pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0091201**
Facility Type	**Non-Municipal**	APS ID	**1058647**
Major / Minor	**Minor**	Authorization ID	**1388177**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Indiana Medical Condominium Association**	Facility Name	**Indiana Medical Condominiums**
Applicant Address	1177 S 6th Street	Facility Address	1177 S Sixth Street
	Indiana, PA 15701-3759		Indiana, PA 15701
Applicant Contact	Roberto Turnbull	Facility Contact	
Applicant Phone	(724) 349-9690	Facility Phone	
Client ID	141148	Site ID	271363
Ch 94 Load Status	Not Overloaded	Municipality	White Township
Connection Status		County	Indiana
Date Application Received	March 4, 2022	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: Renewal of an NPDES Permit for a minor sewage treatment facility.

Summary of Review

This is an existing discharge for a minor sewage treatment facility.

Act 14 – Proof of Notification was submitted and received.

Existing treatment consists of (WQM Permit No. 3280407 T-1): septic tanks, dosing tank, subsurface sand filter, and chlorination.

There are no open violations in WMS for the subject Client ID (141148) as of 10/25/2023. *10/27/2023 CWY*

Sampling frequency for DO, TRC and pH have been increased to 1/day from the previous permit cycle's 3/week monitoring. The permittee was informed in the Fact Sheet Addendum from the previous permit cycle that this monitoring increase was likely.

Annual monitoring for E. Coli has been added per Department SOP for new and reissued NPDES permits with design flows exceeding 2000GPD.

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.

Approve	Deny	Signatures	Date
X		Jordan A. Frey, E.I.T. Jordan A. Frey, E.I.T. / Project Manager	October 30, 2023
X		Chad W. Yurisic Chad W. Yurisic, P.E. / Environmental Engineer Manager	10/30/2023

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.0036
Latitude	40º 35' 47.97"	Longitude	-79º 9' 0.21"
Quad Name	Indiana	Quad Code	40079E2
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Two Lick Creek (CWF)	Stream Code	44245
NHD Com ID	123719831	RMI	
Drainage Area	0.54	Yield (cfs/mi^2)	0.1
Q_{7-10} Flow (cfs)	0.054	Q_{7-10} Basis	Default
Elevation (ft)	1254	Slope (ft/ft)	---
Watershed No.	18-D	Chapter 93 Class.	CWF
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	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

Background/Ambient Data		Data Source
pH (SU)	7.0	Default
Temperature (°F)	20	Default
Hardness (mg/L)	100	Default
Other:		

Nearest Downstream Public Water Supply Intake		Saltsburg Muni Waterworks	
PWS Waters	Conemaugh River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	>25

Changes Since Last Permit Issuance: None.

Other Comments:

Treatment Facility Summary

Treatment Facility Name: Indiana Medical Condominiums

WQM Permit No.	Issuance Date
3280407 T-1	11/26/1980

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage			No Disinfection	

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.0036		Not Overloaded		

Changes Since Last Permit Issuance: None.

Other Comments:

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .0036
Latitude 40º 36' 8.00" **Longitude** -79º 8' 50.00"
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)
E. Coli	Report	IMAX		92a.61

Comments: TRC limits are based on the Department's TRC Spreadsheet. E. Coli monitoring is based on the Department's SOP for new and reissued permits.

Water Quality-Based Limitations

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

Parameter	Limit (mg/l)	SBC	Model
CBOD5	25	Average Monthly	WQM 7.0
NH3-N	4.5	Average Monthly	WQM 7.0
DO	4.0	Instantaneous Minimum	WQM 7.0

Comments: WQM modeling calculated a minimum Dissolved Oxygen (DO) limit of 3.0 mg/l, but a 4.0 mg/l limit shall be imposed per the Department's SOP as a BPJ limit. *This is more stringent than the current permit limit, however a review of the eDMR sample results indicate the system can meet the more stringent limits. Therefore, a compliance schedule will not be needed in the permit. The Ammonia limit is also more stringent than in the previous permit but eDMR data suggests the system can meet the more stringent Ammonia limits without needing a compliance schedule. 10/30/2023 CWY*

Best Professional Judgment (BPJ) Limitations

Comments: Monitoring frequencies for Dissolved Oxygen, pH, and Total Residual Chlorine will be increased to 1/day in congruence with the Department's SOP entitled "Establishing Effluent Limitations for Individual Sewage Permits" (SOP No. BPNPSM-PMT-033, dated November 9, 2012, Revised March 24, 2021. The permittee was allowed sampling 3/week on the previous permit cycle due to cost constraints at the Department's discretion, but had been told by the Department to anticipate the more stringent daily monitoring per regulation in this permit cycle.

Anti-Backsliding

N/A

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 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" (386-0400-001), 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	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	XXX	XXX	XXX	25	XXX	50	2/month	Grab
TSS	XXX	XXX	XXX	30	XXX	60	2/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
Total Nitrogen	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	13.5	XXX	27.0	2/month	Grab
Ammonia May 1 - Oct 31	XXX	XXX	XXX	4.5	XXX	9.0	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab

Compliance Sampling Location: Outfall 001, after disinfection.

Other Comments: None.

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
18D	44245	Trib 44245 to Two Lick 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
0.650	Indiana Med Con	13.32	24.04	13.32	24.04	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
0.650	Indiana Med Con	1.68	4.54	1.68	4.54	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)		
0.65	Indiana Med Con	25	25	4.54	4.54	3	3	0	0

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
18D	44245	Trib 44245 to Two Lick Creek	**0.650**	1246.00	0.07	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	0.100	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
Indiana Med Con	PA0091201	0.0021	0.0036	0.0036	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	3.00	8.24	0.00	0.00
NH3-N	25.00	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
18D	44245	Trib 44245 to Two Lick Creek	**0.450**	1065.00	0.62	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	0.100	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
		0.0000	0.0000	0.0000	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	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
18D	44245	Trib 44245 to Two Lick Creek

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
0.650	0.004	22.215	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
0.919	0.314	2.931	0.044
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
12.19	1.330	2.01	0.830
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
5.920	23.954	Owens	5
Reach Travel Time (days)			
0.280			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.028	11.70	1.96	6.63
0.056	11.22	1.92	7.03
0.084	10.77	1.88	7.25
0.112	10.34	1.83	7.39
0.140	9.92	1.79	7.48
0.168	9.52	1.75	7.55
0.196	9.13	1.71	7.60
0.224	8.76	1.67	7.65
0.252	8.41	1.63	7.70
0.280	8.07	1.59	7.74

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
18D	44245	Trib 44245 to Two Lick 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)
0.650	Indiana Med Con	PA0091201	0.002	CBOD5	25		
				NH3-N	4.54	9.08	
				Dissolved Oxygen			3

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
18D	44245	Trib 44245 to Two Lick 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												
0.650	0.01	0.00	0.01	.0056	0.17140	.314	.92	2.93	0.04	0.280	22.22	7.00
Q1-10 Flow												
0.650	0.00	0.00	0.00	.0056	0.17140	NA	NA	NA	0.04	0.318	22.77	7.00
Q30-10 Flow												
0.650	0.01	0.00	0.01	.0056	0.17140	NA	NA	NA	0.05	0.253	21.85	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		

TRC - Indiana Med

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.054	= Q stream (cfs)	0.5	= CV Daily
0.0036	= Q discharge (MGD)	0.5	= CV Hourly
30	= no. samples	1	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)
0.5	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 3.112	1.3.2.iii	WLA cfc = 3.027
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 1.160	5.1d	LTA_cfc = 1.759

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500	BAT/BPJ
		INST MAX LIMIT (mg/l) = 1.635	

WLA afc	**(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...** **...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)**
LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)
LTA_afc	wla_afc*LTAMULT_afc
WLA_cfc	**(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))...** **...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)**
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)
LTA_cfc	wla_cfc*LTAMULT_cfc
AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)
INST MAX LIMIT	**1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)**