pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**New/Renewal**	Application No.	**PA0266124**
Facility Type	**Non-Municipal**	APS ID	**1048057**
Major / Minor	**Minor**	Authorization ID	**1370741**

Applicant and Facility Information

Applicant Name	**2000 Perkiomen Ave LLC**	Facility Name	**Green Hills Estates STP**
Applicant Address	503 Hanley Lane	Facility Address	Green Hills Road Robeson Twp
	Downingtown, PA 19335		Birdsboro, PA 19508
Applicant Contact	Joseph Margusity	Facility Contact	Richard Longcoy, Ebert Engineering Inc.
Applicant Phone	302-236-6598 (Gary Cuppels, agent) gtcuppels@yahoo.com	Facility Phone	610-584-6701/ RLongcoy@Ebertengineering.com
Client ID	365614	Site ID	791389
Ch 94 Load Status	Not Overloaded	Municipality	Robeson Township
Connection Status	No Limitations	County	Berks
Date Application Received	September 15, 2021 &	EPA Waived?	Yes
Date Application Accepted	October 7, 2021	If No, Reason	
Purpose of Application	Renewal of expired NPDES permit- new construction		

Summary of Review

The previous permit was issued August 30, 2016 and expired August 31, 2021. No discharges occurred during that time: the planned development had not been built. A renewal application was received September 15, 2021, for a new client. The project is for 55 new single-family residences. Another 44 existing equivalent dwelling units from the surrounding area are to be conveyed to the treatment plant as well. The discharge is to the Allegheny Creek downstream of the Green Hills Lake.

Sewage Planning Approval: A3-06954-247-3A, dated January 27, 2016. “The sewage will be conveyed via the right of way along Green Hills Road and Lake Shore Drive and then via a right of way through the lands of MB Investments…..This treatment plant has been designated the interim regional treatment facility to allow for future joint use of this sewage treatment plant to handle the present and future short-term needs of the area.”

Design Flow:

The previous NPDES permit application, received July 8, 2015, and the new NPDES permit application received September 15, 2021, both represented the facility’s design Annual Average Flow (AAF) as 0.035 MGD and Hydraulic Design Capacity as 0.0525 MGD. However, the WQM permit issued on August 30, 2016 (#0616404) indicated an AAF of 0.026 MGD and a Hydraulic Design Capacity of 0.035 MGD. The WQM permit application received in September 2021 also represented an AAF of 0.026 MGD and a Hydraulic Design Capacity of 0.035 MGD. Therefore, the NPDES permit will indicate a corresponding design flow of 0.026 MGD and Hydraulic Design Capacity of 0.035 MGD, consistent with DEP’s Standard Operating Procedure (SOP) Establishing Effluent Limitations in Individual Sewage Permits.

Approve	Deny	Signatures	Date
x		*Bonnie Boylan* Bonnie J. Boylan / Environmental Engineering Specialist	December 2, 2021 ~~November 19, 2021~~
x		*Maria D. Bebenek for* Daniel W. Martin, P.E. / Environmental Engineer Manager	December 9, 2021
x		*Maria D. Bebenek* Maria D. Bebenek, P.E. / Environmental Program Manager	December 9, 2021

Summary of Review

The change in the stated design flow in the permit has not impacted any of the limits from the previous permit which were Technology Based effluent concentration limits, not Water Quality Based effluent limits and not mass load limits.

Industrial Waste: None.

Hauled in Waste: None

Combined Sewers: None.

Sludge use and disposal description and location(s): Off-site disposal anticipated.

Outstanding Violations: None

Delaware River Basin Commission:

The facility discharges to a stream within the Delaware River watershed and is thus subject to the Delaware River Basin Commission's (DRBC) requirements. A copy of the draft permit and Fact Sheet will therefore be sent to the DRBC for their review in accordance with State regulations and an interagency agreement. Any comments from DRBC will be considered.

Public Participation:

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

PREVIOUS PERMIT LIMITS, OUTFALL 001:

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Instantaneous Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
UV Intensity (mW/cm^2)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Calculated
CBOD5	Report	Report	XXX	25.0	XXX	50.0	2/month	Grab
BOD5 Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	2/month	Grab
TSS	Report	Report	XXX	30.0	XXX	60.0	2/month	Grab
TSS Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	2/month	Grab
Total Dissolved Solids	XXX	XXX	XXX	1000.0	XXX	XXX	1/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia	XXX	XXX	XXX	20.0	XXX	40.0	2/month	Grab
Total Nitrogen	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	Grab
Total Phosphorus	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	Grab

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.026
Latitude	40º 15' 47"	Longitude	-75º 54' 13"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Allegheny Creek (CWF, MF)	Stream Code	1817
NHD Com ID	25993020	RMI	3.4
Drainage Area	14.9	Yield (cfs/mi^2)	0.11
Q_{7-10} Flow (cfs)	1.59	Q_{7-10} Basis	USGS Pa Strm Stats online
Elevation (ft)	270’	Slope (ft/ft)	
Watershed No.	3-C	Chapter 93 Class.	*CWF, MF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	

Secondary Waters: Allegheny Creek empties into Schuylkill River at RMI 68, approx..

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake		Pottstown Water Authority	
PWS Waters	Schuylkill River	Flow at Intake (cfs)	
PWS RMI	57 approx	Distance from Outfall (mi)	Approx. 14

Changes Since Last Permit Issuance:

Design Flow adjusted from 0.035 MGD per NPDES application to 0.026 MGD per WQM permit/permit application.

Other Comments:

NOT a Class A Wild Trout or Trout Natural Reproduction Water

*DEP’s updated Stream Redesignation and Existing Use lists on DEP’s web page were reviewed in addition to DEP’s eMapPA .

Treatment Facility Summary

Treatment Facility Name: Green Hills Estates STP

WQM Permit No.	Issuance Date
0616404	August 30, 2016 But expired – no construction occurred
0621407	When NPDES permit issued as final

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Ammonia Reduction	Extended Aeration	Ultraviolet	0.026

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.035	70	Not Overloaded		

Changes in Treatment Plant design since last NPDES permit:

-newer UV model with improved display capability

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .026
Latitude 40º 15' 47" **Longitude** -75º 54' 13"
Wastewater Description: Sewage Effluent

Technology-Based Effluent Limitations

The following technology-based limitations apply, subject to water quality analysis and Best Professional Judgement (BPJ) limits where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation	DRBC Water Quality Standards
CBOD5	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)	
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)	
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)	
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)	
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)	
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)	
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)	
Ammonia	20	Average Monthly			18 CFR Part 410
Total Dissolved Solids	1000	Average Monthly			18 CFR Part 410

Water Quality-Based Limitations

The following limitations were determined through water quality modeling (output files attached):

Parameter	Limit (mg/l)	SBC	Model
Dissolved Oxygen	5	Instant Minimum	WQM 7.0

(For Ammonia and CBOD5, the WQM 7.0 model defaulted to the TBEL limits indicating that no more stringent limits were needed to protect the receiving water.)

Other Than Effluent Limits

Monitoring Requirements without Limits:

Daily monitoring is required for **UV intensity** (or UV Dosage or UV Transmittance, dependent on the system's sensors and display) consistent with other permits with UV disinfection and to be sure a drop in adequate disinfection is noticed timely and corrected.

Monitoring is required for **Total Nitrogen and Total Phosphorus** similar to all NPDES individual sewage permits with significant flows to be able to evaluate nutrient impacts on receiving waters as authorized by PA Code Chapter 92a.61. Because the receiving water is not impaired in this case and because the monitoring is not being required for verification that limits are not being exceeded, quarterly monitoring has been allowed rather than the twice per month monitoring frequency recommended in the DEP's Technical Guidance for the Development and Specification of Effluent Limitations [362-0400-001].

The annual monitoring requirement for **E. Coli** has been added from the previous permit as a result of a regulatory changes published in the July 11, 2020 PA Bulletin, PA Code Chapter 92a.61, and consistent with DEP's Standard Operating Procedure (SOP) entitled Establishing Effluent Limitations for Individual Sewage Permits, Version 1.9.

The proposed sample types and monitoring frequencies are consistent with Technical Guidance 362-4000-001, Table 6-3. Not requiring mass loading limits is consistent with Technical Guidance 362-400-001, Table 5-3, for treated sewage flows under 0.1 MGD.

Anti-Backsliding:

No limits have been made less stringent from the previous permit.

Anti-degradation:

The discharge is not to a waterway designated as High Quality or Exceptional Value or to an impaired water. The discharge is not expected to interfere with any designated or existing uses and satisfies the Anti-degradation requirements of Title 25 PA Code Chapter 93.4a and 93.4c.

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality as needed and BPJ. Instantaneous Maximum (IMAX) limits are generally determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Instantaneous Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
UV Intensity (mW/cm²)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
CBOD5	Report	Report	XXX	25.0	XXX	50.0	2/month	Grab
BOD5 Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	2/month	Grab
TSS	Report	Report	XXX	30.0	XXX	60.0	2/month	Grab
TSS Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	2/month	Grab
Total Dissolved Solids	XXX	XXX	XXX	1000.0	XXX	XXX	1/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia	XXX	XXX	XXX	20.0	XXX	40.0	2/month	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Total Nitrogen	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	Grab
Total Phosphorus	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	Grab

Compliance Sampling Location: after treatment

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☒	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☒	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☒	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
☒	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: Establishing Effluent Limitations for Individual Sewage Permits, revised March 24, 2021.
☒	Other: Domestic Wastewater Facilities Manual, 362-0300-001, 10/1/1997.

3800-PM-WSHR0115 1/2011
Permit

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WATER QUALITY MANAGEMENT PERMIT

PERMIT NO. 3610404
AMENDMENT NO. _____
APS ID. 878330
AUTH ID. 1142250

A. PERMITTEE (Name and Address) CLIENT ID: 224091
Nick & Lee Inc.
3901 Germantown Pike
Collegeville, PA 19426

B. PROJECT/FACILITY (Name):
Green Hills Estates STP

SITE ID: 781389

C. LOCATION (Municipality, County)
Robeson Township, Berks County

FILE COPY

D. This permit approves the construction of sewage facilities as listed in:

Construction of a new extended aeration treatment plant to serve 99 EDUs.

Pump Stations: _____	Manure Storage	Sewage Treatment Facility:
Design Capacity: GPM	Volume: _____ MG	Annual Average Flow: 0.026 MGD (AAF)
	Freeboard: ___ Inches	Design Hydraulic Capacity: 0.035 MGD (MHF)
		Design Organic Capacity: 70 #/day (MMOL)

E. APPROVAL GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING:

1. New Permits: All construction, operations and procedures shall be in accordance with the Water Quality Management Permit application dated 5/26/2016, its supporting documentation and addendums dated 7/15/2016 and 7/28/2016, which are hereby made a part of this permit.
2. Permit Conditions Relating to Sewerage are attached and made part of this permit.

F. THE AUTHORITY GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING FURTHER QUALIFICATIONS:

1. If there is a conflict between the application or its supporting documents and amendments and the attached conditions, the attached conditions shall apply.
2. Failure to comply with the rules and regulations of DEP or with the terms or conditions of this permit shall void the authority given to the permittee by the issuance of this permit.
3. This permit is issued pursuant to the Clean Streams Law Act of June 22, 1937, P.L. 1987, as amended 35 P.S. §691.1 et seq. Issuance of this permit shall not relieve the permittee of any responsibility under any other law.

PERMIT ISSUED: AUG 30 2016

BY: _____
Maria D. Bebenek, P.E.
TITLE: Clean Water Program Manager
South Central Regional Office

3800-PM-WSFR0015 1/2011
Permit

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WATER QUALITY MANAGEMENT PERMIT

PERMIT NO. 0616404

AMENDMENT NO. _____

APS ID. 875330

AUTH. ID. 1140220

A. PERMITTEE (Name and Address): CLIENT ID#: **321091** **Nick & Les Inc.** **3801 Germantown Pike** **Collegeville, PA 19426**	B. PROJECT/FACILITY (Name): **Green Hills Estates STP**
C. LOCATION (Municipality, County): **Robeson Township, Berks County**	SITE ID#: **791389**

D. This permit approves the construction of sewage facilities consisting of:

Construction of a new extended aeration treatment plant to serve 99 EDUs.

Pump Stations: _____	Manure Storage:	Sewage Treatment Facility:		
Design Capacity: _____ GPM	Volume: _____ MG	Annual Average Flow:	**0.026**	MGD (AAF)
	Freeboard: _____ inches	Design Hydraulic Capacity:	**0.035**	MGD (MMF)
		Design Organic Capacity:	**70**	lb/day (MMOL)

E. APPROVAL GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING:

1. **New Permits:** All construction, operations and procedures shall be in accordance with the Water Quality Management Permit application date **5/25/2016**, its supporting documentation and addendums dated **7/19/2016 and 7/29/2016**, which are hereby made a part of this permit.
2. Permit Conditions Relating to Sewerage are attached and made part of this permit.

F. THE AUTHORITY GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING FURTHER QUALIFICATIONS:

1. If there is a conflict between the application or its supporting documents and amendments and the attached conditions, the attached conditions shall apply.
2. Failure to comply with the rules and regulations of DEP or with the terms or conditions of this permit shall void the authority given to the permittee by the issuance of this permit.
3. This permit is issued pursuant to the Clean Streams Law Act of June 22, 1937, P.L. 1987, as amended 35 P.S. §691.1 *et seq.* Issuance of this perm shall not relieve the permittee of any responsibility under any other law.

PERMIT ISSUED:
8/30/2016

BY: **/s/**
Maria D. Bebenek, P.E.
TITLE: **Clean Water Program Manager**
South Central Regional Office

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
03C	1817	ALLEGHENY CREEK	3.400	270.00	14.90	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.110	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Green Hills	PA0266124	0.0000	0.0000	0.0350	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	5.00	8.24	0.00	0.00
NH3-N	20.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
03C	1817	ALLEGHENY CREEK	2.500	250.00	15.70	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.110	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
downstrm		0.0000	0.0000	0.0000	0.000	20.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	5.00	8.24	0.00	0.00
NH3-N	20.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
03C	1817	ALLEGHENY CREEK

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
3.400	1.64	0.00	1.64	.0541	0.00421	.562	19.62	34.9	0.15	0.358	20.16	7.00
Q1-10 Flow												
3.400	1.05	0.00	1.05	.0541	0.00421	NA	NA	NA	0.12	0.455	20.25	7.00
Q30-10 Flow												
3.400	2.23	0.00	2.23	.0541	0.00421	NA	NA	NA	0.18	0.303	20.12	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
03C	1817	ALLEGHENY CREEK

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
3.400	Green Hills	16.42	40	16.42	40	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
3.400	Green Hills	1.87	20	1.87	20	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
3.40	Green Hills	25	25	20	20	5	5	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
03C	1817	ALLEGHENY CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
3.400	0.035	20.160	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
19.620	0.562	34.905	0.154
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.74	0.361	0.64	0.709
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.139	6.163	Tsivoglou	5
Reach Travel Time (days)			
0.358			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.036	2.70	0.62	8.22
0.072	2.67	0.61	8.22
0.107	2.63	0.59	8.22
0.143	2.60	0.58	8.22
0.179	2.56	0.56	8.22
0.215	2.53	0.55	8.22
0.251	2.50	0.54	8.22
0.287	2.46	0.52	8.22
0.322	2.43	0.51	8.22
0.358	2.40	0.50	8.22

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
03C	1817	ALLEGHENY CREEK

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
3.400	Green Hills	PA0266124	0.000	CBOD5	25		
				NH3-N	20	40	
				Dissolved Oxygen			5

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

January 27, 2016

Robeson Township Supervisors
8 Boonetown Road
Birdsboro, PA 19508

Re: Approval Letter – Amendment to Revision
Act 537 Planning
Green Hill Estates Subdivision
DEP CODE NO. A3-06954-247-3A
APS ID No. 867796
AUTH ID No. 1104771
Robeson Township, Berks County

Ladies and Gentlemen:

This letter supersedes our previous letter which had an incorrect date.

Continued…….

This letter supersedes our previous letter which had an incorrect date.

The Department of Environmental Protection (DEP) has reviewed the proposed amendment to the Official Plan revision for Green Hill Estates previously approved on June 9, 2015. The amendment proposes changing the discharge point of the sewage treatment plant from the unnamed tributary to Allegheny Creek near the site of the proposed development to the Allegheny Creek downstream of Green Hills Lake. The sewage will be conveyed via the right of way along Green Hills Road and Lake Shore Drive and then via a right of way through the lands of MB Investments. Total expected sewage flows are approximately 35,000 gallons per day from the 55 proposed single family residences plus an additional 44 existing equivalent dwelling units from the surrounding area.

The amendment to the plan is approved with the following comments:

1. The approved project will require an NPDES (Part I) permit for the proposed effluent discharge. The permit application must be submitted in the name of Nick and Les Inc.
2. The approved project will require a Water Quality Management (Part II) permit for the construction and operation of the proposed sewage facilities. The permit application must be submitted in the name of Nick and Les Inc. Issuance of a Part II permit will be based upon a technical evaluation of the permit application and supporting documentation. Starting construction prior to obtaining a permit is a violation of the Clean Streams Law.
3. Other DEP permits may be required for construction if encroachment to streams or wetlands will result. Information regarding the requirements for such permits or approvals can be obtained from DEP's Waterways and Wetlands Program at the letterhead address, by

Clean Water Program
Southcentral Regional Office | 909 Elmerton Avenue | Harrisburg, PA 17110-8200 | 717.705.4707 | F 717.705.4760
www.depweb.state.pa.us

Continued…….

telephone at 717.705.4802 or downloaded from the Internet at:
http://www.elibrary.dep.state.pa.us/dsweb/View/Collection-10978

4. This treatment plant has been designated the interim regional treatment facility to allow for future joint use of this sewage treatment plant to handle the present and future short-term needs of the area.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa. C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, PO Box 8457, Harrisburg, PA 17105-8457, 717.787.3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800.654.5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on audiotape from the Secretary to the Board at 717.787.3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.

IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717.787.3483) FOR MORE INFORMATION.

Continued……..

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If you have any questions or concerns, please call Mike Morris at 717-705-4793, and refer to DEP Code No. A3-06954-247-3A, Application No. 867796 and Authorization No.1104771.

Sincerely,

Maria D. Bebenek, P.E.
Program Manager

cc: Nick and Les, Inc.
Boyer Engineering, LLC.
Berks County Planning Commission

DEP's Domestic Wastewater Facilities Manual, 362-0300-001, 10/1/97, page 39:

Design Flow Parameter	General Definition	Typical Application
Annual Average Flow	The total flow received at the facility during any one calendar year divided by 365 (the number of days in that period).	The "nominal" design flow of a facility. Used for cost comparisons and annual estimates of O&M costs. Used for water quality modeling. Used for evaluating Act 537 plan updates. Used to determine allowable mass loadings in NPDES permits.
Monthly Average Flow	The total flow received at the facility during any one calendar month divided by the number of days in that month.	A flow reporting parameter used in discharge monitoring reports.
Maximum Monthly Average Flow	The highest monthly average flow during any one calendar year.	Determine the overall hydraulic design of the facility. Used for evaluating Act 537 plan updates and planning modules. Is the "hydraulic capacity" for Chapter 94 determinations. Establishes the monthly average flow limitation on NPDES permit.
Peak Hourly Flow	The maximum flow rate received at the facility averaged over a period of one hour.	Designing clarifers, chlorine contact tanks, and other hydraulically sensitive units.
Peak Instantaneous	The maximum instantaneous flow rate received at the facility at any given time.	Designing comminutors, pump stations, piping, and units subject to peak flow conditions.