



DEPARTMENT OF THE AIR FORCE
23D CIVIL ENGINEER SQUADRON (ACC)
MOODY AIR FORCE BASE GEORGIA



MEMORANDUM FOR GEORGIA DEPARTMENT OF NATURAL RESOURCES
Environmental Protection Division
Watershed Protection Branch
Wastewater Regulatory Program
Industrial Permitting Unit (Attn: Mr. Christopher Douglas)
2 Martin Luther King Jr. Drive, Suite 1152E
Atlanta GA 30334

FROM: 23 CES/CD
3485 Georgia Street
Moody AFB GA 31699-1707.

SUBJECT: Request Modification of National Pollutant Discharge Elimination System (NPDES) Permit GA0020001, Moody Air Force Base (AFB), Georgia, Effective 1 Sep 2017

1. In accordance with NPDES Permit GA0020001 (Permit), Part II.B.4, Moody AFB requests a modification to the effluent discharge limitations presented in the table located at Part I.A.1.b. (Page 4 of 23) (Attachment 1) based upon the re-modeling scenarios presented by your office on 12 October 2018 (Attachment 2). Specifically, Moody AFB is requesting our Permit be modified by:

- a. Adopting a quarterly monitoring frequency for ammonia-nitrogen, instead of the current semi-annual monitoring;
- b. Adjusting the effluent discharge limitations for ammonia nitrogen to Daily Averages of 1.22 mg/L (Jul-Sep), 2.85 mg/L (Jan-Mar), 1.79 mg/L (Oct-Dec), and 1.4 mg/L (Apr-Jun); and,
- c. Lowering the maximum pH standard units to no greater than 7.0 at the point of discharge.

2. Considering any compliance schedule, it is our goal to work with GA EPD within the confines of the federal programming and funding schedule to comply with adjusted effluent limitations. Because our wastewater treatment plant is not currently capable of meeting the proposed re-modeled ammonia nitrogen limitations noted above, Moody AFB will implement a capital improvement project in order to install new technology to meet both the reduced ammonia nitrogen and pH limits. Unfortunately, the federal programming and funding schedule, along with the time required for design and construction, is not going to allow us to have the plant modified in time to meet the current permitted compliance schedule of 1 September 2020 (Permit Part I.A.1.b.) (Attachment 1), and potentially not within the current permit cycle (see Moody Project Timeline at Attachment 3). Our team reacted promptly to request funds for a capital improvement project (FY20), and quickly obtained funds and awarded a contract to evaluate potential treatment upgrade alternatives and perform the ammonia recalculation, and we are committed to continue advocating for funding approvals to complete the National

- b. Effective 36 months from the effective date of the permit and continuing until the expiration date of the permit, the permittee is authorized to discharge from outfall number 001¹ – sanitary sewage, groundwater infiltration, stormwater runoff, residential water, potable water treatment plant, and vehicle maintenance operations.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristics (Units)	Discharge Limitations				Monitoring Requirements ²		
	Mass Based (lbs/day)		Concentration Based (mg/L)		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Flow (MGD)	0.75	1.125	--	--	Daily	Continuous	Effluent
BOD ₅	--	--	15	22.5	2/Week	24-hr composite	Effluent
TSS	--	--	14	21	2/Week	24-hr composite	Effluent
Total Phosphorus ³	--	--	Report	Report	1/Week	24-hr composite	Effluent
Ortho-Phosphorus ³	--	--	Report	Report	1/Week	24-hr composite	Effluent
Fecal Coliform ⁵ (#/100 mL)	--	--	200	400	1/Week	Grab	Effluent
Ammonia Nitrogen ⁴ (May – October)	--	--	0.24	0.36	1/Week	24-hr composite	Effluent
Ammonia Nitrogen ⁴ (November – April)	--	--	0.41	0.62	1/Week	24-hr composite	Effluent
Total Nitrogen ⁴	--	--	Report	Report	1/Week	24-hr composite	Effluent
Total Kjeldahl Nitrogen ⁴	--	--	Report	Report	1/Week	24-hr composite	Effluent
Nitrate/Nitrite ⁴	--	--	Report	Report	1/Week	24-hr composite	Effluent
Dissolved Oxygen	--	--	5.0 Daily Minimum	--	1/Month	Grab	Effluent
Carbon Tetrachloride	--	--	Report	Report	1/Month	Grab	Effluent

The pH shall not be less than 6.0 standard units nor greater than 8.5 standard units and shall be monitored once per week by grab sample.

¹ There shall be no discharge of floating solids or visible foam other than in trace amounts.

LEE, GREGORY W GS-12 USAF ACC 23 CES/CEIE

From: Douglas, Christopher <christopher.douglas@dnr.ga.gov>
Sent: Friday, October 12, 2018 9:37 AM
To: LEE, GREGORY W GS-12 USAF ACC 23 CES/CEIE
Cc: ADAMS, RUSSELL R CIV USAF AFCEC AFCEC/CZO-E
Subject: [Non-DoD Source] RE: Ammonia Recalculation Study
Attachments: NH3 toxicity pH reduction alternative.xlsx; Ammonia limit Table.xlsx

Mr. Lee,

Happy Friday! I have received some feedback from the modeling team regarding the ammonia recalculation study. They have produced multiple scenarios of which ammonia nitrogen may be increased. We wanted to present this information to you and determine what preference you may have. The summary sheet is in "NH3 toxicity pH reduction alternative.xlsx" spreadsheet. If you have any additional questions you can contact Mr. William Wang at 404-463-4920 and he can discuss these options with you.

Sincerely,

Christopher Douglas

Environmental Engineer
Georgia Department of Natural Resources
Environmental Protection Division
Watershed Protection Branch
Wastewater Regulatory Program
Industrial Permitting Unit
2 Martin Luther King Jr. Drive Suite 1152E Atlanta, GA 30334
Phone: (404) 463-0932

Did you know starting October 1, 2018 you may complete your wastewater and underground injection control applications online using the Georgia EPD Online System? You can access the site at the following link:
<https://geos.epd.georgia.gov/GA/GEOS/Public/GovEnt/Shared/Pages/Main/Login.aspx>

-----Original Message-----

From: LEE, GREGORY W GS-12 USAF ACC 23 CES/CEIE [mailto:gregory.lee.5@us.af.mil]
Sent: Monday, August 27, 2018 1:47 PM
To: Douglas, Christopher
Cc: ADAMS, RUSSELL R CIV USAF AFCEC AFCEC/CZO-E
Subject: RE: Ammonia Recalculation Study

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Sir,

Sir,

How about next Thursday, 30 August, at 1:00 pm?

I assume the meeting will be at your office on Martin Luther King, Jr, Drive?

Thanks,

Greg Lee

Gregory W. Lee, Certified Wildlife Biologist Supervisory Biological Scientist/Chief, Moody AFB Environmental Element
gregory.lee.5@us.af.mil
229-257-5881 (DSN 460-5881)

"Providing flexibility for mission activities while protecting natural and cultural resources"

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-----Original Message-----

From: Douglas, Christopher [mailto:christopher.douglas@dnr.ga.gov]

Sent: Wednesday, August 22, 2018 3:02 PM

To: LEE, GREGORY W GS-12 USAF ACC 23 CES/CEIE <gregory.lee.5@us.af.mil>

Cc: LANE, ELVIS A GS-11 USAF ACC 23 CES/CEIEC <elvis.lane@us.af.mil>; FOWLER, WILLIAM J GS-12 USAF ACC 23

CES/CEIEC <william.fowler.5@us.af.mil>; ADAMS, RUSSELL R CIV USAF AFCEC AFCEC/CZO-E

<russell.adams.1@us.af.mil>; FROST, MICHAEL E GS-13 USAF ACC 23 CES/CEI <michael.frost@us.af.mil>

Subject: [Non-DoD Source] RE: Ammonia Recalculation Study

Mr. Lee,

I would like to have Mrs. Elizabeth Booth present for this meeting and she is leaving the country for vacation at the end of the month. So if possible I would suggest sometime next week, however if that is not feasible we can schedule something upon her return.

Christopher Douglas

Environmental Engineer

Georgia Department of Natural Resources

—Original Message—

From: Douglas, Christopher [mailto:christopher.douglas@dnr.ga.gov]

Sent: Tuesday, August 21, 2018 3:16 PM

To: LEE, GREGORY W GS-12 USAF ACC 23 CES/CEIE <gregory.lee.5@us.af.mil>

Cc: LANE, ELVIS A GS-11 USAF ACC 23 CES/CEIEC <elvis.lane@us.af.mil>; FOWLER, WILLIAM J GS-12 USAF ACC 23

CES/CEIEC <william.fowler.5@us.af.mil>; ADAMS, RUSSELL R CIV USAF AFCEC AFCEC/CZO-E <russell.adams.1@us.af.mil>

Subject: [Non-DoD Source] Ammonia Recalculation Study

Mr. Lee,

The modelling team has reached out to me and requested we set up a meeting to discuss the findings of the ammonia study you conducted. Would you be available to come into our office sometime before the end of this month?

Christopher Douglas

Environmental Engineer

Georgia Department of Natural Resources

Environmental Protection Division

Watershed Protection Branch

Wastewater Regulatory Program

Industrial Permitting Unit

2 Martin Luther King Jr. Drive Suite 1152E Atlanta, GA 30334

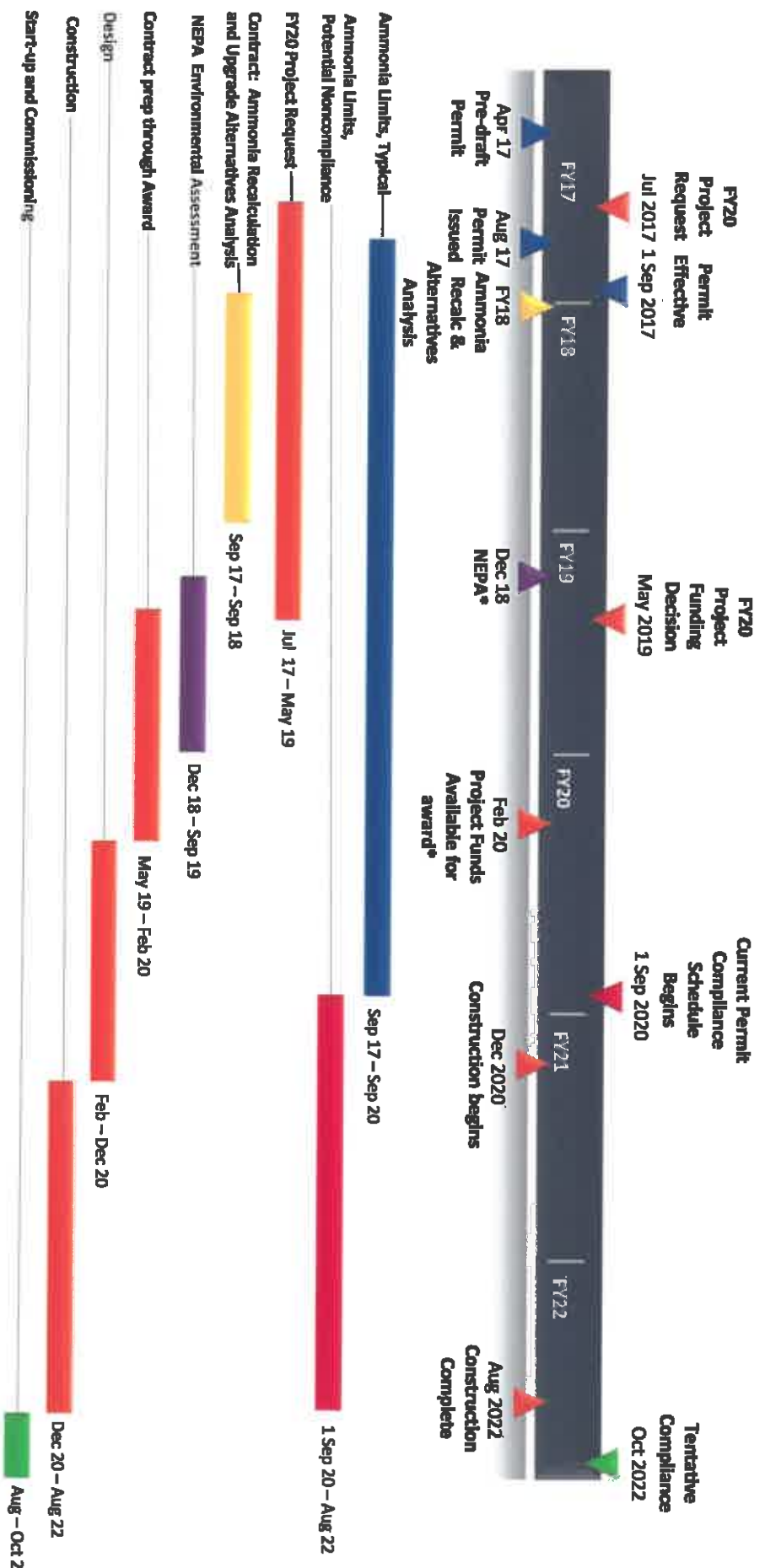
Phone: (404) 463-0932

Ammonia limit Table							
Basic							
Summer	temp	bckg pH	Eff. pH	Bckg Nh3	30Q3	Q eff	Limit
	28	7	8.5	0.13	0.0087	0.75	0.24
			8				0.49
			7.5				0.84
			7				1.13
			6.8				1.21
Winter	temp	bckg pH	Eff. pH	Bckg Nh3	30Q3	Q eff	Limit
	21	7	8.5	0.13	0.013	0.75	0.41
			8				0.78
			7.5				1.33
			7				1.79
			6.8				1.9
Rev1 backgrnd Nh3							
Summer	temp	bckg pH	Eff. pH	Bckg Nh3	30Q3	Q eff	Limit
	28	7	8.5	0.07	0.0087	0.75	0.24
			8				0.49
			7.5				0.84
			7				1.13
			6.8				1.21
Winter	temp	bckg pH	Eff. pH	Bckg Nh3	30Q3	Q eff	Limit
	21	7	8.5	0.03	0.013	0.75	0.41
			8				0.78
			7.5				1.33
			7				1.79
			6.8				1.9
Rev2 backgrnd Nh3 & pH							
Summer	temp	bckg pH	Eff. pH	Bckg Nh3	30Q3	Q eff	Limit
	28	6.4	8.5	0.07	0.0087	0.75	0.34
			8				0.54
			7.5				0.86
			7				1.14
			6.8				1.21
Winter	temp	bckg pH	Eff. pH	Bckg Nh3	30Q3	Q eff	Limit
	21	6.3	8.5	0.03	0.013	0.75	0.67
			8				0.95
			7.5				1.4
			7				1.8
			6.8				1.91



MOODY AFB

WWTP Upgrade - Project Timeline (Tentative)



* Schedule is tentative pending funds availability (FY19 NEPA, FY20 Design/Build)