Pennsylvania Department of Environmental Protection

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0217832**
Wastewater Type	**Sewage**	APS ID	**1134027**
Facility Type	**SFTF**	Authorization ID	**1521195**

NPDES PERMIT FACT SHEET INDIVIDUAL SFTF/SRSTP

Applicant, Facility and Project Information

Applicant Name	**Fox Tiels, LLC**	Facility Name	**Perrine Building SFTF**
Applicant Address	4425 William Penn Highway	Facility Address	112 Pfeffer Road
	Murrysville, PA 15668-1917		Export, PA 15632-1933
Applicant Contact	Jim Fox	Facility Contact	Andru Boring
Applicant Phone	(412) 480-5436	Facility Phone	(724) 568-3623
Client ID	361507	Site ID	484011
SIC Code	6512	Municipality	Washington Township
SIC Description	Fin, Ins & Real Est - Nonresidential Building Operators	County	Westmoreland
Date Application Received	March 27, 2025	WQM Required	No
Date Application Accepted	March 27, 2025		

Project Description: NPDES Permit Renewal Application for Discharge of Treated Sewage Effluent.

Summary of Review

The permittee has applied for a renewal of NPDES Permit No. PA0217832, this permit was previously issued by the PA Department of Environmental Protection (DEP) on September 10, 2020, and will expire on September 30, 2025.

WQM No. 6598406 issued on September 15, 1998 approved the construction of a treatment facility consists of flow equalization, a Cromaglass CA-15 batch treatment unit, subsurface sand filtration and chlorination. Alum is added for phosphorus removal.

The STP has an average daily design flow of 0.001 MGD and discharges to Unnamed Tributary to Thorn Run, which is filling in the Beaver Run Reservoir state watershed 18-B, and classified as a HQ-CWF per CH93 designation.

The previous review stated that this type of treatment system is not in DEP 's Small Flow Sewage Treatment Plant Design Manual, which is the reason that this plant was permitted as a minor non-municipal treatment plant instead of a SFTF.

The discharges is to a special protection waters make it not eligible for a general NPDES permit.

In the last permit, Antidegradation BAT limits for BOD5 and TSS were imposed, WQBELs for Dissolved Oxygen and Ammonia-Nitrogen were developed based on DEP WQM model, also, a phosphorus AML of 2.0 mg/L was imposed based on a previous lake study done by DEP in 1985 for Beaver Run Reservoir.

For this review, per current SOP- No. BCW-PMT-003, Version 1.8, Final, November 9, 2012, Revised November 9, 2023 " *SFTFs are those with design flows of 2,000 gallons per day (GPD) or less. Single residence sewage treatment plants (SRSTPs) are a subset of SFTFs and are facilities for single homes with a typical design flow between 400 and 800 GPD. All*

Approve	Deny	Signatures	Date
X		Hazim Aldalli / Project Manager	November 25, 2025
X		Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineering Manager	December 12, 2025

Summary of Review

SFTFs that are for multiple homes or for businesses with design flows of less than or equal to 2,000 GPD are called SFTFs." Therefore, this facility should be considered as SFTF (eFACTS already indicates this auth as SFTF) per the assigned discharge (1,000 gallons per day GPD). Also, the recently updated DEP's Small Flow Sewage Treatment Plant Design Manual (updated on November 11, 2023) stated that "*SFTF - Small Flow Treatment Facility - An individual or community sewerage system designed to adequately treat sewage flows not greater than 2,000 gpd for final disposal using a stream discharge or other methods approved by the Department. (25 Pa. Code 92a.2)*", and per the Design Manual Sec. 11.1.

The Cromaglass CA-15 batch treatment unit is basically a mini SBR compacted treatment system rated for 1500 GPD. This unit operates under standard SBR principles; fill, react, settle and discharge, with flow alarms and electric valves ; therefore, the need for an operator will be limited for the regular maintenance that can be performed by a certified contractor.

This facility is receiving sewage flow from an office building with no other users discharging per the last Operations inspection report dated on March 20, 2025.

Checking on Operations compliance report; the facility is in general compliance with no open violations.

The applicant attached invoices that shows consistent maintenance for the treatment system in compliance with the AMR requirements.

The application stated that there were no changes to the facility conditions regarding discharge, receiving stream, or treatment technology. No changes are foreseen for the next five years.

The applicant provides a proof of Act 14, P.L. 834 compliance with the March 12 & March 13, 2025 letters, no comments received.

Draft permit issuance is recommended.

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.

Discharge and Stream Data – 2 - Receiving Waters and PWS

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.001
Latitude	40º 28' 8.00"	Longitude	-79º 35' 31.00"
Quad Name	Slickville	Quad Code	40079D5
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Thorn Run (HQ-CWF)	Stream Code	42981
NHD Com ID	125291792	RMI	0.4
Drainage Area	0.78	Yield (cfs/mi^2)	0.0214
Q_{7-10} Flow (cfs)	0.0167	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	1193	Slope (ft/ft)	0.0105
Watershed No.	18-B	Chapter 93 Class.	HQ-CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use	None.	Exceptions to Criteria	None.
Assessment Status	Attaining Use(s): Supporting; Aquatic Life		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

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

Nearest Downstream Public Water Supply Intake	WEST CNTY MUNI AUTH-MCKEESPORT		
PWS Waters	Youghiogheny River	Flow at Intake (cfs)	420
PWS RMI	1.8	Distance from Outfall (mi)	>20.0

Changes Since Last Permit Issuance:

- Q_{7-10} flow, elevation, drainage area, and low flow yield were all updated to match USGS Stream Stats new data (see Attachment A).

Other Comments: None.

Compliance History

Operations Compliance Check Summary Report

Facility: PERRINE BLDG STP
NPDES Permit No.: PA0217832
Compliance Review Period: 4/1/20-4/3/25

Inspection Summary:

INSPECTED DATE	INSP TYPE	INSPECTION RESULT DESC	INSPECTION COMMENT
03/20/2025	Compliance Evaluation	No Violations Noted	
03/19/2025	Administrative/File Review	No Violations Noted	DISCHARGE MONITORING REPORT ("DMR") REVIEW (January 2024 – December 2024): - The eDMR review for the indicated review period revealed 2 effluent exceedance(s): o January 2024 – NH3-N I-max (10.5mg/l reported / 9.0mg/l limit) o June 2024 – BOD I-max. (22.7mg/l reported / 20.0mg/l limit) o A letter was attached to the both the January and June eDMRs explaining the cause of the exceedances was investigated. No definitive cause was determined, but products used at the hair salon were suspected. - The eDMR review for the indicated review period revealed zero reported unauthorized discharge(s). - The eDMR review for the indicated review period revealed zero reported "other" non-compliance(s), such as late or incomplete eDMR submittals. - The eDMR review for the indicated period showed that all monthly and annual DMRs had been submitted on-time and were complete. No missed samples were reported. In general, but with some variation, treatment plant operating summary forms, daily effluent monitoring, lab analysis, Sewage Sludge/Biosolids Production, and Non-Compliance forms are attached to the eDMRs. - TRC, DO, and pH measurements are collected/reported as outlined in the permit at the frequency of 1/week. - According to the Department's records, no complaints have been filed with the Department regarding the Perrine Building SFTF during the indicated period. - According to the eDMR submittals, no sludge was disposed o during 2024. - According to the Department's records, the permittee began utilizing the eDMR system with the ~March 2018 DMR submittal.

08/21/2020	Administrative/File Review	No Violations Noted	DMR/eDMR Review: Jan. 1, 2019 - Jun. 30, 2020 Monitoring Period. Monthly DMR submittals required: Received on-time. Effluent exceedances included TSS Average & I-max during in Nov. 2019, and NH3-N Average & I-max exceedances in Feb. 2019. Began utilizing the eDMR system with the Mar. 2018 DMR submittal. No unauthorized discharges, or other non-compliances reported/revealed during indicated review period. Permit expiration date was 10-31-19; permit renewal application was received 4-10-19, which is currently under the Department's review, and the permit has been administratively extended. Receiving stream is UNT of Thorn Run and the plant is rated at 0.001MGD. June 2016 CACP executed for prior effluent exceedances.

Violation Summary:
No violations noted during review period
Open Violations by Client ID:
No open violations for Client ID 361507
Enforcement Summary:
No enforcements executed during review period

Effluent Violation Summary:

MONPD	PARAMETER	REPORTED VALUE	PERMIT LIMIT	UNIT	STAT_BASE_CODE	FACILITY COMMENT
Jun-24	Biochemical Oxygen Demand (BOD5)	22.7	20.0	mg/L	Instantaneous Maximum	
Jan-24	Ammonia-Nitrogen	10.5	9.0	mg/L	Instantaneous Maximum	
Nov-21	Total Residual Chlorine (TRC)	0.06	.04	mg/L	Instantaneous Maximum	The Maximum report limit on the permit is 1.6 mg/L NOT 0.04 mg/L. The state has the incorrect limit associated with this sewage treatment plant permit.

Compliance Status: Facility is generally in compliance with no open violations or pending enforcements.
Completed by: Amanda Illar **Completed date:** 4/3/25

Other Comments: None.

Development of Effluent Limitations

Outfall No. 001 Design Flow (MGD) 0.001
Latitude 40º 28' 8.00" Longitude -79º 35' 31.00"
Wastewater Description: Treated Sewage Effluent

Technology-Based Limitations (TBELs)

The following effluent limitations and monitoring requirements, at a minimum, will be established in all new and renewed SFTF permits based on the requirements of DEP's "Standard Operating Procedure (SOP) for Clean Water Program New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Application" (SOP No. BCW-PMT-003, Version 1.8, Final, November 9, 2012, Revised November 9, 2023).

Parameter	Avg	IMAX	Sample Type	Frequency: SFTFs	Frequency: SRSTPs
Flow (GPD)	Report	XXX	Estimate (SRSTPs) Measured (SFTFs)	1/month	1/year
BOD5 (mg/L)	10	20	Grab	1/month	1/year
TSS (mg/L)	10	20	Grab	1/month	1/year
pH*	6.0 S.U. Inst. Min.	9.0 S.U.	Grab	1/month	1/year
TRC (mg/L)	Report for SRSTPs; Use TRC Spreadsheet to determine WQBELs or 0.02 mg/L for SFTFs		Grab	1/month	1/year
Fecal Coliform (No./100 ml)	200 Geometric Mean (SFTFs) / Average (SRSTPs)		Grab	1/month	1/year

* Technology-Based effluent limits for pH will be imposed based upon Federal Regulation 133.102(c) and State Regulation 95.2(1).

Antidegradation Considerations

The existing facility was originally permitted after the August 1992 edition of the "Special Protection Waters Implementation Handbook" and prior to the development of the "Water Quality Antidegradation Implementation Guidance" document (Doc. No. 391-0300-002; November 29, 2003). Perrine Building SFTF discharges to a high quality (HQ) stream (Unnamed Tributary to Thorn Run (HQ-CWF)), and therefore it's subjected to antidegradation considerations.

The following Antidegradation Best Available Combination of Technologies (ABACT) effluent limits, at a minimum, will be established based on the requirements of DEP's Antidegradation Guidance.

Parameter	Treatment Process Performance Expectations (mg/L)		
	<2,000 gpd	2,000-50,000 gpd	>50,000 gpd
$CBOD_5$ (May 1 – Oct. 31)	10	10	10
$CBOD_5$ (Nov. 1 – Apr. 30)	20	20	10
Suspended Solids	20	10	10
NH_3-N (May 1 – Oct. 31)	5.0	3.0	1.5
NH_3-N (Nov. 1 – Apr. 30)	15.0	9.0	4.5
Effective disinfection	Disinfection should be accomplished using a method that leaves no detectable residual. Disinfection using ultra-violet light or other non-chlorine based systems is encouraged and must be considered.		
Other parameters, as needed	*Determined by the size and characteristics of the proposed discharge, may include – NO_2/NO_3-N, Total Phosphorus, Copper, Lead, Zinc*		

The limitations and monitoring requirements, specified on page 8 of this Fact Sheet, reflect the most stringent limitation amongst the above Technology-Based Effluent Limitations.

Additional Considerations:

Pa. Code 25 § 92a.48(b)(3) states: *"Facilities using chlorination that discharge to an Exceptional Value Water, or to a High Quality Water where economic or social justification under § 93.4c(b) (1)(iii) (relating to implementation of antidegradation requirements) has not been demonstrated under applicable State or Federal law or regulations, shall discontinue chlorination or dechlorinate their effluents prior to discharge into the waters."* Therefore, the Department recommends that the facility should maintain dechlorination of its effluent water prior to discharge and/or consider replacing the chlorination system with UV disinfection or other non-chlorine-based systems before or during the renewal of the next NPDES permitting cycle.

TRC was calculated using DEP calculation sheet, which generates an AML of 0.5 mg/L (see Attachment B). This is less stringent from the current limit that was based on the Water Quality Antidegradation Implementation Guidance requirements for high quality waters and to ensure the dechlorination process effectiveness; TRC AML of 0.02 mg/L shall be maintained since no changes foreseen for the facility's flow or updates to DEP policy. Part C120 will be added as a special TRC condition to the renewal permit.

BOD_5 limitations were imposed instead of $CBOD_5$ which reflect the most stringent limitation amongst the Technology-Based Effluent Limitations, and based upon the Department's SOP – New and Reissuance Individual SFTF NPDES Permits, and per DEP Small Flow Treatment Facilities Manual (Nov. 2023).

Per DEP SOP No. BCW-PMT-003, the Dissolved Oxygen is not considered for this review, and is no more a permit limit. The Biological Oxygen Demand BOD_5 proposed limit will help in controlling the depletion of the dissolved Oxygen within the receiving waters.

DEP SOP stated that SFTFs/SRSTPs are not required to monitor for Total Nitrogen and Total Phosphorus in new and reissued permits, for this particular case, this discharge is into a high quality stream that flow into a lake; therefore, the special protection phosphorus AML of 2.0 mg/L shall be maintained for this renewal with monthly monitoring.

Anti-Backsliding:

This facility will be permitted as a SFTF based on the new information available from the recently approved DEP Small Flow Treatment Facility Manual, and the DEP SOP No. BCW-PMT-003 which both were updated after this permit was last time been issued. Pursuant to State regulation 25 Pa. Code 92a.2, and per DEP Manual definition for small flow treatment facility (see page 2), and per DEP SOP No. BCW-PMT-003 under Note G.3; the new limitation will be a technology based effluent limits as shown in the table above. Part of that is the Ammonia-Nitrogen limits which was a WQBELs, and for this review purposes will be a TBELs based on the ABACT analysis, the relaxation of these limits is not a backsliding based on the backsliding exceptions list.

TRC will be the only water quality effluent limit as instructed by the referenced SOP. This determination will be based on one of the anti-backsliding exceptions Section 402(o)(2) which lists six narrow grounds on which such effluent limits may be made less stringent, new information is on the backsliding exceptions list.

Kiskiminetas River Basin TMDL

In accordance with 40 CFR § 122.44(d)(1)(vii)(B), when developing WQBELs the permitting authority shall ensure that effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available Wasteload allocation (WLA) for the discharge prepared by the State and approved by EPA pursuant to 40 CFR § 130.7.

This TMDL was developed due to the acid mine drainage within the watershed. This facility considered a "Negligible Discharge Facility" as identified in Appendix C of the Kiskiminetas-Conemaugh River Watershed TMDL with no WLA developed for this discharge. Also, the receiving waters Unnamed Tributary to Thorn Run (HQ-CWF) segment within the facility is not impaired with acid mine drainage and it's attaining its uses (see page 3). Therefore, no limits or monitoring will be imposed for this renewal.

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) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	0.001	XXX	XXX	XXX	XXX	XXX	1/month	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/month	Grab
TRC	XXX	XXX	XXX	0.02	XXX	0.04	1/week	Grab
BOD5	XXX	XXX	XXX	10.0	XXX	20.0	1/month	Grab
TSS	XXX	XXX	XXX	10.0	XXX	20.0	1/month	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	15.0	XXX	30.0	1/month	Grab
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	5.0	XXX	10.0	1/month	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	XXX	1/month	Grab
Total Phosphorus	XXX	XXX	XXX	2.0	XXX	4.0	1/month	Grab

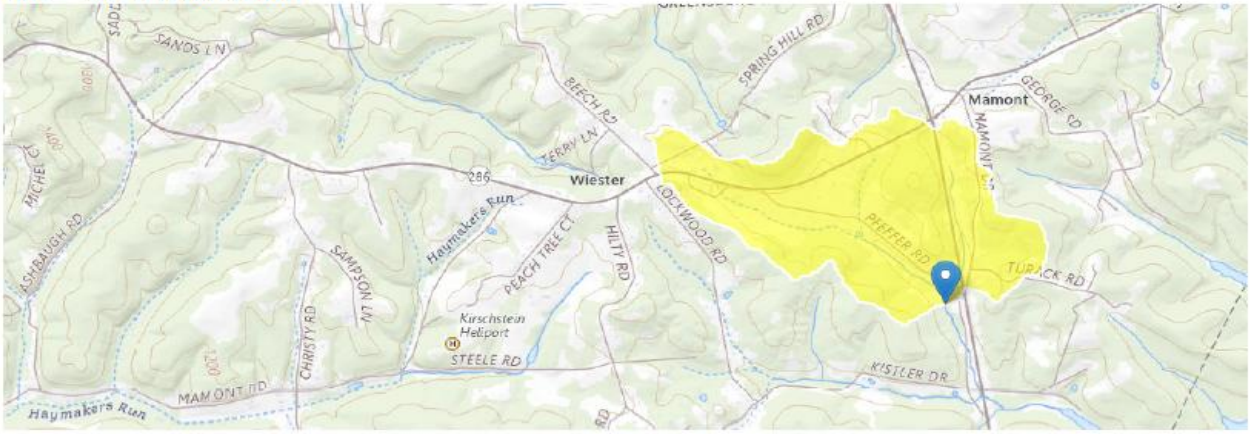
Compliance Sampling Location: at Outfall 001.

Other Comments: None.

ATTACHMENT A:
USGS StreamStats

StreamStats Report

Region ID: PA
Workspace ID: PA20250708133416360000
Clicked Point (Latitude, Longitude): 40.46884, -79.59178
Time: 2025-07-08 09:34:38 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.78	square miles
ELEV	Mean Basin Elevation	1193	feet
PRECIP	Mean Annual Precipitation	39	inches

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 3]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.78	square miles	2.33	1720
ELEV	Mean Basin Elevation	1193	feet	898	2700
PRECIP	Mean Annual Precipitation	39	inches	38.7	47.9

Low-Flow Statistics Disclaimers [Low Flow Region 3]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Low-Flow Statistics Flow Report [Low Flow Region 3]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0507	ft^3/s
30 Day 2 Year Low Flow	0.0752	ft^3/s
7 Day 10 Year Low Flow	0.0167	ft^3/s
30 Day 10 Year Low Flow	0.0264	ft^3/s

Statistic	Value	Unit
90 Day 10 Year Low Flow	0.0412	ft^3/s

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

Application Version: 4.29.2
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

ATTACHMENT B:
DEP TRC Calculation Sheet

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.0167	= Q stream (cfs)	0.5	= CV Daily
0.001	= Q discharge (MGD)	0.5	= CV Hourly
4	= 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 =	3.463	1.3.2.iii	WLA cfc =	3.368
PENTOXSD TRG	5.1a	LTAMULT afc =	0.373	5.1c	LTAMULT cfc =	0.581
PENTOXSD TRG	5.1b	LTA_afc=	1.290	5.1d	LTA_cfc =	1.958

Source		Effluent Limit Calculations		
PENTOXSD TRG	5.1f	AML MULT =	1.720	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) =	0.500	BAT/BPJ
		INST MAX LIMIT (mg/l) =	1.170	

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)**