pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0228249**
Facility Type	**Non-Municipal**	APS ID	**1066014**
Major / Minor	**Minor**	Authorization ID	**1400648**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Eagle Creek LLC**	Facility Name	**Eagle Creek LLC WWTP**
Applicant Address	1454 Martin Street State College, PA 16803-3065	Facility Address	Old SR 220 South of Unionville Julian, PA 16844
Applicant Contact	Scott Yocum	Facility Contact	Scott Yocum
Applicant Phone	(814) 234-4645	Facility Phone	(814) 231-8200
Client ID	285677	Site ID	493660
Ch 94 Load Status	Not Overloaded	Municipality	Union Township
Connection Status	No Limitations	County	Centre
Date Application Received	June 20, 2022	EPA Waived?	Yes
Date Application Accepted	July 1, 2022	If No, Reason	
Purpose of Application	Renewal of an existing NPDES permit for the discharge of treated sewage.		

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		*Derek S. Garner* Derek S. Garner / Project Manager	May 8, 2023
X		*Nicholas W. Hartranft* Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	May 9, 2023

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.015
Latitude	40º 53' 59.77"	Longitude	-77º 52' 55.16"
Quad Name	Bear Knob	Quad Code	1122
Wastewater Description:	Sewage Effluent		

Receiving Waters	Bald Eagle Creek	Stream Code	22412
NHD Com ID	67179272	RMI	35.3
Drainage Area	76.8	Yield (cfs/mi^2)	0.438
Q_{7-10} Flow (cfs)	33.6	Q_{7-10} Basis	Streamgage No. 01547200
Elevation (ft)	775	Slope (ft/ft)	n/a
Watershed No.	9-C	Chapter 93 Class.	TSF
Existing Use	n/a	Existing Use Qualifier	n/a
Exceptions to Use	n/a	Exceptions to Criteria	n/a
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	n/a		
Source(s) of Impairment	n/a		
TMDL Status	n/a	Name	n/a

Nearest Downstream Public Water Supply Intake	Pennsylvania American Water Company		
PWS Waters	West Branch Susquehanna River	Flow at Intake (cfs)	741.48
PWS RMI	10.64	Distance from Outfall (mi)	91.52

Treatment Facility Summary

Treatment Facility Name: Eagle Creek LLC Wastewater Treatment Plant

Construction and operation of the facility is covered under Water Quality Management (WQM) Permit No. 1401402, issued May 2, 2001. The permit allows for a phased expansion of the facility to accommodate build-out of the serviced mobile home park. Phase I represents build-out of the mobile home park from initial development through the addition of 67 units. Phase II represents build-out of the mobile home park from 68 to 104 units proposed in the approved Act 537 Sewage Facilities Plan. Phase I is served by the construction of a 15,000 GPD treatment plant. The permit requires treatment units for an additional 15,000 GPD to be constructed prior to the start of Phase II. As of the date of this fact sheet there has been no discussion regarding additional treatment units or Phase II of the mobile home park.

WQM Permit No. 1401402 was amended on November 15, 2022 to approve installation and operation of a sodium bisulfite dechlorination system.

Existing treatment at the facility consists of:

- Aerated equalization tank
- Cromaglass CA-150 Unit
- Erosion Chlorinator
- Chlorine Contact Tank

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended Aeration	Hypochlorite	0.015
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.015	38	Not Overloaded	Aerobic Digestion	Other WWTP

Compliance History

The following violations occurred during the existing permit's term:

Monitoring Period Begin Date	Monitoring Period End Date	Noncompliance Description	Noncompliance Category	Parameter	Sample Value	Violation Condition	Permit Value	Units	SBC
5/1/2019	5/31/2019	Sample collection less frequent than required	Other Violations	CBOD5					
5/1/2019	5/31/2019	Sample collection less frequent than required	Other Violations	Fecal Coliform					
5/1/2019	5/31/2019	Sample collection less frequent than required	Other Violations	Total Suspended Solids					
5/1/2019	5/31/2019	Violation of permit condition	Effluent	Fecal Coliform	14136	>	1000	CFU/100 ml	IMAX
5/1/2019	5/31/2019	Violation of permit condition	Effluent	Fecal Coliform	14136	>	200	CFU/100 ml	Geometric Mean
9/1/2019	9/30/2019	Late DMR Submission	Other Violations						
11/1/2019	11/30/2019	Late DMR Submission	Other Violations						
12/1/2019	12/31/2019	Sample collection less frequent than required	Other Violations						
3/1/2020	3/31/2020	Late DMR Submission	Other Violations						
6/1/2020	6/30/2020	Violation of permit condition	Effluent	Fecal Coliform	1102	>	1000	CFU/100 ml	IMAX
8/1/2020	8/31/2020	Late DMR Submission	Other Violations						
1/1/2021	1/31/2021	Late DMR Submission	Other Violations						
4/1/2021	4/30/2021	Late DMR Submission	Other Violations						
5/1/2021	5/31/2021	Late DMR Submission	Other Violations						
9/1/2022	9/30/2022	Violation of permit condition	Effluent	Fecal Coliform	2419.6	>	1000	CFU/100 ml	IMAX
9/1/2022	9/30/2022	Violation of permit condition	Effluent	Fecal Coliform	2420	>	200	CFU/100 ml	Geometric Mean
11/1/2022	11/30/2022	Late DMR Submission	Other Violations						
3/1/2023	3/31/2023	Late DMR Submission	Other Violations						

The Operations Section is aware of the abovementioned violations and has noted such in the most recent inspection reports.

The facility was most recently inspected by DEP on March 6, 2023. The inspection report indicates no impact was noted at the outfall.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.015
Latitude 40º 54' 0.50" **Longitude** -77º 52' 55.51"
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

DEP models in-stream conditions to determine if water quality-based effluent limitations (WQBELs) are appropriate. A model was created using WQM 7.0 v1.0b to determine if the existing limits for CBOD5, ammonia-N and dissolved oxygen are appropriate or if more stringent limits are necessary.

The water quality model WQM 7.0 v1.0b is used to determine the WQBELs for dissolved oxygen, CBOD5 and ammonia-n (NH3-N) based on a multiple-discharge analysis, if applicable. The model assumes complete and instantaneous mixing with the receiving surface water. The reach chosen to model the in-stream characteristics is appropriate as a recovery in dissolved oxygen levels is demonstrated. The modeling output is as follows:

Parameter	Discharge Conc. (mg/l)	Effluent Limitations		
		30 Day Average (mg/l)	Maximum (mg/l)	Minimum (mg/l)
CBOD5	25	25	-	-
NH3-N	25	25	50	-
Dissolved Oxygen	3	-	-	3

The input concentration for CBOD5 is the technology-based concentration limit in the existing permit, and the input concentrations for ammonia-N and dissolved oxygen are the assumed default values for treated sewage. Based on the model output, the existing limits are protective of the receiving surface water.

An evaluation of the existing technology-based TRC limits indicates there are no water quality concerns.

All modeling input/output data is attached.

Best Professional Judgment (BPJ) Limitations

The existing permit contains a 2/month ammonia and daily dissolved oxygen reporting requirement help characterize the effluent. DEP recommends that these requirements remain in the permit.

An annual reporting requirement for E. Coli is proposed per the 2017 Triennial Review of Water Quality Standards, published in the PA Bulletin on July 11, 2020.

Chesapeake Bay Considerations

Per the Wastewater Supplement to Phase 3 of Pennsylvania's Watershed Implementation Plan (WIP) the Eagle Creek LLC Wastewater Treatment Plant is considered a Phase 5 facility. The WIP requires all Phase 5 facilities to conduct, at a minimum, annual sampling for Total Nitrogen (TN) and Total Phosphorus (TP) if the facility has not completed two years' worth of voluntary nutrient monitoring already. The facility sampled for the nitrogen series and total phosphorus from September 2006 to February 2010.

Monitoring Period	Total Nitrogen		Total Phosphorus	
	Mo Load (lbs)	Avg Mo Conc (mg/l)	Mo Load (lbs)	Avg Mo Conc (mg/l)
Jan-09	7.7	15.0	2.4	4.6
Feb-09	11.2	25.3	2.3	5.2
Mar-09	6.2	10.7	3.1	4.3
Apr-09	15.0	25.0	3.0	7.2
May-09	6.2	16.9	3.1	4.9
Jun-09	8.9	19.8	2.0	4.5
Jul-09	9.1	19.6	2.4	5.3
Aug-09	13.9	20.3	6.2	8.5
Sep-09	9.9	14.8	3.0	4.9
Oct-09	15.5	13.0	3.1	2.6
Nov-09	16.2	21.1	4.8	6.3
Dec-09	13.3	20.9	3.1	4.7
Jan-10	3.1	15.3	0.9	4.2
Feb-10	12.0	19.9	2.2	4.0
AVG	***10.6***	***18.4***	***3.0***	***5.1***

Anti-Backsliding

No limits or monitoring requirements are proposed to be made less stringent. Anti-backsliding should not impact the permit.

Existing Effluent Limitations and Monitoring Requirements

The existing effluent limitations and monitoring requirements are as follows:

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	1/week	Weir
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	Report	XXX	XXX	XXX	1/day	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	XXX	XXX	XXX	25	XXX	50	2/month	8-Hr Composite
Total Suspended Solids	XXX	XXX	XXX	30	XXX	60	2/month	8-Hr Composite
Fecal Coliform (CFU/100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (CFU/100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia-Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite

Compliance Sampling Location: Outfall 001

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" (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)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	1/week	Weir
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	Report 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	8-Hr Composite
TSS	XXX	XXX	XXX	30	XXX	60	2/month	8-Hr Composite
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
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Ammonia	XXX	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite

Compliance Sampling Location: Outfall 001

Input Data WQM 7.0

Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
22412	BALD EAGLE CREEK	**35.300**	775.00	76.80	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	0.438	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	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
Eagle Creek LLC	PA0228249	0.0150	0.0150	0.0150	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

Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
22412	BALD EAGLE CREEK	**34.800**	767.00	81.70	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	0.438	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	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 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
09C	22412	BALD EAGLE 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 (ºC)	Analysis pH
Q7-10 Flow												
35.300	33.64	0.00	33.64	.0232	0.00303	.852	71.11	83.48	0.56	0.055	25.00	7.00
Q1-10 Flow												
35.300	31.96	0.00	31.96	.0232	0.00303	NA	NA	NA	0.54	0.057	25.00	7.00
Q30-10 Flow												
35.300	39.69	0.00	39.69	.0232	0.00303	NA	NA	NA	0.61	0.050	25.00	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	0.95	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.18	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
09C	22412	BALD EAGLE 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
35.300	Eagle Creek LLC	11.07	50	11.07	50	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
35.300	Eagle Creek LLC	1.37	25	1.37	25	0	0

Dissolved Oxygen Allocations

		CBOD5		NH3-N		Dissolved Oxygen		Critical	Percent
RMI	Discharge Name	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Reach	Reduction
35.30	Eagle Creek LLC	25	25	25	25	3	3	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
09C	22412	BALD EAGLE CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (ºC)	Analysis pH
35.300	0.015	25.000	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
71.115	0.852	83.477	0.556
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.02	0.012	0.02	1.029
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.239	8.843	Tsivoglou	5
Reach Travel Time (days)			
0.055			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.005	2.02	0.02	7.54
0.011	2.02	0.02	7.54
0.016	2.02	0.02	7.54
0.022	2.02	0.02	7.54
0.027	2.02	0.02	7.54
0.033	2.01	0.02	7.54
0.038	2.01	0.02	7.54
0.044	2.01	0.02	7.54
0.049	2.01	0.02	7.54
0.055	2.01	0.02	7.54

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
09C	22412	BALD EAGLE 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)
35.300	Eagle Creek LLC	PA0228249	0.015	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			3

1A	B	C	D	E	F	G
2	**TRC EVALUATION**					
3	Input appropriate values in B4:B8 and E4:E7					
4	33.6	= Q stream (cfs)		0.5	= CV Daily	
5	0.015	= Q discharge (MGD)		0.5	= CV Hourly	
6	30	= no. samples		1	= AFC_Partial Mix Factor	
7	0.3	= Chlorine Demand of Stream		0.032	= CFC_Partial Mix Factor	
8	0	= Chlorine Demand of Discharge		15	= AFC_Criteria Compliance Time (min)	
9	0.5	= BAT/BPJ Value		720	= CFC_Criteria Compliance Time (min)	
	0	= % Factor of Safety (FOS)		0	=Decay Coefficient (K)	
10	Source	Reference	AFC Calculations		Reference	CFC Calculations
11	TRC	1.3.2.iii	WLA afc = 461.919		1.3.2.iii	WLA cfc = 14.421
12	PENTOXSD TRG	5.1a	LTAMULT afc = 0.373		5.1c	LTAMULT cfc = 0.581
13	PENTOXSD TRG	5.1b	LTA_afc= 172.122		5.1d	LTA_cfc = 8.384
14						
15	Source		Effluent Limit Calculations			
16	PENTOXSD TRG	5.1f	AML MULT = 1.231			
17	PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500		BAT/BPJ	
18			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)