pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0113140**
Facility Type	**Non-Municipal**	APS ID	**989991**
Major / Minor	**Minor**	Authorization ID	**1267643**

Applicant and Facility Information

Applicant Name	**Kress Holdings & Land Development LLC**	Facility Name	**Hillside View MHP WTP**
Applicant Address	356 Roscoe Drive Gillett, PA 16925-9700	Facility Address	15540 Route 6 Mansfield, PA 16933
Applicant Contact	Daniel Kress	Facility Contact	Daniel Kress
Applicant Phone	(607) 426-7298	Facility Phone	(607) 426-7298
Client ID	294707	Site ID	3060
Ch 94 Load Status	Not Overloaded	Municipality	Richmond Township
Connection Status	No Limitations	County	Tioga
Date Application Received	March 25, 2019	EPA Waived?	Yes
Date Application Accepted	April 8, 2019	If No, Reason	

Purpose of Application: Application for the renewal of the existing individual NPDES permit.

Summary of Review

Kress Holdings & Land Development LLC has submitted an application for the renewal of the existing NPDES Permit PA0113140 for the Department's review. 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.

Approve	Deny	Signatures	Date
X		Jonathan P. Peterman / Project Manager	January 22, 2020
		Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.026
Latitude	41º 46' 35.04"	Longitude	-77º 8' 9.70"
Quad Name	Crooked Creek	Quad Code	0428
Wastewater Description:	Sewage Effluent		
Receiving Waters	UNT to North Elk Run (CWF, MF)	Stream Code	31365
NHD Com ID	57352149	RMI	1.1
Drainage Area	1.48	Yield (cfs/mi^2)	0.0614
Q_{7-10} Flow (cfs)	0.091	Q_{7-10} Basis	Gage No. 1516350
Elevation (ft)	1414	Slope (ft/ft)	
Watershed No.	4-A	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	N/A		
Source(s) of Impairment	N/A		
TMDL Status	Final	Name	Tioga River
Nearest Downstream Public Water Supply Intake	Assumed intake at PA-NY border.		
PWS Waters	Tioga River	Flow at Intake (cfs)	28.8
PWS RMI	13	Distance from Outfall (mi)	29.2

Changes Since Last Permit Issuance: The updated Q_{7-10} data was obtained from the updated stream gage information obtained from *Stuckey, M.H., and Roland, M.A., 2011, Selected Streamflow Statistics for Streamgage Locations In and Near Pennsylvania*. An analysis was conducted by using the flows from an downstream gage on the Tioga River (1516350). It was determined that a Q_{7-10} of 0.091 will be used in lieu of the previous Q_{7-10} which was 0.095. Q_{7-10} calculations are attached in Appendix A.

Other Comments: None.

Treatment Facility Summary

Treatment Facility Name: Hillside View MHP

WQM Permit No.	Issuance Date	Comments
5973404	9/28/1973	Original construction.
5973404 T-1	8/26/1986	Transfer from Gerald Miller to Nicolino Galluppi/Far Valley View MHP.
5973404 T-2	11/19/2008	Transfer from Far Valley View MHP to Hillside View LLC.
5973404 T-3	10/11/2016	Transfer from Hillside View LLC. to Kress Holdings & Land Development LLC.

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	Septic Tank Sand Filter W/Sol Removal	Hypochlorite	0.026
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.026	35.7	Not Overloaded	Holding Tank	Land Application

Treatment System Components:
- One (1) Comminutor.
- One (1) Influent Bar Screen.
- One (1) Aeration Tank.
  - Two (2) Blowers.
- Two (2) Sand Filters.
- One (1) Clarifier.
- One (1) Erosion Tablet Chlorinator.
- One (1) Chlorine Contact Tank.
- One (1) Flow Meter.
- One (1) Outfall 001.

- One (1) Sludge Holding Tank.

Changes Since Last Permit Issuance: None.
Other Comments: None.

TMDL Impairment

The Department's Geographic Information System (GIS) shows that the UNT to North Elk Run (Tioga River Watershed) is attaining it's use but a TMDL does exist for the watershed. High levels of metals caused these impairments (iron, manganese, aluminum) as well as pH. All impairments resulted from acid mine drainage. The TMDL addresses the three primary metals associated with acid mine drainage (iron, manganese, aluminum). There is currently no industrial waste being discharged into the treatment plant and this discharge is not expected to contribute to the level of metals in the stream. Given the regulations contained in 40 CFR §122.44(d)(1)(ii)&(iii), it can be determined that the type of effluent from this facility has no "Reasonable potential to cause, or contributes to an in-stream excursion above the allowable ambient concentration of a State numeric criteria within a State water quality standard for an individual pollutant."

Chesapeake Bay Requirements

Since this facility's annual average design flow is 0.026 MGD, the permittee will be required to monitor and report TN and TP throughout the permit term at a frequency no less than annually in accordance with the Phase II WIP Chesapeake Bay Strategy for Phase V facilities (0.002 MGD to 0.2 MGD) unless 1) the facility has already conducted at least two years of nutrient monitoring and 2) a summary of the monitoring results are included in the next permit's fact sheet. The previous permits did not contain the Chesapeake Bay Monitoring requirements. Therefore, annual nutrient monitoring will be required.

Anti-Backsliding

In accordance with 40 CFR 122.44(l)(1) and (2), this permit does not contain effluent limitations, standards, or conditions that are less stringent than the previous permit.

Existing Effluent Limitations and Monitoring Requirements

Existing Limits – Outfall 001

Discharge Parameter	Limitations							
	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Monthly Average	Daily Maximum	Minimum	Average Monthly	Average Weekly	Instantaneous Maximum	Minimum Frequency	Sample Type
Flow (MGD)	Report						1/ Week	Weir
C-BOD_5				25		50	2/ Month	8-Hr. Comp.
TSS				30		60	2/ Month	8-Hr. Comp.
TRC				0.3		1.0	5/ Week	Grab
NH3-N (5/1-10/31)				5		10	2/ Month	8-Hr. Comp
NH3-N (11/1-4/30)				15		30		
D.O.			5.0				2/ Month	Grab
pH (Std. Units)			6.0			9.0	5/ Week	Grab
Fecal Coliforms (5/1-9/30)	200 colonies/100 ml as a geometric mean					1,000	2/ Month	Grab
Fecal Coliforms (10/1-4/30)	2,000 colonies/100 ml as a geometric mean					10,000		

*The existing effluent limits for Outfall 001 were based on a design flow of 0.026 MGD.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.026
Latitude 41º 47' 5.06" **Longitude** -77º 8' 8.52"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
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)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Water Quality-Based Limitations

To establish whether or not water-quality based effluent limitations (WQBELs) are required, the Department models in-stream conditions. In order to determine limitations for CBOD5, ammonia-N and dissolved oxygen, the Department utilizes the WQM 7.0 v1.0b model and in order to determine limitations for toxics, the Department utilizes the PENTOXSD v2.0d model.

WQM 7.0 for Windows, Version 1.0b, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen
The model was run using the Q7-10 stream, background water quality, average annual design flow, and other discharge characteristics. The existing technology-based effluent limits for $CBOD_5$ (25 mg/l) and existing water quality-based effluent limits for NH3-N (5 mg/l) were used as inputs for the modeling. The DO minimum daily average criterion from §93.7 (5.0 mg/L for CWF) was used for the in-stream objective for the model. The summary of the output is as follows:

Parameter	Effluent Limit		
	30 Day Average	Maximum	Minimum
CBOD5	25	N/A	N/A
Ammonia-N	5	10	N/A
Dissolved Oxygen	N/A	N/A	3

The model did not recommend more stringent water-quality based effluent limitations with regards to CBOD5, ammonia-nitrogen, and dissolved oxygen. Refer to the Appendix for the WQM 7.0 inputs and results. The existing effluent limits will remain.

Best Professional Judgment (BPJ) Limitations

See D.O. section below.

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 the abovementioned technology, water quality, and BPJ. Instantaneous Maximum (IMAX) limits are 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) and/or BPJ.

Proposed Limits - Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date

Discharge Parameter	Limitations							
	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Monthly Average	Daily Maximum	Minimum	Average Monthly	Average Weekly	Instantaneous Maximum	Minimum Frequency	Sample Type
Flow (MGD)	Report						1/ Week	Weir
C-BOD_5				25		50	2/ Month	8-Hr. Comp.
TSS				30		60	2/ Month	8-Hr. Comp.
TRC				0.3		1.0	5/ Week	Grab
NH3-N (5/1-10/31)				5		10	2/ Month	8-Hr. Comp
NH3-N (11/1-4/30)				15		30		
D.O.			5.0				5/ Week	Grab
pH (Std. Units)			6.0			9.0	5/ Week	Grab
Fecal Coliforms (5/1-9/30)	200 colonies/100 ml as a geometric mean					1,000	2/ Month	Grab
Fecal Coliforms (10/1-4/30)	2,000 colonies/100 ml as a geometric mean					10,000		
Total Nitrogen	Report			Report			1/ Year	Grab
Total Phosphorus	Report			Report			1/ Year	Grab

*The proposed effluent limits for Outfall 001 were based on a design flow of 0.026 MGD.

Effluent Limit Determination for Outfall 001

General Information

All of the limits proposed above are consistent with other permits issued for Phase V wastewater treatment plants in the region. All effluent limits were then rounded down in accordance with the rounding rules established in the *Technical Guidance for the Development and Specification of Effluent Limitations (362-0400-001)*, Chapter 5 - Specifying Effluent Limitations in NPDES Permits. The existing monitoring frequencies and sample types for these parameters generally correspond with the *Technical Guidance for the Development and Specification of Effluent Limitations* (362-0400-001) Table 6-3 and will remain. During the previous review, it was determined by the Department that monitoring at a frequency of 5/ Week in lieu of 1/ Day would be acceptable for TRC and pH. Given that there is no history of non-compliance with effluent limitations for these parameters over the past two years according to DMR data for these parameters, and the existing monitoring frequencies are less stringent than Table 6-3, the existing frequencies will remain. DO monitoring will be 5/ Week in lieu of 1/ week to correspond with pH and TRC monitoring.

Flow

Reporting of the monthly average flow is consistent with monitoring requirements for other treatment plants of this size.

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)

The results of the WQM 7.0 model show that the previously applied technology-based advanced treatment requirements for $CBOD_5$ are protective of water quality and will remain.

Total Suspended Solids (TSS)
The previously applied technology-based advanced treatment requirements for TSS will remain as well.

pH
CFR Title 40 §133.102(c) and 25 PA Code §95.2(1) provide the basis of effluent limitations for pH.

Fecal Coliforms
The existing fecal coliform limits with I-max limits were updated from the previous Chapter 92 code to correspond with what is specified in the updated 25 PA Code § 92a.47 (a)(4)&(5) and will remain.

Ammonia-Nitrogen (NH3-N)
The WQM 7.0 modeling results for NH3-N indicate that the existing average monthly limit of 5 mg/L would still be protective of water quality and will remain. These limits were assigned in accordance with the *Implementation Guidance of Section 93.7 Ammonia Criteria* (391-2000-013) which states that a multiplier of 2.0 times the average monthly concentration limit (5 mg/L) was used to establish the I-max concentration limit (10 mg/L). These limits were then rounded down to the nearest 1.0 in accordance with the rounding rules established in the *Technical Guidance for the Development and Specification of Effluent Limitations (362-0400-001)*, Chapter 5 - Specifying Effluent Limitations in NPDES Permits. The Implementation Guidance also states that the winter seasonal limits shall be 3.0 times the summer limits.

Dissolved Oxygen (DO)
Given results of the WQM 7.0 model, a discharge of effluent from this facility with a DO concentration of 3 mg/l would not result in an exceedance of water quality requirements for this stream. However, the Department previously established a minimum effluent limit of 5.0 mg/l which will remain.

Total Residual Chlorine (TRC)
In accordance with 25 Pa. Code 92a.48(b)(2), the existing effluent limit (0.3 mg/L) was used in lieu of the best available technology (BAT) value of 0.5 mg/l in the TRC Spreadsheet. The attached TRC model indicates that the existing water quality-based effluent limits of 0.3 mg/L (Average Monthly) and 0.9 mg/L (Instantaneous Maximum) are still protective of water quality and will remain.

Other Comments: All effluent limits are appropriate and typical for this facility type.

Compliance History

Summary of Inspections -The last inspection of the facilities was conducted on 7/2/19 by the Department. The inspection report indicates that the facility was operating normally, but Part A effluent violations were noted several operational changes recommended.

WMS Query Summary - A WMS Query was run at *Reports - Violations & Enforcements – Open Violations for Client Report* to determine whether there are any unresolved violations associated with the client that will affect issuance of the permit (per CSL Section 609). This query revealed one (1) open violations in the Clean Water program. The Operations Section will be contacted, and this open violation will be resolved in the system prior to issuance of this permit.

INSP PROGRAM	PROGRAM SPECIFIC ID	INSP ID	VIOLATION ID	VIOLATION DATE	VIOLATION CODE	VIOLATION	PF INSPECTOR	INSP REGION
WPC NPDES	PA0113140	2942465	864532	10/08/2019	302.202	Operator Certification - Failure to submit annual system fee	SHIHINSKI, BRANDON	NCRO

DMRs Summary - Upon review of the DMR's, the facility has been in compliance with the existing effluent limits except for the two (2) minor Ammonia exceedances listed below (See list of violations below).

Attachments

Hillside View
Appendices

Compliance History

DMR Data for Outfall 001 (from December 1, 2018 to November 30, 2019)

Parameter	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18
Flow (MGD) Average Monthly	0.004	0.005	0.002	0.003	0.002	0.006	0.008	0.007	0.007	0.008	0.005	0.004
pH (S.U.) Minimum	7.0	7.3	7.1	6.9	7.1	6.7	6.9	7.0	6.9	6.8	6.7	7.0
pH (S.U.) Instantaneous Maximum	7.7	7.9	7.7	7.7	8.1	7.8	7.5	7.5	7.6	7.6	7.5	7.6
DO (mg/L) Minimum	7.2	7.4	7.9	7.1	7.3	6.8	6.7	7.1	6.7	6.5	7.1	6.7
TRC (mg/L) Average Monthly	0.3	0.09	0.3	0.3	0.27	0.2	0.26	0.2	0.23	0.3	0.2	0.3
TRC (mg/L) Instantaneous Maximum	0.6	0.5	0.6	0.6	0.87	0.7	0.7	0.6	0.5	0.6	0.6	0.6
CBOD5 (mg/L) Average Monthly	< 5.0	< 3.0	< 4.0	< 3.0	< 3.0	< 4.0	< 3.0	< 3.0	< 3.0	< 6.0	< 3.0	< 3.0
CBOD5 (mg/L) Instantaneous Maximum	6.1	< 3.0	4.6	3.5	< 3.0	4.1	< 3.0	< 3.0	< 3.0	8.4	< 3.0	< 3.0
TSS (mg/L) Average Monthly	< 3.0	11.0	17.0	10.0	4.0	6.0	11.0	14.0	7.0	10.0	< 1.6	6.0
TSS (mg/L) Instantaneous Maximum	3.6	18.8	24.4	14.0	5.2	9.6	18.0	22.8	8.4	14.0	< 2.2	6.8
Fecal Coliform (No./100 ml) Geometric Mean	< 1	< 5	< 6	< 8	16	8	2	2	9	2	< 1	< 1
Fecal Coliform (No./100 ml) Instantaneous Maximum	2	21	31	58	52	28	5.2	3	39.9	4	< 1	1
Ammonia (mg/L) Average Monthly	< 0.7	6.0	< 0.3	< 0.1	< 0.2	0.257	< 0.9	2.4	< 7.5	7.5	5.8	2.3
Ammonia (mg/L) Instantaneous Maximum	1.3	10.6	0.5	< 0.1	0.2	0.379	1.7	3.1	14.8	13.2	6.7	4.3

Compliance History

Effluent Violations for Outfall 001, from: January 1, 2019 To: November 30, 2019

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Ammonia	10/31/19	Avg Mo	6.0	mg/L	5.0	mg/L
Ammonia	10/31/19	IMAX	10.6	mg/L	10.0	mg/L

Summary of Inspections: An Ammonia exceedance in October which was resolved.

Other Comments: None.

Tools and References Used to Develop Permit	
☒	Q7-10 Analysis and Stream Data (see Appendix **A**)
☒	WQM 7.0 Model Input/Output (see Appendix **B**)
☐	Toxics Screening Analysis v2.4 (see Appendix)
☐	PENTOXSD v2.0d Model Input/Output (see Appendix)
☒	Facility Map and Schematic (see Appendix **C**)
☐	TRC Evaluation Spreadsheet (see Appendix)
☐	Lake Model Output (see Appendix)
☐	WETT Spreadsheet (see Appendix)
☒	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: New and Reissuance Sewage Individual NPDES Permit Applications - Version 1.8 – 10/11/13
☒	SOP: Establishing Effluent Limitations for Individual Sewage Permits– Version 1.5 - 8/23/13
☐	Other: