required to show proof of hardship to gain approval under this Section.
 - b. The approval shall specify the maximum number of dwelling units approved on the lot. A minimum lot area per dwelling unit is not specified, but the Zoning Hearing Board shall consider reasonable use of the property in determining a maximum density. The intent is to allow a higher density for dwelling units that are age restricted or that include only one bedroom.
 - c. An addition of up to 20 percent of the existing floor area may be approved as part of this approval. Any larger addition shall comply with the zoning district regulations.
 - d. Upon request of the applicant, the Zoning Hearing Board may modify off-street parking requirements as part of this approval. The applicant shall provide testimony that they have considered all reasonable alternatives to provide parking to meet Section 601, and that the modification of parking requirements will not create a serious shortage of on-street parking in the neighborhood.
 - e. The applicant shall describe in writing or on plans any measures that will be used to preserve historic architectural features of the building.

- f. A building addressed by this subsection may also be converted into a single family detached dwelling as by a by right use without having to meet any zoning regulations, other than obtaining a permit.
2. **Adult Use.** (This is limited to the following: Adult Bookstore, Adult Movie Theater, Massage Parlor, or Adult Live Entertainment Facility)
- a. **Purposes.** The regulations on Adult Uses are intended to serve the following purposes, in addition to the overall objectives of this Ordinance.
 - (1) To recognize the adverse secondary impacts of Adult Uses that affect health, safety and general welfare concerns. These secondary impacts have been documented in research conducted across the nation. These secondary impacts typically include, but are not limited to: increases in criminal activity, increases in activities that increase the risk of transmission of sexually transmitted diseases, increases in activities that increase the risk of transmission of other communicable diseases, increases in blight, decreases in the stability of residential neighborhoods, and decreases in property values for surrounding homes, and decreases in the marketability of nearby commercial business space. The research conducted across the nation concludes that Adult Uses typically involve insufficient self-regulation to control these secondary effects.
 - (2) To limit Adult Uses to locations where these secondary impacts can be minimized, particularly as they affect residential neighborhoods and commercial revitalization.
 - (3) To not attempt to suppress any activities protected by the "free speech" protections of the State and U.S. Constitutions, but instead to control secondary effects.
 - b. An Adult Use and its parking area shall not be located within any of the following distances, whichever is most restrictive:
 - (1) 500 lineal feet from the lot line of an existing dwelling,
 - (2) 500 lineal feet from the lot line of any lot in a residential zoning district,
 - (3) 1,000 lineal feet from the lot line of any primary or secondary school, place of worship, library, public park, day care center or child nursery.
 - c. No Adult Use shall be located within 1,000 lineal feet from any existing "adult use."
 - d. A 50 feet buffer yard shall be provided, regardless of zoning district, along the side and rear lot lines. If such buffer area does not include substantial mature trees that will be preserved, it shall include continuous screening by evergreen trees with an initial height of 5 feet.
 - e. No pornographic material, displays or words shall be placed in view of persons who are not inside of the establishment. Definite precautions shall be made to prohibit minors from entering the premises.
 - f. No Adult Use shall be used for any purpose that violates any Federal, State or municipal law.
 - g. Pornographic and sexually explicit signs and displays shall be prohibited that are visible from outside of the premises.
 - h. The Adult Use shall not include the sale or display of "obscene" materials, as defined by Pennsylvania criminal law, as may be amended by applicable Court decisions.

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- i. An Adult Use shall be prohibited in all Districts except where specifically allowed under Section 306. An Adult Use is a distinct use, and shall not be allowed under any other use, such as a retail store or club.
 - j. A minimum lot area of 1 acre is required.
 - k. For public health reasons, private or semi-private viewing booths of any kind are prohibited. This specifically includes, but is not limited to, booths for viewing adult movies or nude dancers.
 - l. No use may include live actual or simulated sex acts nor any physical or sexual contact between employees and entertainers nor or between employees or entertainers and customers. At an Adult Live Entertainment Use, employees or entertainers shall maintain a minimum distance of 3 feet from customers. This shall include, but not be limited to, a prohibition on "lap dancing."
 - m. Only "lawful" massages as defined by State court decisions shall be performed in a massage parlor.
 - n. All persons within any adult use shall wear non-transparent garments that cover their genitals and the female areola, except within a permitted lawful "adult live entertainment facility."
 - o. Any application for such use shall state the name and daytime address of an on-site manager responsible to ensure compliance with this Ordinance on a daily basis. A telephone number shall be provided where the on-site manager can be reached during County business hours. Such information shall be regularly updated in writing to the Zoning Officer.
 - p. The use shall not operate between the hours of 12 midnight and 7 a.m.
 - q. As specific conditions of approval under this Ordinance, the applicant shall prove compliance, where applicable, with the following State laws, as amended: the Pennsylvania Liquor Code, Act 219 of 1990 (which pertains to sale or consumption of alcohol between 2 a.m. and 8 a.m.), Act 207 of 1990 (which pertains to obscenity) and Act 120 of 1996 (which pertains to Adult-Oriented Establishments and which limits enclosed viewing booths among other matters).
 - r. An adult use shall not be on the same lot as a use that sells alcoholic beverages.
3. **After Hours Club.** This use is effectively prohibited by State Act 219 of 1990, as amended (Section 7327 of Title 18 of the Pennsylvania Statutes). In the event that the use would be determined to be allowed, a 500 feet setback shall apply from the building and any parking areas from any residential zoning district. The applicant shall prove that adequate on-site security will be in place.
4. **Airport.**
- a. As part of any special exception use approval required under Article 3, the Zoning Hearing Board shall have the authority to establish reasonable conditions that limit the types, sizes and weights of aircraft and the hours of operation in order to minimize noise nuisances to dwellings.
 - b. As part of a special exception use application, the applicant shall provide evidence that flight patterns will be designed to minimize noise nuisances to dwellings.

- c. Each end of a runway shall be setback a minimum of 150 feet from all lot lines. Each side of a runway shall be setback a minimum of 75 feet from all lot lines.
- 5. **Animal Cemetery.**
 - a. All the regulations for a "cemetery" in this Section shall apply.
- 6. **Apartments.** See "Townhouses and Apartments" in this Section 402.
- 7. **Assisted Living Facility/Personal Care Center.** The standards for nursing homes in this section shall apply.
- 8. **Auto, Boat or Mobile/Manufactured Home Sales.**
 - a. No vehicle, boat or home on display shall occupy any part of the street right-of-way.
 - b. Any mobile/manufactured homes on a sales site shall meet the required principal building setbacks from the perimeter lot lines.
- 9. **Auto Repair Garage.**
 - a. Outdoor storage of motor vehicles shall not be within any required buffer yard or street right-of-way.
 - b. The use shall not meet the definition of a "junkyard" (as defined by Article 2) unless the requirements for such use are also met.
- 10. **Auto Service Station.**
 - a. This use may be combined with an Auto Repair Garage if the requirements for each are met.
 - b. Fuel pumps shall be at least 25 feet from the street right-of-way and shall meet side yard principal building setback requirements.
 - c. The use shall not meet the definition of a "junkyard" (as defined by Article 2) unless the requirements for such use are also met.
 - d. The use may include a "convenience store" if the requirements for such use are also met.
 - e. A canopy shall be permitted over the gasoline pumps with a minimum front yard setback of 20 feet from each street right-of-way line. Such canopy may be attached to the principal building. A portion of the allowed wall sign area may be placed on the canopy.
- 11. **Bed and Breakfast Inn.**
 - a. Within an agricultural or residential district (where permitted under Section 306), a maximum of 6 rental units shall be provided and no more than 3 adults may occupy one rental unit. No maximums shall apply within other permitted districts.
 - b. One off-street parking space shall be provided for each rental unit, plus employee parking. To the maximum extent feasible, any area of 5 or more new off-street parking spaces shall be: a) located either to the side or rear of the principal building and b) screened from the street and abutting dwellings by landscaping.
 - c. The use shall be owned, operated or managed by permanent residents of the lot.

- d. There shall not be separate cooking facilities in any guest room. Food shall only be served to guests who are staying overnight, unless a restaurant is also permitted.
- e. Guests shall not routinely stay for more than 21 days in any month.

12. Boarding House (includes Rooming House).

- a. Minimum lot area- 20,000 square feet, unless a larger lot size is required by the zoning district regulations.
- b. Minimum side yard building setback - 30 feet side
- c. Minimum lot width- 150 feet
- d. Maximum density- 3 bedrooms per acre; but in no case shall the lot serve a total of more than 20 persons.
- e. Each bedroom shall be limited to 2 adults each.
- f. A buffer yard with screening meeting Section 803 shall be provided between any boarding house building and any abutting dwelling.
- g. Note: There are separate standards for an "assisted living facility," which is not considered a boarding house.

13. Campground, Camp or Recreational Vehicle Park.

- a. Retail sales shall be allowed as an accessory use, provided that in a residential district, the store is primarily intended to serve persons camping on the site.
- b. Minimum lot area - 1 acre in an allowed commercial or industrial district, 5 acres in any other district where the use is permitted under Article 3.
- c. All campsites, recreational vehicle sites, and principal commercial buildings shall be setback a minimum of 75 feet from any contiguous lot line of an existing dwelling or public recreation land that is not part of the Campground or Camp. Within this buffer, the applicant shall prove to the maximum extent feasible that any existing healthy trees will be maintained and preserved. Where healthy mature trees do not exist within this buffer, and if practical considering soil and topographic conditions, new trees shall be planted within this buffer.
 - (1) The screening of evergreens provided in Section 803 between business and residential uses is not required if the tree buffer would essentially serve the same purpose, or if removal of mature trees would be needed to plant the shrubs.
- d. Buildings used for sleeping quarters shall not be within the 100-year floodplain.
- e. No person other than a bona fide resident manager/caretaker shall reside on the site for more than 6 months in any calendar year. No recreational vehicle shall be occupied on the site for more than 6 months in any calendar year by any one individual or one family.
- f. See also regulations in the County Subdivision and Land Development Ordinance or applicable Subdivision and Land Development Ordinance for a "Recreational Vehicle Park".

14. Car Wash.

- a. On-lot traffic circulation channels and parking areas shall be clearly marked.

- b. Adequate provisions shall be made for the proper and convenient disposal of refuse. The applicant shall provide evidence that adequate measures will be in place to prevent pollutants from being washed into the groundwater or waterways. Any chemicals or polluted runoff that may be hazardous to aquatic life shall be stored within an area that will completely contain any leaks, spills or polluted runoff.
- c. Water from the car wash operation shall not flow onto sidewalks or streets in such a manner as could cause ice hazards.
- d. Any car wash that is located within 250 feet of an existing dwelling shall not operate between the hours of 10:00 p.m. and 7:00 a.m.

15. **Cemetery.**

- a. Minimum lot area 2 acres, which may be on the same lot as an allowed place of worship.
- b. A crematorium, where allowed by Article 3, shall be setback a minimum of 250 feet from all lot lines of existing dwellings and all undeveloped residentially zoned lots.
- c. All structures and graves shall be setback a minimum of: 30 feet from the right-of-way of any public street, 10 feet from the cartway of an internal driveway, and 20 feet from any other lot line. Any buildings with a height greater than 20 feet shall be setback a minimum of 50 feet from all lot lines.
- d. No grave sites and no structures shall be located within the 100-year floodplain.

16. **Commercial Communications Tower as a principal use.**

- a. Any commercial communications tower shall only be allowed where specifically authorized in Section 306, and in compliance with the following additional regulations:
 - (1) Such tower shall be set back from all lot lines and street rights-of-way a distance that is greater than the total height of the tower/antenna above the surrounding ground level. The Zoning Hearing Board may permit an easement arrangement to be used without meeting the setback requirement from the edge of the leased area, provided that there are legal safeguards to ensure that the setback will continue to be met over time from a lot line.
 - (2) A new tower, other than a tower on a lot of an emergency services station, shall be setback the following minimum distance from any existing dwelling: 200 feet plus the total height of the tower above the surrounding ground level.
 - (3) The applicant shall describe in writing the policies that will be used to offer space on a tower to other communications providers, which shall serve to minimize the total number of towers necessary in the region. This policy shall be designed to minimize the total number of towers necessary in the County.
 - (4) An applicant for a new commercial tower shall provide evidence to the Zoning Hearing Board ("the Board") that they have investigated co-locating their facilities on an existing tower and other tall structures and have found such alternative to be unworkable, and that therefore a new tower is needed. The reasons shall be provided.
 - (5) A maximum total height of 200 feet above the ground shall apply in a commercial and industrial district and 150 feet in any other district where it may be allowed,

unless the applicant proves to the Zoning Hearing Board as a special exception use that a taller height is absolutely necessary and unavoidable.

- (6) The application shall describe any proposed lighting. The Board may require lighting of a tower even if it will not be required by the Federal Aviation Administration. Such lighting is intended to provide protection for emergency medical helicopters. Strobe lighting shall not be used, but flashing lights may be used.
- b. Purposes - These provisions for commercial towers are primarily designed to serve the following purposes, in addition to the overall objectives of this Ordinance:
 - (1) To protect property values.
 - (2) To minimize the visual impact of communication towers, particularly considering the importance of the scenic beauty of the area in attracting visitors for outdoor recreation.
 - (3) To minimize the number and heights of towers in a manner that still provides for adequate telecommunications services and competition.
- c. Any communication tower that is no longer in active use shall be completely removed within 6 months after the discontinuance of use. The operator shall notify the Zoning Officer in writing after the tower use is no longer in active use. Any lease shall require such removal by the owner of the tower. Any lease should provide that the lease shall expire once the tower is removed. The Zoning Hearing Board may require that a financial guarantee be posted to pay for removal of the tower if the Board determines such guarantee is needed.
- d. All accessory utility buildings or cabinets shall have a maximum height of 25 feet and meet principal building setbacks.

17. Conversion of an Existing Building (including an Existing Dwelling) into Dwelling Units.

- a. See Article 3, which regulates where conversions are permitted.
- b. A previously residential building shall maintain a clearly residential appearance as viewed from the street, except as may be necessary for restoration of a historic building or the addition of handicapped or fire safety improvements.
- c. A maximum total of 4 dwelling units may be developed per lot unless a more restrictive provision is established by another section of this Ordinance, unless the building included more than 4,000 square feet of building floor area at the time of adoption of this Ordinance.
- d. Each unit shall meet the definition of a dwelling unit and shall meet the minimum floor area requirements of Section 801.C.

18. Day Care Center, Adult.

- a. The use shall include constant supervision during all hours of operation.
- b. The use shall not meet the definition of a "treatment center."

19. **Day Care Center, Child.**
- a. Convenient parking spaces within the requirements of Article 6 shall be provided for persons delivering and waiting for children.
 - b. In residential districts, where permitted as a principal use, a day care use shall have a minimum lot area of 30,000 square feet and a minimum setback for buildings and outdoor play areas of 25 feet from an abutting "residential lot line."
 - c. The use shall include secure fencing around outdoor play areas.
 - d. This use shall not be conducted as a principal use in a building that is physically attached to a dwelling that does not have a common owner.
 - e. See also the standards for a "Place of Worship" in this Section, which allows a day care center as an adjunct use.
20. **Gas and Oil Wells.** The provisions of Section 403 apply as either a principal or accessory use.
21. **Golf Course.** A golf course may include a restaurant or clubhouse provided that such building is located a minimum of 150 feet away from any lot line of an existing dwelling. The maximum impervious area covered by man-made surfaces shall not exceed 5 percent of the total lot area of the golf course.
22. **Groundwater or Spring Water Withdrawal, involving removal of an averaging of more than 100,000 gallons per day from a lot for off-site consumption.** (Note - If the water is being utilized for uses on adjacent lots or as part of a public water system, it shall not be considered off-site consumption.)
- a. The provisions of this subsection are not intended to prohibit the actual water withdrawal, but instead to address related uses and activities. The regulations of this subsection shall not apply to water used by a principal agricultural use within the County.
 - b. If the water will be trucked off-site, the applicant shall provide a written report by a professional engineer with substantial experience in traffic engineering. Such report shall only be required to address the suitability of the public road/street system to handle the resulting truck traffic.
 - c. If the water will be trucked off-site, any area used for loading or unloading of tractor-trailer trucks shall be setback a minimum of 150 feet from any adjacent residential lot.
23. **Group Homes.** Group homes are permitted within a lawful dwelling unit, provided the following additional requirements are met:
- a. The use shall meet the definition in Section 202.
 - b. A Group Home shall not include any use meeting the definition of a "Treatment Center."
 - c. A Group Home shall include the housing of a maximum of 6 unrelated persons, except:
 - (1) if a more restrictive requirement is established by another code requirement;
 - (2) the number of bona fide paid professional staff shall not count towards such maximum; and
 - (3) as may be approved by the Zoning Hearing Board under Section 111.D.

- d. The Group Home shall register in writing its location, general type of treatment/care, maximum number of residents and sponsoring agency with the Zoning Officer.
- e. Parking - See Section 601.
- f. If a Group Home is in a residential district, an appearance shall be maintained that is closely similar to nearby dwellings, and no sign shall identify the use.
- g. The persons living on-site shall function as a common household unit.
- h. An off-street parking space shall be provided for the largest vehicle that serves the use.

24. Helipad/Heliport.

- a. The applicant shall prove that the heliport/helipad has been located and designed to minimize noise nuisances to other properties.
- b. The Zoning Hearing Board may place conditions on the size of helicopters, frequency of use, fueling facilities, setbacks and hours of operation to minimize nuisances and hazards to other properties. Provided that the conditions do not conflict with safety or Federal or State regulations, the Zoning Hearing Board may require that the majority of flights approach from certain directions, and not from other directions that are more likely to create nuisances for residential areas.

25. Hotel or Motel.

- a. See definitions in Section 202, which distinguish a hotel/motel from a boarding house.
- b. Buildings and tractor-trailer truck parking shall be a minimum of 50 feet from any "residential lot line."

26. Junkyard.

- a. Storage of garbage or biodegradable material is prohibited, other than what is customarily generated on-site and routinely awaiting pick-up.
- b. Outdoor storage of junk and junk vehicles shall be kept at least: a) 100 feet from any residential lot line, and b) 50 feet from any other lot line and the existing right-of-way of any public street.
- c. The site shall contain a minimum of 2 exterior points of access, each of which is not less than 20 feet in width. One of these accesses may be limited to emergency vehicles. Cleared driveways with a minimum width of 15 feet shall be provided throughout the entire use to allow access by emergency vehicles. Adequate off-street parking areas shall be provided for customers.
- d. Outdoor storage shall be completely enclosed (except at approved driveway entrances) by a 40 foot wide buffer yard which complies with Section 803, unless such storage is not visible from an exterior lot line or street. The initial height of the evergreen planting shall be 6 feet. Secure fencing with a minimum height of 8 feet shall be provided and well-maintained around all outdoor storage areas. Such fencing shall be provided inside of the evergreen screening.
- e. Burning or incineration is prohibited.
- f. Tires - see the "Outdoor Storage and Display" standards in Section 403.
- g. No Junkyard shall be located within the boundaries of the watershed of any Municipality or any Private Water Company whose business is to supply potable water

to its citizens or customers or within the boundaries of any publicly owned recreation facility.

- h. Any storage of junk shall be maintained a minimum distance of 100 feet from the centerline of any waterway, and shall be kept out of a drainage swale.
- i. Where an aspect of a Junkyard is regulated by both this Ordinance and an ordinance of the Borough/Township, the provision that is more restrictive upon the Junkyard use shall apply.

27. Kennel.

- a. All buildings in which animals are housed (other than buildings that are completely soundproofed and air conditioned) and all runs outside of buildings shall be located at least 150 feet from all "residential lot lines." This 150 feet setback shall be increased to 200 feet if more than 20 dogs are kept overnight on the lot, and be increased to 250 feet if more than 50 dogs are kept overnight on the lot.
- b. Buildings shall be adequately soundproofed so that sounds generated within the buildings cannot routinely be heard within any principal building on another lot.
- c. No animal shall be permitted to use outdoor runs from 9 p.m. to 8 a.m. that are within 250 feet of an existing dwelling. Runs for dogs shall be separated from each other by visual barriers a minimum of 4 feet in height, to minimize dog barking.
- d. Minimum lot area - 5 acres, unless a larger lot area is required by another section of this Ordinance.

28. Livestock and Poultry Intensive, Raising of.

- a. Minimum lot area - 25 acres shall apply for an "Intensive Raising of Livestock or Poultry" use.
- b. For an Intensive Raising of Livestock or Poultry use, any building used for the keeping of livestock or poultry shall be located a minimum of: 1) 400 feet from a lot in a R-2 or R-3 district, 2) 200 feet from an existing dwelling that is not within a residential district, and 3) 50 feet from all other exterior lot lines.
- c. As a special exception use, the Zoning Hearing Board may approve a smaller setback for the expansion of facilities that existed prior to the adoption of this Section where the applicant proves that there is no reasonable and feasible alternative and where the applicant proves that the lesser distance would not be detrimental to public health or safety or create significant hazards or nuisances, or where the applicant proves that a particular provision is preempted under State law.
- d. The setbacks from property lines provided in this section for this use shall not apply from dwellings or lots owned by: 1) the operator or owner of the livestock use, or 2) affected property-owners providing a written notarized letter waiving such setback.
- e. The following additional requirements shall apply to an Intensive Raising of Livestock or Poultry use:
 - (1) The applicant shall describe in writing or on site plans methods that will be used to address water pollution and insect and odor nuisances. Applicants should consider the applicable sections of the Pennsylvania Soil and Water Conservation Technical Guide as published by the U.S. Department of Agriculture and the State Department of Environmental Protection's Manure Management Manual for

Environmental Protection, or their successor publications. The applicant may meet this requirement by providing a cross-reference to certain sections of such manuals or other written industry standards to describe the methods that will be used.

Note to Applicant - See procedures and requirements of the State Nutrient Management Act and accompanying State regulations, including manure storage facility setbacks.

- (2) Buildings used for the keeping of livestock or poultry shall:
 - (a) not be located within 100 feet of a perennial stream, river, natural lake, or water supply reservoir, and
 - (b) not be located within 100 feet of an active public water supply drinking well or an active intake for a public water supply.
 - f. A zoning permit shall be required for any building. A zoning permit shall not be required for the use of keeping of livestock or poultry by itself, unless the use meets the definition of an “Intensive Keeping of Livestock or Poultry” use.
29. **Manufactured Homes and Manufactured Home Parks.** See "Mobile/Manufactured Home" and “Mobile/Manufactured Home Park” in this Section.
30. **Membership Club.**
- a. See definition in Article 2.
 - b. Any active outdoor play areas shall be setback at least 30 feet from any abutting "residential lot line."
 - c. This use shall not include an “After Hours Club.”
31. **Mineral Extraction.**
- a. The following shall apply to mineral extraction other than water, coal and gas and oil wells (See definition in Section 202):
 - (1) If a Mineral Extraction use involves mining activities over more than 2 acres of land in any calendar year, then the following additional requirements shall be met:
 - (a) When mineral extraction is adjacent to a roadway and within the established distance under State regulations, the Zoning Hearing Board may require a 50 feet wide yard covered by natural vegetative an earthen berm and/or the use of a fence
 - (b) A plan shall be submitted showing sequential phases of mining activities on the land.
 - b. The following shall apply to Mineral Extraction of Coal:
 - (1) See various district regulations in Section 306, which may limit the locations of certain mechanical processing facilities and buildings and/or may require special exception approval.
 - c. See separate provisions in Section 403 for “Gas and Oil Wells.”

32. **Mobile/Manufactured Home.** Installed on an individual lot or within a mobile/manufactured home park approved after the adoption of this ordinance.
- a. Construction. Any mobile/manufactured home placed on any lot after the adoption of this Ordinance shall be constructed in accordance with 1976 or later Safety and Construction Standards of the U.S. Department of Housing and Urban Development. (Note: These Federal standards supersede local construction codes for the actual construction of the home itself.)
 - b. Anchoring. Notice to Applicant: See requirements of the Construction Codes, in addition to the manufacturer's specifications for installation.
33. **Mobile/Manufactured Home Park.**
- a. Plans and Permits. Plans shall be submitted and reviewed by the County for all mobile/manufactured home parks in compliance with the mobile/manufactured home park provisions of the applicable Subdivision and Land Development Ordinance and all other provisions of such ordinance that apply to a land development, including the submission, approval and improvements provisions (other than specific provisions altered by this Section).
 - b. The minimum tract area shall be 3 contiguous acres, unless a larger tract area is required by Section 306 in a particular zoning district. This minimum tract area shall be under single ownership.
 - c. Density The maximum average density of the tract shall be 5 dwelling units per acre.
 - (1) To calculate this density: a) land in common open space or proposed streets within the park may be included, but b) land within the 100 year floodplain, wetlands and slopes over 25 percent shall not be included.
 - d. Landscaped Perimeter - Each mobile/manufactured home park shall include a 20 foot wide landscaped area including substantial attractive evergreen and deciduous trees around the perimeter of the site, except where such landscaping would obstruct safe sight distances for traffic. A planting plan for such area shall be approved by the Zoning Hearing Board as part of any required special exception use approval. The same area of land may count towards both the landscaped area and the building setback requirements.
 - e. The following setbacks shall apply unless a differing requirement applies under the applicable Subdivision and Land Development Ordinance:
 - (1) A dwelling, including any attached accessory building, shall be setback a minimum of 20 feet from another dwelling within the mobile home park, except that unenclosed decks, patios, porches, awnings and accessory buildings may be 15 feet from the walls of another dwelling.
 - (2) The minimum separation between homes and edge of interior street cartway or parking court cartway shall be 15 feet.
 - (3) The minimum principal and accessory building setbacks from exterior/boundary lot lines and rights-of-way of pre-existing public streets shall be 40 feet.
 - (4) A minimum of 15 percent of the total lot area of the entire mobile home park shall be set aside as common open space for the residents. The applicant shall prove that

these areas will be suitable for active or passive recreation. This open space shall be maintained by the owner of the manufactured home park.

- f. Each home shall comply with the requirements for "Mobile/Manufactured Homes" stated in the preceding sub-section.
- g. Streets. Access to individual mobile home spaces shall be from interior parking courts, access drives or private streets and shall not be from public streets exterior to the development.
- h. Utilities. All units within the mobile home park shall be connected to a central water and a central sewage system. The system shall meet appropriate minimum water pressure/fire flow and hydrant requirements. The applicant shall prove that adequate provisions are made for solid waste disposal.
- i. Other Requirements. A manufactured/mobile home park shall comply with all of the same requirements that apply to a subdivision or land development of site-built single family detached dwellings, except for requirements that are specifically modified by this section.

34. Motor Vehicle Race Track.

- a. All areas used for the racing of motor vehicles and related testing and maintenance shall be setback a minimum of 400 feet from the lot line of an existing dwelling or a residential district boundary. Any improved track used for motorcycles, all terrain vehicles or motor vehicles for commercial purposes shall be setback a minimum of 400 feet from the lot line of an existing dwelling or a residential district boundary.
- b. All buildings, parking, loading and unloading areas shall be setback a minimum of 150 feet from the lot line of an existing dwelling or a residential district boundary.
- c. The applicant shall prove that the standards of Article 5 will be met.
- d. Minimum lot area - 30 acres.
- e. For a special exception use, the Zoning Hearing Board may require the installation of sound barriers or berms and/or the planting of additional trees.

35. Nursing Home.

- a. Licensing - See definition in Article 2.
- b. A minimum of 15 percent of the lot shall be suitable and developed for passive recreation. This area shall include outdoor sitting areas and pedestrian walks.

36. Off-Road Vehicle Park.

- a. A use that only involves unimproved facilities with no defined tracks, ramps, structures or parking and which is only used by residents or owners of a lot and their occasional invited guests shall not be regulated by this provision.
- b. The use shall comply with provisions of the Subdivision and Land Development Ordinance.
- c. Camping facilities, overnight use of recreational vehicles or cabins shall only be allowed if all applicable requirements for a campground are also met.
- d. Any area regularly used by off road vehicles or their testing and maintenance shall be setback a minimum of 400 feet from the lot line of an existing dwelling or a residential

district boundary. If there is racing by motorcycles or on-road vehicles, the requirements for a Motor Vehicle Race Track shall also be met.

- e. All buildings, parking, loading and unloading areas shall be setback a minimum of 150 feet from the lot line of an existing dwelling or a residential district boundary.
- f. The applicant shall prove that the standards of Article 5 will be met.
- g. Minimum lot area - 30 acres.
- h. For a special exception use, the Zoning Hearing Board may require the installation of sound barriers or berms and/or the planting of additional trees.
- i. All tracks and buildings shall be setback a minimum of 100 feet from any perennial river, creek or other waterway.
- j. The off-road vehicles shall not be operated by customers between the hours of 9 pm and 7 am.

37. **Outdoor Storage and Display.** The provisions listed for this use under Section 403 shall apply.

38. **Picnic Grove, Commercial.**

- a. All buildings, pavilions and areas used for nighttime activities shall be a minimum of 150 feet from an existing dwelling on another lot. All parking areas shall be setback a minimum of 75 feet from any residential lot line. The use shall not operate between the hours of 11 p.m. and 7 a.m.
- b. Minimum lot area - 3 acres.

39. **Place of Worship.**

- a. Minimum lot area- 1.5 acres in a residential district, unless a larger lot area is required by the applicable zoning district. In any other district, a place of worship shall meet the minimum lot area provided in Article 3 for that district.
- b. A primary or secondary school and/or a child or adult day care center may be approved on the same lot as a place of worship provided the requirements for such uses are also met
- c. A maximum of one dwelling unit may be accessory to a place of worship on the same lot, to house employees of the place of worship and/or an employee and his/her family. Such dwelling shall meet the maximum number of unrelated persons in the definition of a "family." No other residential use shall be allowed.

40. **Recreation, Outdoor**

- a. All buildings, pavilions and areas used for nighttime activities shall be a minimum of 100 feet from an existing dwelling on another lot. All parking areas shall be setback a minimum of 20 feet from any residential lot line.
- b. This term shall not include "Publicly-Owned Recreation," a "Golf Course," or a "Motor Vehicle Race Track."
- c. In a residential district, the minimum lot area shall be 2.5 acres, unless a more restrictive lot area is established by another section of this Ordinance.
- d. Maximum impervious coverage in any residential district - 25 percent.

- e. Maximum building coverage in any residential district - 15 percent.
 - h. A site plan meeting the requirements of Article 1 shall be submitted to the County.
 - i. Where woods exist adjacent to an exterior lot line of the use adjacent to a residential lot line, such woods shall be preserved within at least 20 feet of such lot line, except for approved driveway, utility and trail crossings. Where such woods will not exist, a 20 feet wide buffer yard in accordance with Section 803 shall be required.
 - j. Any Restaurant open to the public, Tavern, Firearms Target Range, Camp, Campground, or Commercial Picnic Ground use shall only be allowed if those uses are permitted in the applicable district and if all requirements for each such use(s) are also met.
41. **Recreational Vehicle Park.** See "Campground, Camp or Recreational Vehicle Park" in this Section.
42. **Recycling Collection Center.**
- a. This use shall not be bound by the requirements of a Municipal Solid Waste (MSW) Landfill.
 - b. All materials shall be kept in appropriate containers, with appropriate sanitary measures and frequent enough emptying to prevent the attraction of insects or rodents and to avoid fire hazards.
 - c. This use may be a principal or accessory use, including being an accessory use to a commercial use, an industrial use, a public or private primary or secondary school, a place of worship or a County- or municipally-owned use, subject to the limitations of this section.
 - d. Materials to be collected shall be of the same character as the following materials: paper, fabric, cardboard, plastic, metal, aluminum, and glass. No garbage shall be stored as part of the use, except for that generated on-site and that accidentally collected with the recyclables. Only materials clearly being actively collected for recycling may be stored on site.
 - e. The use shall only include the following operations: collection, sorting, baling, loading, weighing, routine cleaning, and closely similar work. No burning or landfilling shall occur. No mechanical operations shall routinely occur at the site other than operations such as baling of cardboard.
 - f. The use shall not include the collection or processing of motor vehicles or items of similar size.
43. **Renewable Energy Facility.**
- a. The applicant shall provide a written statement describing measures that will be used to minimize hazards from any explosive or fire hazards.
44. **Residential Conversions.** See "Conversions of an Existing Building" within this Section.
45. **Restaurant.**
- a. See "Drive-Through" service in Section 403.

- b. Drive-through service shall only be provided where specifically permitted in the applicable district regulations.

46. School, Public or Private, Primary or Secondary

- a. Minimum lot area - 2 acres in a residential district. In any other district, the use shall meet the standard minimum lot area requirement for that district.
- b. No children's play equipment, basketball courts or illuminated recreation facilities shall be within 25 feet of a residential lot line.
- c. The use shall not include a dormitory unless specifically permitted in the District.

47. Self-Storage Development.

- a. Radioactive or highly toxic substances, garbage, refuse, explosives or flammable materials, hazardous substances, animal carcasses or skins, or similar items shall not be stored.
- b. Nothing shall be stored in a manner that would obstruct interior traffic aisles that are necessary to provide customer and emergency access to each unit.
- c. Adequate lighting shall be provided for security, but it shall be directed away or shielded from any adjacent residential uses.
- d. Any outdoor storage or garage doors within 200 feet of a street right-of-way and visible from the street shall be screened from that street by a buffer yard meeting Section 803.

48. Solid Waste Transfer Facility, Municipal Solid Waste (MSW) Landfill, or Solid Waste-to-Energy Facility.

- a. All solid waste storage, disposal, incineration or processing shall be at least 200 feet from the following: public street right-of-way, exterior lot line, 100 year floodplain, edge of a surface water body (including a water filled quarry), or wetland of more than 1/2 acre in area.
- b. All solid waste storage, disposal, incineration or processing shall be a minimum of 500 feet from any residential district, perennial creek, publicly-owned park or any existing occupied dwelling that the applicant does not have an agreement to purchase. Any solid waste landfill disposal area shall be setback a minimum of 1,320 feet from any public water supply.
- c. The use shall be served by a minimum of 2 paved access roads, each with a minimum cartway width of 24 feet. One of these roads may be restricted to use by emergency vehicles.
- d. No burning or incineration shall occur, except within an approved Waste to Energy Facility.
- e. The operation and day-to-day maintenance of the solid waste disposal area shall comply with all applicable State and Federal regulations as a condition of the continuance of any permit of the County. Violations of this condition shall also be considered to be violations of this Ordinance.
- f. Open dumps and open burning of refuse are prohibited.
- g. The applicant shall prove to the satisfaction of the Zoning Hearing Board that the existing street network can handle the additional truck traffic, especially without

bringing extraordinary numbers of trash hauling trucks through or alongside existing residential or residentially zoned areas and especially considering the width and slopes of streets in the County.

- h. The applicant shall prove to the satisfaction of the Zoning Hearing Board that the use would not routinely create noxious odors off of the tract.
- i. A chain link or other approved fence with a minimum height of 8 feet shall surround active solid waste disposal areas to prevent the scattering of litter and to keep out children, unless the applicant proves to the satisfaction of the Zoning Hearing Board that this is unnecessary. A buffer yard meeting Section 803 with plantings with an initial height of 6 feet shall be required between the use and any adjacent public street or dwelling. The Board may also require the installation of earth berms and/or shade trees as needed to reduce the visibility of landfill operations from public streets or dwellings.
- j. A minimum lot area of 15 acres shall be required for the first 250 tons per day of capacity to treat or dispose of waste, plus 1 acre for each additional 100 tons per day of capacity. A solid waste facility shall have a maximum total capacity of 500 tons per day.
- k. Health Hazards. Any facility shall be operated in such a manner to prevent the attraction, harborage or breeding of insects, rodents or vectors.
- l. Attendant. An attendant shall be present during all periods of operation or dumping.
- m. Gates. Secure gates, fences, earth mounds, and/or dense vegetation shall prevent unauthorized access.
- n. Emergency Access. The operator of the use shall cooperate fully with local emergency services. This should include allowing practice exercises on the site and the provision of all information needed by the emergency services to determine potential hazards. Adequate means of emergency access shall be provided.
- o. Under authority granted under Act 101 of 1988, the hours of operation shall be limited to between 7 a.m. and 9 p.m.
- p. Tires. See "Outdoor Storage and Display" in Section 403.
- q. Litter. The operator shall regularly police the area of the facility and surrounding streets to collect litter that may escape from the facility or trucks.
- r. Dangerous Materials. No radioactive, hazardous, chemotherapeutic or infectious materials may be stored, processed, disposed or incinerated. Infectious materials are defined as medical wastes used or created in the treatment of persons or animals with seriously contagious diseases.
- s. The applicant shall provide sufficient information for the County to determine that the requirements of this Ordinance will be met.
- t. State Requirements. Nothing in this Ordinance is intended to supersede any State requirements. It is the intent of this Ordinance that when similar issues are regulated on both the County and State levels, that the stricter requirement shall apply for each aspect, unless it is determined that an individual State regulation preempts County regulation in a particular aspect. The applicant shall provide the Zoning Officer with a copy of all written materials and plans that are submitted to PADEP at the same time as they are submitted to DEP.

- u. For a solid-waste-to-energy facility or solid waste transfer facility, all loading and unloading of solid waste shall only occur within an enclosed building, and over an impervious surface drains to a holding tank that is then adequately treated. All solid waste processing and storage shall occur within enclosed buildings or enclosed containers.
 - v. A professional traffic study shall be submitted with the zoning application. The traffic study shall meet the requirements of the Subdivision and Land Development Ordinance and shall identify intended truck routes into and out of the facility to reach expressways.
49. **Stable, Nonhousehold or Household.** (Includes riding academies)
- a. Minimum lot area - 2 acres for first horse or similar animal, plus one acre for each horse or similar animal in excess of one.
 - b. Any horse barn, manure storage areas or stable shall be a minimum of 75 feet from any lot line of an existing adjacent dwelling and from the edge of a perennial waterway.
 - c. Manure shall be regularly collected and disposed of in a sanitary manner that avoids nuisances to neighbors. Manure shall be stored in a manner that prevents it from being carried off by runoff into a creek.
50. **Swimming Pool, Non-Household.**
- a. The water surface shall be setback at least 50 feet from any existing dwelling on another lot.
 - b. Minimum lot area- 20,000 square feet.
 - c. Drainage. A proper method shall be provided for drainage of the water from the pool that will not flood other property.
51. **Target Range.**
- a. All target ranges shall have a barrier behind the target area which is of sufficient height and thickness to adequately protect the public safety.
 - b. The following provisions shall not apply to a target range that is only used by residents or owners of a lot and their occasional guests:
 - (1) The design of the outdoor firearms target range shall be compared by the applicant with applicable published guidelines of the National Rifle Association. The Zoning Hearing Board may consider such guidelines to be the generally accepted standard for the safety of these facilities.
 - (2) An outdoor firearms target range and any firing stations shall be located a minimum of 450 feet from the nearest occupied building on another lot, unless all firing would occur within a completely enclosed sound-resistant building. Clay pigeon shooting shall be directed away from homes and streets.
 - (3) An outdoor firearms target range shall be properly posted. The Zoning Hearing Board may require fencing as necessary.
 - (4) An indoor firearms target range shall be adequately ventilated and/or air conditioned to allow the building to remain completely enclosed.
 - (5) A target range shall only be used for types of firearms or other weapons for which it was specifically designed.

- (6) An outdoor target range shall not be used during nighttime hours. Maximum hours and days of operation may be established as a condition of the zoning approval.
- (7) Minimum lot area for an outdoor firearms target range - 10 acres, unless a more restrictive provision is established by another provision of this Ordinance.
- (8) See Section 803. Wherever woods exist adjacent to an exterior lot line of an outdoor firearms target range, such woods shall be preserved within at least 100 feet of each such lot line, except for approved driveway, utility and trail crossings.

52. Townhouses and Apartments.

- a. Maximum length and width of an attached grouping of townhouses - 160 feet. Maximum number of Apartments that shall be within a building - 12, except no maximum shall apply in a building in which all units are permanently age restricted to at least one resident age 55 and older.
- b. Paved Area Setback - All off-street parking spaces, except spaces on driveways immediately in front of a carport or garage entrance, shall be set back a minimum of 10 feet from any dwelling.
- c. Garages. It is strongly recommended that all Townhouses be designed so that garages and/or carports are not an overly prominent part of the view from public streets. For this reason, parking courts, common garage or carport structures or garages at the rear of dwellings are encouraged instead of individual garages opening onto the front of the building, especially for narrow townhouse units.
- d. Mailboxes. Any mailboxes provided within the street right-of-way should be clustered together in an orderly and attractive arrangement or structure. Individual freestanding mailboxes of non-coordinated types at the curbside are specifically discouraged.
- e. Access. Vehicular access points onto all arterial and collector streets shall be minimized to the lowest reasonable number. No townhouse dwelling within a tract of 5 or more dwelling units shall have its own driveway entering onto an arterial or collector street.
- f. Common Open Space. On a tract of more than two acres, a minimum of 15 percent of the total lot area of the development involving Townhouses and Apartments and their accessory uses shall be set aside as common open space for the residents. The applicant shall prove that these areas will be suitable for active or passive recreation. .
 - (1) If a development will not be restricted to at least one resident age 55 and older, then the common open space should include a rectangular grass field that is suitable for free play by young persons. If all dwellings in a development will be restricted to at least one resident age 55 and older, then the common open space should at a minimum include landscaped trails that are ADA-accessible.
 - (2) Common open space under this section may be used to meet any recreation requirements under the Subdivision Ordinance, if the land would meet both ordinances.
 - (3) This open space shall be maintained by the owner of a rental development or by a property owner's association, unless a municipality specifically agrees to accept ownership.

53. **Treatment Center.**

- a. See definition in Section 202.
- b. The applicant shall provide a written description of all conditions (such as criminal parolees, alcohol addiction) that will cause persons to occupy the use during the life the permit. Any future additions to this list shall require an additional special exception approval.
- c. The applicant shall prove to the satisfaction of the Zoning Hearing Board that the use will involve adequate on-site supervision and security measures to protect public safety.
- d. The Zoning Hearing Board may place conditions upon the use to protect public safety, such as conditions on the types of residents and security measures.

54. **Trucking Company Terminal.**

- a. As a condition of special exception use approval, the Zoning Hearing Board may require additional earth berming, setbacks, landscaping and lighting controls as they determine to be necessary to provide compatibility with adjacent dwellings. These measures shall be designed to minimum glare, noise, soot, dust, air pollutants and other nuisances upon dwellings.

55. **Veterinarian Office.** (includes Animal Hospital)

- a. Any structure in which animals are treated or housed shall be a minimum of 30 feet from any lot line of an existing dwelling on another lot, unless the building is completely soundproofed and air conditioned.
- b. Animals undergoing treatment may be kept as an accessory use. However, a commercial kennel shall only be allowed if a kennel is permitted in that district and if the applicable requirements are met.

56. **Wind turbines, Other than is Allowed for Wind Turbine as an Accessory Use by Section 403 (This section regulates, among other items, 2 or more wind turbines per lot, or a wind turbine as a principal use).**

- a. The wind turbine shall be setback from the nearest existing occupied dwelling on another lot a distance not less than 3 times the maximum height to the top of the maximum sweep of the blade of the turbine, unless a written waiver is provided by the owner of such building. The turbine height shall be the distance from the ground level. The setback shall be measured from the base of the turbine to the nearest part of such building. This provision shall apply to buildings that existed prior to the application for a zoning permit.
- b. The audible sound from the wind turbine(s) shall not exceed 45 A weighted decibels, as measured at the exterior of a occupied dwelling on another lot, unless a written waiver is provided by the owner of such building.
- c. The owner of the facility shall completely remove all above ground structures within 12 months after the wind turbine(s) are no longer used to generate electricity.
- d. Wind turbines shall not be climbable for at least the first 12 feet above the ground level.

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- e. All wind turbines shall be set back from the nearest public street right-of-way a minimum distance equal to the total height to the top of the turbine hub, as measured from the center of the wind turbine base.
- f. In situations other than “a.”, all wind turbines shall be set back from each lot line or street right-of-way a minimum distance equal to the total height to the top of the turbine hub, as measured from the center of the Wind turbine base, unless a written waiver is provided by the owner of such lot.
- g. If guy wires are used, and they are not within a fence, they shall be marked near their base with reflectors, reflective tape or similar method.
- h. The turbine shall include automatic devices to address high speed winds.
- i. Accessory electrical facilities are allowed, such as a transformer.
- j. The site plan shall show proposed driveways, turbines and areas of woods proposed to be cleared.
- k. A wind turbine regulated by this Section shall be setback a minimum of 800 feet from each side of the centerline of the Appalachian Trail.
- l. If two or more wind turbines are on a lot, they shall need approval as a Land Development under the Subdivision and Land Development Ordinance.
- m. Wherever a wind turbine is allowed, a temporary test tower shall also be allowed.

403. ADDITIONAL REQUIREMENTS FOR ACCESSORY USES.

- A. General. Accessory buildings, structures or uses that are clearly customary and incidental to a permitted by right or special exception are permitted by right, except as is provided for in this Ordinance. A business shall only be conducted as an accessory to a dwelling if specifically permitted by this Ordinance. An accessory building shall only be allowed on the same lot as a principal building, except for an agricultural building or stable or as specifically allowed by this Ordinance.
- B. Accessory Setbacks. The accessory setback requirements of the applicable district shall apply to every accessory building, structure or use unless a standard that is clearly meant to be more restrictive or less restrictive is specifically stated in this Article for a particular accessory use. Accessory structure setback requirements shall not apply to permitted surface parking lots, fences or permitted accessory signs.
- C. Front Yard Setback. No accessory structure, use or building shall be permitted in a required front yard in any district, unless specifically permitted by this Ordinance.
- D. Special Standards. Each accessory use shall comply with all of the following standards listed for that use:
 - 1. **Additional Business Uses on a Farm**. This use may be approved on a lawful existing lot with a minimum lot area of 20 acres that include a principal agricultural use and subject to the following:
 - a. Shall be defined as a limited-intensity commercial or industrial activity that functions as a customary accessory use to an on-site principal agricultural use. These businesses are intended to provide supplemental income to farmers to encourage the continuation of farming, to promote reuse of older barns, and to provide needed services to other farmers and nearby residents.
 - b. Shall be conducted by a resident or owner of the property, his/her “relatives,” and a maximum total of 4 other employees working on-site at one time, in addition to employees of the agricultural use. In addition, a barn that was constructed for agricultural purposes prior to the adoption of this Section may be leased to a non-resident for a use meeting these standards.
 - c. Any new building constructed and any new parking area for trucks shall be set back a minimum of 100 feet from any lot line of an existing dwelling, unless a larger setback is required by another section of this Ordinance. The total of all building floor areas used shall not exceed 8,000 square feet. This 8,000 square foot limit shall only apply to buildings constructed after the effective date of this Ordinance. May use buildings of any size that existed prior to the effective date of this Ordinance. The total area used, including parking, shall not exceed 3 acres.
 - d. Shall not routinely require the overnight parking of more than 2 tractor-trailer trucks, other than trucks serving the agricultural use.
 - e. Any manufacturing operations shall be of a custom nature and shall be conducted indoors.

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- f. Non-agricultural operations shall not routinely occur in a manner that generates traffic or noise heard by neighbors between the hours of 9 p.m. and 7 a.m.
- g. Any retail sales shall only be occasional in nature, and shall occur by appointment or during a maximum of 20 hours per week (except customary retail sales as part of a barber/beauty shop). This provision shall not restrict permitted sale of agricultural products.
- h. Only one sign shall advertise the business, which shall have a maximum sign area of 10 square feet on each of two sides, and which shall not be internally illuminated.
- i. The following activities shall be permitted by right:
 - (1) farm equipment or farm vehicle repair;
 - (2) occasional repair of one motor vehicle at a time, beyond those vehicles owned or leased by a resident of the property or his/her relative, but not including a junkyard, auto body shop or spray painting;
 - (3) welding and custom machining of parts;
 - (4) sale, processing, or mixing of seeds, feed, chemical fertilizers, or wood/leaves/bark compost;
 - (5) barber/beauty shops;
 - (6) construction tradesperson's headquarters;
 - (7) music, hobby, trade or art instruction for up to 10 persons at a time;
 - (8) small engine repair;
 - (9) custom woodworking or wood refinishing;
 - (10) custom blacksmithing or sharpening services;
 - (11) rental storage of household items, vehicles, boats and building materials;
 - (12) boarding of animals, not including a kennel or a stable (which are separate uses);
 - (13) custom butchering, not including a commercial slaughterhouse or stockyard;
 - (14) processing and storage of agricultural products, other than a commercial slaughterhouse;
 - (15) sawmill;

See also Stables and Retail Sales of Agricultural Products, which are treated as separate uses.
- j. This subsection shall not regulate agricultural uses that are permitted under other provisions of this Ordinance.
- k. If an activity would be permitted as either an Additional Business Uses on a Farm or a Home Occupation, then the applicant may choose which set of provisions shall apply.
- l. One off-street parking space shall be provided per non-resident employee, plus parking for any dwelling. In addition, the applicant shall prove to the Zoning Officer that sufficient parking will be available for customers, which is not required to be paved.
- m. Landscaping shall be placed between any outdoor storage of non-agricultural materials or products and any adjacent dwelling from which storage would be visible.
- n. The lot shall have provisions for trucks to turn around on the site without backing onto a public street.

2. **Day Care, Child - as accessory to a Dwelling.**

- a. See Section 306 and the definitions in Section 202 concerning the number of children who can be cared for in different zoning districts in a Family Day Care Home or a Group Day Care Home.
- b. In any case, 7 or more children (other than children who are "related" to the primary caregiver) shall only be cared for at one time within a single family detached dwelling.
- c. In a residential district, an existing dwelling shall retain a residential appearance with no change to the exterior of the dwelling to accommodate the use, other than cosmetic, fire safety and handicapped access improvements.
- d. The use shall be actively operated by a permanent resident of the dwelling.
- e. See also "Day Care Center" as a principal use and Day Care as accessory to a Place of Worship in Section 402.

3. **Drive-through facilities.**

- a. The proposed traffic flow and ingress-egress shall not cause traffic hazards on adjacent streets.
- b. On-lot traffic circulation and parking areas shall be clearly marked.
- c. A drive-through use shall be designed with space for an adequate number of waiting vehicles while avoiding conflicts with traffic onto, around and off of the site. Any drive-through facilities shall be designed to minimize conflicts with pedestrian traffic.

4. **Fences and Walls that Are Not Part of a Building.**

- a. See sight clearance provisions at an intersection in the applicable Subdivision and Land Development Ordinance.

5. **Gas and Oil Wells as a Principal or Accessory Use.**

- a. Gas and Oil Wells shall only be allowed where provided under Section 306.
- b. A minimum setback of 300 feet shall be required from a Gas or Oil Well, any accompanying storage tank and any above-ground equipment from any of the following: 1) any existing dwelling on another lot, or 2) any day care center, place of worship, nursing home, hospital, personal care center, park or recreational area, or school. See setbacks from other buildings in the State Oil and Gas Act. A minimum setback of 50 feet shall be required from a Gas or Oil Well, any accompanying storage tank and all related above-ground equipment to any street right-of-way or any lot line, unless a written waiver is provided to the County by the principal owner of record of the adjacent lot.
- c. A row of primarily evergreen trees shall be provided between any Gas or Oil Well and any existing dwelling on an adjacent lot.
- d. A minimum 4 feet high security fence or architectural masonry wall shall be provided around a Gas or Oil Well.
- e. If any Gas or Oil Well or related mechanical equipment will be within 600 feet from an existing dwelling on another lot: 1) sound walls, acoustical blankets or similar measures shall be used to control noise, and 2) movement of trucks onto and off of the property shall not occur between the hours of 9 p.m. and 7 a.m., except for emergency measures.

- f. A County Zoning Permit shall be required for a Gas or Oil Well. Prior to receiving a Zoning Permit, the applicant shall also provide written notification to the Township/Borough, with such notification describing impacts upon roads.
6. **Home Occupations.** (Note: In most cases, a Major Home Occupation needs Zoning Hearing Board approval while a Minor Home Occupation is permitted by right. See subsection “b” for uses that are Minor Home Occupations.)
- a. All home occupations shall meet the following requirements:
 - (1) The use shall be conducted primarily by a permanent resident of the dwelling, and involve a maximum of two persons working on-site or operating a vehicle from the site at any one time who do not reside within the dwelling.
 - (2) The use shall be conducted indoors. No outdoor storage or display related to the home occupation shall be permitted. No changes shall occur to the exterior of a building that would reduce its residential appearance as viewed from a street.
 - (3) The use shall occupy an area that is not greater than 25 percent of the total floor area of the principal dwelling unit (not including vehicle garage floor area and other than space with less than 6.5 feet clear vertical height), except such percentage may be 50 percent for an office use. The use shall clearly be secondary to the residential use.
 - (4) One off-street parking space shall be required per non-resident employee who has a vehicle on-site.
 - (5) The use shall not regularly require delivery by tractor-trailer trucks.
 - (6) No more than 2 trucks shall be parked overnight on a residential lot as part of a home occupation.
 - (7) No equipment or machinery shall be permitted that produces noise, noxious odor, vibration, glare, electrical or electronic interference detectable on another property. The use shall not involve the storage or use of hazardous, flammable, or explosive substances, other than types and amounts typically found on a residential property. The use shall not involve the storage or use of "toxic" or "highly hazardous" substances.
 - (8) A home occupation shall not be conducted in a manner that is perceptible to other residents between the hours of 9 p.m. and 7 a.m.
 - (9) Any tutoring or instruction shall be limited to a maximum of 4 students at a time.
 - (10) A barber or beauty shop shall not include more than one non-resident employee.
 - (11) The main office of a medical doctor, chiropractor or dentist shall not be permitted as a home occupation.
 - (12) See Home Occupation sign provisions in Article 7.
 - (13) The use shall not involve manufacturing, other than of custom crafts and sewing.
 - (14) The use shall not involve commercial repair of motor vehicles. Auto body work shall not be allowed as a home occupation.
 - (15) The use may include sales using telephone, mail order, or electronic methods. On-site retail sales shall be prohibited, except for sales of hair care products as accessory to a barber/beauty shop.

- b. The standards in “a” apply to both Major and Minor Home Occupations. To be permitted by right as a “Minor Home Occupation,” the use shall only involve the following activities:
 - (1) work routinely conducted within an office,
 - (2) custom sewing and fabric and basket crafts,
 - (3) cooking and baking for off-site sales and use,
 - (4) creation of visual arts (such as painting, wood carving or screen printing on clothes),
 - (5) repairs to and assembly of computers and computer peripherals,
 - (6) headquarters of a construction trades-person, provided that no more than 2 non-resident employees shall operate from the lot,
 - (7) tutoring or instruction of up to 4 pupils at a time, or
 - (8) barber or beautician.
 - (9) any other activity that meets the definition of a “No Impact Home Based Business” as defined in the Municipalities Planning Code.
 - c. All home occupations need a zoning permit.
7. **Outdoor Storage and Display.** Commercial or Industrial as a Principal or Accessory Use.
- a. Location. Outdoor storage or display shall not occupy any part of any of the following: the existing or future street right-of-way, sidewalk, or other area intended or designed for pedestrian use or required parking area.
 - b. No such storage or display shall occur on areas with a slope in excess of 25% or within the 100 year floodplain.
 - c. Screening. See Section 803.
8. **Residential Accessory Structure or Use.** (see definition in Article 2)
- a. Accessory structures and uses (other than fences and walls) shall not be located within the required accessory use setback unless specifically exempted by this Ordinance. Accessory structures shall not be located within a minimum front yard. See accessory setback regulations in Section 307.
 - b. Height. See Section 307.B.
 - c. An existing building that is accessory to a dwelling may be replaced with a new accessory building provided the new building does not increase the nonconformity. For example, a garage can be replaced with a new garage covering the same land area. See also Section 805, which allows an extension of certain non-conforming setbacks.
 - d. A building that originally served as a Manufactured/Mobile Home shall not be used as an accessory storage building for a dwelling.
9. **Retail Sales of Agricultural Products as an Accessory Use.**
- a. The use shall be an accessory use incidental to a crop farming, greenhouse, plant nursery, orchard, winery or raising of livestock use.
 - b. The only retail sales shall be of agricultural products and horticultural products, in addition to any hand-made crafts produced by the operator of the market and/or his/her family. An average of not less than 25 percent of the products sold on-site shall have

been produced by the operator or his/her family. This percentage may vary month to month, provided that the average is met.

- c. Off-street parking shall be provided in compliance with the provisions of Article 6. No parking shall be permitted in such a way that it creates a safety hazard.
- d. No stand shall be located closer than: 50 feet from a lot line of an existing dwelling on another lot, or within 25 feet from a street right-of-way, unless the sales occur within a building that existed prior to the adoption of this Ordinance.
- e. A maximum total of 5,000 square feet of building floor area shall be used for such use.
- f. The retail sales shall be located on land owned by the operator of the market or upon a lot that is farmed.

10. **Stable, Household.** The provisions for Stable, Non-Household in Section 402 shall apply. Accessory Household Stables are permitted by right in all districts.

11. **Swimming Pool, Household, In ground.**

- a. Note to Applicant – See the requirements of the Construction Code regarding fencing of pools. The applicant should contact the Borough/Township building official.
- b. An in ground swimming pool shall not be located in a required minimum front yard. The water surface of an in ground swimming pool shall be setback a minimum of 5 feet from side and rear lot lines.
- c. An above ground swimming pool is exempt from this Ordinance.

12. **Wind Turbines.**

- a. All Wind turbines shall be set back from any lot line or street right-of-way line a minimum distance equal to the total height to the top of the maximum sweep of the turbine blade, as measured from the ground level under the turbine base. Such setback shall not apply from a lot if a written signed and notarized waiver is provided to the Zoning Officer by the principal owner of adjacent lot. Two or more abutting lot owners may use the setback waiver process to share use of a wind turbine.
- b. The audible sound from the wind turbine shall not exceed 45 A weighted decibels, as measured at the exterior of an occupied principal building on another lot, unless a written waiver is provided by the owner of such building. This noise limit shall not apply during wind speeds of more than 30 miles per hour. A person claiming a violation of this noise level, and not the County, shall be responsible to provide evidence of the violation.
- c. The owner of the facility shall completely remove all above ground structures within 12 months after the windmill is no longer used to generate electricity.
- d. The turbine shall include automatic devices to address high speed winds, such as mechanical brakes and over-speed controls.
- e. The maximum total height above the ground level to the tip of the extended blade shall be 90 feet in an R-2 or R-3 district and 150 feet in any other district. For taller heights, the wind turbine regulations in Section 402 shall apply.

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- f. If located within 800 feet of each side of the centerline of the Appalachian Trail, a wind turbine shall have a maximum height of 90 feet and shall be setback a minimum of 1,000 from any other wind turbine.
- g. In addition, in a commercial or industrial district, multiple wind turbines that are mounted on a roof shall be permitted by right provided they do not extend more than 30 feet above the roof.

ARTICLE 5
ENVIRONMENTAL PROTECTION

501. EROSION CONTROL.

See the requirements of the County Conservation District, the Subdivision and Land Development Ordinance and State erosion control regulations (Note: as of 2009 in 25 PA. Code Chapter 102).

502. NUISANCES AND HAZARDS TO PUBLIC SAFETY.

If the Zoning Officer has reason to believe that the proposed use may have difficulty complying with the standards of this Article that control nuisances and hazards to public safety, then the Zoning Officer may require an applicant to provide written descriptions of proposed machinery, hazardous substances, operations and safeguards.

503. FP - FLOODPLAIN DISTRICT (Flood-prone Areas).

The requirements of the municipal Floodplain Ordinance shall apply. See the Official Federal Floodplain Maps, as published by the U.S. Emergency Management Agency.

ARTICLE 6

OFF-STREET PARKING AND LOADING

601. REQUIRED NUMBER OF OFF-STREET PARKING SPACES.

A. Overall Requirements.

1. Number of Spaces. Each use that is newly developed, enlarged, significantly changed in type of use, or increased in number of establishments shall provide and maintain off-street parking spaces in accordance with Table 6.1 and the regulations of this Article.
2. Uses Not Listed. Uses not specifically listed in Table 6.1 shall comply with the requirements for the most similar use listed in Table 6.1, unless the applicant proves to the satisfaction of the Zoning Officer that an alternative standard should be used for that use.
3. Multiple Uses. Where a proposed lot contains or includes more than one type of use, the number of parking spaces required shall be the sum of the parking requirements for each separate use.
4. Parking Landscaping. See Sections 803 and 804 of this Ordinance.

TABLE 6.1 - OFF-STREET PARKING REQUIREMENTS
(See Section 601.B. below for the TC and C-1 Districts)

USE	NUMBER OF OFF-STREET PARKING SPACES REQUIRED	PLUS 1 OFF-STREET PARKING SPACE FOR EACH:
A. <u>RESIDENTIAL USES:</u> 1. Dwelling Unit, other than types listed separately in this table.	2 per dwelling unit. As part of a new subdivision, if a vehicle must be moved from one space in order to access the second space, then an additional parking space shall be available for each dwelling unit, such as an on-street space in front of the dwelling or an overflow parking lot.	
2. Home Occupation	See Section 403	
3. Housing Permanently Restricted to Persons 62 Years and Older and/or the Physically Handicapped	1 per dwelling/ rental unit, except 0.4 per dwelling/ rental unit if evidence is presented that the non-physically handicapped persons will clearly primarily be over 70 years old	Non-Resident Employee
4. Boarding House	1 per rental unit or bed for adult, whichever is greater	Non-Resident Employee
5. Group Home	1 per 2 residents, unless the applicant proves the home will be limited to persons who will not be allowed to drive a vehicle from the property	Employee

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USE	NUMBER OF OFF-STREET PARKING SPACES REQUIRED	PLUS 1 OFF-STREET PARKING SPACE FOR EACH:
<u>B. INSTITUTIONAL USES:</u>		
1. Place of Worship or Church	1 per 5 seats in room of largest capacity. For pews that are no individual seats, each 48 inches shall count as one seat.	Employee
2. Hospital	1 per 3 beds	1.2 Employees
3. Nursing Home	1 per 5 beds	1.2 Employees
4. Assisted Living Facility and/or Retirement Community	1 per 4 beds, plus 1.5 for each individual dwelling unit	1.2 Employees
5. Day Care Center	1 per 10 children, with spaces designed for safe and convenient drop-off and pick-up	1.1 Employees
6. School, Primary or Secondary	1 per 4 students aged 16 or older	1.1 Employee
7. Utility Facility	1 per vehicle routinely needed to service facility	
8. College or University	1 per 1.5 students not living on campus who attend class at peak times (plus required spaces for on-campus housing)	1.1 Employee
9. Library, Community Center or Cultural Center or Museum	1 per 5 seats (or 1 per 250 sq. ft. of floor area accessible to patrons and/or users if seats are not typically provided)	1.1 Employee
10. Treatment Center	1 per 2 residents aged 16 years or older plus 1 per non-resident intended to be treated on-site at peak times	Non-Resident Employee
11. Swimming Pool, Non-Household	1 per 50 sq. ft. of water surface, other than wading pools	1.1 Employee
<u>C. COMMERCIAL USES:</u>	All commercial uses, as applicable, shall provide additional parking or storage needed for maximum number of vehicles stored, displayed or based at the lot at any point in time. These additional spaces are not required to meet the stall size and parking aisle width requirements of this Ordinance.	
1. Auto Service Station or Repair Garage	4 per repair/service bay and 1/4 per fuel nozzle with such spaces separated from accessways to pumps	Employee; plus any parking needed for a convenience store under "retail sales"
2. Auto, Boat, Recreational Vehicle or Manufactured Home Sales	1 per 15 vehicles, boats, RVs or homes displayed	Employee

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USE	NUMBER OF OFF-STREET PARKING SPACES REQUIRED	PLUS 1 OFF-STREET PARKING SPACE FOR EACH:
3. Bed and Breakfast Use	1 per rental unit plus the 2 per dwelling unit	Non-resident employee
4. Bowling Alley	2 per lane plus 2 per pool table	1.1 Employees
5. Car Wash	1 waiting space in front of each washing bay plus 2 drying or vacuuming spaces.	1.1 Employees
6. Financial Institution (includes bank)	1 per 200 sq. ft. of floor area accessible to customers, plus "office" parking for any administrative offices	1.1 Employees
7. Funeral Home	1 per 5 seats in rooms intended to be in use at one time for visitors, counting both permanent and temporary seating	Employee
8. Miniature Golf	1 per hole	1.1 Employees
9. Haircutting/Hairstyling	1 per customer seat used for haircutting, hair styling, hair washing, manicuring or similar work	1.1 Employees
10. Hotel or Motel	1 per rental unit plus 1 per 4 seats in any meeting room (plus any required by any restaurant)	1.1 Employees
11. Laundromat	1 per 3 washing machines	On-site Employee
12. Offices or clinic, Medical/dental	5 per physician or physician's assistant and 4 per dentist	1.1 Employees
13. Offices, other than above	1 per 300 sq. ft. of total floor area	
14. Personal Service Use, other than haircutting/hairstyling (minimum of 2 per establishment)	1 per 200 sq. ft. of floor area accessible to customers	1.1 Employees
15. Indoor Recreation (other than bowling alley), Membership Club or Exercise Club	1 per 4 persons of maximum capacity of all facilities	1.1 Employees
16. Outdoor Recreation (other than uses specifically listed in this table)	1 per 4 persons of capacity (50% may be on grass overflow areas with major driveways in gravel)	1.1 Employees
17. Restaurant	1 per 4 seats, or 3 spaces for a use without customer seats. This parking shall be calculated separately from a shopping center.	1.1 Employees

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USE	NUMBER OF OFF-STREET PARKING SPACES REQUIRED	PLUS 1 OFF-STREET PARKING SPACE FOR EACH:
18. Retail Sales (other than types separately listed and other than a shopping center)	1 per 200 sq. ft. of floor area of rooms accessible to customers.	
19. Retail Sales of Only Furniture, Lumber, Carpeting, Bedding or Floor Covering	1 per 800 square feet of floor area of rooms accessible to customers	
20. Shopping Center involving 5 or more retail establishments on a lot.	1 per 200 square feet of leasable floor area	
21. Tavern or Nightclub or After-hours Club	1 per 30 sq. ft. of total floor area	1.1 Employees
22. Theater or Auditorium	1 per 4 seats, one-half of which may be met by convenient parking shared with other business uses on the same lot that are typically not routinely open beyond 9:00 p.m.	1.1 Employees
23. Trade/Hobby School	1 per 2 students on-site during peak use	1.1 Employee
24. Veterinarian Office	4 per veterinarian	1.1 Employee
<u>E. INDUSTRIAL USES:</u> All industrial uses (including warehousing, distribution and manufacturing)	In addition to parking or storage needed for maximum number of vehicles stored, displayed or based at the lot at any point in time, which spaces are not required to meet the stall size and aisle width requirements of this Ordinance 1 per 1.1 employee, based upon the maximum number of employees on-site at peak period of times	1 visitor space for every 10 managers on the site
Self-Storage Development	1 per 20 storage units	1.1 Employee

B. Parking Reduction in TC and C-1 Districts Within Boroughs.

1. Purposes. To recognize the availability of on-street parking and pedestrian travel in the TC and C-1 districts within boroughs, and the limited ability to provide parking to serve existing buildings, and the potential of customers walking to businesses in the area.
2. The parking requirements in Table 6.1 shall be modified within the TC and C-1 districts within a borough as follows:
 - a. Additional off-street parking spaces shall not be required for a new or replacement commercial use within a building that existed prior to the adoption of this ordinance. This provision shall not allow the removal of off-street parking that is currently required and currently provided.

- b. Off-street parking shall be required for any additional dwelling units or any new construction of any building or any expansion of a building, except as may be allowed under Section 602.C.2.

602. GENERAL REGULATIONS FOR OFF-STREET PARKING.

- A. General. Parking spaces and accessways shall be laid out to result in safe and orderly use, and to fully take into account all of the following: vehicular access onto and off the site, vehicular movement within the site, loading areas, pedestrian patterns and any drive-thru facilities. No parking area shall cause a safety hazard or impediment to traffic off the lot.
- B. Existing Parking.
 1. Any parking spaces serving such pre-existing structures or uses at the time of adoption of this Ordinance shall not in the future be reduced in number below the number required by this Ordinance.
 2. If a new principal non-residential building is constructed on a lot, then any existing parking on such lot that serves such building shall be reconfigured to comply with this Ordinance, including but not limited to, requirements for channelization of traffic from adjacent streets, channelization of traffic within the lot, minimum aisle widths, paving and landscaping.
- C. Change in Use or Expansion. A structure or use in existence at the effective date of this Ordinance that expands or changes in use of an existing principal building shall be required to provide all of the required parking for the entire size and type of the resulting use, except as follows:
 1. If an existing lawful use includes less parking than would be required if the use would be newly developed, then that deficit of parking shall be grandfathered for reuses of an existing building. For example, an existing store might include 3 parking spaces and would have been required to provide 7 spaces if it was newly developed. Therefore, there is an existing nonconforming deficit of 4 spaces. Then, if that store is converted to an office that would need 10 spaces, the office would need to provide a total of 6 spaces (10 spaces minus the pre-existing deficit of 4 equals 6).
 2. If parking is reduced by Section 601.B. then this grandfathering of a parking deficit shall not also be used.
 3. If a non-residential use expands by an aggregate total maximum of 5 percent in the applicable measurement (such as building floor area) beyond what existed at the time of adoption of this Ordinance, then no additional parking is required. For example, if an existing building included 3,000 square feet, and a single minor addition of 150 square feet was proposed, then additional parking would not be required. This addition without providing new parking shall only be allowed one time per lot.
- D. Continuing Obligation of Parking and Loading Spaces. All required numbers of parking spaces and off-street loading spaces shall be available as long as the use or building which the spaces serve still exist, and such spaces shall not be reduced in number below the minimum required by this ordinance. No required parking area or off-street loading spaces shall be used for any other use (such as storage or display of materials) that interferes with the area's availability for parking.

E. Location of Parking.

1. Required off-street parking spaces shall be on the same lot or abutting lot with the principal use served, unless the applicant proves to the satisfaction of the Zoning Officer that a method of providing the spaces is guaranteed to be available during all of the years the use is in operation within 300 feet walking distance from the entrance of the principal use being served. Such distance may be increased to 500 feet for employee parking of a non-residential use. A written and signed lease shall be provided, if applicable. The use shall only be allowed for a period of time consistent with the lease of the parking. A zoning permit may be considered to no longer be valid if the lease for the required parking is not renewed.
2. Within the TC district, no new off-street surface parking space shall be placed between a principal building and the curbline of an arterial street. This requirement shall not prevent the realignment of existing parking areas. This provision shall not prevent vehicle parking from being located to the side or rear of a building.
3. In the TC district, if an existing rear or side alley is available or could be feasibly extended, it shall be used for access to any garage or parking spaces for the lot instead of a front yard driveway accessing directly onto an arterial street.

F. Reduction of Parking Requirements as a Special Exception.

1. Purposes - To minimize the amount of land covered by paving, while making sure adequate parking is provided. To recognize that unique circumstances may justify a reduction in parking.
2. As a special exception, the Zoning Hearing Board may authorize a reduction in the number of off-street parking spaces required to be provided for a use if the applicant proves to the satisfaction of the Zoning Hearing Board that a lesser number of spaces would be sufficient.
 - a. The applicant shall provide evidence justifying the proposed reduced number of spaces, such as studies of similar developments during their peak hours. The applicant shall also provide relevant data, such as numbers of employers, peak expected number of customers/visitors and similar data.
 - b. Under this section, an applicant may prove that a reduced number of parking spaces is justified because more than one principal use will share the same parking. In such case, the applicant shall prove that the parking has been designed to encourage shared use, and that long-term agreements ensure that the parking will continue to be shared. The amount of the reduction in parking should be determined based upon whether the different uses have different hours of peak demand and/or overlapping customers.
 - (1) In addition, an applicant may prove that parking needs will be reduced or that off-site parking is feasible because the applicant agrees to make a long-term commitment to a shuttle service for residents or employees.
 - c. Reserved Area for Additional Parking. Under this section, the Zoning Hearing Board may require that a portion of the required parking be met through a reservation of an area for future parking. The Board may require the reservation for a certain number of years or an indefinite period corresponding to the years the buildings are in use.
 - (1) Such reservation shall be in a form acceptable to the Zoning Hearing Board Solicitor that legally binds current and future owners of the land to keep the reserved parking area in open space and then to provide the additional parking if the Borough/Township determines it is necessary. A deed restriction is recommended.

- (2) If approved under this subsection “c.”, the applicant shall present a site plan to the Zoning Officer that shows the layout that will be used for the additional parking if the parking is required to be provided in the future. The site plan shall show that the additional parking is integrated with the overall traffic access and pedestrian access for the site, and that the additional parking will be able to meet Borough/Township requirements.
- (3) The additional parking that is “reserved” under this subsection shall be required to be kept as landscaped open area, until such time as the Zoning Hearing Board decision may authorize the land’s release from the restriction, or until the Borough/Township may require that the land be developed as parking.
- (4) The Zoning Officer shall periodically review the sufficiency of the parking that is provided. If the Zoning Officer in the future determines that the reserved parking is needed to meet actual demand, he/she shall provide written notice to the property-owner. The property-owner shall then have one year to develop the reserved area into off-street parking in compliance with this Ordinance.

603. DESIGN STANDARDS FOR OFF-STREET PARKING.

A. General Requirements.

1. Backing Onto a Street. No parking area shall be designed to require or encourage parked vehicles to back into a public street in order to leave a parking space, except for: a) a driveway serving one dwelling or b) a driveway that enters onto a local street or parking court. Parking spaces may back onto an alley.
2. Every required parking space shall be designed so that each motor vehicle may proceed to and from the parking space provided for it without requiring the moving of any other vehicle, unless specifically permitted otherwise.
3. Parking areas shall not be within a required buffer yard or street right-of-way.
4. Separation from Street. Except for parking spaces immediately in front of individual dwellings, all areas for off-street parking, off-street loading and unloading and the storage or movement of motor vehicles shall be physically separated from the street by a continuous grass or landscaped planting strip, except for necessary and approved vehicle entrances and exits to the lot.
5. Stacking and Obstructions. Each lot shall provide adequate area upon the lot to prevent back-up of vehicles on a public street while awaiting entry to the lot, or while waiting for service at a drive-thru facility.

B. Size and Marking of Parking Spaces.

1. Each parking space shall be a rectangle with a minimum width of 9 feet and a minimum length of 18 feet, except the minimum sized rectangle shall be 8 feet by 22 feet for parallel parking and except where a larger space is required by Section 603.C.
2. For spaces for persons with disabilities, Section 603.F.
3. All spaces shall be marked to indicate their location, except those of a one or two family dwelling.

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C. Aisles. Parking spaces and aisles shall be designed and built in conformance with the following:

Angle of Parking	Parking Space Min. Width (feet)	Parking Space Min. Depth (feet)	Aisle Width - One Way Traffic (feet)	Aisle Width - Two Way Traffic (feet)
90 degrees	9	18	20	24
55 to 89 degrees	10	22	18	22
35 to 54 degrees	10	21	15	20
1 to 34 degrees	10	19	12	20
Parallel	8	22	12	20

Min. = Minimum

D. Accessways and Driveways.

1. Width of Driveway at Entrance onto
a Public Street, at the edge of the cartway* One-Way Use* Two-Way Use*

Minimum	12 feet	24 feet
Maximum	20 feet	30 feet

* This standard may be revised where PennDOT requires a different standard is required by PennDOT for an entrance to a State road, or where the applicant demonstrates to the Zoning Officer that a wider width is needed for truck access.

2. Drainage. Adequate provisions shall be made to maintain uninterrupted parallel drainage along a public street at the point of driveway entry. The Borough/Township may require an applicant to install an appropriate type and size of pipe at a driveway crossing.

E. Maintenance and Surfacing of Parking Area. For parking areas of 5 or more spaces including driveways and loading areas (other than areas maintained in landscaping) shall be graded, surfaced with asphalt, concrete, paving block, crushed stone, porous asphalt, porous concrete or similar surfaces designed to promote groundwater recharge. Parking areas shall be drained in a manner that minimizes erosion.

1. Parking areas that only serve seasonal or temporary uses or that are in excess of the minimum amount of parking may be maintained in grass.
2. The first 20 feet of a business or institutional use driveway adjacent to a public street/road cartway shall be surfaced in asphalt or concrete.

F. Parking for Persons With Disabilities.

1. Number of Spaces. See requirements under the Federal Americans With Disabilities Act for parking for persons with disabilities. The following is a summary of certain relevant requirements in effect as of the enactment of this Ordinance.

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TOTAL NO. OF PARKING SPACES ON THE LOT	REQUIRED MINIMUM NO./ PERCENT OF ADA-ACCESSIBLE PARKING SPACES
1 to 25	1 van-accessible
26 to 50	2, 1 of which must be van-accessible
51 to 75	3, 1 of which must be van-accessible
76 to 100	4, 1 of which must be van-accessible
101 to 150	5, 1 of which must be van-accessible
151 to 200	6, 1 of which must be van-accessible
201 to 300	7, 1 of which must be van-accessible
301 to 400	8, 1 of which must be van-accessible
401 to 500	9, 2 of which must be van-accessible
501 to 1,000	2% of total number of spaces, 1/8th of which must be van-accessible
1,001 or more	20 plus 1% of spaces for each 100 over 1000 spaces, 1/8 of which must be van-accessible

2. Location. Handicapped parking spaces shall be located where they would result in the shortest reasonable accessible distance to a handicapped accessible building entrance. Curb cuts shall be provided as needed to provide access from the handicapped spaces.
3. Minimum Size and Slope. See requirements of the Americans With Disabilities Act regulations.
4. Marking. All required handicapped spaces shall be well-marked in compliance with the Americans With Disabilities Act. Such signs and/or markings shall be maintained over time.
5. Paving. Handicapped parking spaces and adjacent areas needed to access them with a wheelchair shall be covered with a smooth surface that is usable with a wheelchair.

G. Paved Area Setbacks (including Off-Street Parking Setbacks).

1. Intent. To ensure that parked or moving vehicles within a lot do not obstruct sight distance or interfere with pedestrian traffic, to aid in storm water management along streets and to prevent vehicles from entering or exiting a lot other than at approved driveways.
2. Any new or expanded vehicle parking or vehicle storage area serving a principal non-residential use shall be separated from a public street by a planting strip. The planting strip shall have a minimum width of 5 feet and be maintained in grass or other attractive vegetative groundcover. The planting strip may be on one or both sides of any sidewalk provided the planting width totals 5 feet. This 5 feet width shall be increased to 10 feet for a lot including 20 to 99 parking spaces and to 15 feet for a lot including 100 or more parking spaces.

- a. The planting strip shall not include heights or locations of plants that would obstruct safe sight distances, but may include deciduous trees that allow motorists to maintain views under the leaf canopy. The planting strip may be used for stormwater infiltration, provided it is vegetated and attractively maintained.
 - b. The planting strip may be placed inward from the shoulder of an uncurbed street or inward from the curb of a curbed street. The planting strip may overlap the street right-of-way, provided it does not conflict with PennDOT requirements, and provided that the Borough/Township and PennDOT as applicable maintain the right to replace planting areas within the right-of-way with future street improvements.
 - c. Approximately perpendicular driveway crossings may be placed within the planting strip. Mostly vegetative stormwater channels may be placed within the planting strip.
 - d. The following shall be prohibited within the planting strip:
 1. paving, except as allowed by subsection "c." above, and except for street widenings that may occur after the development is completed, and
 2. parking, storage or display of vehicles or items for sale or rent.
 - e. Where feasible, where a sidewalk is not installed, this setback should include an unobstructed generally level width running parallel to a street that is suitable for a person to walk.
3. See landscaping requirements in Section 803 and 804.

604. OFF-STREET LOADING.

- A. Each use shall provide off-street loading facilities, which meet the requirements of this Section, sufficient to accommodate the maximum demand generated by the use and the maximum size vehicle, in a manner that will not routinely obstruct traffic on a public street and traffic entering and exiting the lot. If no other reasonable alternative is feasible, traffic may be obstructed for occasional loading and unloading along an alley, provided traffic has the ability to use another method of access.
- B. At the time of review under this Ordinance, the applicant shall provide evidence to the Zoning Officer on whether the use will have sufficient numbers and sizes of loading facilities. For the purposes of this Section, the words "loading" and "unloading" are used interchangeably.
- C. Each space and the needed maneuvering room shall not intrude into approved buffer areas and landscaped areas.

605. FIRE LANES AND ACCESS.

- A. Fire lanes shall be provided where required by State or Federal regulations or other local ordinances.
- B. Access shall be also provided so that fire equipment can reach all sides of principal non-residential buildings and multi-family/apartment buildings. This access shall be able to support a loaded fire pumper truck, but shall not necessarily be paved.
- C. The specific locations of fire lanes are subject to approval by local Fire Officials.

ARTICLE 7

SIGNS

701. PURPOSES AND APPLICABILITY.

- A. Purposes. This Article is intended to: promote and maintain overall community aesthetic quality; establish reasonable time, place and manner of regulations for the exercise of free speech, without unreasonably regulating content; promote traffic safety by avoiding distractions and sight distance obstructions; and protect property values and ensure compatibility with the character of neighboring uses.
- B. Permit Required. A zoning permit shall be required for any free standing sign with an area of 50 or more square feet, except for that the following types of signs shall not need a permit and shall not be regulated by this Ordinance provided they are not a prohibited type of sign: a) signs meeting Section 703 shall also not need a permit, b) window signs of any size shall not need a permit and are not regulated, and c) wall signs of any size shall not need a permit. For signs with a sign area of 50 or more square feet, only types, sizes and heights of signs that are specifically permitted by this Ordinance within the applicable District shall be allowed.
1. State Permits. Note: The applicant is also responsible to obtain any required PADOT approvals or permits for a sign located along a State highway.
- C. Changes on Signs. Any lawfully existing sign (including nonconforming signs) may be painted or repaired or changed in logo or message without a new permit under this Ordinance provided that the changes do not increase the sign area or otherwise result in noncompliance or an increased non-conformity with this Ordinance.
- D. Nonconforming Signs.
1. Signs legally existing at the time of enactment of this Ordinance and which do not conform to the requirements of the Ordinance shall be considered nonconforming signs.
 2. An existing lawful non-conforming sign that was lawful when it was initially placed may be replaced with a new sign, provided the new sign is not more nonconforming in any manner than the previous sign. A non-conforming sign shall not be expanded in a manner that does not conform to this Ordinance.

702. SIGN DEFINITIONS.

- A. The following definitions shall also be used in determining whether signs meet the measurement and type requirements of this Article:
1. Abandoned Sign. A sign which identifies something that is no longer a bona fide business, lessor, service, owner or product, or advertises an event or activity that is not longer occurring, and/or for which no legal owner can be found. This term shall also include a structural support for a sign if the sign has been removed.
 2. Awning. A non-illuminated sign painted on or attached to a fabric or vinyl cover on a rigid frame. All or part of the allowed wall sign area may be placed on an awning.
 3. Building Face. The vertical area of a particular side of a building, but not including the area of any slanted roof.

4. Changeable Message Sign. A sign that is designed to vary from message to message by means of electronic lights, movable panels and/or movable letters.
5. Freestanding Sign. A sign which is self-supporting upon the ground or which is primarily supported by poles attached to the ground and not primarily supported by a building.
6. Height of Sign. The vertical distance measured from the average ground level surrounding a sign to the highest point of the sign and its supporting structure. Religious symbols, when not accompanied by lettering, shall not be restricted by the sign heights of this Article when attached to a tower or spire of a place of worship.
7. Illuminated Sign, Internally. A sign illuminated by light from within the sign rather than a source adjacent to or outside of the sign. A sign within a display case with lights only shining onto the front of the sign shall be considered to be "externally" illuminated.
8. Non-conforming Sign. A sign which was lawful when it was installed, but which would not meet current sign regulations of this Ordinance.
9. Off-Premise Sign. A sign which directs attention to an object, product, service, place, activity, person, institution, organization or business that is primarily offered or located at a location other than the lot upon which the sign is located.
10. On-Premises Sign. A sign that is not an off-premises sign, such as a sign that advertises a business or service offered on the premises.
11. Political Sign. A sign that advertises a candidate for election or an opinion on a current political issue.
12. Portable Sign. A sign that is not permanently affixed to the ground or to a building, and which is not listed by this Article as an allowed temporary sign, and which is attached to a chassis, wheels or legs that allows it to be towed or carried from one location to another.
13. Projecting Sign. A sign that is attached to a building and that extends perpendicular from the building and which meets requirements of the Construction Code for secure construction and minimum clearance over a sidewalk, and which does not extend over a street.
14. Real Estate Sign. A temporary sign advertising the availability of land or building space for sale, lease or auction.
15. Sign. Any physical device for visual communication that is used for the purpose of attracting attention from the public and that is visible from beyond an exterior lot line, including all symbols, words, models, displays, banners, flags, devices or representations. This shall not include displays that only involve symbols that are clearly and entirely religious in nature, and which do not include advertising.
16. Wall Sign. A sign primarily supported by or painted on a wall of a building. A Wall Sign may also be displayed upon an awning or canopy, provided other requirements of this Ordinance are met.
17. Window Sign. A sign which is readily visible and can be at least partially read from an exterior lot line and which is attached to a window or transparent door or that can be read through a window or transparent door.

703. MISCELLANEOUS SIGNS NOT REQUIRING PERMITS.

A. The following are not regulated by this Ordinance:

1. Holiday Decoration Sign-commemorates a holiday recognized by the Federal, State, County, Township/Borough or other legally constituted governmental body that does not include advertising.

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2. Not Readable Sign- not readable from any public street or any exterior lot line.
3. Official Sign- erected by the Federal, State, County, Township/Borough or other legally constituted governmental body, or specifically authorized by Federal, State, County, Township/Borough action, and which exists for public purposes.
4. Political Sign. – temporary political signs.
5. Required Sign- only includes information required to be posted outdoors by a government body or agency.
6. Right-of-Way Sign- posted within the existing right-of-way of a public street and officially authorized by PennDOT, the Township/Borough or the County, including but not limited to decorative banners hung from street lights that are authorized by the Township/Borough.
7. Contractor(s) or Financing Entity Sign-listing the name of the contractor(s) or financing entity involved with an active building site; to advertise the availability of land or building space for sale or lease, to advertise charitable events; and to allow temporary banners advertising lawful principal commercial businesses. Such signs shall not need a zoning permit.

704. FREESTANDING SIGNS (On-Premises Signs).

- A. The following are the on-premises freestanding signs permitted on a lot within the specified districts and within the following regulations, in addition to "Exempt Signs" and "Temporary Signs" permitted in all districts by other provisions of this Article. The sizes and numbers of wall and window signs are not regulated by this Ordinance provided that they do not exceed the height of the building to which they are attached by more than 10 feet. See definitions of the types of signs in Section 702.

ZONING DISTRICT OR TYPE OF USE	TOTAL MAXIMUM HEIGHT OF FREE-STANDING SIGNS	TOTAL MAXIMUM AREA AND NUMBER OF FREE-STANDING SIGNS
A, CR and Residential Districts, with signs in this table limited to allowed principal non-residential uses, nursing homes and personal care centers.	10 feet	1 sign on each street the lot abuts, each with a maximum sign area of 60 sq. ft.
C-1 and T-C Town Center Commercial District.	10 feet	1 sign per street that the lot abuts, each with a maximum area of 60 sq. ft. * In addition, a maximum 12 square feet projecting sign is allowed. See also banners in Section 703.
C-3, C-4, I-C, CM districts and any other district not listed above	20 feet.	1 sign per street that the lot abuts, each with a maximum area of 60 sq. ft. * In addition, a 12 square feet projecting sign is allowed. See also banners in Section 703.

- * If a lot includes 2 or more distinct principal non-residential uses, the maximum freestanding sign area may be increased by 15 square feet for each principal non-residential use beyond

the first non-residential use. For example, in the C-1 district, if a lot includes 3 such uses, the maximum freestanding sign area shall be 60 plus 30 equals 90 square feet. A movie theater freestanding sign may have a sign area of 200 square feet. One freestanding sign with a maximum sign area of 60 square feet each shall be allowed for each new motor vehicle franchise on the lot.

B. Portable Signs (Including "Signs on Mobile Stands").

1. Purpose. These standards recognize portable signs as a particular type of sign that has the characteristics of a temporary sign but that has been inappropriately used as a permanent sign. This Section is based on the policy that if a use desires to regularly display a sign for regularly changing messages, that it erect a permanent sign within all of the requirements of this Ordinance.
2. Portable signs are prohibited in all districts, except as a temporary Charitable Event sign.
3. Businesses are encouraged to provide an area on a permanent sign that displays changeable messages, as opposed to using a separate sign for such purpose.

C. Signs on Freestanding Walls. A freestanding sign may be attached to a decorative masonry or stone wall, provided it does not obstruct safe sight distances.

705. PROHIBITED SIGNS.

The following prohibitions on signs shall apply in all zoning districts:

- A. Any moving object used to attract attention to a commercial use is prohibited. However, certain flags and banners may be allowed as provided in Section 703.
- B. Flashing, blinking, twinkling, animated, or moving signs of any type are prohibited. Signs may change their message from time to time provided that each message is visible for a minimum of 6 seconds, except as follows: a) time and temperature signs may change more frequently, and b) a sign with a sign area greater than 100 square feet shall not change its message more frequently than once every 20 seconds.
 1. In addition, flashing lights visible from a street shall not be used to attract attention to a business. This restriction specifically includes window signs, but does not prohibit Christmas season lighting or displays.
- C. Signs which emit smoke, visible vapors or particles, sound or odor are prohibited.
- D. Signs that are of such form, shape or color that they resemble an official traffic sign, signal or device or that have any characteristics which are likely to confuse or distract the operator of a motor vehicle on a public street (such as prominent use of the words "Danger") are prohibited.
- E. Signs or displays visible from a lot line that include words or images that are obscene or pornographic are prohibited.
- F. Floodlights and outdoor lasers for advertising purposes are prohibited.

706. OFF-PREMISE SIGNS (Including Billboards).

- A. Purposes. These provisions are intended to: ensure that a physical environment is maintained that is attractive to desirable types of development; prevent visual pollution and protect property values, especially in consideration of the fact that many commercial areas are within close proximity to existing residences; prevent glare on adjacent property and streets; avoid the creation of additional visual distractions to motorists, especially along busy arterial streets that involve complex turning movements and numerous traffic hazards; recognize the numerous alternative forms of free speech available in the Township/Borough, including existing nonconforming off-premise signs, on-premise signs and temporary signs and printed and electronic media; carry out the purposes of Section 701.
- B. Nonconforming Off-Premise Signs. This section is not intended to require the removal of an existing lawfully-placed off-premise sign that is in structurally sound condition.
- C. Permitted Off-Premise Signs. Except for other types of signs that are specifically allowed by this Section to be off-premises, an off-premise sign is only permitted if it meets the following requirements:
 - 1. District. An off-premise sign is permitted in the A, C-3, C-4, I-C and CM Districts.
 - 2. Location. An off-premise sign shall be setback a minimum of 25 feet from all lot lines and street rights-of-way.
 - 3. Maximum Total Sign Area on Each of 2 Sides. 300 square feet, except 674 square feet shall be allowed within 600 feet from an interstate highway right-of-way.
 - 4. Spacing. Any off-premise sign shall be separated by a minimum of 500 feet from any other off-premise sign with a sign area greater than 20 square feet, including signs on either side of a street and including existing signs in other municipalities. No lot shall include more than 1 off-premise sign structure.
 - 5. Maximum Height. 40 feet above the elevation of the adjacent street or highway, measured at the street or highway centerline that the sign faces onto.
 - 6. Attached. No off-premise sign or sign face shall be attached in any way to any other off-premise sign, except that a sign may have two sign faces provided the angle between the signs does not exceed 45 degrees.
 - 7. Setbacks. No off-premise sign greater than 60 square feet in sign area shall be located within 200 feet from any of the following: a) an existing dwelling or b) a residential district.
 - 8. Condition. The sign shall be maintained in a good and safe condition, particularly to avoid hazards in high winds.
- D. Additional Off-Premise Signs. Up to 2 off-premises signs may be placed if needed to direct motorists to a principal business use within a municipality that is not adjacent to an arterial road. Such signs shall only be posted with permission of the owner of the land upon which the signs will be placed. Each sign shall not exceed 10 square feet and shall not exceed 8 feet in height. Such signs shall not be illuminated.

- E. Industrial Park Signs. Off-premises signs shall be allowed that are necessary to direct traffic to principal industrial uses. Each such sign shall have a maximum sign area of 60 square feet and a maximum height of 15 feet.

707. GENERAL DESIGN, LOCATION AND CONSTRUCTION OF SIGNS.

- A. Right-of-Way. Official signs are allowed within an existing street right-of-way. The Borough Council or Board of Supervisors or their designee may approve other signs within a street right-of-way, without needing zoning approval.
- B. Sight Clearance. No sign shall be so located that it interferes with the sight clearance requirements of Section 803.
- C. Off-Premises. No signs except permitted Off-Premise, Official, Political or Public Service Signs shall be erected on a property to which it does not relate. A Major Development Sign may be located on one lot in a subdivision to advertise uses throughout the subdivision.
- D. Permission of Owner. No sign shall be posted on any property or public utility pole, unless permission has been received by the owner of such land or pole.
- E. Utility Poles. No sign shall be attached to a utility pole using metal fasteners, except by a utility or government agency.
- F. Construction of Signs. Every permanent sign permitted in this section shall be constructed of durable materials and shall be kept in good condition and repair.

708. VEHICLES FUNCTIONING AS SIGNS.

Any vehicle, trailer or structure to which a sign is affixed in such a manner that the carrying of such sign(s) no longer is incidental to the primary purpose of the vehicle, trailer or structure but instead becomes a primary purpose in itself shall be considered a freestanding sign and shall be subject to all of the requirements for freestanding signs in the district in which such vehicle, trailer or structure is located.

709. ABANDONED OR OUTDATED SIGNS.

Signs advertising a use no longer in existence (other than a sign relating to a building that is clearly temporarily vacant and being offered to new tenants or for purchase) shall be removed within 180 days of the cessation of such use.

710. MEASUREMENT OF SIGNS.

- A. Measurement of Sign area.
 - 1. Sign area shall include all lettering, wording and accompanying designs and symbols, together with related background areas on which they are displayed. One "freestanding sign" may include several signs that are all attached to one structure, with the total "sign area" being the area of a common geometric form that could encompass all signs.
 - 2. The sign area shall not include any structural supports that do not include a message.

3. Where the sign consists of individual letters or symbols attached to or painted directly on a building or window, other than an illuminated background that is a part of the sign, the sign area shall be the smallest rectangle that includes all of the letters and symbols.
4. The maximum sign area of sign shall be for each of two sides of a sign, provided that only one side of a sign is readable from any location.
5. Unless otherwise specified, all square footages in regards to signs are maximum sizes.

711. MAJOR DEVELOPMENT SIGNS.

- A. If a subdivision or land development is approved to include 15 or more dwelling units or 5 or more principal non-residential uses, then an additional sign shall be permitted up to 2 vehicle entrances to the project from exterior public streets. Such sign may have two sign faces on one structure, or one sign face on each structure on each side of the entrance.
 1. Each such sign shall have a maximum sign area of 60 square feet. Such signs shall have a maximum total height of 6 feet. The sign may be attached to a stone or decorative masonry wall or fence constructed of weather-resistant wood or materials with a similar appearance. In such case, the wall or fence shall have a maximum total height of 6 feet and a maximum length of 20 feet.
- B. Such signs should be of durable construction that requires little maintenance. Such sign shall not be illuminated. Attractive low-maintenance landscaping should surround the sign.

ARTICLE 8
GENERAL REGULATIONS

801. FRONTAGE ONTO IMPROVED STREETS; NUMBER OF USES OR BUILDINGS; MINIMUM SIZE OF DWELLINGS.

A. Frontage Required onto Improved Street. Each proposed new lot and each land development shall have vehicle access by one of the following methods: 1) onto a “public street” that is usable by motor vehicles and which is maintained by a municipality or the State; 2) a street which is constructed or bonded by the municipality and has been approved for future dedication to the Borough/Township by the subdivision plan which created or creates such lot; 3) onto a stone or hard surfaced private street which meets all of the requirements of the applicable Subdivision and Land Development Ordinance (SALDO) and which provides legal access to connect to a public street; or 4) as provided in Section 801.A.1. In the case of townhouses, manufactured/mobile home park, or apartments, each unit may have access onto a parking court which then has access onto an approved street.

1. A lot may have vehicle access to a public street / road using an easement serving no more than 3 single family detached residences (such as one existing dwelling and two new lots) subject to the following requirements:
 - a. The grant of easement shall be recorded with the deed for each lot.
 - b. The easement shall be appurtenant to the dominant tenement.
 - c. The easement shall be the actual route of access to the lot.
 - d. The level of use of the easement shall be specified in the grant of easement.
 - e. The grant of easement shall provide that the level of use of the easement shall include use of the easement as the route for provision of all utility services to the dominant tenement.
 - f. The grant of easement shall define the level of improvement of the easement provided that the minimum level of improvement shall be “mud free”, such as a stone surface.
 - g. The grant of easement shall specify who is responsible for maintenance of the easement.
 - h. The route of the easement shall be field surveyed.
 - i. The route of the easement shall be described by metes and bounds.
 - j. All easements shall be at least 33 feet wide, unless a pre-existing easement is 25 feet wide.
 - k. The access easement shall be improved to be suitable for access by a fire truck and ambulance, with an area available for a turnaround. The vehicle accessway shall meet the requirements of the applicable Subdivision and Land Development Ordinance that would apply to a driveway, such as maximum slope.
1. A new principal building shall be setback a minimum of 20 feet from the access easement, unless a larger setback applies under the zoning district in Section 306.

B. Number of Principal Uses and Principal Buildings Per Lot.

1. A lot in a commercial or industrial district may include more than one permitted principal use per lot and/or more than one permitted principal building per lot, provided

that all of the requirements are met for each use and each building. If differing dimensional requirements apply for different uses on the lot, then the most restrictive requirement shall apply.

- a. For example, if Use One requires a one acre lot area and Use Two on the same lot requires a two acre lot area, then the lot shall have a minimum lot area of two acres.
 - b. The applicant shall submit a site plan that demonstrates that each structure would meet the requirements of this Ordinance.
 - c. The uses and buildings shall be in common ownership. However, a condominium form of ownership of individual buildings, with a legally binding property-owners association, may be established if the applicant proves that there will be appropriate legal mechanisms in place.
2. A lot within a residential district shall not include more than one principal use and shall not include more than one principal building unless specifically permitted by this Ordinance.
- a. A manufactured/mobile home park, condominium residential development or apartment development may include more than one principal building per lot, provided all other requirements of this Ordinance are met. A condominium form of ownership of individual dwelling units, with a legally binding homeowners association, may be established if the applicant proves that there will be appropriate legal mechanisms in place.
- C. Minimum Size of Dwellings. Each dwelling unit shall include a minimum of 500 square feet of enclosed habitable, indoor, heated floor area, which shall be primarily above the ground level. This 500 square feet requirement may be reduced to 400 square feet within pre-existing buildings in the TC or C-1 districts.
- D. Maximum Occupancy. No recreational vehicle shall be occupied on a lot for more than 30 days in a calendar year, except as may be approved within a campground with suitable central water and sewage service. No mobile/manufactured home shall be occupied on a lot as a dwelling unless it meets all of the requirements for a dwelling.

802. RESERVED.

803. SPECIAL LOT AND YARD REQUIREMENTS, SIGHT DISTANCE AND BUFFER YARDS.

A. In General.

1. No lot, structure or use shall be created or developed in such a way that it would result in another lot, building or use not being able to meet the requirements of this Ordinance. This includes, but is not limited to: setback areas, non-impervious areas and off-street parking areas.
2. Emergency Access. All uses and structures shall have adequate provisions for access by emergency vehicles and fire ladders. Such access shall be maintained in a passable condition by the owner of the lot, or where applicable by the property-owner association.

B. Exceptions to Minimum Lot Areas, Lot Widths and Yards.

1. Corner Lots. For a corner lot, each yard that abuts a public street shall be considered a front yard and meet the requirements for minimum depth of a front yard. See definition of "Lot, Corner" in Section 202.
2. Projections Into Required Yards.
 - a. Cornices, footers, eaves, roof overhangs, sills or other similar architectural features, rain gutters, chimneys, or other similar structures that do not include space usable by persons may extend or project into a required yard not more than 4 feet.
 - b. Outdoor steps, stoops, fire escapes, handicapped ramps, doors and landings necessary to provide entrance to a building may be located within a required setback area.
 - c. For decks, patios and porches, see Section 307. C.
3. Lot Widths Around Curves. Around the bulb of a cul-de-sac turnaround or on the outside of the curve of a street with a radius of less than 150 feet, the minimum lot width at the minimum building setback line may be reduced to 75 percent of the width that would otherwise be required.
4. Flag Lots. See Section 307.G.

C. Sight Clearance at Intersections. The provisions in the Subdivision and Land Development Ordinance shall apply.

D. Buffer Yards. Buffer yards including plant screening complying with the following standards shall be required under the following situations, unless a more restrictive provision is established by another section of this Ordinance:

1. A minimum 8 feet wide buffer yard with plant screening shall be required along the rear and side lot lines of any lot used principally for principal non-residential purposes that is contiguous to a lot line of a residentially zoned lot occupied by an existing principal dwelling.
 - a. If a principal business use will include areas used for manufacturing or will have a loading dock that will be routinely serviced by two or more tractor-trailer trucks or refrigerated trucks, then the minimum buffer yard width along such manufacturing area and/or loading dock shall be increased to 30 feet, and the minimum initial height of plantings shall be increased to 6 feet.
 - b. If a dwelling will be on the same lot as a principal business use, then a buffer yard shall not be required to protect such dwelling.
 - c. A buffer yard is also required to be provided by the following if they are abutting and visible from a public street:
 - (1) Along lot lines and street rights-of-way of any newly developed or expanded outdoor industrial storage, or
 - (2) Along lot lines and street rights-of-way of any newly developed or expanded area routinely used for the overnight parking of 3 or more tractor-trailer trucks or trailers of tractor-trailers.

2. A required yard may overlap a required buffer yard, provided the requirement for each is met. The buffer yard shall be measured from the district boundary line, street right-of-way line or lot line, whichever is applicable. Required plantings shall not be placed within the right-of-way, except that the County may allow deciduous canopy trees.
3. The buffer yard shall be a landscaped area free of structures, dumpsters, commercial or industrial storage or display, signs, manufacturing or processing activity, materials, loading and unloading areas or vehicle parking or display.
4. Each planting screen shall meet the following requirements:
 - a. Plant materials needed to form the visual screen shall have a minimum height when planted of 4 feet.
 - b. Plants needed to form the visual screen shall be of such species, spacing and size as can reasonably be expected to produce within 3 years a mostly solid year-round visual screen at least 6 feet in height.
 - c. The plant screen shall be placed so that at maturity the plants will not obstruct a street or sidewalk.
 - d. The plant visual screen shall extend the full length of the lot line, except for: a) approved points of approximately perpendicular vehicle or pedestrian ingress and egress to the lot, b) locations necessary to comply with safe sight distance requirements where the plantings cannot feasibly be moved further back, and c) locations needed to meet other specific State, County, Borough/Township and utility requirements, such as stormwater swales.
 - e. American Arborvitae and similar weak-stem plants shall not be used to meet the buffer yard requirements. Evergreen trees should be planted at diagonal off-sets so that there is room for future growth of the trees. The plant screening shall primarily use evergreen trees.
 - f. Any fence shall be placed on the inside of any required buffer yard.

804. LANDSCAPING.

- A. Any part of a commercial, industrial, institutional or apartment lot which is not used for structures, loading areas, parking spaces and aisles, sidewalks and designated storage areas shall be provided with an all-season, well-maintained vegetative groundcover, and shall be landscaped with trees and shrubs.
- B. See also the buffer yard provisions in Section 803. See parking lot setbacks in Section 603.G.
- C. Parking Lot Landscaping.
 1. A minimum of one deciduous tree shall be required for every 20 new off-street parking spaces.
 2. If a lot will include 30 or more new parking spaces, landscaped islands shall be provided within auto parking areas. Otherwise, the trees may be planted around the parking area.
 3. Type of Trees. Required trees shall be chosen from the list of approved street trees as contained in the County Subdivision and Land Development Ordinance or applicable Subdivision and Land Development Ordinance, unless the applicant proves to the

satisfaction of the County that another type of tree would shade paved areas, be resistant to disease, road salt and air pollution and be attractive.

4. Required trees shall be of symmetrical growth and free of insect pests and disease.
5. The trunk diameter (measured at a height of 6 inches above the finished grade level) shall be a minimum of 2 inches or greater.
6. Trees shall be planted with adequate soil and unpaved surface around each for water and air.

D. Landscape Maintenance. All landscaping required by this Ordinance shall be perpetually maintained by the property-owner. If such landscaping dies, is removed, or is severely damaged, it shall be replaced by the current property-owner as soon as is practical considering growing seasons.

805. NONCONFORMITIES.

A. Proof of Nonconformities. It shall be the responsibility of, with the burden of proof upon, a party asserting a nonconformity to provide the evidence that it is lawful. A property owner may request a written statement of nonconformity from the Zoning Officer after providing sufficient evidence.

B. Continuation of Nonconformities.

1. A lawful nonconforming use, structure or lot as defined by this Ordinance may be continued and may be sold and continued by new owners.
2. Any expansion of, construction upon or change in use of a nonconformity shall only occur in conformance with this section.
3. If an existing use was not lawfully established, it shall not have any right to continue as a nonconforming use.

C. Expansion of or Construction Upon Nonconformities. The following shall apply, unless the structure is approved under Section 805.D.

1. Nonconforming Structure.

- a. The Zoning Officer shall permit a nonconforming structure to be replaced, reconstructed or expanded provided:
 - (1) that such action will not increase the severity or amount of the nonconformity (such as the area of the building extending into the required yard) or create any new nonconformity, or
 - (2) that any expanded area will comply with the applicable setbacks in that District and other requirements of this Ordinance, except as may be allowed under subsection 1.c. below.
- b. In the case of a nonconforming structure which is used by a nonconforming use, any expansion shall also meet the requirements of this Section regarding nonconforming uses.
- c. See provisions in Section 307 that allow reductions in setbacks for certain existing lots.

- d. **Extension Along a Nonconforming Setback.** If an existing building has a lawfully nonconforming front, side or rear building setback, additions may occur to increase the height above such setback or to extend other portions of the building out to the nonconforming front, side or rear setback line, provided that:
 - (1) the structure shall not be extended beyond the existing nonconforming setback line;
 - (2) the new nonconforming extension is not greater than 50 percent of the existing floor area of the building being expanded;
 - (3) all other requirements of this Ordinance shall be met; and
 - (4) such additions shall not be permitted for a building for a non-residential use that abuts an existing primarily residential use.
2. **Nonconforming Lots.**
 - a. **Permitted Construction on a Nonconforming Lot.** A single permitted by right principal use and its customary accessory uses may be constructed, reconstructed or expanded on a nonconforming lot provided all of the following additional requirements are met:
 - (1) The lot must be a lawful nonconforming lot of record;
 - (2) Minimum setback requirements shall be met, except as provided elsewhere in this ordinance.
 - (3) State and Federal wetland regulations shall be met;
 - (4) If a septic or well is used, the requirements for such shall be met.
 - b. **Lot Width.** The fact that an existing lawful lot of record does not meet the minimum lot width requirements of this Ordinance shall not by itself cause such lot to be considered to be a nonconforming lot.
 - c. **Note:** The dimensional requirements for certain districts in Section 306 allow reduced side yards for some nonconforming lots.
3. **Expansion of a Nonconforming Non-Residential Use.** A non-conforming use or building area used by a nonconforming use shall not be expanded, except in accordance with the following provisions:

A nonconforming structure may be expanded up to one hundred (100%) percent of its floor area as it exists at the time of adoption of this Ordinance. A nonconforming structure proposed to be expanded more than 100% of its floor area may be permitted by special exception. Such use shall not be expanded except in accordance with all of the zoning regulations herein.

A nonconforming use may be expanded up to fifty (50%) percent of its lot area as it exists at the time of the adoption of this Ordinance. A nonconforming use proposed to be expanded more than 50% of its lot area may be permitted by special exception. Such use shall not be expanded except in accordance with all of the zoning regulations herein

Such reconstruction or expansion shall be only upon the same lot that the nonconforming use was located upon at the time the use became nonconforming. The above maximum increase shall be measured in aggregate over the entire life of the nonconformity. All expansions of the nonconforming use and/or building(s) that occurred since the use originally became nonconforming shall count towards the above maximum increase. Any expansion of a nonconforming use shall meet the required setbacks and other requirements of this Ordinance, unless the Zoning Hearing Board grants a variance.

4. Expansion of a Nonconforming Residential Use. An existing non-conforming residential use may be expanded as a permitted by right use provided that: a) the number of dwelling units or rooming house units are not increased, b) the expansion meets all applicable setbacks, c) no new types of nonconformities are created and d) a nonconformity is not made more severe.
5. Nonconforming Sign. The provisions of this Ordinance shall not provide a right to expand or extend a nonconforming sign. Instead, any expansions or extensions of a nonconforming sign shall comply with this Ordinance. See also Section 707.

D. Damaged or Destroyed Nonconformities.

- 1 Whenever an existing structure with prior nonconforming elements is partially damaged or totally destroyed by fire or other causes beyond the control of the property owner, that structure may be rebuilt, provided that such rebuilding does not result in a building which is more out of compliance than the building being replaced. A zoning permit to replace the structure must be obtained within twenty-four (24) months from the date of damage or destruction. Any such building or structure shall be allowed to be reconstructed on the same footprint that existed prior to the damage or destruction.
- 2 Extension. In response to an applicant stating good cause in writing, the Zoning Officer may extend in writing the time limit for substantial completion of work to a maximum total of 48 months after permits are issued.
- 3 If the structure or use is within the 100-year floodplain, regulations also apply under the Borough / Township floodplain regulations.

E. Abandonment of a Nonconformity.

1. If a nonconforming use of a building or land is discontinued, razed, removed or abandoned for 5 or more years, subsequent use of such building or land shall conform with the regulations of the district in which it is located, except as provided for in the "Damaged or Destroyed Nonconformities" provisions of Section 805.D.
2. The applicant shall be responsible to provide clear and convincing evidence that the nonconformity was not abandoned.
3. An existing lawful separate dwelling unit may be unrented for any period of time without being considered "abandoned" under this Ordinance.

F. Changes from One Nonconforming Use to Another.

1. Once changed to a conforming use, a structure or land shall not revert to a nonconforming use.
2. A nonconforming use may be changed to a different nonconforming use only if approved as a Special Exception by the Zoning Hearing Board. However, Special Exception approval is not needed for a simple change within an existing building from one lawful nonconforming retail store use to another retail store use or from one lawful nonconforming personal service use to another personal service use, provided that the

new use complies with any applicable Zoning Hearing Board conditions that applied to the previous use.

3. Where special exception approval is required for a change of a nonconforming use, the Board shall determine whether the applicant has provided sufficient proof to show that the proposed new use will be equal or less objectionable in external effects than the pre-existing nonconforming use with regard to:
 - a. Traffic safety and generation (especially truck traffic),
 - b. Noise, dust, fumes, vapors, gases, odor, glare, vibration, fire, hazardous substances, and explosive hazards,
 - c. Amount and character of outdoor storage,
 - d. Hours of operation if the use would be close to dwellings and
 - e. Compatibility with the character of the surrounding area.
 4. A nonconforming use shall not be changed to a nonconforming Adult Use.
- G. District Changes. Any uses, structures or lots that become nonconforming because of a zoning district change shall be regulated under this Section on nonconformities.

ARTICLE 9

SPECIAL PROVISIONS IN APPROACH AREAS FOR BENDIGO AND SCHUYLKILL COUNTY (JOE ZERBEY) AIRPORTS

901. APPLICABILITY AND PURPOSES.

- A. This Article creates overlay zoning districts that regulate the height of structures and objects of natural growth, and otherwise regulates the use of property, in the vicinity of the Bendigo, and Schuylkill County (Joe Zerbey) Airports, which are hereafter known as “the Airports.” This Article establishes the boundaries of the overlay zoning districts and incorporates maps of the Airport Approach overlay zoning districts.
- B. It is hereby found that an obstruction within the approaches to the Airports: 1) has the potential for endangering the lives and property of users of the Airports and property of occupants of land in the vicinity; 2) affect existing and future instrument approach minimums of the Airports; and 3) may reduce the size of areas available for the landing, takeoff, and maneuvering of aircraft, thus tending to destroy or impair the utility of the Airports and the public investment therein. Accordingly, it is declared:
 - 1. that the creation or establishment of an obstruction has the potential of being a public nuisance and may injure the region served by the Airports.
 - 2. that it is necessary in the interest of the public health, public safety, and general welfare that the creation or establishment of obstructions that are a hazard to air navigation be prevented; and
 - 3. that the prevention of these obstructions should be accomplished, to the extent legally possible, by the exercise of the police power without compensation.
- C. Within an Airport Approach overlay district/zone, the applicable provisions of this Article shall apply in addition to all other requirements of this Ordinance. The land uses allowed by the underlying zoning district shall continue to be allowed, but the heights of structures shall be regulated in a more restricted manner as provided in this Article.
- D. The Airport Approach Map is available for review in the County Planning and Zoning Office.

902. AIRPORT APPROACH DEFINITIONS.

- A. For the purposes of this Article 9, the following terms shall have the following meanings:
 - 1. Airports. Bendigo and Schuylkill County (Joe Zerbey) Airports.
 - 2. Airport Elevation. The highest point of an airport’s usable landing area measured in feet from sea level.
 - 3. Airport Hazard. Any structure or object, natural or manmade, or use of land which obstructs the airspace required for flight or aircraft in landing or taking off at an airport or is otherwise hazardous as defined in 14 CFR Part 77 and 74 Pa. Cons. Stat. §5102.

4. Airport Hazard Area. Any area of land or water upon which an airport hazard might be established if not prevented as provided for in this Ordinance and Act 164 of 1984 (Pennsylvania Laws Relating to Aviation).
5. Airport Surface. A surface longitudinally centered on the extended runway centerline, extending outward and upward from the end of the primary surface and at the same slope as the approach zone height limitation slope set forth in Section 904. In plan the perimeter of the approach surface coincides with the perimeter of the approach zone.
6. Approach, Transitional, Horizontal, and Conical Zones. These zones are set forth in Section 903.
7. Conical Surface. A surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.
8. Department. Pennsylvania Department of Transportation.
9. FAA. Federal Aviation Administration of the United States Department of Transportation.
10. Hazard to Air Navigation. An obstruction determined to have a substantial adverse effect on the safe and efficient utilization of the navigable airspace.
11. Height. For the purpose of determining the height limits in all zones set forth in this Article and shown on the maps incorporated herein, the datum shall be mean sea level elevation unless otherwise specified.
12. Horizontal Surface. A horizontal plane 150 feet above the established airport elevation, the perimeter of which in plane coincides with the perimeter of the horizontal zone.
13. Larger Than Utility Runway. A runway that is constructed for and intended to be used by propeller driven aircraft of greater than 12,500 pounds maximum gross weight and jet powered aircraft.
14. Non-precision Instrument Runway. A runway having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance, or area type navigation equipment, for which a straight-in non-precision instrument approach procedure has been approved or planned.
15. Person. An individual, firm, partnership, corporation, company, association, joint stock association, or governmental entity; includes a trustee, a receiver, an assignee, or a similar representative of any of them.
16. Precision Instrument Runway. A runway having an existing instrument approach procedure utilizing an Instrument Landing System (ILS) or a Precision Approach Radar (PAR). It also means a runway for which a precision approach system is planned and is so indicated on an approved layout plan or any other planning document.

17. Primary Surface. A surface longitudinally centered on a runway. When the runway has a specially prepared hard surface, the primary surface extends 200 feet beyond each end of that runway; or, when the runway has no specially prepared hard surface, or planned hard surface, the primary surface ends at each end of that runway. The width of the primary surface is set forth in Section 903. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline.
18. Runway. A defined area on an airport prepared for landing and takeoff of aircraft along its length.
19. Transitional Surfaces. These surfaces extend outward at 90 degree angles to the runway centerline and the runway centerline extended at a slope of 7 feet horizontally for each foot vertically from the sides of the primary and approach surfaces to where they intersect the horizontal surface.
20. Utility Runway. The runway that is constructed for and intended to be used by propeller driven aircraft of 12,500 pounds maximum gross weight and less.
21. Visual Runway. A runway intended solely for the operation of aircraft using visual approach procedures.
22. Zone. For the purposes of this Article, the term “Zone” shall have the same meaning as an overlay zoning district.

903. AIRPORT ZONES.

- A. In order to carry out the provisions of this Article, there are hereby created and established certain zones which include all of the land lying beneath the approach surfaces, transitional surfaces, horizontal surfaces, and conical surfaces as they apply to Bendigo and Schuylkill County (Joe Zerbey) Airports. Such zones are shown on maps prepared for each Airport, which are included in this Ordinance by reference and are part of this Ordinance. A copy of such maps shall be kept by the Zoning Officer. An area located in more than one of the following zones is considered to be only in the zone with the more restrictive height limitation. The various zones are hereby established and defined as follows:
 1. Utility Runway Visual Approach Zone. The inner edge of this approach zone coincides with the width of the primary surface and is 250 feet wide. The approach zone expands outward uniformly to a width of 1,250 feet at a horizontal distance of 5,000 feet from the primary surface. Its centerline is the continuation of the centerline of the runway.
 2. Runway Larger than Utility With a Visibility Minimum Greater than 3/4 Mile Non-Precision Instrument Approach Zone. The inner edge of this approach zone coincides with the width of the primary surface and is 500 feet wide. The approach zone expands outward uniformly to a width of 3,500 feet at a horizontal distance of 10,000 feet from the primary surface. Its centerline is the continuation of the centerline of the runway.
 3. Transitional Zones. The transitional zones are the areas beneath the transitional surfaces.

4. Horizontal Zone. The horizontal zone is established by swinging arcs of 10,000 feet radii from the center of each end of the primary surface of each runway and connecting the adjacent arcs by drawing lines tangent to those arcs. The horizontal zone does not include the approach and transitional zones.
5. Conical Zone. The conical zone is established as the area that commences at the periphery of the horizontal zone and extends outward there from a horizontal distance of 4,000 feet.

904. AIRPORT ZONE HEIGHT LIMITATIONS.

- A. Except as otherwise provided in this Article, no structure shall be erected, altered, or maintained in any zone created by this Article to a height in excess of the applicable height limitations established for each of the zones in question as follows:
 1. Utility Runway Visual Approach Zone. Slopes 20 feet outward for each foot upward beginning at the end of and at the same elevation as the primary surface and extending to a horizontal distance of 5,000 feet along the extended runway centerline.
 2. Runway Larger than Utility With a Visibility Minimum Greater than 3/4 Mile Non-Precision Instrument Approach Zone. Slopes 34 feet outward for each foot upward beginning at the end of and at the same elevation as the primary surface and extending to a horizontal distance of 10,000 feet along the extended runway centerline.
 3. Transitional Zones. Slopes 7 feet outward for each foot upward beginning at the sides of and at the same elevation as the primary surface and the approach surface, and extending to a height of 150 feet above the airport elevation. In addition to the foregoing, there are established height limits sloping 7 feet outward for each foot upward beginning at the sides of and at the same elevation as the approach surface, and extending to where they intersect the conical surface.
 4. Horizontal Zone. Established at 150 feet above the airport elevation.
 5. Conical Zone. Slopes 20 feet outward for each foot upward beginning at the periphery of the horizontal zone and at 150 feet above the airport elevation and extending to a height of 350 feet above the airport elevation.
 6. Expected Height Limitations. Nothing in this Article shall be construed as prohibiting the construction or maintenance of any structure to a height up to 50 feet above the surface of the land.
- B. Permit Applications for property adjoining Schuylkill County (Joe Zerbey) Airport. As regulated by Act 164 and defined by 14 Code of Federal Regulations Part 77.13(a) (as amended or replaced), any person who plans to erect a new structure 200' or greater above ground level or adds to an existing structure thereby increasing the height to 200' or greater above ground level and being within five (5) miles of the Airport shall notify the Schuylkill County Airport Authority of the applicant's intentions by submitting the appropriate FAA form, PADOT Form AV-57 and providing a copy of such form(s) to the Schuylkill County Airport Authority.

- C. Permit Applications for property adjoining Bendigo Airport. As regulated by Act 164 and defined by 14 Code of Federal Regulations Part 77.13(a) (as amended or replaced), any person who plans to erect a new structure 200' or greater above ground level or adds to an existing structure thereby increasing the height to 200' or greater above ground level and being within the Airport Hazard Area shall notify the owner of the Bendigo Airport of the applicant's intentions by submitting the appropriate FAA form, PADOT Form AV-57 and providing a copy of such form(s) to the owner of the Bendigo Airport.

No permit is required to make maintenance repairs to or to replace parts of existing structures which do not enlarge or increase the height of an existing structure.

905. AIRPORT APPROACH USE RESTRICTIONS.

Notwithstanding any other provisions of this Article, no use may be made of land or water within any zone established by this Article in such a manner as to create electrical interference with navigational signals or radio communication between the airport and aircraft, make it difficult for pilots to distinguish between airport lights and others, result in glare in the eyes of pilots using the airport, impair visibility in the vicinity of the airport, create bird strike hazards, or otherwise in any way endanger or interfere with the landing, takeoff, or maneuvering of aircraft intending to use the airport.

906. NONCONFORMING USES.

- A. The regulations prescribed by this Article shall not be construed to require the removal, lowering, or other change or alteration of any structure not conforming to the regulations as of the effective date of this Article or otherwise interfere with the continuance of nonconforming use. Nothing contained herein shall require any change in the construction, alteration, or intended use of any structure, the construction or alteration of which was begun prior to the effective date of this Article and is diligently prosecuted.
1. Marking and Lighting. Notwithstanding the preceding provision of this Section, the owner of any existing nonconforming structure is hereby required to permit the installation, operation, and maintenance thereon of such markers and lights as shall be deemed necessary by the Schuylkill County Airport Authority to indicate to the operators of aircraft in the vicinity of the airport the presence of such Airport Hazard. Such markers and lights shall be installed, operated, and maintained at the expense of the Schuylkill County Airport Authority.
 2. Existing Uses. No permit shall be granted that would allow the establishment or creation of an Airport Hazard or permit a nonconforming use or structure to become a greater hazard to air navigation than it was on the effective date of this Article or any amendments thereto or than it is when the application for a permit is made. A landowner with a tree that has grown in a way that intrudes into an airport approach zone is encouraged to allow the owner of the affected Airport to have access to trim the top of the tree as is necessary for safety.
 3. Obstruction Marking and Lighting. Any special exception or variance granted may, if such action is deemed advisable, effectuate the purpose of this Article and be reasonable in the circumstances, be so conditioned as to require the owner of the structure in

question to install, operate, and maintain, at the owner's expense, such markings and lights as may be necessary.

907. PERMITS.

- A. Future Uses. Except as specifically provided for in other sections of this ordinance, no material change shall be made in the use of land, and no structure shall be erected or otherwise established unless a permit therefore shall have been applied for and granted. Each application for a permit shall indicate the purpose for which the permit is desired, with sufficient particularity to permit it to be determined whether the resulting use or structure would conform to the regulations herein prescribed. If such determination is in the affirmative, the permit shall be granted. No permit for a use inconsistent with the provisions of this Article shall be granted unless a variance has been approved in accordance with Article 1.

Schuylkill County Zoning Ordinance

Attachment K-2

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

Deed of Restricted Use

This **Deed of Restriction of Use** made
this 11th day of December in the year two thousand nine (2009).

Between **BLACKWOOD, INC.**, a for-profit corporation
organized under the laws of the Commonwealth of Pennsylvania with its
principal office located in Wind Gap, Northampton County, Pennsylvania,
called, "Grantor",

- AND -

BLACKWOOD, INC., a for-profit corporation organized
under the laws of the Commonwealth of Pennsylvania with its principal
office located in Wind Gap, Northampton County, Pennsylvania, called
"Grantee",

WITNESS, that in consideration of the sum of One (\$1.00)
Dollar, the receipt which is hereby acknowledged, along with other valuable
consideration, including the resolution of a zoning matter with the County of
Schuylkill and Township of Reilly, Schuylkill County, Pennsylvania, the
Grantor, hereby desires to place restrictions on the use of its various parcels
of contiguous land totaling approximately one thousand eight hundred forty-
seven and six tenths (1,847.6) acres situated in Reilly Township, Schuylkill
County, Pennsylvania, as found in the Deed from Hava, LTD, to
Blackwood, Inc. dated February 24, 1999, recorded in the office of the
Schuylkill County Recorder of Deeds in Deed Book 550 beginning at Page
306, hereafter collectively called the "Blackwood Lands", that are the
subject of a pending appeal for zoning approval from the Schuylkill County
Zoning Hearing Board in order to use the Blackwood Lands to create and
operate as set forth in the application: "alkaline stabilization of biosolids into
Class A product using N-Viro process, storage of product", hereafter
"Biosolid Processing Operation";

WHEREAS, since part of the Agreement reached with
Township of Reilly involves promises and guarantees about the use of the
Blackwood Lands, by the owners, their successors, assigns, affiliates,
lessees, partners, associates, employees, independent contractors or anyone
on the property with permission, this document was created to insure the

restrictions contained here would remain with the title to the Blackwood Lands and be binding for the present and any future owners of the Blackwood Lands;

WHEREAS, the Grantor, and its successors and assigns, expressly sets forth the following restrictions on the use of the Blackwood Lands with regard to the Biosolid Processing Operation:

1. Except for the delivery, application, supervision and seeding related to Class A biosolids product that will be used only for lawful land application purposes on those parcels which are located north of the existing Reading, Blue Mountain and Northern (RBMN) railroad tracks, south of State Route 209, west of State Route 901 and east of State Route 125, as depicted on the attached map, no other aspect of the Biosolid Processing Operation, including, but not limited to, transportation as ingress or egress, storage of materials/product of any type or any processing related activity will be conducted on the portion of the Blackwood Lands located north of those RBMN railroad tracks that are situated in the northern portion of the Blackwood Lands;
2. All transportation for ingress and egress to/from the Blackwood Lands relating to the Biosolid Processing Operation, other than by rail line or the exception in the preceding paragraph, must be from the southern entrance to the Blackwood Lands from State Route 125, Tremont Township, Schuylkill County, Pennsylvania;
3. All aspects of the Biosolid Processing Operation, including, but not limited to the storage of materials or spreading of any product/material, or the regular operation of any machinery or processing, must take place at least one thousand (1,000) yards, and farther if required by federal or state law or regulation, from any existing occupied residence that is located in the Village of Newtown and,
4. In the event the necessary approval(s) for land application of Class B biosolid material is obtained for the area of the Blackwood Lands north of the RBMN railroad tracks, the same ingress transportation restrictions mentioned above are applicable for incoming material, and, if the appropriate permission is obtained, the RBMN railroad tracks can be crossed to access those Blackwood Lands north of the railroad tracks for land

application, no Class B biosolids will be applied within 1,000 yards, and farther if required by federal or state law or regulation, of any existing occupied residence that is located in the Village of Newtown. It is the intention of Blackwood to cease accepting any Class B Biosolids for land application north of the RBMN Tracks once the Class A permits are finally issued (via Zoning and/including DEP Approval) and beyond all Appeals.

The Schuylkill County Tax Parcel Numbers of the property collectively referred to as the Blackwood Lands are: 24-4-58, 24-4-60, 24-4-61, 24-4-68, 24-4-69, 24-5-5, 24-7-7, 24-7-8, 24-7-9 and 24-8-2.

In Witness, the undersigned officers of the Grantor, have been authorized to execute this document under their hand and seal, the day and year first above written.

Sealed and Delivered

in the presence of

BLACKWOOD, INC.

Donna E. Donald BY: Nolan A. Perin
Attest President

COMMONWEALTH OF PENNSYLVANIA

COUNTY OF NORTHAMPTON SS.

ON THIS, 16th day of December, 2009, before me, a Notary Public, the undersigned officer(s), personally appeared Nolan A. Perin known by me (or satisfactorily proven) to be the person whose name(s) is/are subscribed to this document and acknowledged that it was executed for the purposes stated.

In Witness, I hereby set my hand and official seal.

Ellen J. Shiner
Administrator of Oaths

Address of Grantee:

NOTARIAL SEAL
ELLEN J. SHINER, NOTARY PUBLIC
BANGOR BORO. NORTHAMPTON CO.
MY COMMISSION EXPIRES NOV. 14, 2010

Attachment K-3

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

Settlement Agreement

AGREEMENT

THIS AGREEMENT, made and executed as of this day of December, 2009, ("Effective Date") by and between Reilly Township, a Second Class Township within Schuylkill County, Pennsylvania with its municipal office at Route 209, Newtown, Pennsylvania 17923 (hereinafter "Reilly Township" or "Township"), with the approval and consent of the Zoning Hearing Board of Schuylkill County (hereinafter "the Board") and WeCare Organics, LLC with a business address at 9289 Bonta Bridge Road, Jordan, New York 13080 (hereinafter "WeCare") and Blackwood, Inc, with a business address at P.O. Box 639, Wind Gap, Pennsylvania, 18091 (hereinafter "Blackwood").

WHEREAS, WeCare, on August 25, 2003, filed a request for a special exception use with the Schuylkill County Zoning Department for permission to construct and operate a Class A Biosolids processing facility (hereinafter "The Facility" or "Facility"), such application being or denied by the Board as presented, but appealed to the Schuylkill County Court of Common Pleas. WeCare alleged in its appeal that it has satisfied its burden to justify the award of a special exception but that the Board had committed error of law by denying the special exception application. Simultaneously with the appeal, WeCare filed a mandamus action to enforce WeCare's claim of a deemed approval of the said application pursuant to the Pennsylvania Municipalities Planning Code (53 P.S. Section 10908(9)) and the Schuylkill County Zoning Ordinance (Section 8.147), the same being adopted and accepted, as filed, by this Agreement; and

WHEREAS, WeCare's claim of a deemed approval has been the subject of protracted litigation in the Schuylkill County Court of Common Pleas, the Commonwealth Court of Pennsylvania, and the Supreme Court of Pennsylvania, as well as the subsequent remand of proceedings to the Schuylkill County Court of Common Pleas, which is currently pending and which may otherwise result in further appeals from that Court's decision. Based on the realistic possibility a deemed approval of the application, without any conditions could be awarded by the Courts, the Township feels it is in the best interest of its citizens to have reached this Agreement containing favorable conditions under the circumstances; so the Board defers to the Township's preference and consents, and

WHEREAS, WeCare's appeal of the Board's denial of the special exception also has the potential for protracted litigation with an uncertain outcome in the Schuylkill County Court of Common Pleas, the Commonwealth court of Pennsylvania, and the Supreme Court of Pennsylvania which litigation would cause the parties to incur substantial costs and expenses with possible adverse effect on the Township community;

WHEREAS, this Agreement shall not be construed by any party or by any third parties as an admission of liability, nor shall it be construed as the establishment of a policy with respect to any persons or entities which are not presently a named as a party to this Agreement; and

WHEREAS, said Facility considers itself a Solid Waste Management Facility (SWMF) under Section 5.600 of the Schuylkill County Zoning Ordinance; and

WHEREAS, The facility is to be situated on an 8.5-acre tract located in the middle of a 1,847.6 acre tract of land owned by Blackwood, Inc.; and

WHEREAS, The entire site upon which the facility is to be located is set forth to be within the Conservation Mining (C-M) District of Reilly Township, Schuylkill County, Pennsylvania and in compliance of all Pennsylvania Department of Environmental Protection (PaDEP) and Environmental Protection Agency (EPA) Permits and Regulations; and

WHEREAS, the Facility will consist of a 12,500 square foot mixing building, and adjacent 15,000 square foot curing building, and material storage silos and a 1.75 acre product storage area; and

WHEREAS, WeCare is anticipated to be permitted to develop and operate a facility that stabilizes municipal sewage sludge utilizing the "N-Viro" process (Advanced Alkaline Stabilization with Subsequent Accelerated Drying is a chemical/physical pasteurization process that renders municipal sewage sludge into a valuable soil conditioner) into N-Viro Soil, an EQ, Class A biosolid product

WHEREAS, the Facility will accept up to 300 wet tons per day of biosolids in the form of dewatered sludge cake from municipal wastewater treatment plants as well as Alkaline Admixtures such as kiln dust, processed lime, coal ash as well as any and all other suitable material to be mixed with the sludge utilizing the N-Viro process. An average of 150 tons of Alkaline Admixture will be accepted at the facility per day and stored in silos and containers. The Facility will produce, cure and store the end product on site, until the same can be sold and transported to users pursuant to all state and federal permits-

WHEREAS, Reilly Township is the Host Municipality to the Facility; and,

WHEREAS, Second Class Townships have the power to assure proper and adequate transportation, collection and storage of Waste generated within the boundaries of Reilly Township, the responsibility to ensure that there is adequate capacity for the disposal of Waste generated within the boundaries of Reilly Township, and the authority to enter into agreements or enact ordinances which address aspects of the operation of the Facility; and

WHEREAS, the Parties are desirous of entering into an agreement to settle litigation filed in Schuylkill County Court of Common Pleas, docketed at S-231-04 (Mandamus Action); and Schuylkill County Court of Common Pleas, docketed at S-1249-04 (Weight Restriction Action); and Commonwealth Court of Pennsylvania, docketed at 1669 CD 2006 (Weight Restriction Appeal); and Commonwealth Court of Pennsylvania, docketed at 945 C.D. 2005 (Appeal on Mandamus), Schuylkill County Court of Common Pleas, docketed at S-2438-02 (Appeal of Sludge Ordinance), Schuylkill County Court of Common Pleas, docketed at S-230-04 (Appeal of Zoning Permit Denial), Certificates of Discontinuances with prejudice will be provided to the Township within thirty (30) days once all parties execute this Agreement;

WHEREAS, Reilly Township officials and Schuylkill County Zoning Hearing Board

officials and WeCare officials and Blackwood officials have identified certain economic and environmental issues of common interest, and desire to establish a cooperative relationship with each other to resolve problems or disputes involving those issues; and,

WHEREAS, Reilly Township and WeCare and Blackwood officials further acknowledge that effective communication and cooperation between them with regard to ongoing permitting issues and road issues involving the Facility is of mutual benefit to all; and,

WHEREAS, it is the intention of WeCare to become fully operational within Five (5) years from the date of the signing of this agreement; and,

WHEREAS, all parties recognize that neither party controls the internal operation(s) or function(s) of the Pennsylvania Department of Environmental Protection and the issuance of the requisite Pennsylvania Department of Environmental Protection Permits are not guaranteed to be issued within any particular time frame; and,

WHEREAS, it is the intention of the Zoning Hearing Board of Schuylkill County and Reilly Township to issue Zoning Permits requested by WeCare in the original application for Special Exception Use with conditions as set forth in this Agreement, said application being deemed approved and approved by operation of this Agreement and WeCare must adhere to all State and Federal laws and regulations; and,

WHEREAS, WeCare and Blackwood shall reactivate the permitting process with the Pennsylvania Department of Environmental Protection, such permitting and application processes as originally filed, shall not be hindered, impaired, or opposed by any party to this agreement as the same is processed by the Pennsylvania Department of Environmental Protection, thereafter the Township reserves any legal right to enter into and/or oppose in this matter any stage of the permitting process with the Pennsylvania Department of Environmental Protection or the appropriate State and Federal Agency to the extent that there may be a material change from the original application process proposed; and,

WHEREAS, Blackwood and/or its heirs, successors and assigns intend to pursue the permitting of a commercial water well on the Southeast segment of the Blackwood property; and,

WHEREAS, Blackwood and/or its heirs, successors and assigns intend to construct a waterline from said well across the Blackwood lands to the Village of Newtown; and,

WHEREAS, it is acknowledged that Blackwood has questioned whether the former Blackwood Road, also known as Reilly Township Road T-567 is still a valid Township Road, as Reilly Township maintains that road was removed from the Township's Road Docket years ago

NOW THEREFORE, for and in consideration of the mutual terms, covenants, and conditions of this Agreement, as well as for other valuable consideration, the parties hereto, intending to be legally bound under and by virtue of the laws of the Commonwealth of Pennsylvania, do covenant and agree:

1. Incorporation of Whereas Clauses. All of the foregoing "Whereas" provisions are incorporated herein, as if fully set forth below.

2. Conventions. In this agreement the following language conventions shall apply:
- a. The singular includes the plural, and the plural shall include the singular;
 - b. Words which specify any gender include the other gender;
 - c. References to statutes include all statutory provisions consolidating, amending or replacing the statute referred to;
 - d. References to writing including printing, typing, lithography and other means of reproducing words in a visible form;
 - e. References to agreements and other contractual instruments shall include all subsequent amendments thereto or changes therein entered into in accordance with their respective terms;
 - f. References to persons include their heirs, successors and assigns; and
 - g. The term "including" shall mean "including without limitation".

3. Authority. Reilly Township shall enact by ordinance or resolution with the binding effect of an ordinance constituting a legislative act of the governing body of Reilly Township, authorizing the Supervisors to enter into and execute this Agreement by which Reilly Township agrees that WeCare, and Blackwood, their successors and assigns may accept for processing and disposition and processing permitted Wastes, Residual Wastes, and additives used in production and management of the final products, at its Facility in Reilly Township during the term of this Agreement while permitted to accept such wastes by PaDEP and federal law.

4. Term. The term of this Agreement shall be for twenty (20) years from the earlier of either the first date of biosolids delivery to any part of the Facility, or the date of January 1, 2013. This Agreement may be extended or modified in writing by mutual consent of the Township and WeCare.

5. Fees. It is the specific intent of this Agreement to permit WeCare, to accept for processing and disposition permitted Wastes, Residual Wastes, and additives used in

production and management of the waste products originating from outside the Commonwealth of Pennsylvania, on the same basis as WeCare would be authorized to accept for processing and disposition such permitted Waste, Residual Waste and additives used in production and management of the waste products originating from within the Commonwealth of Pennsylvania in recognition that Reilly Township will receive revenues from the disposition of such waste.

The payments set forth in the following schedule will be in lieu of any taxes, fees and assessments which may be imposed by the Township (except for real estate taxes as currently assessed or to be assessed) by virtue of ownership and operation of the Facility during the term of this Agreement and any amendments,:

a. Host Municipality Fee: \$2 per wet ton of weighed sludge arriving at Facility. Said tonnage excludes any admixture arriving at the facility, which is intended to be blended with the sludge to create the final product. Said tonnage shall not be based upon the final end product. Admixture is not subject to the tonnage calculation. In the event that WeCare no longer needs to pay for the Admixture they will pay a Host Municipal Fee of \$2 per ton to the Township for the Admixture. Should any state or federal law or regulation be enacted that would increase the amount of Host Municipality Fee which could otherwise be collected, it is agreed Reilly Township will get the immediate benefit of the increased payment.

b. The fees agreed upon herein shall be based on waste tonnages reported by WeCare to PaDEP and the reported tonnages shall be subject to modification should PaDEP modify the reported tonnages for any reason, and if and when any and all appeals or challenges regarding such modifications have been finally determined. The fees hereunder shall be paid to the Township by WeCare on a monthly basis, with such payment to be made in arrears by the 30th day of the following month. The fees shall commence within 30 days following the first date biosolids is delivered to any part of the facility. The Township may direct WeCare to make such payment directly to an account at a financial institution on behalf of the Township, as designated in writing by the Township. Notwithstanding anything to contrary, and not intending to limit any rights provided to the Township by SWMA or Act 101, the records of the Facility relating to waste intake rates shall be provided with each payment and be subject to audit or review by the Township, and the waste intake records maintained by the Facility shall be made available to the Township or its designated agents at any time upon request during regular business hours. There will be a late payment fee of Five Hundred (\$500.00) Dollars for each ten (10) day period that a monthly payment is not timely received by Reilly Township.

6. Compliance. WeCare agrees to comply with all applicable rules and regulations of PaDEP and EPA, and with all representations made in the special exception use application, which is accepted by this Agreement and upon a deemed approval with conditions as set forth in this Agreement of its contents. A violation of any applicable rules, regulations or permits of PaDEP and EPA, and/or with all conditions of the special exception use deemed approval with conditions as set forth in this Agreement, in addition to any other applicable rights and remedies afforded to PaDEP, EPA and the Township, shall constitute a material breach of this Agreement. WeCare agrees that the Facility shall not accept any regulated quantity of (a)

Hazardous Waste, (b) chemotherapeutic or infectious waste (which has not been rendered harmless or adequately processed by treatment such as autoclaving, or the like) as defined by state or federal law, or (c) any material or substances that by reason of its composition, characteristics or quality is ineligible for, or barred from, or not permitted for Disposal or Management at the Facility by any applicable federal or state law, or (d) any other materials or

substances that any federal or state governmental entity shall determine to be harmful, toxic, dangerous, or otherwise ineligible for Disposal or Management at the Facility, (e) any materials, substances or wastes that the Facility is precluded from accepting for processing pursuant to any permit.

7. Complaints. WeCare shall promptly create procedures acceptable to the Township to receive and respond to, in a fair, timely and prompt fashion, any complaints from the Township or any other person relating to the operation of the Facility. Complaints shall be accepted in writing, by facsimile, and by e-mail.

8. Access. WeCare shall permit the Township's designated representative to have access to the Facility to inspect the operations of the Facility at any time. During regular business hours, the Township and its authorized representatives shall be permitted access to the records of WeCare pertaining to maps, drawings, books, records and the like for the purposes of verifying compliance with the conditions of this Agreement. Failure to permit access when requested and pursuant to the terms of this paragraph shall constitute a material breach of this Agreement. The Township's designated representative is required to sign in upon arrival and to notify site management before performing an inspection at the Facility, and is required to follow all reasonable site-specific safety policies and procedures.

9. Dispute Resolution. In the event any default occurs, or any claim, controversy or dispute arises between the Township and WeCare relating to this Agreement, the Township and WeCare agree to attempt to resolve the dispute in good faith. If the Township and WeCare are unable to resolve the dispute, then either party may proceed to protect and enforce their respective rights under this Agreement under the laws of the Commonwealth of Pennsylvania by such suits, actions or special proceedings in the Schuylkill County Court of Common Pleas, whose jurisdiction shall be deemed exclusive, either for the specific performance of any covenant or agreement contained herein or in aid of execution of any power herein granted for the enforcement of any proper legal or equitable remedy. Each party acknowledges and agrees that the recovery of monetary damages may not be a sufficient or adequate remedy in the event of a dispute. Any decision of the Court shall be appealable in the manner and as provided by the provisions of Commonwealth law.

10. Default. The following shall constitute a default by any party hereunder: the failure of any party to this Agreement to comply with any material term, condition, obligation, representation, of covenant contained in this Agreement, if such material breach or failure is not cured within ten (10) days following receipt of written notice that will be sent by United States certified mail.

11. Notice. In the event notice is required by any provisions of this agreement, notice shall be provided in writing and delivered by recognized carrier service, or sent by certified mail, postage prepaid, with return receipt requested to the parties at the addresses listed above. Any party may change the address set forth in this paragraph by providing written notice to all other parties or representatives, as listed above.

12. Survival. Should a competent court or tribunal adjudge any provision of this Agreement invalid, such provision shall be deemed modified to the extent necessary to make it enforceable and, all other provisions of this Agreement shall survive.

13. Binding Effect. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, successors and assigns, lessees, and any transfer of assets, access or ownership shall be subject to the terms of this Agreement.

14. Exercise of Rights: Cumulative Remedies. Unless otherwise stated herein, no remedy or election under this Agreement shall be deemed to be exclusive, but rather shall be deemed to be cumulative with all other available remedies at law or in equity.

15. Waiver. Unless otherwise specifically provided by the terms of this Agreement, no delay or failure to exercise any right resulting from any breach of this Agreement shall impair the right or be construed to be a waiver thereof, but the right may be exercised from time to time and as often as may be deemed expedient. Any waiver must be in writing and signed by the party granting the waiver. If any covenant or agreement contained in this Agreement is breached by either party, and thereafter waived by the other party, that waiver will be limited to the particular material breach so waived and will not be deemed to constitute a waiver of any other material breach under this Agreement. Except as provided herein, neither party shall be deemed to have waived any right or claim available pursuant to law.

16. Immunity. Nothing contained herein is intended to waive any immunity afforded to the Township or its representatives under the provisions of Commonwealth law.

17. Modification. This Agreement may be modified only upon the written consent of the parties. This Agreement may be assigned only upon the prior consent of all of the parties, which consent shall not be unreasonably withheld.

18. Entire Agreement. This Agreement shall constitute the entire agreement of the parties, and no prior drafts or communications of the parties shall be relevant or admissible for the purposes of determining the meaning or extent of any provisions contained herein in any proceeding. No modification of this Agreement shall be effective unless made in writing and signed by the parties.

19. Invalidity. In the event that any provisions of this Agreement shall be determined to be invalid, illegal or unenforceable in any respect, that provision shall be enforced to the maximum extent permissible so as to affect the intent of the parties, and the validity, legality and enforceability of the remaining portions shall not in any way be affected or impaired thereby.

Further, in the event that any provisions of this Agreement shall be determined to be invalid, illegal or unenforceable in any respect, the parties agree to negotiate in good faith to modify this agreement or take any other appropriate action necessary to implement and give effect to the provisions of this Agreement. All other provisions of this Agreement shall remain in full force and effect, and the invalidity of one or more phrases, sentences, clauses or sections contained in this Agreement shall not affect the validity of the remaining portion of the Agreement so long as the material purposes of this Agreement can be determined and effectuated.

20. Indemnity. WeCare and Blackwood, their successors and assigns, hereby agree to indemnify and defend Reilly Township, its board members, officers, employees, agents, and attorneys from any and all liability, loss, or damage the Township may suffer as a result of claims, demands, costs, or judgments against it arising from the operation and maintenance of the Facility or the post-closure operation of the Facility whether the liability is caused by or arises out of the negligence of WeCare or Blackwood, their successors and assigns or of their respective officers, agents, employees and attorneys. Further, WeCare and Blackwood, their successors and assigns, hereby agree to indemnify and defend Reilly Township from any loss or claim caused by any person other than a Township employee. Although the Township will at all times be named as an additional insured of any insurance policy obtained by WeCare and Blackwood regarding the Facility operation and maintenance (with the Township to receive 10 days advance written notice of any significant change to the insurance policy), the duty and cost (including reasonable attorney fees and litigation expense) to indemnify and defend the Township from claims related to the Facility is owing to the Township by WeCare and Blackwood, and their respective successors and assigns, irrespective of whether WeCare and/or Blackwood, or whatever entities that own, operate and /or maintain the Facility, obtain an insurance policy to cover this duty. Blackwood and WeCare represent that insurance shall be obtained and maintained for this purpose.

21. Governing Law. The laws of the Commonwealth of Pennsylvania shall govern this Agreement.

22. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which take together shall constitute a single instrument.

23. Cooperation. The parties agree to cooperate with each other in good faith and each shall perform such acts, execute and deliver such instruments and documents, and do all other things as may be reasonably necessary to accomplish the purposes contemplated in this Agreement.

24. Partnership; Agency. It is understood and agreed that nothing in this Agreement is intended to or should be construed to establish a relationship of partnership or agency or joint venture between the Reilly Township on one hand, and either WeCare or Blackwood on the other hand. Furthermore, Reilly Township has not chosen nor sets forth any position on the choice by WeCare and/or Blackwood to utilize the "N-Viro" stabilization process for the

Facility.

25. Captions; Headings. The section headings and captions contained in this Agreement are included for the convenience of the parties and shall not be considered a part of the Agreement or affect the construction or interpretation of this Agreement. Except as otherwise indicated, all references in this Agreement refer to sections or parts of this Agreement.

26. Act 101. The parties agree that this Agreement has been negotiated in accordance with and in full satisfaction of Act 101 and any related legal authority governing the relationship between the owners and operators of a waste management facility and its host municipality, subject to the provisions of Paragraph 5 a. stated above.

27. Supersession. Any other provisions of any other agreement, which are inconsistent with the provisions of this Agreement, are hereby superseded by this Agreement. Should approval of any court be required to modify any prior agreement of the parties, the parties agree to cooperate and take all reasonable steps necessary to obtain an approval.

28. Non-Parties. The parties agree that this Agreement does not and is not intended to create rights of any kind in any person or entity not a party to the Agreement.

29. Representations. The parties respectively represent and warrant that:

a. WeCare is a Limited Liability Company duly organized and existing and in good standing under the laws of New York and is authorized to do business in the Commonwealth of Pennsylvania.

b. Blackwood is a corporation duly organized and existing and in good standing under the laws of Pennsylvania and is authorized to do business in the Commonwealth of Pennsylvania.

c. Each party has full power, authority and legal right to enter into and perform this Agreement, and execution, delivery and performance hereof and thereof by each of them (i) will not violate any judgment, order, law, ordinance or regulation and any provision of WeCare's or Blackwood's articles of incorporation or bylaws, and (ii) do not conflict with, constitute a default under, or result in creation of any lien, charge, encumbrance or security interest upon any assets, under any agreement or instrument to which WeCare or Blackwood is a party or by which any of them or any of their assets may be bound or affected.

d. The Agreement has been duly authorized, executed and delivered by each party, and this Agreement constitutes legal, valid and binding obligations of the parties, enforceable in accordance with its terms, except as such enforcement of such obligations may be limited by bankruptcy, insolvency, reorganization or similar laws affecting the enforcement of creditors' rights generally, or by general equitable principles concerning remedies, whether enforceability is sought in a proceeding at law or in equity.

e. There is no action, suit or proceeding, at law or in equity, before or by any court or governmental authority pending or to the knowledge of the parties, threatened against or affecting the parties wherein a ruling, decision or finding would materially adversely affect the performance by the parties of their obligations hereunder or in connection with the transactions contemplated hereby or which, in any way, would adversely affect the validity or enforceability of this Agreement.

f. It is understood and agreed between the parties that in the event of a notice of violation and/or act or omission which may be in technical violation of the instant agreement such violation shall be brought to the attention of the respective parties and a reasonable opportunity to cure said notice of violation and or act or omission shall be permitted.

30. Reilly Township is aware Blackwood is trying to obtain legal permission to cross the railroad tracks which bisect its property, however, Blackwood and WeCare, and all others on the property relating to the Facility, will gain access by vehicle to the Blackwood lands north of the railroad tracks from the southern portion of the Blackwood lands, subject to a lawful crossing over the railroad tracks.

31. Regarding all activity related to the Facility itself, WeCare, Blackwood and any vehicles, whether or not of their employees, agents or any independent contractors as well as all Township officials, employees or consultants traveling to and from will only use the Blackwood entrance off of Route 125 in Tremont for all vehicle traffic in and out of the facility itself. Blackwood will keep all vehicle ingress and egress south of the railroad tracks that currently bisect the Blackwood property and at least one thousand (1,000) yards (farther if required by any state or federal regulations) from any existing occupied residential dwelling in the Village of Newtown.

32. Regarding all activity related to the Facility, The facility will be operating twenty-four hours a day but will only receive truck traffic from the hours of 6:00 a.m. to 6:00 p.m. WeCare and Blackwood will not ship or receive truck traffic from the hours of 6:00 p.m. to 6:00 a.m. daily, without the written approval of Reilly Township.

33. Throughout the term of this Agreement, WeCare will add and maintain Reilly Township, at no cost to the Township, as an additional insured on their respective general liability policies providing not less than Five Million (\$5,000,000.00) Dollars coverage, indemnity and legal defense of any claims related to the existence and/or operation of the Facility. Blackwood will add and maintain Reilly Township, at no cost to the Township, as an additional insured on their respective general liability policies providing not less than One Million (\$1,000,000.00) Dollars coverage, indemnity and legal defense of any claims related to the existence and/or operation of the Facility. It is also agreed and understood that there shall be

a Five Hundred Thousand (\$500,000.00) Dollars liability limit on any and all claims made under the above referenced policy for each separate incident/occurrence.

34. The parties reserve all other rights available for protection of their respective interests.

35. WeCare and Blackwood will use its best reasonable effort to hire employees from Reilly Township for the Facility, in the first instance provided said applicants are otherwise qualified and willing and able to carry out their tasks competently and efficiently.

36. WeCare and Blackwood will keep all activity and items associated with the Facility, including but not limited to vehicle ingress and egress, storage and any processing, south of the railroad tracks that currently bisect the Blackwood property and at least one thousand (1,000) yards (farther if required by any state or federal regulations) from any existing occupied residential dwelling in the Village of Newtown.

37. Within thirty (30) days of the start of operation of the Facility and thereafter by January 15 of every year thereafter during the term of this Agreement, WeCare and Blackwood will each make a lump sum payment to the Township of a minimum of Five Thousand (\$5,000.00) Dollars, in addition to those companies providing periodic additional services, such as razing the Branchdale School by Blackwood, Inc.

38. Should the Township seek to terminate or rescind the instant Agreement for any reason, all Restrictions and Covenants, including the Deed of Restriction will be null and void as permitted by law and as determined by final Order of Court.

39. Blackwood and WeCare Organics LLC agree that once the Pennsylvania Department of Environmental (PaDEP) Permit(s) is issued for the Class A Biosolid Processing (alkaline stabilization) facility to be conducted on the Blackwood Lands, and all appeals against the issuance of the permit(s) are successfully ended to allow the construction to begin, no Class B biosolid materials will be land applied or stored on any of the Blackwood Lands north of the RBMN railroad tracks for any reason whatsoever. In the meantime, Blackwood and WeCare, provided all necessary permit(s) and approvals are received from PaDEP, will be land applying Class B biosolids on the Blackwood Lands north of the RBMN railroad tracks. Any Class B biosolids that are land applied on the Blackwood Lands north of the RBMN railroad tracks will

be initially placed at the eastern portion nearest to State Route 901 and/or in any case will never be placed closer than 1,000 yards from any Village of Newtown residential dwelling existing at the time of execution of this agreement.

40. Blackwood, as landowner, has agreed to contemporaneously execute a Deed of Restrictions on the Use of the property consistent with terms set forth in this Agreement.

IN WITNESS WHEREOF, with the intent of being legally bound hereby, the parties hereto have caused this agreement to be duly executed on the date first set forth above:

ATTEST:

Chris W. Bell

By: _____
Reilly Township

Richard Zimmerman
By: Richard Zimmerman, Chairman,
Zoning Hearing Board of Schuylkill County

Daniel E. Dina

Nolan A. Perin
By: Nolan A. Perin, President
Blackwood Inc.

Mary T. Dine

Jeffery LeBlanc
By: Jeffery LeBlanc, President
WeCafe Organics, LLC

40. Blackwood, as landowner, has agreed to contemporaneously execute a Deed of Restrictions on the Use of the property consistent with terms set forth in this Agreement.

IN WITNESS WHEREOF, with the intent of being legally bound hereby, the parties hereto have caused this agreement to be duly executed on the date first set forth above:

ATTEST:

Mary Ann Mitulewicz

Gerald Devine
By: GERALD DEVINE, CHAIRMAN SUPERVISOR
Reilly Township

By:
Zoning Hearing Board of Schuylkill County

Rachel E. Dwinia

Nolan A. Perin
By: Nolan A. Perin, President
Blackwood Inc.

Mary E. Avoila

Jeffery LeBlanc
By: Jeffery LeBlanc, President
WeCare Organics, LLC

Attachment K-4

EnSol, Inc.

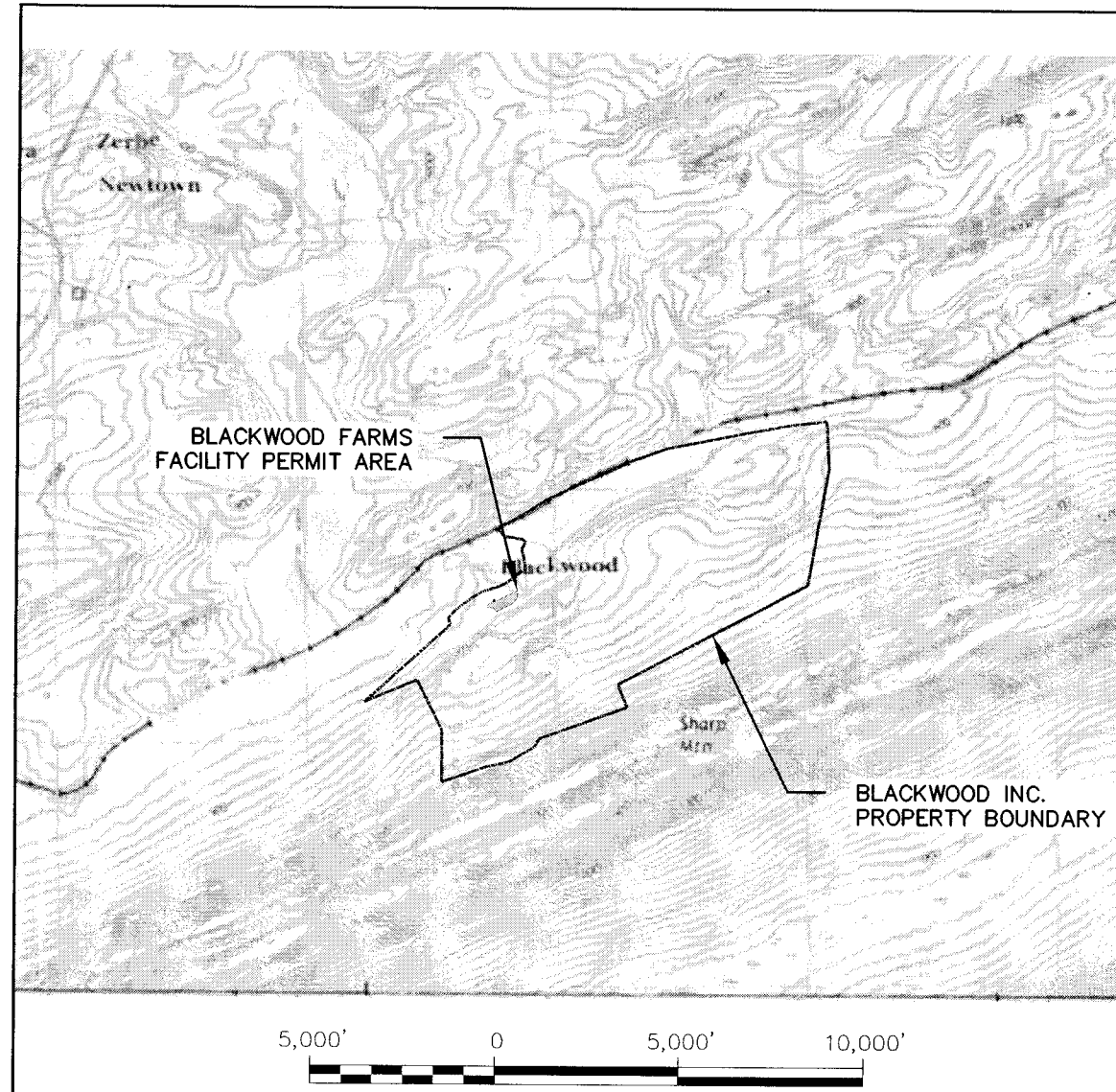
ENGINEERING + ENVIRONMENTAL

***Schuylkill County Planning Commission
Approval***

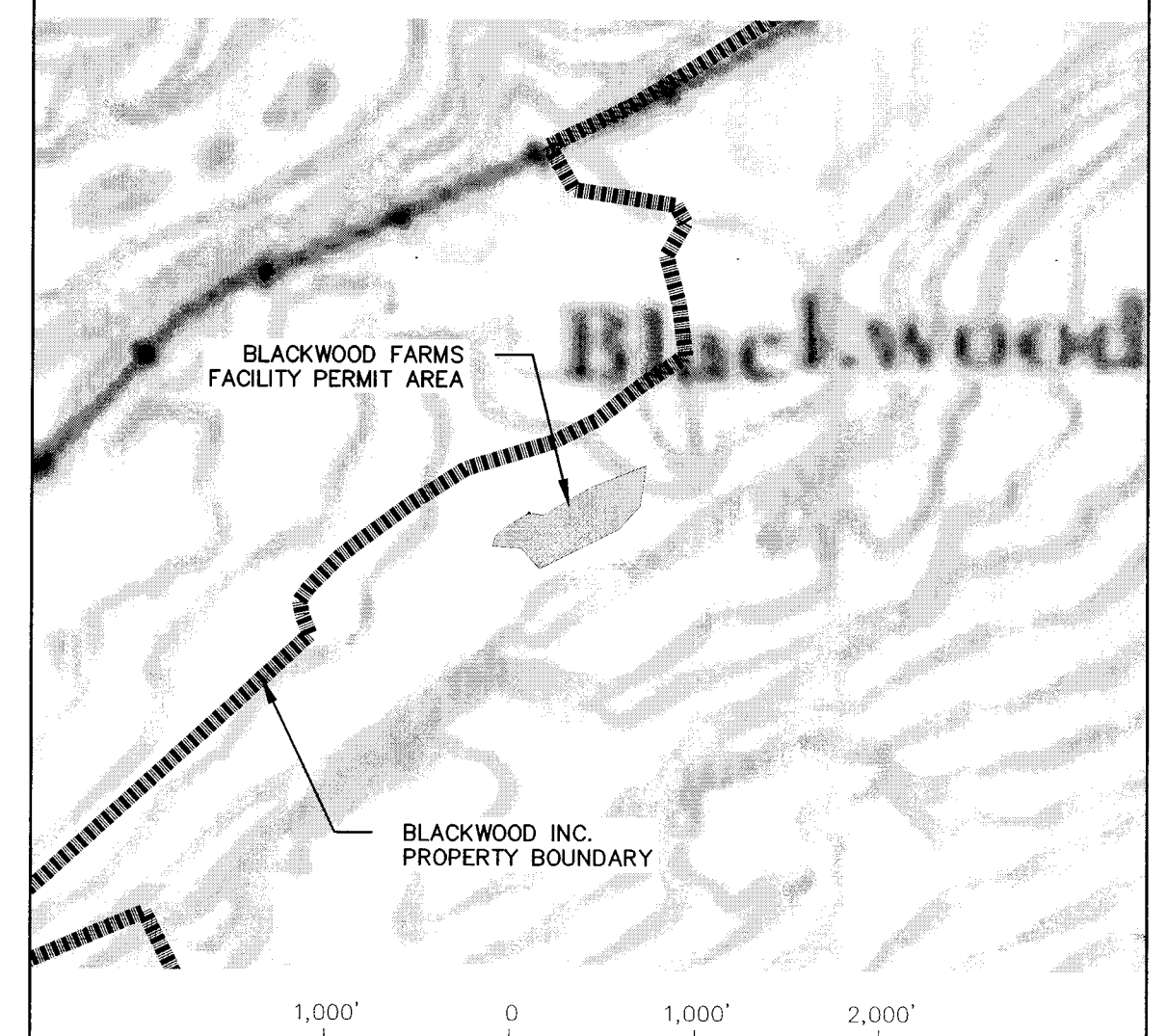
SCHUYLKILL COUNTY MAJOR LAND DEVELOPMENT FINAL PLAN APPLICATION FOR: BLACKWOOD FARMS CLASS A BIOSOLIDS MANAGEMENT FACILITY

12 TREMONT ROAD, REILLY TOWNSHIP, SCHUYLKILL COUNTY,
COMMONWEALTH OF PENNSYLVANIA

MARCH 2018
REVISED SEPTEMBER 2018



REGIONAL LOCATION MAP



SITE LOCATION MAP

- PLAN NOTES**
- RECORD OWNER**
BLACKWOOD, INC.
991 W. PENNSYLVANIA AVENUE
PEN ARGYL, PA 18072
 - SOURCE OF TITLE**
CONVEYANCE FROM BLACKWOOD, INC. TO BLACKWOOD, INC. BY DEED DATED 12/16/2009 AS RECORDED IN SCHUYLKILL COUNTY RECORD BOOK 2362, PAGE 1829 UPI No. 24-07-0009.000
 - LAND USE**
EXISTING LAND USE: VACANT MINING AREA
PROPOSED LAND USE: CLASS A BIOSOLIDS MANAGEMENT FACILITY
 - INTENT OF PLAN**
THE INTENT OF THIS PLAN IS TO CONSTRUCT THE BIOSOLIDS MANAGEMENT FACILITY AS DEPICTED ON THE ATTACHED DRAWINGS
 - TRACT ACREAGE**
548.33 ACRES
 - WATER SUPPLY**
PRIVATE DELIVERIES & STORAGE. NO PUBLIC CONNECTION
 - SEWAGE DISPOSAL**
ON-SITE STORAGE TANKS & PRIVATE DISPOSAL. NO PUBLIC CONNECTION
 - SURVEY INFORMATION**
BOUNDARY AND TOPOGRAPHIC SURVEY INFORMATION SHOWN HEREIN WAS PROVIDED BY I&I ENGINEERING INC.
 - PARKING**
TEN STANDARD PARKING SPACES AND ONE HANDICAP SPACE ARE PROVIDED (FOR 10 EMPLOYEES PER TABLE 6.1 OF COUNTY ZONING ORDINANCE - INDUSTRIAL USE)
 - FIRE PROTECTION**
BUILDING CONTENTS ARE NON-COMBUSTIBLE WET SLUDGES. ON-SITE FIRE RESPONSE EQUIPMENT WILL INCLUDE: ALARMS, FIRE EXTINGUISHERS, AND A WATER TRUCK.
 - WETLANDS**
NO WETLANDS EXIST WITHIN THE PROJECT AREA (SEE DEP PERMIT APPLICATION INCLUDED WITH APPLICATION)
 - FLOODPLAINS**
NO FLOODPLAINS EXIST WITHIN THE PROJECT AREA (SEE DEP PERMIT APPLICATION INCLUDED WITH APPLICATION)
 - DOT**
NO PLAT WHICH WILL REQUIRE ACCESS TO A HIGHWAY UNDER THE JURISDICTION OF THE DEPARTMENT OF TRANSPORTATION SHALL BE FINALLY APPROVED UNLESS THE PLAT CONTAINS A NOTICE THAT A HIGHWAY OCCUPANCY PERMIT IS REQUIRED PURSUANT TO SECTION 420 OF THE ACT OF JUNE 1, 1945 (P.L. 1242, NO 428), KNOWN AS THE "STATE HIGHWAY LAW", BEFORE DRIVEWAY ACCESS TO STATE HIGHWAY IS PERMITTED
 - COMMON USE ROAD**
THE ROAD FORMERLY KNOWN AS BLACKWOOD ROAD AND TOWN ROAD T-567 HAS BEEN CONSIDERED A COMMON-USE ROAD FOR PURPOSES OF THIS APPLICATION AND IS SUBJECT TO FURTHER LITIGATION REGARDING OWNERSHIP AND JURISDICTION. THE APPLICANT TAKES FULL RESPONSIBILITY FOR THE ROAD, MAINTENANCE AND RESTORATION OF THE ROAD IS REQUIRED AND BONDED BY THE FOLLOWING PADEP PERMITS:
A) PADEP SOLID WASTE DISPOSAL AND/OR PROCESSING FACILITY PERMIT No. 603455
B) PADEP SURFACE MINING PERMIT No. 54900101R4
 - ZONING INFORMATION - CM, CONSERVATION MINING DISTRICT**

ITEM	REQUIRED	PROVIDED
MINIMUM LOT SIZE		
AREA	43,560 sq ft	548.33 ac
WIDTH	150 ft	~3,500 ft
MINIMUM YARDS		
FRONT	25 ft	~1,800 ft
REAR	25 ft	~6,200 ft
SIDE	10 ft	~160 ft
MAXIMUM BUILDING HEIGHT	100 ft	34 ft
MAXIMUM BUILDING COVERAGE	25%	0.44%
MAXIMUM IMPERVIOUS COVERAGE	50%	1.32%

INDEX OF SHEETS

SHEET NO.	TITLE
1	PROJECT TITLE AND INDEX OF DRAWINGS
2	EXISTING CONDITIONS AND PROJECT LOCATION PLAN
3	SITE DEVELOPMENT/LAYOUT PLAN
4	ZONING SETBACKS
5	GRADING AND STORM DRAINAGE PLAN
6	CROSS SECTIONS
7	SITE DETAILS
8	EROSION AND SEDIMENT CONTROL PLAN
9	ACCESS ROAD INFORMATION

I hereby CERTIFY that this document is recorded in the office of the Recorder of Deeds in and for the County of Schuylkill and Commonwealth of Pennsylvania



Ann Dush
Recorder of Deeds

SUBDIVISION AND LAND ORDINANCE (SALDO) MODIFICATIONS APPROVED BY THE SCHUYLKILL COUNTY PLANNING COMMISSION ON NOVEMBER 15, 2017

SECTION 1118.B - CURBING

DUE TO THE REMOTE LOCATION AND LIMITED SITE TRAFFIC, CURBING IS NOT ANTICIPATED TO ADD ANY BENEFITS TO THE PROJECT.

SECTION 1121.N - INFILTRATION

STORMWATER INFILTRATION AREAS ARE NOT PROPOSED AT THE FACILITY AS INFILTRATION THROUGH THE MINE TAILINGS PRESENT AT THE DEVELOPMENT AREA COULD CONTRIBUTE TO GROUNDWATER CONTAMINANT MIGRATION THROUGH THE TAILINGS. ADDITIONALLY, THE PROPOSED STORMWATER MANAGEMENT SYSTEM HAS BEEN REVIEWED AND APPROVED BY BOTH THE PADEP BUREAUS OF WASTE MANAGEMENT AND MINING PROGRAMS.

PREPARED FOR:



WECARE BLACKWOOD FARMS, LLC.
9293 BONTA BRIDGE ROAD
JORDAN, NY 13080

PREPARED BY:

EnSol, Inc.
Environmental Solutions

661 MAIN STREET, NIAGARA FALLS, NY 14301
PHONE (716) 285-3920 FAX (716) 285-3928

SCHUYLKILL COUNTY PLANNING COMMISSION APPROVAL:

THE LAND DEVELOPMENT PLAN AS SHOWN HEREON IS HEREBY GRANTED FINAL APPROVAL BY THE SCHUYLKILL COUNTY PLANNING COMMISSION.

Susan A. Smith
DIRECTOR

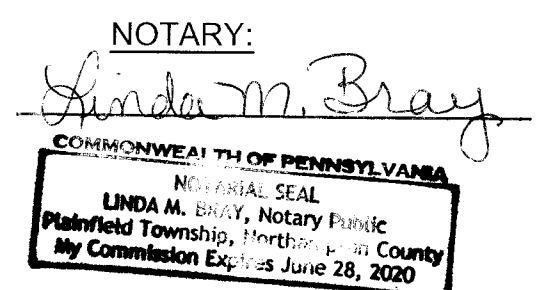
8/27/18
DATE

CERTIFICATE OF OWNERSHIP

THIS PLAN IS HEREBY EXECUTED AND DELIVERED BY BLACKWOOD, INC. WHICH IS THE OWNER (OR EQUITABLE OWNER) OF THE PROPERTY SHOWN ON THIS PLAN, AND THE SAID PLAN WAS MADE BY THE AUTHORITY OF THE CORPORATION.

IN WITNESS WHEREOF BLACKWOOD, INC. HAS DULY CAUSED THIS TO BE EXECUTED BY ITS PRESIDENT, NOLAN A. PERIN AND BY ITS SECRETARY, JEFFREY W. BUZZARD AND ITS CORPORATE SEAL TO BE AFFIXED THERETO THIS 4th DAY OF SEPTEMBER, 2018.

BY: Nolan A. Perin
PRESIDENT: NOLAN A. PERIN
ATTEST: Jeffrey W. Buzzard
SECRETARY: JEFFREY W. BUZZARD
CORPORATE SEAL:



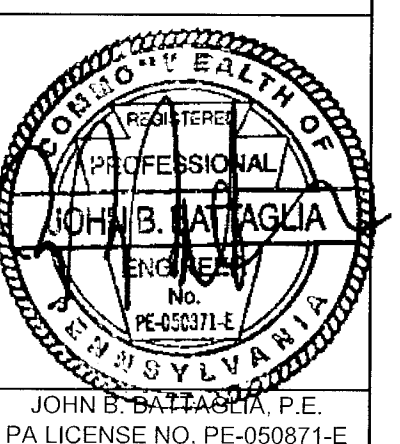
CERTIFICATE OF ACCURACY

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE PLAT SHOWN AND DESCRIBED HEREON AS WELL AS ALL DRAWINGS BEARING MY SEAL ARE TRUE AND CORRECT AS TO ACCURACY AS REQUIRED BY THE COMMISSION AND WERE PREPARED BY ME OR UNDER MY DIRECTION AND FOR WHICH I ACCEPT FULL RESPONSIBILITY.

SIGNED THIS 4th DAY OF SEPTEMBER 2018

SIGNATURE [Signature]

MY PENNSYLVANIA REGISTRATION LICENSE
NUMBER IS PE-050871-E

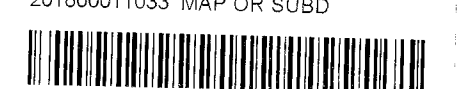


UPI CERTIFICATION:

CERTIFICATION OF PARCEL NUMBERS ONLY
DOES NOT CERTIFY CONTENTS
OF THIS DOCUMENT
SCHUYLKILL COUNTY ASSESSMENT BUREAU

RECORDER OF DEEDS AUTHORIZATION

Filed in SCHUYLKILL COUNTY, PA
ANN DUDISH, RECORDER OF DEEDS
09-06-2018 AT 11:58 am Fee: 115.00
201800011033 MAP OR SUBD



201800011033
Filed for Record in
SCHUYLKILL COUNTY, PA
ANN DUDISH, RECORDER OF DEEDS
09-06-2018 AT 11:58 am
MAP OR SUBD 115.00

Bk. _____ Page _____
201800011033
BLACKWOOD FARMS TO
REILLY TWP FINAL
MAP BK 58 PG 898

DATE: SEPTEMBER 2018

DWG:

17-0049-OOS-1-D01-TITLE.REV4.DWG

CHECKED BY:

JBB

PROJ. NO.:

17-0049-OOS-1

SHEET:

1
OF 9

Attachment K-5

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

Schuylkill County Zoning Permit

SCHUYLKILL COUNTY

ZONING PERMIT

This is to certify that the development or use herein underway is in compliance with the Schuylkill County Zoning Ordinance and that a Zoning Permit has been duly applied for and approved by the Zoning Officer.

For:	Alkaline Stabilization of Bio-solids into Class A Product Using N-Viro Process, Storage of Product
Location:	12 Tremont Road, Reilly Township
Issued To:	We Care Organics, LLC, o.b.o. Blackwood, Inc.
Date Issued:	12/17/2009
Permit No:	16709
UPI No:	24-07-0007.000
Zoning District:	CM – Conservation Mining
Zoning Officer:	Carole A. Cooney-Syzdek
Comments:	Zoning Permit issued based on agreement per Civil Action, Land Use Appeal, Case No. S-230-04, filed in the Court of Common Pleas of Schuylkill County, Commonwealth of Pennsylvania.

NOTE: This permit must be posted in a conspicuous place on the premises for which a permit has been issued.

Attachment M-1

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

Nuisance Minimization and Control Plan

Nuisance Minimization and Control Plan

Date Revised: 11/28/2024

Liberty Soils Biosolids Management Facility

1.0 Introduction

The goal of this *Nuisance Minimization and Control Plan* is to provide guidance for Liberty Soils Biosolids Management Facility (facility) operations to control and minimize conditions that are harmful to the environment or public health, or which create odors, dust, noise, traffic and other public nuisances.

2.0 Odors

Odors are a normal occurrence at a biosolids management facility. Proper operation of the facility, however, will minimize the amount of odor generated. The following operational procedures will be followed in order to minimize odors at the facility:

- Minimize the amount of time that unprocessed biosolids are in the receiving area. All biosolids should be processed by the end of the day, if possible.
- The processed material should be well mixed, and not include balls of unmixed material, which can reduce the efficiency of the process.
- Process operational parameters (such as feed rates, etc.) should be uniformly and properly controlled.
- Proper moisture levels must be maintained in the material mixture during the process. If the mix is allowed to become too dry, biological activity will be reduced and proper decomposition will not occur. Additionally, excessive moisture (low solids) in the input mix or inadequate mix porosity can lead to excessive odors.
- All vehicles that carry materials, either inbound or outbound, are required to be tarped and directed to use routes that avoid populated areas.
- Route 125 in the vicinity of the site road intersection will be inspected for material loss on a daily basis.
- The facility will be maintained to minimize ponding of water and piles of unprocessed biosolids.
- The material handling equipment, receiving area floor and processing areas shall be cleaned regularly.

- Proper management of material in the storage areas, including:
 - Monitoring pH to prevent restart of pathogen growth;
 - Curtailed or modified activities during adverse weather conditions such as inversions.
 - Ensure that product is stored in well-drained area.
 - If the finished product has strong odor, shredding will expose and oxidize trapped ammonia and other gases.
- Proper management of the stormwater detention pond, including:
 - Skimming and removal of any offensive materials;
 - Removal of potentially odor-causing water or sediment;
 - Aeration.

(It is anticipated that only clean stormwater will be collected in the detention pond; however, odors may develop due to high organic loading or stagnant pond conditions.)
- If any material-containing vehicles require on-site storage after normal hours of material acceptance, they will be stored inside a building with appropriate ventilation.

Odor Neutralizing System

In response to PADEP and community concerns regarding odor, an odor neutralizing system was installed in the processing building and the catch bin in storage building #1 in March 2022. The VT1500 Odor Neutralizing System provides a waterless vapor that disperses over the building openings, captures odors, scrubs them and drops them to the floor. The system typically operates during the time that biosolids are being processed. Unit specifications and a fact sheet are provided in the *Operations and Maintenance Manual*.

Odor Complaints

Liberty has requested that complaints received by PADEP be forwarded to Liberty's Asset Manager as soon as possible. The following are the odor complaint reporting procedures for complaints received by the facility.

1. Reports of off-site odors in the community should be reported directly to the facility by calling the Community Hotline phone number, 570-593-0181, at any hour. All calls will

- be received by the Facility Manager. The hotline number is on the facility's website libertysoils.com.
2. The online Facility Complaint Form at libertysoils.com (attached) may also be used to report an odor complaint. The complaint form is sent to the facility operations team.
 3. All reports of odor will be documented in the Odor Complaint Log. The following information will be recorded: time and date, name, telephone number, and street location of the complainant, description of the odor, weather conditions, operational activities that may have contributed to the odor and measures taken to control or eliminate the odor. Daily screenshots of weather and wind conditions will be used to evaluate the location of the complaint in relation to the facility.
 4. Responses to odor complaints will be made on the same day if during business hours, or on the following day if received after business hours. A facility staff member will respond to the location of each reported odor.

In the event that odor complaints are received at the facility, the following actions will be taken:

- Identify the source of the odor.
- Evaluate components of the processing method (admixture use, presence of septic conditions, amount of CKD/LKD, processing schedules).
- Evaluate housekeeping procedures.
- Activate odor neutralizing system.

If any regular odor issues arise due to common site practices (e.g., the loading/unloading and handling of the biosolids product), modifications will be made to existing procedures to attempt to alleviate odor issues without compromising the processing goal and objectives of pathogen reduction and production of a high-quality end-product.

3.0 Dust

The Facility Manager is responsible for ensuring that adequate dust control measures are used at the facility. These measures may include:

- All vehicles that carry materials, either inbound or outbound, are required to be tarped;
- Access road will be maintained to limit dust (i.e., laying down aggregate);

- Paved areas are to be swept clean as necessary to minimize dust;
- Water will be sprayed on the road to minimize dusty conditions if necessary;
- Drivers will be advised to adhere to the 10-mph speed limit;
- The building ventilation system will be regularly maintained;
- Burning of materials is not permitted at the facility.

In the event that dust becomes a problem at the facility, the following actions will be taken:

- Curtail operations during periods of high winds;
- Spray water on on-site roadways.

4.0 Vectors

Controlling vectors at the facility begins with site cleanliness. The Facility Manager is responsible for ensuring that adequate vector control measures are used at the facility. These measures may include:

- Routine cleaning of waste handling equipment, receiving area floor and processing areas;
- Proper storage of unprocessed material and admixtures;
- Litter and dust control;
- Maintenance of drainage mechanisms to prevent ponding of water; and
- Detention pond maintenance.

In the event that vectors become a problem at the facility, the following actions will be taken:

- Poison and traps may be used;
- Obtain the services of a qualified pest control expert to perform baiting and/or periodic spraying.

5.0 Litter & Debris

To minimize litter and debris generation on and off-site, facility staff and visitors will be made aware of conditions that can generate litter. All vehicles that carry materials, either inbound or outbound, are required to be tarped. Facility aisles, walkways and roadways will be kept unobstructed and clear of debris. Building doors will be kept closed when possible.

The scale area, site roadways used by facility traffic, and the processing and storage areas will be inspected for litter and debris on a daily basis. Access road perimeters will be visually inspected daily as personnel travel the access road. Route 125 in the vicinity of the site road intersection will be inspected for litter and material loss on a daily basis. Any observed litter and debris will be removed.

Drainage features such as roof downspouts, collection tank, and conveyance piping and channels will be kept free of debris that may impede their function. The stormwater detention pond will be kept free of litter and debris. Litter and recyclables collected at the site will be contained and hauled away for disposal or recycling on a regular schedule.

6.0 Noise

Noise issues will generally arise from use of heavy equipment, or process-related operations. The remote location of the facility reduces the likelihood that noise will be a nuisance to area residents. Some common procedures to control noise at the facility include:

- Drivers entering the facility will be warned of faulty exhaust systems and advised to have them repaired prior to re-entry;
- Internal combustion-powered equipment used at the facility will be equipped with mufflers.

Any noise complaints made by residents of the surrounding area will be investigated to determine the cause. Mitigation measures to ensure that any recurrence is prevented or reduced to an acceptable level will be evaluated. Modification of equipment operating hours may be one possible course of action.

7.0 Traffic

Traffic related to the proposed facility may cause a potential nuisance to users of the site access road. This road passes through State Game Land #229. Truck traffic may cause potential impacts on the users of the land. Potential impacts may include:

- Odors from biosolids;
- Debris;
- Dust;
- Traffic problems;

- Deterioration of road surface.

The following measures will be used to eliminate and/or reduce the nuisances associated with traffic:

- Tarps will be used on all waste vehicles to contain odors.
- Water will be sprayed on the road to minimize dusty conditions if necessary.
- Drivers will be advised to adhere to the 10-mph speed limit. Warnings will be issued to those who don't. A driver may be banned after several warnings.
- Drivers will be advised of pull-off areas and parking areas.
- Drivers of trucks with faulty exhaust systems will be advised to have them repaired.
- The road will be kept passable and well maintained. Road maintenance includes daily inspections for any damage, litter and materials that may have fallen from vehicles.
- Route 125 in the vicinity of the site road intersection will be inspected for debris on a daily basis. Cleanup will be performed when required.

The Facility Manager will be responsible for implementing these control measures.

At times, traffic supervision and guidance may be needed. The Facility Manager will appoint a competent worker to act as a Traffic Control Person (TCP) to direct traffic on site, as defined in this procedure:

- While directing traffic, the TCP cannot participate in any other facility activities;
- The TCP shall be positioned in such a way that he or she will not be endangered by vehicles or equipment;
- The TCP shall wear appropriate PPE and high-visibility safety vest;
- The TCP shall have adequate written or oral instruction with respect to directing vehicular traffic. This instruction must include a description of the signals to be used.

8.0 Inspections

In order to control potential nuisances, it is important to maintain a clean, safe and workable site. Routine site inspections will be performed in order to identify housekeeping needs. The Facility Manager or designee will conduct routine self-inspections of the facility, access road,

and entrance. Items requiring corrective action will be addressed in a timely manner. The results of the inspections shall be recorded on the Daily Facility Self-Inspection Form and kept on file at the facility. Corrective actions taken will be recorded on the form. The Process Operators are responsible for completing daily equipment inspections and recording the results on the Daily Equipment Inspection Log. Examples of the forms used to conduct facility self-inspections and equipment inspections are included in the Operations and Maintenance Manual.

Submit a Complaint

Please use this form to submit a complaint related to the facility. Complainants will receive a response from a **Liberty** representative with 2 business days.

You may also call the **Liberty** Complaint Hotline at 570-593-0181

Liberty Processing & Soils LLC Complaint Form

** Indicates Required Field*

Date of Incident *

Select a date



Time of Incident *

02:30 PM

Incident Street Address *

Street Address

Incident Township *

Township

Incident State *

State

Incident Zip code *

Zip code

Description of Incident *

Name (First Last) *

Phone *

Phone

Email *

☐

I certify that the information provided is truthful and relevant.

Send

FORM L

CONTINGENCY PLAN FOR EMERGENCY PROCEDURES

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form L, reference the item number and identify the date prepared. The "date prepared/revised" on any attached sheets needs to match the "date prepared/revised" on this page.

General References: 273.181; 277.181; 279.109; 281.141; 283.110; 288.171; 289.163; 293.109; 295.141; 297.111; 299.216

SECTION A. SITE IDENTIFIER

Applicant/permittee: Liberty Soils, LLC

Site Name: Liberty Soils Biosolids Management Facility

Facility ID (as issued by DEP): 634876

SECTION B. CHECK TYPE OF FACILITY

Municipal Waste Landfill.....	☐	Residual Waste Disposal Impoundment.....	☐
Construction/Demolition Waste Landfill	☐	Residual Waste Composting Facility.....	☐
Composting Facility	☐	Land Application of Residual Wastes.....	☐
Demonstration Facility	☐	Residual Waste Demonstration Facility	☐
Transfer Facility	☐	Residual Waste Transfer Facility	☐
Incinerator or Resource Recovery Facility	☐	Residual Waste Incinerator	☐
Other Waste Processing Facility	☒	Oil and Gas Wastewater Storage Impoundment	☐
Residual Waste Landfill.....	☐	Other Residual Waste Processing Facility	☐

SECTION C. CONTINGENCY PLAN

A contingency plan, relating to emergency procedures, must be developed and implemented for the proposed waste management facility. The plan must include a Preparedness, Prevention and Contingency Plan (PPC Plan) that is consistent with the Department's most recent guidelines, #400-2200-001, titled, Development and Implementation of Environmental Emergency Response Plans (<http://www.dep.state.pa.us/dep/deputate/airwaste/wm/mrw/forms/master-forms.htm>). The format is that of the PPC Plan guidelines. In addition, the contingency plan must contain provisions that require routine drills and equipment tests targeted at preventing hazards at the facility. These additional provisions should appear at various locations in the PPC Plan Guidelines, as follows:

- In addition to the requirements of Section II-C (Spill Leak Prevention and Response) of the PPC Plan guidelines, describe how the proposed facility will be designed, constructed, maintained, and operated to prevent and minimize potential for fire, explosion or release of solid waste constituents to the air, water or land. As part of this Section, include but do not limit information to site maps, product storage areas, transfer areas, process/handling areas, truck and railcar loading and unloading areas, and waste handling and storage areas. It will also be necessary to address the trucking of leachate, whether permanent or temporary, in this Section of the PPC Plan.
- For municipal and residual waste landfill, construction/demolition waste landfill, and residual waste disposal impoundment applications:
 - In addition to the requirements of Section II-D.5 (Emergency Equipment Available for Response) of the PPC Plan guidelines, indicate the available first aid facilities, their location(s) at the facility, and procedures for their proper management and maintenance.
- For resource recovery facility and other municipal or residual waste processing facility applications:
 - In addition to the requirements of Section II-C.8 (Employee Training Program) of the PPC Plan Guidelines, describe the development of an Accident Prevention and Safety Plan to protect employees and patrons of the facility. The Accident Prevention and Safety Plan must include:

SECTION C. (Continued)

- i) The development of an employee safety handbook, to be issued to each employee
 - ii) Special operating procedures for potentially dangerous activities, which will be posted in relevant operating areas
 - iii) A schedule of ongoing safety programs that must be conducted, as required
 - iv) Emergency telephone numbers and basic procedures for first aid which will be posted throughout the facility
- b) In Section II-A.2 (Emergency Response Plans) of the PPC Plan Guidelines, explain State and Federal laws pertaining to occupational safety and their implementation, as well as the implementation of operation, safety and maintenance procedures recommended by the designers or manufacturers of equipment at the facility.
- c) In Section II-C.4 (Preventive Maintenance) of the PPC Plan Guidelines, explain how proper ventilation of the facility will be conducted. Further, describe how open burning will be prevented.
4. Provide an up-to-date list of all available emergency equipment. The list must include the location, a physical description, maintenance and testing schedule, and a brief description of the intended use and capabilities of each item on the list. In addition, for each of the types of equipment identified below, check a box to indicate whether it will be available for use during an emergency, and include specific information in the respective section of the PPC Plan. If you check "Available," identify the specific equipment which will be used. If you check "Not Available," explain in detail why such equipment is not necessary to protect public health, safety, public welfare, and the environment during an emergency:
- | Available | Not Available | |
|-------------------------------------|-------------------------------------|---|
| ☒ | ☐ | a. Internal Communication or Alarm System
(incorporate into <u>Section II-D.3</u> (Internal and External Communication and Alarm System) of PPC Plan) |
| ☒ | ☐ | b. Communication system capable of summoning emergency assistance.
(incorporate into <u>Section II-D.3</u> of PPC Plan) |
| ☒ | ☐ | c. Portable Fire Extinguishers
(incorporate into <u>Section II-D.5</u> (Emergency Equipment Available for Response) of PPC Plan) |
| ☐ | ☐ | d-1. Fire Control Equipment for Landfill
(incorporate into <u>Section II-D.5</u> of PPC Plan) |
| ☐ | ☐ | d-2. Fire Control Equipment for Resource Recovery Facility, Transfer Station, and Composting Facility – describe the facility water supply, and quantity and pressure of water needed to supply equipment.
(incorporate into <u>Section II-D.5</u> of PPC Plan) |
| ☒ | ☐ | e. Spill Control Equipment
(incorporate into <u>Sections II-E</u> (Emergency Control Network); <u>II-C.3</u> (Inspection and Monitoring Program), <u>II-C.4</u> (Preventive Maintenance); and <u>II-C.5</u> (Housekeeping Program); and <u>II-D.5</u> of PPC Plan) |
| ☒ | ☐ | f. Decontamination Equipment
(incorporate into <u>Section II-D.5</u> of PPC Plan) |
| ☐ | ☒ | g. Portable Gas Explosimeters
(incorporate into <u>Section II-D.5</u> of PPC Plan) |
| ☐ | ☒ | h. Other Gas Monitoring Equipment
(incorporate into <u>Section II-D.5</u> of PPC Plan) |
5. In addition to the requirements of Section II-B.3 (Duties and Responsibilities of the Coordinator) of the PPC Plan guidelines, describe how adequate space will be maintained to allow the unobstructed movement of emergency personnel and equipment to any operating area of the facility. Explain what measures will be taken to provide emergency agencies with the specific PPC Plan for the facility, as well as if the facility will continue to operate in the event of an emergency.

SECTION D. IMPLEMENTATION OF THE CONTINGENCY PLAN

The operator of the facility shall immediately implement the applicable provisions of the approved contingency plan in the event of an emergency. The term "emergency" includes a fire, spill or other event that threatens public health, safety, public welfare, or the environment, and personal injury.

In addition to the requirements of Section II-B.3 and Appendix I (Examples of an Emergency Coordinator's Duties and Responsibilities) of the PPC Plan guidelines, explain the duties and responsibilities of the emergency coordinator of the facility, using the following as guidance.

In the event of an emergency, the operator shall:

1. Make an assessment of actual or potential hazards to public health and safety, public welfare and the environment, that are occurring or may occur.
2. Ensure that fires, spills or other hazards do not occur, reoccur or spread to other solid waste at the facility.
3. Immediately phone the local and/or county and the Department's emergency management agency, and report the following:
 - a. name and phone number of person reporting the incident;
 - b. name, address, and permit number of the facility;
 - c. date, time and location of emergency;
 - d. description of the nature of the emergency;
 - e. type and quantity of solid waste involved;
 - f. existence of dangers to public health, safety, public welfare, and the environment;
 - g. nature of injuries; and
 - h. parts of the contingency plan being implemented to alleviate the emergency.
4. After an emergency, the operator shall:
 - a. clean up the affected area;
 - b. treat, store or dispose of recovered solid waste, contaminated soil or contaminated waste in a manner approved by the Department. Testing of the affected area may be necessary to assure that spilled contaminants have been removed adequately; and
 - c. prevent disposal, processing, storage or treatment of solid waste in the area affected by the emergency until the operator has cleaned up the area, and the Department has inspected and approved the cleanup.



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PREPAREDNESS, PREVENTION, AND CONTINGENCY PLAN

Liberty Soils Biosolids Management Facility

**500 Blackwood Rd.
Tremont, PA 17981
Reilly Township
Schuylkill County**

Prepared for:

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Liberty Soils Biosolids Management Facility
Preparedness, Prevention, and Contingency Plan

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Liberty Soils Biosolids Management Facility
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INTRODUCTION

This *Preparedness, Prevention, and Contingency (PPC) Plan* for the Liberty Soils Biosolids Management Facility (facility) has been developed in accordance with the guidelines set forth by the Commonwealth of Pennsylvania Department of Environmental Protection's (PADEP) "Guidelines for the Development and Implementation of Environmental Emergency Response Plans", (September 2001).

The purpose of this PPC Plan is to provide preventive measures and response actions to situations that might endanger the environment and/or public health and safety through the accidental release of toxic, hazardous, or other pollutants, to the environment from the facility. The provisions in this PPC Plan will be carried out during an emergency situation that threatens the environment and/or public health and safety. An effort has been made to present this PPC Plan in a readable and simple form in order to increase its effectiveness. Each employee will be required to review this document.

A. DESCRIPTION OF FACILITY

1. Description of the Industrial or Commercial Activity

The facility is located on the Blackwood, Inc. property in Reilly Township, Schuylkill County, as shown on Figure 1, Facility Location. The facility layout and building floor plan are shown on Figure 2, Site Plan and Figure 3, Building Floor Plan. The facility is operated by Liberty Processing and Soils, LLC (Liberty).

The facility uses an alkaline stabilization process in which dewatered wastewater treatment plant (WWTP) biosolids are mixed with lime and/or alkaline materials to achieve a Class A level of treatment with respect to pathogens. Lime and alkaline materials react with the biosolids to generate heat and increase the pH of the biosolids. The combination of heat and high pH serves to eliminate viable pathogenic organisms. However, the process permits the survival of microflora, which is important for long-term odor control and soil fertility. Due to the lime addition, the product is used as a soil additive or soil substitute for agricultural use or reclamation of abandoned mine lands. The facility consists of a biosolids receiving area, a processing area, a catch bin for mixed materials, and storage buildings where final material curing and storage occur. Materials are metered into the mixer and transferred via conveyor to

the catch bin, from which they are transferred with a front-end loader to a curing/storage location designated by the Process Operator. Once the curing period is completed, the material is considered finished product.

2. Description of Existing Emergency Response Plans

This PPC Plan was developed for the facility in 2011 and has been updated when necessary, most recently in April 2024. No other emergency response or pollution prevention plans have been developed for the facility.

Occupational Safety – State and Federal Laws

Occupational safety in the United States is primarily governed by the Occupational Safety and Health Act (OSH Act), enforced by OSHA at the federal level, and Pennsylvania's Occupational Safety and Health Act (POSHA), administered by the Pennsylvania Department of Labor and Industry. These laws and regulations aim to ensure safe working environments, protect workers from hazards, and provide guidelines for workplace safety standards. While the federal government sets baseline standards, Pennsylvania may implement additional or more specific regulations to address local needs and circumstances. Effective enforcement involves inspections, training programs, penalties for non-compliance, and protections for workers who report unsafe conditions. Please see Attachment 1 for further details.

Equipment operators are required to understand and follow manufacturers' safety precautions. Sections C.4 and C.5 of this Plan describe preventive maintenance, inspections, and housekeeping procedures to keep equipment in safe working condition. Procedures for safe equipment operation are described in Section 4.E. of the facility's Health and Safety Program (HASP) (Appendix G of the O&M Manual). Manuals for equipment used at the facility are kept at the site office.

3. Materials and Waste Inventory

The facility uses certain materials and chemical products consistent with manufacturers' requirements and applicable law. The facility also generates small amounts of residual waste that is disposed of in accordance with applicable law. Table 1 provides a listing of the locations and quantities of materials that are stored and used at the facility. Liberty contracts with sources for these materials.

Table 1 - Materials Inventory Summary

Trade/Chemical Name	Location	Source	Quantity*
Biosolids	Trucks/Processing Building	WWTPs	1,630 tons
Quicklime	Silo	Graymont PA	80 - 200 tons
Lime Kiln Dust	Silo	Baker Lime	80 - 120 tons
Cement Kiln Dust	Silo	Supplier TBD	80 - 120 tons
Coal Fly Ash	Bin in Storage Building #1 (as needed)	Supplier TBD	Approx. 80 tons

* Maximum expected to be on-site at a given time

Biosolids

The facility receives dewatered biosolids from local and regional wastewater treatment facilities. Truck shipments of biosolids are received at the facility, weighed, and delivered to the floor of the Processing Building. Biosolids are transferred to a mixer where they are combined with alkaline admixtures.

Alkaline Admixtures

The facility can receive an average of 200 tons per day of alkaline materials, which includes lime, cement kiln dust, lime kiln dust and coal fly ash.

Shipments of alkaline admixtures are transported to the facility in pneumatic tank trailers. The materials are stored in 80-120-ton silos. Due to fine particle size and low moisture content, alkaline materials are transferred into the receiving silos via a four-inch pipeline equipped with a quick-disconnect coupling. Each silo is equipped with a bag house to trap particulate matter while allowing air to discharge from the silo during filling. Each silo is also equipped with a high-level sensor and alarm to prevent overfilling.

Commercial Chemical Products

The facility uses and stores small amounts of commercial chemical products (oils, lubricants, cleaners, etc.) necessary for equipment maintenance and/or emergency repairs.

Table 2 - Chemical Products Summary

Trade/Chemical Name	Location	Source	Quantity (gallons)
VaporDOX Odor Neutralizer	Outside Processing Building	55-gallon drum	55
#2 Diesel Fuel	Outside Processing Building	3,000-gallon fuel tank	3,000
Diesel Exhaust Fluid (DEF)	Outside Processing Building	300-gallon tank	300
76 T5X Heavy Duty Lubricating Oil (SAE 30)	Maintenance Garage	55-gallon drums	110
Premium Hydraulic Oil	Maintenance Garage	55-gallon drum	55
Diesel Engine Antifreeze Coolant	Maintenance Garage	55-gallon drum	55

Safety Data Sheets (SDSs) for these materials are provided in Attachment 2.

Byproducts

No byproducts are generated from the biosolids stabilization process. Small amounts of liquid from the biosolids receiving area in the Processing Building are incorporated into the mixing process, as is any wash water from cleaning floors and equipment. Final product that does not meet acceptance criteria may be blended back into the biosolids/admixture material at the mixer. Alternatively, this material can be disposed as waste at a department-approved facility.

Stormwater runoff from the facility is conveyed into a collection pond located on the site.

4. Pollution Incident History

No pollution incidents have occurred at the facility.

5. Implementation Schedule for Plan Elements Not Currently In Place

All aspects of this plan are currently in place.

6. Designated Area for Vehicles That Trigger Radiation Monitor Alarm

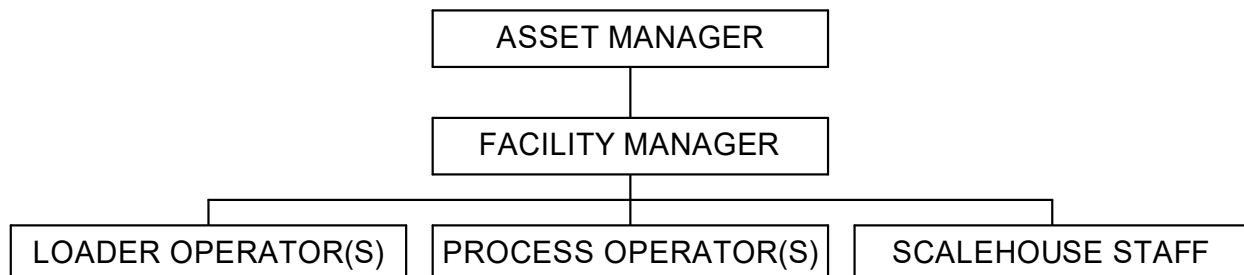
In the event that the facility's radiation monitor alarm is triggered, the vehicle will be relocated to the Designated Area for additional characterization or evaluation by facility or DEP staff.

This area is the temporary staging area for vehicles found to contain elevated radiation readings. The use of this area is described in the Radiation Protection and Radioactivity Monitoring Action Plan.

B. PPC PLAN IMPLEMENTATION

1. Organizational Structure of Facility

The following organizational chart represents a typical facility staffing plan. Additional staff will be hired and trained as needed.



The Facility Manager is responsible for ensuring that the facility is operated in compliance with all approved permits and applicable federal, state and local rules and regulations. The Facility Manager has direct control of all processing operations at the facility. The Facility Manager is also the primary Emergency Coordinator, and is responsible for implementing this PPC Plan. The lead Process Operator will act on behalf of the Manager when the Manager is not present at the site.

A breakdown of the staff's general responsibilities is included in the O&M Manual.

2. Emergency Coordinators

The following is an up-to-date list of individuals authorized to act an Emergency Coordinator (EC) in the event of an emergency situation. These employees are to be thoroughly familiar with all aspects of this PPC Plan, plant operations and activities, the location and characteristics of materials handled, the location of records pertaining to operations, and the layout of the facility. These employees are authorized to implement this PPC Plan and commit resources necessary to carry out this Plan.

Emergency Coordinators	Name	Title	Address	Telephone Number(s)
Primary	Matthew Zehring	Facility Manager	181 Pinehill Rd. Pine Grove, PA 17963	267-342-6719 Cell#
Secondary	Robert Madigan	Process Operator	523 Birds Hill Rd. Pine Grove, PA 17963	267-346-2091 Cell#

At all times, at least one of the Emergency Coordinators is on-site or on-call, and will have authorization for coordinating all emergency response measures at the facility. Cellular phones are the normal means of communication. More than one of the above-listed personnel may act as EC during an actual emergency situation, since many activities may need to be performed at this time.

3. Duties and Responsibilities of the Emergency Coordinator

Whenever there is an imminent or actual emergency situation, the EC shall immediately:

1. Activate facility alarms or communication systems, where applicable, to notify facility personnel, and to notify local emergency response agencies including the PADEP.
2. Whenever there is an emission, discharge, fire, or explosion, the EC shall immediately identify the character, exact source, amount, and real extent of emitted or discharged materials. He/she may do this by observation or review of records and, if necessary, by chemical analysis.
3. Concurrently, the EC shall assess possible hazards to human health or the environment that may result from the emission, discharge, fire, or explosion. This assessment shall consider both direct and indirect effects of the emergency situation.

If the EC determines that the facility has had an emission, discharge, fire, or explosion that would threaten human health or the environment, he/she shall immediately notify the appropriate local authorities and indicate if evacuation of local areas may be advisable. Authorities to be contacted include those dispatched by the Schuylkill County 911 Communication Center in Pottsville (570) 628-3568. The EC shall also immediately contact the Northeast PADEP (570) 826-2511, the National Response Center (800) 424-8802, and/or the PA Emergency Management Agency (610) 562-3003. The following information is to be provided:

1. Name of the person reporting the incident and his/her telephone number;
2. Name, location and permit number of the facility;
3. Date, time and location of the incident;

4. A brief description of the incident, nature of the materials or wastes involved, nature and extent of any injuries, and possible hazards to human health or the environment;
5. The estimated quantity of the materials or wastes involved;
6. The extent of contamination of land, water, or air, if known; and
7. The action(s) being implemented to alleviate the incident.

The EC will ensure that any emergency aid vehicles, equipment and personnel will have adequate access to any operating area of the facility. During an emergency situation, the EC shall take all reasonable measures necessary to ensure that the fire, explosion, emission, or discharge does not occur, reoccur, or spread to other materials or wastes at the facility. These measures shall include, where applicable, stopping operations, collecting and containing released materials or wastes, and removing or isolating containers.

The EC will make a determination as to whether the facility will continue to operate in an emergency situation. If the facility stops operations in response to a fire, explosion, emission, or discharge, the EC shall ensure that adequate monitoring is conducted for leaks, pressure buildup, gas generation, or ruptures in valves, pipes or other equipment.

Immediately after an emergency, the EC, with PADEP approval, shall provide for treating, storing, or disposing of residues, contaminated soil, etc. from the cleanup of an emission, discharge, fire, or explosion.

The EC shall ensure that in the affected areas of the facility, no material or waste incompatible with the emitted or discharged residues is processed, stored, treated, or disposed of until cleanup procedures are completed in a manner to be approved by PADEP. Also, all emergency equipment shall be cleaned and fit for its intended use before normal operations are resumed.

Within 15 days after the incident, the facility shall submit a written report on the incident to PADEP. The report shall include the following:

1. Name, address, and telephone number of the individual filing the report;
2. Name, address and telephone number of the facility;

3. Date, time and location of the incident;
4. A brief description of the circumstances causing the incident;
5. Description and estimated quantity by weight or volume of materials or wastes involved;
6. An assessment of any contamination of land, water, or air that has occurred due to the incident;
7. Estimated quantity and disposition of recovered materials or gases that resulted from the incident; and
8. A description of what actions the facility intends to take to prevent a similar occurrence in the future.

4. Chain of Command

The table in Section B.2 provides a list of Emergency Coordinators, listed in the order in which they should be contacted in the event of an emergency or spill. This is the chain of command that will be followed during emergency situations.

C. SPILL LEAK PREVENTION AND RESPONSE

1. Pre-release Planning

The facility has been designed to minimize the potential for risk to the environment, the public and operational personnel. The alkaline stabilization process utilizes a proven EPA-approved technology and is designed to provide efficiency of operation. Biosolids, alkaline admixtures, and small amounts of commercial chemical products (cleaners, oils, lubricants, etc.) will be accepted and stored at the facility. Locations and materials within the site where there is a potential for spills and leaks include the following:

Table 3 – Summary of Pollution Prevention Measures

Material	Location	Potential Causes of Release	Pollution Prevention Measures
Biosolids, admixtures	Roads	Accidents, material spills	Tarping, vehicle cleaning, spill control materials
Admixtures	Silo Pad	Material spills	Level sensor, overfill alarm, cleanup materials
Motor fluids	Maintenance Garage	Spills, leaks	Spill control materials
Fuel	Roads	Accidents, fuel leaks	Spill control materials
Fuel	Fuel storage tank	Equipment failure	Level alarm, secondary containment, spill control materials

Unloading and mixing activities are performed on impervious surfaces and any liquids that seep from biosolids are collected using absorbent materials (such as foundry sand), which are then incorporated into the mixing process. Containers (55 gallons or less) of motor fluids are stored inside the maintenance garage. The fuel tank is equipped with secondary containment. The final product is stored under a roof, which prevents contact with stormwater.

Channels along the access road are in place to collect stormwater, as well as any liquids that may be spilled in the unlikely event of a release of material from a vehicle.

Transfer of dry admixtures is accomplished by use of pipes equipped with quick-disconnect couplings, which prevent these materials from being spilled or dispersed by wind.

Spills

The site is equipped with a front-end loader, brooms and shovels to clean up any solid materials that may be spilled. The services of a vacuum truck are available if deemed necessary. In addition, absorbent spill control materials are stored on-site at locations with the potential for spills.

2. Material Compatibility

All materials used in the construction and operation of the facility are compatible for use at a municipal waste processing facility.

3. Inspection and Monitoring Program

The facility is closely inspected and monitored for conditions that could contribute to spills or releases that could endanger the environment and/or human health and safety. Site inspections shall be conducted on a daily basis during the active operation of the facility. These inspections shall minimally include:

- Visual inspection of incoming biosolids vehicle access and parking areas;
- Visual inspection of biosolids and admixture unloading and transfer;
- Visual inspection of process equipment;
- Visual inspection of the buildings for cracks, damage, or other signs of deterioration;
- Visual observation for debris, dust, and vectors;
- Visual observation for levels in fuel tank;
- Visual observation of all erosion and sedimentation control devices;
- Visual observation of the site access road and associated drainage features outside the permit area,
- Visual inspection of permit area surfaces;
- Visual observation of general site housekeeping;
- Detailed inspection and calibration of monitoring equipment;
- Detailed inspection for any seeps, leaks, stains, etc. in the general facility operational area;
- Evaluation of spill control material inventory; and

- Evaluation of first aid and safety equipment, including first aid kits, eyewash stations, fire extinguishers, and PPE.

Any identified deficiencies will be corrected in a timely manner. The Facility Self Inspection Form has been included in the facility's O&M Manual.

4. Preventive Maintenance

Routine procedures prevent the malfunctioning or failure of equipment that could cause environmental degradation or endangerment to public health and safety. Procedures include periodic inspection, testing, appropriate adjustment, repair, or replacement of parts and complete records of preventive maintenance activities. Preventive maintenance procedures are performed on a regular schedule and spare parts are kept on hand at the facility to expedite repairs. Preventive maintenance schedules will be based upon manufacturer recommendations.

Daily equipment logs are used to note equipment condition. The Daily Equipment Inspection Log has been included in Appendix C, Operations Recording Forms, of the facility's O&M Manual. These logs allow the Facility Manager to identify potential problems so that repairs can be made in a timely manner, thereby avoiding excessive 'downtime'. Regular oil, transmission, hydraulic fluid and filter changes are performed, as recommended by the equipment manufacturer.

Equipment is cleaned on a daily basis or at scheduled intervals as determined by the Facility Manager. This maintains a clean and neat appearance and prevents any waste accumulations that may cause odors or equipment malfunctions.

The Processing Building uses several louvered exhaust fans in the south wall to provide ventilation when material is being processed. The product storage buildings are open-sided to allow air circulation. Collected litter is properly disposed. Open burning of materials is prohibited.

The facility is designed to operate with limited redundancy in the event of short- or long-term equipment breakdowns. An additional mixing unit may be added, if needed. If no other alternatives can be found, biosolids will be hauled to a DEP-approved landfill.

5. Housekeeping Program

Good housekeeping practices are necessary to maintain a safe and healthy environment at the facility. Daily facility self-inspection forms are used to note the facility condition. At a minimum, the facility housekeeping program addresses the following key topics:

- Keep areas around personnel travel paths as dry as possible and free from stored debris.
- Keep all equipment components clean and maintained. Schedule preventive maintenance.
- Regular cleaning of the biosolids receiving area and process equipment in order to minimize odors and nuisance conditions.
- Clean up all fluid spills immediately with proper adsorbents/absorbents and dispose of the waste materials in a manner that complies with local, state and federal requirements.
- Keep on-site roads passable; maintain road surface and drainage. Water will be sprayed on roads to minimize dusty conditions if necessary. During the winter months, snow and ice will be removed from roads, scale and ramps as needed.

6. Security

Lighting, gates, locking doors and monitoring of facility users are the primary security measures at the facility. A gate on the site entrance road discourages unauthorized vehicular traffic from entering the permit area. All vehicles entering the facility permit area are required to stop at the scale house to present identification and sign in. Reasonable care will be taken to ensure that unauthorized persons are kept out of any areas where waste is handled, processed or stored. Building doors are secured at night.

7. External Factor Planning

The facility will not operate during severe inclement weather. In the event that a lengthy delay is expected, haulers will be notified by telephone regarding the nature of the cause for temporary facility closure and the anticipated time or date for the resumption of normal operations.

If the generator is inoperable and unavailable for an extended period, the facility will be closed until a backup power source can be obtained. Incoming materials that cannot be properly handled without electricity will not be accepted.

8. Employee Training Program

The Facility Manager is responsible for staff training. The training program is designed to ensure that personnel are familiar with facility operations and can respond rapidly and effectively to any site emergency. Some of the training involved will be informal and ongoing in nature, carried out by competent facility personnel under actual operating conditions.

The facility's formal training program includes the following as a minimum:

- General facility operations
- Identifying potentially unacceptable biosolids
- Equipment operation, inspection, and maintenance procedures
- Safety and emergency response training
- Sampling procedures
- General security procedures

The *Employee Training Program Outline* is provided as Appendix D to the O&M Manual. Each employee will also be required to review the following:

- This PPC Plan
- Safety Data Sheets for the various materials used in the alkaline stabilization process;
O&M Appendix E.

- Health and Safety Program (HASP) (Appendix G of the O&M Manual), including
 - Basic Hygiene Precautions for Safe Handling of Biosolids
 - *NIOSH Guidance for Controlling Potential Risks to Workers Exposed to Class B Biosolids*

The Facility Manager and Process Operators shall satisfactorily complete the PADEP “Land Application of Biosolids” training course, which is required for persons preparing biosolids that will be land applied.

9. Accident Prevention & Safety Plan

Refer to Section C. of this Plan and the HASP, particularly Section 1.0. Although there is an overlap between this PPC Plan and the HASP, both documents contain essential information pertaining to the protection of facility personnel, such as safety guidelines, hygiene, respiratory protection, accident prevention, fire response, moving equipment hazards and emergency procedures.

The facility has established a Safety Committee based on PA Dept of Labor & Industry HandS (Health and Safety) Guidelines. Monthly safety meetings are held, focusing on equipment usage and safety procedures. Any deficiencies observed or new procedures will be covered in these meetings.

The following information is posted in the Processing Building:

- Operating procedures for processing equipment
- Emergency telephone numbers
- Basic procedures for first aid

10. Personal Protective Equipment (PPE)

Employees are to wear safety glasses, gloves and safety shoes when handling all material. Tyvek™ coveralls, respiratory and hearing protection are available to all employees. If repairs are performed involving a torch or cutting, protective goggles or face shields are to be worn. Specific job duties may require hard hats, as directed by the Facility Manager.

D. COUNTERMEASURES

1. Countermeasures to be Undertaken by Facility

Preparedness is key in emergency situations to prevent a release of pollutants to air, soil, or surface water. Minor problems can escalate if proper measures are not taken and equipment is not in appropriate locations. Table 4, Emergency Equipment, details the equipment that is to be available and maintained at the facility. All personnel must familiarize themselves with the equipment operation and use. An emergency contact list will also be posted in conspicuous locations at the facility.

Leaks and Spills

Small fuel spills that occur during vehicle and equipment operation, fuel delivery or general site operations shall be cleaned up by facility personnel. Whenever practical, absorbent pads, buckets, brooms, soil or similar means shall be used to prevent and control spillage. Locations of spill control equipment and supplies are identified in Section D.5.

In the event of a major spill, leak or release of materials, facility personnel shall execute the following plan:

1. The staff member discovering the spill shall immediately notify the EC of their need for assistance.
2. Upon notification, the responsible person shall assess the nature and scope of the spill.
3. The EC shall notify the appropriate emergency agencies. The EC shall provide a copy of this Plan and assist emergency personnel.
4. Concurrently with #3, the primary spill response effort shall focus on preventing the release of regulated material to the surrounding property and waterways.
5. Actions shall be directed by the EC and may include establishing dikes using booms, putting down absorbent pads in the path of the spill, installing physical barriers, and trenching to direct spilled material.
6. Once the spill is contained, clean-up shall be performed using absorbents or mechanical removal methods.
7. Contaminated cleanup materials shall be placed in approved containers for shipment in accordance with United States Dept. of Transportation (DOT) regulations.

The EC may respond by utilizing equipment brought to the site by a response vehicle, and/or the services of offsite spill response personnel and equipment.

Odors and Air Emissions

The facility uses an Odor Neutralizing System to provide odor control at locations where biosolids odors are most concentrated. The system typically operates during the time that biosolids are being processed. Unit specifications and a fact sheet are provided in the *O&M Manual*. Operational procedures to be used to minimize odors are described in the *Nuisance Minimization and Control Plan*.

Dust

In the event that dust becomes a problem at the facility, the following actions will be taken:

- Operations may be curtailed during periods of high winds;
- Water may be applied to on-site roadways to control dust if necessary;
- Storage piles may be covered with tarps.

Litter

Any litter or debris that is observed during daily litter inspections will be collected and disposed. Litter and recyclables collected at the site will be contained and hauled away for disposal or recycling on a regular schedule.

Fires

It is important to note that all of the materials utilized within, and produced by the alkaline stabilization process are not explosive or ignitable, i.e., LKD, CKD, lime, coal ash, soil product, etc. However, any electrical, motorized or gas-fired piece of equipment always possesses the potential to cause an explosion and/or fire. During a fire emergency, the Fire Department should be contacted, as necessary, by dialing 911.

Materials and equipment kept on site for emergency situations are listed in Table 4, Emergency Equipment. The facility is equipped with fire extinguishers for use in the event of a fire on the premises. Fire extinguishers that are 10 pounds and rated ABC are distributed

throughout the material handling and storage areas of the facility (see Figure 2 Floor Plan). One fire extinguisher is located in the fuel storage area. In addition, loaders are available to assist in emergency response efforts. Processed material can be used to smother an electrical fire if necessary. Water for firefighting can be obtained from hose bibs in the Processing Building and Storage Building #1. In addition, a yard hydrant is located near the fuel tank and generator.

Personal Injury – see HASP Section 4.H.

Equipment Malfunction

The most important factor in ensuring the reliability of site equipment is an effective maintenance program. The Process Operator is responsible for preventive maintenance, managing warranties, parts replacement, etc. on all of the equipment at the facility. In the event of a malfunction, a Process Operator will determine a course of action. Appropriate lockout/tagout procedures will be followed. The Health and Safety Program contains information on workplace safety, confined space entry, respiratory protection, fire prevention and lockout/tagout. Equipment manufacturers' manuals will be referenced before performing repairs on a piece of equipment. Sufficient spare parts, lubricants, and other supplies necessary for routine repairs will be stocked onsite. Major repair jobs will be contracted to local heavy-equipment repair garages. In the event that an equipment breakdown occurs and is unable to be replaced with on-site equipment, a local equipment rental or leasing firm will be contacted regarding availability and procurement information. If a component of the processing system becomes inoperable and cannot be repaired in a timely manner, material deliveries may be delayed or suspended.

2. Countermeasures to be Undertaken by Contractors

Liberty does not have, nor requires, an agreement with an outside organization or contractor to provide emergency response services. Facility personnel, local and state agencies are sufficient in number to effectively respond to an emergency situation. Local Emergency Responders have been provided with a list of chemicals and equipment located at the facility, as well as contact information for the Facility Manager.

3. Internal and External Communication and Alarm System

Internal and external communications for summoning fire, police or medical assistance consists of on-site cellular telephones. Emergency numbers are posted conspicuously in the scale house and in the Processing Building. The site security system alerts if it detects intruders.

4. Evacuation Plan for Facility Personnel

Due to the nature of site operations, the need for facility evacuation is unlikely. However, if there is a need to evacuate, the signal will be given by air horn (kept in the Processing Building), or by cell phone. Evacuation of the facility will proceed via the two site driveways and west along the common site road to meet at the scale. It will be the responsibility of the EC to advise all unnecessary personnel to leave the site. In an emergency situation, vehicles will be directed off site and access roads to allow unobstructed movement of emergency response vehicles. At no time shall unauthorized personnel be allowed to remain on site during an emergency situation.

5. Emergency Equipment Available for Response

The following table indicates the locations of emergency equipment at the facility.

Table 4 – Emergency Equipment

Equipment	Quantities	Location
Fire Extinguishers – 5 lb Class ABC	1 ea.	All Heavy Equipment & Highway Trucks
Fire Extinguishers – 10 lb Class ABC	9	(4) in the Processing Building, and (1) each Outside the Processing Building and in the Storage Building #1, Maintenance Garage, Lab & Scale House
Front End Loaders	2	Processing Building and Storage Buildings
Spill Control Materials	1 box	Processing Building
Pressure Washer	1	Maintenance Garage
Absorbent materials	1 ea.	All Highway Trucks

Equipment	Quantities	Location
Brooms	6	Processing and Storage Buildings
Shovels	6	Processing and Storage Buildings
Brooms & Shovels	1 ea	All Highway Trucks
Hoses	3	Processing Building & Storage Building #1
Eye Wash Station	1	Processing Building
Emergency Body Shower	1	Processing Building
First Aid Kits	1	Processing Building, Scale House and Vehicles

Spill Cleanup Equipment

The site is equipped with front-end loaders, brooms and shovels to clean up any spilled liquids or solid materials. Spill control equipment is located in the Processing Building for any spills that may occur there. A vacuum truck and water truck will be on-call to respond if needed. Vehicles that transport materials at the facility are to have cleanup equipment (broom/shovel/bucket/PPE) for use in the event of a release along the site access road. Drivers are to call the Facility Manager to provide assistance or additional equipment if needed.

Fire Fighting Equipment

All heavy equipment and trucks will have at least one (1) five-pound Class ABC portable fire extinguisher on board. The facility is also equipped with several portable 10-pound Class ABC fire extinguishers (see Table 4). Visual inspections are conducted monthly and maintenance checks are conducted annually.

First Aid Equipment

A first aid kit in the facility is equipped to handle various first aid emergencies. Smaller kits are also found in the vehicles that enter the site. In severe medical emergencies, professional emergency assistance shall be summoned by calling 911.

Miscellaneous Emergency Equipment

Several items located at the facility can also be used for emergency situations. These may include:

- Spill cleanup kits
- Power saw
- Portable heaters
- Tool box
- Air compressor
- Power washer
- Camera/photo equipment
- Fans
- Jacks

All equipment shall be decontaminated or replaced following an emergency situation. Decontamination shall be in a PADEP-approved manner and shall be accomplished before normal operations are resumed.

In the event a silo or other confined space must be entered, proper testing for oxygen concentration, hydrogen sulfide (H₂S), and explosive conditions will be conducted using the appropriate rented instrument(s).

E. EMERGENCY SPILL CONTROL NETWORK

1. Arrangements with Local Emergency Response Agencies

Each year (in December) the Asset Manager will send a letter to the Host Municipality (Reilly Township) with a list of on-site chemicals & locations and extend an invitation to schedule a site visit to the facility with local emergency responders. An example of the notification letter is provided in Attachment 3. Arrangements for emergency services will be made with local emergency response agencies.

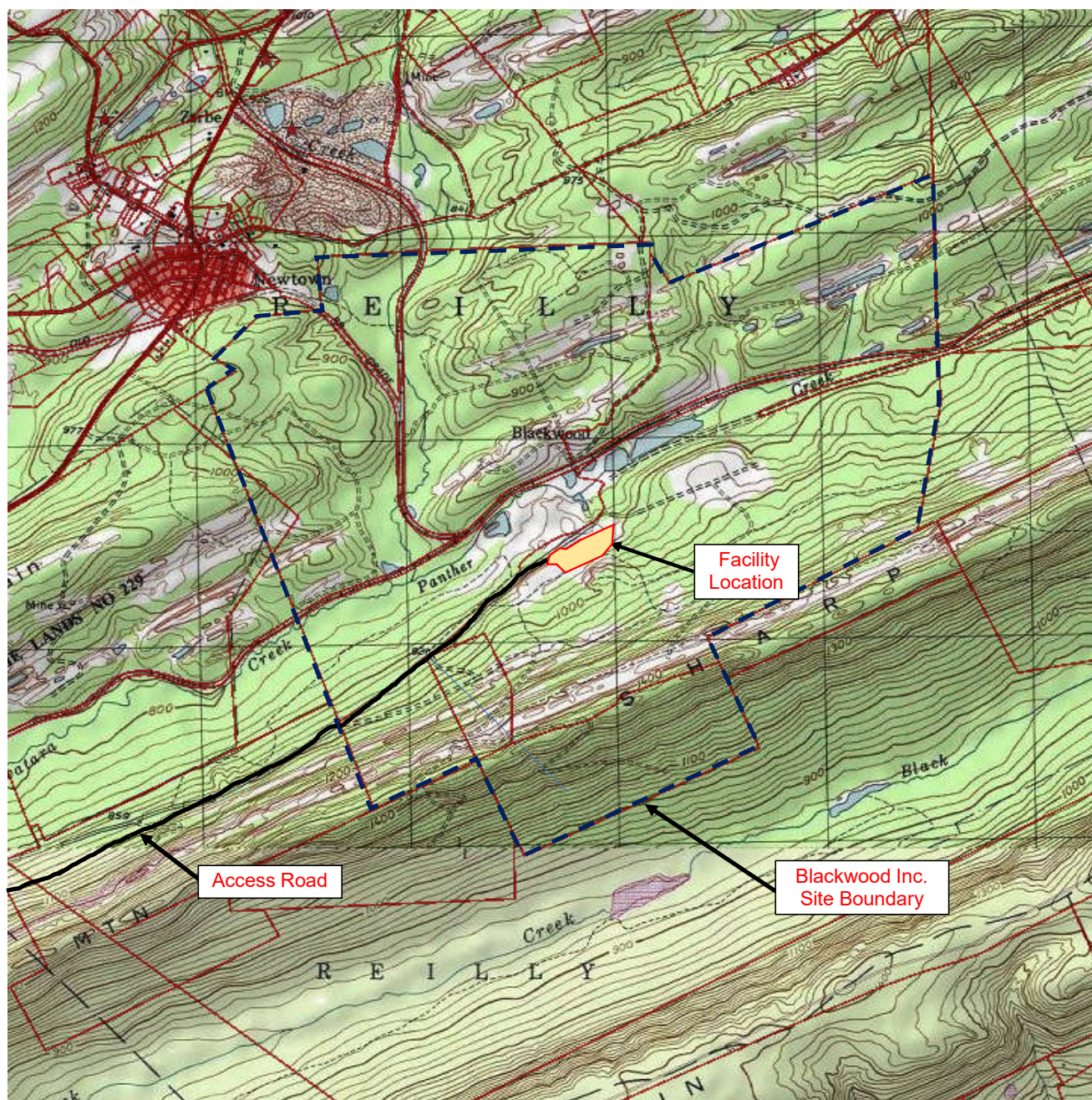
2. Notification Lists

The following is a list of agencies and their respective phone numbers to be contacted as necessary in the event of an emergency situation:

Agency	Telephone Number
<u>Federal</u>	
National Response Center	800 424-8802
U.S. EPA Region 3 (Mid-Atlantic)	215-814-9016
<u>State</u>	
Pennsylvania DEP Emergency Northeast Regional Emergency Waste Management Program Manager Pottsville District Mining Office	800-541-2050 570-826-2511 570-826-2511 570-621-3118
Pennsylvania Emergency Management Agency	610-562-3003 800-372-7362
Pennsylvania Fish and Boat Commission PA Fish Commission Hotline	717-626-0228 800-854-7365
<u>County</u>	
Schuylkill County Emergency Management Agency Department of Health	570-622-3739 570-621-3112
<u>Local</u>	
Fire, Police, Ambulance	911
Good Samaritan Regional Medical Center	570-621-4000
Schuylkill County Health Center	570-874-4289

3. Downstream Notification Requirement for Storage Tanks

This facility does not store >21,000 gallons of regulated substances. Therefore, there is no downstream notification requirement for this facility.



NTS

Source: <https://store.usgs.gov/map-locator>

EnSol, Inc.

3000 Alt Blvd., Grand Island, NY 14072

Ph: 716-285-3920 Fax: 716-285-3928

Prepared By:

KLP

Date:

Dec. 2024

**LIBERTY SOILS, LLC
MAJOR PERMIT MODIFICATION APPLICATION**

LIBERTY SOILS BIOSOLIDS MANAGEMENT FACILITY

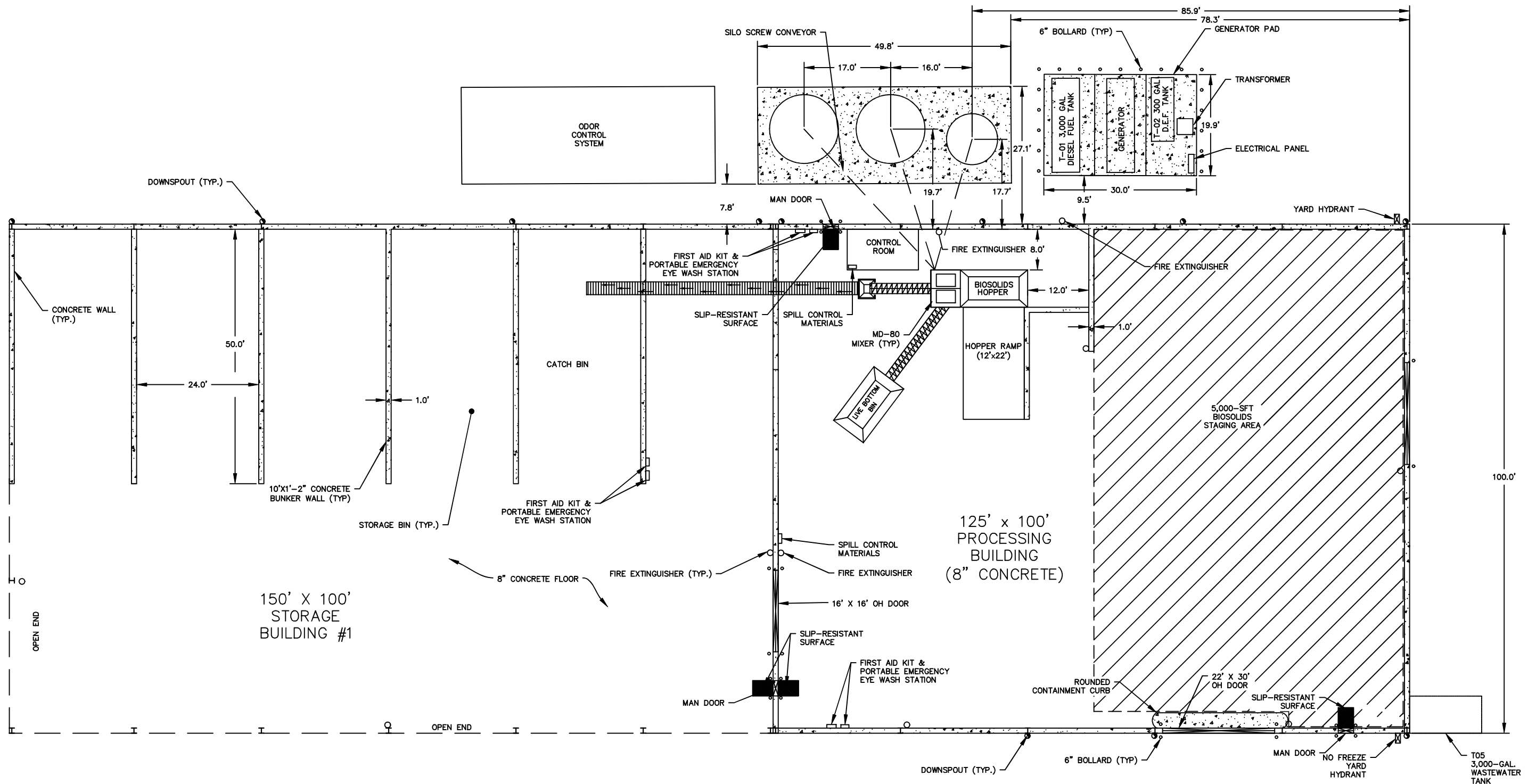
**500 Blackwood Rd.
Tremont, PA**

FIGURE 1

**USGS SITE LOCATION
MAP**

[illegible]

FIGURE | 3



Attachment 1

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

Occupational Safety – State and Federal Laws

Occupational Safety Laws in Pennsylvania and at the Federal Level

Occupational safety laws in the United States are primarily aimed at ensuring the health and well-being of workers, and both federal and state governments play key roles in enforcing these regulations. Below is an explanation of the primary laws governing occupational safety at the federal and Pennsylvania state levels.

1. Federal Occupational Safety Laws

At the federal level, the primary law governing workplace safety is the **Occupational Safety and Health Act (OSH Act) of 1970**. The Occupational Safety and Health Administration (OSHA), a federal agency within the Department of Labor, is responsible for enforcing these regulations.

a. Occupational Safety and Health Act (OSH Act) of 1970

The OSH Act created a framework to ensure safe working conditions by establishing specific workplace safety standards. The key components include:

- **General Duty Clause:** Employers must provide a workplace free of recognized hazards that could cause death or serious harm. This clause covers situations not addressed by specific OSHA standards.
- **OSHA Standards:** OSHA has developed specific regulations (standards) for a wide variety of industries, ranging from construction to healthcare. These regulations are designed to address common workplace hazards such as chemical exposure, machine safety, personal protective equipment (PPE), and workplace ergonomics.
- **Enforcement:** OSHA inspectors conduct workplace inspections to ensure compliance. Violations of OSHA standards can result in fines, penalties, or orders for corrective actions.
- **Training and Education:** Employers must provide their employees with the necessary training to understand and follow safety practices. This includes providing information on the hazards present in the workplace, as well as how to handle these hazards safely.
- **Recordkeeping:** Employers are required to maintain records of workplace injuries and illnesses and submit reports to OSHA.

b. OSHA Implementation

- **Inspections:** OSHA conducts both routine and unannounced inspections to enforce compliance with safety standards. These inspections can lead to citations, fines, or orders for changes in safety practices.
- **Whistleblower Protections:** OSHA provides protections for workers who report safety violations or unsafe practices, shielding them from retaliation.
- **Emergency Preparedness:** Employers must have procedures in place for responding to emergencies (e.g., fires, chemical spills), including proper training and emergency equipment.

2. Pennsylvania Occupational Safety Laws

In addition to federal regulations, Pennsylvania has its own set of laws and agencies that address workplace safety. These laws often mirror federal OSHA standards but can have additional provisions or enforcement mechanisms tailored to the state.

a. Pennsylvania's Occupational Safety and Health Act (POSHA)

- Pennsylvania has a state-level occupational safety law known as the **Pennsylvania Occupational Safety and Health Act (POSHA)**. This law was enacted to create a state program that mirrors federal OSHA standards but is administered at the state level.
- The **Pennsylvania Department of Labor and Industry (DLI)** enforces these regulations.
- Under POSHA, the state adopts many of the same standards as those set by federal OSHA, but in certain cases, the state may impose additional regulations or have a broader reach. This can be especially relevant in state-run or local government workplaces.

b. The Pennsylvania Workers' Compensation Act

While this law primarily deals with compensation for workers injured on the job, it has indirect implications for occupational safety. The Workers' Compensation Act mandates that employers must carry workers' compensation insurance to cover the cost of medical expenses and lost wages for workers injured due to unsafe working conditions.

- If workers are injured due to unsafe working conditions, they are entitled to benefits regardless of who is at fault, providing an incentive for employers to maintain a safe workplace.

c. Pennsylvania Department of Labor and Industry (L&I)

- **Bureau of Occupational and Industrial Safety:** This bureau within the L&I enforces a number of safety regulations concerning construction, general industry, and other sectors. It also provides training and education programs aimed at improving workplace safety.
- **State-Approved Plan:** Pennsylvania has a state-approved OSHA plan that operates alongside federal OSHA. This plan allows Pennsylvania to enforce its own safety regulations, providing flexibility for more specific enforcement in areas like agriculture and construction.

3. Differences and Coordination Between State and Federal Laws

- **Adoption of Federal Standards:** Pennsylvania generally adopts federal OSHA standards as its own for private-sector workplaces, but it may have additional requirements or guidelines for certain types of industries or workers (e.g., public sector).
- **State-Specific Regulations:** Pennsylvania can impose regulations that go beyond federal requirements, particularly in areas like construction safety or public health. For example,

Pennsylvania's state plan may include additional provisions that are more tailored to the local workforce.

- **Federal Preemption:** If Pennsylvania's regulations are not as stringent as federal OSHA standards, federal OSHA may step in to enforce federal regulations. This can occur if the state's workplace safety regulations are found to be inadequate.

4. Implementation of Occupational Safety Laws

- **Inspections:** Both federal OSHA and the Pennsylvania Department of Labor and Industry (DLI) have inspectors who conduct workplace inspections to ensure compliance with safety regulations. While OSHA conducts inspections for private-sector employers, the DLI typically handles inspections for public-sector employers in Pennsylvania.
- **Training and Education:** Both federal and state agencies offer training programs, certifications, and educational resources to improve workplace safety. This includes topics such as hazard communication, proper equipment handling, and emergency procedures.
- **Penalties:** Employers who fail to comply with safety regulations may be subject to fines and penalties. Penalties vary depending on the severity of the violation (e.g., willful violations vs. minor infractions). Both federal and state agencies have the authority to issue citations, with escalating fines for repeated violations.

Attachment 2

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

SDS/MSDS

VaporDOX Odor Neutralizer

#2 Diesel Fuel

Diesel Exhaust Fluid (DEF)

T5X Heavy Duty Engine Oil

Hydraulic Oil

Diesel Antifreeze Coolant

SAFETY DATA SHEET

1. Product and Company Identification

Product identifier(s)	VaporDOX-Elite VaporDOX-Elite Blue Spruce VaporDOX-Elite Cherry Blossom VaporDOX-Elite Citronella VaporDOX-Elite Citrus Grove VaporDOX-Elite Flower Garden VaporDOX-Elite Fresh Breeze VaporDOX-Elite Gardenia VaporDOX-Elite Lavender Petal VaporDOX-Elite Low Fragrance VaporDOX-Elite No Fragrance VaporDOX-Elite North Forest VaporDOX-Elite Spring Mist
Other means of identification	Industrial strength odor neutralizer.
Recommended use	Dilute with air / evaporate and apply as a vapor for the treatment of fugitive nuisance odor emissions.
Recommended restrictions	None known.
Manufacturer	
Company name	BioTriad Environmental Inc.
Address	11 Foundry Street Unit 109 Stroudsburg, PA 18360 United States
Telephone	570-730-4705
Facsimile	570-300-2323
Website	http://biotriad.com/
E-mail	tech@biotriad.com
Emergency phone number	888-658-7423

Multiple products with different fragrances but similar chemical and hazard properties have been covered by this SDS. A single SDS may apply to two or more complex mixtures with similar hazards and ingredients according to the OSHA Hazard Communication Standard (HCS) 29 CFR 1900.1200 (g)(4).

2. Hazards Identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard Symbol: No symbol required

Signal Word: None

Hazard statement: None

Precautionary statement:

Prevention: Wear protective gloves, eye protection, protective clothing, and face protection.

Response: If on skin: Wash with plenty of water.
Wash contaminated clothing before reuse.

Storage: Store away from incompatible materials.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition / Information on Ingredients

This product does not contain any hazardous ingredients

4. First Aid Measures

Inhalation	If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
Skin contact	Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.
Eye contact	Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.
Ingestion	Rinse mouth. Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious or is convulsing. Obtain medical attention.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat patient symptomatically.
General information	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. CO2.
Unsuitable extinguishing media	Not available.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equip. and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting Equipment instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Never return spills in original containers for re-use. Clean surface thoroughly to remove residual contamination. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
Environmental precautions	Do not discharge into lakes, streams, ponds, public waters, or any wetlands.

7. Handling and Storage

Precautions for safe handling	Observe good industrial hygiene practices.
Conditions for safe storage, including incompatibilities	Store locked up. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children.

8. Exposure Controls/Personal Protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Exposure guidelines	Not available.
Appropriate engineering controls	Ensure adequate ventilation.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields and full face protection.
Skin protection	
Hand protection	Wear Nitrile gloves with extended wrist length.
Other	Wear chemical resistant boots, chemical resistant full arm protection, and full-length chemical resistant apron.
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
Thermal hazards	Not applicable.
General hygiene Considerations	When using, do not eat or drink.

9. Physical and Chemical Properties

Appearance	Liquid
Physical state	Liquid.
Color	Milky white / opaque white.
Odor	Base Formula: A pleasant mild fragrance that is characteristic of a mixture of natural ingredients. Blue Spruce: Pleasant conifer / evergreen fragrance Cherry Blossom: Pleasant cherry fragrance Citrus Grove: Pleasant citrus fragrance Flower Garden: Pleasant floral fragrance Fresh Breeze: Pleasant fresh linen fragrance Gardenia: Pleasant floral fragrance No Fragrance: Very slight pleasant fragrance Lavender Petal: Fresh herbaceous floral fragrance. North Forest: Pleasant conifer / evergreen fragrance Spring Mist: Pleasant springtime fragrance Vanilla Bean: Pleasant warm vanilla fragrance
Odor threshold	Not available.
pH	~ 6.2 - 7.8
Melting point	Not available.
Freezing point	28 °F (-2.22 °C)
Initial boiling point	212 °F (100 °C)
Boiling range	Not available.
Pour point	Not available.
Specific gravity	0.99 at 68°F.
Partition coefficient (n-octanol/water)	Not available.
Flash point	None

Evaporation rate	Medium to fast.
Flammability (solid, gas)	Not flammable.
Upper/lower flammability or explosive limits	
Flammability limit, low	Not available.
Flammability limit, high	Not available.
Explosive limit, low	Not available.
Explosive limit, upper	Not available.
Vapor pressure	<2mmHg @ 68°F (20°C)
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Completely soluble in water.
Auto-ignition temp.	Not available.
Decomposition temp.	Not available.
Viscosity	Not available.
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and Reactivity

Reactivity	This product may react with strong oxidizers.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition Products	No hazardous decomposition products are known.

11. Toxicological Information

Information on likely routes of exposure

Ingestion	Ingestion of pure undiluted product may cause stomach distress, nausea or vomiting.
Inhalation	No adverse effects due to inhalation are expected.
Skin contact	Direct contact with pure undiluted product on skin may cause skin sensitization.
Eye contact	Direct contact with pure undiluted product in eyes may cause irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Direct contact with eyes may cause irritation.

Information on toxicological effects

Acute toxicity	Not available
Skin corrosion/irritation	Not available
Exposure minutes	Not available.
Erythema value	Not available.
Oedema value	Not available.
Eye damage/eye Irritation	Not available
Corneal opacity value	Not available.
Iris lesion value	Not available.
Conjunctival reddening value	Not available.
Conjunctival oedema value	Not available.
Recover days	Not available.

Respiratory or skin sensitization

Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	Not a skin sensitizer.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs: Listed substance

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not classified.

Chronic effects Not available.

Further information This product has no known adverse effect on human health.

12. Ecological Information

Ecotoxicity Not available.

Persistence and degradability Not available.

Bioaccumulative potential Not available.

Mobility in soil Not available.

Mobility in general Not available.

Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product.

13. Disposal Considerations

Disposal instructions

Dispose of contents/container in accordance with local / regional / national / international regulations.

Local disposal regulations

Dispose in accordance with all applicable regulations.

Hazardous waste code

The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused Products

Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4) Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard – No

Delayed Hazard – No

Fire Hazard – No

Pressure Hazard – No

Reactivity Hazard – No

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting) Not regulated.

Other federal regulations

Clean Air Act (CAA) Sect 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Sect 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100) Not listed.

US. Massachusetts RTK - Substance List Not regulated.

US. New Jersey Worker and Community Right-to-Know Act Not regulated.

US. Pennsylvania RTK - Hazardous Substances Not regulated.

US. Pennsylvania Worker and Community Right-to-Know Law Not listed.

US. Rhode Island RTK Not regulated.

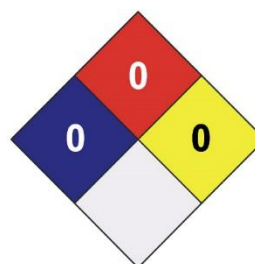
US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/ 0
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



Disclaimer Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated.

Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Further information For an updated SDS, please call (888) 658-7423

Product Name: NO. 2 DIESEL FUEL

Revision Date: 10 May 2010

Page 1 of ##Numpages##

MATERIAL SAFETY DATA SHEET

SECTION 1

PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: NO. 2 DIESEL FUEL

Product Description: Hydrocarbons and Additives

Product Code: 123455-22, 123455-29, 152017-00, 974570, 977044, 977606, 977675, 977680, 977760, 977903, 978007, 978511, 978687, 978745, 979675, 979840, 97A398, 97AB24, 97AB26, 97AC23, 97AH81, 97AH85, 97AJ26, 97AJ32, 97AJ36, 97AJ37, 97AJ38, 97AJ39, 97AJ40, 97AL49, 97AS73, 97AV80, 97AV81, 97AV82, 97BB19, 97BJ98, 97BJ99, 97BK00, 97BK01, 97BK02, 97BK03, 97BK04, 97BK05, 97BK06, 97BN31, 97BN32, 97BN33, 97BN68, 97BN70, 97BN71, 97BN72, 97BN89, 97BN90, 97BN91, 97BN92, 97BN93, 97BN94, 97BN95, 97BN96, 97BN97, 97BR17, 97BR20, 97BR21, 97BR27, 97BR28, 97BR29, 97BR55, 97BR56, 97BR57, 97BR58, 97BR59, 97BR60, 97BR61, 97BR62, 97BR63, 97BR64, 97BR65, 97BR66, 97BR67, 97BR68, 97BR69, 97BR70, 97BR71, 97BR72, 97BR73, 97BR74, 97BR75, 97BR76, 97BR77, 97BR78, 97BR79, 97BR80, 97BS98, 97BS99, 97BT00, 97BT20, 97BT33, 97BT34, 97BT36, 97BT37, 97U644, 97V859, 97Y149, 97Y564, 97Z972, 97Z976, EMGF22, EMGF29

Intended Use: Diesel engine fuel, Heating Oil

COMPANY IDENTIFICATION

Supplier:

EXXON MOBIL CORPORATION

3225 GALLOWES RD.

FAIRFAX, VA. 22037 USA

24 Hour Health Emergency

609-737-4411

Transportation Emergency Phone

800-424-9300

ExxonMobil Transportation No.

281-834-3296

Product Technical Information

800-662-4525, 800-947-9147

MSDS Internet Address

<http://www.exxon.com>, <http://www.mobil.com>

SECTION 2

COMPOSITION / INFORMATION ON INGREDIENTS

Reportable Hazardous Substance(s) or Complex Substance(s)

Name	CAS#	Concentration*
FATTY ACIDS, METHYL ESTERS		0 - 20%
FUELS, DIESEL	68334-30-5	80 - > 99%

Hazardous Constituent(s) Contained in Complex Substance(s)

Name	CAS#	Concentration*
ETHYL BENZENE	100-41-4	0.1 - 1%
NAPHTHALENE	91-20-3	0.1 - 1%

* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

NOTE: Composition may contain up to 0.5% performance additives and / or dyes.

SECTION 3

HAZARDS IDENTIFICATION

This material is considered to be hazardous according to regulatory guidelines (see (M)SDS Section 15).

Product Name: NO. 2 DIESEL FUEL

Revision Date: 10 May 2010

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POTENTIAL PHYSICAL / CHEMICAL EFFECTS

Combustible. Material can release vapors that readily form flammable mixtures. Vapor accumulation could flash and/or explode if ignited. Material can accumulate static charges which may cause an ignition.

POTENTIAL HEALTH EFFECTS

Repeated exposure may cause skin dryness or cracking. Possible human cancer hazard. If swallowed, may be aspirated and cause lung damage. Under conditions of poor personal hygiene and prolonged repeated contact, some polycyclic aromatic compounds (PACs) have been suspected as a cause of skin cancer in humans. May be irritating to the eyes, nose, throat, and lungs. May cause central nervous system depression. High-pressure injection under skin may cause serious damage.

Target Organs: Lung | Skin |

ENVIRONMENTAL HAZARDS

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

NFPA Hazard ID:	Health: 1	Flammability: 2	Reactivity: 0
HMIS Hazard ID:	Health: 1*	Flammability: 2	Reactivity: 0

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 4	FIRST AID MEASURES
------------------	---------------------------

INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT

Remove contaminated clothing. Dry wipe exposed skin and cleanse with waterless hand cleaner and follow by washing thoroughly with soap and water. For those providing assistance, avoid further skin contact to yourself or others. Wear impervious gloves. Launder contaminated clothing separately before reuse. Discard contaminated articles that cannot be laundered. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

Seek immediate medical attention. Do not induce vomiting.

NOTE TO PHYSICIAN

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

PRE-EXISTING MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY EXPOSURE

Product Name: NO. 2 DIESEL FUEL

Revision Date: 10 May 2010

Page 3 of ##NUMPAGES##

Hydrocarbon Solvents/Petroleum Hydrocarbons- Skin contact may aggravate an existing dermatitis.

SECTION 5	FIRE FIGHTING MEASURES
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EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards: Combustible.

Hazardous Combustion Products: Smoke, Fume, Aldehydes, Sulfur oxides, Incomplete combustion products, Oxides of carbon

FLAMMABILITY PROPERTIES

Flash Point [Method]: >55C (131F) [ASTM D-93]

Flammable Limits (Approximate volume % in air): LEL: 0.6 UEL: 7.0

Autoignition Temperature: >200°C (392°F)

SECTION 6	ACCIDENTAL RELEASE MEASURES
------------------	------------------------------------

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for Personal Protective Equipment.

SPILL MANAGEMENT

Land Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Large Spills: Water spray may reduce vapor; but may not prevent ignition in closed spaces.

Water Spill: Stop leak if you can do it without risk. Eliminate sources of ignition. Warn other shipping. If the Flash Point exceeds the Ambient Temperature by 10 degrees C or more, use containment booms and remove from the surface by skimming or with suitable absorbents when conditions permit. If the Flash Point does not

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exceed the Ambient Air Temperature by at least 10C, use booms as a barrier to protect shorelines and allow material to evaporate. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7 HANDLING AND STORAGE

HANDLING

Avoid all personal contact. Do not siphon by mouth. Do not use as a cleaning solvent or other non-motor fuel uses. For use as a motor fuel only. It is dangerous and/or unlawful to put fuel into unapproved containers. Do not fill container while it is in or on a vehicle. Static electricity may ignite vapors and cause fire. Place container on ground when filling and keep nozzle in contact with container. Do not use electronic devices (including but not limited to cellular phones, computers, calculators, pagers or other electronic devices, etc.) in or around any fueling operation or storage area unless the devices are certified intrinsically safe by an approved national testing agency and to the safety standards required by national and/or local laws and regulations. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

Static Accumulator: This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

STORAGE

The container choice, for example storage vessel, may effect static accumulation and dissipation. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Storage containers should be grounded and bonded. Fixed storage containers, transfer containers and associated equipment should be grounded and bonded to prevent accumulation of static charge.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

Source	Form	Limit / Standard			NOTE	Source
ETHYL BENZENE		TWA	435 mg/m3	100 ppm	N/A	OSHA Z1

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ETHYL BENZENE		STEL	125 ppm		N/A	ACGIH
ETHYL BENZENE		TWA	100 ppm		N/A	ACGIH
FUELS, DIESEL	Stable Aerosol.	TWA	5 mg/m3		N/A	ExxonMobil
FUELS, DIESEL	Vapor.	TWA	200 mg/m3		N/A	ExxonMobil
FUELS, DIESEL [total hydrocarb, vapor&aerosol]	Inhalable fraction and vapor	TWA	100 mg/m3		Skin	ACGIH
NAPHTHALENE		TWA	50 mg/m3	10 ppm	N/A	OSHA Z1
NAPHTHALENE		STEL	15 ppm		Skin	ACGIH
NAPHTHALENE		TWA	10 ppm		Skin	ACGIH

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

Use explosion-proof ventilation equipment to stay below exposure limits.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

No special requirements under ordinary conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves.

Eye Protection: If contact with material is likely, chemical goggles are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

Chemical / oil resistant clothing if contact with material is likely.

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Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS

See Sections 6, 7, 12, 13.

SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

GENERAL INFORMATION

Physical State: Liquid

Color: Clear (May Be Dyed)

Odor: Petroleum/Solvent

Odor Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15 C): 0.81 - 0.87

Density (at 15 °C): 810 kg/m³ (6.76 lbs/gal, 0.81 kg/dm³) - 876 kg/m³ (7.31 lbs/gal, 0.88 kg/dm³)

Flash Point [Method]: >55C (131F) [ASTM D-93]

Flammable Limits (Approximate volume % in air): LEL: 0.6 UEL: 7.0

Autoignition Temperature: >200°C (392°F)

Boiling Point / Range: 145C (293F) - 370C (698F)

Vapor Density (Air = 1): > 2 at 101 kPa

Vapor Pressure: 0.067 kPa (0.5 mm Hg) at 20 C

Evaporation Rate (n-butyl acetate = 1): N/D

pH: N/A

Log Pow (n-Octanol/Water Partition Coefficient): > 3.5

Solubility in Water: Negligible

Viscosity: 1.7 cSt (1.7 mm²/sec) at 40 C - 4.1 cSt (4.1 mm²/sec) at 40 C

Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: N/D

Melting Point: N/A

Pour Point: < -6°C (21°F)

SECTION 10

STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Open flames and high energy ignition sources.

MATERIALS TO AVOID: Halogens, Strong Acids, Strong Bases, Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

HAZARDOUS POLYMERIZATION: Will not occur.

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SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Route of Exposure	Conclusion / Remarks
Inhalation	
Toxicity (Rat): LC50 > 5000 mg/m3	Minimally Toxic. Based on test data for structurally similar materials.
Irritation: Data available.	Elevated temperatures or mechanical action may form vapors, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs. Based on test data for structurally similar materials.
Ingestion	
Toxicity (Rat): LD50 > 5000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Skin	
Toxicity (Rabbit): LD50 > 5000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Irritation (Rabbit): Data available.	May dry the skin leading to discomfort and dermatitis. Based on test data for structurally similar materials.
Eye	
Irritation (Rabbit): Data available.	May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.

CHRONIC/OTHER EFFECTS

For the product itself:

Sensitization: Non-sensitizing to the skin of laboratory animals.

Vapor concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anesthetic and may have other central nervous system effects.

Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

Diesel fuel: Caused cancer in animal tests. Caused mutations in vitro. Repeated dermal exposures to high concentrations in test animals resulted in reduced litter size and litter weight, and increased fetal resorptions at maternally toxic doses. Dermal exposure to high concentrations resulted in severe skin irritation with weight loss and some mortality. Inhalation exposure to high concentrations resulted in respiratory tract irritation, lung changes/infiltration/accumulation, and reduction in lung function.

Diesel exhaust fumes: Carcinogenic in animal tests. Inhalation exposures to exhaust for 2 years in test animals resulted in lung tumors and lymphoma. Extract of particulate produced skin tumors in test animals. Caused mutations in vitro.

Contains:

NAPHTHALENE: Exposure to high concentrations of naphthalene may cause destruction of red blood cells, anemia, and cataracts. Naphthalene caused cancer in laboratory animal studies, but the relevance of these findings to humans is uncertain.

ETHYLBENZENE: Caused cancer in laboratory animal studies. The relevance of these findings to humans is uncertain.

Additional information is available by request.

The following ingredients are cited on the lists below:

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Chemical Name	CAS Number	List Citations
ETHYL BENZENE	100-41-4	5
NAPHTHALENE	91-20-3	2, 5

--REGULATORY LISTS SEARCHED--

1 = NTP CARC

2 = NTP SUS

3 = IARC 1

4 = IARC 2A

5 = IARC 2B

6 = OSHA CARC

SECTION 12	ECOLOGICAL INFORMATION
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The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

MOBILITY

More volatile component -- Highly volatile, will partition rapidly to air. Not expected to partition to sediment and wastewater solids.

High molecular wt. component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

PERSISTENCE AND DEGRADABILITY

Biodegradation:

Material -- Expected to be inherently biodegradable

Atmospheric Oxidation:

More volatile component -- Expected to degrade rapidly in air

SECTION 13	DISPOSAL CONSIDERATIONS
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Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

REGULATORY DISPOSAL INFORMATION

RCRA Information: Disposal of unused product may be subject to RCRA regulations (40 CFR 261). Disposal of the used product may also be regulated due to ignitability, corrosivity, reactivity or toxicity as determined by the Toxicity Characteristic Leaching Procedure (TCLP). Potential RCRA characteristics: IGNITABILITY.

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with

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governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14

TRANSPORT INFORMATION

LAND (DOT)

Proper Shipping Name: DIESEL FUEL

Hazard Class & Division: COMBUSTIBLE LIQUID

ID Number: NA1993

Packing Group: III

Marine Pollutant: Yes

ERG Number: 128

Label(s): NONE

Transport Document Name: NA1993, DIESEL FUEL, COMBUSTIBLE LIQUID, PG III, MARINE POLLUTANT

Footnote: The flash point of this material is greater than 100 F. Regulatory classification of this material varies. DOT: Flammable liquid or combustible liquid. OSHA: Combustible liquid. IATA/IMO: Flammable liquid.

LAND (TDG)

Proper Shipping Name: GAS OIL

Hazard Class & Division: 3

UN Number: 1202

Packing Group: III

SEA (IMDG)

Proper Shipping Name: GAS OIL

Hazard Class & Division: 3

EMS Number: F-E, S-E

UN Number: 1202

Packing Group: III

Marine Pollutant: Yes

Label(s): 3

Transport Document Name: UN1202, GAS OIL, 3, PG III, (55°C c.c.), MARINE POLLUTANT

AIR (IATA)

Proper Shipping Name: GAS OIL

Hazard Class & Division: 3

UN Number: 1202

Packing Group: III

Label(s) / Mark(s): 3

Transport Document Name: UN1202, GAS OIL, 3, PG III

SECTION 15

REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purpose, this material is classified as hazardous in accordance with OSHA 29CFR 1910.1200.

NATIONAL CHEMICAL INVENTORY LISTING: AICS, IECSC, DSL, EINECS, ELINCS, KECI, PICCS, TSCA

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EPCRA: This material contains no extremely hazardous substances.

CERCLA: This material is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Contact local authorities to determine if other reporting requirements apply.

SARA (311/312) REPORTABLE HAZARD CATEGORIES: Fire. Immediate Health. Delayed Health.

SARA (313) TOXIC RELEASE INVENTORY:

Chemical Name	CAS Number	Typical Value
ETHYL BENZENE	100-41-4	0.1 - 1%
NAPHTHALENE	91-20-3	0.1 - 1%

The following ingredients are cited on the lists below:

Chemical Name	CAS Number	List Citations
ETHYL BENZENE	100-41-4	1, 4, 10
FUELS, DIESEL	68334-30-5	1, 18, 19
NAPHTHALENE	91-20-3	1, 4, 5, 9, 10

--REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	6 = TSCA 5a2	11 = CA P65 REPRO	16 = MN RTK
2 = ACGIH A1	7 = TSCA 5e	12 = CA RTK	17 = NJ RTK
3 = ACGIH A2	8 = TSCA 6	13 = IL RTK	18 = PA RTK
4 = OSHA Z	9 = TSCA 12b	14 = LA RTK	19 = RI RTK
5 = TSCA 4	10 = CA P65 CARC	15 = MI 293	

Code key: CARC=Carcinogen; REPRO=Reproductive

SECTION 16	OTHER INFORMATION
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N/D = Not determined, N/A = Not applicable

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Revision Changes:

Section 04: First Aid Inhalation - Header was modified.

Section 04: First Aid Ingestion - Header was modified.

Section 01: Product Code was modified.

Section 01: Product Intended Use was modified.

Section 07: Handling and Storage - Storage Phrases was modified.

Section 06: Accidental Release - Spill Management - Water was modified.

Section 16: Water Spill was modified.

THIS MSDS COVERS THE FOLLOWING MATERIALS: DIESEL NO. 2 | ESSO DIESEL FUEL | EXXON DIESEL FUEL | LOW SULFUR DIESEL | MARINE DIESEL FUEL | MOBIL DIESEL FUEL | ULTRA LOW SULFUR DIESEL | WINTERIZED DIESEL FUEL

PRECAUTIONARY LABEL TEXT:

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Contains: FATTY ACIDS, METHYL ESTERS, FUELS, DIESEL
WARNING!

HEALTH HAZARDS

Repeated exposure may cause skin dryness or cracking. Possible human cancer hazard. If swallowed, may be aspirated and cause lung damage.

Target Organs: Lung | Skin |

PHYSICAL HAZARDS

Combustible. Material can accumulate static charges which may cause an ignition.

PRECAUTIONS

Avoid contact with skin. Do not siphon by mouth. Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation.

FIRST AID

Eye: Flush thoroughly with water. If irritation occurs, get medical assistance.

Oral: Seek immediate medical attention. Do not induce vomiting.

Skin: Remove contaminated clothing. Dry wipe exposed skin and cleanse with waterless hand cleaner and follow by washing thoroughly with soap and water. For those providing assistance, avoid further skin contact to yourself or others. Wear impervious gloves. Launder contaminated clothing separately before reuse. Discard contaminated articles that cannot be laundered. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

FIRE FIGHTING MEDIA

Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

SPILL/LEAK

Land Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk. Prevent entry into waterways, sewer, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Water Spill: Stop leak if you can do it without risk. Eliminate sources of ignition. Warn other shipping. If the Flash Point exceeds the Ambient Temperature by 10 degrees C or more, use containment booms and remove from the surface by skimming or with suitable absorbents when conditions permit. If the Flash Point does not exceed the Ambient Air Temperature by at least 10C, use booms as a barrier to protect shorelines and allow material to evaporate. Seek the advice of a specialist before using dispersants.

This warning is given to comply with California Health and Safety Code 25249.6 and does not constitute an admission or a waiver of rights. This product contains a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm. Chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm are created by the combustion of this product.

The information and recommendations contained herein are, to the best of ExxonMobil's knowledge and belief, accurate and reliable as of the date issued. You can contact ExxonMobil to insure that this document is the most current available from ExxonMobil. The information and recommendations are offered for the user's consideration and examination. It is the user's responsibility to satisfy itself that the product is suitable for the intended use. If buyer repackages this product, it is the user's responsibility to insure proper health, safety and other necessary information is



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included with and/or on the container. Appropriate warnings and safe-handling procedures should be provided to handlers and users. Alteration of this document is strictly prohibited. Except to the extent required by law, republication or retransmission of this document, in whole or in part, is not permitted. The term, "ExxonMobil" is used for convenience, and may include any one or more of ExxonMobil Chemical Company, Exxon Mobil Corporation, or any affiliates in which they directly or indirectly hold any interest.

Internal Use Only

MHC: 1A, 0B, 0, 0, 1, 1

PPEC: C

DGN: 7079307XUS (1012398)

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Diesel Exhaust Fluid

Product form : Mixture

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Cleaning of waste gases

1.3. Details of the supplier of the safety data sheet

Blue Sky East, LLC.
800 Roosevelt Avenue
Carteret, New Jersey, 07008 USA
Tel: 732-969-9200
Fax: 732-541-7999
Contact: Thomas Sensbach
Email: tsensbach@blueskydefna.com
www.blueskydefna.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: Domestic North America: 800-424-9300
International: 703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Irrit. 2 H315
Eye Irrit. 2A H319
STOT SE 3 H335

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US)



GHS07

Signal word (GHS-US)

: **Warning**

Hazard statements (GHS-US)

: H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

Precautionary statements (GHS-US)

: P261 - Avoid breathing vapours
P264 - Wash hands, forearms and face thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear eye protection, protective clothing, protective gloves
P302+P352 - If on skin: Wash with plenty of soap and water
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P312 - Call a doctor, a POISON CENTER if you feel unwell
P321 - Specific treatment (see first aid instructions on this label)
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

No data available

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SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%
Urea	(CAS No) 57-13-6	15 - 40
Urea, N,N-methylenebis-	(CAS No) 13547-17-6	<= 1
Imidodicarbonic diamide	(CAS No) 108-19-0	<= 1
Alkalinity, as Ammonia		<= 0,1

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person.
- First-aid measures after inhalation : IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if breathing is affected. If breathing is difficult, supply oxygen.
- First-aid measures after skin contact : IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with water for at least 15 minutes. If irritation develops or persists, get medical attention.
- First-aid measures after eye contact : IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. If pain, blinking, or irritation develops or persists, get medical attention. Continue rinsing.
- First-aid measures after ingestion : IF SWALLOWED: rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.
- Symptoms/injuries after inhalation : May cause respiratory irritation.
- Symptoms/injuries after skin contact : Causes skin irritation.
- Symptoms/injuries after eye contact : Causes serious eye irritation.
- Symptoms/injuries after ingestion : May cause gastrointestinal irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Foam. Carbon dioxide. Dry powder.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : The product is not flammable.
- Explosion hazard : Product is not explosive.
- Reactivity : No dangerous reactions known under normal conditions of use.

5.3. Advice for firefighters

- Precautionary measures fire : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Do not dispose of fire-fighting water in the environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Evacuate area. Ventilate area. Keep upwind. Spill should be handled by trained clean-up crews properly equipped with respiratory equipment and full chemical protective gear (see Section 8).

6.1.1. For non-emergency personnel

- Protective equipment : Wear Protective equipment as described in Section 8.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Wear suitable protective clothing, gloves and eye or face protection. Approved supplied-air respirator, in case of emergency.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

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6.3. Methods and material for containment and cleaning up

- For containment : Stop leak if safe to do so. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Sweep or shovel spills into appropriate container for disposal. This material and its container must be disposed of in a safe way, and as per local legislation.

6.4. Reference to other sections

See Sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing. Avoid breathing vapours, mist. Use personal protective equipment as required. Ensure good ventilation of the work station. If process is performed that may cause airborne particles, appropriate respiratory protection should be used to avoid breathing any dust or vapors. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage conditions : Store in a dry, cool and well-ventilated place. Keep container tightly closed. Keep only in original container. Containers which are opened should be properly resealed and kept upright to prevent leakage. Do not store in unlabeled containers.
- Storage temperature : -5 - 30 °C (23 - 86 °F)

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Urea (57-13-6)	
Remark (ACGIH)	OELs not established
Remark (OSHA)	OELs not established
Urea, N,N-methylenebis- (13547-17-6)	
Remark (ACGIH)	OELs not established
Remark (OSHA)	OELs not established
Imidodicarbonic diamide (108-19-0)	
Remark (ACGIH)	OELs not established
Remark (OSHA)	OELs not established

8.2. Exposure controls

- Appropriate engineering controls : Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment with flammable materials. Ensure adequate ventilation, especially in confined areas.
- Personal protective equipment : Gloves. Protective goggles. Protective clothing.



- Hand protection : Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Gloves should be classified under Standard EN 374 or ASTM F1296. Suggested glove materials are: Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, PVC or vinyl. Change contaminated gloves immediately. Suitable gloves for this specific application can be recommended by the glove supplier.
- Eye protection : Wear eye protection, including chemical splash goggles and a face shield when possibility exists for eye contact due to spraying liquid or airborne particles.
- Skin and body protection : Wear long sleeves, and chemically impervious PPE/coveralls to minimize bodily exposure.
- Respiratory protection : Use NIOSH-approved dust/particulate respirator. Where vapor, mist, or dust exceed PELs or other applicable OELs, use NIOSH-approved respiratory protective equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Appearance : Clear, colorless liquid.

Diesel Exhaust Fluid

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Color	: Colorless. Yellow.
Odor	: Characteristic.
Odor Threshold	: No data available
pH	: 10 [Conc. (% w/w): 10%]
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: -11 °C (12.2 °F)
Boiling point	: 103 °C (217.4 °F)
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 0.4 mm Hg @ 20 °C (68 °F)
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.087 - 1.093 g/cm ³ @ 20 °C (68 °F)
Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 0.14 mPa.s (0.14 cP)
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Avoid contact with : Incompatible materials.

10.5. Incompatible materials

Oxidizing agent. Nitrites.

10.6. Hazardous decomposition products

Thermal decomposition generates : Carbon oxides (CO, CO₂). Nitrogen oxides. Ammonia.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Urea (57-13-6)	
LD50 oral rat	8471 mg/kg
Skin corrosion/irritation	: Causes skin irritation. pH: 10 [Conc. (% w/w): 10%]
Serious eye damage/irritation	: Causes serious eye irritation. pH: 10 [Conc. (% w/w): 10%]
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: May cause respiratory irritation.

Diesel Exhaust Fluid

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Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: May cause respiratory irritation.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: May cause gastrointestinal irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No information available.

12.2. Persistence and degradability

Diesel Exhaust Fluid	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

Diesel Exhaust Fluid	
Bioaccumulative potential	No information available.

12.4. Mobility in soil

Diesel Exhaust Fluid	
Ecology - soil	No information available.

12.5. Other adverse effects

Other adverse effects : No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Obtain the consent of pollution control authorities before discharging to wastewater treatment plants.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment.

SECTION 14: Transport information

In accordance with DOT

Not hazardous for transport

Additional information

Other information : No supplementary information available.

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Diesel Exhaust Fluid	
All chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA (Toxic Substances Control Act) Inventory All the constituents of this preparation are registered in the EINECS inventory or in the ELINCS list	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

15.2. International regulations

No additional information available.

15.3. US State regulations

California Proposition 65

This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm.

SECTION 16: Other information

Indication of changes : Revision 1.0: New SDS Created.

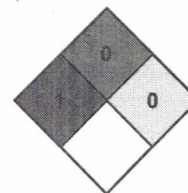
Diesel Exhaust Fluid

Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 03/05/2015
Other information : Author: BCS.

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
NFPA fire hazard : 0 - Materials that will not burn.
NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 1
Flammability : 0
Physical : 0
Personal Protection :

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



T5X Heavy Duty (All Grades)

Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: T5X Heavy Duty (All Grades)

MSDS Code: 721860

Synonyms: 76 T5X Heavy Duty 10W
76 T5X Heavy Duty 10W-30
76 T5X Heavy Duty 15W-40
76 T5X Heavy Duty 20W-20
76 T5X Heavy Duty 30
76 T5X Heavy Duty 40
76 T5X Heavy Duty 50

Intended Use: Heavy Duty Diesel Engine Oil

Responsible Party: ConocoPhillips Lubricants
600 N. Dairy Ashford
Houston, Texas 77079-1175

Customer Service: 888-766-7676

Technical Information: 800-255-9556

MSDS Information: Internet: <http://w3.conocophillips.com/NetMSDS/>

Emergency Telephone Numbers: Chemtrec: 800-424-9300 (24 Hours)
California Poison Control System: 800-356-3219

2. HAZARDS IDENTIFICATION

Emergency Overview

This material is not considered hazardous according to OSHA criteria.

NFPA



Appearance: Clear, brown
Physical Form: Liquid
Odor: Petroleum

Potential Health Effects

Eye: Contact may cause mild eye irritation including stinging, watering, and redness.

Skin: Contact may cause mild skin irritation including redness and a burning sensation. Prolonged or repeated contact can defat the skin, causing drying and cracking of the skin, and possibly dermatitis (inflammation). No harmful effects from skin absorption are expected.

Inhalation (Breathing): Expected to have a low degree of toxicity by inhalation.

Ingestion (Swallowing): No harmful effects expected from ingestion.

Signs and Symptoms: Effects of overexposure may include irritation of the digestive tract, nausea and diarrhea. Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Pre-Existing Medical Conditions: Conditions aggravated by exposure may include skin disorders.

See Section 11 for additional Toxicity Information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS	Concentration (wt %)
Lubricant Base Oil (Petroleum)	VARIOUS	78 - 91
Additives	PROPRIETARY	9 - 22

4. FIRST AID MEASURES

Eye: If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

Skin: Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops and persists, seek medical attention.

Inhalation (Breathing): First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air. Seek immediate medical attention.

Ingestion (Swallowing): First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

Notes to Physician: Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

5. FIRE-FIGHTING MEASURES

NFPA 704 Hazard Class

Health: 0 **Flammability:** 1 **Instability:** 0 (0-Minimal, 1-Slight, 2-Moderate, 3-Serious, 4-Severe)

Unusual Fire & Explosion Hazards: This material may burn, but will not ignite readily. Vapors are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire.

Extinguishing Media: Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Fire Fighting Instructions: For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. The use of explosion-proof electrical equipment is recommended. Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

Environmental Precautions: Stop spill/release if it can be done with minimal risk. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements.

Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone number 800-424-8802).

Methods for Containment and Clean-Up: Notify fire authorities and appropriate federal, state, and local agencies. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling: Use good personal hygiene practices and wear appropriate personal protective equipment. Wash thoroughly after handling.

Used motor oils have been shown to cause skin cancer in mice after repeated application to the skin without washing. Brief or intermittent skin contact with used motor oil is not expected to cause harm if the oil is thoroughly removed by washing with soap and water.

Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

Conditions for safe storage: Use and store this material in cool, dry, well-ventilated areas away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Keep container(s) tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component	ACGIH	OSHA	Other:
Lubricant Base Oil (Petroleum)	TWA: 5mg/m ³ STEL: 10 mg/m ³ as Oil Mist, if generated	TWA: 5 mg/m ³ as Oil Mist, if generated	---

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Personal Protective Equipment (PPE):

Eye/Face: The use of eye protection that meets or exceeds ANSI Z.87.1 is recommended to protect against potential eye contact, irritation, or injury. Depending on conditions of use, a face shield may be necessary.

Skin: The use of gloves impervious to the specific material handled is advised to prevent skin contact. Users should check with manufacturers to confirm the performance of their products. Suggested protective materials: Nitrile

Respiratory: Where there is potential for airborne exposure above the exposure limit a NIOSH certified air purifying respirator equipped with R or P95 filters may be used.

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (MUC) as directed by regulation or the manufacturer's instructions, in oxygen deficient (less than 19.5 percent oxygen) situations, or other conditions that are immediately dangerous to life and health (IDLH).

Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

Appearance:	Clear, brown
Physical Form:	Liquid
Odor:	Petroleum
Odor Threshold:	No data
pH:	Not applicable
Vapor Pressure:	<1
Vapor Density (air=1):	>1
Boiling Point/Range:	520°F / 271°C
Melting/Freezing Point:	No data
Solubility in Water:	Negligible
Partition Coefficient (n-octanol/water) (Kow):	No data
Specific Gravity:	0.86 - 0.90 @ 60°F (15.6°C)
Bulk Density:	7.16 - 7.51 lbs/gal
Viscosity:	6.0 - 20.5 cSt @ 100°C; 34 - 216 cSt @ 40°C
Percent Volatile:	Negligible
Evaporation Rate (nBuAc=1):	<1
Flash Point:	Minimum 399°F / 204°C
Test Method:	Cleveland Open Cup (COC), ASTM D92
LEL (vol % in air):	No data
UEL (vol % in air):	No data
Autoignition Temperature:	No data

10. STABILITY AND REACTIVITY

Stability: Stable under normal ambient and anticipated conditions of storage and handling.

Conditions to Avoid: Extended exposure to high temperatures can cause decomposition.

Materials to Avoid (Incompatible Materials): Avoid contact with strong oxidizing agents.

Hazardous Decomposition Products: Combustion can yield oxides of carbon, nitrogen, sulfur, phosphorus and zinc. During use in engines, contamination of oil with low levels of hazardous combustion by-products (e.g. polycyclic aromatic hydrocarbons) may occur.

Hazardous Polymerization: Not known to occur.

11. TOXICOLOGICAL INFORMATION

Chronic Data:

The petroleum base oils contained in this product have been highly refined by a variety of processes including severe hydrocracking/hydroprocessing to reduce aromatics and improve performance characteristics. All of the oils meet the IP-346 criteria of less than 3 percent PAH's and are not considered carcinogens by NTP, IARC, or OSHA.

p-dodecylphenol 74499-35-7

Reproductive: This product contains low levels of p-dodecylphenol (tetrapropenyl phenol). Rats given high, repeated daily doses of p-dodecylphenol by oral intubation experienced adverse reproductive effects. Pregnant rats given high, repeated daily doses of p-dodecylphenol by oral intubation gave birth to pups with cleft palate and skeletal malformations at dose levels that caused maternal toxicity. Follow-up studies of p-dodecylphenol in finished lubricating fluids demonstrated a no-observed effect level of 1.78 wt%.

Acute Data:

Component	Oral LD50	Dermal LD50	Inhalation LC50
Lubricant Base Oil (Petroleum)	>5 g/kg	>2 g/kg	No data
p-dodecylphenol 74499-35-7	2100 mg/kg (rat)	>2000 mg/kg (rabbit)	No data

12. ECOLOGICAL INFORMATION

Lubricant oil basestocks are complex mixtures of hydrocarbons (primarily branched chain alkanes and cycloalkanes) ranging in carbon number from C15 to C50. The aromatic hydrocarbon content of these mixtures varies with the severity of the refining process. White oils have negligible levels of aromatic hydrocarbons, whereas significant proportions are found in unrefined basestocks. Olefins are found only at very low concentrations. Volatilization is not significant after release of lubricating oil basestocks to the environment due to the very low vapor pressure of the hydrocarbon constituents. In water, lubricating oil basestocks will float and will spread at a rate that is viscosity dependent. Water solubilities are very low and dispersion occurs mainly from water movement with adsorption by sediment being the major fate process. In soil, lubricating oil basestocks show little mobility and adsorption is the predominant physical process.

Both acute and chronic ecotoxicity studies have been conducted on lubricant base oils. Results indicate that the acute aquatic toxicities to fish, Daphnia, Ceriodaphnia and algal species are above 1000 mg/l using either water accommodated fractions or oil in water dispersions. Since lubricant base oils mainly contain hydrocarbons having carbon numbers in the range C15 to C50, it is predicted that acute toxicity would not be observed with these substances due to low water solubility. Results from chronic toxicity tests show that the no observed effect level (NOEL) usually exceeds 1000 mg/l for lubricant base oils with the overall weight of experimental evidence leading to the conclusion that lubricant base oils do not cause chronic toxicity to fish and invertebrates.

Large volumes spills of lubricant base oils into water will produce a layer of undissolved oil on the water surface that will cause direct physical fouling of organisms and may interfere with surface air exchange resulting in lower levels of dissolved oxygen. Petroleum products have also been associated with causing taint in fish even when the latter are caught in lightly contaminated environments. Highly refined base oils sprayed onto the surface of eggs will result in a failure to hatch.

Extensive experience from laboratory and field trials in a wide range of crops has confirmed that little or no damage is produced as a result of either aerosol exposure or direct application of oil emulsion to the leaves of crop plants. Base oils incorporated into soil have resulted in little or no adverse effects on seed germination and plant growth at contamination rates up to 4%.

13. DISPOSAL CONSIDERATIONS

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations.

This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste and is not believed to exhibit characteristics of hazardous waste. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the MSDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste.

This material under most intended uses would become "Used Oil" due to contamination by physical or chemical impurities. Whenever possible, Recycle Used Oil in accordance with applicable federal and state or local regulations. Container contents should be completely used and containers should be emptied prior to discard.

14. TRANSPORTATION INFORMATION

U.S. Department of Transportation (DOT)

Shipping Description:

Not regulated

Note:

If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply. (Contains oil)

14. TRANSPORTATION INFORMATION

International Maritime Dangerous Goods (IMDG)

Shipping Description: Not regulated

Note: Federal compliance requirements may apply. See 49 CFR 171.12.

International Civil Aviation Org. / International Air Transport Assoc. (ICAO/IATA)

UN/ID #: Not regulated

Note: Federal compliance requirements may apply. See 49 CFR 171.11.

	LTD. QTY	Passenger Aircraft	Cargo Aircraft Only
Packaging Instruction #:	---	---	---
Max. Net Qty. Per Package:	---	---	---

15. REGULATORY INFORMATION

CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds):

This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

CERCLA/SARA - Section 311/312 (Title III Hazard Categories)

Acute Health: No
Chronic Health: No
Fire Hazard: No
Pressure Hazard: No
Reactive Hazard: No

CERCLA/SARA - Section 313 and 40 CFR 372:

This material contains the following chemicals subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR 372:

Component	Concentration (wt %)	de minimis
Zinc Compound(s)	0.5 - 2.0	1.0%

EPA (CERCLA) Reportable Quantity (in pounds):

This material does not contain any chemicals with CERCLA Reportable Quantities. This material contains the following chemicals subject to the reporting requirements of 40 CFR 302.4:

California Proposition 65:

Warning: This material may contain detectable quantities of the following chemicals, known to the State of California to cause cancer, birth defects or other reproductive harm, and which may be subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):

Component	Type of Toxicity
Benzene	Cancer Developmental Toxicant Male Reproductive Toxicant
Lead / Lead Compounds	Cancer Developmental Toxicant Female Reproductive Toxicant Male Reproductive Toxicant
Arsenic (Inorganic Arsenic Compounds)	Cancer
Cadmium / Cadmium Compounds	Cancer Developmental Toxicant Male Reproductive Toxicant

Canadian Regulations:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the Regulations.

WHMIS Hazard Class
None

National Chemical Inventories:

All components are either listed on the US TSCA Inventory, or are not regulated under TSCA.
All components are either on the DSL, or are exempt from DSL listing requirements.

U.S. Export Control Classification Number: EAR99

16. OTHER INFORMATION

Issue Date:	10-Oct-2007
Status:	Final
Revised Sections or Basis for Revision:	NFPA ratings (Section 2) Composition (Section 3) Toxicological (Section 11)
MSDS Code:	721860

MSDS Legend:

ACGIH = American Conference of Governmental Industrial Hygienists; CAS = Chemical Abstracts Service Registry; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; IARC = International Agency for Research on Cancer; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

Disclaimer of Expressed and implied Warranties:

The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.



Supersedes Date 7/2/2007

Material Safety Data Sheet

Product Name/ Trade Name	JAX PREMIUM HYDRAULIC OIL - ISO 22, 32, 46, 68 & 100	Product ID No.	44022; 44032; 44046; 44068; 44100
Supplier	JAX INC. W134 N5373 CAMPBELL DRIVE MENOMONEE FALLS, WI 53051 USA	Emergency Contact For Chemical Emergency, Spill, Leak, Fire, Exposure or Accident, Call CHEMTREC: NORTH AMERICA 800-424-9300 INTERNATIONAL +01-703-527-3887 Collect	
Synonym(s)	None		
Chemical Name	Petroleum lubricating oil		
Chemical Family	Petroleum hydrocarbon oil blend	Non-Emergency Contact	JAX: 262-781-8850 JAX/FAX: 262-781-3906
Chemical Formula	Mixture		
Material Uses	Hydraulic oil		

Name	PEL/TLV, Source	CAS #	% by Weight
PROPRIETARY FORMULA. This material is essentially lubricating oil with corrosion inhibitor and antiwear compounds.	5 mg/m ³ (mist), OSHA	Mixture	100.0
LC₅₀, LD₅₀ of Ingredients	Not available		

Emergency Overview	Potential health risks vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized. In an accident involving high-pressure equipment, this product may be injected under the skin, resulting in a small, sometimes bloodless puncture wound. Immediate treatment at a surgical emergency center is recommended.
Potential Health Effects:	
Eye Contact	Not expected to cause prolonged or significant eye irritation.
Skin Contact	Contact with skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin. High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The initial wound at the injection site may not appear to be serious at first, but if left untreated, could result in disfigurement or amputation of the affected part.
Ingestion	Not expected to be harmful if swallowed.
Inhalation	May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit.

Continued on Next Page

Section III. Hazards Identification (cont'd)

HMIS Code				HAZARD RATINGS	
	Health: 1	Fire: 1	Physical Hazard: 0	0 Minimal Hazard 1 Slight Hazard 2 Moderate Hazard	3 Serious Hazard 4 Severe Hazard

Section IV. First Aid Measures

Eye Contact	Remove contact lenses, if worn, and flush eyes with water. If irritation persists, consult a physician.
Skin Contact	Remove clothing and shoes if contaminated. Wash skin with soap and water. Wash or clean contaminated clothing before reuse and discard oil-soaked shoes. If irritation persists, consult a physician.
Ingestion	If swallowed, DO NOT induce vomiting. As a precaution, give the person a glass of water to drink and seek medical attention. Never give anything by mouth to an unconscious person. Consult a physician.
Inhalation	If exposed to excessive levels of material in the air, move the exposed person to fresh air. Seek medical attention if coughing or respiratory discomfort occurs.

Section V. Fire and Explosion Data

Autoignition Temperature	Not available	Sensitivity to Impact	Not available
Flash Point	396°F (202°C) min., ASTM D 92	Sensitivity to Static Discharge	Not available
Flammable Limits (Approx.)	LOWER Flammable Limit: Not available	UPPER Flammable Limit:	Not available
Explosion Hazards	See Lower and Upper Flammable Limits		
Products of Combustion	Carbon monoxide, carbon dioxide, oxides of sulfur, oxides of phosphorus, oxides of zinc, aldehydes, hydrogen sulfide, alkyl mercaptans, smoke and irritating vapors as products of incomplete combustion.		
Firefighting Media and Instructions	Dry chemical, alcohol foam, and carbon dioxide type extinguishing agents may all be suitable for extinguishing fires involving this type of product, depending on the size or potential size of fire and circumstances related to the situation. Plan fire protection and response strategy through consultation with local fire protection authorities or appropriate specialists. The following procedures for this type of product are based on the recommendations in the National Fire Protection Association's Fire Protection Guide on Hazardous Materials. Use water to keep fire-exposed containers cool. If a leak or spill has not ignited, use water spray to disperse the vapors and to provide protection for men attempting to stop a leak. Water spray may be used to flush spills away from explosives. Firefighters should wear full protective gear, including helmet. Use supplied-air breathing equipment for enclosed or confined spaces or as otherwise needed.		
Special Remarks - Fire and Explosion Hazards	For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. Leaks/ruptures in high-pressure systems using materials of this type can create a fire hazard when in the vicinity of ignition sources (open flame, pilot lights, sparks or electric arcs).		

Section VI. Accidental Release Measures

Release or Spill	Recover free product using non-sparking tools and equipment. Add sand, earth, or other suitable absorbent material to the spill area. Minimize breathing vapors. Minimize skin contact. Open all windows and doors. Keep product out of sewers and watercourses by diking or impounding. Advise authorities if the product has entered or may enter sewers, watercourse, or extensive land areas.
Environmental Impact	Report spills as required to the appropriate authorities. U.S Coast Guard Regulations require immediate reporting of spills that could reach any waterway including intermittent dry creeks. Report spill to the Coast Guard toll-free number 800-424-8802.

Section VII. Handling and Storage

Handling	Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. "Empty" containers retain product residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition as they may explode and can cause injury or death. Empty container should be promptly returned to a drum reconditioner.
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Section VII. Handling and Storage (cont'd)

Storage	Do not use in high-pressure systems in the vicinity of flames, sparks and hot surfaces. Keep container closed. Do not store near heat, sparks, open flame, pilot lights, static electricity, or where temperature may exceed 120°F (49°C).
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Section VIII. Exposure Controls and Personal Protection

Respiratory Protection	Use respiratory protection if needed to keep airborne levels below recommended mineral oil mist exposure limits.
Ventilation	Use in a well-ventilated area. See Engineering Controls.
Protective Gloves	Any lined non-permeable rubber gloves.
Eye Protection	Chemical splash goggles or face shield in compliance with OSHA regulations are advised when eye contact may occur.
Personal Hygiene	Wash skin thoroughly after contact, before breaks and meals and at end of work period. Product is readily removed from skin by waterless hand cleaners followed by washing thoroughly with soap and water.
Engineering Controls	If user operations generate an oil mist, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended mineral oil mist exposure limits.
Exposure Limit	See Section II.

Section IX. Physical and Chemical Properties

Appearance/Odor	Clear to amber colored lube oil with little or no odor	Vapor Pressure	Nil
Odor Threshold	Not available	Vapor Density	Not available
Specific Gravity	0.8586 - 0.8860	Percent Volatile	Nil
Density	Not available	Evaporation Rate	Nil
Molecular Weight	Not available	Viscosity	Not available
pH	Not available	Solubility in Water	Nil
Boiling Point	Not available	Coefficient of Water/Oil Distribution	Not available
Freezing/Melting Point	Not available	Physical State	Liquid

Section X. Stability and Reactivity Data

Stability	Stable under normal temperatures and pressures.	Conditions of Reactivity	Not available
Conditions of Instability	Not available		
Conditions and Materials to Avoid	Avoid contact with heat, open flames, and oxidizing agents.		
Hazardous Polymerization	Hazardous polymerization will not occur.		
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide, oxides of sulfur, oxides of phosphorus, oxides of zinc, aldehydes, hydrogen sulfide, alkyl mercaptans, smoke and irritating vapors as products of incomplete combustion.		

Section XI. Toxicological Information

Routes of Entry	Dermal contact, eye contact, inhalation, ingestion.	Ingestion	Not available
Toxicity to Animals	Not available	Inhalation	Not available
Effects of Acute Exposure	Not available	Toxically Synergistic Products	Not available
Acute Effects of Sensitization	Not available		
Chronic Effects on Humans:			
Carcinogenic Effects	This product does not contain a carcinogen or potential carcinogen as listed by NTP, IARC, or OSHA [29 CFR 1910.1200(D)#4].		
Mutagenic Effects	No data available to indicate any components present at greater than 0.1% may present a mutagenic hazard.		

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Section XI. Toxicological Information (cont'd)

Teratogenic Effects	No data available to indicate any components present at greater than 0.1% may present a teratogenic hazard.
Reproductive Effects	No data available to indicate any components present at greater than 0.1% may present a reproductive hazard.

Section XII. Ecological Information

Ecotoxicity	There is no data available on the adverse effects of this material on the environment.
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Section XIII. Disposal Considerations

Waste Disposal	Consult federal, state or local authorities for proper disposal and reporting procedures. All disposals must comply with federal, state and local regulations.
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Section XIV. Transportation Information

U.S. D.O.T.			
Shipping Name:	None	UN Number:	None
Hazard Class:	None	Packing Group:	Not applicable
Remarks	Petroleum Lubricating Oil - Not Hazardous by U.S. D.O.T. ADR/RID Hazard Class - Not applicable.		

Section XV. Regulatory Information

U.S. Federal Regulations:	
CERCLA	Release of the following chemical(s) at quantities equal to or greater than the reportable quantities (RQ), is regulated by 40 CFR 302.4 : None
SARA (Section 313)	This product contains the following chemical(s) listed in Section 313 at or above the de minimis concentrations: None
SARA Extremely Hazardous List	This product contains greater than 1.0% of the following chemical(s) on the SARA Extremely Hazardous Substances List: None
TSCA Inventory	All components of this material are on the U.S. TSCA Inventory.
California Prop. 65	WARNING: This product contains the following chemical(s) known to the State of California to cause birth defects or other reproductive harm: < 0.001% cadmium; < 0.001% lead; < 0.001% arsenic

International Regulations:

Canada	All components are in compliance with the Canadian Environmental Protection Act. This product has been classified in accordance with the hazard criteria of the CPR and this MSDS contains all the information required by CPR.
Japan MITI	Not available
Australia	Not available
Switzerland	Not available

Section XVI. Other Information

Approval Date	2/9/2009
Supersedes Date	7/2/2007
Prepared by	Technical Services 262-781-8850
Sections Revised Since Last Version	Section I

The information and recommendations contained herein are, to the best of JAX INC.'s knowledge and belief, accurate and reliable as of the date issued. JAX INC. makes no warranty or guarantee, expressed or implied, of their accuracy or reliability, and JAX INC. shall not be liable for any loss or damage based up on the criteria supplied by the developers of these rating systems, together with JAX INC.'s interpretation of the available data.

Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Cat® DEAC™ (Diesel Engine Antifreeze Coolant) Premix 50/50

Product Use: Antifreeze/Coolant

Product Number(s): 07962, CPS227027

Company Identification

ChevronTexaco Global Lubricants
6001 Bollinger Canyon Road
San Ramon, CA 94583
United States of America

Transportation Emergency Response

CHEMTREC: (800) 424-9300 or (703) 527-3887

Health Emergency

ChevronTexaco Emergency Information Center: Located in the USA. International collect calls accepted.
(800) 231-0623 or (510) 231-0623

Product Information

email : lubemsds@chevrontexaco.com
Product Information: 800-LUBE-TEK
MSDS Requests: 800-414-6737

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Ethylene Glycol	107-21-1	40 - 55 %weight
Diethylene glycol	111-46-6	1 - 5 %weight

SECTION 3 HAZARDS IDENTIFICATION

***** EMERGENCY OVERVIEW

- HARMFUL OR FATAL IF SWALLOWED
- POSSIBLE BIRTH DEFECT HAZARD - CONTAINS MATERIAL THAT MAY CAUSE BIRTH DEFECTS BASED ON ANIMAL DATA
- MAY CAUSE DAMAGE TO:
- KIDNEY

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: Toxic; may be harmful or fatal if swallowed.

Inhalation: The vapor or fumes from this material may cause respiratory irritation. Symptoms of respiratory irritation may include coughing and difficulty breathing. Breathing this material at concentrations above the recommended exposure limits may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.

DELAYED OR OTHER HEALTH EFFECTS:

Reproduction and Birth Defects: Contains material that may cause birth defects based on animal data.

Target Organs: Contains material that may cause damage to the following organ(s) following repeated ingestion based on animal data: Kidney

See Section 11 for additional information. Risk depends on duration and level of exposure.

SECTION 4 FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue.

SECTION 5 FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:

OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

NFPA RATINGS: Health: 2 Flammability: 0 Reactivity: 0

FLAMMABLE PROPERTIES:

Flashpoint: Not Applicable

Autoignition: No Data Available

Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

EXTINGUISHING MEDIA: Dry Chemical, CO₂, AFFF Foam or alcohol resistant foam.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: This material will not burn.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner

consistent with applicable regulations.

Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: Wash thoroughly after handling. Do not taste or swallow. Do not breathe vapor or fumes.

General Handling Information: Do not taste or swallow antifreeze or solution. Keep out of the reach of children and animals.

General Storage Information: Do not store in open or unlabeled containers.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: Natural rubber, Neoprene, Nitrile Rubber, Polyvinyl Chloride (PVC or Vinyl).

Respiratory Protection: Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors, Dusts and Mists.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
Ethylene Glycol	ACGIH	--	--	100 mg/m3	--

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Purple

Physical State: Liquid

Odor: Faint or Mild

pH: 10 - 11

Vapor Pressure: 0.12 mmHg (Typical) @ 20 °C (68 °F)

Vapor Density (Air = 1): 2.1

Boiling Point: 108.9°C (228°F)

Solubility: Miscible

Freezing Point: -36.7°C (-34°F)

Specific Gravity: 1.13 @ 15.6°C (60.1°F) / 15.6°C (60.1°F)

Viscosity: No data available

Evaporation Rate: No Data Available

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Hazardous Decomposition Products: Aldehydes (Elevated temperatures), Ketones (Elevated temperatures)

Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS

Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product components.

Skin Irritation: The skin irritation hazard is based on evaluation of data for similar materials or product components.

Skin Sensitization: No product toxicology data available.

Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains ethylene glycol (EG). The toxicity of EG via inhalation or skin contact is expected to be slight at room temperature. The estimated oral lethal dose is about 100 cc (3.3 oz.) for an adult human. Ethylene glycol is oxidized to oxalic acid which results in the deposition of calcium oxalate crystals mainly in the brain and kidneys. Early signs and symptoms of EG poisoning may resemble those of alcohol intoxication. Later, the victim may experience nausea, vomiting, weakness, abdominal and muscle pain, difficulty in breathing and decreased urine output. When EG was heated above the boiling point of water, vapors formed which reportedly caused unconsciousness, increased lymphocyte count, and a rapid, jerky movement of the eyes in persons chronically exposed. When EG was administered orally to pregnant rats and mice, there was an increase in fetal deaths and birth defects. Some of these effects occurred at doses that had no toxic effects on the mothers. We are not aware of any reports that EG causes reproductive toxicity in human beings.

This product contains diethylene glycol (DEG). The estimated oral lethal dose is about 50 cc (1.6 oz) for

an adult human. DEG has caused the following effects in laboratory animals: liver abnormalities, kidney damage and blood abnormalities. It has been suggested as a cause of the following effects in humans: liver abnormalities, kidney damage, lung damage and central nervous system damage.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

The toxicity of this material to aquatic organisms has not been evaluated. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water.

ENVIRONMENTAL FATE

This material is expected to be readily biodegradable.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: Anti-freeze Preparations, Proprietary

IMO/IMDG Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION UNDER THE IMDG CODE

ICAO/IATA Shipping Description: Anti-freeze Preparations, Proprietary

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:	1. Immediate (Acute) Health Effects:	YES
	2. Delayed (Chronic) Health Effects:	YES
	3. Fire Hazard:	NO
	4. Sudden Release of Pressure Hazard:	NO
	5. Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

The following components of this material are found on the regulatory lists indicated.

Diethylene glycol	07
Ethylene Glycol	03, 05, 06, 07

CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), EINECS (European Union), ENCS (Japan), PICCS (Philippines), TSCA (United States).

One or more components does not comply with the following chemical inventory requirements: IECSC (China), KECI (Korea).

NEW JERSEY RTK CLASSIFICATION:

Refer to components listed in Section 2.

WHMIS CLASSIFICATION:

Class D, Division 1, Subdivision B: Toxic Material -
Acute Lethality

Class D, Division 2, Subdivision A: Very Toxic Material -
Teratogenicity and Embryotoxicity

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 2 Flammability: 0 Reactivity: 0

HMIS RATINGS: Health: 2* Flammability: 0 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

LABEL RECOMMENDATION:

Label Category : ANTIFREEZE/COOLANT 1

REVISION STATEMENT: This revision updates the following sections of this Material Safety Data Sheet:
2,3,4,5,9,10,14,15,16

Revision Date: 10/12/2004

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - ChevronTexaco	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the ChevronTexaco Energy Research & Technology Company, 100 Chevron Way, Richmond, California 94802.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

Attachment 3

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

Emergency Responder Notification



January 7, 2025

Dear Emergency Responders:

The Township requested that we provide a list of chemicals used at our facility. Attached is a list of the chemicals and equipment in the various buildings. Please contact our Facility Manager, Matt Zehring, to schedule a site visit if beneficial. He can be reached at 267-342-6719.

Thank you,

A handwritten signature in black ink, appearing to read "Sarah Hrywnak".

Sarah Hrywnak
Asset Manager



List of Buildings, Equipment & Materials for Emergency Responders

Updated January 2025

Site Contact

Matt Zehring
Facility Manager
267-342-6719

Maintenance Garage

- 80 kW Generator
- 325 gal. Diesel Fuel Tank
- 55 gal. Hydraulic Fluid
- 55 gal Antifreeze coolant

Scalehouse / Office (Outside)

- 100 gal. Propane Tank

Processing Building (Inside)

- Pressurized Air
- Processing Equipment (mixers, engines)
- Control Room

Processing Building (Outside, South Side)

- 155 kW Generator
- Silo #1 (180 ton) – Quicklime
- Silo #2 (180 ton) – Quicklime
- Silo #3 (100 ton) – Quicklime
- 250 gal. DEF Tote
- 3,000 gal. Diesel Fuel Tank
- Trailer – 55-gal Drum of BioTriad Odor Elite

Security / Notes

- There is an access gate ~1 mile before the scale.
- The facility is self-powered via (2) diesel generators.
- While crew is off-site the access gate is closed/locked, generators are shut-down.
- Facility hours are ~6am – ~3pm Monday – Friday , 6am-10am Saturday.
- The premises are monitored by ~18 battery-powered security cameras and are activated when no personnel are present.

Attached:

- Site Plan, Quicklime TDS, BioTriad Vapor DOX SDS

FORM MRW-C IDENTIFICATION OF INTERESTS & COMPLIANCE HISTORY

Fully and accurately provide the following information, as specified. Attach additional sheets as necessary.

Type of MRW-C Submittal (check all that apply):

☐ Original Filing ☒ Amended Filing Date of Last Filing 06/24/2024

Type of Permit or License Submittal:

☐ New Application ☐ Renewal ☐ Annual Update ☒ Other Permit
Modification
(specify)

A. General Applicant Information:

1. Name of the APPLICANT:

Liberty Soils, LLC

☐ If operating under a fictitious name, please state name here: _____

ADDRESS: 411 NW Park Avenue, Suite 401

Portland, OR 97209

TELEPHONE NUMBER: 971-352-8430

EIN or other TAX ID No.: EIN 82-1216232

PERMIT or LICENSE ID: 603455

2. Identify the form of management under which the applicant conducts its business (check appropriate box):

☐ Individual	☒ Limited Liability Company
☐ Municipality	☐ Partnership
☐ Proprietorship	☐ Limited Partnership
☐ Public Corporation	☐ Government Agency
☐ Private Corporation	☐ Joint Venture
☐ Syndicate	☐ Other _____
☐ Municipal Authority	(specify)

3. Type of permit or license application (check all that apply):

☒ Municipal Waste Permit
☐ Regulated Medical and Chemotherapeutic Waste Transporter License
☐ Residual Waste Permit
☐ Act 90 Waste Transportation Safety Authorization
☐ Other _____
(specify)

B. Information Related to the Applicant see attached sheet

1. Provide the names, addresses and telephone numbers of any contractor, including the contractor for gas or energy recovery from the proposed operation, if the contractor is a person other than the applicant.
2. Provide the names, addresses, telephone numbers and Tax ID No. or EIN of related parties to the applicant and a description of the relationship to the applicant. (see instructions for definition of related party.)
3. Provide the names and addresses of all owners of record of surface and subsurface areas within, and contiguous to, the proposed permit area. (Not applicable to Act 90 waste transportation safety authorization.)
4. Provide the names and addresses of all holders of record to a leasehold interest of surface and subsurface areas within and contiguous to the proposed permit area. (Not applicable to Act 90 waste transportation safety authorization.)

C. General Corporate Information see attached sheets

For applicants other than sole proprietorships, provide the following information:

1. Provide the names, titles and addresses of all principals, corporate officers, general and limited partners, directors and other persons performing a function similar to a director.
2. The principal shareholders or stockholders who own, hold or control stock of 5% or more of a publicly held corporation or 10% or more of a privately held corporation.
3. The names, principal places of business and Tax ID No or EINs of United States parent corporations of the applicant, including the ultimate parent corporations and United States subsidiary corporations of the applicant and the applicant's parent corporations. A diagram of corporate structure may be provided to illustrate corporate relationships.
4. Provide the name and address or name and Tax ID No or EIN of other persons having or exercising control over any aspect of the proposed facility, including but not limited to, associates, agents, contractors, subcontractors and property owners. The relationship to the applicant must be clearly defined.

D. Beneficial Interests and Management see attached sheet

1. If the applicant, or an officer, principal shareholder, general or limited partner, limited liability company member or manager, or other related party has a beneficial interest in, or otherwise manages or controls another person or municipality engaged in the business of solid waste collection, transportation, storage, processing, treatment or disposal, provide the following information:
 - a. The name, address and EIN or other TAX ID No. of the corporation or other person or municipality.
 - b. The nature of the relationship or participation with the corporation or other person or municipality.

E. Information Regarding Specific Businesses, Permits and Licenses see attached sheet

For the applicant and related parties, provide the following:

1. List all **permits, licenses or authorizations issued** by the Department under the environmental protection acts that are currently in effect or have been in effect at any time, in the 10 years prior to the date on which this form is signed. This list is to include the type of permit, license or authorization; permit, license or authorization number; location; address; issuance date and expiration date.
2. The location, type of operation and State or Federal permits under which all solid waste processing or disposal facilities in this Commonwealth operate or have operated, in the 10 years prior to the date on which this form is signed. Facilities that are no longer permitted or which were never under a permit shall also be listed.

3. List all **permit, license or authorization denials** by the Department or any other state or federal agency under the environmental protection acts within 10 years prior to the date on which this form is signed. Include the type of permit, license or authorization; permit, license or authorization number; location; denial date and reason for denial.
4. List all persons that have filed for or been discharged from **bankruptcy** in this Commonwealth within 10 years prior to the date on which this form is signed. Specify the circumstances of bankruptcy, including those for which the debtor sought to abandon property or to be discharged from any environmental liability subject to the environmental protection acts. Including the name of the bankruptcy court, docket number and description and location of any property involved.

F. Compliance History: see attached sheet

(Note: Copies of specific documents must be made available to the Department upon its request)

For the applicant and related parties, provide the following:

1. List all **“Enforcement Actions”** issued by the Department in this Commonwealth, or, where applicable, other regulatory agency in another state within 10 years prior to the date on which this form is signed, using the following format grouped by state and location in chronological order.

Type of Action	Date	Location	Permit/ License/ EPA ID #	Issuing Agency	Nature of Violation	Disposition	Dollar Amount of Penalty
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Enforcement actions include but are not limited to:

- a. All **notices of violation (NOVs)** issued by the Department involving the environmental protection acts, a condition of a permit or license or regulation or order of the Department.
 - b. All **administrative orders, bond forfeiture actions and civil penalty actions** adjudicated by any judicial body involving the environmental protection acts, regulation, order or condition of a permit or license in either the Commonwealth or other state.
 - c. All **summary, misdemeanor or felony convictions, or pleas of guilty or no contest** that have been obtained, pursuant to the environmental protection acts, in either the Commonwealth or other state, or any acts involving the storage, collection, treatment, transportation, processing or disposal of solid waste. For **summary offenses**, only those offenses within the Commonwealth need to be reported.
 - d. All **court proceedings** involving the environmental protection acts in the Commonwealth or other state.
 - e. All **consent orders, consent adjudications, consent decrees or monetary settlements (settlement agreements, letter agreements, settlement letters or consent assessments)** between the applicant and related parties; and any state, federal or county agency regarding the environmental protection acts, any other environmental statute, regulations or ordinance, in the Commonwealth or other state.
 - f. All **civil penalties and any permit or license suspensions/revocations** within the Commonwealth adjudicated by any judicial body involving the environmental protection acts, regulation, order or condition of a permit or license.
2. List all principals, managers, partners and directors that have held similar positions with another entity that has committed any violation of the environmental protection acts. The list shall include the name of the other entity, date, location, nature and disposition of the violation, and shall explain the relationships between the principal shareholder, partner or member and both of the following:
 - a. The owner or operator
 - b. The other corporation, partnership or limited liability company

I hereby certify, pursuant to the penalties of 18 Pa. C.S.A §4904, that I have the authority to submit the information contained in this form on behalf of the applicant or permittee named herein and that the information provided in this form is true and correct to the best of my knowledge, information and belief.

Jared Sperry
(Signature)

Name: Jared Sperry
(Print or Type Name)

Title: Principal
(Print or Type Title)

Date: January 14, 2025

Christian Cochran
(Signature)

Name: Christian Cochran
(Print or Type Name)

Title: Manager
(Print or Type Title)

Date: January 14, 2025

Form MRW-C**B. Information Related to the Applicant****1 Contractor**

Third Oak, Inc.

Asset Manager/Onsite Processing & Maintenance

2 Related Parties - See attached diagram

Wastewater Capital Management, LLC

411 NW Park Ave, Portland, OR 97209

EIN 46-2274592

Wastewater Opportunity Fund, LLC

411 NW Park Ave, Portland, OR 97209

EIN 47-2436927

Liberty Processing & Soils Member, LLC

411 NW Park Ave, Portland, OR 97209

EIN 32-0524600

Liberty Processing & Soils, LLC

411 NW Park Ave, Portland, OR 97209

EIN 82-0978916

Third Oak, Inc.

3000 Alt Blvd., Grand Island, NY 14072

EIN 35-2485873

3 Surface, subsurface and contiguous area owner(s)

Blackwood, Inc., PO Box 639, Wind Gap, PA 18091

4 Surface, subsurface and contiguous area leaseholder(s)

NA

C. General Corporate Information**1** Michael GobelPrincipal/Owner & Managing Member -
Liberty Processing & Soils Member, LLC -
Operator411 NW Park Ave, Suite 401, Portland,
OR 97209

Sarah L. Hrywnak

Asset Manager & Onsite Processing &
Maintenance - Third Oak, Inc.

3000 Alt Blvd., Grand Island, NY 14072

2 Liberty Processing & Soils Member, LLC

Managing Member of Project

100% Ownership of Liberty Processing &
Soils, LLC (Operator)

Liberty Soils, LLC

Permit Holder

100% Owned by Liberty Processing &
Soils, LLC**3** See response to B.2.**4** Blackwood, Inc.

Property Owner

PO Box 639, Wind Gap, PA 18091
EIN 23-2977505**D. Beneficial Interests and Management****1** See response to B.2.

Form MRW-C Section E. Information Regarding Specific Businesses, Permits and Licenses

1 Permits, licenses or authorizations issued by the Department ...

FACILITY	LOCATION	ADDRESS	PERMIT TYPE & No.	PERMITTEE	ISSUED BY	DATE ISSUED	EXPIRES	NOTES
Liberty Soils Biosolids Management Facility	Tremont	500 Blackwood Rd. Tremont, PA 17901	Municipal waste processing permit 603455	Liberty Soils, LLC	PADEP	12/23/2013	12/23/2033	
Liberty Soils Biosolids Management Facility	Tremont	500 Blackwood Rd. Tremont, PA 17901	Product distribution permit WMGM054	Liberty Soils, LLC	PADEP	1/27/2016	1/26/2026	
Liberty Soils Biosolids Management Facility	Tremont	500 Blackwood Rd. Tremont, PA 17901	PAG-07 2203	Liberty Soils, LLC	PADEP	2/15/2022		Coverage under this statewide permit will not expire. Coverage under the General Permit is automatically extended for the duration of the final renewed, reissued or amended General Permit.
Liberty Soils Biosolids Management Facility	Tremont	500 Blackwood Rd. Tremont, PA 17901	NoExposure Certification NOEXNE020	Liberty Soils, LLC	PADEP	1/13/2020	1/15/2025	Renewal pending
Liberty Soils Biosolids Management Facility	Tremont	500 Blackwood Rd. Tremont, PA 17901	Storage Tank Registration	Liberty Soils, LLC	PADEP	4/26/2019	4/4/2025	
Blackwood Mine	Reilly, Branch & Tremont Townships	12 Tremont Rd. Tremont, PA 17901	Surface mining permit 54900101	Blackwood, Inc.	PADEP	6/3/1994		
Blackwood Operation	Reilly, Branch & Tremont Townships	12 Tremont Rd. Tremont, PA 17901	Mining Stormwater GP-104 PAM113082	Blackwood, Inc.	PADEP	12/3/2021		
Blackwood Operation	Reilly, Branch & Tremont Townships	12 Tremont Rd. Tremont, PA 17901	Mine operator 5965	Blackwood, Inc.	PADEP	5/25/2021		
RPM Recycling Inc.	Wind Gap	701 N. Broadway, Wind Gap, PA 18091	NPDES permit PAS402202	RPM Recycling Inc.	PADEP	2/9/2022	3/31/2027	
Liberty Soils Biosolids Management Facility	Tremont	500 Blackwood Rd. Tremont, PA 17901	PAG-072203 A-1	Liberty Soils, LLC	PADEP	2/6/2023		Extended by PADEP

2 State or federal permits ...

FACILITY	LOCATION	PERMIT TYPE & No.	TYPE of Operation
Liberty Soils Biosolids Management Facility	Tremont	Municipal waste processing permit 603455	Solid waste processing: Alkaline stabilization of municipal WWTP biosolids
		Product distribution permit WMGM054	Distribution of biosolids product to farmers, etc.
		PAG-07 2203	Solid waste processing: Alkaline stabilization of municipal WWTP biosolids
		NoExposure Certification NOEXNE020	Solid waste processing: Alkaline stabilization of municipal WWTP biosolids
		Storage Tank Registration 5455424	Solid waste processing: Alkaline stabilization of municipal WWTP biosolids

3 List all permit, license or authorization denials ...

FACILITY	LOCATION	ADDRESS*	Authorization	Denial Date	Reason for Denial
Blackwood Farms Biosolids Management Facility	Tremont	12 Tremont Rd. Tremont, PA 17901	Resource Recovery & Other Processing Permit Form 43	12/17/2018	Sludge did not meet % solids requirement
Blackwood Farms Biosolids Management Facility	Tremont	12 Tremont Rd. Tremont, PA 17901	Resource Recovery & Other Processing Permit Form 43	5/4/2021	Technically deficient
Blackwood Farms Biosolids Management Facility	Tremont	12 Tremont Rd. Tremont, PA 17901	Resource Recovery & Other Processing Permit Form 43	12/8/2023	Technically deficient

4 List all persons that have filed for or been discharged from bankruptcy ...

None.

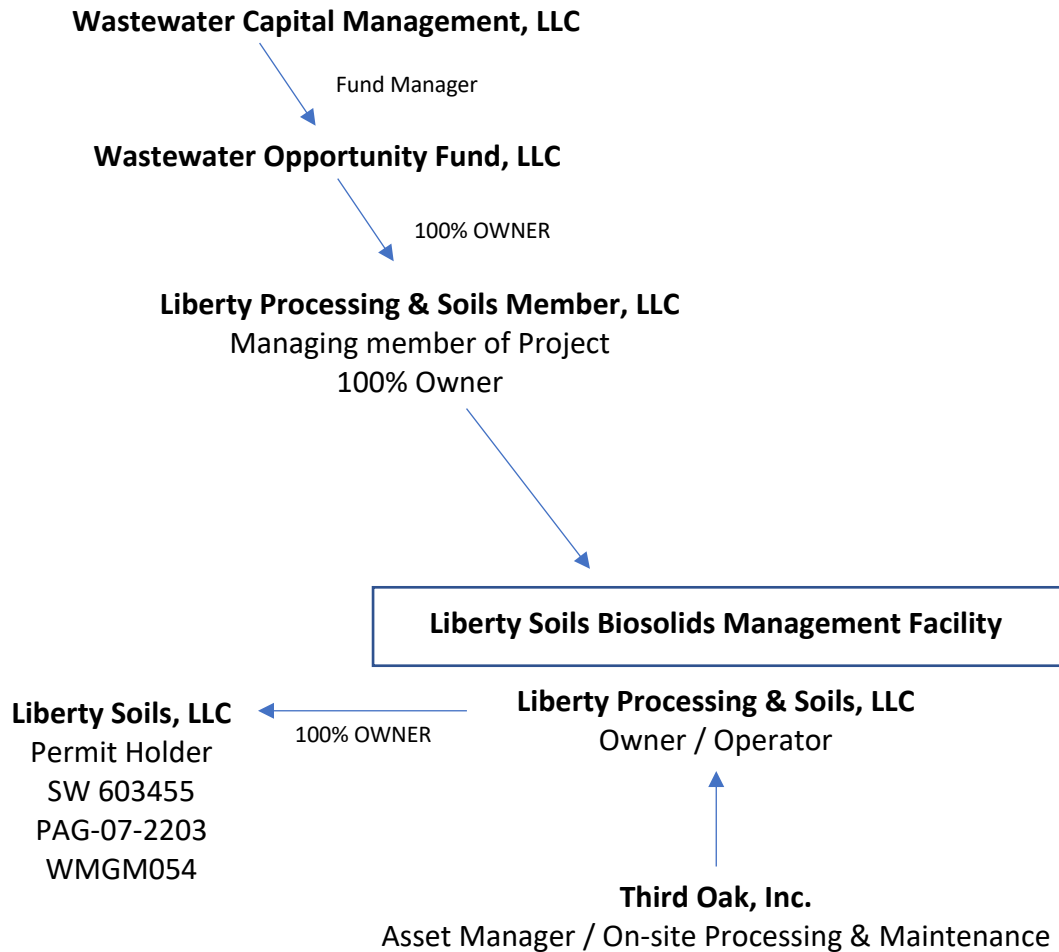
* Until 2024 the previous address was 12 Tremont Rd.

1/9/2025

Form MRW-C Section F.1 Compliance History

Type of Action	Date	Location	Permit/License/EPA ID#	Issuing Agency	Nature of Violation	Disposition	Dollar Amount of Penalty
NOV	11/14/2014	Blackwood Farms	Municipal Waste	DEP	There is a violation of Act 97, Dept. regulation, order or term of permit	Administrative Closeout	
Environmental Health & Safety	02/06/15	Blackwood	WPC State Water Pollution Control	DEP	Persons failed to apply for and obtain a permit to own or operate a municipal waste disposal or processing facility	Administrative Closeout	No enforcement data
Administrative	04/02/15	Blackwood	WPC State Water Pollution Control	DEP	Biosolids persons applying sewage sludge failed to adhere to additional or more stringent requirements that DEP had determined necessary to protect public health & the environment.	Administrative Closeout	No enforcement data
Administrative	04/02/15	Blackwood	WPC State Water Pollution Control	DEP	Biosolids persons applied sewage sludge without obtaining permit	Administrative Closeout	No enforcement data
Environmental Health & Safety	04/02/15	Blackwood	WPC State Water Pollution Control	DEP	Biosolids persons failed to apply for & obtain a permit to own or operate a municipal waste disposal or processing facility under Chapter 279	Administrative Closeout	No enforcement data
Administrative	09/09/16	Blackwood	WPC State Water Pollution Control	DEP	Biosolids persons preparing sewage sludge failed to ensure that the sewage sludge was applied according to regulations	Administrative Closeout	No enforcement data
Environmental Health & Safety	10/31/16	Blackwood		DEP	Failure to comply with conditions of general permit	Comply/Closed	
NOV	11/10/16	RPM Recycling Inc	PAS402202	DEP	Failure to submit NPDES renewal application at least 180 days prior to expiration or later approved date	Corrected/Abated	2000.00
NOV	01/26/17	RPM Recycling Inc	PAS402202	DEP	NPDES - Failure to submit monitoring report(s) or properly complete monitoring reports	Corrected/Abated	No enforcement data
Environmental Health & Safety	04/06/17	Blackwood		DEP	Failure to comply with conditions of general permit	Administrative Closeout	
Environmental Health & Safety	04/06/17	Blackwood		DEP	Failure to comply with conditions of general permit	Administrative Closeout	
NOV	03/19/18	RPM Recycling Inc	PAS402202	DEP	NPDES - Failure to submit monitoring report(s) or properly complete monitoring reports	Corrected/Abated	No enforcement data
Environmental Health & Safety	06/01/20	Blackwood		DEP	Failure to comply with conditions of general permit	Corrected/Abated	0.00
NOV	04/28/22	WeCare Blackwood Farms, LLC	PAG-07-2203	DEP	Transported biosolids that were applied within EV watershed	Corrected/Abated	\$6,500
NOV	08/02/23	Liberty Soils, LLC	PAG-07-2203	DEP	Distribution of EQ biosolids that failed to meet the Class A pathogen reduction requirements	Corrected/Abated	\$9,500
NOV	5/9/2024, 6/27/24, 7/11/24	Liberty Soils, LLC	PAG-07-2203	DEP	Permittee failed to store exceptional quality biosolids in accordance with the permit. Permittee violated the recordkeeping requirements.	Corrected/Abated	\$1,750

Liberty Processing & Soils, LLC
 Ownership Diagram
 Rev. December 2024



Entity	EIN #	Corporation Address
Wastewater Opportunity Fund, LLC (Business name / disregarded entity per W9: Liberty Processing & Soils, LLC)	47-2436927	411 NW Park Ave., Suite 401 Portland, OR 97209
Liberty Processing & Soils Member, LLC f/k/a WOF NE Blackwood Member LLC	32-0524600	411 NW Park Ave., Suite 401 Portland, OR 97209
Liberty Processing & Soils, LLC f/k/a WOF NE Blackwood Project, LLC	82-0978916	411 NW Park Ave., Suite 401 Portland, OR 97209 Mailing Address: 3000 Alt. Blvd. Grand Island, NY 14072
Liberty Soils, LLC f/k/a WeCare Blackwood Farms LLC	82-1216232	411 NW Park Ave., Suite 401 Portland, OR 97209



Date Prepared/Revised
1/9/2025

DEP USE ONLY

Date Received

FORM P INCINERATORS AND OTHER PROCESSING FACILITIES

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form P, reference the item number and identify the date prepared. The "date prepared/revised" on any attached sheets needs to match the "date prepared/revised" on this page.

General References: Chapters 283 and 297

SECTION A. SITE IDENTIFIER

Applicant/permittee: Liberty Soils, LLC

Site Name: Liberty Soils Biosolids Management Facility

Facility ID (as issued by DEP): 634876

SECTION B. OPERATING PLAN

1. Description of general operating plan:

The facility processes wastewater treatment plant (WWTP) biosolids with lime and alkaline materials to achieve a Class A level of treatment with respect to pathogens. Due to the lime addition, the resultant product is used as a soil additive or soil substitute for agricultural use or reclamation of abandoned mine lands. The facility includes equipment for mixing and moving material inside a processing building, and covered buildings for product storage. Product is monitored and tested to ensure that it meets regulatory requirements. See OPERATIONS AND MAINTENANCE MANUAL Sections 3.0 through 5.0 for a complete description.

2. Solid Waste

a. Origin: Biosolids: Municipal wastewater treatment facilities

Quicklime: Graymont (PA) Inc. or other supplier

Cement kiln dust: Portland Cement manufacturing

Lime Kiln Dust: dolomitic limestone

Coal Ash: coal-fired energy plants

b. Composition: Biosolids: dewatered municipal wastewater treatment plant sludge

Quicklime is a white porous solid obtained by the calcination of high-purity limestone. An SDS for quicklime is included in Appendix E of the OPERATIONS AND MAINTENANCE MANUAL.

Cement kiln dust: An SDS for a typical source of CKD is included in Appendix E of the OPERATIONS AND MAINTENANCE MANUAL.

Lime Kiln Dust: Calcium oxide. An SDS for lime kiln dust is included in Appendix E of the OPERATIONS AND MAINTENANCE MANUAL.

Coal Ash: An SDS for a typical source of coal fly ash is included in Appendix E of the OPERATIONS AND MAINTENANCE MANUAL.

- c. Weight or volume (cubic yards, tons): Biosolids: monthly average of 300 wet tons per day (TPD) with a daily maximum of 500 TPD. This allows a daily surge up to 500 tons. See B.7.
Admixtures: up to 200 TPD

3. Process to be used:

The process uses an alkaline stabilization process in which dewatered wastewater treatment plant (WWTP) biosolids are mixed with alkaline materials to achieve a Class A level of treatment with respect to pathogens. The process destroys pathogenic microorganisms to below detectable levels, allows for the survival of microflora (necessary for long-term odor control and soil fertility, and ensures odor stabilization. The process is documented in 40 CFR part 503 and 25 Pa. Code § 271.932 & 933 under pathogen disinfection Alternative 4 and vector attraction reduction Option 6.

SECTION B. OPERATING PLAN (continued)

4. Daily operational methodology of process and method of waste measurement:

See OPERATIONS AND MAINTENANCE MANUAL, Section 5.0 and Process Flow Diagram (Figure 3). Loads of biosolids and admixtures are weighed at the site scale.

5. Describe how wastes, not approved by the Department, will be prevented from being accepted at the facility.

All material types are approved by PADEP prior to being accepted at the facility. A Form 43 is submitted for each biosolids source. A Form U is submitted for each residual material. No material is accepted without PADEP approval. The quicklime used is not a waste. It is purchased from the supplier.

6. Loading rate: The process equipment is sized to process 70 tons of material per hour.

7. Capacity of Facility: The facility will accept a monthly average of 300 wet tons of biosolids per receiving day with a daily maximum of 500 wet tons of biosolids. This allows a daily surge up to 500 wet tons of biosolids and keeps the monthly average to 300 wet tons of biosolids per receiving day (Monday-Saturday). Approximately 27,000 cyd (21,600 tons) of product can be stored in Storage Building #2.

8. Expected life: 30+ years

9. Plan for an alternative waste handling or disposal system during periods when the proposed facility is not in operation, including procedures to be followed in case of equipment breakdown. Procedures may include the use of standby equipment, extension of operating hours, and contractual agreements for diversion of wastes to other facilities.

See OPERATIONS AND MAINTENANCE MANUAL Section 4.8.

See PREPAREDNESS, PREVENTION, AND CONTINGENCY (PPC) PLAN.

10. Describe how the installation and operation of this facility will be consistent with the requirements of Act 1988-101.

1. The facility decreases the flow of solid waste to municipal waste landfills, reducing the burden on the Commonwealth's, and the County's, disposal capacity for municipal waste and extending the operating life of these landfills.
2. The facility aids in the conservation and recovery of valuable resources, and provides another option for the use of a municipal waste stream.
3. The facility provides another option to Schuylkill County for a processing facility to handle waste generated within the County.
4. The facility utilizes the capabilities of private enterprise in accomplishing the objectives of the County's solid waste management plan. The project is funded entirely by private sources and is located on private land.

11. Plan for operational safety, fire prevention and emergency response, that will adequately protect workers and patrons of the facility, prepared by an expert in the field of industrial hygiene and safety.

See PPC PLAN.

See Liberty Soils Health and Safety Program (Appendix G of the OPERATIONS AND MAINTENANCE MANUAL).

12. Plan for hiring and training equipment operators and other personnel concerning the operation and approved design of the facility.

Facility staff (5 full-time employees) are from the Pottsville area.

See OPERATIONS AND MAINTENANCE MANUAL Section 6.4.

13. Operating hours of facility: Normal hours of operation are Monday through Saturday, 6:00 a.m. to 6:00 p.m. for delivery of material, and 24 hours per day, seven days per week for processing material.

SECTION C. DESIGN AND RELATED INFORMATION

Include a narrative description of:

1. Sources, types, and weight or volume of solid waste to be processed, including data on moisture content of waste, and information concerning special environmental pollution or handling problems that may be created by the solid waste.
2. Methods to be used to control the flow of waste to the facility, including a flow chart with a materials balance depicting the processing of solid waste and mechanical components of the processing system.
3. Interior dimensions of the tipping fiord, storage area and, when applicable, ingress and egress thereto.
4. Size, type, capacity, and general specifications of the equipment for the handling, processing and storage of waste.
5. Anticipated recovery rate of marketable materials or energy.
6. Actual or expected physical and chemical composition of ash, residue, or wash water produced by operation of the facility.
7. The proposed location and method for disposal, storage or processing of ash, residue or wash water produced by operation of the facility.
8. Plan for separation, storage and ultimate disposal of unmarketable waste generated by the process, including plans for the temporary storage of bulky waste.
9. Minimum and maximum volume or weight of the types of material or solid waste to be prior to sale, reuse or disposal, and the minimum and maximum time that material or waste is to be stored.
10. Plan for disposal or processing of waste if the facility or a processing line within the facility is closed or shutdown.
11. Utilities to be installed at the facility.
12. Plans and designs for operating and maintaining the proposed facility to prevent fires, explosions, the emission of noxious or toxic gases and other emergencies.
13. A plan for the repair or replacement of equipment in the event of equipment breakdown, including plans for obtaining spare parts.

14. Drawing indicating area for isolating detected radioactive waste.
15. Drawing indicating location of radioactive monitoring equipment.

SECTION D.

Public and Private Water Supply for Resource Recovery Facilities over 50 tons/day Capacity. Provide a study of the short-term and long-term effects that the facility will have on the quality and quantity of public and private water supplies. The study shall include, but not be limited to, effects of pollution, contamination, diminution, and alternative sources of water adequate in quantity and quality for the purposes served by the water supply both public and private.



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OPERATIONS AND MAINTENANCE MANUAL

Liberty Soils Biosolids Management Facility

**500 Blackwood Rd.
Tremont, PA 17981
Reilly Township
Schuylkill County**

Prepared for:

**Liberty Soils, LLC
411 NW Park Avenue, Suite 401
Portland, OR 97209**

Prepared by:



EnSol, Inc.
3000 Alt. Blvd.,
Grand Island, NY 14072
716.285.3920

ensolinc.com

PN 040-A0013
January 2025

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Appendices

Appendix A	Definitions
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Appendix C	Operations Recording Forms
Appendix D	Employee Training Program Outline
Appendix E	Safety Data Sheets
Appendix F	Operations SOPs • Product Segregation SOP BR-005 • Truck and Trailer Cleaning SOP OPS-010 • Overweight Load Prevention SOP OPS-011
Appendix G	<u>Health and Safety Program</u>
Appendix H	Troubleshooting Guide
Appendix I	Access Road Details
Appendix J	Product Information & Use Guides

1.0 INTRODUCTION

This Operations and Maintenance Manual has been prepared for the Liberty Soils Biosolids Management Facility (facility) in Reilly Township, Pennsylvania. The permit holder is **Liberty Soils, LLC**. The facility owner is Liberty Processing and Soils, LLC (Liberty). The facility is located on a portion of the Blackwood, Inc. property, as shown on Figure 1. The layout of the facility is shown on Figure 2, Site Plan.

This manual includes the following:

- Basic definitions for the Advanced Alkaline Stabilization process - Appendix A
- Information regarding equipment operation - Appendix B
- Forms used for inspections, recordkeeping and reporting - Appendix C
- Employee Training Program Outline - Appendix D
- Safety Data Sheets and Technical Data Sheets for the various materials used for processing - Appendix E
- Operations SOPs - Appendix F
- Health and Safety Program (HASP) - Appendix G
- Troubleshooting- Appendix H
- Access Road Details - Appendix I
- Product Information & Use Guides - Appendix J

The following additional documents support this Operations and Maintenance Manual:

- **Sampling and Analysis Plans (SAP)** provide specific guidance on proper treatment monitoring and monthly sampling to ensure that the products generated at the facility are in compliance with the facility's permits and applicable regulations.
 - Sampling and Analysis Plan for EQ-054 Biosolids Product
 - Sampling and Analysis Plan for PAG-07 Biosolids Product
- **Monitoring and sampling SOPs** have been developed to provide guidance to facility staff for use in monitoring the treatment process and collecting monthly samples to demonstrate

compliance with permit and regulatory requirements. The following SOPs are provided in the Sampling and Analysis Plans.

- Measuring Total Solids BR-002
- Measuring pH BR-003
- Monthly Product Sampling BR-007
- Monthly Nutrient Sampling BR-008

- The **Prevention, Preparedness & Contingency (PPC) Plan** (Form L) provides preventive measures to avoid situations that might endanger the environment and/or public health and safety, and response actions to be carried out during an emergency situation that threatens the environment and/or public health and safety.

2.0 THE ADVANCED ALKALINE STABILIZATION PROCESS

The facility uses an advanced alkaline stabilization process; a type of chemical stabilization in which dewatered wastewater treatment plant (WWTP) biosolids are mixed with lime and alkaline materials to achieve a Class A level of treatment with respect to pathogens. The advanced alkaline stabilization method has been approved specifically by the U.S. Environmental Protection Agency (EPA) as an Alternative 4 method to achieve Process to Further Reduce Pathogens (PFRP), producing Class A biosolids (see 40 CFR 503.32). The alkaline materials react with the biosolids to generate heat and increase the pH of the biosolids. This method of alkaline stabilization to meet PFRP requirements simultaneously meets EPA Vector Attraction Reduction (VAR) requirements under Option 6, Addition of Alkali, in 40 CFR 503.33.

The combination of high pH and elevated temperatures over sufficient time inactivates pathogens to less-than-detectable levels. However, the process permits the survival of microflora, which is important for long-term odor control and soil fertility, and helps prevent odor production after product pH values decline. Due to the lime addition, the resultant product is used as a soil additive or soil substitute for agricultural use or reclamation of abandoned mine lands.

2.1 Pathogen Reduction and Vector Attraction Reduction

Pathogen Reduction Alternative 4

The Alternative 4 pathogen reduction requirements of PA Code 271.932(a)(6) are:

- (i) Either the density of fecal coliform in the sewage sludge shall be less than 1,000 most probable number per gram of total solids (dry weight basis), or the density of salmonella sp. bacteria in the sewage sludge shall be less than three most probable number per 4 grams of total solids (dry weight basis) at the time the sewage sludge is used; at the time the sewage sludge is prepared for sale, give away or other distribution in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in § 271.911(b)(1) or (3).*
- (ii) The density of enteric viruses in the sewage sludge shall be less than one plaque-forming unit per 4 grams of total solids (dry weight basis) at the time the sewage sludge*

is used; at the time the sewage sludge is prepared for sale, give away or other distribution, in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in § 271.911(b)(1) or (3), unless otherwise specified by the Department.

(iii) The density of viable helminth ova in the sewage sludge shall be less than 1 per 4 grams of total solids (dry weight basis) at the time the sewage sludge is used; at the time the sewage sludge is prepared for sale, give away or other distribution, in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in § 271.911(b)(1) or (3), unless otherwise specified by the Department.

Compliance with pathogen reduction requirements is confirmed by laboratory analysis as described in the Sampling and Analysis Plans.

Vector Attraction Reduction (VAR) Option 6

The VAR requirements of 40 CFR 503.33(b)(6) and PA Code 271.933(b)(6) are:

The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for 2 hours and then at 11.5 or higher for an additional 22 hours.

Compliance with VAR requirements is documented on the Daily Batch Record (Appendix C).

Monitoring to meet VAR Option 6 is described in the Sampling and Analysis Plans.

3.0 FACILITY DESCRIPTION

3.1 Facility Design

The scale, scale house and on-site lab are located near the entrance to the facility. The 24' x 70' scale house trailer serves as the facility's office and also includes restrooms, showers, lockers, and break room/meeting room. The maintenance garage houses the on-site lab for process monitoring. Processing takes place in the Processing Building (12,500 sft). Curing and product storage take place in the 15,000 sft Storage Building #1 and the 75,000 sft Storage Building #2.

Processing and storage areas are constructed of impervious materials with controlled drainage. Final product is stored under cover so that it is not exposed to stormwater, minimizing the amount of water requiring treatment or disposal. Site surface water is directed to a stormwater detention pond.

3.2 Utilities

The following are provided at the facility:

Power

Power to the site for equipment, lighting, and other needs is provided by generators. One generator provides power to the scale, scale house and maintenance garage/lab, and another generator provides power for the processing area. Diesel fuel for the generators is stored in a 3,000-gallon aboveground steel tank with secondary containment.

Water (potable and non-potable)

An on-site well provides water for the scale house and maintenance garage. Bottled water is provided for drinking.

Sanitary Service

A sewage holding tank serves the scale house. The tank contents are removed and properly disposed when necessary.

Wastewater Holding Tank

A 3,000-gallon tank collects runoff from the biosolids receiving and processing areas. The tank contents are removed and properly disposed when necessary.

Telephone/Internet

Telephone and internet service is through mobile technology. Cell phones are used for on-site communication. Computers, security cameras, and the scale house data collection system are operational when the generator is on.

Heating

Propane is used to heat the scale house. A portable electric heater is used to heat the lab.

4.0 FACILITY OPERATIONS

4.1 Sources, Types & Weight of Material

- Biosolids: dewatered sludge from municipal wastewater treatment facilities, must be >15% solids when received at the facility.
- Quicklime: Graymont (PA) Inc. or other supplier. The lime used in the process is a high-calcium quicklime, which is purchased from a local supplier. It is a white porous solid resulting from the calcination of high-purity limestone (CaCO_3) and composed essentially of calcium oxide (CaO). An SDS for Graymont High Calcium Quicklime is included in Appendix E.
- Cement kiln dust: Portland Cement manufacturing. An SDS for a typical source of CKD is included in Appendix E.
- Lime Kiln Dust: An SDS for Magnesita LKD is included in Appendix E.
- Coal Ash: fly ash or bottom ash from coal-fired energy plants. An SDS for a typical source of coal ash is included in Appendix E.

The following quantities of these materials will be accepted at the facility:

- Biosolids: Accept a monthly average of 300 wet tons per receiving day, with a daily maximum of 500 wet tons (to accommodate an occasional surge). The total amount will not exceed the monthly average of 300 tons per day.
- Admixtures: up to 200 tons per day

When properly handled, no environmental pollution or handling problems will be created by these materials. The materials processed in the specified manner have no known concerns regarding waste/leachate compatibility, storage, or groundwater contamination.

4.2 Products

The EQ-054 product uses a combination of high-calcium quicklime (defined in Section 4.1) with alkaline admixtures such as lime kiln dust (LKD) and coal ash. The product consists of approximately 65% biosolids, 25% coal ash/LKD and 10% quicklime. EQ-054 product is

processed under PADEP Solid Waste Permit 603455 and distributed under PADEP WMGM054 distribution permit.

The PAG-07 product uses high-calcium quicklime. The product consists of approximately 90% biosolids and 10% quicklime. PAG-07 product is processed under PADEP Solid Waste Permit 603455 and distributed in accordance with an approval for coverage under PADEP General Permit PAG-07-2203 for Beneficial Use of Exceptional Quality Biosolids.

At 300 tons per day of incoming biosolids, the facility can produce from 330 to 390 tons of product per day (PAG-07 or EQ-054, respectively). At 500 tons per day of incoming biosolids, the facility can produce from 550 to 650 tons of product per day (PAG-07 or EQ-054, respectively).

4.3 Material Flow Control

The Waste Analysis and Classification Plan (WACP – previously submitted) details procedures for approving materials that are accepted at the facility. Contracts with suppliers of biosolids are based on the biosolids meeting the requirements of Form 43. Materials balance and processing steps are detailed in the **Process Flow Diagram**, Figure 3.

4.4 Unauthorized Material

No incoming biosolids are unloaded without the permission of the Facility Manager or designee. All biosolids sources are required to have authorization to deliver material to the facility. Employees are to be alert for containers that are marked “hazardous” or “danger” or that have symbols on them for radioactive or infectious materials. Any suspected unauthorized material that is discovered by an employee is to be reported to the Facility Manager. If the Manager confirms that it is unauthorized, a transporter who can legally handle that material shall appropriately transport it off-site.

4.5 Waste Disposal

It is anticipated that final product that does not meet regulatory requirements will be incorporated back into the process. However, as a contingency, non-compliant final product may be disposed at a department-approved facility.

4.6 Storage Capacity

Biosolids and Alkaline Admixtures

The facility has sufficient storage capacity for incoming materials in the event of a two-day shutdown. The receiving floor of the Processing Building has the capacity to hold up to 1,325 tons of biosolids. Together, the three silos containing admixtures have a capacity of 320 tons.

Product

The facility has the capacity to store up to 27,000 cyds (21,600 tons) of final product under a roof in Storage Building #2. Product can be distributed after the 24-hour curing period is completed.

4.7 Product Segregation

Facility operations are essentially the same for producing either product; however, complete segregation of the EQ-054 and PAG-07 products is required during processing, storage and distribution. Colored product cue cards and magnetic signs will be used to ensure segregation of product lines. Detailed procedures are provided in SOP BR-005, Product Segregation (see Appendix F).

4.8 Required PADEP Notification

24-hour written notice is required to be issued to the PADEP Clean Water and Waste Management Bureaus prior to switching between the EQ-054 and the PAG-07 products.

4.9 Alternative Waste Handling or Disposal

The facility is designed to operate with limited redundancy in the event of a short- or long-term equipment breakdown. An additional mixing unit may be added, if needed. In the event that an equipment breakdown occurs and is unable to be replaced with on-site equipment, a local equipment rental or leasing firm will be contacted regarding availability and rental. If a component of the processing system becomes inoperable and cannot be repaired in a timely manner, material deliveries may be delayed or suspended. If no other alternatives can be found, or if the facility is shut down for longer than three days, incoming shipments of all materials will be suspended or diverted to alternative permitted solid waste processing or disposal facilities until processing can be resumed. Unprocessed biosolids will be loaded into transfer vehicles and disposed at a department-approved facility.

4.10 Surface and Groundwater Protection

Several design and operational features serve to protect surface water and groundwater in the permit area and surrounding land.

- Any liquid that has come into contact with biosolids is collected using absorbent materials. The sorbents are then incorporated into the mixing process.
- The product storage areas are covered to prevent contact with stormwater,
- Stormwater run-on has been minimized through the use of diversion channels,
- Stormwater is retained in an on-site collection pond with controlled discharge.

4.11 Nuisance Control

The Nuisance Minimization and Control Plan (under separate cover (Form D Attachment M-1)) addresses measures to prevent and control hazards or nuisances from vectors, odors, litter, noise and dust.

Since March 2022, the facility uses a VT1500 Odor Neutralizing System to provide odor control at the facility locations where biosolids odors are most concentrated. Waterless vapor disperses over the Processing Building/Storage Building #1 openings, captures odors, scrubs them

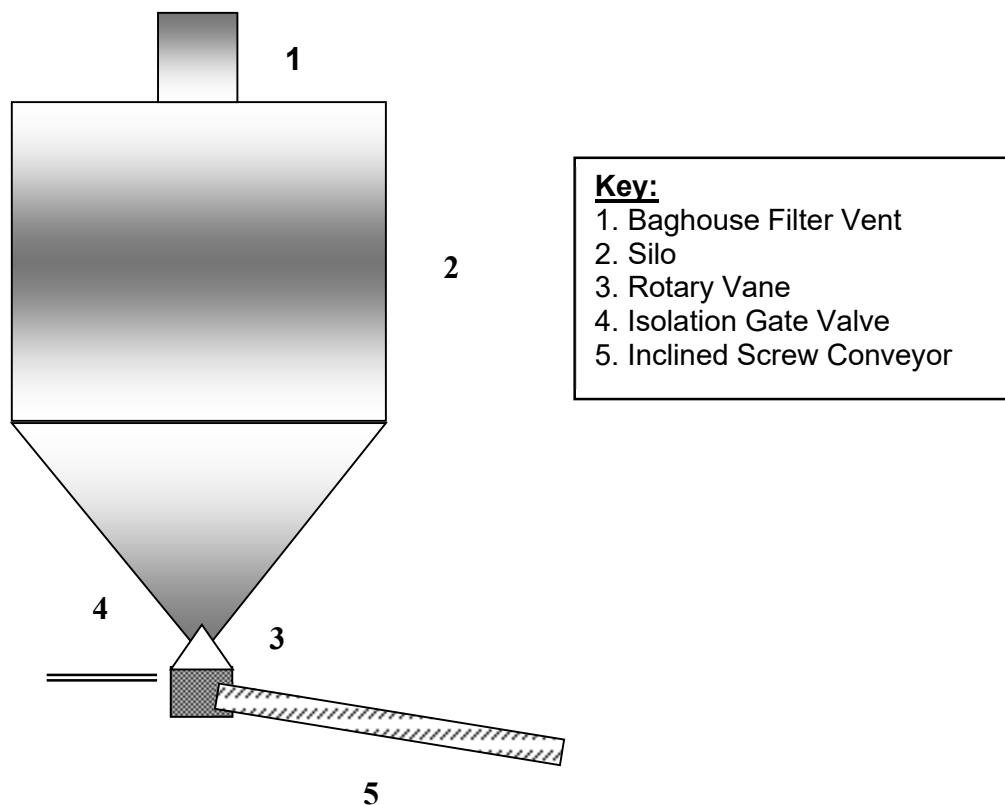
and drops them to the floor. The system typically operates during the time that biosolids are being processed. Unit specifications and a fact sheet are provided in Appendix B.

5.0 MATERIAL PROCESSING

5.1 Equipment and Processing Steps

For detailed instructions on each equipment item, please refer to manufacturers' manuals. The layout of the processing equipment is shown in Figure 4, Building Floor Plan. The processing steps are detailed in the Process Flow Diagram, Figure 3. Two 120-ton silos and one 80-ton silo (Cemen Tech or equivalent) store the alkaline admixtures: Quicklime, Coal Fly Ash, Cement Kiln Dust (CKD) and Lime Kiln Dust (LKD). Each silo has a dry chemical feeder using a screw auger to move the material at controlled rates. An additional back-up silo may be used, if necessary.

A schematic diagram of the feed silos is shown below. Details on Cemen Tech silo and feeder operations are provided in Appendix B and in the silo manufacturer's literature.



Processing involves moving biosolids from the receiving floor (using a wheeled front-end loader) to the hopper of the mixer, where they are combined with lime (and admixture if using). The

mixing unit is an NSP-80 unit, manufactured by Cemen Tech (or equivalent). Further details on the mixing unit are provided in Appendix B. A live-bottom bin and conveyor system will also be used for processing biosolids. A schematic diagram is provided in Appendix B.

5.2 Mixing Ratios and Process Feed Rates

Alkaline materials are added to the biosolids to achieve pH requirements and desired total solids percent. Experience with the equipment, admixtures, and the biosolids being processed is needed to ensure that treatment requirements are met. AA (alkaline admixture) dosages usually range from 10 to 40% of the biosolids mass, on a wet basis. The EQ-054 product uses the recipe 65% biosolids, 10% quicklime and 25% ash. The PAG-07 product uses the recipe 90% biosolids and 10% quicklime.

Feed rates for biosolids, lime and AA are listed in Table 1.

Table 1

Feeder	Storage Volume (tons)	Minimum Feed Rate (tons / hr)	Average Feed Rate (tons / hr)	Maximum Feed Rate (tons / hr)
Biosolids Feed Rate	N/A	50	70	80
Lime Feeder	110	5	7	8
Alkaline Admixture Feeders 1 & 2	240	15	21	24

Average feed rates listed in Table 1 are approximate values for meeting the required treatment conditions. Exact feed rates will be determined during the initial start-up and as needed during operation. Feed rate modifications should be made, as needed, when biosolids from new sources are delivered, or when admixtures from new sources are supplied. Proper feed rates are set by monitoring the mixed material's appearance and consistency, as well as reviewing treatment monitoring results.

At the average biosolids feed rate in Table 1, 600 tons of biosolids can be processed in about 8.5 hours.

After mixing, the material is sent by a conveyor to the catch bin in Storage Building #1, as shown on Figure 4. The mixed material is then moved to a curing pile in Storage Building #1 or Storage Building #2 where it is monitored for 24 hours to ensure compliance with vector attraction reduction requirements.

5.3 Processing and Monitoring Procedures

Forms for recording process monitoring and regulatory reporting information are provided in Appendix C. A Troubleshooting Guide is provided as Appendix H. Step-by-step operations and monitoring procedures for the advanced alkaline stabilization process at the facility are as follows:

- 1) Determine recipe for the day's product (PAG-07 or EQ-054). Enter on the Daily Batch Record.
- 2) Inspect all equipment before start-up. Verify:
 - Mixer and conveyor status and operation
 - That silos' levels indicate sufficient lime (and admixture) quantity for the recipe
 - Lime (and admixture) feed rate settings
- 3) Loads of biosolids are weighed at the scale. Load weights are recorded on the Daily Batch Record.
- 4) Biosolids are unloaded onto the floor of the Processing Building. The temperature and total solids of each load are measured (see SOP BR-001, Measuring Temperature and SOP BR-002, Measuring Total Solids) and recorded on the Daily Batch Record.
- 5) Record batch number, date, and time on the Daily Batch Record.
- 6) Use a front-end loader to route biosolids to the mixer's receiving hopper.
- 7) Adjust the discharge conveyor to send the mixed material to the catch bin.
- 8) Start up the mixer and adjust to desired rate.
- 9) Reduce AA feeds to desired dose rates after steady operation is attained.
- 10) Maintain biosolids feed to hopper, as needed, using front-end loader.

- 11) Visually observe the mix and adjust feeds to achieve a consistent discharge.
- 12) Visually observe discharge product color and consistency.
- 13) Discharge into catch bin (see Figure 4), transferring material, as needed, with a front-end loader to a curing/storage location designated by the Process Operator. Mark the pile with a curing flag. Record batch location on the Daily Batch Record.
- 14) Record counter display, process observations and on-site weather conditions on the Daily LPS O&M Report.
- 15) Begin monitoring – See Sampling and Analysis Plan for EQ-054 or PAG-07 product.
- 16) Process objective is as follows:
 - Maintain the $\text{pH} \geq 12$ for 2 hours, then >11.5 for additional 22 hours
- 17) Monitor and record the pH of the batch at 0, 2 and 24 hours to demonstrate VAR compliance (see SOP BR-003, Measuring pH). Enter these readings on the Daily Batch Record.
- 18) Reprocess or divert the batch to disposal if pH does not meet VAR Option 6 requirements.
- 19) Once the 24-hour curing/treatment monitoring period is completed, the material is considered finished product. On average, product is distributed within 30 days of production.
- 20) Once per month, take samples for laboratory testing. See Sampling and Analysis Plans.
- 21) Finished product is delivered to agricultural and mine reclamation sites in accordance with distribution permits. Transport of outgoing product is performed by third-party haulers. Record appropriate details of pick-up (customer, hauler, date, time, batch numbers picked up).
- 22) For first-time land application of PAG-07 product at a new site, 24-hr advance notice must be provided to PADEP in accordance with the permit.
- 23) When there is a request for product it is taken from the front of the oldest pile, moving into the pile. Product distribution continues into the next pile, in the same manner.

5.4 Product Specifications

Product reliability and consistency is an important factor in maintaining the quality of the facility's product. Liberty's goal is to create public and customer awareness of the market value and safety of the alkaline stabilized product.

Product requirements are as follows:

1. The advanced alkaline stabilization process must be operated in accordance with the procedures as set forth in the Operations & Maintenance Manual and its subsequent modifications.
2. Disinfection/Stabilization criteria must meet the Class A requirements of 40 CFR 503 regulations and individual state regulations as required.
3. The product shall meet metals concentrations listed in 40 CFR Part 503, Table 3. Utilization must be in accordance with 40 CFR Part 503.
4. Nitrogen, Phosphorus, Potassium (NPK) and Ag lime equivalence shall be specified.

Liberty provides a **Product Information Guide** (see Appendix J) to the end user so they can develop appropriate application rates and nutrient management.

5.5 Product Non-compliance Contingencies

The process used at the facility has consistently produced material that meets on-site treatment testing requirements as well as pathogen reduction requirements as confirmed by laboratory analysis. However, if pH at 0 hrs or 2 hrs is < 12 the batch will be reprocessed or disposed. If pH at 24 hrs is < 11.5, the batch will be disposed.

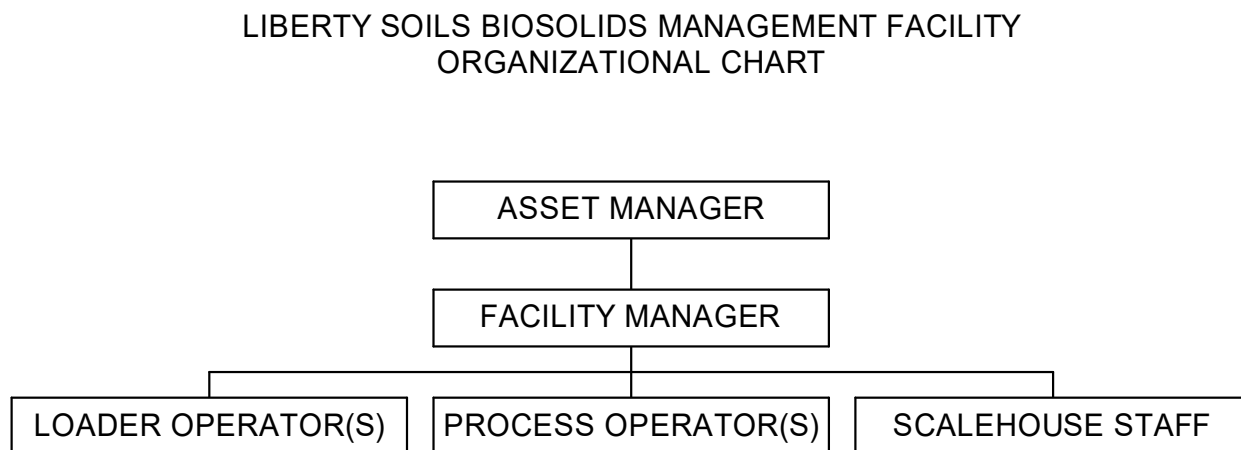
6.0 GENERAL FACILITY AND PERSONNEL MANAGEMENT

6.1 Hours of Operation

Normal hours of operation at the facility are Monday through Saturday, 6:00 a.m. to 6:00 p.m. for delivery of material, and 24 hours per day, seven days per week for processing material.

6.2 Staffing Plan

The following organizational chart represents a typical facility staffing plan. Additional staff will be hired and trained as needed.



6.3 Personnel Responsibilities

A breakdown of the staff's general responsibilities follows:

Project/Asset Manager – Representative of the facility operator. Responsibilities include human resources, environmental and contract compliance and product quality. The Asset Manager is the point of contact with PADEP. The Asset Manager is responsible for addressing ALL regulatory and operational issues, preparing Form U/43s, and determining end use or disposal of product. The Asset Manager oversees Scalesoft Sales Orders for inbound and outbound material and end-of-month reconciliation of accounting and material inventory balances. The Asset Manager is responsible for product marketing, tours, public demonstration and education.

Facility Manager - The Facility Manager oversees all operations at the facility, supports and reports to the Asset Manager. Responsibilities include the day-to-day management of the process, facility staff, and compliance with all facility, PADEP and OSHA safety requirements. The Facility Manager is responsible for product quality, acceptance or rejection of any problematic incoming loads at the facility, and determination of end use or disposal of product. The Facility Manager is responsible for recordkeeping, self-inspections, staff training and implementation of safety and contingency plans. The Facility Manager is the primary Emergency Coordinator. The Facility Manager may also assist in the marketing of the product.

Process Operator(s) – Process Operators(s) are responsible for implementing the daily product recipe, overseeing daily processing of biosolids, labeling & loading the batch into its designated curing location, testing, managing storage of the finished product and maintaining quality assurance/quality control requirements for the process. The Process Operators are also responsible for completing daily equipment inspections and ensuring that processing equipment is routinely maintained for safe operation. Responsibilities also include preventive maintenance, managing warranties, parts replacement, etc. on all of the equipment at the facility. A Process Operator will act on behalf of the Manager when the Manager is not present at the site.

Loader Operator(s) - Loader Operators manage, transfer and transport biosolids and product at the facility, as well as loading the product into delivery trucks. Operators are responsible for completing daily equipment inspections and ensuring that equipment is routinely maintained for safe operation. At least one Loader Operator is on-site at all times. Additional Operators may be needed depending on the season and delivery requirements of the end users.

Scalehouse Staff - Duties include managing material deliveries, operating the scale, generating weight tickets, inputting Scalesoft data, and providing drivers with product cue cards. At least two Scalemasters are licensed to operate the scale. Duties also include daily batch QA/QC testing, data collection and management, product sample collection, and communication with the Facility Manager.

6.4 Employee Training Program

Training, including distribution of the Operations and Maintenance Manual, is required for all new personnel. The Manual will be available to employees at the facility office.

The Facility Manager is responsible for staff training. The training program is designed to ensure that personnel are familiar with facility operations and can respond rapidly and effectively to any site emergency. Some of the training involved will be informal and ongoing in nature, carried out by competent facility personnel under actual operating conditions.

Formal training includes the following as a minimum:

- General facility operations
- Material flow control
- Identifying potentially unacceptable biosolids
- Equipment operation and maintenance procedures
- Emergency response procedures
- Sampling procedures
- Health and Safety Program (HASP), Appendix G
- General security procedures

The *EMPLOYEE TRAINING PROGRAM OUTLINE* is provided as Appendix D.

In addition to this Manual, each employee will also be provided with, and be required to review, the Preparedness, Prevention, and Contingency (PPC) Plan. The PPC Plan provides preventive measures and response actions to situations that could endanger the environment and/or public health and safety through the accidental release of toxic, hazardous, or other pollutants, to the environment from the facility.

A third party may be retained to train facility personnel in radiation safety and the operation of radiation monitoring equipment.

Since the facility prepares biosolids product that is applied to land, employees involved in processing biosolids shall satisfactorily complete the PADEP Biosolids Training Course, which is required for persons preparing biosolids that will be land applied.

Safety meetings are held monthly, focusing on equipment usage and safety procedures. Any deficiencies observed or new procedures will be covered in these meetings.

7.0 CLEANING AND MAINTENENCE

It is important to maintain a clean, safe and workable site. A neat and orderly site is a reflection of the operating personnel and contributes to the facility's public image. Daily site inspections are performed in order to identify housekeeping needs. The Facility Self-Inspection Form is included in Appendix C. Items requiring corrective action are addressed in a timely manner.

7.1 Sitewide Housekeeping

At a minimum, housekeeping at the facility includes the following:

1. Waste-handling equipment and material processing areas are cleaned daily by facility personnel in order to prevent unnecessary odors or other nuisances. No debris shall be allowed to remain outside the buildings.
2. The trailer unloading area is cleaned as needed throughout the day and at the end of each working day.
3. All materials are placed in the appropriate locations.
4. Keep aisles, walkways and roadways unobstructed and clear of debris. Keep areas around travel paths as dry as possible.
5. Keep all equipment components clean and maintained. Scheduled preventive maintenance is the best method of protecting the equipment.
6. All small liquid spills are immediately cleaned to prevent spreading of such materials. Clean up all lubricant spills immediately with proper adsorbents/absorbents and dispose of the waste materials in a manner that complies with local, state and federal requirements. Water will be cleaned up immediately and will not be allowed to sit on floors and grounds.
7. Clean up all dust spills with caution. The Respiratory Protection section of the Health and Safety Program includes conditions for respirator use.

7.2 Material Control

In order to minimize tracking of material off-site, the following multi-step program will be implemented and enforced:

1. Housekeeping: Traffic areas are scraped on a routine basis to minimize the potential for vehicles and equipment to drive through material. This will be done at least twice per day, with

at least one scraping at the end of the production day. This frequency will be increased during inclement weather.

2. **Truck and Trailer Cleaning:** Trucks and trailers carrying biosolids or finished product "over-the-road" are cleaned prior to leaving the facility. See the Truck and Trailer Cleaning SOP in Appendix F. On-site personnel will inspect trucks and trailers after cleaning.
3. **Trailer Tarping:** All vehicles that carry materials, either inbound or outbound, are required to be tarped for "over-the-road" travel. Empty trailers are not tarped.
4. **Daily Inspections of Route 125:** Route 125 in the vicinity of the site road intersection, is inspected for material loss on a daily basis. At a minimum, this is performed twice daily, once at the start of the day and once at the end of the day. A daily inspection report will be prepared for each day of operation. Road condition may be noted at other times of the day, if it is warranted.
5. **Clean-up Report:** When material is lost or tracked off-site, an incident report will be completed and filed. This report will document who reported the incident, what and how much material is involved, what the response was, and any other pertinent information that will improve this program.
6. **Discipline:** Any person found responsible for off-site material loss will be subject to disciplinary action, as described in the employee handbook. Penalties may include loss of performance bonuses, suspension or termination, especially if it is deemed to be a willful act.

7.3 Maintenance

Process Equipment

Poor product quality frequently is the result of equipment malfunctions. The most critical components of the process that directly affect product quality are the mixer, shredding equipment, the metering conveyors, and the monitoring equipment. In addition, air emissions can result from inadequate maintenance of baghouse filters on the silos.

The most important factor in determining the service life and reliability of site equipment and structures is an effective maintenance program. The keys to good preventive maintenance (PM) are establishing and rigorously implementing PM schedules and minimizing unscheduled

downtime. This approach will be augmented with thorough record keeping, enabling maintenance personnel to anticipate failures before they occur. Frequency of maintenance is approximate and will be based on the actual hours of operation and operating conditions, which may require more frequent maintenance. Process equipment maintenance literature, together with schedules will be used as the basis for the preventive maintenance program. Maintenance schedules along with detailed vendor Operations and Maintenance (O&M) Manuals for each major piece of equipment will be available to facility employees. They will be referred to before performing any maintenance on a piece of equipment. Sufficient spare parts, lubricants, and other supplies necessary for routine repairs and maintenance will be stocked on-site.

Site Roads, Drainage Features and Stormwater Pond

Routine inspections will identify the need for cleaning and maintenance activities for the following areas:

- The site access road and associated drainage features outside the permit area are maintained in accordance with the construction details provided in Exhibit 12.1, Project Narrative Addendum for a Minor Permit Revision to SMP No. 54900101 (Appendix I). Road maintenance includes daily inspections for any damage. Most grading and road surface repairs are performed by the property owner's (Blackwood, Inc.) personnel and equipment; however, outside resources will be utilized as required. Snow removal will be performed using existing site equipment. Materials used for road repairs include gravel, earth and foundry sand.
- Road surfaces within the permit area are kept free of dirt and debris as described above. Cracks or potholes are repaired in a timely manner.
- Pond, discharge structure and drainage channels within the permit area are maintained so that they function properly.

Further details regarding housekeeping and preventive maintenance procedures related to spill prevention are included in the PPC Plan.

8.0 INSPECTIONS

Examples of the forms used to conduct facility self-inspections and equipment inspections are included in Appendix C.

The Facility Manager or designee will conduct routine self-inspections of the facility, access road, and entrance. Any identified deficiencies will be corrected in a timely manner. The results of the inspections shall be recorded on the **Facility Self Inspection Form** and kept on file at the facility. Corrective actions taken will be recorded on the form.

The Process Operators are responsible for completing daily equipment inspections and recording the results on the **Daily Equipment Inspection Log**. These inspections ensure that equipment is routinely maintained for safe operation.

9.0 RECORDKEEPING AND REPORTING

Careful recordkeeping can help identify the source(s) of a problem. The Facility Manager or designee will be responsible for maintaining the facility's operating forms and logbooks. The facility's operating forms are included in Appendix C. Records will be made available for inspection upon request from the PADEP.

The following information is maintained:

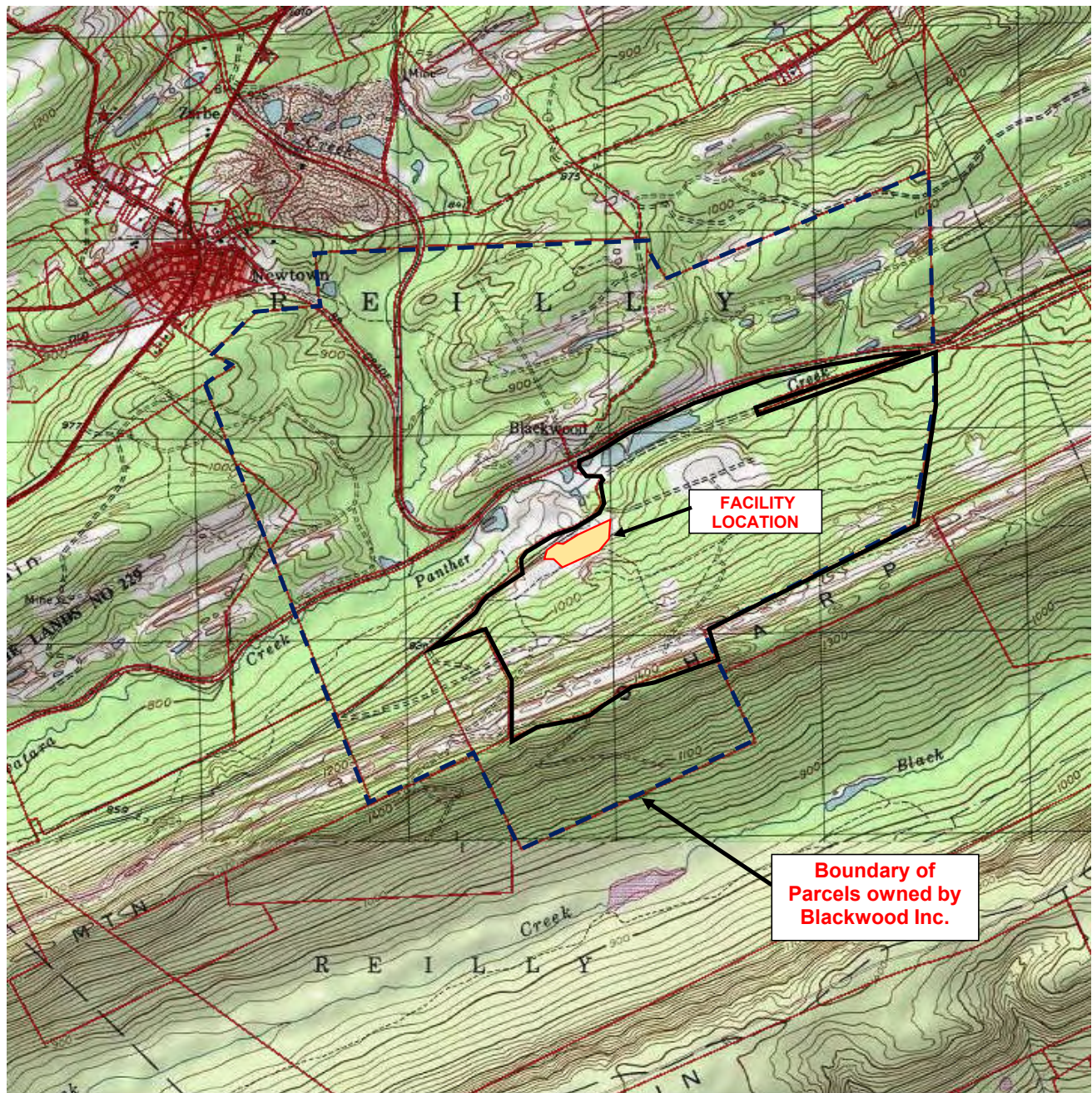
- Process monitoring records
- Daily and annual tabulations of the volumes and sources of biosolids and admixtures delivered to the site
- Admixture inventory (amount & type)
- Product inventory (amount & type)
- Product distribution records (amount, type & location)
- Analytical data for biosolids and admixtures (for each generator)
- Finished product laboratory reports (test methods used, quantitation limits and QA/QC information)
- Equipment inspection, preventive maintenance and repair records
- Facility inspection and maintenance records
- Complaint records and response actions.

Annual Reporting

As required by permit 603455, an annual operation report is submitted to the Department in accordance with PA Code 283.262. The report is submitted on or before June 30 for activities conducted during the previous calendar year.

As required by permit WMGM054, the facility will prepare and submit the Recordkeeping and Reporting Form (3800-FM-WSFR0339a) and supporting data annually on or before March 1 for activities conducted during the previous calendar year.

As required by permit PAG-07-2203, the facility will submit the Recordkeeping and Reporting Form (3800-FM-WSFR0339a) and supporting data annually on or before March 1 for activities conducted during the previous calendar year.



NTS

Source: <https://store.usgs.gov/map-locator>

EnSol, Inc.

661 Main Street, Niagara Falls, NY 14301

Ph: 716-285-3920 Fax: 716-285-3928

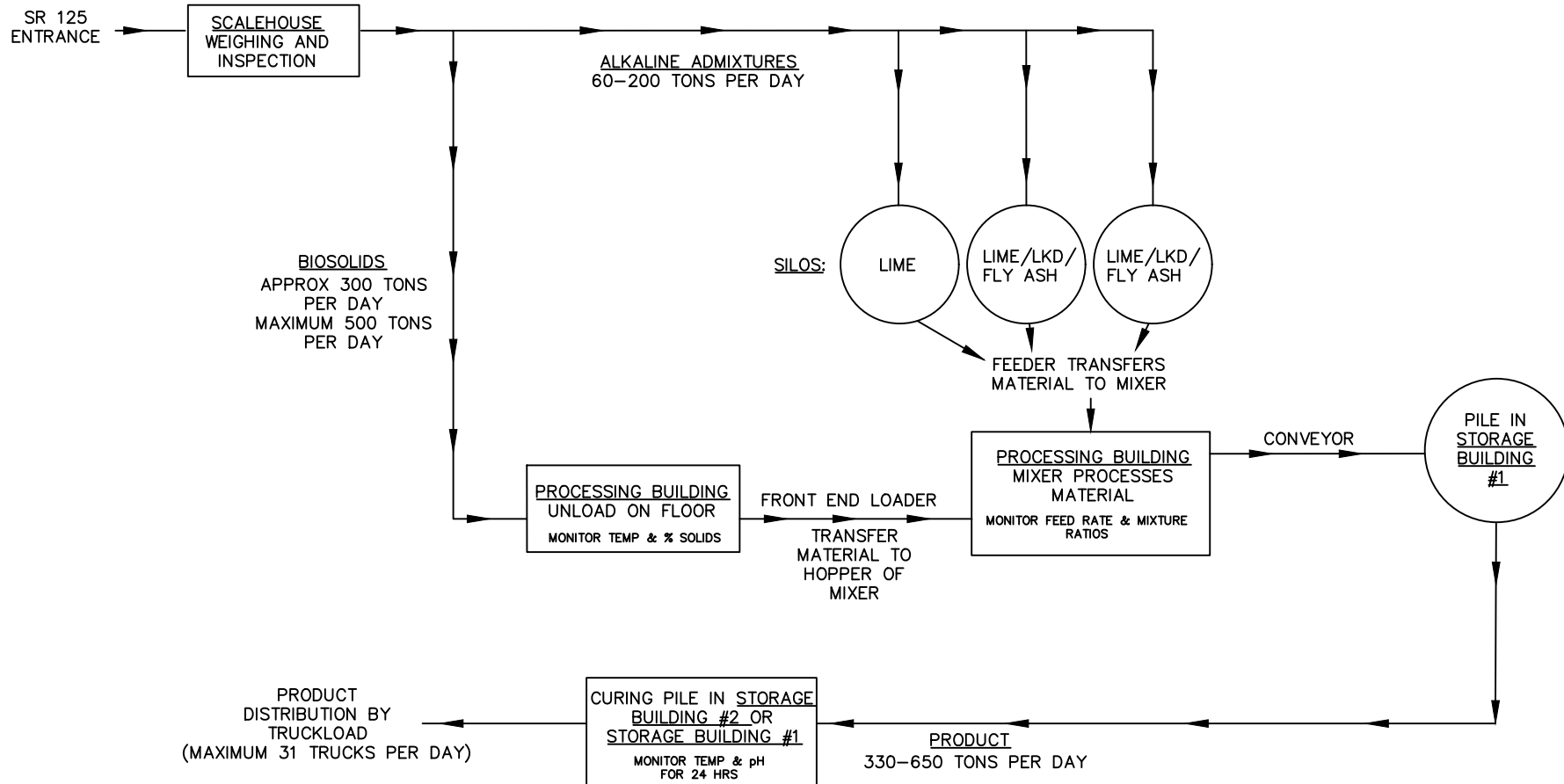
Prepared By: KLP
Date: 11/28/24

**LIBERTY SOILS, LLC
MAJOR PERMIT MODIFICATION APPLICATION**

LIBERTY SOILS BIOSOLIDS MANAGEMENT FACILITY
500 Blackwood Rd.
Tremont, PA

FIGURE 1

**USGS SITE LOCATION
MAP**



NOTES:

1. PRODUCT NOT MEETING TEMP & pH REQUIREMENTS WILL BE REPROCESSED OR DISPOSED AS WASTE

SCALE: N.T.S.

PROCESS FLOW DIAGRAM

CAPACITY INCREASE MOD.

LIBERTY SOILS, LLC

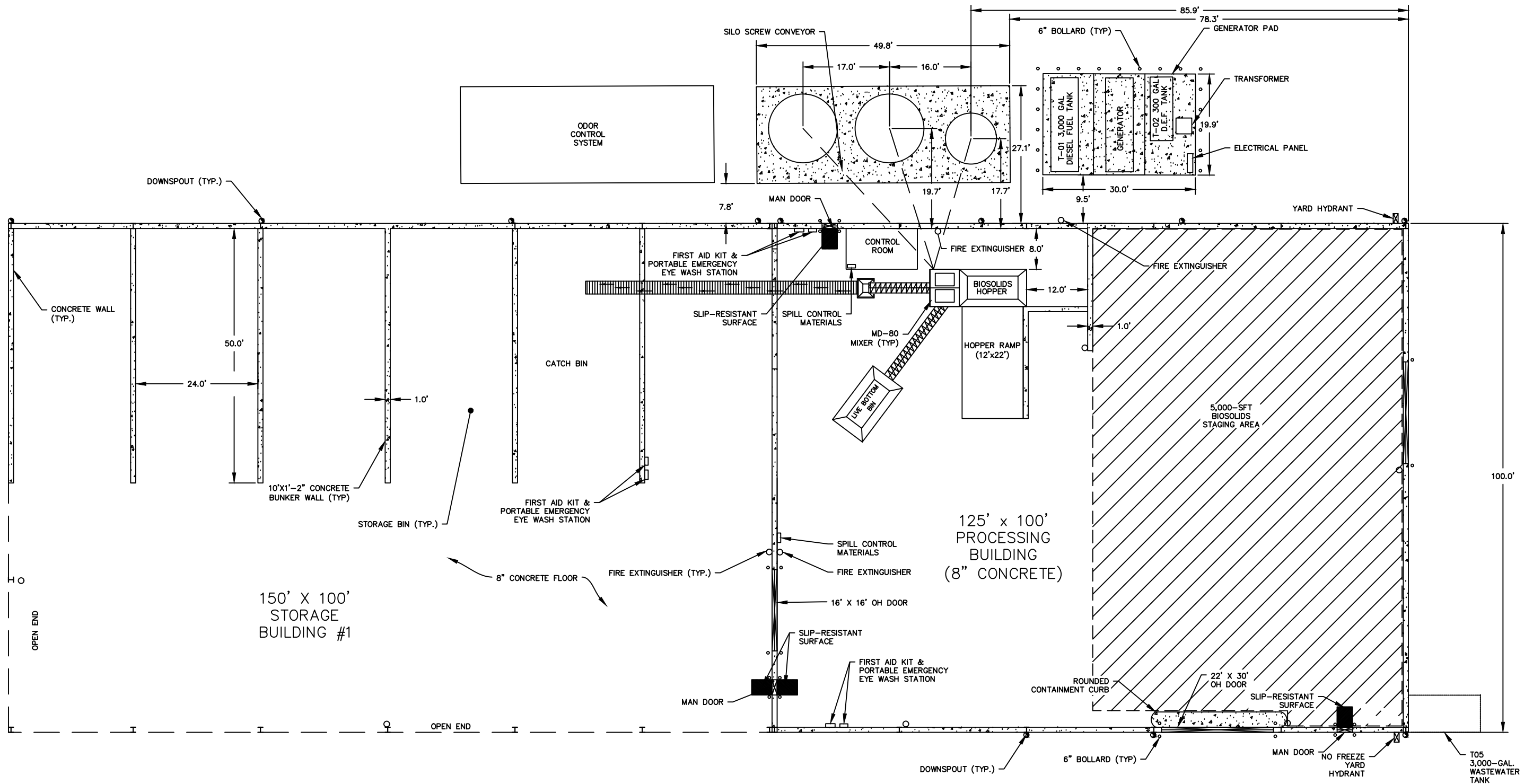
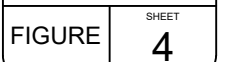
TOWN OF TREMONT
COUNTY OF SCHUYLKILL
STATE OF PENNSYLVANIA

DECEMBER 2024

040-A0013

FIGURE

3

[illegible]

Appendix A

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

Definitions

Liberty Soils Biosolids Management Facility

DEFINITIONS

- **Advanced Alkaline Stabilization**: a type of chemical stabilization in which dewatered wastewater treatment plant (WWTP) sewage sludge (biosolids) is mixed with alkaline materials to achieve a Class A level of pathogen treatment.
- **Batch**: Mixture of biosolids, lime (and admixture, if used) that is produced during one day of processing.
- **Biosolids**: Incoming sewage sludge that is approved by the PADEP for processing and has not yet been processed.
- **Catch Bin**: Bin where the day's batch drops off conveyor and piles up before being moved to a curing location.
- **Curing Pile**: Pile of processed material during the 24-hour period while pH testing is completed. Designated with a "Curing Flag."
- **Curing Flags**: Flags stuck in piles which identify "date" processed and Batch #.
- **Processing Building**: Building where incoming biosolids are dumped on floor and loaded into hoppers for processing.
- **Product**: Material that is finished curing and is being stored and/or staged for distribution.
- **Product Type**: Either WMGM054 or PAG-07. The product type determines the recipe and the distribution permit the product should adhere to.
- **Product Recipe**: Specific to the product type; WMGM054 (65% biosolids + 10% quicklime + 25% admixtures), PAG-07 (90% biosolids + 10% quicklime).
- **Treatment Monitoring**: pH testing during the 24-hour period after a batch of material is processed.
- **Storage Buildings**: Covered buildings in which Curing Piles will be monitored and Product Piles will be stored. Storage buildings will be identified by numbers.
- **Application Sites**: Recipients of the product for agricultural or reclamation use.
- **Scalesoft**: Software used to generate and record tickets for incoming and outgoing material.

- **Scalesoft Sales Order**: A selection when generating a Scalesoft ticket linking the Customer to the application site address, hauler, product type, application type, and application rate.

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

Appendix B

Equipment Information

Silo and Feeder Operation

NSP-80 Mixer and Silos

Live-Bottom Bin

Odor Neutralizing System

Silo and Feeder Operation

Alkaline materials are loaded into silos pneumatically. Occasionally, a silo may appear full even though there seems to be plenty of space for the material. Bag house clogging, which increases air pressure, usually causes this phenomenon, resulting in accompanying alarms. The pressure indicator valve may also clog, with the same effect. Keeping the bag house in good working order and maintaining the air valve can reduce problems associated with loading and having to absorb the cost of handling unused portions of a delivery.

While it is infrequent for lime, occasionally tramp material can be present in alkaline admixtures. Most intake fittings have a screen to prevent this material from entering the silo. Some facilities have been so troubled with the clogging of these screens that the screens have been removed and anything that will pass through is allowed in the silo.

Note: Check the bulk density of AAs before loading into the silo.

Silo Loading

Note: For complete operation and safety information, refer to the manufacturer's manual for detailed instructions. The following information is generic, intended as a general guide to standard operating practices.

Shipments of AA are transported in pneumatic tank trailers and blown into the receiving silos by on-board compressors. The AA is usually blown from the truck into the silo through a four-inch pipeline equipped with a quick-disconnect coupling.

The operator should determine if the bag house needs cleaning or shaking before and after each load of AA is received, clearing AA dust from the bag house filtering cloth. The bag house should be on-line during loading. Proper operation (cleaning/shaking) of the bag house will prevent restriction of air discharge from the silo as the material is pneumatically discharged from the truck. (Please check the manufacturer's instructions.)

The operator should monitor the silo high level indicator during filling to prevent overloading the silo and potentially damaging the bag house and silo equipment.

Silo Level Monitoring

AA level indicators may be provided to alert the operator to:

1. High Silo level
2. Low Silo level

The operator should monitor the level indicators and order (if appropriate) AA at the proper time to prevent a shutdown.

Bag House Inspection

The silos are provided with a bag house to trap particulate matter while allowing air to discharge from the silo during pneumatic filling.

Bag shaking equipment should be periodically inspected to assure proper operation. Material should shake from the bags and fall back into the silo. Damaged or improperly secured bags should be repaired or replaced.

Alkaline Admixture Dosing/Metering Equipment Operation

AA typically is discharged from the silo through a positive isolation gate and a rotary vane feeder, into a screw conveyor to the mixing unit.

Air pads fluidize and promote materials flow from the silo. The air flow rate into the silo will affect the flow of AA into the mixing equipment. Caution must be exercised to minimize introduction of moisture into the silo through fluidization operations to prevent carbonation of calcium oxide, thereby reducing AA reactivity.

NSP-80
Bid Specifications

February 17, 2003

- 1.0 **GENERAL:** This specification describes a proportioning and mixing unit designed to mix dewatered sludge with an alkaline material(s). The cake sludge is dewatered by a belt filter press, centrifuge, or vacuum press, and it shall be in the range of 14% to 30% solids content. The equipment shall be designed and manufactured by a single manufacturer as a single unit to insure compatibility of all components. At a minimum, the unit shall consist of a hopper and metering device for sludge, and a mixer designed to thoroughly mix a wide range of cake sludges. Additional equipment will include three bulk storage silos with rotary vane feeders and u-trough screw conveyors.
- 2.0 **SLUDGE HOPPER:** A "V" bottom sludge hopper 12 feet in length shall be included. It is to be constructed of 10 gauge steel. Capacity shall be a minimum of 250 cu. ft.
- 2.1.1 The bottom of the sludge hopper shall have two 12" diameter, full pitch augers for metering the sludge. The augers shall be powered by two Leeson 10 HP TEFC, high efficiency electric motor that is rated for inverter service. The drive shall include a Sumitomo gear reduction box. The drive shall be variable speed through a variable frequency drive.
- 2.2 The sludge hopper bottom shall be water tight so liquids will not escape. Each side of the hopper bottom will have a 3" drain plug.
- 2.3 The sludge hopper shall contain one agitator to break up the cake sludge and promote an even flow into the metering auger. The agitator shall be driven independently by a Leeson 3.0 Hp TEFC high efficiency constant speed electric motor drive and gear reduction box. The Sumitomo gear reduction box shall have a minimum reduction ratio of 357:1. The agitator paddles shall be bolt on and capable of being reversed.
- 2.4 The sides of the sludge hopper shall be sloped at no less than 64 degrees from the horizontal above the centerline of the agitator and 77 degrees from the centerline of the agitator to the hopper bottom. The ends shall be vertical.
- 2.5 The discharge hopper for the sludge and alkaline materials shall fit into the receiving hopper of the mix auger so as to control dust flow and sludge spillage. It shall have removable plates on the side and end of the sludge dispensing hopper for inspection/service/calibration. A calibration chute and rake shall be included.
- 3.0 **MIXER:** The homogenizing mixer shall be ten (10') feet long and twenty one (21")

inches in diameter and shall thoroughly mix the sludge and alkaline material. Mixing action shall be adjustable by the following methods. A) mixer speed (rpm) B) operating angle C) material feed rate. The manufacturer shall have demonstrated the capability of the mixer unit to thoroughly mix alkaline materials and cake sludge into a plastic condition where alkaline materials are in intimate contact with sludge particles, or the mixing is such that a granulated material is discharged from the mixer and all sludge balls are completely coated with alkaline material.

- 3.0 The auger fighting material shall be equipped with bolt on NI-HARD cast steel wear blades designed for long wear life.
- 3.2 The mixer shall be powered by a discharge end mounted hydraulic motor. The mixer speed shall be controlled by the operator from 50 rpm up to a maximum of 350 rpm.
- 3.3 The mix auger shall be contained in a steel frame with a flexible bottom boot. The top shall be enclosed for normal operation. The top shall be capable of being opened for inspection and clean out.
- 3.4 Mixer rpm shall be displayed on the operator panel via the touch screen display.
- 3.5 A hydraulic cylinder lift shall control the mix angle. In the event of mixer failure, the NSP will automatically shutdown.
- 4.0 **POWER:** A Leeson 75 HP, 3 phase, 460 volt electric motor shall be provided to operate a fixed displacement hydraulic pump that provides power to the mixer auger and mixer hoist.
- 5.0 The NSP shall be equipped with a fixed displacement hydraulic pump with a maximum flow of at least 52 gpm and a maximum continuous pressure rating of 2500 psi.
- 5.1 A 65 gallon hydraulic reservoir with sight gauge shall be included.
- 5.2 A 100 mesh suction filter shall be included.
- 5.3 A spin on type, 10 micron return line filter shall be included.
- 5.4 Pressure compensated flow control valves in each hydraulic circuit shall be included.
- 5.5 A water to oil shell and tube type oil cooler in the return line shall be included. This cooler shall have a capacity of 50,000 BTU. 10 gallons per minute water flow required for water to hydraulic oil cooler. A thermostatically controlled quick acting air operated water valve shall be included to control water flow to the cooler. The temperature at which the valve is activated is set by the operator.

6.0 **ELECTRICAL:** All electrical equipment shall meet or exceed the NATIONAL ELECTRIC CODE in effect at placement of purchase order. Electrical enclosures are constructed of mild steel material meeting NEMA 4, 12, or 13 specifications

6.1.1 460 volts, 60 Hz, 3 phase power is required. For other voltages or frequencies contact the factory.

6.2 **POWER:** A Leeson 75 HP, 3 phase, 460 volt electric motor shall be provided to operate the fixed displacement hydraulic pump that provides hydraulic power.

6.2.1 A main disconnect with circuit breaker type motor protector shall be included.

6.2.2 A safety shut down cable and trip switches shall be included around the inside lip of the sludge bin.

CONTROLS: A control panel located at the operator's station shall allow the operator to control all functions.

6.3.1 Surge suppression for the control panel shall be included.

6.3.2 Control for alkaline admixture(s) feed rate are supplied to the operator through the operator touch screen.

6.3.4 The hydraulic control valves shall be standard type configuration with handles. Their control shall be provided by integral air control cylinders mounted at the ends of the control valve spools. The air pressure signal shall be provided by electric over air solenoid valves.

6.4 **WARNING SIGNAL (100 DB AUDIO HORN):** Sounds a start up warning signal when NSP and/or conveyors are started in the semi or full automatic mode. Sounds a warning signal when level of sludge in sludge bin is at an unacceptable level. Sounds a warning signal in the event of equipment failure when in the semi or full automatic mode

6.5 **TOUCH SCREEN DISPLAYS:** The touch screen panel shall be capable of displaying digital readouts that show the amount processed in pounds (kg). Readouts for sludge and alkaline material shall be included. The readouts shall show both delivery rate or process total. In addition, a digital readout at the control panel shall indicate mixer auger rpm.

6.6 **SLUDGE LEVEL SENSOR:** An ultrasonic sensor that can detect the level of the sludge in the hopper shall be included. It shall be integrated into the total system to automatically start and stop the N-VIRO SLUDGE PROCESSOR as cake sludge is loaded into the hopper by means of a conveyor or similar device. The sensing device shall be adjustable and capable of measuring the level of sludge in the sludge bin. These measurements shall be used to send signals to external devices through a form

C relay, 5 relays are included.

1. Overflow alarm for the sludge bin.
2. Control the NSP, start/stop process
3. Input control (conveyor, belt filter press etc.)
4. Power on interlock. May be reset to another function.
5. Sensor fail warning LOE (loss of echo).

6.7 AUTOMATIC FEED CONTROL: An Omron programmable logic controller (PLC) with a feedback control system shall be included. The PLC system shall allow the operator to enter scale factors of alkaline material and cake sludge for continuous monitoring and control of materials flows and rates of productions. The system shall include a PLC and VFD feedback loop, and a password lock out via the touch screen display. Alkaline material feed rates are based upon a percentage of the wet weight of the sludge processed. After the desired percentage of alkaline material addition rate is entered, the PLC controls this percentage to be the same for any sludge processing rate entered.

7.0 SILOS: Three bulk material silo of 1400 cu. ft. will be provided for alkaline material. The alkaline material shall be transferred to the discharge hopper on the unit by U-trough screw conveyors. A waterproof connection shall be included between the auger discharge and the discharge hopper. The silos shall be constructed to be waterproof from normal rainfall. To insure complete unloading, the cone angle measured from horizontal shall be 60 degrees.

7.1 The silos shall be equipped with a high efficiency baghouse of the reverse pulse jet cleaning design. The cleaning area shall be 243 sq. ft. minimum. 120VAC and 3cfm are required for operation. A control panel shall be located at the fill pipe connection for the operator to activate the continuous cleaning when filling.

7.1.1 Each silo will use a rotary vane feeder to meter the alkaline material to the mixing chamber. Silo #1 will have a 12" rotary air lock with a ½ hp motor while silo's #2 and #3 will have 14" with a 1hp motor.

7.2 A pressure relief and vacuum relief valve shall be installed to prevent damage to the silo from pressure or vacuum.

7.3 A 4" diameter fill pipe and adapter accessible from ground level shall be included. The fill pipe shall include an inlet filter to restrict the entrance of particles larger than 3/8 inch.

7.4 Clear high and low fill level windows shall be included.

7.5.0 SCREW CONVEYORS FROM SILO TO NSP.

7.5.1 A 6" diameter u-trough screw conveyor shall transport alkaline materials from

bulk storage silo #1 to the mixing chamber on the NSP. A 9" u-trough screw conveyor will be used on silos #2 and #3. Auger construction shall include:

- A. Minimum 10 gauge wall thickness.
- B. Helicoid flighting with a minimum 3/16" root thickness.
- C. Flighting welded to a minimum DOM tube/shaft of 2.375" OD with 7/32" wall thickness.

7.5.2 A 24" rack and pinion type shutoff gate shall be provided to allow service on the screw conveyors with material in the silos. Smaller shutoffs that restrict full flow to the input of the screw conveyor will not be accepted.

7.5.3 The silo screw conveyors shall be powered by three Leeson 3 HP 3 phase electric motors with gear reduction boxes. The transfer auger shall be powered by a Leeson 5 HP 3 phase electric motor with a gear reduction box. The electric motors shall be a high efficiency, TEFC, 230/460 VAC, 60 Hertz, 1750 rpm design motor.

7.5.4 A Dodge reducer/gearbox shall be supplied to provide rpm reduction to reach a final auger rpm of 175. The reducer shall be of a c- face design to readily accept a standard electric motor. Minimum reduction shall be 11.4:1. reducer design shall include:

- A. Parallel gearing for straight through, countershaft power transfer.
- B. Double reduction, 11.4:1 ratio, 188 rpm output.
- C. Minimum 4500 in-lbs. Output torque rating.
- D. Minimum 13.44 output horsepower rating.
- E. Housing and covers shall be constructed of corrosion resistant class 30 gray iron with cast internal ribbing for additional strength.
- F. All housings and end covers shall be either doweled or tenoned and precision machined for proper alignment.
- G. Gearing shall be of the single helical design, and crown shaved or ground to provide an ellipsoid tooth design to assure meshing in the strongest tooth area.
- H. All gears shall be case carburized for longer service life.
- I. Reducer bearings shall be either ball or tapered roller type and provide a minimum 25,000 hour life.
- J. All seals shall be of the spring loaded type and made of nitrile or viton materials.
- K. Gears shall be splash lubricated with a synthesized lubricant.

7.5.5 **CONTROLS:** Allen Bradley motor starters and controls shall be provided. Motor control shall be controlled by the PLC for automatic operation. A remote service disconnect located at each electric motor shall be provided.

7.6 A ladder with safety cage for access to the top shall be provided. The safety cage with toe board encloses the full circumference of the top. Depending upon the silo height and when required by OSHA, a rest platform will be provided.

7.7 Three lifting eyes at the top of the silo shall be provided.

7.8 Six air diffusion pads located in the cone of each silo shall be included. The air inlet system to this valve shall include a water trap and filter. To supply compressed air to these air pads, a 10 gallon air reservoir mounted on the silo base will be provided. The pulsation of the air pads is controlled by the operator from the NSP operators station.

8.0 GENERAL

8.1 The sludge bins, control, and air compressor shall be mounted on an integral skid base.

8.2 **POWER REQUIREMENTS:** 460 volts, 60 Hz, 3 phase power is required.

8.3 **COMPRESSED AIR:** 100 psi air at 10 cfm is required to operate air diffusion aeration system, vibrators and valves. A 3 HP Champion "Advantage Series" air compressor with a 60 gallon horizontal reservoir and refrigerated air dryer shall be included.

8.4.0 **COATING PROCEDURE:** Standard Cemen Tech factory coating system. The following describes the coating procedure applied to the N-VIRO sludge processor (NSP) and to all appurtenant equipment, attachments and accessories.

8.4.1 **SURFACE PREPARATION:** The substrate to be coated shall be free from contaminants such as grease, oil, weld splatter, mill scale, or similar contaminants. The surface shall then be blasted to SSPC-SP6 (commercial blast cleaning) standards. The surface shall be clean and dry before application of the coating system.

8.4.2 **PRIME COAT:** The prime coat shall be one coat of 2 component, polyamide epoxy primer applied by spray application at 4-5 mils wet film thickness to achieve a 1.5-2.0 dry film thickness.

8.4.3 **TOP COAT:** The top coat shall be two coats of 2 component acrylic aliphatic urethane applied by spray application at 3.0-4.5 mils wet film thickness to achieve a 1.5-2.0 dry film thickness.

8.5 All structural fasteners meet or exceed grade 5, ASTM A449 specifications.

8.6 The carbon steel used in the fabrication of the NSP-80 and silos meets the following specifications:

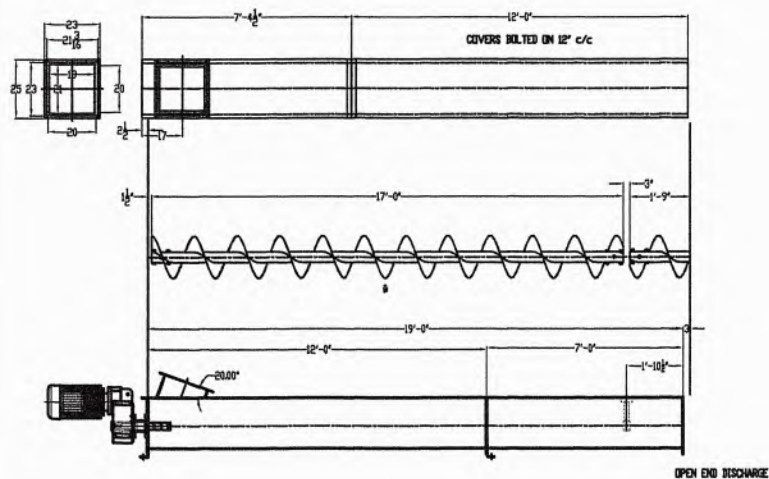
Angles, beams, and hot rolled plate	ASTM A-36
Hot rolled sheet steel	ASTM A-569
Square and Rectangular tubing	ASTM A-500B

9.0 **OPERATIONS AND MAINTENANCE MANUALS:** Two O&M manuals shall

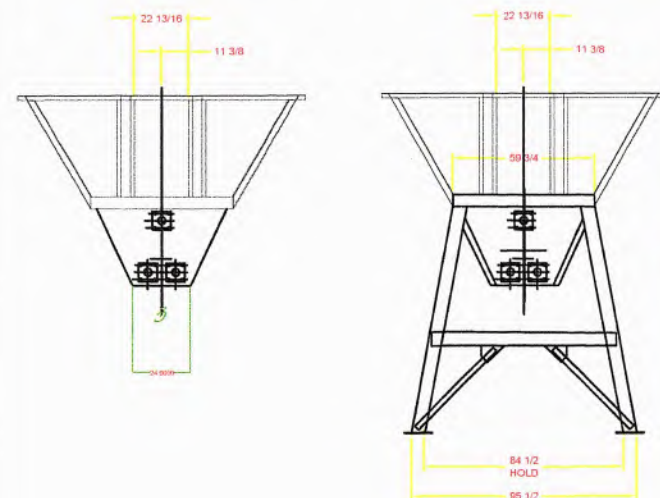
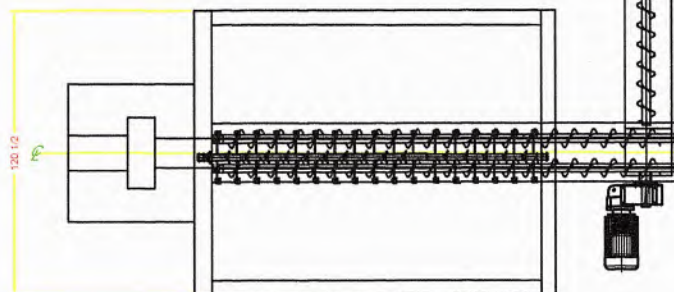
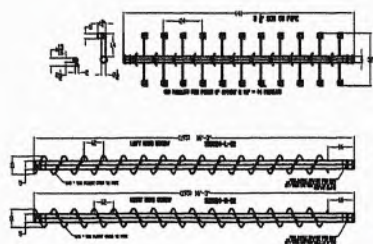
be provided with the CSP.

10.0 CARE OF UNIT PRIOR TO INSTALLATION: Between the time of arrival at the plant site and the time the unit is installed, care must be taken to insure that the unit is not damaged by either natural or man made causes. This is particularly applicable to the electronics and electrical apparatus including the PLC(s), ultrasonic level sensors, and the main control panel. These units will be securely wrapped at the factory and if not installed on the unit should be placed in a protected storage area until final installation. If they are installed, the factory wrap must be checked frequently and replaced if necessary. Damage incurred may not be covered under Cemen Tech warranty. If you have any questions consult the factory.

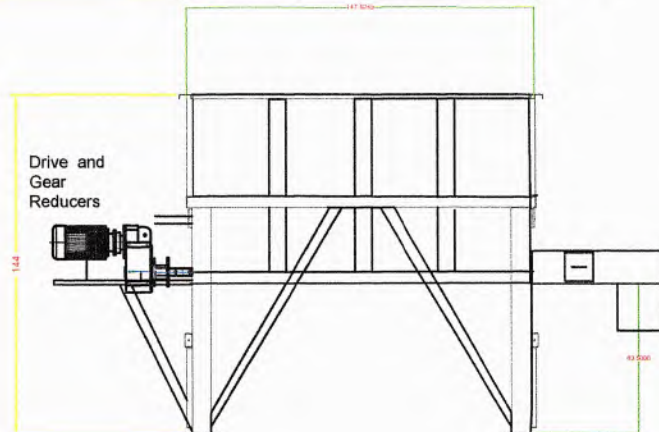
Live-Bottom Bin



Screw conveyor
Discharge to existing system



Drive and
Gear
Reducers

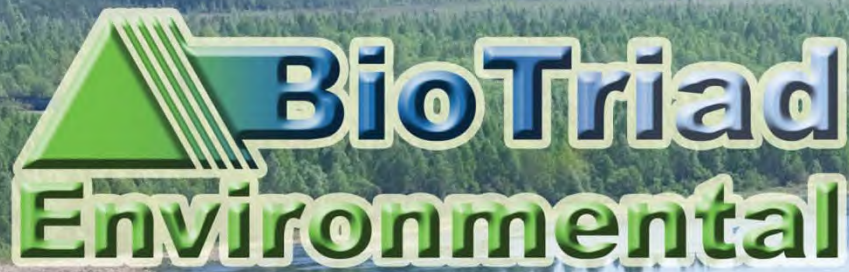


Screw conveyor discharge

Bear ridge Machine and Fabrication
10 Eleanor Ave
Frackville PA 17931
Project 2019272
drawing 60237
WOF NE Blackwood Ash hopper

General Arrangement Drawing





Vapor Phase Odor Neutralization

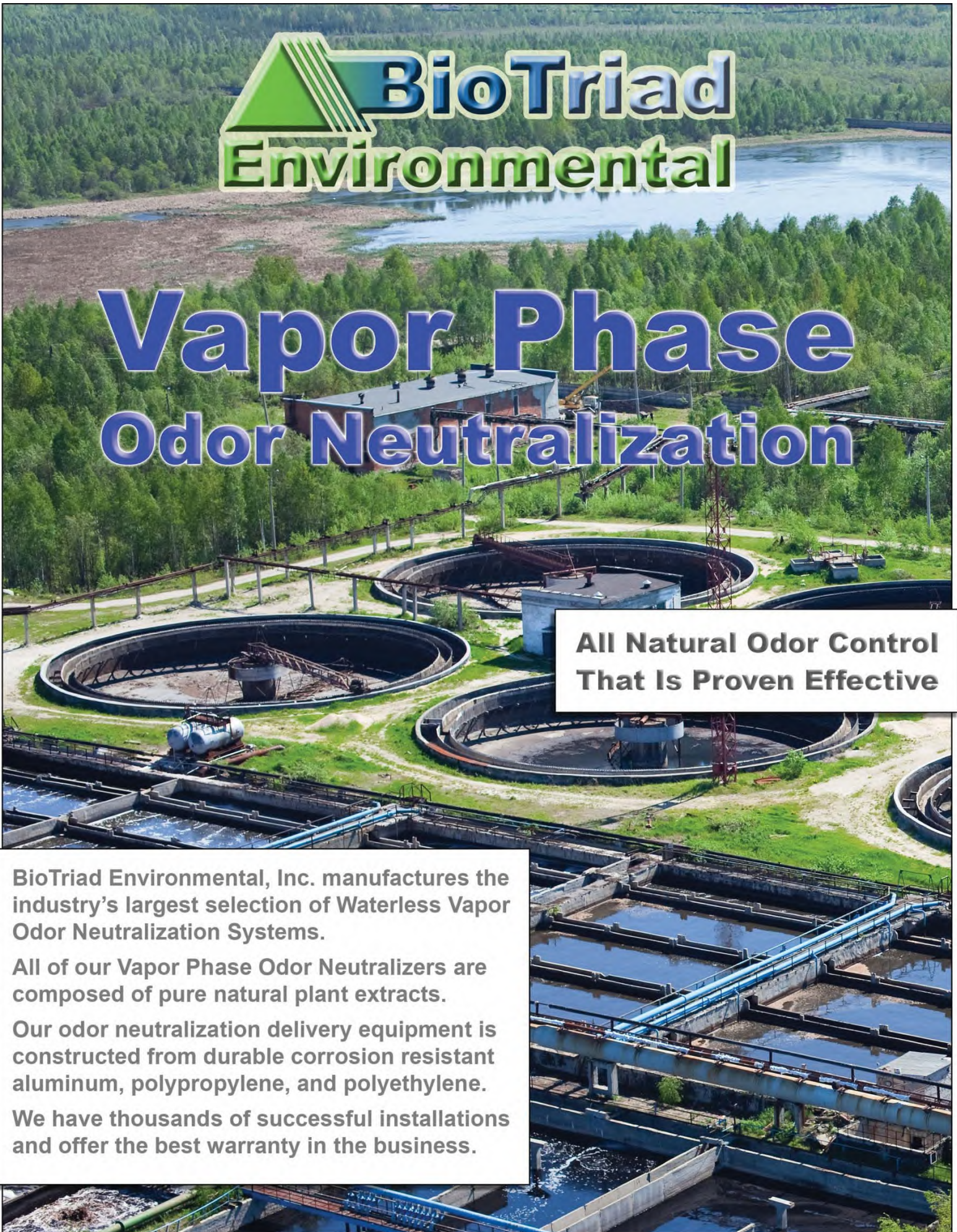
**All Natural Odor Control
That Is Proven Effective**

BioTriad Environmental, Inc. manufactures the industry's largest selection of Waterless Vapor Odor Neutralization Systems.

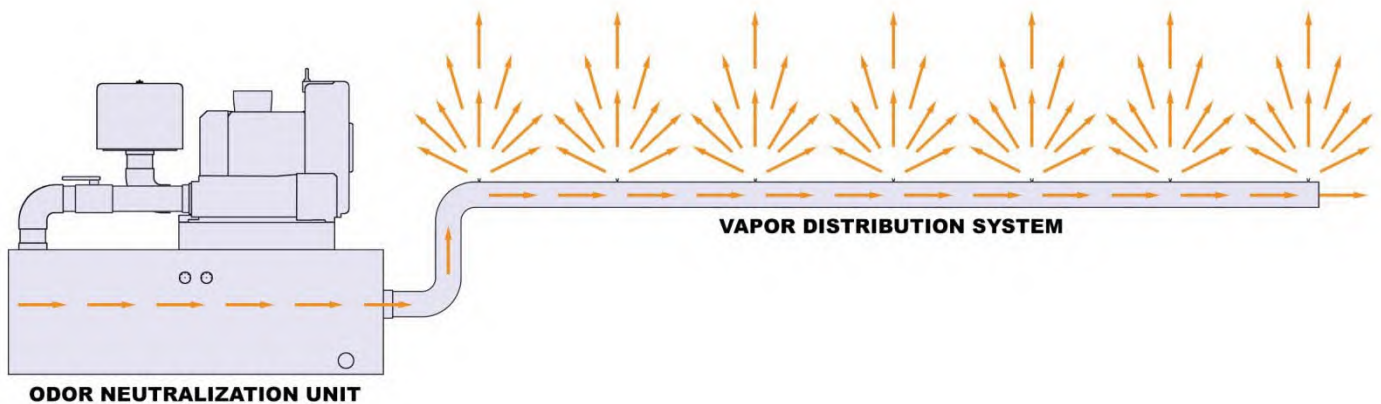
All of our Vapor Phase Odor Neutralizers are composed of pure natural plant extracts.

Our odor neutralization delivery equipment is constructed from durable corrosion resistant aluminum, polypropylene, and polyethylene.

We have thousands of successful installations and offer the best warranty in the business.



How Waterless Vapor Odor Neutralization Works



There are three components involved with BioTriad's vapor phase system; the Odor Neutralizer, the Odor Neutralization Unit, and the Vapor Distribution System.

The *Odor Neutralizer* is the reactive component of the system; the neutralizer is a safe blend of natural plant extracts formulated to neutralize odors. BioTriad's vapor phase neutralizers are formulated for clean residual-free evaporation.

The *Vapor Phase Odor Neutralization Unit* evaporates the liquid odor neutralizer and pressurizes the vapor distribution system; the odor neutralization units are compact and self-contained, with cabinet and trailer enclosures available.

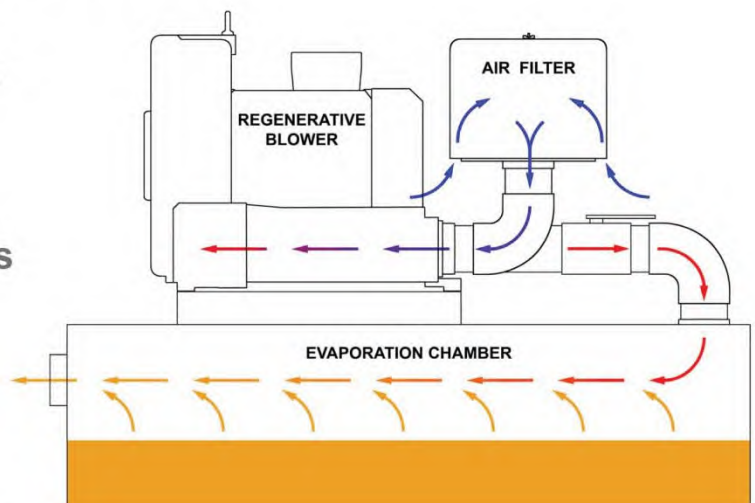
The *Vapor Distribution System* delivers the evaporated odor neutralizer into the malodorous air; the distribution system is constructed from polypropylene pipe, polyethylene pipe, or flexible vapor supply hose.

Ambient air is drawn into the odor neutralization unit through an air filter.

This air is heated by a regenerative blower and forced into an evaporator.

The safe and natural odor neutralizer is converted from a liquid to an odor neutralizing vapor in the evaporator.

The neutralizing vapor is forced from the unit through a vapor distribution system, treating malodors on contact.



= AMBIENT AIR

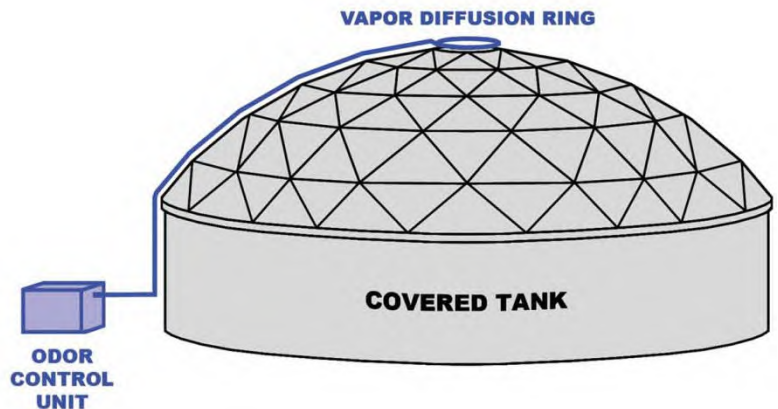
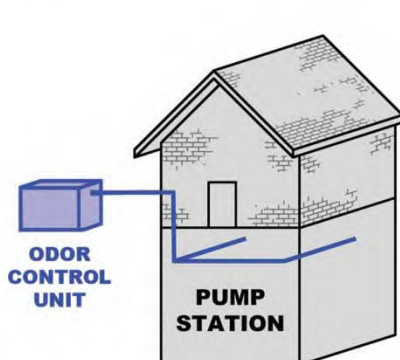
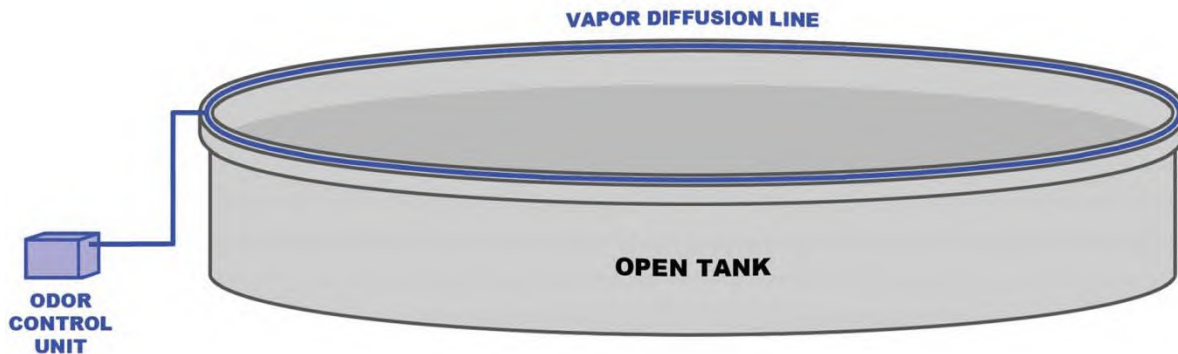
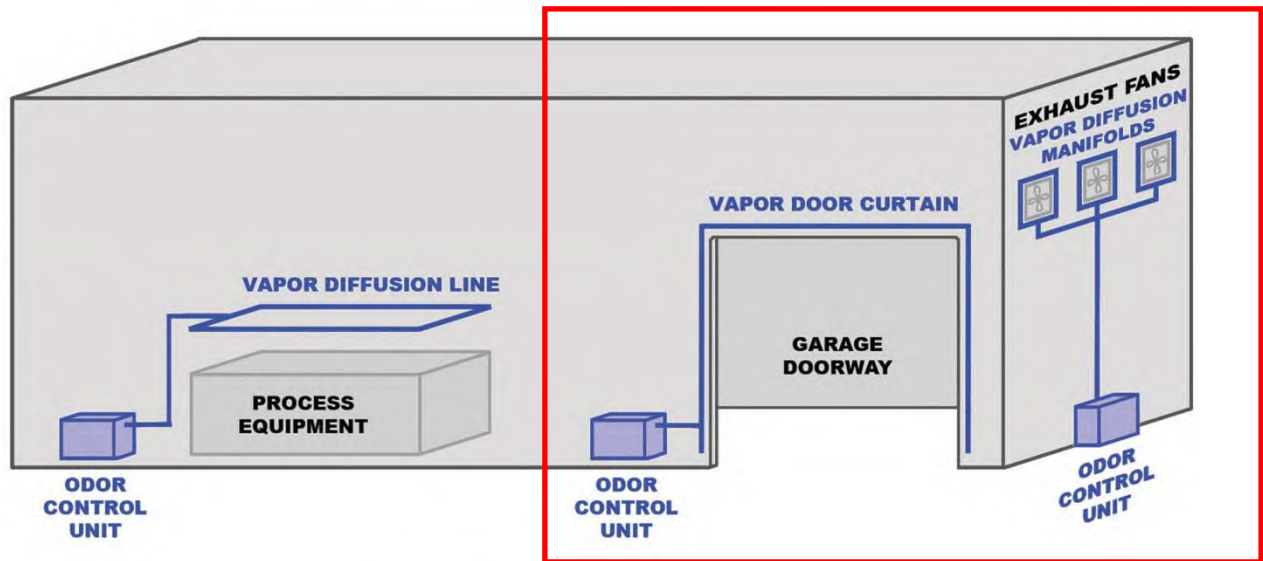
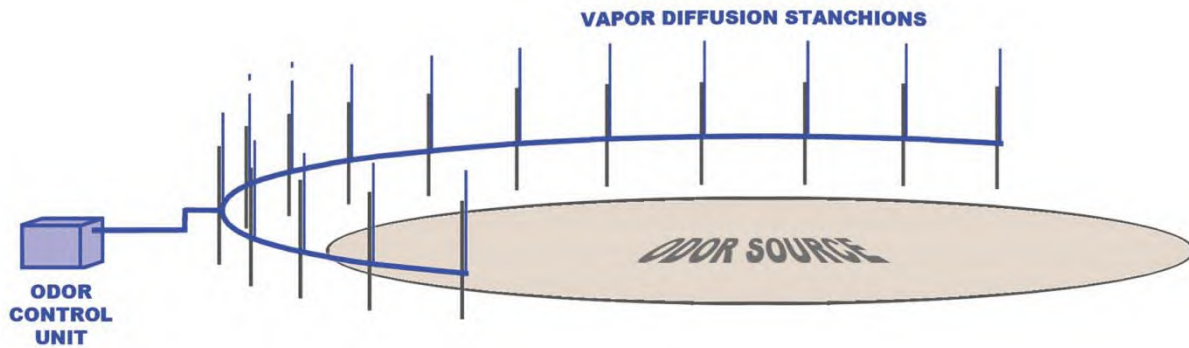


= WARM AIR



= ODOR NEUTRALIZER

Typical Odor Neutralization Applications



VaporCom Unit Specifications:



Model #	Product Avg Usage	HP	Volts	Piping Coverage	Dimensions (L X W X H)
VC33	3 gal/mo	.33	120	33'	18 x 12 x 18 (inches)
VC67	5 gal/mo	.67	120	60'	24 x 14 x 24 (inches)
VC100	7 gal/mo	1.1	120	100'	24 x 14 x 24 (inches)

Cabinet Unit Specifications:



Model #	Product Avg Usage	HP	Volts	Piping Coverage	Dimensions (L X W X H)
V100	7 gal/mo	1.1	120	100'	36 x 24 x 40 (inches)
V300	15 gal/mo	3.5	460	300'	48 x 24 x 52 (inches)
V750	25 gal/mo	8.5	460	750'	60 x 36 x 52 (inches)
V1500	55 gal/mo	15	460	1,500'	60 x 36 x 52 (inches)

Trailer Unit Specifications:



Model #	Product Avg Usage	HP	Volts	Piping Coverage	Dimensions (L X W X H)
VT300	15 gal/mo	3.5	460	300'	8 x 6 x 6 (feet)
VT750	25 gal/mo	8.5	460	750'	8 x 6 x 6 (feet)
VT1500	55 gal/mo	15	460	1,500'	8 x 6 x 6 (feet)



VaporDOX Ultra Products

Fact Sheet

Vapor Phase Odor Neutralization Chemistry

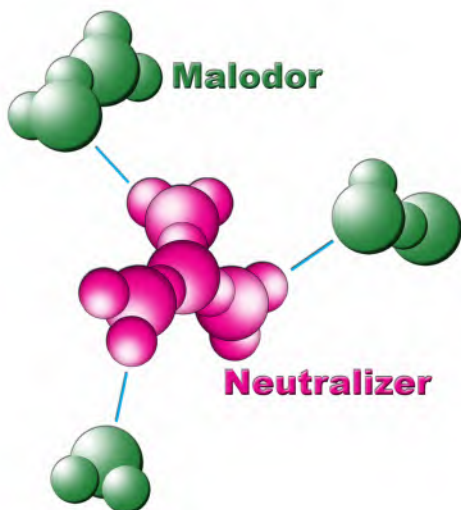
VaporDOX Ultra super concentrated odor neutralizers are designed for the treatment of fugitive odor emissions from municipal and industrial applications.

Product Description...

VaporDOX Ultra is an industrial strength odor neutralizer formulated specifically to be delivered as a waterless vapor.

This product line includes formulas designed to target malodorous compounds from specific industries.

VaporDOX Ultra products do not mask odors, they eliminate malodors with proven odor neutralization science.



How It Works...

Odor neutralization eliminates fugitive nuisance odor emissions.

Odor neutralizers lower overall odor concentrations, whereas masking agents increase detectable odors.

VaporDOX Ultra products are formulated to reduce and eliminate malodors.



VaporDOX Ultra Industrial Strength Odor Neutralizer

Product Features...

VaporDOX Ultra contains no hazardous air pollutants, as promulgated under the Clean Air Act 40 CFR, part 63, C.

This product line includes multiple formulas to treat a variety of odors.

VaporDOX Ultra products are non-hazardous & non-toxic solutions to odors from the waste & wastewater industries.

Specifications...

Storage: Avoid sparks and flame.
Products freeze at -18° F.
Keep containers sealed.

Solubility: Not water soluble.

Dilution: Diluted with air, not water.

Shelf Life: Two year typical shelf life.
(In a sealed container).

Effectiveness...

Extensive field testing has demonstrated that VaporDOX Ultra is highly effective in reducing or completely eliminating odor concentration, intensity, and persistence.

VaporDOX Ultra products have been successfully utilized in thousands of applications throughout the world, with satisfied customers on every continent.

Our team of air quality control experts can design a custom odor control plan for each unique application to ensure the maximum system effectiveness.

Standard Products...

All products listed above are available in the following blends or in a low fragrance formulation:

- | | | |
|-------------------|-----------------|----------------------------------|
| • Cinnamon Bark | • Flower Garden | • Citrus Grove |
| • Northern Forest | • Fresh Breeze | • C/F (citrus, cinnamon, floral) |
| • Lavender | • Spring Mist | • Low Fragrance |
| • Gardenia | • Jasmine | • Customer Blends |

Applications...

- Green waste compost facilities and Biosolids sludge processing plants.
- Dairies, Meat packing plants, Slaughterhouses, and Food processing facilities.
- Recycling centers, Solid waste landfills, Transfer stations, and Incinerators.
- Municipal and Industrial Wastewater treatment plants and Collection systems.

Appendix C

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

Operations Recording Forms

Liberty Soils Biosolids Management Facility
Daily Batch Record

Product:

PAG-07		*BATCH #
EQ-054		DATE:

1	Process Operator:	Weather Conditions (Temperature, Wind Speed/Direction)	
2	Processing Start Time:	AM TEMP:	PM TEMP:
3	Processing End Time:	WIND:	WIND:
Incoming Biosolids Ticket Numbers:			
4	Incoming Biosolids Temperature (each load):		
5	Incoming Biosolids % Solids (each load):		
6	Recipe:		

	Date	Time	pH	Sample Temp.	Adjusted pH	Initials
8	pH at 0 hrs (>12) (Immediately Following Processing)					
9	pH at 2 hrs (>12)					
10	pH at 24 hrs (>11.5)					

	Date	Time	% Total Solids	Initials
14	Total Solids			

15 Curing/Storage Location:

17 Check boxes if samples from this batch were collected for monthly testing:

	Pollutants & FC
	Pathogens (HO & EV)
	Nutrients

* Batch # format: 000-054 or 000-07

Odor Neutralizing System	Start Time	End Time	Hrs
	Total		

Liberty Biosolids Management Facility
Daily Equipment Inspection Log

Instructions: *Complete one form per month per equipment*

Equipment: Wheel Loader - Case 821F

Month Year: October 2024

Operator Initials Day of Week Date HRS at START HRS at END		Tuesday		Wednesday		Thursday		Friday		Saturday	
		1		2		3		4		5	
Total Hrs per Day											
TOTAL HRS FOR MONTH											
INSPECTION ITEM	WHAT TO INSPECT	O.K.	INOP.	O.K.	INOP.	O.K.	INOP.	O.K.	INOP.	O.K.	INOP.
Tires/Tracks	Lugs, Rims, Severe Cuts, Track Bolts, Sprockets										
Ammonia Filter	Needs rinsing or replacing?										
Hoses & Lines	Free of wear & leaks? Protected from heat?										
Ladder/Steps/ Walkways/ Travelways	Free of defects? Clean?										
Handrails/ Guardrails/ Handholds	Free of defects?										
Doors	Functional?										
Mirrors (both sides)	Clean? Free of defects?										
Interior	Clean? Free of oil leaks?										
Fire Extinguisher	Serviced? Inspected?										
Seat Belt	Clean? Free of Defects?										
Seat	Frame and mounting firm? Padding & covering in place?										
Lights	All in place and operational?										
Brake Lights	All in place and operational?										
Windshield Wipers	Operational? Blade(s) in good condition?										
Windshield & All Glass	Good visibility? Free of defects?										
A/C	Functional?										
Horn	Functional?										
Parking Brake/ Emergency Brake	Will hold unit on maximum grade, with typical load?										
Service/ Foot Brake	Will stop unit on maximum grade with typical load?										
Backup Alarm	Functional and Audible over background noise?										
Instruments & Gauges	Functioning properly?										
Steering/ Aux. Steer (if applicable)	Inspected? Functioning properly?										
Exhaust System	Free of defects?										
Engine	Oil Pressure										
	Ammeter										
	Transmission										
	Cooling Systems										
	Hydraulic Fluid										
	Grease Machine										
Any other safety concerns: (Date & Comments)											

Liberty Soils Biosolids Management Facility

Daily LPS O&M Report

Completed by:

Date:

Staff (name)	Position	Hours Worked

Weather	Morning	Afternoon
Temperature		
Wind Speed & Direction		
Humidity		
Precipitation Type & Amount		

Processing Counts (lbs) Documented at the Start and End of each processing day. If you zero-out a piece of equipment it must be done at the beginning of the day.

Equipment	Counter START	Counter END	TOTAL ^
Cementech Hopper	0		
Silo 1 - Quicklime	0		
Silo 2 - Quicklime	0		
Silo 3 - Quicklime	0		
Live Bottom Bin Hopper	0		

^ Input totals to the "Processing & Inventory" spreadsheet

Equipment Uptime	# of Hours	Comments/Problems/Maintenance (Description)
CemenTech System		
Hyundai 960A HDXT-A		
Case Loader 820		
Hyundai 960A HDXT-B		
Generator - Cat C18		Rental
Generator - Kohler		

Building and Grounds - Maintenance	
Scale House - Maintenance	
Road - Maintenance	
Safety Concerns, Near Misses* or Recordables**	
Visitors - see Visitor Log	

* Near Misses: Could have been an injury but was not; how to mitigate in the future

** Recordables: Incident resulting in injury

Liberty Soils Biosolids Management Facility
FACILITY SELF INSPECTION FORM

INSTRUCTIONS: *To be completed each day per month*

MONTH YEAR: **October 2024**

PERFORMED BY:

DATE:

DAY OF WEEK:

		1	2	3	4
		ACTIONS-MAINTENANCE-COMMENTS	ACTIONS-MAINTENANCE-COMMENTS	ACTIONS-MAINTENANCE-COMMENTS	ACTIONS-MAINTENANCE-COMMENTS
Site Appearance, exterior neatness	GOOD FAIR POOR				
Site Road Conditions (potholes, debris, mud, dust, drainage)	GOOD FAIR POOR				
Condition of SR 125 & Site Entrance (mud, debris, dust)	GOOD FAIR POOR				
Condition of Facility Signs	GOOD FAIR POOR				
Condition of Scale, Scale House	GOOD FAIR POOR				
Site Security Conditions, Gates, Locks, Lighting, Cameras	GOOD FAIR POOR				
Condition of Trailer, Septic, Water & Propane	GOOD FAIR POOR				
Condition of Pavement	GOOD FAIR POOR				
Condition of Mixing Building	GOOD FAIR POOR				
Condition of Process Equipment (CemenTech System)	GOOD FAIR POOR				
Condition of Unloading and Transfer Areas	GOOD FAIR POOR				
Condition of Silos and Filters	GOOD FAIR POOR				
Condition of Generator and Fuel Tank (& tank level)	GOOD FAIR POOR				
Condition of Fire Extinguishers	GOOD FAIR POOR				
Condition of Eye Washes & First Aid Kits	GOOD FAIR POOR				
Condition of Spill Control Equipment	GOOD FAIR POOR				
Maintenance/Breakdown : machinery involved area worked on					
PPE Inventory	GOOD FAIR POOR				
Condition of Product Storage Building and Storage Area	GOOD FAIR POOR				
Condition of Monitoring Equipment (temp. probes, % solids analyzer, pH testing)	GOOD FAIR POOR				
Condition of Stormwater Drainage System (channels, tank, pond, outlet)	GOOD FAIR POOR				
Safety Concerns Observed	YES NO				
Operating Permit on Site?	YES NO				
CORRECTIVE ACTIONS:					

Unit: CAT C18 Diesel Gen

Liberty Soils

Generator Log

Month/Year: [illegible]

Days:

Hours:

12/06/24

Unit: Kohler

Liberty Soils

Generator Log

Month/Year: [illegible]

Days:

	Hours:
--	--------

12/06/24

LIBERTY SOILS BIOSOLIDS MANAGEMENT FACILITY

RADIOACTIVITY DETECTION EVENT LOG

DATE TIME

PORTAL MONITOR/SCALE OPERATOR

INITIAL LEVEL mrem/hr SECOND LEVEL mrem/hr

ORIGIN AND DESCRIPTION OF MATERIAL

HAULING COMPANY & PHONE NUMBER

DRIVER NAME

TRUCK ID PLATE

DESCRIBE INCIDENT AND RESPONSE ACTION TAKEN

PA DEP CONTACT NAME

PA DEP RESPONSE TO NOTIFICATION

FINAL DISPOSITION

COMMENTS

Liberty Soils Biosolids Management Facility

Visitor Log

[illegible]

Appendix D

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

Employee Training Outline

Liberty Soils Biosolids Management Facility

EMPLOYEE TRAINING PROGRAM OUTLINE

1 General Facility Operations

- A. Overview of Operations
- B. Start Up and Shut Down Procedures
- C. Housekeeping

2 Occupational Safety

- A. Safety Standards & Guidelines
- B. Equipment Operation
- C. Accident Prevention
- D. Employee Hygiene Program
- E. Protective Clothing
- F. Respiratory Protection
- G. Radiation Safety
- H. Confined Space Entry

3 Emergency Procedures

- A. Emergency Response
- B. Evacuation
- C. Reporting

4 Material Control/Unauthorized Material

- A. Controlling the Flow of Biosolids
- B. Identification & Handling of Unauthorized Biosolids

5 SOPs (Standard Operating Procedures)

- A. Product Segregation
- B. Process/Treatment Monitoring
- C. Monthly Sampling

6 Position-Specific Training

- A. Equipment Operator(s), Process Operator(s), Scalehouse Staff

References:

- Operations & Maintenance Manual
- Preparedness, Prevention, and Contingency (PPC) Plan
- Health & Safety Program
- Sampling & Analysis Plans

Appendix E

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

Safety Data Sheets



SAFETY DATA SHEET

HIGH CALCIUM QUICKLIME

Section 1. Identification

GHS product identifier : HIGH CALCIUM QUICKLIME
Code : Not available.
Other means of identification : Lime, Quicklime, Calcium Oxide, Burnt Lime, Unslaked Lime, Fluxing Lime.
Product type : Solid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Neutralization, flocculation, flux(met.), caustic agent, absorption, stabilization.

Supplier/Manufacturer : GRAYMONT
 #200-10991 Shellbridge Way
 Richmond, BC V6X 3C6
 Canada
 Phone: 1 604 207-4292
 Toll free: 1 866 207-4292
 Fax: 1 604 207-9014
 Web Site: <http://www.graymont.com/>

Emergency telephone number (with hours of operation) : CHEMTREC, US (800-424-9300)
 INTERNATIONAL: (703-527-3887)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SKIN CORROSION/IRRITATION - Category 2
 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
 CARCINOGENICITY (inhalation) - Category 1A
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) - Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H318 - Causes serious eye damage.
 H315 - Causes skin irritation.
 H350 - May cause cancer if inhaled.
 H335 - May cause respiratory irritation.
 H372 - Causes damage to organs through prolonged or repeated exposure. (respiratory tract)

Precautionary statements



Section 2. Hazards identification

Prevention	- P201 - Obtain special instructions before use. - P202 - Do not handle until all safety precautions have been read and understood. - P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing. - P271 - Use only outdoors or in a well-ventilated area. - P260 - Do not breathe dust. - P270 - Do not eat, drink or smoke when using this product. - P264 - Wash hands thoroughly after handling.
Response	- P314 - Get medical attention if you feel unwell. - P308 + P313 - IF exposed or concerned: Get medical attention. - P304 + P340 + P312 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. - P302 + P352 + P362 + P363 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. - P332 + P313 - If skin irritation occurs: Get medical attention. - P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.
Storage	P401 - Store to minimize dust generation.
Disposal	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	Not applicable.
Hazards not otherwise classified	Reacts violently with water, generating heat which can ignite combustible materials.

Section 3. Composition/information on ingredients

Substance/mixture	Mixture
Other means of identification	Lime, Quicklime, Calcium Oxide, Burnt Lime, Unslaked Lime, Fluxing Lime.

Ingredient name	%	CAS number
Calcium oxide	88 - 98	1305-78-8
Crystalline silica, respirable powder	0.0001 - 1	14808-60-7

Crystalline silica has been found in some products at or above detection level 0.1%. Concentration is dependent upon limestone source.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician.
--------------------	--

Section 4. First aid measures

- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. When used under normal conditions quicklime doesn't generate fumes. However dust (Particulates) may be generated. Use dust-mask if dust is present. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
burning sensation
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

Section 4. First aid measures

- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical fire extinguisher.

- Unsuitable extinguishing media** : Do not use water or halogenated compounds, except that large amounts of water may be used to deluge small quantities of quicklime.

- Specific hazards arising from the chemical** : Not applicable.

- Hazardous thermal decomposition products** : None.

- Special protective actions for fire-fighters** : First move people out of line-of-sight of the scene and away from windows.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

- Large spill** : Move containers from spill area. Do not use water on bulk material spills. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store to minimize dust generation. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store in unlabeled containers.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Calcium oxide	ACGIH TLV (United States, 3/2017). TWA: 2 mg/m ³ 8 hours. NIOSH REL (United States, 10/2016). TWA: 2 mg/m ³ 10 hours. OSHA PEL (United States, 6/2016). TWA: 5 mg/m ³ 8 hours.
Crystalline silica, respirable powder	OSHA PEL Z3 (United States, 6/2016). TWA: 250 mppcf 8 hours. Form: Respirable TWA: 10 mg/m ³ 8 hours. Form: Respirable TWA: 5 mg/m ³ Form: Respirable fraction TWA: 15 mg/m ³ Form: Total dust NIOSH REL (United States, 10/2013). TWA: 0.05 mg/m ³ 10 hours. Form: Respirable dust TWA: 5 mg/m ³ Form: Respirable fraction TWA: 10 mg/m ³ Form: Total dust OSHA PEL (United States, 6/2016). TWA: 50 µg/m ³ 8 hours. Form: Respirable dust ACGIH TLV (United States, 3/2017). TWA: 0.025 mg/m ³ 8 hours. Form: Respirable fraction MSHA PEL TWA 8/40 hours: 30 mg/m ³ /(%SiO ₂)+2 mg/m ³ Form: Total dust 10 mg/m ³ /(%SiO ₂)+2 mg/m ³ Form: Respirable dust

Canada

Occupational exposure limits

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
Calcium oxide	CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 2 mg/m³ 8 hours. CA British Columbia Provincial (Canada, 6/2017). TWA: 2 mg/m³ 8 hours. CA Ontario Provincial (Canada, 1/2018). TWA: 2 mg/m³ 8 hours. CA Quebec Provincial (Canada, 1/2014). TWA_{EV}: 2 mg/m³ 8 hours. CA Saskatchewan Provincial (Canada, 7/2013). STEL: 4 mg/m³ 15 minutes. TWA: 2 mg/m³ 8 hours.
Crystalline silica, respirable powder	CA British Columbia Provincial (Canada, 6/2017). TWA: 0.025 mg/m³ 8 hours. Form: Respirable CA Quebec Provincial (Canada, 1/2014). TWA_{EV}: 0.1 mg/m³ 8 hours. Form: Respirable dust CA Ontario Provincial (Canada, 1/2018). TWA: 0.1 mg/m³ 8 hours. Form: Respirable fraction CA Saskatchewan Provincial (Canada, 7/2013). TWA: 0.05 mg/m³ 8 hours. Form: Respirable fraction CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 0.025 mg/m³ 8 hours. Form: Respirable particulate.

Appropriate engineering controls

- Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Engineering controls may be required to control the primary or secondary risks associated with this product.

Environmental exposure controls

- Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures

- Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

- Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

- Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

- Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 8. Exposure controls/personal protection

- Respiratory protection** : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Wear an appropriate NIOSH approved respirator if concentration levels exceed the safe exposure limits.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Solid. [Crystalline.]
- Color** : White.
- Odor** : Odorless + soil like smell.
- Odor threshold** : Not available.
- pH** : 12.45 [Sat. soln.] at 25°C
- Melting point** : 2570 to 2625°C (4658 to 4757°F)
- Boiling point** : 2850°C (5162°F)
- Flash point** : Not applicable.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : 3.25 to 3.28
- Solubility in water** : 0.125 g/100 g at 20°C
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Not available.
- Flow time (ISO 2431)** : Not available.

Section 10. Stability and reactivity

- Reactivity** : Reacts violently with strong acids. Reacts with water to form Calcium Hydroxide. The heat generated when mixed with water or moist air is sufficient enough to ignite surrounding materials such as paper, wood or cloth.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Exothermic reaction to water.
- Conditions to avoid** : Do not allow quicklime to come into contact with incompatible materials. e.g. Water, acids, reactive fluoridated compounds, reactive brominated compounds. reactive powdered metals, organic acid anhydrides, nitro-organic compounds, reactive phosphorous compounds, interhalogenated compounds.

Section 10. Stability and reactivity

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials, acids and moisture.

Hazardous decomposition products : None.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

There is no data available.

Irritation/Corrosion

There is no data available.

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

Classification

Product/ingredient name	OSHA	IARC	NTP
Crystalline silica, respirable powder	-	1	Known to be a human carcinogen.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

Name	Category	Target organs
Calcium oxide	Category 3	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Target organs
Crystalline silica, respirable powder	Category 1	respiratory tract

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : May cause respiratory irritation.
Skin contact : Causes skin irritation.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
burning sensation
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : No known significant effects or critical hazards.
- Potential delayed effects** : No known significant effects or critical hazards.

Long term exposure

- Potential immediate effects** : No known significant effects or critical hazards.
- Potential delayed effects** : No known significant effects or critical hazards.

Potential chronic health effects

- General** : Causes damage to organs through prolonged or repeated exposure.
- Carcinogenicity** : May cause cancer if inhaled. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

There is no data available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Calcium oxide	Chronic NOEC 100 mg/L Fresh water	Fish - Oreochromis niloticus - Juvenile (Fledgling, Hatchling, Weanling)	46 days

Persistence and degradability

There is no data available.

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
Calcium oxide	-	2.34	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	UN1910
UN proper shipping name	-	-	-	CALCIUM OXIDE
Transport hazard class(es)	-	-	-	8 
Packing group	-	-	-	III
Environmental hazards	No.	No.	No.	No.

AERG : Not applicable.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

- U.S. Federal regulations** :
- United States inventory (TSCA 8b):** Calcium Oxide is subject to inventory update reporting (IUR).
 - RCRA classification:** Calcium Oxide is not listed or classified.
 - CWA-311:** Calcium Oxide has been withdrawn from the Clean Water Act (CWA) list of hazardous substances. (11/13/79) (44FR65400).
 - CERCLA:** Calcium Oxide is not listed.
 - FDA:** Calcium Oxide has been determined as "Generally Recognized As Safe" (GRAS) by FDA. See 21CFR184.1210. (CFR Title 21 Part 184 -- Direct food substances affirmed as generally recognized as safe).

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification

- : SKIN CORROSION/IRRITATION - Category 2
- : SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
- : CARCINOGENICITY (inhalation) - Category 1A
- : SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
- : SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) - Category 1

Composition/information on ingredients

Name	Classification
Calcium oxide	SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Crystalline silica, respirable powder	CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) (inhalation) - Category 1

SARA 313

There is no data available.

State regulations

- Massachusetts** : The following components are listed: Calcium oxide; Crystalline silica, respirable powder
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: Calcium oxide; Crystalline silica, respirable powder
- Pennsylvania** : The following components are listed: Calcium oxide; Crystalline silica, respirable powder

Section 15. Regulatory information

California Prop. 65

WARNING: This product can expose you to Crystalline silica, respirable powder, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Canadian lists

Canada inventory (DSL NDSL) : All components are listed or exempted.

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health : 3 * **Flammability :** 0 **Physical hazards :** 1

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)

Health : 3 **Flammability :** 0 **Instability :** 1

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
SKIN CORROSION/IRRITATION - Category 2	Expert judgment
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1	On basis of test data
CARCINOGENICITY (inhalation) - Category 1A	Expert judgment
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) - Category 1	Calculation method

History

Date of issue mm/dd/yyyy : 02/15/2019

Date of previous issue : 03/30/2018

Version : 4

Prepared by : KMK Regulatory Services Inc.

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient

Section 16. Other information

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Safety Data Sheet Cement Kiln Dust

Section 1. Identification

GHS product identifier:	Cement Kiln Dust Mixture
Chemical name:	Calcium compounds, calcium silicate compounds, and other calcium compounds make up the majority of this product.
Other means of identification:	CKD, Stack Dust, Precipitator Dust, Baghouse Dust
Relevant identified uses of the substance or mixture and uses advised against:	Agricultural material, soil amendment, building material, construction, soil stabilization.
Supplier's details:	300 E. John Carpenter Freeway, Suite 1645 Irving, TX 75062 (972) 653-5500
Emergency telephone number (24 hours):	CHEMTREC: (800) 424-9300

Section 2. Hazards Identification

Overexposure to cement kiln dust can cause serious, potentially irreversible skin or eye damage in the form of chemical (caustic) burns, including third degree burns. The same serious injury can occur if wet or moist skin has prolonged contact exposure to dry cement.

OSHA/HCS status:	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture:	SKIN SENSITIZATION – Category 1; H314 CARCINOGENICITY – Category 1A; H350 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) – Category 2; H335 SKIN CORROSION/IRRITATION – Category 1C; H314 SERIOUS EYE DAMAGE/EYE IRRITATION – Category 1; H318

GHS label elements

Hazard pictograms:



Signal word:

Hazard statements:

Danger
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May cause respiratory irritation.
May cause cancer.

Precautionary statements:

Prevention:

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust. Use outdoors in a well ventilated area. Wash any exposed body parts thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated clothing must not be allowed out of the workplace.

Response:

If exposed or concerned: Immediately get medical advice/attention if you feel unwell or irritation or rash occurs. If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If in eyes: Rinse continuously with water for several minutes.

Storage:

Remove contact lenses, if present and easy to do. If inhaled: Remove person to fresh air and keep comfortable for breathing. If swallowed: Rinse mouth. Do not induce vomiting. Restrict or control access to stockpile areas (store locked up). Engulfment hazard: To prevent burial or suffocation, do not enter a confined space, such as a silo, bulk truck or other storage

Disposal:	container or vessel that stores or contains cement kiln dust without an effective procedure for assuring safety. Store in a well ventilated area. Keep container tightly closed.
Hazards not otherwise classified (HNOC):	Dispose of contents/container in accordance with local/regional/national/international regulations.
Supplemental Information:	None known
	Respirable Crystalline Silica (RCS) may cause cancer. Repeated inhalation of respirable crystalline silica (quartz) may cause lung cancer according to IARC and NTP; ACGIH states that it is a suspected cause of cancer. Other forms of RCS (e.g., tridymite and cristobalite) may also be present or formed under certain industrial processes.

Section 3. Composition/information on ingredients

Substance/mixture:	Mixture
Chemical Name:	Cement Kiln Dust Mixture

CAS number/other identifiers

Ingredient name	%	CAS number
Cement Kiln Dust (Flue dust)	100%	68475-76-3
The structure may contain the following in some concentration ranges:		
Calcium oxide	5-50	1305-78-8
Quartz	1-10	14808-60-7
Hexavalent chromium*	Trace	18450-29-9
Blended cement also contains gypsum, limestone and magnesium oxide in various concentrations. However, because these components are not classifiable as a hazard under Title 29 Code of Federal Regulations 1910.1200, they are not required to be listed in this section.		
Limestone	80-85	1317-65-3
Magnesium oxide	1-2	1309-48-4

Any concentration shown as a range is to protect confidentiality or is due to process variation.

*Chromium salts may be present in trace amounts and hexavalent chromium is included due to dermal sensitivity associated with the component. There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye Contact:	Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician.
Inhalation:	Seek medical help if coughing or other symptoms persist. Inhalation of large amounts of cement kiln dust requires immediate medical attention. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If the individual is not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in a recovery position and get medical attention immediately. Maintain and open airway.
Skin Contact:	Get medical attention immediately. Heavy exposure to cement kiln dust or associated water requires prompt attention. Quickly remove contaminated clothing, shoes, and leather goods such as watchbands and belts. Quickly and gently blot or brush away excess cement kiln dust. Immediately wash thoroughly with lukewarm, gently flowing water and non-abrasive pH natural soap. Seek medical attention for rashes, burns, irritation, dermatitis and prolonged unprotected exposures to wet cement kiln dust, cement kiln dust mixtures or liquids from wet cement kiln dust. Burns should be treated as caustic burns. Cement causes skin burns with little warning. Discomfort or pain cannot be relied upon to alert a person to a serious injury. You may not feel pain or the severity of the burn until hours after the exposure. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure.
Ingestion:	Get medical attention immediately. Call a poison center or physician. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING unless directed to do so by medical personnel. Remove victim to fresh air and keep at rest in

a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Have victim drink 60 to 240 mL (2 to 8 oz.) of water. Stop giving water if the exposed person feels sick as vomiting may be dangerous. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Most important symptoms/effects, acute and delayed potential acute health effects

Eye contact:	Causes serious eye damage.
Inhalation:	May cause respiratory irritation.
Skin contact:	Causes severe burns. May cause an allergic skin reaction.
Ingestion:	May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact:	Adverse symptoms may include the following: pain, watering and redness
Inhalation:	Adverse symptoms may include the following: respiratory tract irritation and coughing
Skin contact:	Adverse symptoms may include the following: pain or irritation, redness and blistering may occur, skin burns, ulceration and necrosis may occur
Ingestion:	Adverse symptoms may include the following: stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments:	Not applicable.
Protection of first-aiders:	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media:	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media:	Do not use water jet or water-based fire extinguishers.
Specific hazards arising from the chemical:	No specific fire or explosion hazard.
Hazardous thermal decomposition Products:	Decomposition products may include the following materials: carbon dioxide, carbon monoxide, sulfur oxides and metal oxide/oxides
Special protective actions for fire-fighters:	Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:	No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders:	For personal protective clothing requirements, please see Section 8.
Environmental precautions:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has entered the environment, including waterways, soil or air. Materials can enter waterways through drainage systems.

Methods and materials for containment and cleaning up

Small spill:	Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of waste material by using a licensed waste disposal contractor.
Large spill:	Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place dust in a closed, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Large spills to waterways may be hazardous due to alkalinity of the product. Dispose of waste material using a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures:	Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure by obtaining and following special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe dust. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material and keep the container tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities:	A key to using the product safely requires the user to recognize that cement kiln dust reacts chemically with water to produce calcium hydroxide which can cause severe chemical burns. Every attempt should be made to avoid skin and eye contact with cement kiln dust. Do not get cement kiln dust inside boots, shoes or gloves. Do not allow wet, saturated clothing to remain against the skin. Promptly remove clothing and shoes that are dusty or wet with cement kiln dust mixtures. Launder/clean clothing and shoes before reuse. Do not enter a confined space that stores or contains cement kiln dust unless appropriate procedures and protection are available. Cement kiln dust can build up or adhere to the walls of a confined space and then release or fall suddenly (engulfment).

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
Particulates not otherwise classified (CAS SEQ250)	ACGIH TLV (United States, Canada) TWA: 3 mg/m ³ . Form: Respirable particles TWA: 10 mg/m ³ . Form: Inhalable particles OSHA PEL (United States) PEL: 5 mg/m ³ . Form: Respirable fraction PEL: 15 mg/m ³ . Form: Total dust MSHA PEL (United States) PEL: 5 mg/m ³ . Form: Respirable fraction PEL: 10 mg/m ³ . Form: Total dust
Calcium oxide	ACGIH TLV (United States and Canada) TWA: 2 mg/m ³ 8 hours OSHA/MSHA PEL (United States) TWA: 5 mg/m ³ 8 hours.
Magnesium oxide	ACGIH TLV (United States and Canada) TWA: 10 mg/m ³ 8 hours. Form: Inhalable fraction OSHA PEL (United States) TWA: 15 mg/m ³ 8 hours. Form: Total particulates
Crystalline Silica (Quartz) (CAS 14808-60-7)	ACGIH TLV (United States) TWA: 0.025 mg/m ³ . Form: Respirable fraction OSHA PEL (United States) TWA: 0.05 mg/m ³ . Form: Respirable MSHA PEL (United States) TWA: 10/(%SiO ₂ + 2) in mg/m ³ Provincial Exposure Limits (Canada, various) ▪ Alberta (OHS Code) 0.025 mg/m³ 8 hour TWA ▪ British Columbia (WorkSafeBC OHS Regulation) 0.025 mg/m³ 8 hour TWA ▪ British Columbia (Health, Safety & Reclamation Code, Mines Act) 0.1 mg/m³ 8 hour TWA ▪ Manitoba (Workplace Safety and Health Regulation) 0.025 mg/m³ 8 hour TWA ▪ New Brunswick 0.025 mg/m³ 8 hour TWA ▪ Newfoundland 0.025 mg/m³ 8 hour TWA ▪ Nova Scotia 0.025 mg/m³ 8 hour TWA ▪ Ontario (O. Reg 490/09; and O. Reg. 833) 0.1 mg/m³ 8 hour TWA ▪ Prince Edward Island 0.025 mg/m³ 8 hour TWA ▪ Quebec (Regulation Respecting OHS, Chapter S-2.1, r. 13) 0.1 mg/m³ 8 hour TWA ▪ Saskatchewan (OHS Regulations) 0.05 mg/m³ 8 hour TWA

Appropriate engineering controls:

Use only with adequate ventilation. If user operations generate dust, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Exposure guidelines:

OSHA PELs, MSHA PELs, Canadian Provincial OELs, and ACGIH TLVs are 8-hr TWA values. NIOSH RELs are for TWA exposures up to 10-hr/day and 40-hr/wk. Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled. Terms including "Particulates Not Otherwise Classified," "Particulates Not Otherwise Regulated," "Particulates Not Otherwise Specified," and "Inert or Nuisance Due" are often used interchangeably; however, the user should review each agency's terminology for differences in

meanings.

Individual protection measures

Hygiene measures:	Clean water should always be readily available for skin and (emergency) eye washing. Periodically wash areas contacted by cement with a pH neutral soap and clean, uncontaminated water. If clothing becomes saturated with cement kiln dust, garments should be removed and replaced with clean, dry clothing.
Eye/face protection:	To prevent eye contact, wear safety glasses with side shields, safety goggles or face shields when handling dust or wet cement kiln dust. Wearing contact lenses when working with cement kiln dust is not recommended.

Skin protection

Hand protection:	Use impervious, waterproof, abrasion and alkali-resistant gloves. Do not rely on barrier creams in place of impervious gloves. Do not get cement kiln dust inside gloves.
Body protection:	Use impervious, waterproof, abrasion and alkali-resistant boots and protective long-sleeved and long-legged clothing to protect the skin from contact with wet cement kiln dust. To reduce foot and ankle exposure, wear impervious boots that are high enough to prevent cement kiln dust from getting inside them. Do not get cement inside boots, shoes, or gloves. Remove clothing and protective equipment that becomes saturated with cement and immediately wash exposed areas of the body.
Other skin protection:	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.
Respiratory protection:	Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product, and assigned protection factor of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical State:	Solid powder	Lower and Upper explosive flammable limits	Not applicable.
Color:	Tan, gray or white.	Vapor pressure:	Not applicable.
Odor:	Odorless.	Vapor density:	Not applicable.
Odor threshold:	Not available.	Relative density:	2.3 to 3.1
pH:	>11.5 [When wet (% w/w): 1%]	Solubility:	Slightly soluble in water.
Melting point:	Not available.	Solubility in water:	0.1 to 1%
Boiling point:	>1000°C (>1832°F)	Partition coefficient: n-octanol/water:	Not applicable.
Flash point:	Not flammable. Not combustible.	Auto-ignition temperature:	Not applicable.
Burning time:	Not available.	Decomposition temperature:	Not available.
Burning rate:	Not available.	SADT:	Not available.
Evaporation Rate:	Not applicable.	Viscosity:	Not applicable.
Flammability (solid, gas):	Not applicable.		

Section 10. Stability and reactivity

Reactivity:	Reacts slowly with water forming hydrated compounds, releasing heat and producing a strong alkaline solution until reaction is substantially complete.
Chemical Stability:	The product is stable.
Possibility of hazardous reactions:	Under normal circumstances of storage and use, hazardous reactions will not occur.
Conditions to avoid:	No specific data.
Incompatible materials:	Reactive or incompatible with the following materials: oxidizing materials, acids, aluminum and ammonium salt. Cement kiln dust is highly alkaline and will react with acids to produce a violent, heat-generating reaction. Toxic gases or vapors may be given off depending on the acid involved. Reacts with acids, aluminum metals and ammonium salts. Aluminum powder and other alkali and alkaline earth elements will react in wet mortar or concrete, liberating hydrogen gas. Limestone ignites on contact with fluorine and is incompatible with acids, alum, ammonium salts, and

Hazardous decomposition products:

magnesium. Silica reacts violently with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride yielding possible fire and/or explosions. Silicates dissolve readily in hydrofluoric acid producing a corrosive gas-silicon tetrafluoride.
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity:

Cement kiln dust LD50/LC50 = Not available

Irritation/Corrosion:

Skin: May cause skin irritation. May cause serious burns in the presence of moisture.

Eyes: Causes serious eye damage. May cause burns in the presence of moisture.

Respiratory: May cause respiratory tract irritation.

Sensitization:

May cause sensitization due to the potential presence of trace amounts of hexavalent chromium.

Mutagenicity:

There are no data available.

Carcinogenicity:

Classification below:

Product/ingredient name	OSHA	ACGIH	NTP
Crystalline Silica (Quartz) (CAS 14808-60-7)	Listed	A2	Known to be a human carcinogen.

Reproductive toxicity:

There are no data available.

Teratogenicity:

There are no data available.

Specific target organ toxicity (single exposure)

Name	Category	Route of Exposure	Target Organs
Calcium oxide	Category 3	Inhalation and skin contact	Respiratory tract irritation, skin irritation
Cement kiln dust, chemicals	Category 3	Inhalation and skin contact	Respiratory tract irritation, skin irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of Exposure	Target Organs
Crystalline Silica (Quartz) (CAS 14808-60-7)	Category 1	Inhalation	Respiratory tract and kidneys

Aspiration hazard:

There are no data available.

Information on the likely routes of exposure

Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects:

Eye contact: Causes serious eye damage.

Inhalation: May cause respiratory irritation.

Skin contact: Causes severe burns. May cause an allergic skin reaction.

Ingestion: May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics:

Eye contact: Adverse symptoms may include the following: pain, watering, redness.

Inhalation: Adverse symptoms may include the following: respiratory tract irritation, coughing

Skin contact: Adverse symptoms may include the following: pain or irritation, redness, blistering may occur, skin burns, ulcerations and necrosis may occur

Ingestion: Adverse symptoms may include the following: stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure:

Short term exposure

Potential immediate effects: No known significant effects or critical hazards.

Potential delayed effects: No known significant effects or critical hazards.

Long term exposure

Potential immediate effects: No known significant effects or critical hazards.

Potential delayed effects: No known significant effects or critical hazards.

Potential chronic health effects:

General: Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. If sensitized to hexavalent chromium, a severe allergic dermal reaction may occur when subsequently exposed to very low levels.

Carcinogenicity: Cement kiln dust is not classifiable as a human carcinogen. Crystalline silica is considered a hazard by inhalation. IARC has classified crystalline silica as a Group 1 substance, carcinogenic to humans. This classification is based on the findings of laboratory animal studies (inhalation and implantation) and epidemiology studies that were considered sufficient for carcinogenicity. Excessive exposure to crystalline silica can cause silicosis, a non-cancerous lung disease.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Numerical measures of toxicity:

Fertility effects: No known significant effects or critical hazards.

Acute toxicity estimates: There are no data available.

Section 12. Ecological Information

Toxicity

Product/ingredient name	Result	Species	Exposure
Calcium oxide	Chronic NOEC 100 mg/L Fresh water	Fish-Oreochromis niloticus-Juvenile (Fledgling, Hatchling, Weanling)	46 days

Persistence and degradability:

There are no data available.

Bioaccumulative potential:

There are no data available.

Mobility in soil:

Soil/water partition coefficient (Koc): Not available.

Other adverse effects:

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods:

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Untreated waste should not be released to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe manner. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff, and contact with soil, waterways, drains and sewers.

Section 14. Transportation information

	DOT Classification	IMDG	IATA
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UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	None.	None.	None.
Canada TDG	-	-	-
Additional information	-	-	-

Special precautions for user:

Transport within user's premises: always transport in closed containers that are upright and secure.
 Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

Not available.

Section 15. Regulatory Information

TSCA 6 final risk management: Chromium, ion (Cr6+)

United States inventory (TSCA 8b): Cement kiln dusts are statutory mixtures under TSCA.

CERCLA: This product is not listed as a CERCLA substance

Clean Air Act Section 112 (b): Hazardous Air Pollutants (HAPs) – Not listed

Clean Air Act Section 602: Class I Substances - Not listed

Clean Air Act Section 602: Class II Substances - Not listed

DEA List I Chemicals: (Precursor Chemicals) – Not listed

DEA List II Chemicals: (Essential Chemicals) – Not listed

Canada Federal regulations:

NSNR Status: Listed on DSL or exempt

SARA 311/312

Classification:

Immediate (acute) health hazard
 Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Fire Hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Calcium oxide	5-50	No	No	No	Yes	No
Quartz	1-10	No	No	No	No	Yes

SARA 313

	Product name	CAS number	%
Form R-Report requirements	Chromium, ion (Cr6+)	8540-29-9	<0.1

State regulations

Massachusetts:

Listed

New York:

None of the components are listed.

New Jersey:

Listed

Pennsylvania:

Listed

California Prop. 65

WARNING: This product contains crystalline silica and chemicals (trace metals) known to the State of California to cause cancer, birth defects or other reproductive harm. California law requires the above warning in the absence of definitive testing to prove the defined risks do not exist.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Quartz	Yes	No	No.	No.
Chromium, ion (Cr6+)	Yes	Yes	0.001µg/day (inhalation)	8.2 micrograms/day (ingestion)

International regulations

International lists: **Canadian Domestic Substances List (DSL):** Cement kiln dust is included on the DSL.
ECC – EINECS: Listed

WHMIS Classification:

D2A “Materials Causing Other Toxic Effects”



Section 16. Other Information

Date of issue: 01/01/2022

Replaces: 07/01/2018

Revised Section(s): Section 8, 11,14,15

Notice to reader

While the information provided in this safety data sheet is believed to provide a useful summary of the hazards of this cement kiln dust as it is commonly used, the sheet cannot anticipate and provide all of the information that might be needed in every situation. Inexperienced product users should obtain proper training before using this product. In particular, the data furnished in this sheet do not address hazards that may be posed by other materials mixed with this cement kiln dust to produce cement kiln dust products. Users should review other relevant material safety data sheets before working with this cement kiln dust or working on related cement kiln dust products.

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Abbreviations

ACGIH — American Conference of Governmental Industrial Hygienists
 CAS — Chemical Abstract Service
 CERCLA — Comprehensive Emergency Response and Comprehensive Liability Act
 CFR — Code of Federal Regulations
 DOT — Department of Transportation
 GHS — Globally Harmonized System
 HEPA — High Efficiency Particulate Air
 IATA — International Air Transport Association
 IARC — International Agency for Research on Cancer
 IMDG — International Maritime Dangerous Goods
 NIOSH — National Institute of Occupational Safety and Health
 NOEC — No Observed Effect Concentration
 NTP — National Toxicology Program
 OSHA — Occupational Safety and Health Administration
 PEL — Permissible Exposure Limit
 REL — Recommended Exposure Limit

RQ — Reportable Quantity
SARA — Superfund Amendments and Reauthorization Act
SDS — Safety Data Sheet
TLV — Threshold Limit Value
TPQ — Threshold Planning Quantity
TSCA — Toxic Substances Control Act
TWA — Time-Weighted Average
UN — United Nations

MATERIAL SAFETY DATA SHEET

FOR Cement Kiln Dust

ROANOKE CEMENT™
A TITAN AMERICA BUSINESS

Effective Date: February 2001

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1. PRODUCT/COMPANY IDENTIFICATION

Manufacturer's Name & Address:

Roanoke Cement
6071 Catawba Rd.
Troutville, VA 24175

Telephone Number for Information:
1.800.782.7622

Chemical Family:

Calcium Compounds

Chemical Name and Synonyms:

Cement Kiln Dust

Formula:

This product contains materials for producing portland cement clinker, that can be present in various stages of calcinations.

Trade Name and Synonyms:

Not Applicable

2. EMERGENCY AND FIRST AID

EMERGENCY INFORMATION:

Cement kiln dust is a gray or tan powder. When in contact with moisture in eyes or on skin, or when mixed with water, cement kiln dust becomes caustic (pH>11) and may damage or burn (as severely as third degree) the eyes or skin. Inhalation may cause irritation to the moist mucous membranes of the nose, throat, and upper respiratory system or may cause, or may aggravate, certain lung diseases or conditions. Use exposure controls or personal protection methods described in Section 10.

EYES: Immediately flush eye thoroughly with water. Continue flushing eye for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.

SKIN: Wash skin with cool water and pH-neutral soap or mild detergent and apply skin cream to help in replacing lost moisture. Seek medical treatment if irritation or inflammation develops or persists. Seek immediate medical treatment in the event of burns.

INHALATION: Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. Seek medical help if coughing and other symptoms do not subside. Inhalation of large amounts of cement kiln dust requires immediate medical attention.

INGESTION: Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately.

3. COMPOSITION INFORMATION

COMPOUNDS:

3CaO • SiO ₂	Tricalcium silicate	CAS # 12168-85-3
2CaO • SiO ₂	Dicalcium silicate	CAS # 10034-77-2
3CaO • Al ₂ O ₃	Tricalcium aluminate	CAS # 12042-78-3
4CaO • Al ₂ O ₃ • Fe ₂ O ₃	Tetracalcium aluminoferrite	CAS # 12068-35-8

MATERIAL SAFETY DATA SHEET

for Cement Kiln Dust

ROANOKE CEMENT
A TITAN AMERICA BUSINESS

Page 2 of 5

Kiln Feed	Calcium carbonate	001317-65-3
	Lime (CaO)	001305-78-8
	Silica (SiO ₂)	60676-86-0
	Crystalline silica	14808-60-7
	Alumina (Al ₂ O ₃)	1344-28-1
	Ferric oxide (Fe ₂ O ₃)	1309-37-1
	Potassium oxide (K ₂ O)	012136-45-7
	Sodium oxide (Na ₂ O)	012401-86-4
	Sulfur trioxide (SO ₃)	007446-11-9
	Magnesia (MgO)	001309-48-4

4. HAZARDOUS INGREDIENTS

EXPOSURE LIMITS

COMPONENT	OSHA PEL (8-Hour TWA)	ACGIH TLV-TWA (2001)	NIOSH REL (8-Hour TWA)
Iron oxide (CAS # 1309-37-1) 0 to 15% by weight	10mg/m ³	5 mg/m ³	5 mg/m ³
Calcium carbonate (CAS#1317-65-3) 0 to 5% by weight	5 mg respirable dust/m ³ 15 mg total dust/m ³	10 mg total dust/m ³	5 mg respirable dust/m ³ 10 mg total dust/m ³
Magnesium oxide (CAS # 1309-48-4) 0 to 5% by weight	5 mg respirable dust/m ³ 15 mg total dust/m ³	10 mg (fume)/m ³	
Calcium oxide (CAS # 1305-78-8) 0 to 5% by weight	5 mg/m ³	2 mg/m ³	2 mg/m ³
Crystalline Silica (CAS # 14808-60-7) 0 to 0.1% by weight	10 mg of respirable dust/m ³ %SiO ₂ < 2	0.05 mg respirable quartz/m ³	0.05 mg respirable quartz quartz/m ³
	80 mg of total dust/m ³ %SiO ₂ > 2		

TRACE INGREDIENTS:

Due to the use of substances mined from the earth's crust, trace amounts of naturally occurring, potentially harmful constituents may be detected during chemical analysis may contain up to 0.75% insoluble residue. A small amount of this residue includes free crystalline silica. Cement kiln dust also may contain trace (<0.05%) amounts of chromium salts or compounds (including hexavalent chromium) or other metals (including nickel compounds) found to be hazardous or toxic in some chemical forms. These metals are present mostly as trace substitutions within the principal minerals. Other trace constituents may include potassium and sodium sulfate compounds.

5. HAZARD IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

NOTE: Potential health effects may vary depending upon the duration and degree of exposure. To reduce or eliminate health hazards associated with this product, use exposure controls or personal protection methods as described in Section 10.

EYE CONTACT:

(Acute/Chronic) Exposure to airborne dust may cause immediate or delayed irritation or inflammation of the cornea. Eye contact by larger amounts of dry powder or splashes of wet cement kiln dust may cause effects ranging from moderate eye irritation to chemical burns and blindness.

SKIN CONTACT:	(Acute) Exposure to dry cement kiln dust may cause drying of the skin with consequent mild irritation or more significant effects attributable to aggravation of other conditions. Discomfort or pain cannot be relied upon to alert a person to a hazardous skin exposure. (Chronic) Dry cement kiln dust coming in contact with wet skin or exposure to wet cement kiln dust may cause more severe skin effects, including thickening, cracking or fissuring of the skin. Prolonged exposure can cause adverse skin damage in the form of chemical (corrosive) burns. Exposure to cement kiln dust may exhibit an irritant response in persons with sensitive skin. The irritant response is typically a redness of the skin and may be accompanied by a stinging or itching sensation.
INHALATION:	(Acute) Exposure to cement kiln dust may cause irritation to the moist mucous membranes of the nose, throat and upper respiratory system. Pre-existing upper respiratory and lung diseases may be aggravated by inhalation of cement kiln dust. (Chronic) Prolonged exposure to fine crystalline silica may increase delayed lung injury including silicosis, or chronic and potentially fatal lung disease, and may cause or aggravate other lung diseases or conditions.
INGESTION:	(Acute) Ingestion of cement kiln dust may irritate the oral cavity and cause mild to moderate gastrointestinal distress.
CARCINOGENIC POTENTIAL:	Cement kiln dust is not recognized as a carcinogen by NTP, OSHA, or IARC. However, it may contain trace amounts of heavy metals recognized as carcinogens by these organizations. In addition, IARC classifies crystalline silica, a trace constituent, carcinogenic to humans (Group I). NTP has characterized respirable silica as "known to be a human carcinogen." (See also Section 13.)

6. PHYSICAL/CHEMICAL DATA

APPEARANCE/ODOR:	Gray to tan powder, odorless	PHYSICAL STATE:	Solid (Powder)
BOILING POINT:	> 1000 °C	MELTING POINT:	Not applicable
VAPOR PRESSURE:	Not applicable	VAPOR DENSITY:	Not applicable
pH (IN WATER): (ASTM D 1293-95)	12 to 13	SOLUBILITY IN WATER:	Slightly soluble (0.1% to 1.0%)
SPECIFIC GRAVITY: (H₂O = 1.0)	2.70-3.00	EVAPORATION RATE:	Not applicable

7. FIRE AND EXPLOSION

FLASH POINT:	None	LOWER EXPLOSIVE LIMIT:	None
AUTO IGNITION TEMPERATURE:	Not combustible	UPPER EXPLOSIVE LIMIT:	None
FLAMMABLE LIMITS:	Not applicable	SPECIAL FIRE FIGHTING PROCEDURES:	None
HAZARDOUS COMBUSTION PRODUCTS:	None	HAZARDOUS EXPLOSION HAZARDS:	None

MATERIAL SAFETY DATA SHEET

for Cement Kiln Dust

ROANOKE CEMENT
A TEAM AMERICA COMPANY

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8. STABILITY AND REACTIVITY DATA

STABILITY:	Product is stable. Keep dry until used.
CONDITIONS TO AVOID:	Unintentional contact with water. Contact with water will result in hydration and produces (caustic) calcium hydroxide.
INCOMPATIBILITY:	Wet cement kiln dust is alkaline. As such, it is incompatible with acids, ammonium salts and aluminum metal.

9. PRECAUTIONS FOR HANDLING, STORAGE, AND DISPOSAL

HAZARDOUS DECOMPOSITIONS:	Will not occur.
ENVIRONMENTAL PRECAUTIONS:	Keep dry until used. Handle and store in manner so that dust does not escape. If release into environment occurs, use appropriate ventilation and dust collection. Use protective clothing and personal protective equipment as described in Section 10.
SPILLS:	Use care to keep spill contained. Do not dispose of dust into air or into any body of water. Material can be used if not contaminated. If too much is spilled to contain, be disposed or used. Avoid inhalation of dust and contact with skin and eyes. Use appropriate control and personal protection methods as described in Section 10.
DISPOSAL:	Comply with all applicable local, state, and federal regulations for disposal of unusable or contaminated materials. Required packaging (e.g. DOT's new 55 gallon drums) for disposal of unusable or contaminated materials. Required packaging (e.g. DOT's new 55 gallon drums) for disposal of unusable or contaminated materials.

10. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:	Use local exhaust or general dilution ventilation to control dust levels below applicable exposure limits. Minimize dispersal of dust into the air. If local or general ventilation is not adequate to control dust levels below applicable exposure limits or when dust causes irritation or discomfort, use NIOSH approved respirators.
EYE PROTECTION:	Wear safety glasses with side shields or goggles to avoid contact with the eyes. In extremely dusty environments and unpredictable environments, wear tight fitting unwashed or indirectly washed goggles to protect eye irritation or injury. Consult OSHA or other appropriate authorities for additional information on certain conditions of use.
SKIN PROTECTION:	Wear impervious abrasion and tear-resistant gloves, boots, long-sleeved shirt, long pants or other protective clothing to prevent skin contact. Promptly remove clothing dusty with dry cement kiln dust or clothing dampened with moisture mixed with cement kiln dust.

11. TRANSPORTATION DATA

Cement kiln dust is not hazardous under U.S. DOT or TDG regulations.

12. OTHER REGULATORY INFORMATION

Status under US OSHA Hazard Communication Rule 29 CFR 1910.1200:	Cement kiln dust is considered to be a hazardous chemical under this regulation and should be included in the employer's hazard communication program.
Status under CERCLA/Superfund, 40 CFR 117 and 302:	Not listed.
Hazard Category under SARA (Title III), Sections 311 and 312.	Cement kiln dust qualifies as a hazardous substance with delayed health effects.
Status under SARA (Title III), Section 313:	Not subject to reporting requirements under Section 313.

MATERIAL SAFETY DATA SHEET

for Cement Kiln Dust

ROANOKE CEMENT
A TIAN AN GROUP COMPANY

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Status under TSCA (as of May 1997):

Some substances in cement kiln dust are on the TSCA inventory list.

Status under the Federal Hazardous Substances Act:

Cement kiln dust is a hazardous substance subject to statutes promulgated under the subject act.

Status under Canadian Environmental Protection Act:

Not listed.

Status under Canadian WHMIS:

Cement kiln dust is considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations (Class D2A, E – Corrosive Material) and subject to the requirements of WHMIS.

13. OTHER INFORMATION

This MSDS provides information on various types of cement kiln dust products. A particular product's composition may vary from sample to sample. The information provided herein is believed by Roanoke Cement to be accurate at the time of preparation, or prepared from sources believed to be reliable. Health and safety precautions in this data sheet may not be adequate for all individuals or situations. Users have the responsibility to comply with all laws and procedures applicable to the safe handling and use of the product, to determine the suitability of the product for its intended use, and to understand possible hazards associated with mixing cement kiln dust with other materials. SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT, THE MERCHANTABILITY, OR THE FITNESS THEREOF FOR ANY PURPOSE, OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY ROANOKE CEMENT.

ABBREVIATIONS

ACGIH – American Conference of Governmental Industrial Hygienists

NIOSH – National Institute for Occupational Safety and Health

ASTM – American Society for Testing and Materials

NTP – National Toxicology Program

CAS – Chemical Abstract Service

OSHA – Occupational Safety and Health Administration

CERCLA – Comprehensive Environmental Response, Compensation and Liability Act

PEL – Permissible Exposure Limit

REL – Recommended Exposure Limit

CFR – Code of Federal Regulations

SARA – Superfund Amendments and Reauthorization Act

ft³ – Cubic Foot

TDG – Transportation of Dangerous Goods

IARC – International Agency for Research on Cancer

TLV – Threshold Limit Value

m³ – Cubic meter

TSCA – Toxic Substance Control Act

mg – milligram

TWA – Time Weighted Average

MSHA – Mine Safety and Health Administration

WHMIS – Workplace Hazardous Materials Information System

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/06/2022

Version 9

Reviewed on 12/06/2022

1 Identification



GHS08 Health hazard

Carcinogenicity 1A H350 May cause cancer.

(Additional information for shaped products: The cancer risk occurs only in the presence of dust)

Label elements

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms



GHS08

Signal word

Danger

Hazard-determining components of labeling:

Hazard statements

quartz (SiO₂)

H350 May cause cancer.

(Additional information for shaped products: The cancer risk occurs only in the presence of dust)

Precautionary statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

Respirators should be used if dust / fume is present.

A respiratory protection program should be implemented if exposure exceeds the American Conference of Governmental Industrial Hygienists (ACGIH) defined Time Weighted Average (TWA)

(Contd. on page 2)

— US —

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Reviewed on 12/06/2022

Trade name: DOLO CMP

(Contd. of page 1)

Hazard description

Do not breathe dust.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

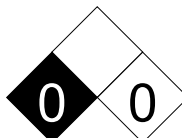
Wear suitable protective clothing, gloves and eye/face protection.

In case of accident or if you feel unwell, seek medical advice immediately.

If swallowed, seek medical advice immediately and show this container or label.

In case of accident by inhalation: remove casualty to fresh air and keep at rest

If swallowed, rinse mouth with water (only if the person is conscious)

Classification system**NFPA ratings (scale 0-4)**

Health = 0

Fire = 0

Reactivity = 0

HMIS Classification

HEALTH	*0
FIRE	0
	0

Health = *0

Fire = 0

Reactivity = 0

Carcinogenicity:

not listed

Other hazards

The product contains substances for which occupational exposure limits exist. It is therefore imperative that the information in Section 8 is also taken into account.

3 Composition/information on ingredients

0.1-1%

⚠ Carcinogenicity 1A, H350

Additional information

In order to avoid dust during installation, the technical possibilities available at the site should be used. Please observe the instructions for personal protective equipment given in section 8.

4 First-aid measures

Reviewed on 12/06/2022

(Contd. of page 2)

Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5 Fire-fighting measures

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Reviewed on 12/06/2022

Trade name: DOLO CMP

(Contd. of page 3)

**Information about protection against
explosions and fires:**

The product is not flammable.

Conditions for safe storage, including any incompatibilities**Storage****Requirements to be met by storerooms and
receptacles:**

No special requirements.

**Information about storage in one common
storage facility:**

Not applicable.

**Further information about storage
conditions:**

None.

Specific end use(s)

No further relevant information available.

* **8 Exposure controls/personal protection**

Safety Data Sheet
acc. to OSHA HCS

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Reviewed on 12/06/2022

Trade name: DOLO CMP

(Contd. of page 4)

* **9 Physical and chemical properties**

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acc. to OSHA HCS

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Reviewed on 12/06/2022

Trade name: DOLO CMP

(Contd. of page 5)

Other information**Additional information**

Melting Point: NA
Freezing Point: NA
Viscosity (and units): NA
Odor Threshold (ppm): NA
Evaporation Rate (relative to): NA
Vapor Density (air =1): NA
Vapor Pressure (units): NA
pH (undiluted): NA
pH (diluted): NA
% dilution: NA
VOC Content: NA
% Volatile: NA
PM Content: NA

*** 10 Stability and reactivity**

Reviewed on 12/06/2022

(Contd. of page 6)

12 Ecological information

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/06/2022

Version 9

Reviewed on 12/06/2022

Trade name: DOLO CMP

(Contd. of page 7)

Proposition 65**Chemicals known to cause cancer:**CAS: 14808-60-7 quartz (SiO₂)**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

**Additional classification according to
Decree on Hazardous Materials**

PRODUCT MAY CONTAIN CRYSTALLINE SILICA, an IARC and NTP listed cancer agent. Prolonged or repeated inhalation of dust from products containing crystalline silica can cause silicosis or cancer.

Carcinogenity categories**EPA (Environmental Protection Agency)**

None of the ingredients is listed.

TLV (Threshold Limit Value)CAS: 14808-60-7 quartz (SiO₂): A2**MAK (German Maximum Workplace Concentration)**CAS: 14808-60-7 quartz (SiO₂): 1**NIOSH-Ca (National Institute for Occupational Safety and Health)**CAS: 14808-60-7 quartz (SiO₂)**GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms

GHS08

Signal word

Danger

**Hazard-determining components of
labeling:**quartz (SiO₂)**Hazard statements**

H350 May cause cancer.

(Additional information for shaped products: The cancer risk occurs only in the presence of dust)

Precautionary statements

- P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 9)

— US —

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acc. to OSHA HCS

Printing date 12/06/2022

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Reviewed on 12/06/2022

Trade name: DOLO CMP

(Contd. of page 8)

National regulations:**SARA 313 TOXIC CHEMICALS**

No material listed in the components in Section 3 of this SDS is on the SARA 313 list.

SARA 302 EXTREMELY HAZARDOUS SUBSTANCES

No material listed in the components in Section 3 of this SDS is on the SARA 302 list.

TSCA (Toxic Substances Control Act)

This substance or all the ingredients of this product are on the Chemical Substances Inventory of the Toxic Substances Control Act (TSCA Inventory).
The presence on this list does not require any legal reporting

HMIS Classification

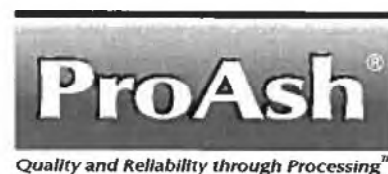
Class D - Division 2 - Subdivision B
Untested mixture containing a toxic material
This product has been classified in accordance with hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all information required by the CPR.

*** 16 Other information**

MATERIAL SAFETY DATA SHEET

FOR Coal Fly Ash

May be used to comply with OSHA's Hazard
Communication Standard 29 CFR 1910.1200.
Standard must be consulted for specific requirements



Date Prepared: October 4, 2000

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SECTION I GENERAL INFORMATION

Subject: Coal Fly Ash

Manufacturer:

STI Ash
Sunbury Generation, LLC
Old Trail - General Delivery
Shamokin Dam, PA 07876

Telephone Number for Information:
781-455-6600

SECTION II HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Mineral Analysis of Ash	CAS Number	Wt. % Ignited Basis	OSHA PEL (mg/m ³)
Silica Amorphous (SiO ₂)		40 - 70%	0.1
Alumina (Al ₂ O ₃)	1344-28-1	20 - 35%	15
Ferric Oxide (Fe ₂ O ₃)	1309-37-1	5 - 15%	10
Calcium Oxide (CaO)	1305-78-8	1 - 5%	5
Silica, Crystalline Quartz	14808-60-7	2 - 8%	0.1
Silica, Crystalline Cristobolite	14464-46-1	1 - 3%	0.1
Potassium Oxide (K ₂ O)		1.6-2%	-
Titanium Oxide (TiO ₂)	13463-67-7	1 - 2%	15

Note: Concentrations are approximate and may vary with coal source and boiler operating conditions. The International Agency for Research on Cancer (IARC) has classified Crystalline Silica as a probable human carcinogen.

SECTION III PHYSICAL AND CHEMICAL CHARACTERISTICS

Appearance and Odor: Fine grained, gray powder No odor

Boiling Point:	N/A	Evaporation Rate:	N/A
Vapor Pressure:	N/A	Melting Point:	1200° C
Vapor Density:	N/A	Solubility in water:	Insoluble
Specific Gravity:	2.0 to 3.0		

(ASTM D854)

Note: N/A means "not applicable"

MATERIAL SAFETY DATA SHEET

for Coal Fly Ash



Page 2 of 3

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flammability Limits: N/A

Fire and Explosion Hazard: None

Fire Fighting Procedures: Coal Fly Ash is the final product of combustion; therefore, unusual hazards are not expected in a fire.

Flash Point: N/A

SECTION V REACTIVITY DATA

Stability: Stable, will not polymerize. Stable under normal conditions of storage and handling.

Conditions to avoid: None

Incompatibility: None

Hazardous Decomposition or By-Products: None Reported

SECTION VI HEALTH HAZARD INFORMATION

Exposure Route:

- Inhalation
- Skin Contact
- Eye Contact

Ingestion: No information on the short term effects from ingestion in humans available. No observed effects in mice that ingest up to 12% Coal Fly Ash in drinking water (Roy et al. 1981).

Mutagenesis: No information on Mutagenicity in humans was found.

Birth Defects and Effects on Reproduction: No information on reproductive effects in humans was found.

Other Health Effects: Inhaled Crystalline silica may cause pulmonary damage, resulting in Silicosis. Silicosis is defined as a degenerative fibrotic lung disease. It has been determined that the pulmonary defense system of mice was significantly affected by Coal Fly Ash (Aranyl and Bradof, 1981).

Note: The International Agency for Research on Cancer (IARC) has classified Crystalline silica as a probable human carcinogen.

Medical Conditions: No information was reported on medical conditions that may be aggravated by exposure to Coal Fly Ash. However, emphysema and bronchitis frequently occur in cases of Silicosis (Merchant et al. 1981).

Emergency and First Aid Procedures:

Inhalation: Move person to fresh air. Clear nasal passage and discourage affected individual from sniffing. If person is not breathing, contact emergency medical services and initiate basic life support.

Skin: Brush away ash particles. To avoid possible irritation, wash contaminated skin immediately with soap and water. Remove any contaminated clothing and rewash skin if necessary. If skin irritation results, obtain medical attention.

Eyes: Immediately flush the eyes for at least 15 minutes at an eyewash station or use an appropriate flush solution or water while holding the eyelids open. Do not rub. Seek medical attention as soon as possible.

MATERIAL SAFETY DATA SHEET

for Coal Fly Ash



Page 3 of 3

SECTION VIII PRECAUTIONS FOR SAFE HANDLING AND USE

Personal Protection: Employees handling fly ash should wear gloves, goggles, NIOSH respiratory protection and disposable coverlets.

Storage and Handling: When storing coal fly ash in ash ponds, treat surface to avoid wind erosion of ash particles. When storing coal fly ash in landfills, the ash should be wetted and covered to avoid wind erosion of ash particles. Open trucks utilized in ash disposal should be properly covered and should be wetted.

Special Precautions and Control Measures: Employees handling fly ash should observe proper personal hygiene, wash hands, remove coverlets before eating, smoking, applying cosmetics or using toilet facilities. Local exhaust systems should be used whenever possible. Other practices such as wetting should be utilized to control dust. Compressed air should not be used.

SECTION IX SPILL OR LEAK PROCEDURES

Spills/Releases: Fly ash should be placed in suitable containers and covered. Fly ash should be wetted where practical to control dust.

Fly ash is not considered a hazardous waste under EPA's Resource Conservation and Recovery Act (RCRA). Coal Fly Ash may be disposed of by adding to cement mixtures, asphalt additives, and as agricultural soil modifiers (Roy et al. 1981).

References

Aranyi, C. and J. Bradof. 1981. Effect of Conventional and Advanced Coal Conversion By-Products on the Pulmonary System. EPA 600/1-81-038. April.

IARC. 1987. IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans. International Agency for Research on Cancer. Vol. 42. Lyon, France.

Wheasant, L.A., R.A. Rodulakis, G. Taylor (eds.) 1992. Occupational Respiratory Diseases. U.S. Department of Health and Human Services. National Institute for Occupational Safety and Health. Publication No. 90-1002.

Morris, S.C. and L.D. Hamilton. 1984. Health and Environmental Effects of Coal-Fired Electric Power Plants. Prepared for the International Congress on Environmental Impacts on Coal Fired Power Plants, Brindisi, Italy. p. 42.

Occupational Safety and Health Administration 1985/1990. Air Contaminants - Permissible Exposure Limits. Title 29 Code of Federal Regulations 1910.1000. U.S. Department of Labor. Occupational Safety and Health Administration.

Raabe, O.E., W.S. Tyler, J.A. Last, et al. 1982. Studies of the Chronic Inhalation of Coal Fly Ash by Rats. Ann. Occup. Hyg. 25(1-4): 189-211.

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Wel, C.I., M.R. Culbertson, M. Shifrine, L.S. Rosenblatt, C.E. Chrisp. 1982. Comparative Studie on *In Vivo* Carcinogenesis in Rats and *In Vivo* Mutagenesis of Mutagenic Coal Fly Ash. J. of Toxicology and Environ. Health, 10: 587-600.

Safety Data Sheet

Fly Ash (All Types)



Date Prepared: 10/01/2022

Supersedes: 03/01/2022

Version 2.0

SECTION 1: IDENTIFICATION

1.1 Product Identifier

Product Name: Fly Ash, Class C fly ash, Class F fly ash, Roadmix and blends of Class C and F fly ash, O1TR, Intrix, P2 Performance Pozzolan, Economizer Ash, PV20A 5, PV20A-5 Micron, Micron 3, **MACS** Ash, Roadmix, Durabase, Flexbase, C-Stone, Celceram, Powerlite, CFB Ash or any of its derivatives, synthetic gypsum.

1.2 Intended Use of the Product

Component of wallboard, concrete, asphalt, roofing material, bricks, cement kiln feed functional filler and construction material for various civil engineering applications

1.3 Name, Address, and Telephone Number of the Responsible Party

Eco Material Technologies Inc., and its subsidiary and affiliate companies
10701 S. River Front Parkway, Suite 300
South Jordan, UT 84095
(801) 984-9400

1.4 Emergency Telephone Number

(678) 757-7583

SECTION 2: HAZARD(S) IDENTIFICATION

2.1 Classification of the Substance or Mixture (GHS-US)

Skin Irritation 2
Eye Irritation 2A
STOT-SE (Single Exposure) 2 (Respiratory)
Carcinogenicity 1
STOT-RE (Repeated Exposure) 1 (Respiratory)

2.2 Label Elements (GHS-US)

Hazard Pictograms:



Signal Word:

- Danger

Hazard Statements:

- Causes skin irritation. (H315)
- Causes serious eye irritation. (H319)
- Harmful if inhaled. (H332)
- May cause respiratory irritation. (H335)
- May cause cancer (H350)
- Causes respiratory harm through prolonged or repeated exposure. (H372)

Precautionary and Response Statements:

- Do not handle until all safety precautions have been read and understood. (P202)
- Avoid breathing dust. (P261)
- Wash hands, forearms, and other exposed areas thoroughly after handling. (P264)
- Wear protective gloves, protective clothing, and eye protection. (P280)
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. (P301) (P330) (P331)
- IF ON SKIN (OR HAIR): Remove all contaminated clothing immediately. Rinse skin with water/shower. (P303) (P353) (P361)
- IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing. (P304) (P340)
- IF IN EYES: Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing until pain or irritation subsides. (P305) (P338) (P351)
- If symptoms persist: Get medical advice/attention. (P308) (P313)

- Remove contaminated clothing and wash before re-use. (P362) (P364)

2.3 Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. Repeat inhalation exposure may cause obstructive pulmonary disease, chronic bronchitis, silicosis, and cancer.

2.4 California Proposition 65:



WARNING: CANCER—www.P65Warnings.ca.gov

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Description of Product

Fly Ash—All Types

3.2 Mixture Ingredients and Hazard Classification

Ingredient	Product Identifier (CAS No.)	% (w/w)	Hazard Classification (GHS-US)
Fly ash combustion residue (amorphous calcium-aluminum silicates) ⁽¹⁾	68131-74-8	60 – 70	• Skin Irritation 2, H315 • Eye Irritation 2A, H319 • Respiratory STOT-SE (Single Exposure) 3, H332 • Respiratory STOT-RE (Repeated Exposure) 1, H373
Crystalline silica ⁽²⁾	14808-60-7	< 16	• Respiratory STOT-RE (Repeated Exposure) 1, H373 • Carcinogenicity 1 (H350)
Calcium oxide	1305-78-8	< 25	• Skin Irritation 2, H315 • Eye Irritation 2A, H319
Iron oxide	1309-37-1	< 7	• Not classified
Magnesium oxide	7487-88-9	< 5	• Not classified
Potassium oxide	12136-45-7	< 1	• Skin Irritation 2, H315 • Eye Irritation 2A, H319
Phosphorus pentoxide	1314-56-3	< 2	• Skin Corrosivity 1, H313 • Eye Irritation 1, H319
<i>fn</i>⁽¹⁾ Fly ash and other CCPs are UVCB substances (substance of unknown or variable composition or biological). Fly ash is defined by the U.S. EPA as: “The residuum from the burning of a combination of carbonaceous materials. The following elements may be present as oxides: aluminum, calcium, iron, magnesium, nickel, phosphorus, potassium, silicon, sulfur, titanium, and vanadium.” The exact composition of fly ash is dependent on the fuel source and flue additives composed of many constituents. The classification of the final substance is dependent on the presence of specific identified oxides as well as other trace elements. <i>fn</i>⁽²⁾ Respirable fraction not tested.			

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. Any person who is experiencing symptoms of injury or illness should be moved to a comfortable area with fresh air, and the label or SDS of this material reviewed. If feeling unwell, seek medical advice.

Inhalation: Move person to fresh air. Provide drinking water, if conscious, to flush mouth and irrigate upper respiratory tract. Seek medical attention if pain, coughing or other symptoms do not subside.

Eye Contact: If the exposed person experiences burning eye irritation due to dust exposure, careful flushing with clean water should continue for at least 15 minutes. If contact lenses are present, they should be removed after flushing if easy to do. Continue flushing. Obtain medical attention if irritation persists.

Skin: Flush skin with plenty of water until irritation subsides. If irritation persists, obtain medical assistance. Wash contaminated clothing before re-use.

Ingestion: Ingestion of this material is not an expected route of exposure. Rinsing mouth with water is appropriate.

4.2 Most Important Symptoms and Effects—Both Acute and Delayed

General: The most important symptoms and effects from exposure to this material after contact with dust are eye and skin irritation. Breathing dust can cause respiratory irritation and respiratory system chronic illness if significant exposures occur repeatedly.

Inhalation: The immediate acute response to dust inhalation is respiratory system irritation. Upon repeated dust exposure at levels exceeding regulatory limits, crystalline silica content of the dust may cause delayed or chronic respiratory illnesses, including silicosis and cancer.

Eye Contact: Exposures of the eyes to dust may result in irritation, which must be treated immediately with first aid (Section 4.1) followed by medical attention if irritation persists.

Skin Contact: Skin contact can cause irritation.

4.3 Indication of Immediate Medical Attention and Special Treatment

Any time symptoms of eye or respiratory irritation occur, immediate first aid should be provided as described in Section 4.1, and medical attention should be obtained if irritation persists.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire. Material is not combustible.

5.2 Special Hazards Arising from the Substance or Mixture

Fire Hazard: Not combustible.

Explosion Hazard: Material is not explosive.

Reactivity: Material is not reactive.

5.3 Advice for Firefighters

Not applicable.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment, and Emergency Procedures

General Measures: Do not breathe dust. Do not get dust in eyes or on skin.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip responders and clean-up personnel with proper protection, including appropriate clothing, eye and face protection. Respiratory protection should be used as necessary to prevent dust exposure.

Emergency Procedures: Ventilate area if dust is generated.

6.2 Environmental Precautions

Reuse material as appropriate to avoid disposal.

6.3 Methods and Material for Containment and Clean-Up

Containment: Contain and collect as any solid. Avoid actions that cause dust to become airborne. Do not breathe dust, and do not allow large quantities of dust or wetted material to contact skin or eyes.

6.4 Reference to Other Sections

See Section 8. Exposure Controls and Personal Protection. For waste management information, refer to Section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Additional Hazards when Processed: Dust will be generated when transferring this material. Use engineered controls and other practices to control dust. Personal Protective Equipment (PPE) described in Section 8 should be used as necessary.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking, and again when leaving work.

7.2 Conditions for Safe Storage, Including any Incompatibilities

Not applicable.

7.3 Specific End-Use(s)

Not applicable.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure Limits

The following exposure limits are based on a time-weighted full-shift exposure, unless otherwise noted.

Ingredient	OSHA PEL ⁽¹⁾ (mg/m ³)	ACGIH-TLV ⁽²⁾ (mg/m ³)	Other ⁽³⁾ (mg/m ³)
Fly ash combustion residues ⁽³⁾ (amorphous calcium-aluminum silicates)	15 (total) 5 (respirable)	10 (total) 3 (respirable)	None Established
Crystalline silica ⁽⁴⁾ (respirable fraction)	50 µg/m ³ (respirable)	0.025 (respirable)	0.05 (respirable)
Calcium oxide	5 (total)	2 (total)	2 (total)
Iron oxide	10 (total)	5 (total)	None Established
Magnesium oxide	None Established	None Established	None Established
Potassium oxide	2 (total, ceiling)	2 (total)	2 (total, ceiling)
Phosphorus pentoxide	None Established	None Established	None Established

fn⁽¹⁾ OSHA PEL (Permissible Exposure Limit) at 29 CFR 1910.1000

fn⁽²⁾ ACGIH-TLV (American Conference of Governmental Industrial Hygienists-Threshold Limit Values 2018)

fn⁽³⁾ *fn⁽³⁾* NIOSH REL (National Institute for Occupational Safety & Health Recommended Exposure Limit)

fn⁽⁴⁾ Crystalline silica is regulated by OSHA as Respirable Crystalline Silica (RCS) [29 CFR 1910.1053]. The amount of RCS in fly ash has not been determined.

8.2 Exposure Controls

Appropriate Engineering Controls: Emergency eyewash equipment should be available in the immediate vicinity of any potential exposure. Use local exhaust or other suppression methods to maintain dust levels below exposure limits.

Personal Protective Equipment: Protective goggles or safety glasses, gloves, protective clothing. Wear respiratory protection if dust is present when transferring or processing.



Hand Protection: Protective gloves as appropriate to prevent irritation and other hand injuries.

Eye and/or Face Protection: Approved safety glasses, goggles, and/or face-shield.

Skin and Body Protection: Appropriate work clothing and footwear should be worn.

Respiratory Protection: If exposure limits may be exceeded or irritation is experienced, approved respiratory protection should be worn in accordance with OSHA Respiratory Protection Standard [29 CFR 1910.134].

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

Physical State: Granular solid.

Appearance: Flowable material—Various colors (gray to tan)

Odor: Essentially odorless.

Odor Threshold: No data.

pH: > 7 – 11

Evaporation Rate: Not applicable.

Melting Point: Not applicable.

Freezing Point: Not applicable.

Boiling Point: Not applicable.

Flashpoint: No data.

Auto-Ignition Temperature: No data.

Decomposition Temperature: No data.

Flammability (solid, gas): No data.

Lower Flammable Limit: No data.

Upper Flammable Limit: No data.

Vapor Pressure: No data.

Relative Vapor Density at 20° C: No data.

Relative Density/Specific Gravity: 2.2 – 2.8

Solubility: Slightly soluble in water.

Partition Coefficient—N-Octanol/Water: Not applicable.

Viscosity: Not applicable.

Explosion Data—Sensitivity to Mechanical Impact: Not applicable.

Explosion Data—Sensitivity to Static Discharge: Not applicable.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Hazardous reactions are not expected to occur under normal conditions.

10.2 Chemical Stability

Stable.

10.3 Possibility of Hazardous Reactions

Hazardous polymerization or other reactions are not expected. For gas generation, see 10.6.

10.4 Conditions to Avoid

Material can become airborne in moderate winds. Dry material should be stored in silos or other structures.

Material stored outdoors should be covered or dampened to reduce dusting.

10.5 Incompatible Materials

Not applicable.

10.6 Hazardous Decomposition Products

Not expected under normal conditions. Wetted material, which contains ammonia, may release ammonia gas, which may result in nuisance odor or potential harmful exposure in a confined area.

SECTION 11: TOXICOLOGICAL INFORMATION**11.1 Likely Routes of Exposure**

Skin Contact: Material may irritate unprotected skin.

Eye Contact: Material may cause serious irritation of unprotected eyes.

Inhalation: Respirable dust may be generated that if inhaled, can cause respiratory system irritation. Prolonged or repeated inhalation exposure may cause chronic respiratory illness, including silicosis and cancer.

Ingestion: Not expected to be an exposure route of concern.

11.2 Symptoms Related to Physical, Chemical, and Toxicological Characteristics

Immediate Effects: Irritation of skin, eyes, and respiratory tract due to dust inhalation or exposure of eyes and skin to material.

Delayed and Chronic Effects: Inhalation of dust on a prolonged or repeated basis may result in chronic lung disease or silicosis, and may also result in lung cancer.

11.3 Numerical Measures of Toxicity

The acute and chronic effects of exposure to this product's dust have not been quantified.

11.4 Carcinogenicity

The ingredient quartz, also known as crystalline silica, has been determined to be carcinogenic by the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP). The potential cancer (H350) Hazard Class designation disclosed in Section 2 is conservative and based on the percentage of crystalline silica in this mixture product. Toxicological studies conducted on fly ash materials, including oral and inhalation repeated dose, as well as mutagenicity have shown no evidence of carcinogenic effects that, except for numerical percentage of crystalline silica and other potential carcinogenic substances included in OSHA GHHCS Guidance, classification as a carcinogen is not required. Reference: *American Coal Ash Association Safety Data Sheet Guidance Document*, May 2015.

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity**

No additional information available.

12.2 Persistence and Degradability

Not available.

12.3 Bioaccumulative Potential

Not available.

12.4 Mobility in Soil

Not available.

12.5 Other Adverse Effects

Not available.

SECTION 13: DISPOSAL CONSIDERATIONS**13.1 Waste Treatment Methods**

Waste Disposal Recommendations: Excess material should be re-used or recycled. Material as a waste is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) (40 CFR 261), but waste material

should be prevented from entering sewer systems, surface waters or the environment. Dispose of waste material in accordance with all local, regional, national, provincial, territorial, and international regulations.

SECTION 14: TRANSPORT INFORMATION

14.1 DOT (U.S.)

Not regulated for transport.

14.2 IMDG (Maritime Code)

Not regulated for transport.

14.3 IATA

Not regulated for transport.

14.4 TDG (Canada)

Not regulated for transport.

SECTION 15: REGULATORY INFORMATION

15.1 U.S. Federal Regulations

SARA Section 311/312 Hazard Classes (40 CFR 370)

Reporting of fly ash is required if reporting threshold (10,000 pounds) is exceeded

- Skin corrosion or irritation
- Serious eye damage or irritation
- Specific target organ toxicity (single or repeated exposure)—Respiratory

SARA Section 313 Emission Reporting

This material may contain the following constituent listed under SARA (Title III) Section 313, but not in amounts requiring supplier notification under 40 CFR Part 372:

- Manganese compounds (< 2%)

Note: Fly ash is not a chemical listed at Part 372.65

TSCA Inventory

All constituents are included on the Toxic Substances Control Act Chemical Inventory (40 CFR 720) and exempt from inventory update reporting (40 CFR 710).

15.2 U.S. State Regulations

State Right-to-Know Laws

Fly ash contains hazardous substances subject to inventory reporting and other requirements of the Massachusetts, New Jersey and Pennsylvania right-to-know laws.

Component	CAS No.	Component	CAS No.
Calcium oxide	1305-78-8	Phosphorus pentoxide	1313-13-9
Iron oxide	1309-37-1	Potassium oxide	12136-45-7
Magnesium oxide	1309-48-4	Silica – crystalline quartz	14808-60-7

References to Table:

Massachusetts: 301 CMR 41, *et seq.* (January 16, 2015)

New Jersey: New Jersey Revised Statutes 34:5A-5 (2016) and New Jersey Health Department List

Pennsylvania: Title 34 Pennsylvania Code, Chapter 323

Note: These lists include specific chemicals and cross-references to other regulatory lists; for example, CERCLA § 102, EPCRA §§ 302 and 313, Clean Air Act § 112(r), OSHA PELs at 29 CFR § 1910.1000, and OSHA Hazard Communication (29 CFR § 1910.1200).

California Proposition 65—Warning Required [California Health and Safety Code § 25249.6]

Refer to Section 2.4.

15.3 Canadian WHMIS Regulations

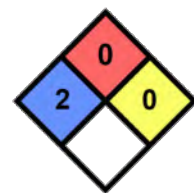
Crystalline silica, titanium dioxide and other fly ash constituents are hazardous materials and subject to WHMIS 2015.

15.4 Other: HMIS and NFPA

HMIS:



NFPA:



SECTION 16: OTHER INFORMATION

Party Responsible for Preparation of this Document

Eco Material Technologies Inc.
(801) 984-9400

Limitations

The information and recommendations set forth herein are based on data we have in our possession, and we have reason to believe is accurate. It is, however, the user's responsibility to determine the safety, toxicity, or suitability for his/her own use of the herein described product. Because the actions of others is beyond our control, Eco Material Technologies Inc., and its subsidiary and affiliate companies make no warranty expressed or implied regarding accuracy of the data or the results to be obtained from the use thereof.

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Appendix F

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

Operations SOPs

Product Segregation SOP BR-005

Truck and Trailer Cleaning SOP OPS-010

Overweight Load Prevention SOP OPS-011

Product Segregation

*Ensuring segregation of product lines during processing, storage and distribution
at
Liberty Soils Biosolids Management Facility
Tremont, PA*

SOP No. BR 005

Project Owner: Christian Cochran – Liberty Soils and Processing, LLC

Facility Operator: Sarah Hrywnak, Project/Asset Manager – THIRD OAK

Facility Manager: Matthew Zehring – THIRD OAK

Environmental Compliance Manager: Rob Madigan – THIRD OAK

Subject: Standard Operating Procedure BR 005: Product Segregation

Purpose: To ensure segregation of product lines during processing, storage and distribution using training, identification, communication, physical barriers and data collection.

Scope: This procedure applies to the **Liberty Soils Biosolids Management Facility** as a supporting document to the PADEP Solid Waste Permit 603455 and PADEP Distribution Permits WMGM054 and PAG-07.

Responsibilities: Facility Manager: Is responsible for the day-to-day management of the biosolids processing operations, including daily product recipe selection, product quality, human resources, safety, environmental compliance and recordkeeping.

Environmental Compliance Manager: Is responsible for updating the SOP, training of affected employees covered by this SOP, and implementation of the SOP.

Project/Asset Manager: Is responsible for working with application sites on product selection, setting up the application sites and products as Scalesoft Sales Orders and reconciling product inventory balance at the end of each month.

Process Operator: Is responsible for implementing the daily product recipe, overseeing daily processing of biosolids, labeling & loading the batch into its designated curing location, testing, managing storage of the

finished product and maintaining quality assurance/quality control requirements for the process.

Loader Operator: Is responsible for loading trucks for distribution of product in accordance with their product cue card.

Scalehouse Staff: Is responsible for indicating the day's product recipe on the Daily Batch Record, generating Scalesoft tickets using the appropriate Sales Order, inputting Scalesoft data accordingly into the Processing and Inventory Spreadsheet and providing drivers with the day's product cue card according to their Scalesoft Sales Order.

Employees: Are responsible for the daily processing of biosolids; monitoring, testing, and managing storage of the finished product; managing material deliveries; operating the scale; data collection and data management.

Affected Employees: Are responsible for reviewing and understanding the contents of this SOP, and suggesting corrections if necessary to the SOP.

1 Definitions / Abbreviations

- 1.1 **Product:** Material that has met the testing requirements for pH 24 hours after processing. Ready for distribution.
- 1.2 **Product Cue Card:** Letter-sized colored paper with large letters stating the product; either "EQ-054" or "PAG-07".
- 1.3 **Product Type EQ-054:** Product that is processed under the PA DEP Solid Waste Permit 603455 and distributed under the PA DEP WMGM054 distribution permit. The recipe consists of approximately 65% biosolids, 25% fly ash/bottom ash/LKD and 10% quicklime.
- 1.4 **Product Type PAG-07:** Product that is processed under the PA DEP Solid Waste Permit 603455 and distributed under the PA DEP PAG-07 distribution permit. Product using the recipe 90% biosolids and 10% quicklime is PAG-07.
- 1.5 **Processing Equipment:** CemenTech mixer and corresponding feeding systems located in Processing Building.
- 1.6 **Processing Building:** The building in which biosolids are delivered and loaded into hoppers for processing.
- 1.7 **Batch:** Mixture of biosolids, lime (and admixture, if used) that is produced during one day of processing.
- 1.8 **Catch Bin:** The bin into which the day's batch of mixed material is conveyed during processing and piled up before being moved to a curing location in one of the Storage Buildings.
- 1.9 **Curing Pile:** Pile of processed material during the 24-hour period while pH testing is completed. Designated with a "Curing Flag."
- 1.10 **Curing Flag:** A flag stuck in a pile of mixed material to signify that it is being tested. The flag identifies the processing date and Batch #.
- 1.11 **Storage Building:** One of several covered buildings in which the Curing Piles and Product piles are stored. Each building has an ID #.

- 1.12 **Application Sites:** Recipients of the product for agricultural or reclamation use.
- 1.13 **Scalesoft:** Software used to generate and record tickets for incoming and outgoing material.
- 1.14 **Scalesoft Sales Order:** A selection when generating a Scalesoft ticket linking the Customer to the application site address, hauler, product type, application type, and application rate.

2 **Equipment**

- 2.1 (2) Wheel Loaders
- 2.2 Mobile Cement Block Walls in Storage Buildings
- 2.3 Signage Identifying Product in Storage Buildings
- 2.4 Product Cue Cards distributed by Scalehouse staff

3 **Processing & Curing**

- 3.1 **Procedure**
 - 3.1.1 Prior to processing, the recipe for the day's product will be determined by the Facility Manager for EQ-054 or PAG-07.
 - 3.1.2 The Facility Manager will notify the Process Operator and the Scalehouse staff accordingly.
 - 3.1.3 The Scalehouse staff will indicate the day's product type on the Daily Batch Record (EQ-054 or PAG-07).
 - 3.1.4 The Process Operator will set the processing equipment for the day's product recipe.
 - 3.1.5 A curing location for the mixed material will be identified in one of the Storage Buildings and labeled by the Process Operator.
 - 3.1.6 Processing will begin; the batch will be processed into the Catch Bin.
 - 3.1.7 As the Catch Bin is filled, the mixed material is moved to the designated location and identified with a Curing Flag.
 - 3.1.8 After the batch meets pH testing requirements (24 hours) it is considered product and is ready for distribution. The Curing Flag is removed.

4 **Storage**

- 4.1 **Procedure**
 - 4.1.1 Once the curing/testing phase is completed the product is stored until it is distributed.
 - 4.1.2 Product is sorted by type in designated areas separated by cement block walls.
 - 4.1.3 The structural beams by the designated areas will have signs attached identifying the product type within close proximity.
 - 4.1.4 In the event the designated areas are insufficient for actual product volume, the cement block walls will be adjusted.
- 4.2 **Data Collection**
 - 4.2.1 As the Daily Batch Records for each product are complete, they will be input into the Processing & Inventory Spreadsheet for product type inventory tracking purposes.

5 Distribution

5.1 Procedure

- 5.1.1 When application sites are set up, the Project/Asset Manager will work with the application site representative to determine the agreed-upon product type and volume or time period.
- 5.1.2 The Project/Asset Manager will set up the application site in Scalesoft with the corresponding product type and haulers.
- 5.1.3 The Project/Asset Manager will provide a written, one-time 24-hour notice to the Department prior to commencing land application activities at a new application site for both EQ-054 and PAG-07 products, in accordance with permit requirements.
- 5.1.4 When drivers arrive to pick up product, the Scalehouse staff will provide the drivers with a “product cue card” and verbal instructions to the appropriate Storage Building to be loaded.
- 5.1.5 The drivers will flash their product cue cards to the Loader Operator in the Storage Building to communicate and/or confirm which product type they are picking up.
- 5.1.6 The drivers will return the product cue cards to the Scalehouse staff at the end of the day for future use.

5.2 Data Collection

- 5.2.1 When the product leaves the site, it will be documented in Scalesoft upon ticket generation.
- 5.2.2 Reconciliation of distribution-related tickets will provide the data necessary to input into the Processing & Inventory Spreadsheet to determine the quantity (tons) of each product distributed.

6 Product Inventory Real-time Data

- 6.1 The product inventory balance for each product type can be estimated at any time by accessing the Scalesoft data and Processing & Inventory Spreadsheet. The actual product inventory balance is reconciled at the end of each month by the Project/Asset Manager.

Created: July 27, 2021

Record of Revision(s)

Revision 1: January 20, 2022

Revision 2: March 21, 2022

Revision 3: December 2024

References

Daily Batch Record

Processing and Inventory Spreadsheet

PADEP Distribution Permit WMGM054

PADEP Solid Waste Permit No. 603455

PADEP Distribution Permit PAG-07

Liberty Soils Biosolids Management Facility Operations & Maintenance Manual

ACCEPTANCE OF SOP BR-005

THIRD OAK, the facility operator, accepts the Standard Operating Procedure BR-005: Product Segregation, and will take necessary actions to adhere to the contents of this document.

Facility Manager

Date

TRAINING FOR SOP BR-005

Undersigned employees accept and understand the Standard Operating Procedure BR-005: Product Segregation, and will take necessary actions to adhere to the contents of this document.

Name

Signature

Date

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

If there are any questions concerning this SOP, please contact
Kristin Price, EnSol, Inc.
kprice@ensolinc.com or (716) 523-5454

Truck and Trailer Cleaning

Ensuring Cleanliness of Biosolids Delivery Trucks and Trailers Prior to Leaving the Facility

at

*Liberty Soils Biosolids Management Facility
Tremont, PA*

SOP No. OPS-010

Project Owner: Christian Cochran – Liberty Processing and Soils, LLC

Facility Operator: Sarah Hrywnak, Project/Asset Manager – THIRD OAK

Facility Manager: Matthew Zehring – THIRD OAK

Environmental Compliance Manager: Rob Madigan – THIRD OAK

Subject: Standard Operating Procedure OPS-010: Truck and Trailer Cleaning

Purpose: To ensure biosolids delivery trucks and trailers are clean prior to leaving the Facility.

Scope: This procedure applies to all third-party vehicles that deliver biosolids to the **Liberty Soils Biosolids Management Facility**.

Responsibilities: **Facility Manager:** Is responsible for providing a copy of this SOP to employees, training of affected employees covered by this SOP, and implementation of the SOP.

Environmental Compliance Manager: Is responsible for updating the SOP.

Truck Drivers: Are responsible for following the procedure outlined in this SOP.

Designated On-Site Employee(s): Are responsible for inspecting trucks and trailers after cleaning.

Affected Employee(s): Are responsible for reviewing and understanding the contents of this SOP and suggesting corrections, if necessary, to the SOP.

1 Definitions / Abbreviations

1.1 **Biosolids:** Dewatered sewage sludge from municipal waste water treatment facilities

- 1.2 **Processing Building:** The facility building where biosolids are delivered and processed.

2 Equipment

- 2.1 Signage Identifying Processing Building
2.2 Shovels and heavy-duty brooms

3 Truck and Trailer Cleaning Procedures

All trucks and trailers carrying biosolids are required to be cleaned by their drivers prior to leaving the Facility. Shovels and heavy-duty brooms shall be used to loosen and sweep out biosolids from the trailer on to the Processing Building floor. Designated onsite employees will inspect the truck and trailer once the driver has completed the cleaning. Particular attention will be paid to the interior of the truck trailer, but tires and undercarriages will also be inspected.

Created: March 29, 2021

Record of Revision(s)

Revision 1: December 2024

ACCEPTANCE OF SOP OPS-010

THIRD OAK, the facility operator, accepts the Standard Operating Procedure OPS-010: Truck and Trailer Cleaning, and will take necessary actions to adhere to the contents of this document.

Facility Manager

Date

TRAINING FOR SOP OPS-010

Undersigned employees accept and understand the Standard Operating Procedure OPS-010: Truck and Trailer Cleaning and will take necessary actions to adhere to the contents of this document.

Name

Signature

Date

If there are any questions concerning this SOP, please contact:

Sarah Hrywnak, Project/Asset Manager
shrywnak@third-oak.com or 716-628-5656

Overweight Load Prevention

*To ensure haulers do not exceed weight limits
at
Liberty Soils Biosolids Management Facility
Tremont, PA*

SOP No. OPS-011

Project Owner: Christian Cochran – Liberty Processing and Soils, LLC
Facility Operator: Sarah Hrywnak, Project/Asset Manager – THIRD OAK
Facility Manager: Matthew Zehring – THIRD OAK
Environmental Compliance Manager: Rob Madigan – THIRD OAK

Subject: Standard Operating Procedure OPS-011: Overweight Load Prevention

Purpose: To prevent overweight vehicles from entering or exiting the facility.

Scope: This procedure applies to the **Liberty Soils Farms Biosolids Management Facility** as a supporting document to the PADEP Solid Waste Permit 603455 and Distribution Permits WMGM054 and PAG-07.

Responsibilities: **Facility Manager:** Is responsible for monitoring incoming load weights and implementing the hauler penalty.

Environmental Compliance Manager: Is responsible for updating the SOP, training of affected employees covered by this SOP, and implementation of the SOP.

Project Manager/Asset Manager: Is responsible for approving the SOP.

Loader Operator: Is responsible for loading trucks.

Scalehouse Staff: Is responsible for notifying the Facility Manager if a load is overweight.

Affected Employees: Are responsible for reviewing and understanding the contents of this SOP, and suggesting corrections if necessary to the SOP.

1 Definitions / Abbreviations

1.1 **Overweight load:** Truck with gross vehicle weight greater than 80,000 lbs.

2 Equipment

2.1 Scale

3 Weighing

3.1 Incoming Loads

- 3.1.1 The hauler is not permitted to enter the facility with a gross weight greater than 80,000 lbs.
- 3.1.2 When an incoming load arrives at the scale and the gross weight is greater than 80,000 lbs., the Scalehouse staff will notify the Facility Manager.
- 3.1.3 The Facility Manager will notify the hauler that they are overweight. The Facility Manager can choose to reject the load or implement a penalty.
- 3.1.4 If the load is rejected, the hauler will be required to dump the excess material and confirm the load weight before entering the facility.

3.2 Outgoing Loads

- 3.2.1 The hauler is not permitted to leave the facility with a gross weight greater than 80,000 lbs.
- 3.2.2 When an outgoing load arrives at the scale and the gross weight is greater than 80,000 lbs., the Scalehouse staff will notify the Facility Manager and the Loader Operator.
- 3.2.3 Scalehouse staff will instruct the hauler to go back to the Storage Building to dump the excess material.
- 3.2.4 The hauler will be requested to confirm the load weight at the scale before exiting the facility.

Record of Revision(s)

Revision 1: December 2024

References

n/a

ACCEPTANCE OF SOP OPS-011

THIRD OAK, the facility operator, accepts the Standard Operating Procedure OPS-011: Overweight Load Prevention, and will take necessary actions to adhere to the contents of this document.

Facility Manager

Date

TRAINING FOR SOP OPS-011

Undersigned employees accept and understand the Standard Operating Procedure OPS-011: Overweight Load Prevention, and will take necessary actions to adhere to the contents of this document.

Name	Signature	Date
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

If there are any questions concerning this SOP, please contact
Sarah Hrywnak, Project/Asset Manager
shrywnak@third-oak.com or 716-628-5656

Appendix G

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

Health and Safety Program (HASP)

HEALTH AND SAFETY PROGRAM

**Liberty Soils Biosolids Management Facility
500 Blackwood Rd.
Tremont, PA**

Prepared for:

**Liberty Processing and Soils, LLC
411 NW Park Avenue, Suite 401
Portland, OR 97209**

Prepared by:

**EnSol, Inc.
3000 Alt Blvd.
Grand Island, New York 14072**

JANUARY 2025

PN 040-A0013

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1.0 INTRODUCTION

This Health and Safety Program (HASP) addresses the health and safety of personnel involved with the operations and maintenance of the Liberty Soils Biosolids Management Facility (facility). This HASP is intended as a handbook to be provided to all employees of the facility. The purpose of this HASP is to assign responsibilities to key personnel and to establish personal protection standards, recommended procedures, and mandatory safety practices to prevent accidents and protect people and equipment. Provisions for contingencies that may arise during site operations are addressed in the Preparedness, Prevention and Contingency (PPC) Plan.

A. Elements of a Safety Program

1. Safety is the concern of every individual employed at the facility. Safety is nothing more than putting common sense into practice. It is impossible to lay down a safety rule covering each and every detail or every task performed at the facility. The safety of you and your fellow workers is the foundation for the general safety rules that are designed to protect all employees, property, equipment and the public.
2. It is the intention of facility management to conduct all operations safely and efficiently and to prevent accidents. All practical methods, procedures and equipment necessary to achieve this end will be used. The first consideration in the performance of any task is the safety of the employees and there shall be no compromise with safety. The safety of employees and the public takes precedence over expediency and shortcuts.
3. It is the intent of facility management to provide safe and healthy working conditions and to minimize the loss of productive resources.
4. Safety is everyone's responsibility and full cooperation with the safety efforts is expected from all employees.
5. The facility has established a Safety Committee based on PA Dept of Labor & Industry HandS (Health and Safety) Guidelines. Monthly safety meetings are held, focusing on equipment usage and safety procedures. Any deficiencies observed or new procedures will be covered in these meetings.
6. The safety criteria addressed here are not intended to be all-inclusive nor could they cover every possible situation. Your own common sense must augment these safety rules to provide for safe and healthful working conditions.

B. Facility Manager's Responsibilities

1. Initiate employee safety activities including meetings, inspections and evaluations.
2. Maintain an active safety policy with competent safety supervision.
3. Support reasonable disciplinary action for failure to follow established safe practices.
4. Hold every employee accountable for safety.
5. Conduct effective training programs, as required.
6. Place the same emphasis on accident prevention as on personnel performance.
10. Post emergency telephone numbers and basic first aid procedures in a prominent place.
11. The Process Operator may perform the duties of the Facility Manager in the Manager's absence.

C. Accident Prevention - Employee Safety Guidelines and Tips

1. All written and oral safety rules should be observed and particular job-associated hazards recognized.
2. Employees must use personal protective equipment (PPE) as directed by the Manager.
3. Always wear the required PPE (eye protection, high-vis vest, mask, appropriate gloves and proper footwear) while performing specific job duties.
4. All tools should be kept clean and in good repair.
5. The rules of personal hygiene should be observed and followed to avoid infection,
6. Good housekeeping is required of all employees to help prevent hazardous conditions.
7. Employees must not engage in any form of "horseplay", rowdiness, or practical jokes.
8. Running is not permitted anywhere in the facility or on the grounds (except in emergencies).
9. All safety and traffic signs must be observed.
10. Employees must know the location and proper operation of emergency equipment in their work area.
11. Remove spills from grounds, walls, walkways, and floors as quickly as possible.
12. Do not smoke in unventilated areas, or in areas posted "NO SMOKING".
13. Employees must wear clothing, footwear, and headgear suitable for their work and that is not hazardous.
14. Report hazardous working conditions to the Manager.
15. Operators of mobile and stationary equipment are responsible for the safe operation of their equipment.

16. Tools, equipment and materials must be in a safe condition before being used. Tools must be used, placed or fastened down in a manner that will prevent injury. Unsafe tools, equipment, and materials must be reported immediately to the Manager.
17. When working on mechanical or electrical equipment, be sure it is properly locked out-tagged out of service under the direction of the Manager.
18. Only authorized employees are to operate machines and equipment. Safety guards must be in place and in good condition before equipment is operated.
19. No employee should enter silos or closed-type vessels without authorization of the Manager and only after proper testing for oxygen concentration, hydrogen sulfide (H₂S), and explosive conditions.
20. Dangerous areas must be roped off or barricaded.
21. When performing overhead work, employees must secure equipment used. Safety belts must be worn as required in performing overhead work.
22. Any employee sustaining an injury on the job must report it to the Manager as soon as practical under conditions prevailing at the time.
23. Employees must lift in the proper way, as shown by the Manager, to avoid strains.
24. Employees must furnish factual information when reporting an accident and in response to questions asked by the Manager.
25. Do not attempt to clean, service or repair any piece of moving equipment without first shutting off the power.

2.0 GENERAL FACILITY OPERATIONS

A. Overview of Operations

The *Operations and Maintenance (O&M) Manual* will be distributed to all employees in training. Employees are expected to become familiar with the contents of the O&M Manual.

B. Start-Up and Shut-Down Procedures

All employees shall check in with the Facility Manager to receive work instructions at the beginning of a shift. Equipment shall be reviewed for necessary maintenance before each employee utilizes it. Protective clothing shall be put on.

At shut-down, equipment shall be stored in a safe manner. All employees shall notify the Facility Manager that they are leaving.

C. Housekeeping

Safety, health and housekeeping go hand-in-hand. A well-maintained and clean facility will operate closer to its maximum potential. General and specific housekeeping requirements are provided in the O&M Manual.

D. Identification of Unauthorized Material

Employees are to be alert for containers that are marked “hazardous” or “danger” or that have symbols on them for radioactive or infectious materials. Any suspected unauthorized material that is discovered by an employee is to be reported to the Facility Manager.

3.0 EMERGENCY PROCEDURES

Emergency procedures are summarized below. See the PPC Plan for complete information.

A. Emergency Coordinator

The Emergency Coordinator is the Facility Manager or his/her designee. It is his/her responsibility to coordinate all emergency response measures at the facility. Any employee who has a question about a procedure shall go to the Emergency Coordinator (EC) for assistance. The EC is also the contact person for municipal emergency services, such as police and fire. The EC's duties are explained in detail in the PPC Plan.

B. Fires

It is important to note that all of the materials utilized within, and produced by, the alkaline stabilization process are not explosive or ignitable (i.e., lime, LKD, CKD, coal ash, soil product, etc.); however, any electrical, motorized or gas-fired piece of equipment always possesses the potential to cause an explosion and/or fire. Anyone who observes a fire at the facility should immediately alert the EC and notify the fire department by dialing 911 (as necessary) and other employees. Fire extinguishers are located throughout the facility and everyone is to receive an explanation of their proper use from the EC. Each employee is to note that fires can spread quickly. They are instructed to leave the building immediately through the nearest exit and meet at the scale so that it can be determined if anyone remains in the buildings. Fire response procedures are described in the PPC Plan.

C. Evacuation

Due to the nature of site operations, the need for facility evacuation is unlikely. However, if there is a need to evacuate, the signal will be given by air horn (kept in the Processing Building), or by cell phone. Evacuation routes are posted on the walls of the facility. In the event of a call for evacuation, all personnel are to shut down equipment that they are working on and leave the facility via the two site driveways and west along the common site road to the scale. It is the responsibility of the EC to advise all unnecessary personnel to leave the site.

D. Reporting Procedures

All fires, regardless of size, will be reported to the EC even if the employee immediately extinguishes the fire. Similarly, flooding, electrical failure or any accident will be reported to the EC by the employee involved or, if he is unable to report, by the nearest available employee.

4.0 OCCUPATIONAL SAFETY/PERSONAL INJURY

A. Maintenance of Safety Standards

All employees are to use care at the facility. Machinery is to be used only by those who fully understand its operation. Questions regarding any procedure may be asked of the Facility Manager.

B. Employee Hygiene Program

Training and education for the protection of employees' health is very important. Special emphasis must be given to the proper instruction for the prevention of the spread of germs. Once the soil product is produced, following the prescribed recipe, the potential for the spread of germs and pathogens is eliminated. The final product can be safely contacted with bare hands; however, unpasteurized sludge has the potential to make any person sick. It is not uncommon for dewatered sludge to contain 1 million fecal coliform per gram of total solids. The best prevention is with personal hygiene training and education. Proper hygiene includes:

- Utilization of hand protection (disposable gloves).
- Frequent hand-washing practices.
- Annual training, associated with bloodborne pathogens and infection control, for all employees in contact with biosolids.

Employees are required to review the following documents, which are useful sources of information regarding potential risks and preventive measures.

- Basic Hygiene Precautions for Safe Handling of Biosolids, Attachment 1.
- National Institute for Occupational Safety and Health (NIOSH) Guidance for Controlling Potential Risks to Workers Exposed to Class B Biosolids, Attachment 2.

C. Personal Protective Equipment

Employees are to wear high-visibility clothing, eye protection, gloves and safety shoes when handling all materials. Tyvek™ coveralls, respiratory and hearing protection are available to all employees. If repairs are performed involving a torch or cutting, protective goggles or face shields are to be worn. Specific job duties may require hard hats, as directed by the Facility Manager.

D. Respiratory Protection

Various environmental conditions can require employees in those areas of risk be trained for, and wear, the appropriate type of respiratory protective equipment. These conditions can include:

- Dusty conditions,
- Oxygen content lower than 19.5% or greater than 23.5% (such as a confined space entry),
- Elevated hydrogen sulfide (H₂S) concentrations.

The need for respiratory protection will be determined by the Facility Manager. The Facility Manager is responsible for educating employees about when and how respirators should be used, training for respirator use, and maintenance and storage of respirators.

E. Equipment Operation

It is important to treat all electrical, mechanical and gas-fired equipment with respect. No heavy equipment is to be operated by anyone who is under the influence of any alcohol, drug or medication that impairs his or her performance. The operation and maintenance of any equipment component carries the potential for injury to all personnel if safe working practices are not properly followed.

The following precautionary procedures are to be used when working with moving equipment:

- Every employee who uses heavy equipment is to assess its working condition at the start of operation,
- Manufacturer's recommendations for safety observations and precautions are to be understood and followed,
- Worn tires, inoperable lights or defective parts are to be replaced,
- Do not attempt to physically clean, repair, maintain or service any piece of moving equipment while it is operating,
- Always keep protective guards on equipment during normal operation,
- Follow a lockout/tagout program which ensures that equipment controls are properly locked out before any maintenance or service is performed
- Identify potential safety concerns associated with each equipment component, along with precautionary procedures to prevent injury,
- Perform preventive maintenance to help ensure maximum equipment efficiency and performance, and, as a result, provide a safer environment for the employees.

F. Confined Space Entry

Various definitions have been offered to indicate what constitutes a confined space in the workplace; most confined spaces contain one or more of the following characteristics:

1. The space has limited or restricted openings for entry or exit, making it difficult for an individual to enter with lifesaving equipment, or to rescue an individual in case of an emergency.
2. The space is not designed for continuous worker occupancy.
3. The space may contain known or potentially hazardous atmospheres (oxygen deficiency or oxygen enrichment, presence of flammable, explosive, toxic or otherwise injurious, asphyxiating or incapacitating substances).
4. A space where conditions of engulfment or entrapment, or any other recognized serious safety or health hazard may exist or develop.

Confined spaces at the facility may include silos, tanks, compartments, ducts, pipelines, bins, tunnels, crawl spaces, scrubbers, air exhaust plenums, rooms with improper size openings with or without mechanical or natural ventilation, and other similar spaces.

The Facility Manager is responsible for educating employees about safe working practices to be used when entering a confined space. The following are important elements of a confined space entry program:

- Responsibilities of management and employees,
- Confined space identification,
- Procedures, including types of entry permits, persons in charge of entry, additional permit information,
- Duties of the attendant,
- Required safety equipment,
- Entry and exit information,
- Rescue information.

G. Radiation Safety

The purpose of the *Radiation Protection and Radioactivity Monitoring Action Plan* (Action Plan) is to educate and train facility staff to screen, detect, identify, and respond to incidents associated with radioactive material (RAM), while protecting and ensuring worker safety. The Facility Manager will

receive a training session covering the fundamentals of radiation safety and detection. Facility personnel involved with radiation detection will be given a Radiation Basics Training Course (Centers for Disease Control and Prevention), which is intended for personnel who may be assigned responsibilities where there is potential for radiation exposure. A third party may be retained to train facility personnel in radiation safety and the operation of radiation monitoring equipment. The subcontracted representative will review the Action Plan with employees, answer any questions regarding health and safety issues, and provide assistance with the operation, calibration and use of the radiation equipment used at the facility.

H. Personal Injury Response and Reporting Procedure

All injuries are to be reported immediately to the Facility Manager or designee. First aid treatment is available for any minor injuries. If necessary, appropriate aid or emergency transportation (911) shall be arranged. Scalehouse staff will control traffic to allow access for an ambulance. A safety inspection of the site of the injury shall be promptly made after any accident. The Facility Manager is responsible for completing an Accident Report and reporting injuries as required. The incident will be reviewed with staff to assess the cause of the incident and evaluate potential actions to prevent a reoccurrence.

Attachment 1

EnSol, Inc.

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Basic Hygiene Precautions for Safe Handling of Biosolids

Basic Hygiene Precautions for Handling Biosolids

The following information is abstracted from DHHS (2002).

Basic hygiene precautions are important for workers handling biosolids. The following list, originally developed by EPA, provides a good set of hygiene recommendations.

- Wash hands thoroughly with soap and water after contact with biosolids.
- Avoid touching face, mouth, eyes, nose, genitalia, or open sores and cuts while working with biosolids.
- Wash your hands before you eat, drink, smoke, and before and after using the bathroom.
- Eat in designated areas away from biosolids handling activities.
- Do not smoke or chew tobacco or gum while working with biosolids.
- Use barriers between skin and surfaces exposed to biosolids.
- Remove excess biosolids from footwear prior to entering a vehicle or a building.
- Keep wounds covered with clean, dry bandages.
- Flush eyes thoroughly, but gently, if biosolids contact eyes.
- Change into clean work clothing on a daily basis and reserve footwear for use at work site or during biosolids transport.
- Do not wear work clothes home or outside the work environment.
- Use gloves to prevent skin abrasion.

Additionally, NIOSH recommends the following steps to provide a more comprehensive set of precautions for use by employers and employees:

Provide appropriate protective equipment, hygiene stations, and training

Personal Protective Equipment (PPE) - Appropriate PPE should be provided for all workers likely to have exposure to biosolids. The choices of PPE include goggles, splash-proof face shields, respirators, liquid-repellant coveralls, and gloves. Face shields should be made available for all jobs where there is a potential for exposure to spray or high-pressure leaks, or aerosolized biosolids during land application. Management and employee representatives should work together to determine which job duties are likely to result in this type of exposure, to conduct appropriate on-site monitoring, and to determine which type of PPE is needed in conjunction with a qualified health and safety professional. If respirators are needed, a comprehensive program would include respirator fit testing and training or retraining.

Hygiene and Sanitation - Hand-washing stations with clean water and mild soap should be readily available whenever contact with biosolids occurs. In the case of workers in the field, portable sanitation equipment including clean water and soap should be provided. Cabs should be wiped down and cleaned of residual mud (or settled dust) frequently to reduce potential exposure to biosolids.

Training - Periodic training on standard hygiene practices for biosolids workers should be conducted by qualified safety and health professionals that covers issues such as:

- frequent and routine hand washing (the most valuable safeguard in preventing infection by agents present in biosolids), especially before eating or smoking;
- the proper use of appropriate PPE, such as coveralls, boots, gloves, goggles, respirators, and face shields;
- the removal of contaminated PPE and the use of available on-site showers, lockers, and laundry services;
- proper storage, cleaning, or disposal of contaminated PPE;
- instructions that work clothes and boots should not be worn home or outside the immediate work environment.
- prohibition of eating, drinking, or smoking while working in or around biosolids.
- procedures for controlling exposures to chemical agents that may be in biosolids.

Reporting - Workers should be trained to report potentially work-related illnesses or symptoms to the appropriate supervisory or healthcare staff. This may aid in the early detection of work-related health effects.

Immunizations - Ensure that all employees are up-to-date on tetanus-diphtheria immunizations, since employees are at risk of soil-contaminated injuries. Current CDC recommendations do not support hepatitis A vaccination for sewage workers.

Attachment 2

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

NIOSH Guidance for Controlling Potential Risks to Workers Exposed to Class B Biosolids

Guidance for Controlling Potential Risks to Workers Exposed to Class B Biosolids

This guidance is intended only for controlling health risks to workers from Class B biosolids during handling and land application. This guidance is not intended to address nonoccupational exposure.

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health

July 2002

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Introduction

Biosolids are the organic residues resulting from the treatment of commercial, industrial, and municipal wastewater (sewage). One purpose of the treatment is to significantly reduce the concentration of disease-causing organisms (also known as pathogens). Treatment also reduces the attractiveness of the residues to insects, birds, and rodents. The product is a material that can be recycled for uses such as adding organic material to the soil.

The U.S. Environmental Protection Agency (EPA) has established two categories of biosolids:

- Class A biosolids have undergone treatment to the point where the concentration of pathogens is reduced to levels low enough that no additional restrictions or special handling precautions are required by Federal regulations [40 CFR* Part 503]. If the Class A biosolids meet *exceptional quality* requirements for metals content, they may be sold in bags and applied in the same way as other soil conditioners such as peat moss.
- Class B biosolids have undergone treatment that has reduced but not eliminated pathogens. By definition, Class B biosolids may contain pathogens. As a result, Federal regulations for use of Class B biosolids require additional measures to restrict public access and to limit livestock grazing for specified time periods after land application [40 CFR Part 503]. This allows time for the natural die-off of pathogens in the soil.

Whereas EPA rules [40 CFR Part 503] restrict public access to lands treated with Class B biosolids in order to protect public health, these rules do not apply to workers involved with Class B biosolids handling and land application.

Workers may come in contact with Class B biosolids during the course of their work. Workers and employers may be well aware of the need for precautions when contacting untreated sewage but less aware of the need for basic precautions when using Class B biosolids. This document provides information, guidance, and recommendations to employers and employees working with Class B biosolids to minimize occupational risks from pathogens. It does not address other potential safety and health issues such as injuries or exposures to chemicals.

How are biosolids used?

Biosolids are typically treated to Class B or Class A standards at the wastewater (sewage) treatment plant, where a liquid or semi-solid material is produced. In a liquid state, biosolids can be transported by truck to a land application site where they are applied directly to the land using tractors, tank wagons, irrigation systems, or special application vehicles. Alternatively, biosolids may undergo mechanical dewatering that may include the use of polymers. Dewatered and liquid biosolids are often temporarily stored at the treatment plant or application site. Dewatered biosolids are transported and applied to land using front-end loaders, trucks, tractors, or biosolids-spreading equipment. Most biosolids are applied with spreaders in semisolid form and then incorporated into the soil using a disc plow. Workers may come into either direct or indirect contact with biosolids during any phase of the treatment, transport, or application process, or after they are land applied. Currently, more than 50% of the biosolids generated in the United States is recycled as soil conditioners to improve and maintain productive soils and stimulate plant growth rather than being sent to landfills or incinerated. Biosolids are applied on agricultural land, forestlands, and surface mine reclamation sites. Class A biosolids are also used in horticultural applications. EPA estimates that 7.1 million tons of biosolids were generated for use or disposal in 2000.

* Code of Federal Regulations.

What is in biosolids that requires control of worker exposures?

There are four major types of human disease-causing organisms (pathogens) that can be found in sewage: (1) bacteria, (2) viruses, (3) protozoa, and (4) helminths (parasitic worms). Class B biosolids may contain the same types of pathogens as the source sewage, but at reduced concentrations. Both Class A and Class B biosolids may also contain chemicals (including metals) and allergens.

To protect public health, the EPA's 40 CFR Part 503 rule prescribes a *restricted period* of up to 1 year to limit public access to lands where Class B biosolids have been applied. These EPA restrictions do not apply to occupational access. EPA does recognize that occupational exposure can occur and states that workers exposed to Class B biosolids might benefit from several additional precautions such as use of dust masks when spreading dry materials, the use of gloves when touching biosolids, and routine hand washing before eating, drinking, smoking, or using the bathroom.

The risk of worker exposure to infectious agents in Class B biosolids is likely greatest prior to, during, and immediately after land application of the biosolids. Because the concentration of pathogens declines through natural processes, the potential for pathogen exposure decreases over time.

Do we know these pathogens can cause disease?

Yes, the association between poor hygiene, raw sewage, and infectious disease is well established. Most of the pathogenic bacteria, viruses, and parasites in biosolids are enteric, which

means they are present in the intestinal tracts of humans and animals. Enteric organisms that may be found in biosolids include, but are not limited to, *Escherichia coli*, *Salmonella*, *Shigella*, *Campylobacter*, *Cryptosporidium*, *Giardia*, Norwalk virus, and enteroviruses. Exposure may potentially result in disease (e.g., gastroenteritis) or in a carrier state in which an infection does not clinically manifest itself in the individual but can be spread to others. These enteric organisms are usually associated with self-limited gastrointestinal illness but can develop into more serious diseases in sensitive populations such as immune-compromised individuals, infants, young children, and especially the elderly.

The disease risk is a function of the number and types of pathogens in the Class B biosolids relative to the exposure levels and infective dose. Because data are sparse on what constitutes an infective dose, it is prudent public health practice to minimize workers' contact with Class B biosolids and soil or dusts containing Class B biosolids during production and application, and at land application sites during the period when public access is restricted. Class A biosolids may also present some health risk to workers, since some chemicals and biologic constituents in Class A biosolids are not regulated by the EPA.

Can workers be exposed to pathogens from biosolids?

Workers could be exposed to pathogens and irritants when working with Class B biosolids during the period when public access is restricted. During a NIOSH field investigation at one biosolids land application and storage site that did not comply with EPA requirements, the following was observed:

- NIOSH interviewed employees who worked in all phases of the biosolids operation. Some

employees reported repeated episodes of gastrointestinal illness after working with the biosolids, either at the treatment plant or during land application.

- NIOSH observed among workers an inconsistent awareness, provision, and use of protective equipment and hygiene practices appropriate for handling Class B biosolids (or biosolids that do not comply with EPA standards).
- NIOSH collected bulk samples from different locations within the biosolids storage site and found measurable concentrations of fecal coliforms. Fecal coliforms are used as an indicator for the presence of other enteric microorganisms. Enteric bacteria were detected in air samples collected at the land application site.
- The local department of environmental services recently informed NIOSH that biosolids applied at this site intermittently exceeded (by up to 4.5 times) the EPA fecal coliform upper limit for Class B biosolids prior to the NIOSH survey.
- The substandard biosolids were applied at the agricultural site before the monitoring results were received from the laboratory.

EPA reports that high-pressure spray applications may result in some aerosolization of pathogens and that application or incorporation of dewatered biosolids may cause very localized fine particulate/dusty conditions. Also, farm workers may be exposed to biosolids after application and during the restricted period. Ancillary workers (for example, laborers hired to clean trucks that were used to haul biosolids) can be exposed to biosolids. Exposures to substandard biosolids can occur when these materials are loaded and hauled to approved landfills or incinerators for disposal.

Additional study of worker exposures to pathogens and other toxics possibly present in

Class B biosolids is needed. This will reduce scientific uncertainty about these issues and allow further refinement of worker precautions.

What should employers do to prevent work-related illness?

To protect workers who have direct contact with Class B biosolids and thus are likely to have an exposure to pathogens, employers should provide a basic level of protection, including appropriate measures from those listed below. While the measures are worded to refer to Class B biosolids, most also apply to tasks involving contact with sewage, untreated or partially treated sludge, or substandard biosolids.

Provide basic hygiene recommendations for workers.

Basic hygiene precautions are important for workers handling biosolids. The following list, originally developed by EPA, provides a good set of hygiene recommendations.

1. Wash hands thoroughly with soap and water after contact with biosolids.
2. Avoid touching face, mouth, eyes, nose, genitalia, or open sores and cuts while working with biosolids.
3. Wash your hands *before* you eat, drink, or smoke and before and after using the bathroom.
4. Eat in designated areas away from biosolids-handling activities.
5. Do not smoke or chew tobacco or gum while working with biosolids.

6. Use barriers between skin and surfaces exposed to biosolids.
7. Remove excess biosolids from footgear prior to entering a vehicle or a building.
8. Keep wounds covered with clean, dry bandages.
9. Thoroughly but gently flush eyes with water if biosolids contact eyes.
10. Change into clean work clothing on a daily basis and reserve footgear for use at worksite or during biosolids transport.
11. Do not wear work clothes home or outside the work environment.
12. Use gloves to prevent skin abrasion.

In addition, NIOSH recommends the following steps to provide a more comprehensive set of precautions for use by employers and employees:

Provide appropriate protective equipment, hygiene stations, and training.

Personal Protective Equipment (PPE).—Appropriate PPE should be provided for all workers likely to have exposure to biosolids. The choices of PPE include goggles, splash-proof face shields, respirators, liquid-repellent coveralls, and gloves. Face shields should be made available for all jobs in which there is a potential for exposure to spray or high-pressure leaks, or aerosolized biosolids during land application. Management and employee representatives should work together to determine which job duties are likely to result in this type of exposure, to conduct appropriate on-site monitoring, and to determine which type of PPE is needed in conjunction with a qualified safety and health professional. If respirators are needed,

a comprehensive program would include respirator fit-testing and training or retraining.

Hygiene and Sanitation.—Hand-washing stations with clean water and mild soap should be readily available whenever contact with biosolids occurs. In the case of workers in the field, portable sanitation equipment, including clean water and soap, should be provided. Cabs should be wiped down and cleaned of residual mud (or settled dust) frequently to reduce potential for exposure to biosolids.

Training.—Periodic training on standard hygiene practices for biosolids workers should be conducted by qualified safety and health professionals to cover issues such as the following:

- Frequent and routine hand washing (the most valuable safeguard in preventing infection by agents present in biosolids), especially before eating or smoking
- The proper use of appropriate PPE, such as coveralls, boots, gloves, goggles, respirators, and face shields
- The removal of contaminated PPE and the use of available on-site showers, lockers, and laundry services
- Proper storage, cleaning, or disposal of contaminated PPE
- Instructions that work clothes and boots should not be worn home or outside the immediate work environment
- Prohibition of eating, drinking, or smoking while working in or around biosolids
- Procedures for controlling exposures to chemical agents that may be in biosolids

Reporting.—Workers should be trained to report potentially work-related illnesses or symptoms to the appropriate supervisory or health care staff. This may aid in the early detection of work-related health effects.

Immunizations.—Ensure that all employees are up-to-date on tetanus-diphtheria immunizations, since employees are at risk of soil-contaminated injuries. Current CDC recommendations do not support hepatitis A vaccination for sewage workers.

Extend good environmental practices to prevent and minimize occupational exposures.

- Where feasible, substituting Class A biosolids could reduce the pathogen exposure risks during land application compared to applying Class B biosolids. Feasibility may be affected by local customer preferences, since the two types of biosolids vary in the nutrient value they provide to end-users.
- Monitor the source material coming from the wastewater treatment facility. Check monitoring results to assure they meet specified Class B or Class A standards prior to land application operations.
- Monitor stored biosolids prior to application to assure that the biosolids are properly stabilized and that unacceptable regrowth or cross-contamination from substandard material has not occurred.
- Where local conditions permit, inject biosolids below the soil or incorporate (thoroughly mix) into tilled soil. This will minimize post-application worker contact with applied biosolids and prevent resuspension into the air during periods of dryness.
- On windy days, avoid spreading or disturbing dry biosolids (e.g., compost) that would create dust.
- On windy days, avoid spreading biosolids by high-pressure spray.
- Avoid unnecessary mechanical disturbance and contact with land-applied Class B biosolids during the period when public access is restricted.
- Equip heavy equipment used at storage and application facilities with sealed, positive-pressure, air-conditioned cabs that contain filtered air-recirculation units.
- Monitor worker exposures when adjusting precautions to address site-specific issues.

For More Information

Additional information about biosolids and preventive measures can be obtained from the following government Web sites:

- Environmental Protection Agency (EPA). *Biosolids*.
www.epa.gov/owm/bio.htm
(This site includes links to professional associations that address biosolids.)
- National Center for Infectious Diseases (NCID). *Viral Hepatitis Resource Center*.
www.cdc.gov/ncidod/diseases/hepatitis
- National Institute for Occupational Safety and Health (NIOSH).
www.cdc.gov/niosh

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Appendix H

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

Troubleshooting Guide

Liberty Soils Biosolids Management Facility

TROUBLESHOOTING GUIDE

1. Biosolids not discharging from the hopper into the blending auger:
 - Verify that power is reaching the unit. Check fuses.
 - Feed auger may be plugged, frozen or worn down.
 - Verify that auger is turning in the correct direction.
 - Check quantity of biosolids in hopper. If there is an insufficient amount of biosolids in the hopper, it will not discharge into the auger. An excess quantity of biosolids will plug the auger.
2. AA not discharging into Mixing Unit:
 - Check operation of transfer conveyor or screw.
 - Check operation of AA feeder.
 - Check position of isolation gate valve at silo.
 - Check level of AA in silo.
 - No air-to-air pads on silo.
 - Not enough air supply to pads.
 - Air pads plugged.
 - Refer to specific equipment manufacturer's manual.
3. Improper dosing of Alkaline Admixture:
 - Check speed of feeder.
 - Check calibration of AA feeder.
 - Check calibration of biosolids feed.
 - Recalculate/check desired dosage rate.
4. Mixing unit not providing good mix.
 - Discharging wet/plasticized material:
 - Check for proper discharge of AA into mixing unit.
 - Consider increasing AA dose rate, not to exceed calculated value.
 - Check solids content of biosolids entering mixing unit.
 - Perform compatibility test to evaluate polymer utilized at wastewater treatment facility.
 - Discharging dry/dusty material:
 - Check for proper discharge of AA into mixing unit.
 - Check level of biosolids in receiving hopper.
 - Consider reducing rate if appropriate.
 - Consider increasing biosolids feed rate to mixer.
5. Low pH immediately after processing (0 hours):
 - Check dose rate of AA for proper setting. Increase rate as appropriate.
 - Modify AA mix to increase lime content if appropriate.
 - Recycle the batch through the process.

6. Low pH (<12) after 2 hours:
 - Recycle the batch through the process.
7. Low pH (<11.5) after 24 hours:
 - Recycle the batch through the process.
8. Finished product has strong ammonia odor:
 - Ensure that odor control system is working properly.
9. Odors on-site are above acceptable limits:
 - Ensure odor control system is working properly.
 - Evaluate modifications to mix designs.
 - Evaluate polymer used for biosolids dewatering.
 - Evaluate biosolids for septicity.
 - Evaluate processing schedules.
 - Evaluate housekeeping procedures.
 - Evaluate need for odor containment.
10. Product compacts and forms clumps during storage:
 - Decrease pile height to reduce compression.
11. Product sticks to transfer vehicles or spreaders:
 - Place sand, straw or sawdust in bottom of truck.
 - Evaluate internal surface of container or trailer for pitting and material compatibility.
 - Coat surfaces where sticking occurs with special paint, epoxy or non-sticking high molecular weight plastic sheets.
12. Odors generated at product storage site:
 - Ensure product is stored in well-drained area.
 - Ensure no standing water is puddling around base of product pile.
 - Ensure precipitation will drain from, not toward, the storage piles.
13. Dust escaping silo while unloading dust into silo:
 - Make sure blower motor is switched on (if applicable) before unloading.
 - Make sure shaker is working properly.
 - Check filter bags.
 - Check relief valve for proper seal.
 - Refer to silo manufacturer's manual.
 - Check conveyors for buildup of material on rollers.
 - Check operation of scraper on conveyor.

Appendix I

EnSol, Inc.



ENGINEERING + ENVIRONMENTAL

Access Road Maintenance

BLACKWOOD INC,
SMP NO. 54900101
APPLICATION FOR MINOR PERMIT REVISION
EXHIBIT 12.1
PROJECT NARRATIVE ADDENDUM

Introduction:

This application is for a Minor Permit Revision to SMP No. 54900101, for the addition of Erosion and Sedimentation Controls (E & S) along Township Road T-567. Township Road T-567 serves as the main access point to the Blackwood Operation. The construction activities proposed under this application for the additional E & S controls will include the following:

- Installation of an upgradient rock lined drainage swale and related berm;
- Replacement of existing cross drains that have become blocked or damaged;
- Installation of additional cross drains in new locations where necessary;
- Installation of rock basin structures for all cross drains; and
- Installation of several downgradient sediment traps and related berms.

As described below, the project will be completed in two construction phases. Phase 1 construction activities will include the E & S controls to be installed in the property areas owned by Blackwood, Inc. (See Exhibit ES-2); whereas, Phase 2 construction activities will include the installation of the E & S controls in the property areas owned by others (i.e., PA Game Commission and Schuylkill County) (See Exhibit ES-1).

Upgradient Drainage Swale:

Presently, a small upgradient drainage swale/earthen berm directs offsite stormwater run-on to the existing roadway cross drains (described below) in problem prone areas. However, this swale/berm cannot always adequately convey the run-on during storm events, and tends to allow the run-on to drain onto or under Township Road T-567; thereby, creating erosion and sediment control problems.

Therefore, in order to prevent offsite stormwater run-on from flowing onto or under Township Road T-567, an upgradient drainage swale will be installed along the road where necessary as illustrated in the typical detail provided on Exhibit ES-3. This swale will be constructed to the dimensions shown on Exhibit ES-3, and will be lined to a depth of 9-inches, with a minimum R-4 Stone. In addition, this structure will likely be constructed as a series of swales (rather than one continuous swale) that will function to convey the water in the most problem prone areas for short distances to low points along the upgradient side of the road where roadway cross drains will be installed. If necessary, check dams within the swale will be installed every 100 feet using R-3 stone, or as conditions warrant to slow the velocity of the water. In addition, the existing upgradient berm will be improved and/or reconstructed as necessary according to the typical detail shown on Exhibit ES-3. Finally, it should be noted that the upgradient drainage swale will not be used to collect any onsite stormwater runoff from the township road.

Roadway Cross Drains:

As mentioned above, all water collected by the new upgradient drainage swale will be conveyed to low points along the southern side of the road where roadway cross drains will be installed. The cross drains will convey the water from the southern (upgradient) side of the township road to the northern (downgradient) side of the road. In this regard, and as shown on Exhibits ES-1 and ES-2, a number of drains have been previously installed along the road, but have become blocked by debris and/or have been damaged over the years. As a result, these cross drains will be removed and replaced with new 15-inch corrugated metal pipes. Also, and as shown on Exhibits ES-1 and ES-2, additional 15-inch corrugated metal pipes may be installed as necessary between the locations of the existing pipes to provide additional drainage of upgradient runoff in the most problem prone areas. Please note that this is a typical scenario that may not be required in all areas.

Rock Basin Structures:

At the termination point of the roadway cross drains along the northern (downgradient) side of the township road, rock basin structures will be installed in order to dissipate the flow energy of the conveyed runoff, and ultimately discharge the water back into the natural drainage pattern under controlled conditions. These structures will be constructed to the dimensions shown on Exhibit ES-3, and will be maintained as needed to ensure their proper operation.

Downgradient Sediment Traps:

In conjunction with the installation of the upgradient controls discussed above, and as requested by the PA DEP, a series of downgradient sediment traps will be installed for the purpose of collecting sediment laden runoff from the township road. Since the traps will be installed in the most problem prone areas, they have been designed to handle short runs of roadway up to 150 feet in length and 30 foot in width. These controls will be installed along the northern (downgradient) side of the road and will be constructed to the design dimensions shown in Exhibit ES-3. Also, there is no new discharge anticipated from these structures to a receiving stream. Nonetheless, each structure will be equipped with any emergency spillway, and will be monitored as required under the existing NPDES permit should a discharge occur.

Where possible, these controls will take advantage of low points along the downgradient side of the road and may be constructed near the outlets of the roadway cross drains. In addition, each trap will be constructed below grade as much as possible. However, in no case will these structures mix the water collected in the traps with the upgradient water conveyed to the cross drains and ultimately the rock basin structures. Finally, and if necessary, a berm along the downgradient side of the roadway will be installed according to the design detail shown on Exhibit ES-3, to direct runoff from the roadway to the traps in the most problem prone areas.

SEDIMENT TRAP DESIGN
(Worst Case)

Upgrade Drainage Area = 0.1± acres (worst case)

Storage Capacity Required:

0.1 acres x 2,000 cubic feet/acre = 200 cubic feet

Storage Capacity Provided:

Useful Depth = 3 feet

Using computer analysis, the capacity provided = 420 cubic feet

NOTES:

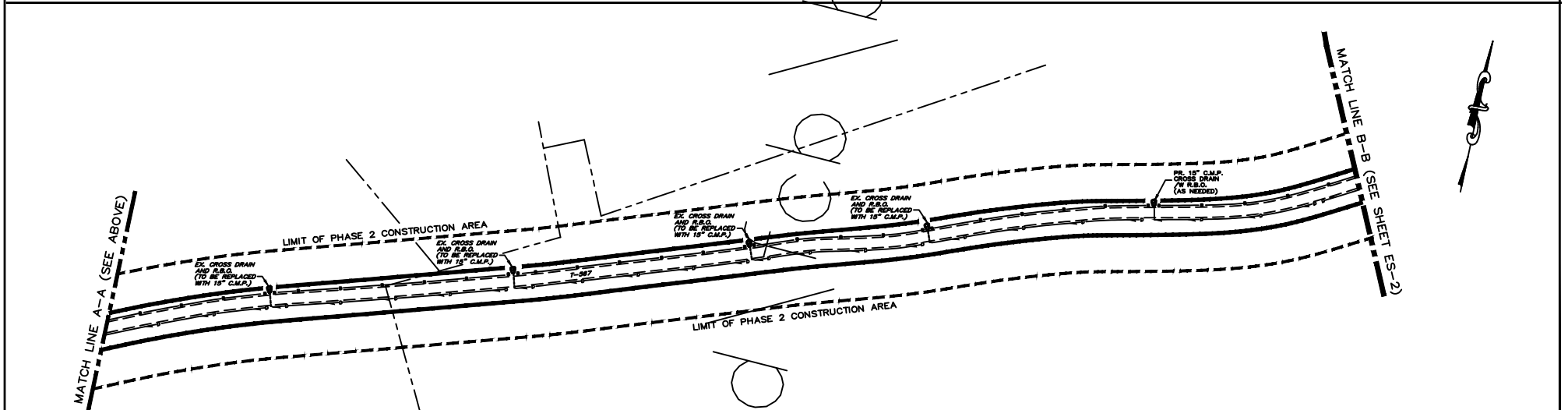
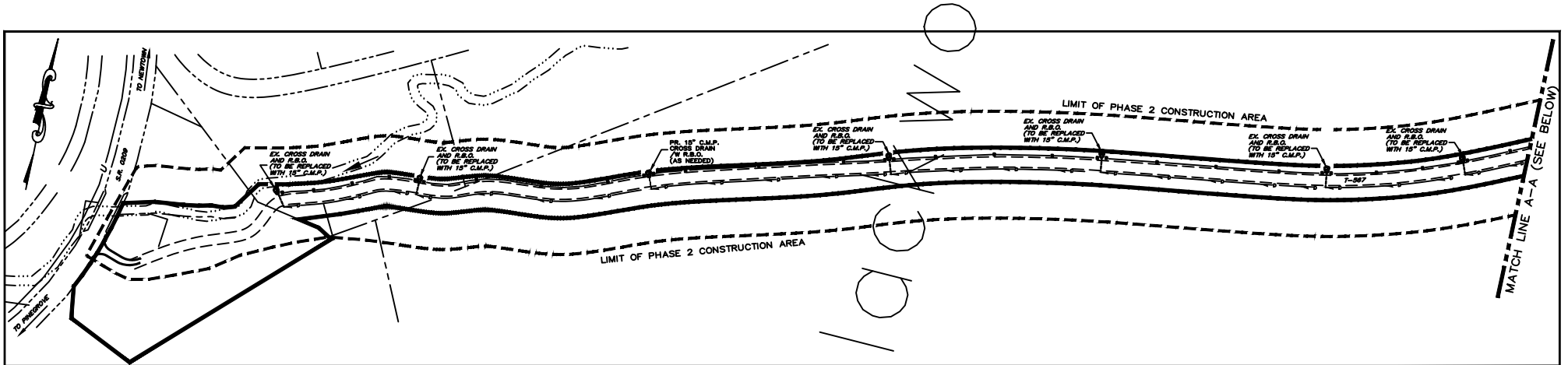
1. Sediment traps will be constructed, as much as possible, below ground. Where this cannot be accomplished, the minimum three-foot depth shall be from the lowest berm to the floor.
2. Each sediment trap will be constructed with an emergency spillway.
3. A typical sediment trap detail is included with Exhibit ES-3.
4. All traps shall be inspected either weekly or after a rainfall runoff event, and cleaned when the depth of sediment reaches 1/3 the depth of the device.

Phased Construction of E & S Controls:

As mentioned in the introduction, installation of the E & S controls will be conducted in two phases. The first phase (termed Phase 1) will be for the installation of the E & S controls along the township road in the areas of the permit boundary owned by Blackwood, Inc. This area has been indicated on Exhibit ES-2 included with this application, and represents the area of most concern to be initially addressed at this time. The second phase (termed Phase 2) will be for the installation of the E & S controls along the township road in the areas of the permit boundary owned by others.

These areas include property owned by the Pennsylvania Game Commission and Schuylkill County, and have been indicated on Exhibits ES-1 and ES-2. In this regard, Blackwood Inc. is currently in the process of notifying the above mentioned landowners of the proposed activities. Any requests or concerns by these landowners in regard to the proposed activities will be addressed by Blackwood, Inc. as necessary.

General operating procedures to be employed during the construction activities will include minimizing the disturbed areas, use of silt fencing as necessary, temporary vegetative stabilization of any area left idle for more than 20 days, and immediate permanent stabilization of completed areas. In addition, all E & S controls will be regularly maintained as necessary to ensure proper operation. The channel linings, pipes and sediment traps should be repaired or replaced as needed, and cleaned when the depth of sediment reaches one third the height of the device. Finally, it should be noted that the entire system, once completed, will be visually monitored for several months to determine if the installed controls are functioning adequately, or if additional correctional measures are required. Should additional measures be required, an Application for Minor Permit revision will be submitted to the PA DEP, Pottsville District Mining Office.



LEGEND

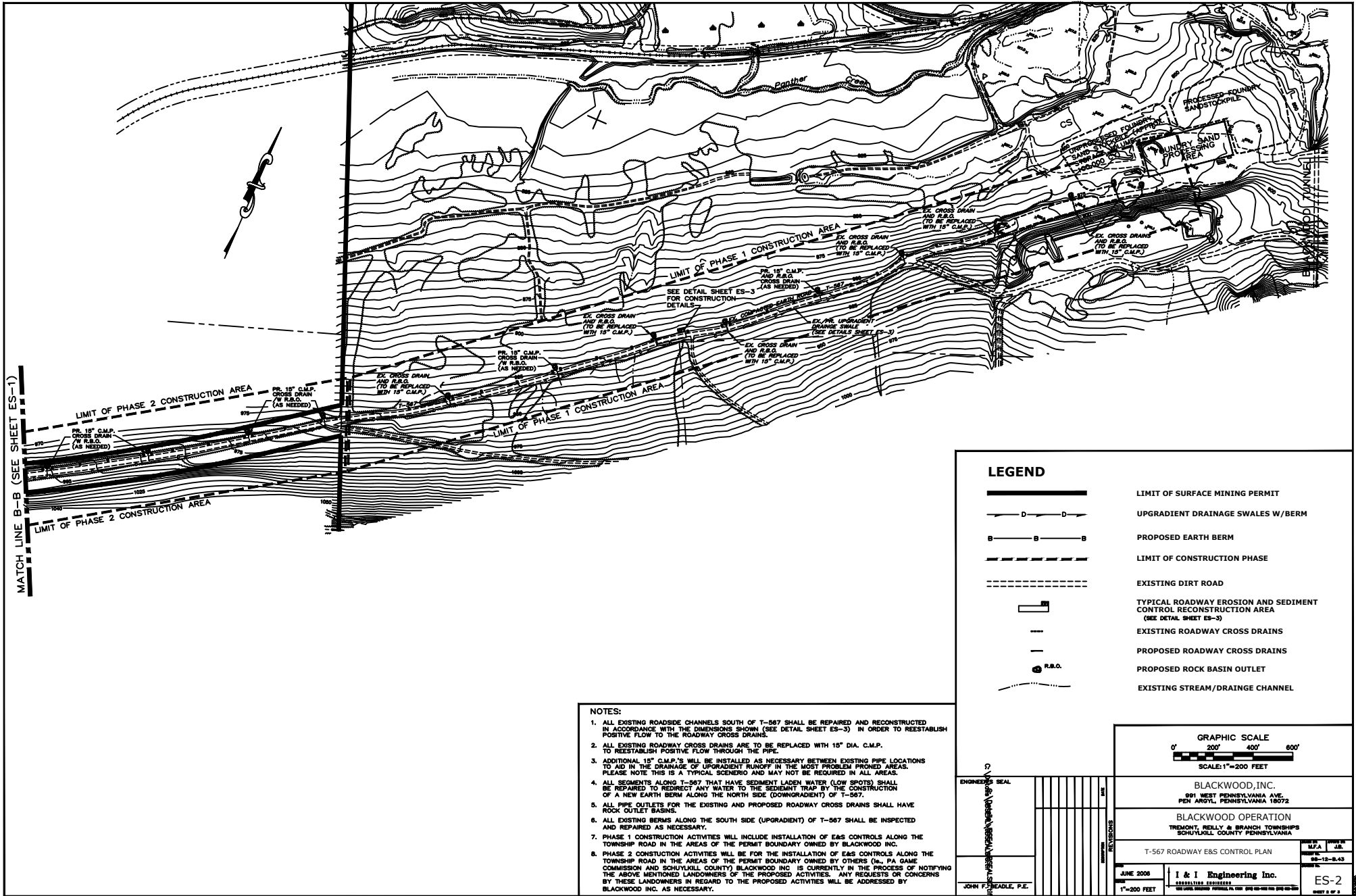
	LIMIT OF SURFACE MINING PERMIT
	UPGRADIENT DRAINAGE SWALES W/ BERM
	PROPOSED EARTH BERM
	LIMIT OF CONSTRUCTION PHASE
	EXISTING DIRT ROAD
	TYPICAL ROADWAY EROSION AND SEDIMENT CONTROL RECONSTRUCTION AREA (SEE DETAIL SHEET ES-3)
	EXISTING ROADWAY CROSS DRAINS
	PROPOSED ROADWAY CROSS DRAINS
	PROPOSED ROCK BASIN OUTLET
	EXISTING STREAM/DRAINAGE CHANNEL

NOTES:

1. ALL EXISTING ROADSIDE CHANNELS SOUTH OF T-567 SHALL BE REPAIRED AND RECONSTRUCTED IN ACCORDANCE WITH THE DIMENSIONS SHOWN (SEE DETAIL SHEET ES-3) IN ORDER TO REESTABLISH POSITIVE FLOW TO THE ROADWAY CROSS DRAINS.
2. ALL EXISTING ROADWAY CROSS DRAINS ARE TO BE REPLACED WITH 15" DIA. C.M.P. TO REESTABLISH POSITIVE FLOW THROUGH THE PIPE.
3. ADDITIONAL 15" C.M.P.'S WILL BE INSTALLED AS NECESSARY BETWEEN EXISTING PIPE LOCATIONS TO AID IN THE DRAINAGE OF UPGRADIENT RUNOFF IN THE MOST PROBLEM PRONE AREAS. PLEASE NOTE THIS IS A TYPICAL SCENARIO AND MAY NOT BE REQUIRED IN ALL AREAS.
4. ALL SEGMENTS ALONG T-567 THAT HAVE SEDIMENT LAMEN WATER (LOW SPOTS) SHALL BE REPAIRED TO REDIRECT ANY WATER TO THE SEDIMENT TRAP BY THE CONSTRUCTION OF A NEW EARTH BERM ALONG THE NORTH SIDE (DOWNGRADIENT) OF T-567.
5. ALL PIPE OUTLETS FOR THE EXISTING AND PROPOSED ROADWAY CROSS DRAINS SHALL HAVE ROCK OUTLET BASINS.
6. ALL EXISTING BERMS ALONG THE SOUTH SIDE (UPGRADIENT) OF T-567 SHALL BE INSPECTED AND REPAIRED AS NECESSARY.
7. PHASE 1 CONSTRUCTION ACTIVITIES WILL INCLUDE INSTALLATION OF E&S CONTROLS ALONG THE TOWNSHIP ROAD IN THE AREAS OF THE PERMIT BOUNDARY OWNED BY BLACKWOOD INC.
8. PHASE 2 CONSTRUCTION ACTIVITIES WILL BE FOR THE INSTALLATION OF E&S CONTROLS ALONG THE TOWNSHIP ROAD IN THE AREAS OF THE PERMIT BOUNDARY OWNED BY OTHERS (i.e., PA GAME COMMISSION AND SCHUYLKILL COUNTY). BLACKWOOD INC. IS CURRENTLY IN THE PROCESS OF NOTIFYING THE ABOVE MENTIONED LANDOWNERS OF THE PROPOSED ACTIVITIES. ANY REQUESTS OR CONCERNS BY THESE LANDOWNERS IN REGARD TO THE PROPOSED ACTIVITIES WILL BE ADDRESSED BY BLACKWOOD INC. AS NECESSARY.

ENGINEER'S SEAL	DATE	REVISIONS
JOHN F. BEADLE, P.E.		

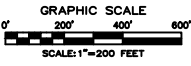
GRAPHIC SCALE 0' 200' 400' 600' SCALE: 1"=200 FEET	
BLACKWOOD, INC. 801 WEST PENNSYLVANIA AVE. PEN ARGYL, PENNSYLVANIA 18072	
BLACKWOOD OPERATION TREMONT, REBELLY & BRANCH TOWNSHIPS SCHUYLKILL COUNTY PENNSYLVANIA	
T-567 ROADWAY E&S CONTROL PLAN	
JUNE 2008 1"=200 FEET	I & I Engineering Inc. CONSULTING ENGINEERS 1000 N. MARKET ST. PHILADELPHIA, PA 19107 ES-1 SHEET 1 OF 2



- NOTES:
1. ALL EXISTING ROADSIDE CHANNELS SOUTH OF T-567 SHALL BE REPAIRED AND RECONSTRUCTED IN ACCORDANCE WITH THE DIMENSIONS SHOWN (SEE DETAIL SHEET ES-3) IN ORDER TO REESTABLISH POSITIVE FLOW TO THE ROADWAY CROSS DRAINS.
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 5. ALL PIPE OUTLETS FOR THE EXISTING AND PROPOSED ROADWAY CROSS DRAINS SHALL HAVE ROCK OUTLET BASINS.
 6. ALL EXISTING BERMS ALONG THE SOUTH SIDE (UPGRADIENT) OF T-567 SHALL BE INSPECTED AND REPAIRED AS NECESSARY.
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LEGEND

- [Solid line] LIMIT OF SURFACE MINING PERMIT
- [Line with 'D' markers] UPGRADIENT DRAINAGE SWALES W/BERM
- [Dashed line] PROPOSED EARTH BERM
- [Dashed line] LIMIT OF CONSTRUCTION PHASE
- [Dashed line] EXISTING DIRT ROAD
- [Box symbol] TYPICAL ROADWAY EROSION AND SEDIMENT CONTROL RECONSTRUCTION AREA (SEE DETAIL SHEET ES-3)
- [Line with dots] EXISTING ROADWAY CROSS DRAINS
- [Line with dots] PROPOSED ROADWAY CROSS DRAINS
- [Circle with dot] PROPOSED ROCK BASIN OUTLET
- [Wavy line] EXISTING STREAM/DRAINAGE CHANNEL



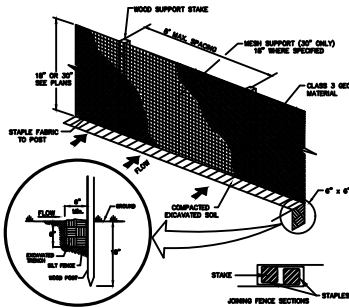
BLACKWOOD, INC.
801 WEST PENNSYLVANIA AVE.
PEN ARGYL, PENNSYLVANIA 18072

BLACKWOOD OPERATION
TREMONT, RUBY & BRANCH TOWNSHIPS
SCHUYLKILL COUNTY PENNSYLVANIA

T-567 ROADWAY E&S CONTROL PLAN

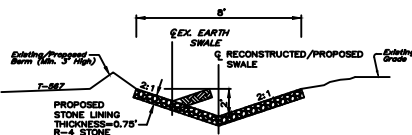
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JOHN F. HEADLE, P.E.				

JUNE 2008	I & I Engineering Inc.	ES-2
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- NOTES:
1. POST SPACING SHALL BE 8 FT. MAX. EMBEDDED 18" INTO GROUND.
 2. EXTEND GEOTEXTILE MATERIAL 6" INTO EXCAVATED TRENCH.
 3. FILTER FABRIC FENCE MUST BE INSTALLED AT LEAST 48 HOURS BEFORE THE FENCE SECTION MUST EXTEND AT LEAST 10 FEET UPLOPE AT 45 DEGREES TO THE HAN FENCE ALONGSIDE.
 4. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE ABOVE GROUND HEIGHT OF FENCE.
 5. ANY FENCE SECTION THAT HAS BEEN UNDERMINED OR TOPPED MUST BE IMMEDIATELY REPLACED WITH A ROCK FILTER FABRIC OUTLET DETAIL. THIS SHEET.

SILT BARRIER FENCE DETAILS
NO SCALE



**EXISTING/PROPOSED
UPGRADIENT DRAINAGE SWALE DETAIL**
NO SCALE

- NOTES:
1. THE EXISTING EARTH SWALE WILL BE REPLACED AS NECESSARY WITH A STONE LINED SWALE.
 2. THIS STRUCTURE WILL LIKELY BE A SERIES OF SWALES RATHER THAN ONE CONTINUOUS SWALE THAT WILL FUNCTION TO CONVEY THE WATER FOR SHORT DISTANCES TO LOW POINTS ALONG THE UPGRADIENT SIDE OF T-567 WHERE ROADWAY CROSS DRAINS WILL BE INSTALLED.

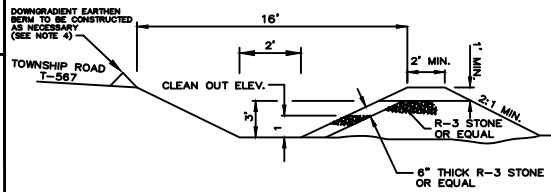
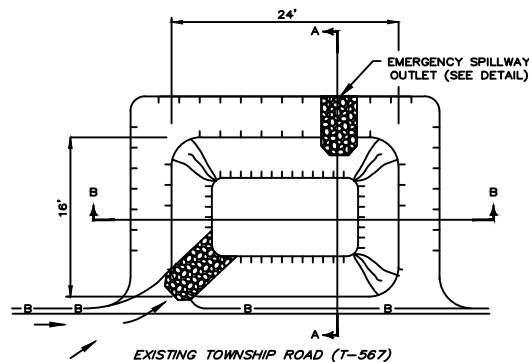


TYPICAL CHECK DAM DETAIL
NO SCALE

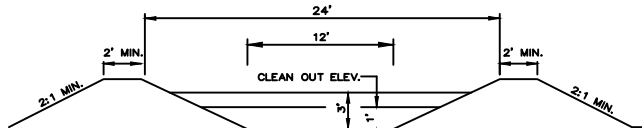
NOTE:
INSTALL CHECK DAMS EVERY 100 FEET WITHIN THE NEW UPGRADIENT DRAINAGE SWALE OR AS NECESSARY.



TYP. UPGRADIENT/DOWNGRADIENT EARTH BERM DETAIL
NO SCALE



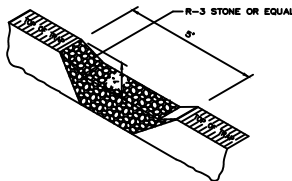
SECTION A-A
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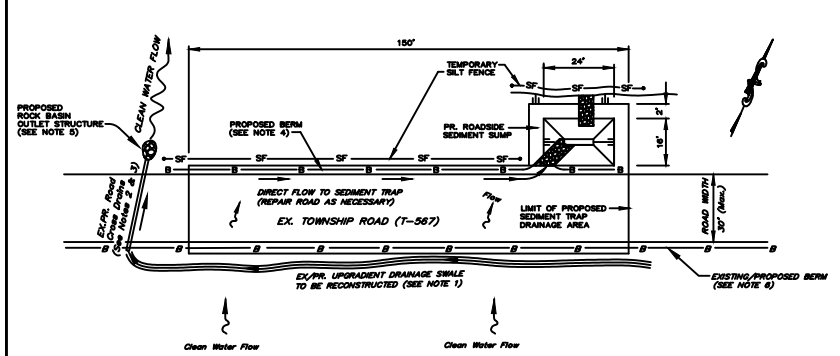
SECTION B-B
No Scale

TYPICAL SEDIMENT TRAP DETAIL
NO SCALE

- NOTES:
1. ALL SEDIMENT TRAPS WILL BE CLEANED AS NEEDED TO PROVIDE 2/3 VOLUME FOR STORAGE CAPACITY.
 2. ALL TRAPS WILL BE BUILT BELOW GRADE AS SITE TOPOGRAPHY ALLOWS.



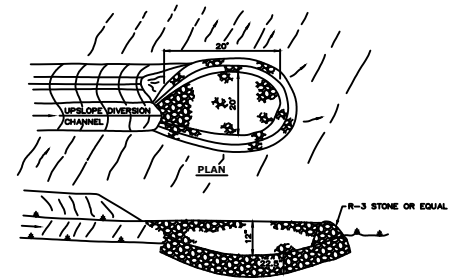
SPILLWAY OUTLET DETAIL
NO SCALE



**TYPICAL ROADWAY (T-567)
EROSION & SEDIMENTATION CONTROL PLAN DETAIL**
NO SCALE

NOTES:

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**SECTION
ROCK BASIN TYPICAL DETAIL**
NO SCALE

- NOTES:
1. ROCK BASIN WILL BE UTILIZED AT ALL ROADWAY CROSS DRAIN OUTLETS.

BLACKWOOD, INC. 891 WEST PENNSYLVANIA AVE. PEN ARGYL, PENNSYLVANIA 18072		BLACKWOOD OPERATION TREMONT, REILLY & BRANCH TOWNSHIPS SCHUYLKILL COUNTY PENNSYLVANIA	
T-567 ROADWAY E&S CONTROL DETAILS		I & I Engineering Inc.	
JUNE 2008		ES-3	
JOHN F. BEADLE, P.E.		AS NOTED	

Appendix J

EnSol, Inc.

ENGINEERING + ENVIRONMENTAL

Product Information & Use Guides



Product Information & Use Guide for Liberty's PAG-07 Product

An exceptional quality biosolids approved for distribution in New York and Pennsylvania

The "PAG-07" material is made from stabilized municipal biosolids and quicklime. These ingredients are blended together in a patented pasteurization Process to Further Reduce Pathogens (PFRP), as required by United States Environmental Protection Agency (EPA), New York State Department of Environmental Conservation (DEC), and Pennsylvania Department of Environmental Protection (DEP), prior to public distribution. "**Exceptional Quality Biosolids**" is sewage sludge as defined by Title 25 Pa. Code §271.1 that meets the pollutant quality standards listed in Title 25 Pa. Code §271.914(b)(1) and (3), one of the **Class A** pathogen reduction alternatives listed in §271.932(a), and one of the vector attraction reduction options listed in §271.933(b)(1)-(8). Nutrient values provided here.

Working density: 52-62 lb/cubic foot
Solids content: 43% average

	Dry Weight	As Delivered
Total Neutralizing Value*	59%	26%
Percent Passing 20 Mesh Sieve**	---	70%
Percent Passing 100 Mesh Sieve**	---	39%
Minimum Fineness Score**	57%	57%
Effective Neutralizing Value	34%	15%
Average Calcium	24%	11%
Average Magnesium	0.6%	0.3%
Average Sulfur	1.0%	0.5%

*as calcium carbonate equivalence

**for the quicklime admixture

THE PAG-07 MATERIAL CONTAINS THE FOLLOWING QUANTITIES OF MAJOR NUTRIENTS

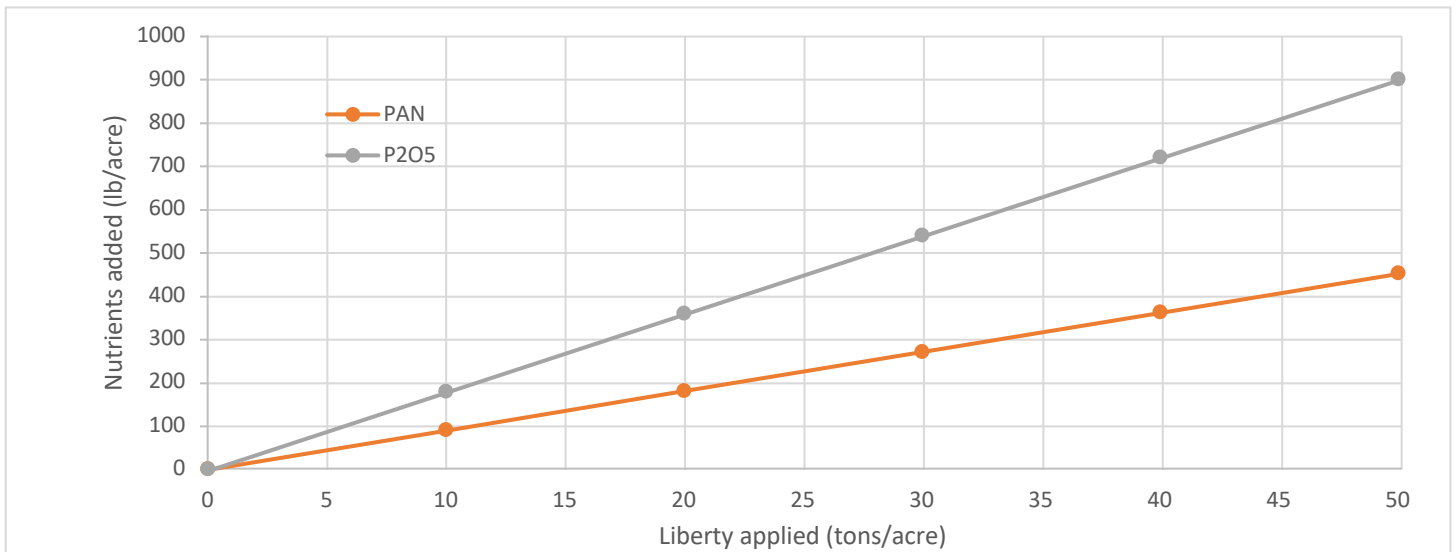
Average quantities of nutrients in as-delivered material

Nutrient	Percent	Lbs / Ton
Organic Nitrogen (N)	1.3	25.7
NH ₄ -N	0.07	1.4
First year plant available Nitrogen (PAN)*	0.45	9.1
Phosphorus (as P ₂ O ₅)	0.9	18
Soluble Potash (as K ₂ O)	0.06	1.1

*Assumes 30% mineralization of the Organic N in the first growing season application plus all NH₄-N (therefore incorporation).

RECOMMENDED APPLICATION RATE BASED ON CROP NITROGEN REQUIREMENT

Amount of first year Plant Available N (PAN) and P (P2O5) added with Liberty's PAG-07 application



It is recommended that soils be tested for liming requirement and to base Liberty application rates on the test results. Application rates are based on lime requirements, then crop nitrogen needs. It is recommended that spreading be done at the lower rate. For optimum crop yields, supplement with other fertilizers only if necessary. Liberty may not be applied at a rate greater than the agronomic loading rate unless a greater rate is approved by the DEP in writing. Use of this product in a manner inconsistent with this label is prohibited.

The Liberty Exceptional Quality Biosolids-Derived Material processed in accordance with the PA DEP Processing Permit No. 603455 and distributed in accordance with PA DEP Permit No. PAG-07-2203. ("PAG-07" or "Product") is manufactured by Liberty Processing & Soils LLC at the Liberty Processing & Soils Facility located at 12 Tremont Road, Tremont, PA 17981.

Questions? Please contact a Liberty Representative.

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LAND APPLICATION, STORAGE REQUIREMENTS and EXCEPTIONS for PAG-07 in Pennsylvania (“Product”)

Excerpted from PA DEP Permit No. PAG-07 2203

LAND APPLICATION REQUIREMENTS (Permit No. PAG-07-2203 SECTION E.)

1. Exceptional quality biosolids may not be applied to the land at a rate that is greater than the agronomic rate, unless a greater application rate is approved by DEP in writing for land reclamation activities.
2. Agronomic rates must be calculated in accordance with the most current version of DEP's Biosolids Training Manual. The Penn State Agronomy Guide, documented yields, or other applicable information sources may be used to determine appropriate yields and nutrient needs for the purposes of calculating application rates.
3. For bulk agricultural activities that are within the direct control of the permittee or agent for the permittee, the permittee must notify the appropriate regional DEP office in writing a minimum of 24 hours prior to commencing land application activities for the first time. This notification can be accomplished via e-mail, facsimile, or mail. The notification must contain the following information:
 - a. Name, address, and phone number of permittee(s)
 - b. General permit number(s)
 - c. Name, address, and phone number of land applier
 - d. Name and address of land application site (the address must be the location of the site and not a PO Box or Rural Route number)
4. Exceptional quality biosolids land applied to a reclamation site shall be incorporated into the soil within 24 hours of land application.
5. [...] If DEP determines that a specific management practice or general requirement is necessary to protect the environment from reasonably anticipated adverse effects, DEP will notify the permittee of the applicable requirements in the letter granting approval of coverage under this General Permit.

STORAGE REQUIREMENTS (Permit No. PAG-07-2203 SECTION G.)

Bulk storage activities at land application sites within the direct control of the permittee or agent for the permittee must follow best management practices (BMP) to minimize and control conditions that would create a public or environmental hazard. BMPs should include:

1. Minimizing run-on and runoff from the storage area.
2. Storage should not be conducted within 100 feet of a perennial stream, within 33 feet of an intermittent stream, or within 50 feet of a property boundary, unless it is conducted within an enclosed building or other structure. Measures should be taken to minimize and control odors and dust emissions from the storage areas.
3. If the storage area requires earth disturbance, such as in the construction of berms, the applicable BMPs as indicated by Chapter 102 should be utilized. These BMPs can be part of or be an amendment to the existing farm conservation or erosion and sedimentation plan. If no plan exists, a Chapter 102 erosion and sedimentation plan may be required.
4. Refer to USEPA's Guide to Field Storage of Biosolids, EPN832-B-00-007 (July 2000) for additional information on appropriate BMPs.
5. Storage of bulk exceptional quality biosolids within the direct control of the permittee or agent for the permittee cannot be stored longer than 1 year unless otherwise approved by DEP.

EXCEPTIONS (Permit No. PAG-07-2203 SECTION 3.)

The following beneficial uses of biosolids are not covered by this General Permit:

- a) Land application of biosolids for beneficial use in watersheds classified as “Exceptional Value (EV)” in Title 25 Pa. Code Chapter 93;
- b) Land application of biosolids for beneficial use that is not, or will not be in compliance with any of the requirements, terms or conditions of this General Permit.
- c) Land application of biosolids for beneficial use that was produced by a person who has failed and continues to fail to comply or has shown a lack of ability or intention to comply with a regulation, permit, schedule of compliance or order issued by DEP;
- d) Land application of biosolids for beneficial use that DEP determines an individual permit is required to ensure compliance with the Clean Water Act, the Clean Stream Law, or the Solid Waste Management Act and rules and regulations promulgated thereto;
- e) The beneficial use of biosolids mixed with residual waste, include food processing waste, unless residual waste is authorized for beneficial use via a general permit or determined to be a coproduct as stated in Section A.6. of this General Permit; and

DEP may deny approval of coverage under this General Permit and require submittal of an application for an individual permit based on a review of the NOI or other information submitted or otherwise available to DEP.



Product Information & Use Guide for Liberty Soils EQ-054

An Exceptional Quality Biosolids-Derived Material

The EQ-054 material is made from stabilized municipal biosolids, coal ash and quicklime. These ingredients are blended together in a patented pasteurization Process to Further Reduce Pathogens (PFRP), as required by United States Environmental Protection Agency (EPA) and Pennsylvania Department of Environmental Protection (DEP), prior to public distribution.

The EQ-054 material is authorized for use as:

1. a soil additive or substitute,
2. agricultural liming material,
3. a horticultural amendment,
4. a fertilizer in normal farming operations or on disturbed lands for reclamation purposes, or
5. a component of the value-added topsoil material at locations other than the processing facility.

Working density: 52-62 lb/cubic foot
Solids content: 61.3% average

	<u>Dry Weight</u>	<u>As Delivered</u>	
Total Neutralizing Value	23.2%	14.3%	(as calcium carbonate equivalence)
Minimum Fineness Score	47%	47%	
Effective Neutralizing Value	22.6%	13.9%	
Average Calcium	12.4%	7.6%	
Average Magnesium	0.8%	0.8%	
Average Sulfur	0.5%	0.3%	

THE EQ-054 MATERIAL CONTAINS THE FOLLOWING QUANTITIES OF MAJOR NUTRIENTS

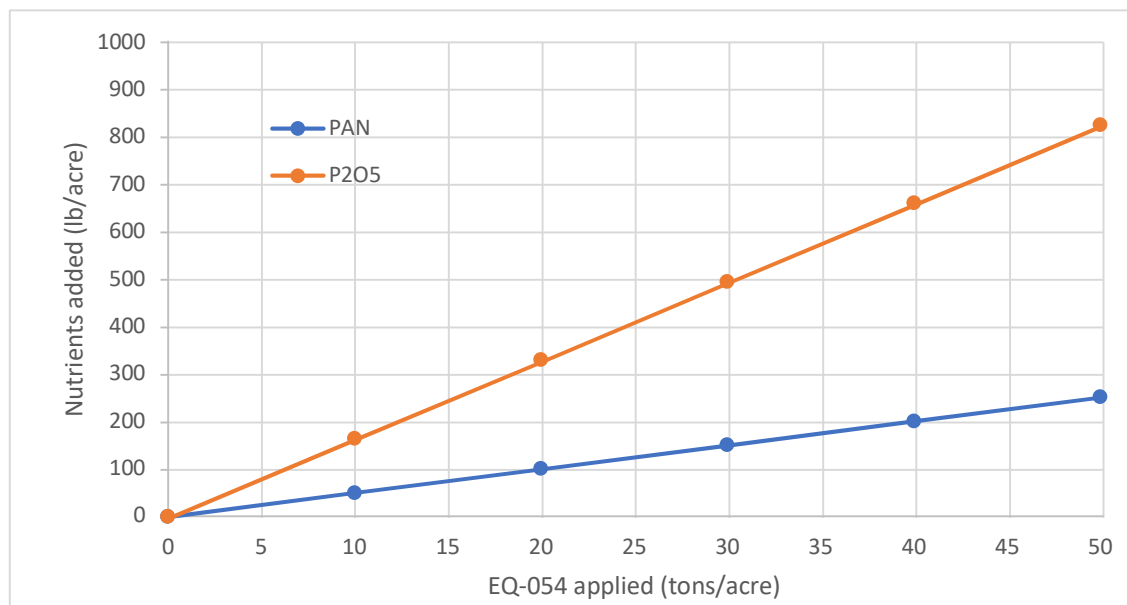
Average quantities of nutrients in as-delivered material

Nutrient	Percent	Lbs / Ton
Total Nitrogen (N) (mostly organic)	0.84	16.8
First year plant available Nitrogen (PAN)*	0.25	5.0
Phosphorus (as P ₂ O ₅)	0.82	17
Soluble Potash (as K ₂ O)	0.121	2.4

*assumes 30% mineralization of total N in first growing season following application

RECOMMENDED APPLICATION RATE BASED ON CROP NITROGEN REQUIREMENT

Amount of first year Plant Available N (PAN) and P (P2O5) added with EQ-054 application



It is recommended that soils be tested for liming requirement and to base product application rates on the test results. Application rates are based on lime requirements, then crop nitrogen needs. It is recommended that spreading be done at the lower rate. For optimum crop yields, supplement with other fertilizers only if necessary. Product may not be applied at a rate greater than the agronomic loading rate unless a greater rate is approved by the DEP in writing. Use of this product in a manner inconsistent with this label is prohibited.

The Liberty Soils' Exceptional Quality Biosolids-Derived Material processed in accordance with the DEP Processing Permit No. 603455 and distributed in accordance with DEP Permit No. WMGM054 ("EQ-054" or "Product") is manufactured by Liberty Processing & Soils, LLC at the Liberty Soils Biosolids Management Facility located at 12 Tremont Road, Tremont, PA 17981.

Contact: Sarah Hrywnak
 Asset Manager
shrywnak@third-oak.com
 716-628-5656

Application & Storage Requirements for EQ-054 (“Product”)

In accordance with a PA DEP General Permit No. WMGM054

BEST MANAGEMENT PRACTICES

1. The product is high in ammonia odor. In an effort to protect surrounding communities, please apply in remote areas and spread within (7) seven days of receiving material.
2. The product is more odoriferous during warm, humid months. If the application site is extremely odor sensitive, please do not apply during the months of June, July, August and September.

ACTIVE LAND APPLICATION SITE

1. Product application rate must not exceed the agronomic requirements of the vegetation grown, unless approved by the PADEP on a case-specific basis. The loading rate must take into account other materials (animal manure, etc.) that are applied to the land.
2. The product shall not be accumulated speculatively or stored for longer than (1) one year.
3. The product must not be stored within:
 - a. 11” of the seasonal high water table or 3.3’ of the regional ground water table.
 - b. 33’ of an intermittent stream.
 - c. 50’ of a property line unless the owner demonstrates one of the following:
 - i. That storage takes place in an enclosed facility.
 - ii. That the owner of the adjacent property has provided a written waiver consenting to the facility being closer than 50 feet. The waiver shall be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver from the owner.
 - d. 100’ of a perennial stream, exceptional value wetland, the edge of a sinkhole or area draining into a sinkhole or the perimeter of an unlined depression.
 - e. 300’ of a water source or occupied dwelling, unless the current owner has provided a written waiver consenting to the activities closer than 300 feet;
 - f. 300 yards measured horizontally from the property line unless a written waiver is obtained from the current property owner of:
 - i. A building owned by a school district or parochial school and used for instructional purposes.
 - ii. A park.
 - iii. A playground.
4. The product must not be stored in an area:
 - a. without an implemented erosion and sedimentation control plan or a farm conservation plan.
 - b. where the storage would adversely affect the habitat of a known endangered or threatened species.
5. No ponding of run-on or run-off is allowed. Any undrained depressions accumulating run-on or run-off shall be regraded or otherwise corrected within 24 hours of detection.
6. The amount of product stored at the active land application site shall not exceed the calculated loading or application rate needed for upcoming growing season for the permitted application site.
7. No product may be stored on flooded land or on land with a slope greater than 3%.

AS INGREDIENT OF A VALUE-ADDED TOPSOIL MATERIAL [VATM]

The general permit authorizes the sale, distribution, or otherwise giving way, in a bag or other container, a treated and finished exceptional quality biosolids-derived material as an ingredient or a component of the value-added topsoil material produced off-site provided that all requirements below are met:

1. There is market or disposition for the material;
2. The value-added material shall be transferred in good faith as a commodity in trade for use in lieu of a commercially available product; and
3. The processing (i.e., blending, combining) of value-added topsoil material is authorized under a separate municipal waste processing permit issued by the Department unless:
 - a. The amount of exceptional quality biosolids-derived material received for the production of value-added topsoil does not exceed 1,000 cubic yards;
 - b. The finished value-added material produced and stored by the processing operation does not exceed 7,500 cubic yards; and
 - c. The pre-and post-processing of value-added topsoil material is not accumulated speculatively.

In addition, the following requirements must be met by the person responsible for the processing of value-added topsoil:

1. Storage of the exceptional quality biosolids-derived material authorized for beneficial use under this general permit and the finished value-added topsoil material cannot be stored for more than 1 year at the distribution site unless otherwise specially approved, in writing, by the Department.
2. The processing of value-added topsoil material cannot be conducted in a manner that will create conditions that are conducive to the harboring, breeding, or attraction of vectors.
3. Structures shall be designed, built, and maintained for the storage area of exceptional quality biosolids-derived material authorized for beneficial use under this general permit to minimize storm water run-on and run-off from storage and processing areas and to prevent discharges into the surface waters of the Commonwealth.
4. Measures shall be utilized to curtail or lessen odors and dust emissions from storage and processing areas.
5. Transportation of the exceptional quality biosolids-derived material authorized for beneficial use under this general permit intended for the processing of value-added topsoil material shall comply with 25 Pa. Code Chapter 285 (relating to storage, collection and transportation) and the Waste Transportation Safety Act, 27 Pa. C.S. §§6201 -6209.
6. The processing and storage of exceptional quality biosolids-derived material authorized for beneficial use under this general permit cannot be conducted within the isolation distances required in Condition C(7)(e) below.
7. The person responsible for the processing operations shall prepare and maintain daily records of the amount (in pounds (lbs)) or volume (cubic yard (yd³)) of the exceptional quality biosolids-derived material received and finished value-added topsoil material produced, sold, given away, or otherwise distributed.
8. If the processing, storage or transportation activities are performed in a way that adversely impacts the environment or public safety, the exceptional quality biosolids-derived material authorized under this general permit that is received and the value-added topsoil material (pre-and-post processing) produced will be considered wastes and the Department has the right to take enforcement against the facility conducting the activities to immediately cease operations, take corrective action, apply for a processing permit, and/or meet all applicable requirements under Chapter 285 (relating to Storage and Transportation of Municipal Waste) and the Waste Transportation Safety Act, 27 Pa. C.S. §§6201 -6209. The Department may also assess fines and penalties.

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Nolan Perin
Blackwood Inc
PO Box 639
Wind Gap, PA 18091



9590 9402 2757 6351 2785 73

99 0710 5270 2013 1647 14

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

Linda Bray

☐ Agent☒ Addressee

B. Received by (Printed Name)

Linda Bray

C. Date of Delivery

1/16/25

D. Is delivery address different from item 1? ☐ YesIf YES, enter delivery address below: ☐ No

BY:

3. Service Type

- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☐ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Insured Mail
- ☐ Insured Mail Restricted Delivery (over \$500)

- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

JAN 21 2025

Domestic Return Receipt

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1. Article Addressed to:

Robert Butensky
Reilly Township Chairman
11 St. Mary Ave, PO Box 55
Branchdale, PA 17923



9590 9402 2757 6351 2785 66

589 0710 5270 2013 1646 91

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

Butensky

☒ Agent☒ Addressee

B. Received by (Printed Name)

X Butensky

C. Date of Delivery

D. Is delivery address different from item 1? ☐ YesIf YES, enter delivery address below: ☐ No

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JAN 16 2025

3. Service Type

- ☐ Adult Signature
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- ☐ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
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- ☐ Priority Mail Express®
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1. Article Addressed to:

County Commissioners
Schuylkill County
401 North Second St
Pottsville PA 17901



9590 9402 2757 6351 2786 03

2. Article Number (Transfer from service label)

9589 0710 5270 2013 1647 07

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

Connie Newman

☒ Agent☐ Addressee

B. Received by (Printed Name)

Connie Newman

C. Date of Delivery

1/17/25

D. Is delivery address different from item 1? ☐ YesIf YES, enter delivery address below: ☐ No

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JAN 21 2025

BY:

3. Service Type

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- ☐ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
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Domestic Return Receipt