VPDES PERMIT PROGRAM FACT SHEET

FILE NO: 445

This document gives pertinent information concerning the VPDES Permit listed below. This permit is being processed as a **MAJOR INDUSTRIAL** permit.

1. **PERMIT NO.:** VA0003808 **EXPIRATION DATE:** June 29, 2011

2. **FACILITY NAME AND LOCAL MAILING ADDRESS**

Perdue Farms, Incorporated
22520 Lankford Highway
Accomac, VA 23301

FACILITY LOCATION ADDRESS (IF DIFFERENT)

22520 Lankford Highway
Accomac, VA 23301

CONTACT AT FACILITY:
NAME: Mr. Randy Rhoades
TITLE: Environmental Mgr
PHONE: (757)787-5289
EMAIL: Randy.Rhoades@perdue.com

CONTACT AT LOCATION ADDRESS
NAME: Same
TITLE:
PHONE: ( )

3. **OWNER CONTACT:** (TO RECEIVE PERMIT)
NAME: Mr. Joe Campbell
TITLE: Director of Operations
COMPANY NAME: (IF DIFFERENT)
ADDRESS:

PHONE: (757)787-5289
EMAIL:

CONSULTANT CONTACT:
NAME:
FIRM NAME:
ADDRESS:

PHONE: ( )
EMAIL:

4. **PERMIT DRAFTED BY:** DEQ, Water Permits, Regional Office

Permit Writer(s): Debra Thompson Debra Thompson Date(s): 2/14/11 4/13/11, 7/12/11, 7/14/11
Reviewed By: Saver Date(s): 4/15/11

5. **PERMIT ACTION:**

( ) Issuance (X) Reissuance ( ) Revoke & Reissue ( ) Owner Modification
( ) Board Modification ( ) Change of Ownership/Name [Effective Date:]

6. **SUMMARY OF SPECIFIC ATTACHMENTS LABELED AS:**

Attachment 1	Site Inspection Report/Memorandum
Attachment 2	Discharge Location/Topographic Map
Attachment 3	Schematic/Plans & Specs/Site Map/Water Balance
Attachment 4	TABLE I - Discharge/Outfall Description
Attachment 5	TABLE II - Effluent Monitoring/Limitations
Attachment 6	Effluent Limitations/Monitoring Rationale/Suitable Data/Antidegradation/Antibacksliding
Attachment 7	Special Conditions Rationale
Attachment 8	Toxics Monitoring/Toxics Reduction/WET Limit Rationale
Attachment 9	Material Stored
Attachment 10	Receiving Waters Info./Tier Determination/STORET Data/Stream Modeling
Attachment 11	303(d) Listed Segments
Attachment 12	TABLE III(a) and TABLE III(b) - Change Sheets
Attachment 13	NPDES Industrial Permit Rating Worksheet and EPA Permit Checklist
Attachment 14	Chronology Sheet
Attachment 15	Other Pertinent Correspondence/Information

APPLICATION COMPLETE: March 1, 2011

7. **PERMIT CHARACTERIZATION:** (Check as many as appropriate)

(X) Existing Discharge
( ) Proposed Discharge
( ) Municipal
SIC Code(s)
(X) Industrial
SIC Code(s)2015, 2077
( ) POTW
( ) PVOTW
(X) Private
( ) Federal
( ) State
( ) Publicly-Owned Industrial

(X) Effluent Limited
(X) Water Quality Limited
(X) WET Limit
( ) Interim Limits in Permit
(X) Compliance Schedule Required

( ) Site Specific WQ Criteria
( ) Variance to WQ Standards
( ) Water Effects Ratio
(X) Discharge to 303(d) Listed Segment
( ) Toxics Management Program Required
( ) Toxics Reduction Evaluation
(X) Storm Water Management Plan
( ) Pretreatment Program Required
( ) Possible Interstate Effect
( ) CBP Significant Dischargers List

8. **RECEIVING WATERS CLASSIFICATION:** River basin information.

Outfall No(s):001, 003-008

Receiving Stream:	Parker Creek to Metompkin Bay to Atlantic Ocean
River Mile:	7-PAR004.83
Basin:	Chesapeake Bay, Atlantic Ocean & Small Coastal
Subbasin:	N/A
Section:	1a
Class:	III
Special Standard(s):	None
Tidal:	NO
7-Day/10-Year Low Flow:	MGD
1-Day/10-Year Low Flow:	MGD
30-Day/5-Year Low Flow:	MGD
Harmonic Mean Flow:	MGD

Outfall No(s):009

Receiving Stream:	Unnamed Tributary to Folly Creek to Atlantic Ocean
River Mile:	7-FLL002.83
Basin:	Chesapeake Bay, Atlantic Ocean & Small Coastal
Subbasin:	N/A
Section:	1a
Class:	III
Special Standard(s):	None
Tidal:	NO

9. **FACILITY DESCRIPTION:** This manufacturing operation consists of slaughtering, defeathering, eviscerating, chilling and packaging of poultry products for human consumption, and rendering offal and feather waste for animal feed ingredients.

Existing industrial discharge resulting from poultry processing and rendering operations, as well as sanitary wastewater and storm water.

10. **LICENSED OPERATOR REQUIREMENTS:** ( ) No (X) Yes Class: II

11. **RELIABILITY CLASS:** Industrial Facility - NA

12. **SITE INSPECTION DATE**: January 19, 2011 **REPORT DATE**: February 18, 2011

Performed By: Stephen Thomas-Eastern Shore Inspector & Debra Thompson-TRO Permits

SEE ATTACHMENT 1

13. **DISCHARGE(S) LOCATION DESCRIPTION**: Provide USGS Topo which indicates the discharge location, significant (large) discharger(s) to the receiving stream, water intakes, and other items of interest.

Name of Topo: Accomac, VA Quadrant No.: 120B **SEE ATTACHMENT 2**

14. **ATTACH A SCHEMATIC OF THE WASTEWATER TREATMENT SYSTEM(S) [IND. & MUN.]. FOR INDUSTRIAL FACILITIES, PROVIDE A GENERAL DESCRIPTION OF THE PRODUCTION CYCLE(S) AND ACTIVITIES.**

This permit addresses both process wastewater and storm water discharges through nine (9) outfalls. The primary outfall, **001**, is treated process wastewater/storm water runoff and is discharged into Parker Creek. The storm water contributions to 001 include impervious surface areas identified as the recycling center storage, cooling shed, rendering plant, food plant drum storage, mechanical storage building, and runoff from the rendering tractor trailer parking lot. Outfall **002** (recycle lagoon) consists of a combined flow of treated process wastewater and storm water which has been conveyed from the wastewater treatment plant to the recycle lagoon. Flows may then be routed back to the WWTP, and discharged thorough outfall 001 (after treatment). This outfall pipe has been permanently sealed and therefore the point source discharge will be deleted from the permit. Outfall **003** is surface storm water runoff from an impervious area handling traffic from the "debone tractor trailer trucks", an employee parking lot and wellness center. These flows discharge to Route 13 into Parker Creek. Outfall **004** drains impervious surface area identified as tractor trailer parking, stationary mechanical deboned meat truck storage and the processing plant building roof drains. These flows also discharge to Route 13 into Parker Creek. Outfalls **005 and 006** consist of point source runoff from agricultural fields. These flows discharge to Route 13 into Parker Creek. Outfall **007** consists of an overflow pipe from the vegetated storm water pond. Sources to this pond are a mix of storm water and process contaminated flow from the back side of the plant with high volume of truck traffic, truck washing station and live bird unloading area. These flows are routed back to the head of the WWTP and the discharge pipe has been sealed; there will be NO discharge to Parker Creek. OUTFALL DELETED from the permit. Outfall **008** consists of a point source flow of storm water from the sludge drying bed area and surrounding wooded area. This discharge would flow to Parker Creek. Outfall **009** is another point source flow from an agricultural area. The drainage from this area is to an unnamed tributary to Folly Creek.

SEE ATTACHMENT 3 (CAN ALSO REFERENCE TABLE I)

15. **DISCHARGE DESCRIPTION**: Describe each discharge originating from this facility.

SEE **TABLE I** (OR CAN SUBSTITUTE PAGE 2C) - **SEE ATTACHMENT 4**

16. **COMBINED TOTAL FLOW**:

TOTAL: 2.69 MGD (for public notice)

PROCESS FLOW: ___ MGD (IND.)

NONPROCESS/RAINFALL DEPENDENT FLOW: .129 (Est.)

DESIGN FLOW: _____ MGD (MUN.)

17. **STATUTORY OR REGULATORY BASIS FOR EFFLUENT LIMITATIONS AND SPECIAL CONDITIONS**: (Check all which are appropriate)

X State Water Control Law
X Clean Water Act
X VPDES Permit Regulation (9 VAC 25-31-10 et seq.)
X EPA NPDES Regulation (Federal Register)
___ EPA Effluent Guidelines (40 CFR 133 or 400 - 471)
X Water Quality Standards (9 VAC 25-260-5 et seq.)
___ Wasteload Allocation from a TMDL or River Basin Plan

18. **EFFLUENT LIMITATIONS/MONITORING**: Provide all limitations and monitoring requirements being placed on each outfall.

SEE TABLE II - ATTACHMENT 5

19. **EFFLUENT LIMITATIONS/MONITORING RATIONALE**: Attach any analyses of an outfall by individual toxic parameter. As a minimum, it will include: statistics summary (number of data values, quantification level, expected value, variance, covariance, 97th percentile, and statistical method); wasteload allocation (acute, chronic and human health); effluent limitations determination; input data listing. Include all calculations used for each outfall and set of effluent limits and those used in any model(s). Include all calculations/documentation of any antidegradation or anti-backsliding issues in the development of any limitations; complete the review statements below. Provide a rationale for limiting internal waste streams and indicator pollutants. Attach chlorine mass balance calculations, if performed. Attach any additional information used to develop the limitations, including any applicable water quality standards calculations (acute, chronic and human health).

OTHER CONSIDERATIONS IN LIMITATIONS DEVELOPMENT:

VARIANCES/ALTERNATE LIMITATIONS: Provide justification or refutation rationale for requested variances or alternatives to required permit conditions/limitations. This includes, but is not limited to: waivers from testing requirements; variances from technology guidelines or water quality standards; WER/translator study consideration; variances from standard permit limits/conditions. N/A

SUITABLE DATA: In what, if any, effluent data were considered in the establishment of effluent limitations and provide all appropriate information/calculations.

All suitable effluent data were reviewed.

ANTIDEGRADATION REVIEW: Provide all appropriate information/calculations for the antidegradation review.

The receiving stream has been classified as tier 1; therefore, no further review is needed. Permit limits have been established by determining wasteload allocations which will result in attaining and/or maintaining all water quality criteria which apply to the receiving stream, including narrative criteria. These wasteload allocations will provide for the protection and maintenance of all existing uses.

ANTIBACKSLIDING REVIEW: Indicate if antibacksliding applies to this permit and, if so, provide all appropriate information.

There are no backsliding issues to address in this permit (i.e., limits as stringent or more stringent when compared to the previous permit).
SEE ATTACHMENT 6

20. **SPECIAL CONDITIONS RATIONALE**: Provide a rationale for each of the permit's special conditions. **SEE ATTACHMENT 7**

21. **TOXICS MONITORING/TOXICS REDUCTION AND WET LIMIT SPECIAL CONDITIONS RATIONALE**: Provide the justification for any toxics monitoring program and/or toxics reduction program and WET limit.

SEE ATTACHMENT 8

22. **SLUDGE DISPOSAL PLAN**: Provide a description of the sludge disposal plan (e.g., type sludge, treatment provided and disposal method). Indicate if any of the plan elements are included within the permit.

All sludge disposal practices are permitted under VPA Permit No VPA01076 issued on 12/09/02

23. **MATERIAL STORED**: List the type and quantity of wastes, fluids, or pollutants being stored at this facility. Briefly describe the storage facilities and list, if any, measures taken to prevent the stored material from reaching State waters.

SEE ATTACHMENT 9

24. **RECEIVING WATERS INFORMATION**: Refer to the State Water Control Board's Water Quality Standards [e.g., River Basin Section Tables (9 VAC 25-260-5 et seq.). **Use 9 VAC 25-260-140 C (introduction and numbered paragraph) to address tidal waters where fresh water standards would be applied or transitional waters where the most stringent of fresh or salt water standards would be applied.** Attach any memoranda or other information which helped to develop permit conditions (i.e. tier determinations, PReP complaints, special water quality studies, STORET data and other biological and/or chemical data, etc. **SEE ATTACHMENT 10**

25 **305(b)/303(d) Listed Segments**: Indicate if the facility discharges to a segment that is listed on the current 303(d) list and, if so, provide all appropriate information/calculations.

This facility discharges directly to Parker Creek. This receiving stream segment has been listed in Category 5 of the 305(b)/303(d) list for non-attainment of fecal coliform and nutrients. EPA approved the Parker Creek TMDL, named "Benthic TMDL Development for Parker Creek Virginia" on 11/7/2008 and SWCB approval on 4/27/2009 for this segment. It contains a wasteload allocation for this discharge specifically addressing fecal coliform (126 CFU/100ml geometric mean or 235 CFU/100ml maximum and Total Phosphorus (TP) 1.8 lbs/day daily load and 664.2 lb/yr annual load. The loads are based on flow data that is not current, THEREFORE, it is recommended that the flows are updated and the TMDL modified to reflect more realistic flows. This modification would result in a revised annual load of approximately 820 lb/year TP. This permit contains limits of fecal coliform and total phosphorus concentration (0.10 mg/l) that is consistent with, and will maintain the instream end point concentration (0.10mg/l).

THE TMDL IS BEING REVISED, public notice to be in the Federal Register; sent to Federal Register on June 1, 2011. The modification will delete the numeric waste load allocation in pounds/year. SEE ATTACHMENT 11

26. **CHANGES TO PERMIT**: Use **TABLE III(a)** to record any changes from the previous permit and the rationale for those changes. Use **TABLE III(b)** to record any changes made to the permit during the permit processing period and the rationale for those changes [i.e., use for comments from the applicant, VDH, EPA, other agencies and/or the public where comments resulted in changes to the permit limitations or any other changes associated with the special conditions or reporting requirements].

SEE ATTACHMENT 12

27. **NPDES INDUSTRIAL PERMIT RATING WORKSHEET:**

TOTAL SCORE: 116 **SEE ATTACHMENT 13**

28. **DEQ PLANNING COMMENTS RECEIVED ON DRAFT PERMIT**: Document any comments received from DEQ planning.

The discharge is not addressed in any planning document but will be included when the plan is updated.

29. **PUBLIC PARTICIPATION:** Document comments/responses received during the public participation process. If comments/responses provided, especially if they result in changes to the permit, place in the attachment.

VDH/DSS COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from the Virginia Dept. of Health and the Div. of Shellfish Sanitation and noted how resolved.

By letter dated January 21, 2011 Dixon Tucker from the VDH provided the following **comments on the application**:

> "There are no public water supply raw water intakes located within 15 miles downstream or within one tidal cycle upstream of the existing project.

By letter dated February 1, 2011 Keith Skiles from DSS provided the following **comments on the application**:

> "The project is located in condemned shellfish growing water and the activity, as described, will not cause an increase in the size or type of the existing closure."

EPA COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from the U.S. Environmental Protection Agency and noted how resolved. Please see Attachment 15

ADJACENT STATE COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from an adjacent state and noted how resolved.

Not Applicable.

OTHER AGENCY COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from any other agencies (e.g., VIMS, VMRC, DGIF, etc.) and noted how resolved.

Not Applicable.

OTHER COMMENTS RECEIVED FROM RIPARIAN OWNERS/CITIZENS ON DRAFT PERMIT: Document any comments received from other sources and note how resolved.

The application and draft permit have received public notice in accordance with the VPDES Permit Regulation, and comments received were adequately addressed. (Comment letter and DEQ response is in attachment 15.

PUBLIC NOTICE INFORMATION: Comment Period: Start Date: August 24 & 31, 2011
End Date: September 23, 2011

Persons may comment in writing or by e-mail to the DEQ on the proposed reissuance of the permit within 30 days from the date of the first notice. Address all comments to the contact person listed below. Written or e-mail comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The Director of the DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requestor's interests would be directly and adversely affected by the proposed permit action.

All pertinent information is on file and may be inspected, and arrangements made for copying by contacting Debra L. Thompson at: Department of Environmental Quality (DEQ), Tidewater Regional Office, 5636 Southern Boulevard, Virginia Beach, VA 23462. Telephone: 757-518-2162 E-mail: debra.thompson@debra.thompson@dedeq.virginia.gov

Following the comment period, the Board will make a determination regarding the proposed issuance/reissuance/modification. This determination will become effective, unless the Director grants a public hearing. Due notice of any public hearing will be given.

30. **ADDITIONAL FACT SHEET COMMENTS/PERTINENT INFORMATION:**

The Parker Creek TMDL approved by EPA 11/7/2008 and SWCB 4/27/2009 is titled "Benthic TMDL Development for Parker Creek Virginia".

Debra Thompson & Roger Everton (TRO) spoke w/Mark Smith, EPA on 5-26-11 regarding the proposed Permit and TMDL issue. The current TMDL is under discussion with proposed modifications to delete reference to annual loads and focus on concentration end pt of 0.10 mgl. DEQ/EPA approval rec'd in-house (DEQ) on 5-31-11, modified TMDL went to Public Notice on June 1st (Federal Register). Mark Smith will consider approval of Permit if TMDL is modified (delete numeric annual load requirement). Once documentation of these actions by TMDL staff is acknowledge by EPA(Permits) and approval is rec'd from EPA-Permits, DEQ-TRO Permits will go to Public Notice with the VPDES Permit reissuance. With this timeline, the permit will expire on June 29, 2011, however, will be reissued immediately after public notice.

DELETED FROM THIS PERMIT IS OUTFALL 007:
This outfall consisted of an overflow pipe from the vegetated storm water lagoon, which is a 2 million gallon holding lagoon. The potential discharge through this outfall consisted of storm water runoff from industrial related areas to include the processing and rendering plants, paved areas for truck & trailer parking, the garage area and exposure/storage of raw material areas (drippings from refrigerated box trailers, No.6 fuel oil, hydraulic oil, waste oil, kerosene, gasoline, diesel fuel and animal fat). The storage lagoon for these flows is designed to hold a 100-year storm. Flows from this storm water lagoon are pumped to the complexes' #1 plant site lift station which also receives all other wastewater from the processing plant and rendering plant. These flows are then sent to the head of the facilities wastewater treatment plant, receive full treatment and discharge through outfall 001. The facility has informed TRO (Email from Randy Rhoads on 5-25-11)that the discharge pipe will be permanently sealed with concrete. Therefore this outfall will be deleted from the permit. Pipe sealed on June 8, 2011.

In addition, OUTFALL 002 HAS BEEN DELETED FROM THE PERMIT...pipe permanently sealed.

Two (2) Compliance Schedules are included w/ this reissuance. The first is the new TMDL Phosphorus Limit Schedule and the second is for Construction & Implementation of a new Anaerobic Lagoon and Closure of the Old Anaerobic Lagoon. The timeline chronology of the Anaerobic Lagoon issue is attached

ATTACHMENT 1

SITE INSPECTION REPORT/MEMORANDUM

1-1

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE
5636 Southern Boulevard, Virginia Beach, Virginia 23462
(757) 518-2000 Fax (757) 518-2009
www.deq.virginia.gov

Doug Domenech
Secretary of Natural Resources

David K. Paylor
Director

February 18, 2011

Mr. Randall B. Rhoades
Environmental Manager
Perdue Farms, Incorporated – Accomac Plant
22520 Lankford Highway
Accomac, VA 23301

Re: Technical Inspection Report
Perdue Farms, Inc.
Permit No. VA0003808

Dear Mr. Rhoades:

Enclosed is a copy of the technical inspection report prepared for the inspection conducted on January 19, 2011. As was discussed during the inspection, please note the deficiencies indicated in the Inspection Requirements for Action section of the report and implement corrective measures in order to ensure future permit compliance. Due to the deficiencies cited in the report, a Warning Letter (WL) will also be issued to your facility. Within twenty (20) days of receipt of this report, you are requested to submit a letter documenting that the necessary corrections have been made. One response letter that covers all items for both the inspection report and the Warning Letter are sufficient.

I would like to thank you and your plant personnel for their cooperation during the inspection. If you have any questions regarding this report, please feel free to contact me at the above address or telephone (757) 414-0750 or by email at stephen.thomas@deq.virginia.gov.

Sincerely,

Stephen J. Thomas
Environmental Specialist II

Enclosure

cc: DEQ/OWCP: Steve Stell
DEQ/TRO: Debbie Kay
DEQ/TRO: File

Facility:	PERDUE FARMS, INC.
County/city:	ACCOMACK/ACCOMAC

1-2-

VPDES NO.	VA0003808

DEPARTMENT OF ENVIRONMENTAL QUALITY
WASTEWATER FACILITY
INSPECTION REPORT
PART 1

Inspection date:	**1/19/2011**	Date form completed:	**1/21/2011**
Inspection by:	**Stephen J. Thomas**	Inspection agency:	**DEQ/TRO**
Time spent:	**8 Hours**	Announced Inspection:	[ ] Yes [**X**] No
Reviewed by: **Kenneth T. Raum**		Photographs taken at site?	[**X**] Yes [ ] No
Present at inspection:	**Randall B. Rhodes , Environmental Manager – Perdue Farms, Inc. Debra Thompson - DEQ**		

FACILITY TYPE:	FACILITY CLASS:
( ) Municipal	(**X**) Major
(**X**) Industrial	( ) Minor
( ) Federal	( ) Small
( ) VPA/NDC	( ) High Priority ( ) Low Priority

TYPE OF INSPECTION:

Routine	**X**	Reinspection		Compliance/assistance/complaint	
Date of previous inspection:	**6/22/2010**	Agency:	**DEQ/TRO**		

Population Served:	**N/A**	Connections Served:	**N/A**

Influent flow from the # 3 lagoon December 2010	BOD_5 (mg/l)	**124**	TSS (mg/l)	**120**	Flow (MGD)	**2.4**	NH_3 (mg/l)	**184**
	Other: pH **7.1** Temp **15 C**							
Last Month Average: Effluent December 2010	BOD_5 (mg/l)	**5**	TSS (mg/l)	**7**	Flow (MGD)	**2.29**	NH_3 (mg/l)	**.13**
	Other: pH **7.7 - 8.0** Total Phosphorus **.62** mg/l Total Nitrogen **58** mg/l D.O. **9.0** mg/l Fecal Coliform **2** MPN							
Last Quarter Average: Effluent November – December 2010	BOD_5 (mg/l)	**8**	TSS (mg/l)	**5.7**	Flow (MGD)	**2.22**	NH_3 (mg/l)	**< QL**
	Other: pH **7.5– 8.1** Total Phosphorus **.51** mg/l Total Nitrogen **62** mg/l Fecal Coliform **2** MPN							

Data verified in preface:	Updated?		NO CHANGES?	**X**
Has there been any new construction? (Sludge holding bunker)		YES	**X**	NO
If yes, were the plans and specifications approved?		YES	**X**	NO
DEQ approval date:				

COPIES TO: (x) DEQ/TRO; (x) DEQ/OWCP; (x) OWNER; (x) EPA-Region III; (x) Other: DEQ-ECM

SUMMARY

INSPECTION COMMENTS:

This unannounced inspection at the Perdue Wastewater facility located in Accomac, Virginia was performed on 1/19/2011. On site arrival time was 10:00 AM. Present during the inspection were Randy Rhodes – Environmental Manager – Perdue Farms and Debbie Thompson – DEQ. A pre inspection briefing was conducted before the inspection of the treatment facilities. A post inspection overview was also performed with Mr. Rhoades. A lab audit was conducted after the technical inspection; Debra Thompson was not present during the audit.

During the site inspection the status of the anaerobic lagoon was of great concern. It appears that a section of the lagoon liner is compromised, as the liner material was clearly visible above the surface of the lagoon. Mr. Rhoades said that was the first time anyone had seen the material on the surface of the lagoon. (Note: During a phone conversation with Mr. Randy Rhodes on 1/25/11 Mr. Rhoades said that Perdue has looked at the liner situation and has determined that the liner has probably pulled away from a pipe that is located in that area. They will have to drain the contents of the lagoon down to further investigate. Mr. Rhoades said they will have to wait for warmer weather before that can be accomplished.)

Freeboard levels in this lagoon and all lagoons must be maintained at one foot, this is a permit requirement. No freeboard gauge was present to determine freeboard level at the time of the inspection, but one foot freeboard levels were clearly not being maintained at all areas along the berm.

The stormwater pond was also an area of concern that was noted during the inspection. There is definitely process water entering the stormwater pond as witnessed during the inspection. As washdown water from the live receiving area is entering the pond near that location. The flow from the rendering truck holding and trailer washout area can enter the pond. Water is routinely pumped back into the wastewater system for treatment but can overflow the two discharge pipes located in the northwest corner of the pond.

The new sludge storage bunker has been constructed and is in use. Stormwater from the site is collected and pumped to the anaerobic lagoon. Sludge track out, at the entrance to the bunker should be cleaned up after use.

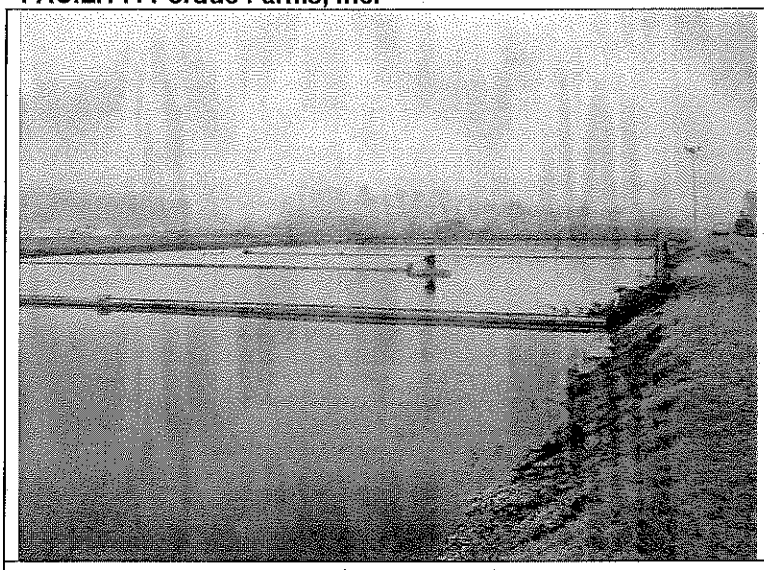
All other treatment units and devices appeared to be operating satisfactorily at the time of the inspection.

I would like to thank Mr. Randy Rhodes for his cooperation & assistance during this inspection.

INSPECTION REQUIREMENTS FOR ACTION:

1.	**It appears that there is a distinct possibility that the liner in the anaerobic lagoon has separated and failed. If this is the situation, then an engineering report needs to be submitted to DEQ outlining how the necessary repairs or replacement of the liner will be implemented, including a time schedule for completion of the project. Documentation on any environmental impact to the surrounding groundwater must also be included.**

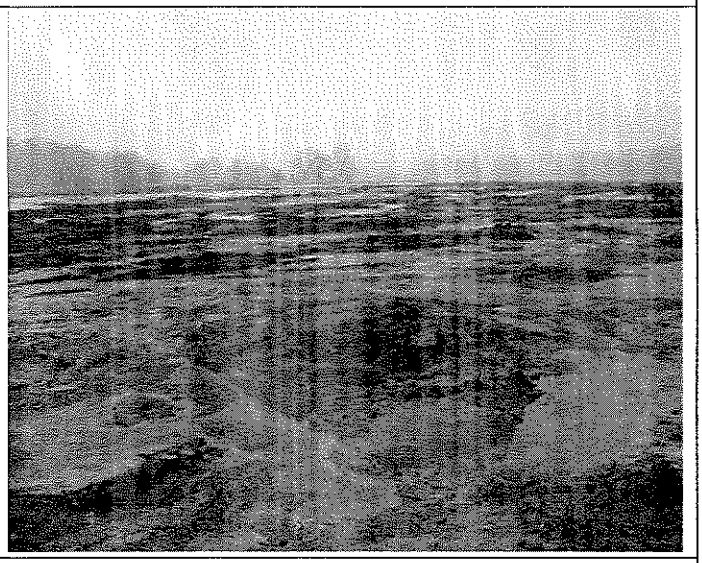
2.	**Freeboard levels in the Anaerobic Lagoon, along several areas of the berm were at one foot or less. The freeboard gauge was not present at the site on the day of the inspection. A permanent freeboard gauge needs to installed at this lagoon. The gauge should be clearly marked in at least half foot increments, installed in a easy location to read, and be installed at the point along the area of the berm that has the lowest elevation. The lagoon needs to be surveyed to determine the proper location for the gauge. If freeboard levels can not be met, then DEQ must be notified as required by the permit. Freeboard levels need to be documented.**
3.	**The bank area around the stormwater pond near the live haul area should be cleaned up of any surface deposits. The erosion of the bank needs to be controlled in that area. Vegetation needs to be removed and maintained around the pond outfall pipes. Perdue needs to insure that discharges do not occur from this pond since it does contain process water. The stormwater pond needs to be inspected on a regular basis to insure adequate pond freeboard level to prevent a discharge from the pond. This should be documented.**



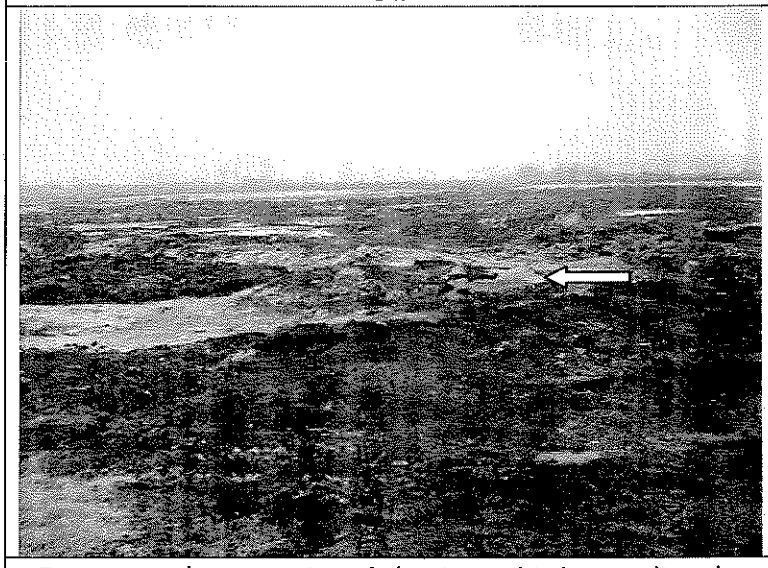
One of the Old Treatment Lagoons

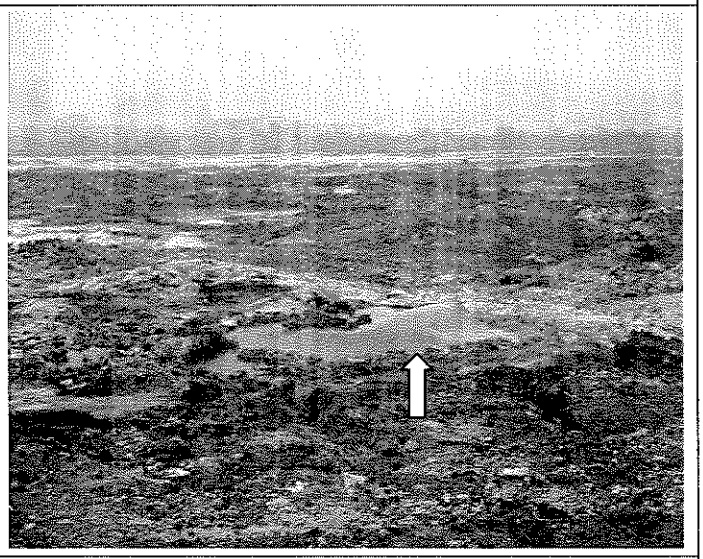
Sludge Holding Lagoon Looking West.

Surface of North side of # 3 Anaerobic Lagoon Looking Towards the Lime Silo

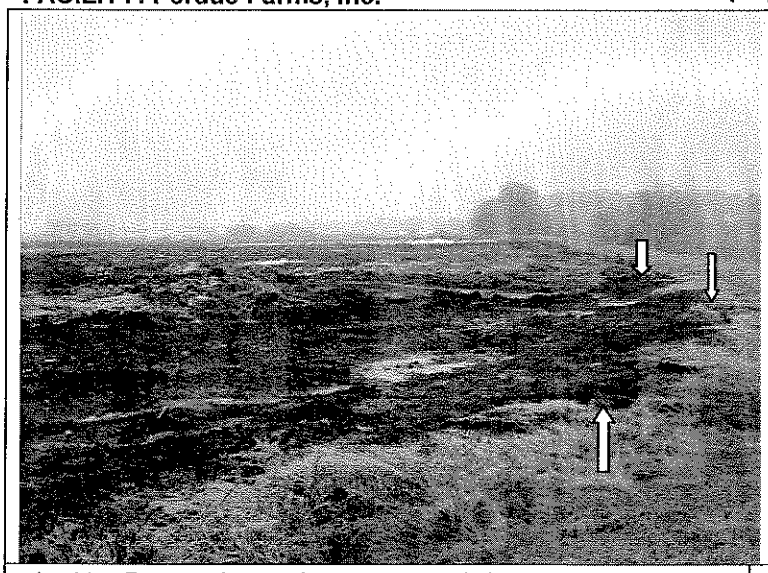


Surface of Anaerobic Lagoon

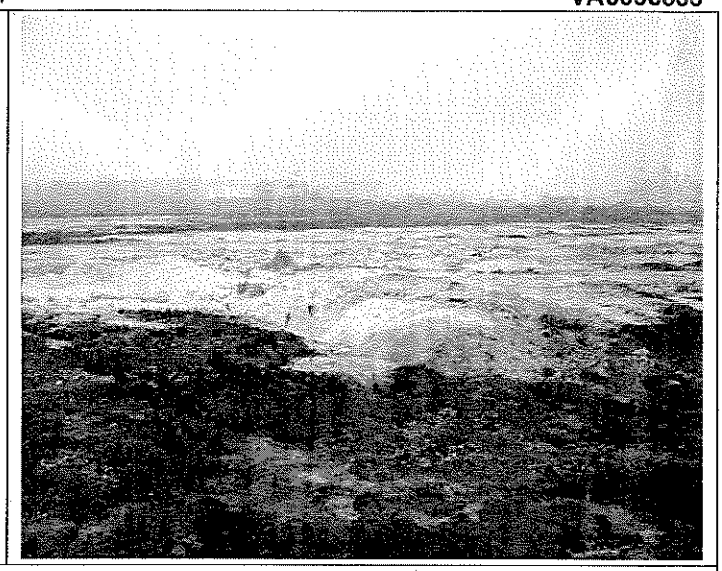




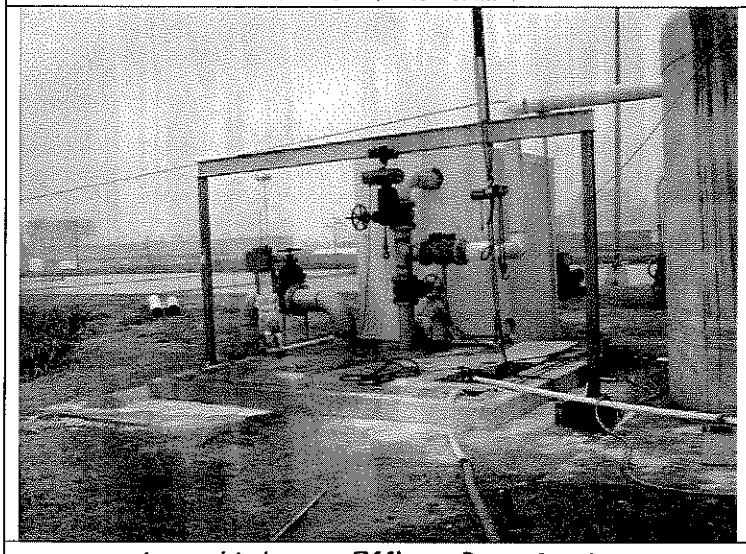
It appears that a portion of the Anaerobic Lagoon liner has separated and is protruding from the crust of the lagoon. Location is on the southwestern side of the lagoon.



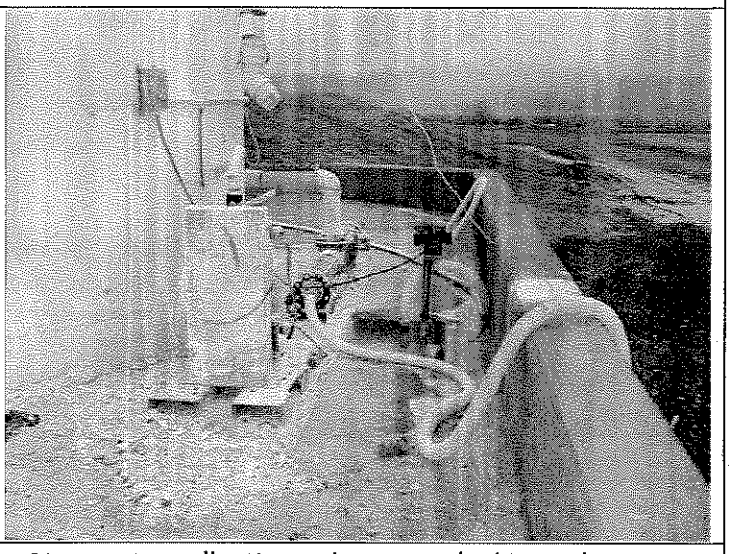
Looking East at the southeast corner of the Anaerobic Lagoon. It appeared the one foot freeboard level was not being met along this area of the berm.



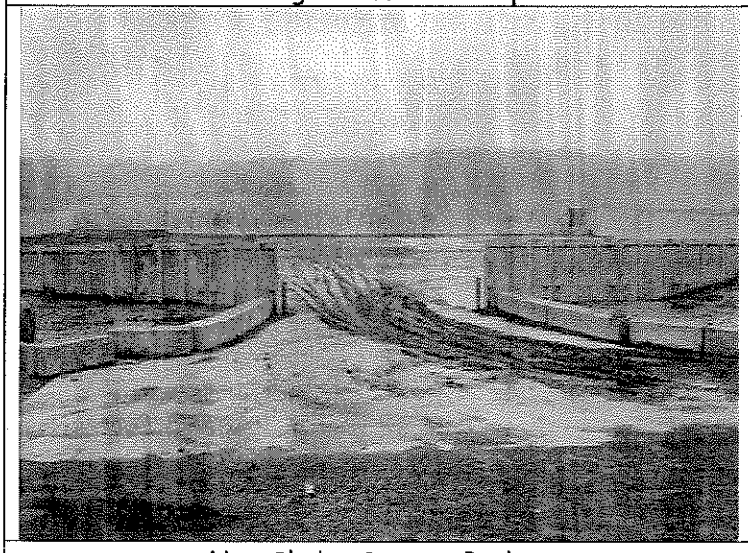
South End of the lagoon - Heavy surface grease buildup near one of the influent pipe locations.



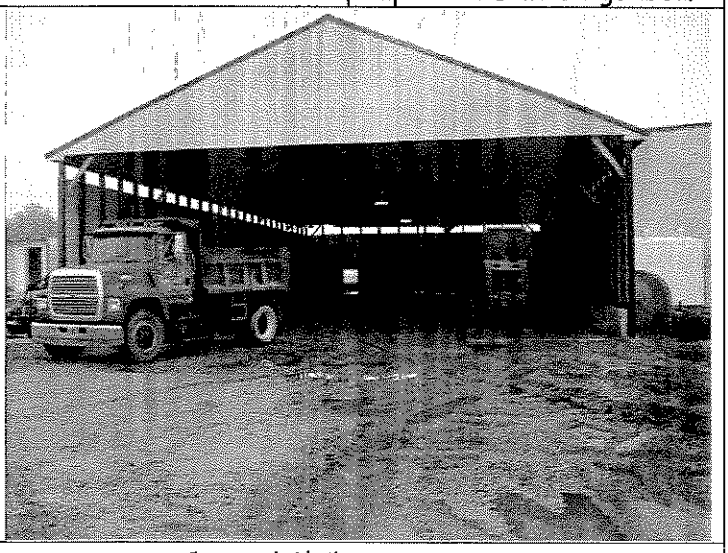
Anaerobic Lagoon Effluent Pump Station



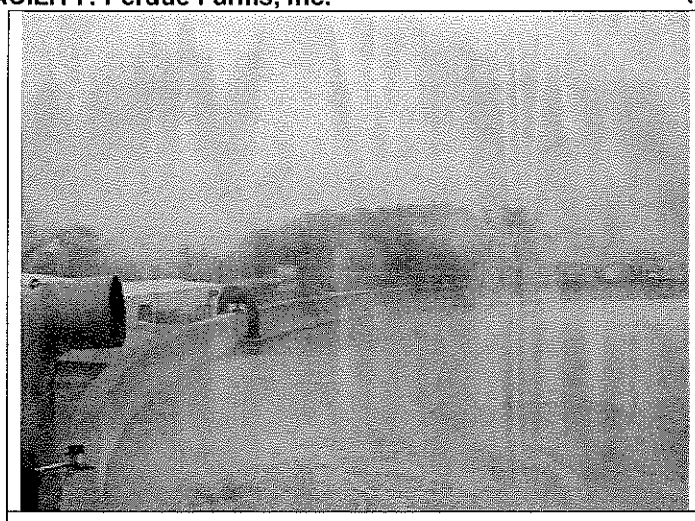
Stormwater collection and pump at the Lime Silage area.



New Sludge Storage Bunker

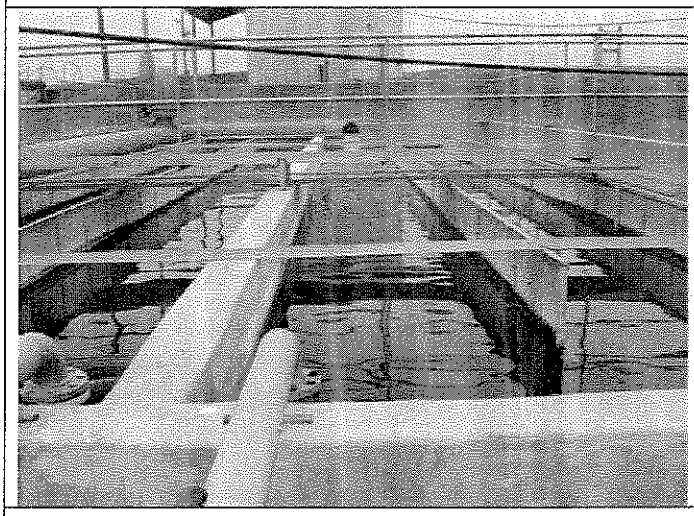


Covered Sludge Storage area.

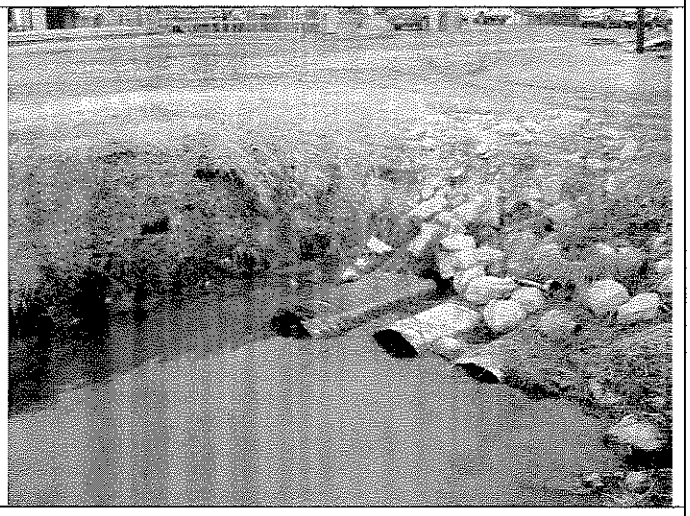


2 CMAS Aeration Tank

Circular Sedimentation Basin

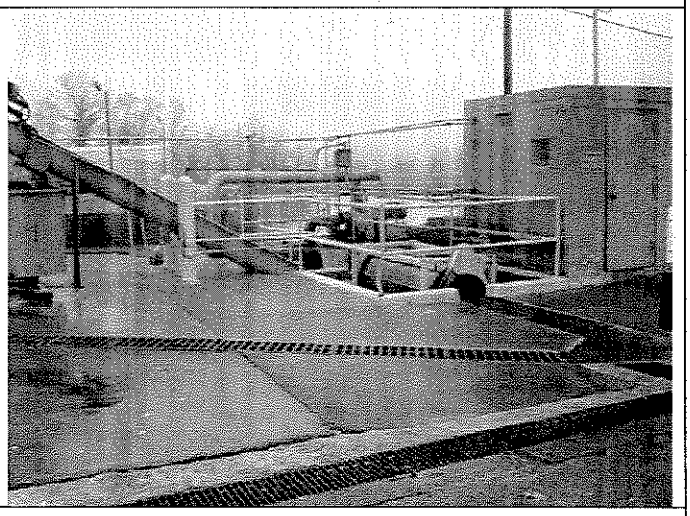


Steve, please identify this structure

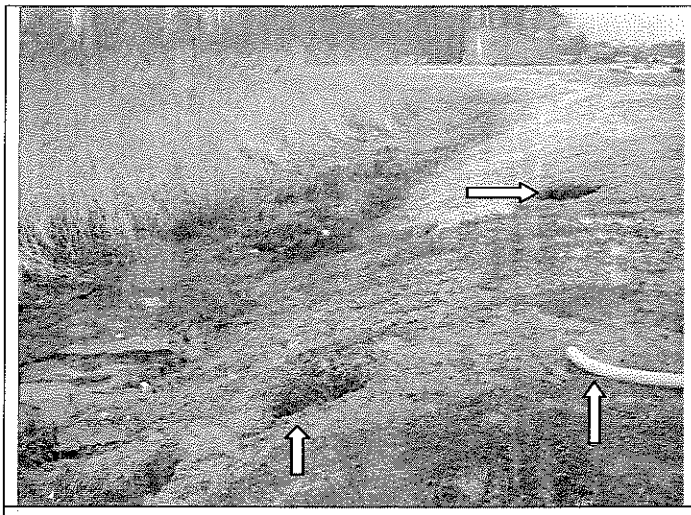


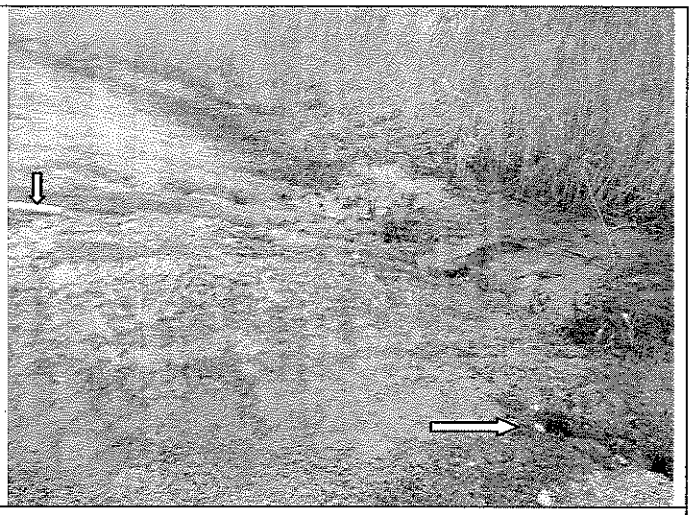
Final Effluent Discharge inot Receiving Stream.

Stormwater pond - Arrow Points at Discharge Location.

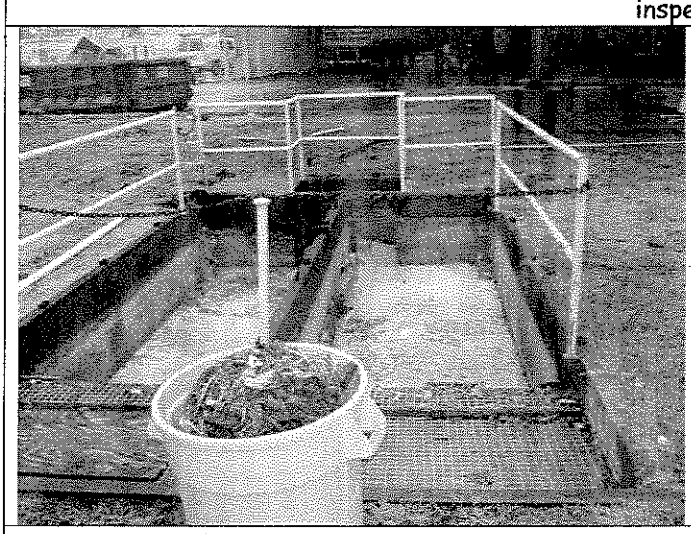


Screening area next to Slutter Pump Station



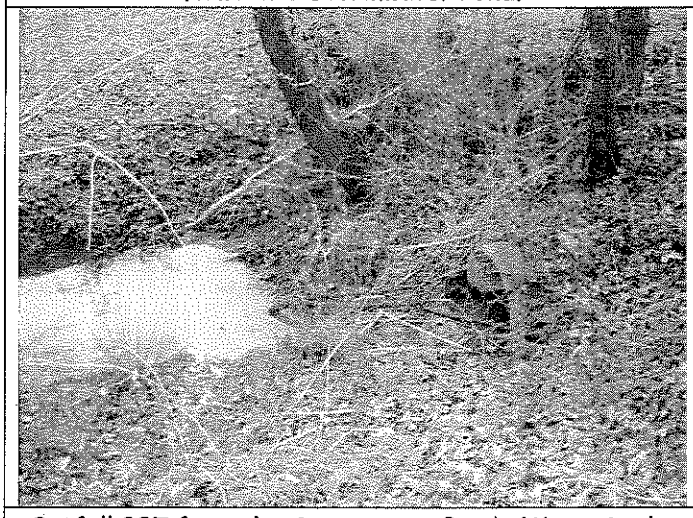


Overflow and discharge from hose – was discharging during the inspection, from a pit located near the live receiving area, entering the Stormwater Pond. Berm Area was also eroded. It was not raining at the time of the inspection.

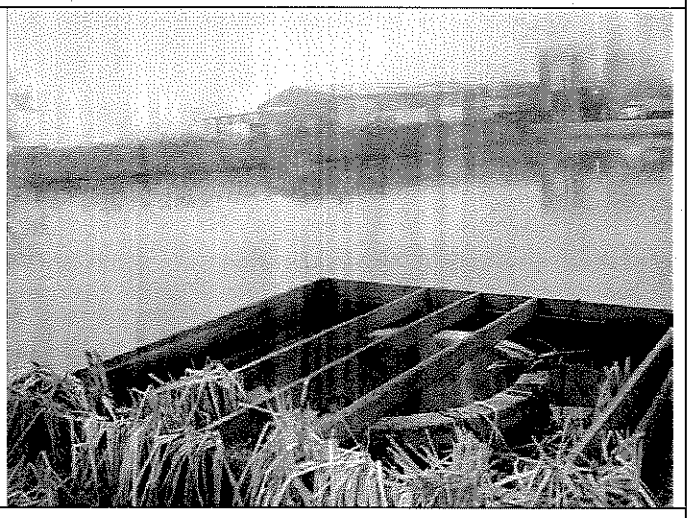


Stormwater Collection Pit near Live Receiving. This pit flows into Stormwater Pond.

Overflow Pipe at the Stormwater Pond

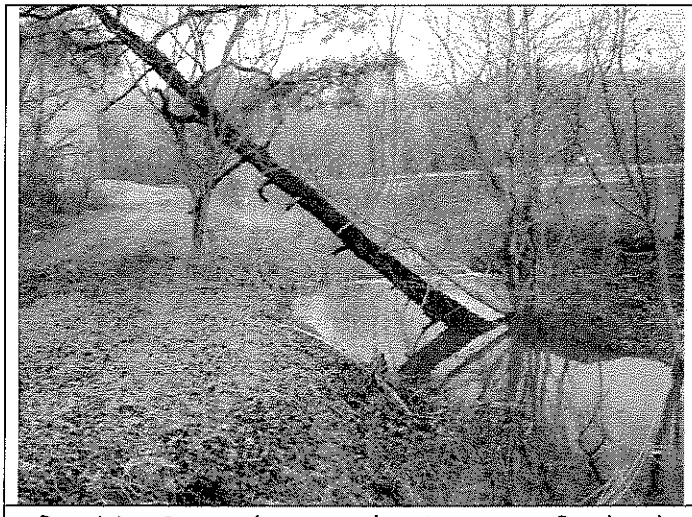


Outfall 007 from the Stormwater Pond. Water in the ditch was off color in this area.



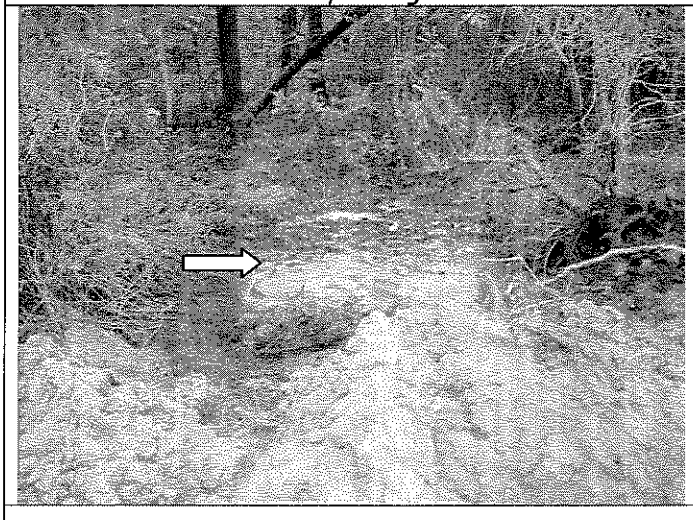
Overflow Pipe at the Stormwater Pond

1-9



Receiving Stream between the stormwater Pond and the Recycle Lagoon.

Recycle Lagoon



Ruptured force main repairs (effluent into lagoon). Located on the West end of the Recycle Lagoon.

ATTACHMENT 2

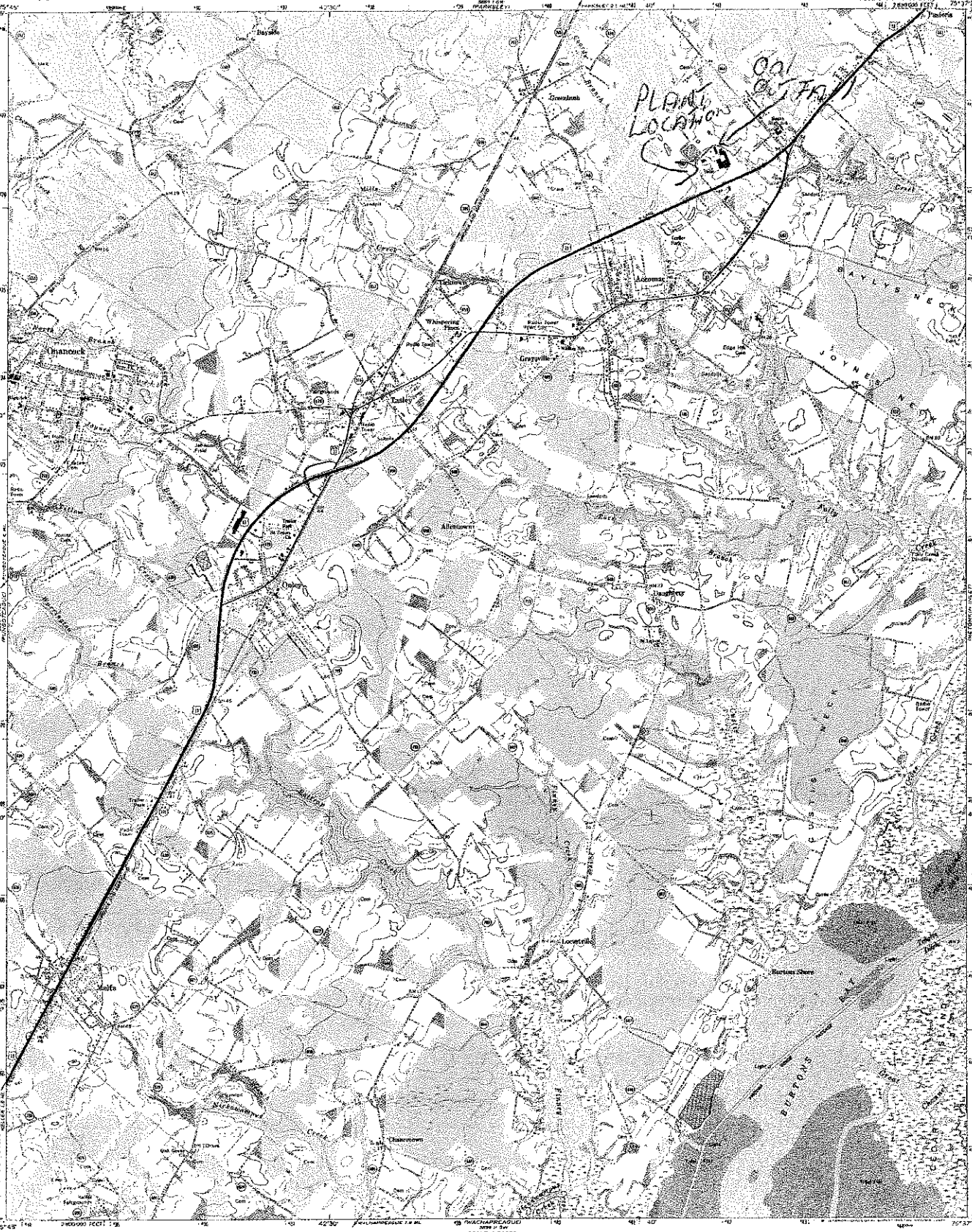
DISCHARGE LOCATION/TOPOGRAPHIC MAP

2-1

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

COMMONWEALTH OF VIRGINIA
DIVISION OF MINERAL RESOURCES

ACCOMAC QUADRANGLE
VIRGINIA-ACCOMACK CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



Mapped, edited, and published by the Geological Survey

Control by USGS, USC&GS, and USCE

Topography by photogrammetric methods from aerial photographs taken 1967. Field checked 1968
Supersedes map dated 1957

Selected hydrographic data compiled from USC&GS Chart 1221 (1969)
This information is not intended for navigational purposes

Polyconic projection. 1927 North American datum
10,000-foot grid based on Virginia coordinate system, south zone
1000-meter Universal Transverse Mercator grid ticks, zone 18, shown in blue

To place on the predicted North American Datum 1983 move the projection lines 9 meters south and 31 meters west as shown by dashed corner ticks

Revisions shown in purple compiled in cooperation with State of Virginia agencies from aerial photographs taken 1977 and other source data. This information not field checked. Map edited 1979

Boundary lines shown in purple compiled from latest information available from the controlling authority

UTM GRID AND 1979 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS MEAN LOW WATER
THE RELATIONSHIP BETWEEN THE TWO DATUMS IS VARIABLE
SHORELINE SHOWS REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS APPROXIMATELY 3.8 FEET

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092
AND VIRGINIA DIVISION OF MINERAL RESOURCES, CHARLOTTESVILLE, VIRGINIA 22903
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

QUADRANGLE LOCATION

Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is unchecked

Short dashed blue lines indicate elliptical bay outlines visible on aerial photographs

ROAD CLASSIFICATION

Primary highway, all weather, hard surface
Light-duty road, all weather, improved surface
Secondary highway, all weather, hard surface
Unimproved road, fair or dry weather

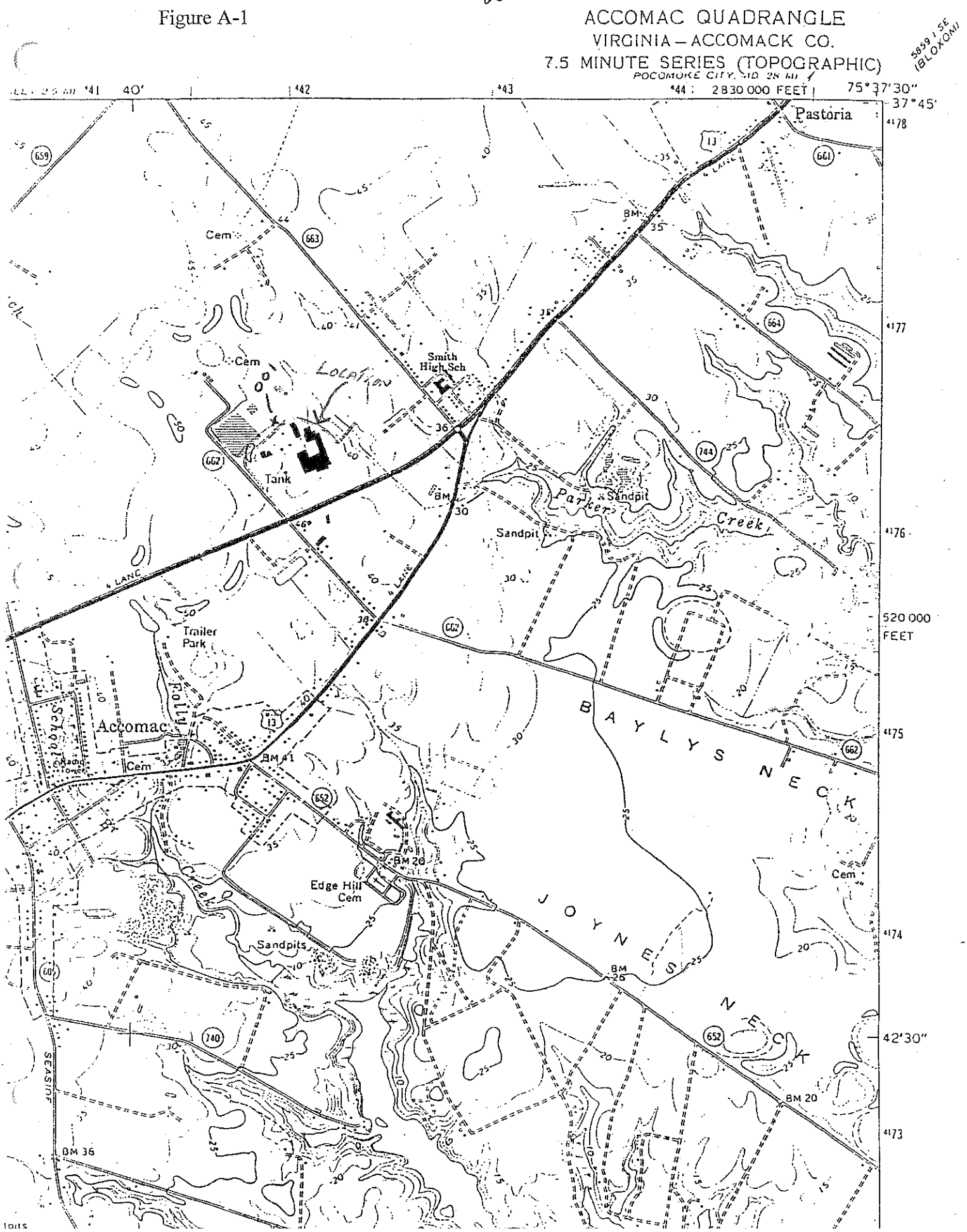
U. S. Route
State Route

ACCOMAC, VA.
N3737.5—W7537.5/7.5

1968
PHOTOREVISED 1979
DATA SHOWN IN NW—SERIES V834

2-2

Figure A-1

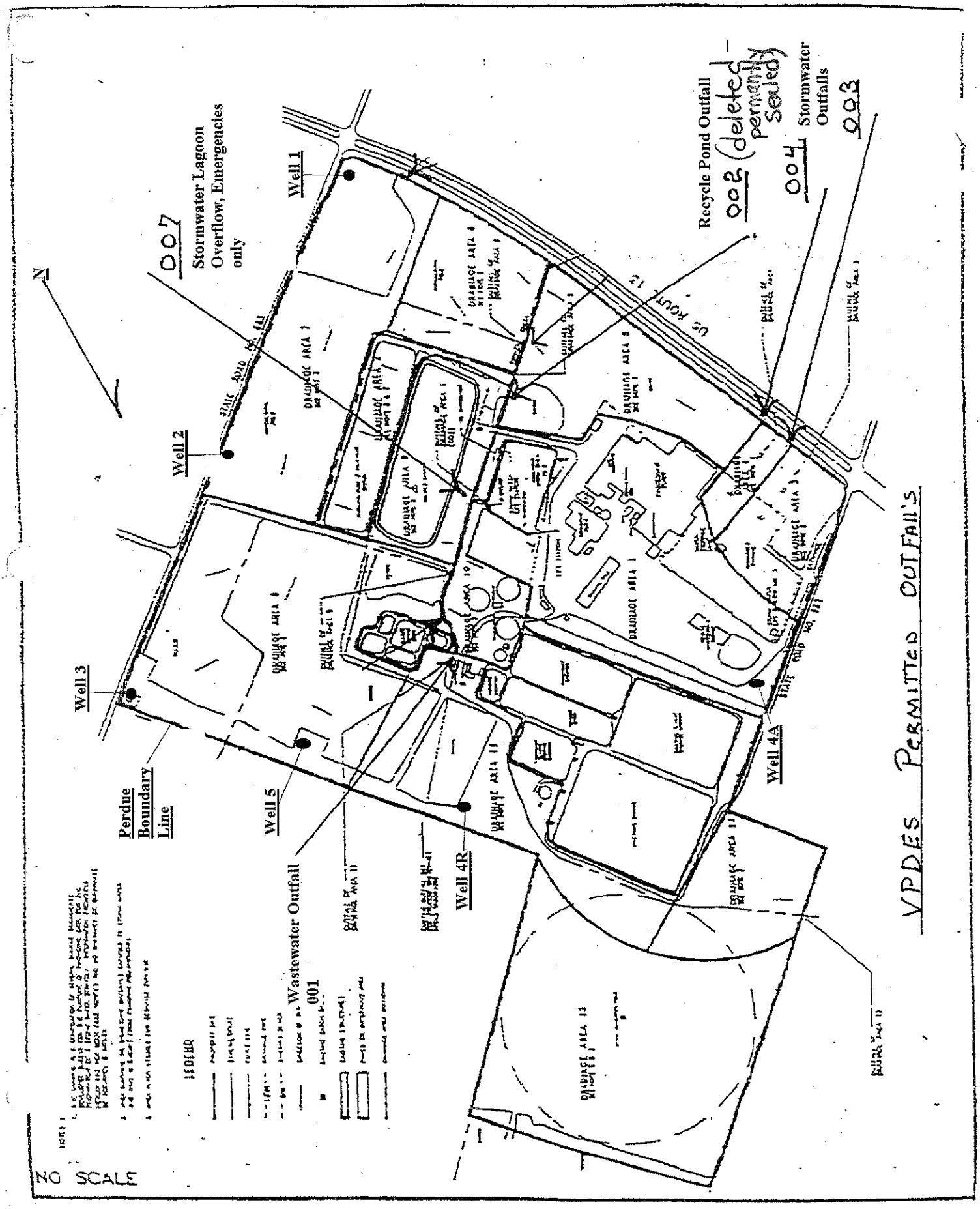

ACCOMAC QUADRANGLE
VIRGINIA – ACCOMACK CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
POCOMOKE CITY, MD 28 MI
5859 I SE (BLOXOM)
2 830 000 FEET
75°37'30"
37°45'
40'
Pastoria
Cem
Smith High Sch
Location
Tank
Parker Creek
Sandpit
Trailer Park
Folly
Accomac
School
Radio Tower
BM 41
BM 20
Edge Hill Cem
Sandpits
BAYLYS NECK
JOYNES NECK
520 000 FEET
42'30"
BM 36
SEASIDE

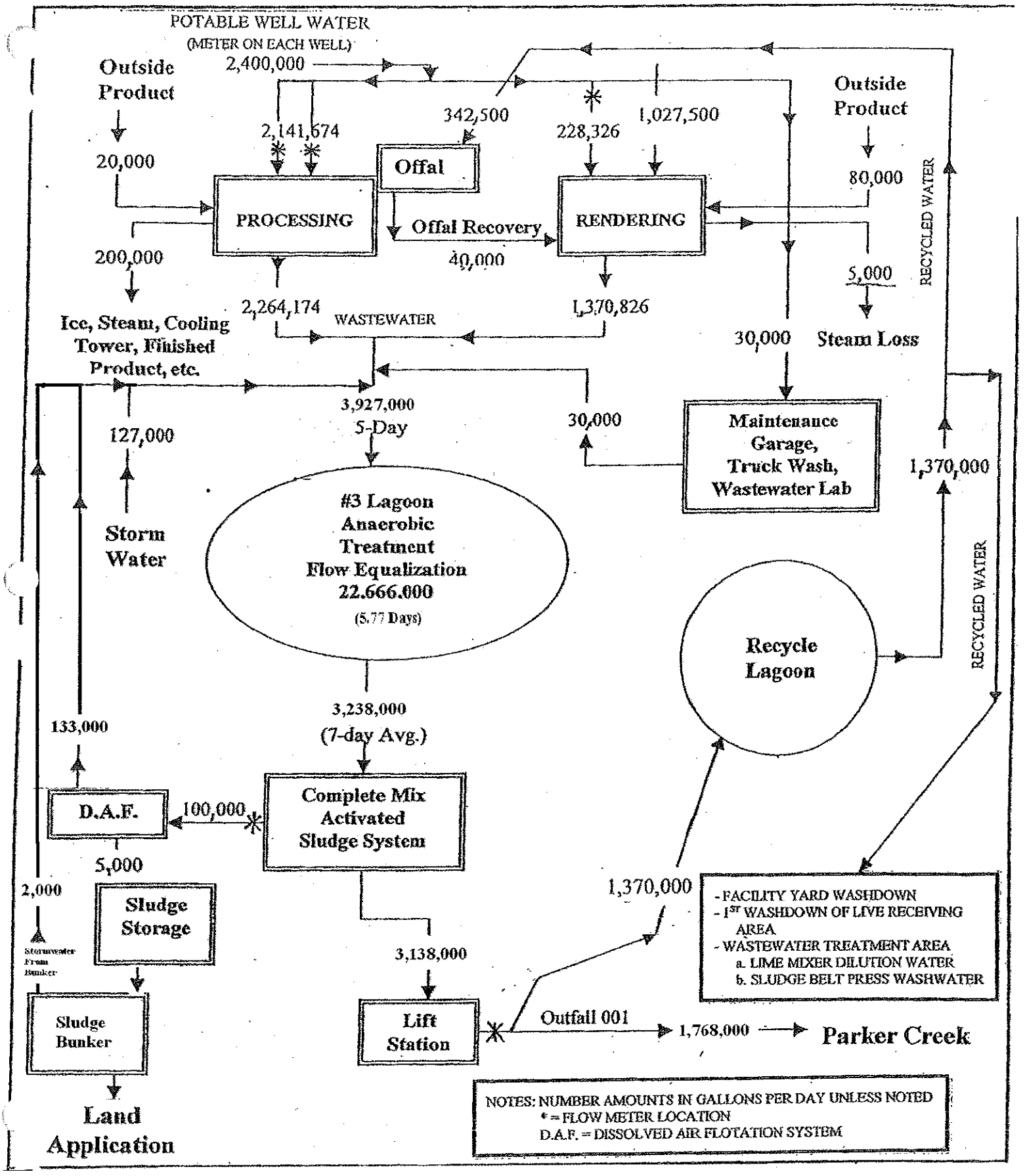
ATTACHMENT 3

SCHEMATIC/PLANS & SPECS/SITE MAP/ WATER BALANCE

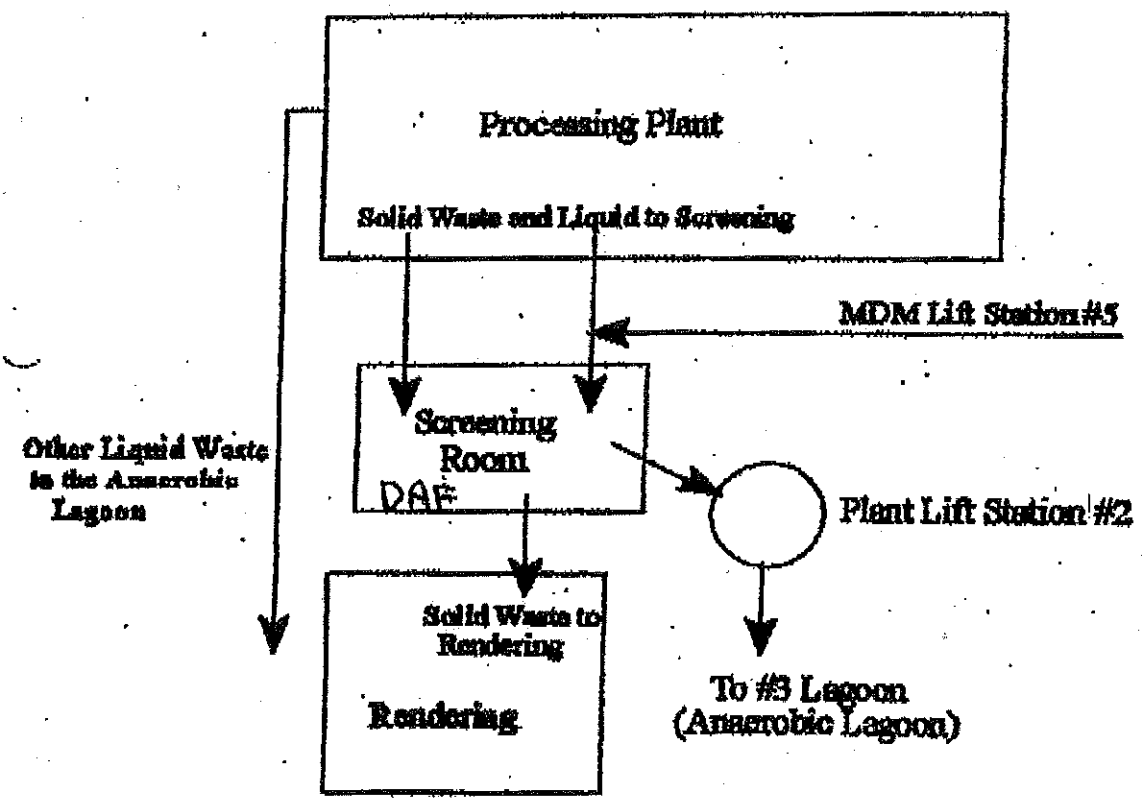
3-1

Figure A-2

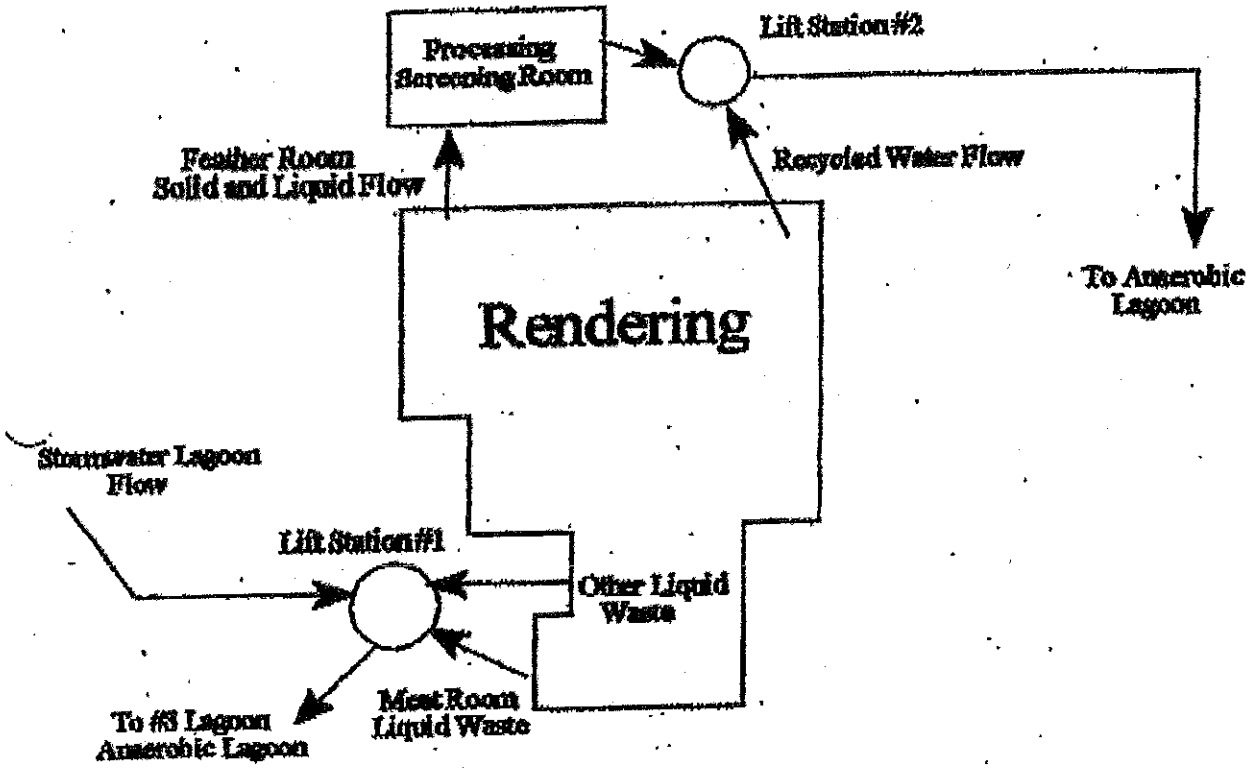

VPDES PERMITTED OUTFALLS
N
Well 1
Well 2
Well 3
Well 4A
Well 4R
Well 5
007
Stormwater Lagoon Overflow, Emergencies only
Perdue Boundary Line
Wastewater Outfall
001
Recycle Pond Outfall
002 (deleted - permanently sealed)
004
Stormwater Outfalls
003
US ROUTE 13
NO SCALE


POTABLE WELL WATER
(METER ON EACH WELL)
2,400,000
Outside Product
20,000
2,141,674
342,500
228,326
1,027,500
Outside Product
80,000
Offal
PROCESSING
Offal Recovery
RENDERING
40,000
200,000
5,000
RECYCLED WATER
2,264,174
WASTEWATER
1,370,826
Ice, Steam, Cooling Tower, Finished Product, etc.
30,000
Steam Loss
3,927,000
5-Day
30,000
Maintenance Garage, Truck Wash, Wastewater Lab
127,000
1,370,000
Storm Water
#3 Lagoon
Anaerobic
Treatment
Flow Equalization
22.666.000
(5.77 Days)
Recycle Lagoon
RECYCLED WATER
3,238,000
(7-day Avg.)
133,000
D.A.F.
100,000
Complete Mix Activated Sludge System
5,000
2,000
Sludge Storage
1,370,000
- FACILITY YARD WASHDOWN
- 1ST WASHDOWN OF LIVE RECEIVING AREA
- WASTEWATER TREATMENT AREA
a. LIME MIXER DILUTION WATER
b. SLUDGE BELT PRESS WASHWATER
Stormwater From Bunker
3,138,000
Sludge Bunker
Lift Station
Outfall 001
1,768,000
Parker Creek
Land Application
NOTES: NUMBER AMOUNTS IN GALLONS PER DAY UNLESS NOTED
* = FLOW METER LOCATION
D.A.F. = DISSOLVED AIR FLOTATION SYSTEM

Processing Flow

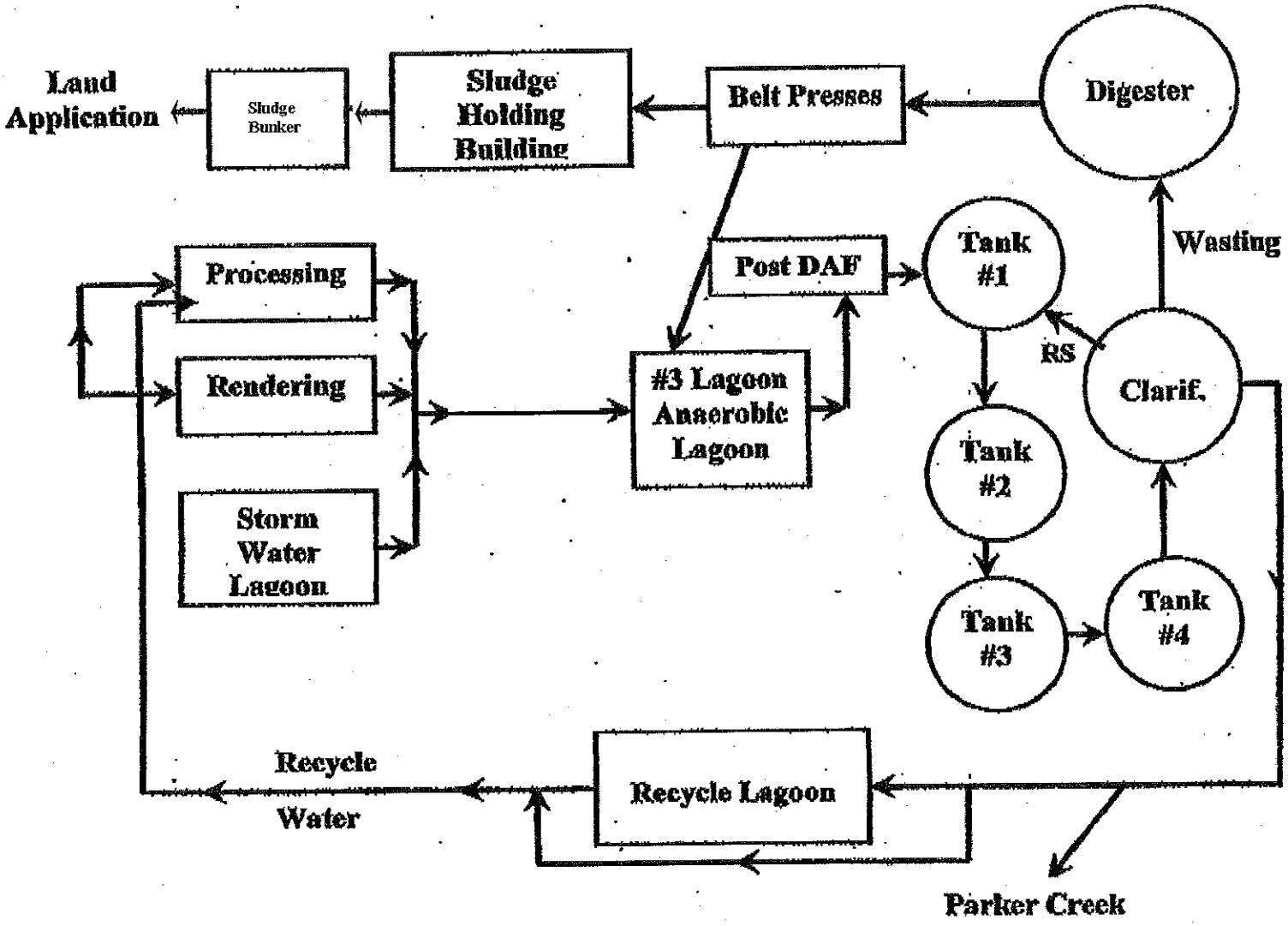


Rendering Waste Flow

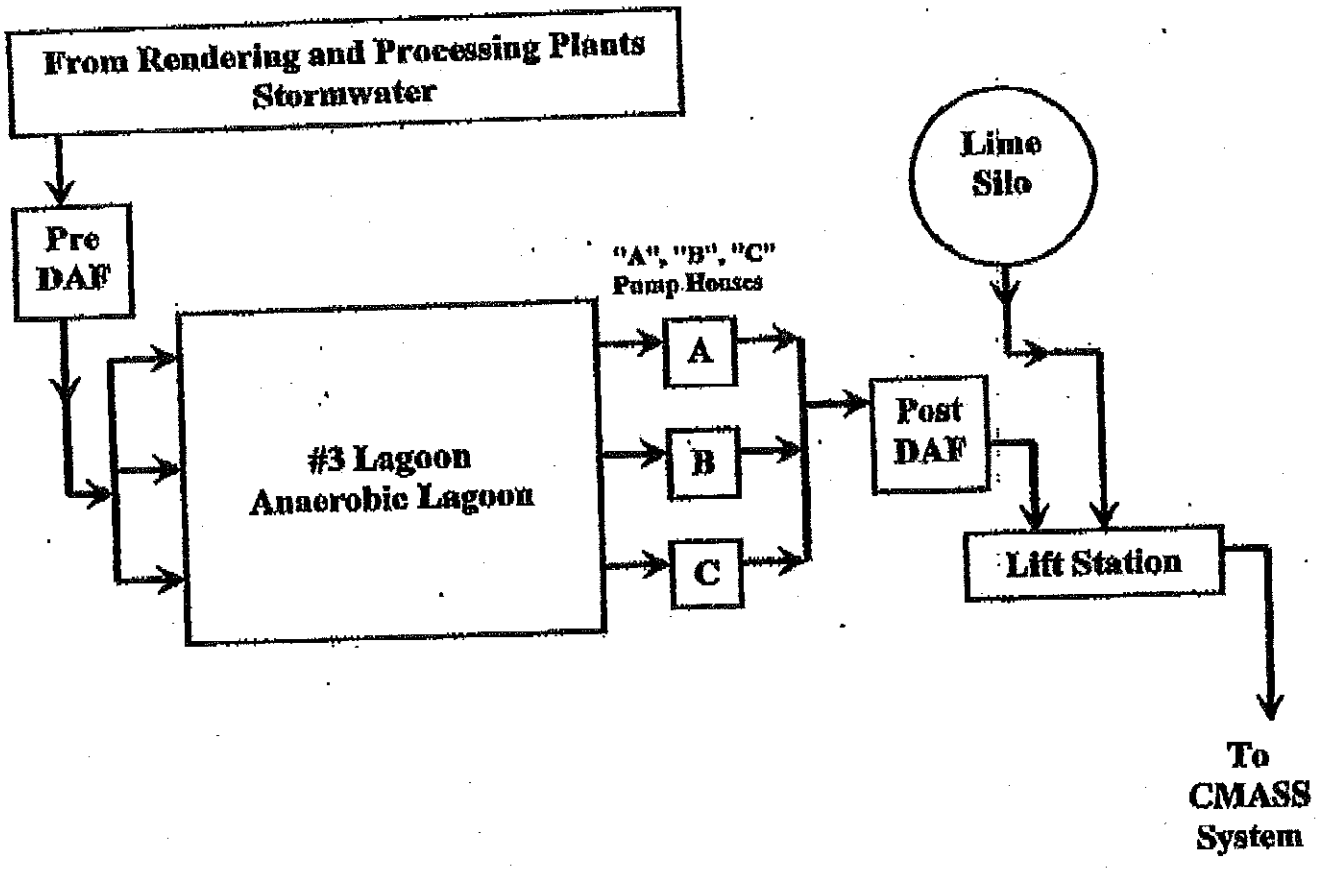


3-5

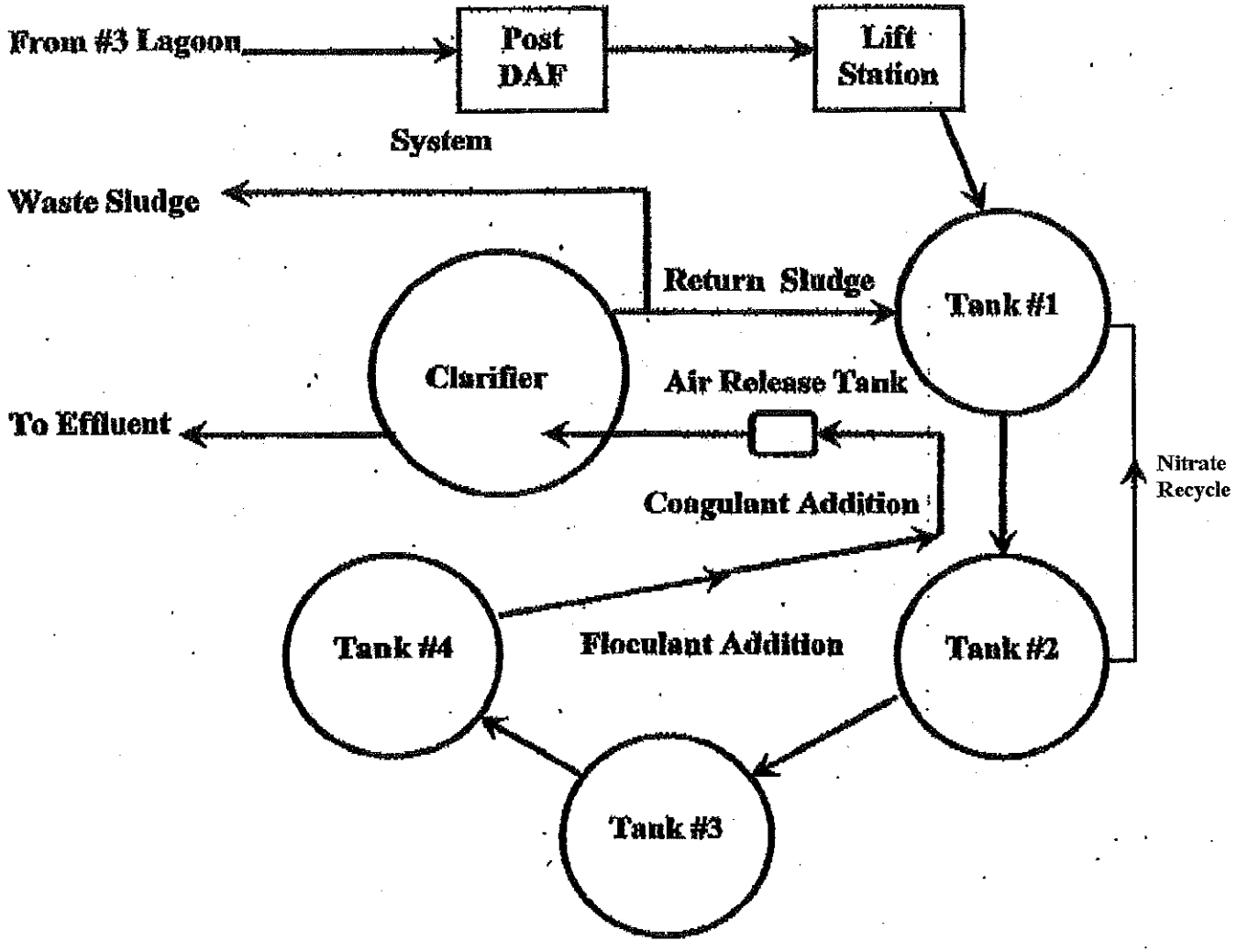
The Wastewater System



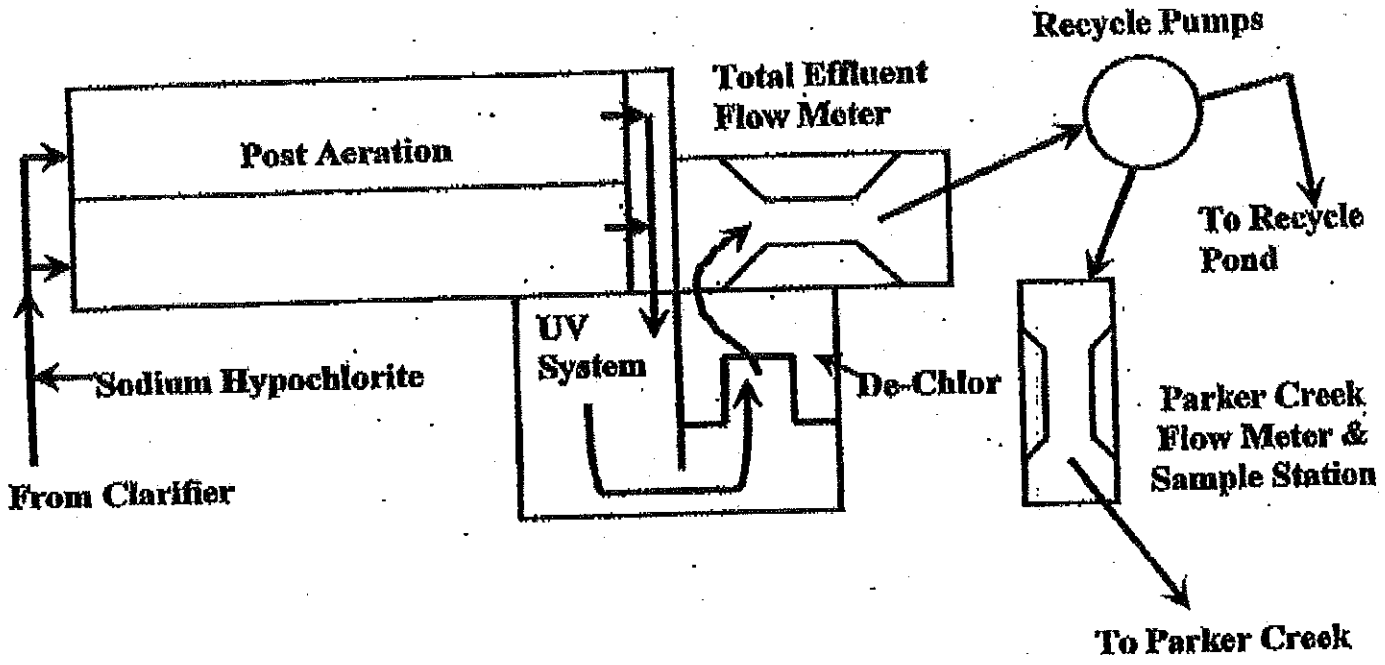
Anaerobic Process

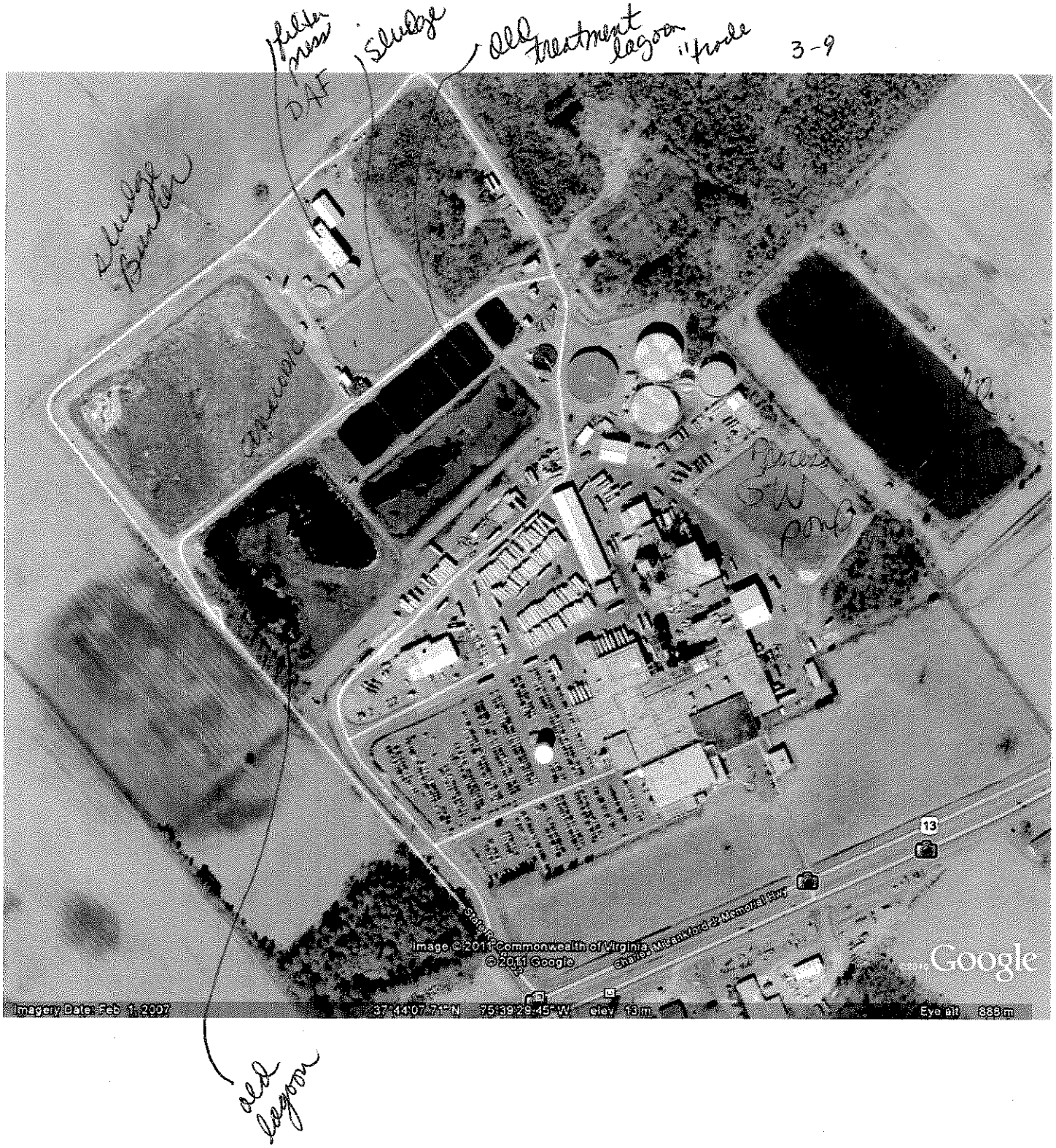


CMASS Process



Disinfection System




filter press
DAF
sludge
old treatment lagoon
"trode
sludge Bunker
Process SW pond
13
Image © 2011 Commonwealth of Virginia
© 2011 Google
Charles Mitchell Jordan Memorial Hwy
Google
Imagery Date: Feb 1, 2007
37°44'07.71" N 75°39'29.45" W elev 13 m
Eye alt 888 m
old lagoon

ATTACHMENT 4

TABLE I - DISCHARGE/OUTFALL DESCRIPTION

4-1

TABLE I

NUMBER AND DESCRIPTION OF OUTFALLS

OUTFALL NO.	DISCHARGE LOCATION	DISCHARGE SOURCE (1)	TREATMENT (2)	FLOW (3)
001	37 44 15.6 75 39 28.0 Parker Creek	Poultry processing, rendering, sanitary waste, truck wash, SW runoff, GW recovery	Screening, offal DAF, anaerobic treatment & flow equalization, activated sludge, nitrification-denitrification, flocculation-sedimentation, UV disinfection, CL disinfection & dechlorination	**
002 DELETED 4/11	37 44 15.2 75 39 14.7 Parker Creek	Poultry processing, rendering, sanitary waste, truck wash, SW runoff, GW recovery	Settling w/ natural vegetation filtration	**
003	37 44 55.0 75 39 25.9 Parker Creek	Storm water runoff	None	Dependant upon rainfall
004	37 43 55 75 39 23.7 Parker Creek	Storm water runoff	None	Dependant upon rainfall
005	37 44 3.9 75 39 11.1 Parker Creek	Storm water runoff	None	Dependant upon rainfall
006	34 44 6.5 75 33 57.8 Parker Creek	Storm water runoff	None	Dependant upon rainfall
007 Deleted 6/11	37 43 55.0 75 39 19.0 Parker Creek	Storm water runoff and process wastewater + rendering washdown	Same as outfall 001 if conveyed to 001, or NONE at outfall 007.	Dependant upon rainfall and washdown
008	37 44 15.6 75 39 22.3 Parker Creek	Storm water runoff	None	Dependant upon rainfall
009	37 44 7.2 75 39 52.9 Folly Creek	Storm water runoff	None	Dependant upon rainfall

**Flows:

Processing plant	2.264 MGD
Rendering plant	1.371 MGD
Maintenance garage, Truck wash, wastewater	0.030 MGD
Storm water from Strom water Lagoon	0.127 MGD
Storm water from Sludge Bunker	0.002 MGD
Sludge Processing (DAF Belt presses)	0.133 MGD

(1) List operations contributing to flow
(2) Give brief description, unit by unit
(3) Give maximum 30-day average flow for industry

ATTACHMENT 4
TABLE I

NUMBER AND DESCRIPTION OF OUTFALLS

Outfall 001: The discharge is a comingled flow of process waste and storm water runoff. The storm water point sources are primarily from the processing plant area. The majority of storm water runoff includes the recycling center storage, cooling shed, rendering plant, food plant drum storage, mechanical storage building, transport truck washing area, entire processing building area and, parking lot runoff from the rendering tractor trailer parking. These flows are conveyed to Parker Creek.

Outfall 002: This outfall no longer has a discharge potential to Parker Creek; the pipe has been permanently sealed with concrete. It will be deleted from the permit.

Outfall 003: This discharge is comprised of storm water runoff from impervious surface area from the Southeast end of the employee parking lot. Formerly this area handled traffic from debone tractor trailer trucks, but now is only used from employee parking and visitor parking. These flows drain to Route 13 and into Parker Creek.

Outfall 004: This discharge is comprised of storm water runoff from the Southeast end of the employee parking area and some of the processing building roof drains. Tractor trailer trucks from the deboned meat area pass through this area. These flows drain to Route 13 and into Parker Creek.

Outfall 005: Flows from this outfall are comprised of storm water runoff from agricultural fields and the complex Wellness Center and Wellness Center parking lot. These flows drain to Route 13 and into Parker Creek.

Outfall 006: Flows from this outfall are comprised of storm water runoff from agricultural fields. These flows drain to Route 13 and into Parker Creek.

Outfall 008: Flows from this area consist of storm water runoff from the abandoned sludge drying bed area and surrounding woods; ultimate discharge is to Parker Creek.

Outfall 009: This outfall discharges storm water runoff from agricultural fields, with ultimate discharge to unnamed tributary to Folly Creek.

ATTACHMENT 5

TABLE II - EFFLUENT MONITORING/LIMITATIONS

TABLE II - INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING

OUTFALL # 001
Outfall Description: process water, sanitary waste and storm water
SIC CODE: 2015

(X) Final Limits ( ) Interim Limits Effective Dates - From: **effective** To: **expiration**

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS [e] MONTHLY AVERAGE	MINIMUM	MAXIMUM	MONITORING REQUIREMENTS FREQUENCY	SAMPLE TYPE
Flow (MGD)		Long Term Avg Flow = 2.34 MGD	NL	NA	NL	Continuous	Totalizing, Indicating and Recording
pH (S.U.)			NA	6.0	9.0	1/day	Grab
BOD5 (mg/l) (summer) [a]	1		15	NA	26	3-D/Week	24-HR Comp
BOD5 (lbs/d) (summer) [a]	3	LWK = 415,351,776 lbs Long Term Avg Flow = 2.34 MGD	293	NA	507	3-D/Week	24-HR Comp
BOD5 (mg/l) (winter) [b]	1		16	NA	26	3-D/Week	24-HR Comp
BOD5 (lbs/d) (winter) [b]	3	LWK = 415,351,776 lbs Long Term Avg Flow = 2.34 MGD	312	NA	507	3-D/Week	24-HR Comp
TSS (mg/l)			20	NA	30	3-D/Week	24-HR Comp
TSS (lbs/d)		LWK = 415,351,776 lbs Long Term Avg Flow = 2.34 MGD	390	NA	585	3-D/Week	24-HR Comp
Oil & Grease (mg/l)			8	NA	14	1/month	Grab
Oil & Grease (mg/l)		LWK = 415,351,776 lbs Long Term Avg Flow = 2.34 MGD	156	NA	273	1/month	Grab
Dissolved Oxygen (mg/l)	2		NA	6.5	NA	1/Day	Grab
Ammonia-Nitrogen (NH_3-N) (mg/l) [a]	2		0.9	NA	2.9	3-D/Week	24-HR Comp
		Long Term max Flow =					

Ammonia-Nitrogen (NH_3-N) (lbs/d) [a]	3	3.02 MGD	23	NA	73	3-D/Week	24-HR Comp
Ammonia-Nitrogen (NH_3-N) (mg/l) [b]	2		1.2	NA	3.9	3-D/Week	24-HR Comp
Ammonia-Nitrogen (NH_3-N) (lbs/d [b]	3	Long Term max Flow = 3.02 MGD	30	NA	98	3-D/Week	24-HR Comp
Total Phosphorus (mg/l [g]	2		2.0	NA	NA	3-D/Week	24-Hr Comp
Total Phosphorus (lbs/d) [g]	3	Long Term max Flow = 3.02 MGD	50	NA	NA	3-D/Week	24-HR Comp
Total Phosphorus (mg/l/ [d]	TMDL		0.10	NA	NL	3-D/Week	24-HR Comp
Total Nitrogen (mg/l)	1		103	NA	147	2/Month	24-HR Comp
Total Nitrogen (lbs/d)	3	Long Term Avg Flow = 2.34 MGD	2010	NA	2869	2/Month	24-HR Comp
Cyanide (ug/l)	2		7.6	NA	7.6	1/6Month	24-HR Comp
Cyanide (lbs/d)	2		0.20	NA	0.20	1/6Month	24-HR Comp
Total Residual Chlorine (mg/l) [c]	2		0.011	NA	0.016	1/Day	Grab
Whole Effluent Toxicity (WET) (TUc) [f]	2		NA	NA	1.724	1/3Months	24-HR Comp
Fecal Coliform (N/CML) [h]	1		200	NA	400	3-D/Week	Grab
E-Coli (N/100ml) [h]	TMDL/2		126	NA	NL	3-D/Week	Grab

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY

1/3 Months = In accordance with the following schedule: 1st quarter (January 1 - March 31); 2nd quarter (April 1 - June 30); 3rd quarter (July 1 - September 30); 4th quarter (October 1 - December 31).

Upon issuance of the permit, Discharge Monitoring Reports (DMRs) shall be submitted to the regional office at the frequency required by the permit regardless of whether an actual discharge occurs. In the event that there is no discharge for the monitoring period, then "no discharge" shall be reported on the DMR.

[a] BOD5 and Ammonia limitations are effective for the summer months of May 1 through October 31.

[b] BOD5 and Ammonia limitations are effective for the winter months of November 1 through April 30

[c] Total Residual Chlorine shall be monitored and reported, as required, at any time chlorine is used for disinfection (ie. when the ultraviolet radiation(UV) disinfection system is non-operational, undergoing maintenance or otherwise malfunctioning).

[d] See Part I.B. for Schedule of Compliance. No monitoring or reporting required until after completion of the schedule.

[e] See Parts I.E.5. and I.E.6. for quantification levels and reporting requirements.

[f] See Part I.D. for WET limitations and monitoring requirements.

[g] Interim limits expire on August 31, 2015.

[h] Calculated as a Geometric Mean.

The basis for the limitations codes are:

1. Technology (e.g., Federal Effluent Guidelines-Poultry First Processing Subpart K, Eastern Shore WQMP)
2. Water Quality Standards (9 VAC 25-260 et. seq.)
3. Best Professional Judgment

Long Term Average Flow = 2.34 MGD [based on actual data for 2005-2010 as reported on the DMR's]
Long Term Maximum Flow = 3.02 MGD [based on actual data for 2005-2010 as reported on the DMRs]

Live Weight Kill = 451,351,776 lbs

TABLE II - STORM WATER EFFLUENT LIMITATIONS/MONITORING

OUTFALL # 003 and 004
Outfall Description: storm water runoff from parking lots, truck storage areas
SIC CODE: 2015

NOTE: These outfalls represent storm event monitoring for existing process and/or non-process outfalls.

PARAMETER & UNITS	STORM REGS. 1-29* or BPJ	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS [a]	
		MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MG)	BPJ	NA	NL	1/Year	Estimate [b]
pH (S.U.)	BPJ	NL	NL	1/Year	Grab
BOD5 (mg/l) [c]	20	NA	NL	1/Year	Grab
TSS (mg/l) [c]	20	NA	NL	1/Year	Grab
Fecal Coliform (N/CML)	BPJ	NA	NL	1/Year	Grab
Total Kjeldahl Nitrogen (TKN) (mg/l) [c]	20	NA	NL	1/Year	Grab
Total Phosphorus (mg/l) [c]	BPJ	NA	NL	1/Year	Grab
Oil & Grease (mg/l) [c]	20	NA	NL	1/Year	Grab

1/Year = Between January 1 and December 31.

[a] See Part I.F. for sampling and reporting requirements.
[b] Estimate of the total volume of the discharge during the storm event.
[c] See Parts I.E.5. and I.E.6. for quantification levels and reporting requirements, respectively.

The basis for the limitation is:
A. Technology (e.g., Federal Effluent Guidelines)
B. Water Quality Standards (9 VAC 25-260 et. seq.)
C. Best Professional Judgment

TABLE II – INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING

OUTFALLs # 005, 006, 008, 009

Outfall Description: storm water runoff from wooded areas and agricultural fields

SIC CODE: 2015

THESE OUTFALLS SHALL CONTAIN ONLY STORM WATER RUNOFF NOT ASSOCIATED WITH A REGULATED INDUSTRIAL ACTIVITY WHERE NO MONITORING IS REQUIRED. THERE SHALL BE NO DISCHARGE OF PROCESS WASTEWATER FROM THESE OUTFALLS.

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

TABLE II - GROUND WATER LIMITATIONS/MONITORING

Ground Water Well(s) # 1, 2, 3, and upgradient #4
Site Description: Ground water wells are located in the vicinity of the anaerobic lagoon.
SIC CODE: 2015

(X) Final Limits ( ) Interim Limits Effective Dates - From: Effective To: Expiration

PARAMETER & UNITS	GROUND WATER MONITORING		MONITORING REQUIREMENTS	
	LIMITATIONS	UNITS	FREQUENCY	SAMPLE TYPE
Static Water Level	NL	0.1 FT.	1/3 Months	Measured
Total Dissolved Solids	NL	mg/l	1/3 Months	Grab
Total Organic Carbon (TOC)	NL	mg/l	1/3 Months	Grab
Specific Conductivity	NL	uS/cm	1/3 Months	Grab
Ammonia Nitrogen (NH3)	NL	mg/l	1/3 Months	Grab
pH	NL	S.U.	1/3 Months	Grab
Nitrate Nitrogen (NO3)	NL	mg/l	1/3 Months	Grab
Total Kjeldahl Nitrogen (TKN)	NL	mg/l	1/3 Months	Grab
Total Phosphorus	NL	mg/l	1/3 Months	Grab
Chlorides	NL	mg/l	1/3 Months	Grab

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY
1/3 Months = In accordance with the following schedule:
1st quarter (January 1-March 31); 2nd quarter (April 1-June 30); 3rd quarter (July 1-September 30); 4th quarter (October 1-December 31).

Grab samples - An individual sample should be taken after three (3) well volumes of groundwater are removed (allowing the well to recharge between each well volume removed) or until well purging parameters (i.e. pH, temperature, and specific conductance) stabilize to ± 10%. The bailer or hose used should not contaminate samples.

The basis for the monitoring/limitations are noted in the special conditions rationale section (Attachment 6) of this fact sheet.

ATTACHMENT 6

EFFLUENT LIMITATIONS/MONITORING RATIONALE/SUITABLE DATA/ ANTIDEGRADATION/ANTIBACKSLIDING

6-1

Perdue Farms Incorporated

VPDES Permit No. VA0003808

Effluent Limitations and Monitoring Rationale

In November 2008, EPA approved the Parker Creek TMDL, named "Benthic TMDL Development for Parker Creek Virginia" and SWCB approval was given on 4/27/2009. The reissuance of this permit will incorporate the TMDL requirements and allow for a compliance schedule to meet the new limits for Total Phosphorus. Application of the TMDL for a stream segment discharging to the Atlantic Ocean incorporates language used in the Nutrient Trading Regulation and DEQ Guidance. The permit will 7 point source outfalls; outfalls 002 and 007 no longer have the potential to discharge to state waters and will be deleted from the permit. These two former discharge pipes have been permanently sealed.

TMDL requirements for Perdue with incorporation into the permit has been discussed at length with DEQ staff. Allan Brockenbrough, Fred Cunningham and Ellenore Daub have assisted TRO staff and the decision to include concentration limits in place of load limits is consistent with regulation and law. In addition the Central Office TMDL staff, Craig Lott, has also been involved. The TMDL is under going a modification to delete the required annual load limits. This revision was approved by TMDL-EPA and is currently at Public Notice (to PN on 6-1-11). The following is guidance received on the incorporation of TMDL into this permit…

> ***The requirement in both the VPDES (9 VAC 25-31-220.D.1.f.(2)) and NPDES (§122.44(d)(1)(vii)(B)) Regulations is that effluent limits to protect a narrative or numeric water quality criterion...."<u>are consistent with the assumptions and requirements of any available wasteload allocation</u>". Because (1) the endpoint for the TMDL was a TP concentration of 0.10 mg/l TP in Parker Creek (as opposed to a particular load to the watershed) and (2) the discharge makes up 100% of Parker Creek at the source, a reasonable case can be made that an effluent concentration limit by itself is consistent with the assumptions and requirements of the TMDL. TP also impacts the stream not as a toxic parameter but by causing algal growth over a longer period of time. I therefore see no reason to apply the TMDL in terms of a daily limit. A monthly average concentration will protect the stream from excessive algal growth."***
>
> ***This permit contains limits of fecal coliform and total phosphorus concentration (0.10 mg/l) that is consistent with, and will maintain the instream end point concentration (0.10mg/l). There are no load limitations in this permit.***

It is recommended the following as limits are protective of the stream and consistent with the assumptions and requirements of the TMDL.....
Outfall 001

- ***0.10 mg/l monthly average (no load limit)***
- ***no daily maximum limits***

It is recommended that 3D/W monitoring is conducted to ensure that the facility is operated in a consistent manner.

The following proposal to modify the current Phosphorus TMDL was sent to EPA:

Greg, (EPA TMDL staff) ***May 20, 2011***

Hello. As we discussed Monday, DEQ TMDL staff have reviewed the Parker Creek TMDL, "Benthic Total Maximum Daily Load (TMDL) Development Parker Creek, Virginia" dated July 2008. The review indicated several areas to improve descriptions in the TMDL. The impaired stream segment's receiving water, in Accomack County, Virginia, is tidal Parker Creek and eventually the Atlantic Ocean. The Executive Summary 'Endpoint Determination' section states, "Based on the average instream total phosphorus concentration of the reference stream, it was concluded that a suitable endpoint for total phosphorus is 0.10 mg/L." This and other findings described throughout the report demonstrate that the impaired Parker Creek Benthic Aquatic Life Use endpoint is

both concentration based and flow independent. The Parker Creek hydrodynamics are effluent dominated and the flow rate changes at the downstream TMDL outlet location are highly dependent upon flow changes at the Perdue permitted discharge outfall location in the headwaters. A description later in the report currently indicates that the daily and annual Waste Load Allocations (WLAs) should be load based and may be used to achieve the TMDL endpoint. This 'load' based mechanism to achieve this concentration endpoint creates confusion. The confusion is associated with the mechanism to restrict load to achieve a concentration endpoint and could result in a need to modify the TMDL when major natural or production originated changes in flow regime occur. While the TMDL concentration endpoint may be achieved, these flow regime changes, from either natural or permitted sources, should have no adverse impact on stream water quality or use attainment as described in the TMDL.

Proposed changes: TMDL equations and WLA equations should remain, but narrative reinforcement should describe that this is a concentration based nutrient TMDL. The concentration endpoint should be achieved by enforcement of the 0.10 mg/L total phosphorus permit limit, and appropriate implementation to achieve reductions in the original non point phosphorus sources in the watershed. The TMDL does not require flow restrictions to assure attainability of Parker Creek's benthic aquatic life use. Although overall loading may change at the TMDL outlet this should not impact stream water quality or attainment of the currently impaired use.

Thanks for your consideration. If you have any questions, please give me a call.

Craig

Craig Lott
Office of Watershed Programs
Virginia Department of Environmental Quality
P.O. Box 1105
Richmond, VA 23218

Ground water monitoring has been included in this reissuance based on an observation during our January 19, 2011 site inspection. Specific detail and plan approval information is in this factsheet.

Outfall 001

The sources of pollutants addressed in this outfall consist of processing plant and rendering plant wastewater, parking lot storm water runoff. The effluent limitations and monitoring requirements are based on several pieces of information: VA Water Quality Standards, Federal Effluent Guidelines for Meat Poultry Products (40 CFR 432.110-112 Subpart K "poultry First Processor", the Eastern Shore Water Quality Management Plan, TMDL for Parker Creek and Best Professional Judgment. Seasonal limits for Ammonia and BOD were incorporated into this permit in the late 1970's and have been updated, but remain valid requirements. Plant performance and stream modeling have been reviewed in the development of the TMDL for Parker Creek. The effluent discharge limitations in this permit are protective of water quality; and some are more stringent than the previous permit. This will require the facility to upgrade the treatment plant for nutrient removal. A compliance schedule will be granted as these limits are newly developed in accordance with the TMDL. **The long term average flow based on DMR data used to calculate load limits in this reissuance is 2.34 MGD. The long term maximum used to calculate load limits for ammonia-nitrogen, total phosphorus and cyanide is 3.02 MGD.**

Flow: No limit, however continuous monitoring by totalizing, indicating and recording equipment is required. Reporting shall be 1/Month in accordance with VPDES Permit Manual and BPJ.

pH: 6.0 S.U. min-9.0 S.U. max, 1/Day by a grab sample. In accordance with VPDES Permit Manual and BPJ for the protection of water quality standards and criteria and determination of compliance with the permit.

BOD(summer): 15 mg/l avg-26 mg/l max, 3-D/Week by a 24-HR Comp. Average concentration based on ESWQMP and WQ Model from the late 1970's and

BPJ. Maximum concentration is based on Federal Effluent Guidelines for Meat & Poultry Products 40 CFR 432.112 (BPT)

BOD(winter): 16 mg/l avg-26 mg/l max, 3-D/Week by a 24-HR Comp. Average and Maximum concentration's are based on Federal Effluent Guidelines for Meat & Poultry Products 40 CFR 432.112 (BPT)

BOD(summer): 293 lbs/d avg-507 lbs/d max, 3-D/Week by a 24-HR Comp. Mass loadings based on concentrations and long term average flow of 2.69 MGD. BPJ for the protection of water quality standards and criteria and determination of compliance with the permit.

BOD(winter): 312 lbs/d avg-507 lbs/d max, 3-D/Week by a 24-HR Comp. Mass loadings based on concentrations and long term average flow of 2.69 MGD. BPJ for the protection of water quality standards and criteria and determination of compliance with the permit.

TSS: 20 mg/l avg-30 mg/l max, 3-D/Week by a 24-HR Comp. Average and maximum concentrations based on Federal Effluent Guidelines for Meat & Poultry Products 40 CFR 432.112 (BPT).

TSS: 390 lbs/d avg-585 lbs/d max, 3-D/Week by a 24-HR Comp. Mass loadings based on concentrations and long term average flow of 2.34 MGD. BPJ for the protection of water quality standards and criteria and determination of compliance with the permit.

Oil & Grease: 8 mg/l avg-14 mg/l max., 1/Month by a grab sample. Average and Maximum concentration's are based on Federal Effluent Guidelines for Meat & Poultry Products 40 CFR 432.112 (BPT).

Oil & Grease: 156 lb/s avg-273 lbs/d max., 1/Month by a grab sample. Mass loadings based on concentrations and long term average flow of 2.34 MGD. BPJ for the protection of water quality standards and criteria and determination of compliance with the permit.

Dissolved Oxygen: 6.5 min, 1/Day by a grab sample. In accordance with VPDES Permit Manual and BPJ for the protection of water quality standards and criteria and determination of compliance with the permit.

Fecal Coliform: 200 N/CML avg-400 N/CML max, 3-D/Week by a grab sample. Average is based on TMDL WLA and Federal effluent Guidelines for Meat & Poultry Products 40 CFR 432.112 (BPT) and Maximum is based on Federal Effluent Guidelines for Meat & Poultry Products 40 CFR 432.112 (BPT).

E.Coli: 126 N/CML avg, 3-D/Week by a grab sample. Based on WQS.

Ammonia Nitrogen: (NH3-N summer)
0.9 mg/l avg-2.9 mg/l max., 3-D/Week by a 24-HR Comp. In accordance with limitations established using site specific data for the summer season and WQS model. These limits remain protective of water quality in stream.

Ammonia Nitrogen: (NH3-N summer)
23 lbs/d avg-73 lbs/d max., 3-D/Week by a 24-HR Comp. In accordance with current flow data (2.34 mgd) and established concentrations using site specific data for the summer season and WQS model. These limits remain protective of water quality standards and criteria and determination of compliance with the permit.

Ammonia Nitrogen (NH3-N) winter:
1.2 mg/l avg - 3.9 mg/l max, 3-D/Week by a 24HR Comp. In accordance with the previously established limitations that were developed

using site specific data for the winter season and WQS Model as well as the WLA40 Model. These limits remain most protective of water quality standards.

Ammonia Nitrogen (NH3-N) winter:
30 lbs/d avg - 98 lbs/d max, 3-D/Week by a 24HR Comp. In accordance with current flow data (2.34 mgd) and established concentrations using site specific data for the winter season and WQS model. These limits remain protective of water quality standards and criteria and determination of compliance with the permit.

Total Phosphorus: 2.0 mg/l avg, 3-D/Week by a 24HR Comp. BPJ for the protection of water quality standards and criteria and determination of compliance with the permit and Nutrient Regulation (9 VAC 25-40-10), as a voluntary participant.

Total Phosphorus: 50 lbs/d avg, 3-D/Week by a 24HR Comp. Mass loadings based on concentrations and long term maximum flow of 3.02 MGD. BPJ for the protection of water quality standards and criteria and determination of compliance with the permit.

Total Phosphorus: 0.10 mg/l monthly avg, 3-D/Week by a 24HR Comp. End point concentration consistent with TMDL waste load allocation to the receiving stream. (4-year compliance schedule: limit effective June 30, 2015).

Total Nitrogen: 103 mg/l avg - 147 mg/l max, 2/Month by 24HR Comp. Average and Max concentration based on Federal Effluent Guidelines for Meat and Poultry Products 40 CFR 432.112 (BPT).

Total Nitrogen: 2010 lbs/d avg - 2869 lbs/d max, 2/Month by 24HR Comp. Mass loadings based on concentrations and long term average flow of 2.34 MGD. Concentrations based on Federal Effluent Guidelines for Meat and Poultry Products 40 CFR 432.112 (BPT).

Total Residual Chlorine: .011 mg/l avg - .016 mg/l max, 1/Day by a grab sample. Monitoring shall be conducted when the chlorination is used for disinfection (UV system is down or otherwise being maintained).In accordance with Guidance Memo #00-2011 and WQS. Numeric limitation is based on water quality and WLA40 Model.

Cyanide: 7.6 ug/l avg - 7.6 ug/l max, 1/6Month by a 24HR Comp. In accordance established limitations developed using site specific data and WQS Model as well as the WLA40 Model. These limits remain most protective of water quality standards.

Cyanide: 0.20 lbs/d avg - 0.20 lbs/d max, 1/6Month by a 24HR Comp. Mass loadings based on concentrations and long term maximum flow of 3.02 MGD. These limits remain most protective of water quality standards.

Whole Effluent Toxicity: 1.724 TUc, 1/3Months by a 24HR Comp. The WET limitation will remain as written in the current permit. The limit is based on water quality Standards. (complete list of test conducted during the permit term is under attachment 8).

Outfall 002

Outfall 002 receives wastewater from the treatment plant for recycle back to the rendering plant. There has not been a discharge to the receiving stream for the period of time it has been addressed in this permit. The outfall pie for direct discharge to Parker Creek has been permanently sealed (with concrete plug). This outfall shall be deleted from the permit.

Outfalls 003 and 004

The flows through these outfalls are from impervious surface areas specific to tractor trailer truck traffic, truck parking, employee parking lots, and an overflow pipe from the vegetated storm water pond. These flows are subject to the storm water regulations for areas associated with industrial activity.

Flow: No limit however monitoring required 1/year by an estimate during a qualifying rain event.

OIL & GREASE, BOD5, TSS, TKN, Total PHOSPHORUS, pH, FECAL COLIFORM:

No limit, however monitoring is required 1/year by a grab sample during a qualifying rain event.

Outfalls 005, 006, 008 and 009

The flows through these outfalls are from agricultural and or wooded/forested areas not regulated as being associated with an industrial activity. NO MONITORING OR REPORTING IS REQUIRED.

Outfall 007

This outfall discharge point was permanently sealed (June 8, 2011) and therefore will not have a surface water discharge. The point source has been deleted from the permit. (All water is contained in this surface water pond or recycled back to the head of the waste water treatment plant).

SIC - 2015 Poultry Slaughtering and Processing

Establishments primarily engaged in slaughtering, dressing, packing, freezing, and canning poultry, rabbits, and other small game, or in manufacturing products from such meats, for their own account or on a contract basis for the trade. This industry also includes the drying, freezing, and breaking of eggs. Establishments primarily engaged in cleaning, oil treating, packing, and grading of eggs are classified in Wholesale Trade, Industry 5144; and those engaged in the cutting up and resale of purchased fresh carcasses are classified in Wholesale and Retail Trade.

- Chickens, processed: fresh, frozen, canned, or cooked
- Chickens: slaughtering and dressing
- Ducks, processed: fresh, frozen, canned, or cooked
- Ducks: slaughtering and dressing
- Egg albumen
- Egg substitutes made from eggs
- Eggs: canned, dehydrated, desiccated, frozen, and processed
- Eggs: drying, freezing, and breaking
- Frankfurters, poultry
- Game, small: fresh, frozen, canned, or cooked
- Game, small: slaughtering and dressing
- Geese, processed: fresh, frozen, canned or cooked
- Geese: slaughtering and dressing
- Ham, poultry
- Luncheon meat, poultry
- Poultry, processed: fresh. froze canned, or cooked
- Poultry: slaughtering and dressing
- Rabbits, processed: fresh, frozen canned, or cooked
- Rabbits, slaughtering and dressing
- Turkeys, processed: fresh, frozen canned, or cooked
- Turkeys: slaughtering and dressing

SIC 2077 Animal and Marine Fats and Oils

Establishments primarily engaged in manufacturing animal oils, including fish oil and other marine animal oils, and fish and animal meal; and those rendering inedible stearin, grease, and tallow from animal fat, bones, and meat scraps. Establishments primarily engaged in manufacturing lard and edible tallow and stearin are classified in Industry Group 201; those refining marine animal oils for medicinal purposes are classified in Industry 2833; and those manufacturing fatty acids are classified in Industry 2899.

- Feather meal
- Fish liver oils, crude
- Fish meal
- Fish oil and fish oil meal
- Grease rendering, inedible
- Meal, meat and bone: not prepared as feed
- Meat and bone meal and tankage
- Oils, animal
- Oils, fish and marine animal: e.g., herring, menhaden, whale
- Rendering plants, inedible grease and tallow
- Stearin, animal: inedible
- Tallow rendering, inedible

6-08

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029
11/7/2008

Ellen Gilinsky, Ph.D.
Director, Division of Water Quality Programs
Virginia Department of Environmental Quality
629 E. Main Street
P.O. Box 1105
Richmond, Virginia 23218

Dear Dr. Gilinsky:

The U.S. Environmental Protection Agency (EPA), Region III, is pleased to approve the Total Maximum Daily Loads (TMDLs) to address the aquatic life use (benthic) impairment in the Parker Creek watershed located in Accomack County, Virginia. The TMDL was submitted to EPA for review on April 29, 2008. The TMDL was established and submitted in accordance with Sections 303(d)(1)(c) and (2) of the Clean Water Act to address impairments of water quality as identified in Virginia's Section 303(d) Lists.

In accordance with Federal regulations at 40 CFR §130.7, a TMDL must comply with the following requirements: (1) be designed to attain and maintain the applicable water quality standards; (2) include a total allowable loading and, as appropriate, wasteload allocations for point sources and load allocations for nonpoint sources; (3) consider the impacts of background pollutant contributions; (4) take critical stream conditions into account (the conditions when water quality is most likely to be violated); (5) consider seasonal variations; (6) include a margin of safety (which accounts for uncertainties in the relationship between pollutant loads and instream water quality); and (7) be subject to public participation. The benthic TMDL for the Parker Creek watershed satisfies each of these requirements. In addition, the TMDL considered reasonable assurance that the TMDL allocations assigned to nonpoint sources can be reasonably met. A copy of EPA's Decision Rationale for approval of these TMDLs is included with this letter.

As you know, all new or revised National Pollutant Discharge Elimination System permits must be consistent with the TMDL wasteload allocations pursuant to 40 CFR §122.44 (d)(1)(vii)(B). Please submit all such permits to EPA for review as per EPA's letter dated September 29, 1998.

If you have any questions, please call me, or have your staff contact Ms. Helene Drago at 215-814-5796.

Sincerely,

/Signed/

Jon M. Capacasa, Director
Water Protection Division

Enclosure

cc: David Lazarus, VADEQ

6-10

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Decision Rationale
Total Maximum Daily Loads
Aquatic Life Use (Benthic) Impairment
Parker Creek Watershed, Accomack County, Virginia

/Signed/

Jon M. Capacasa, Director
Water Protection Division

Date: 11/7/2008

Decision Rationale
Total Maximum Daily Loads
Aquatic Life Use (Benthic) Impairment
Parker Creek Watershed, Accomack County, Virginia

I. Introduction

The Clean Water Act (CWA) requires a Total Maximum Daily Load (TMDL) be developed for those waterbodies identified as impaired by a State where technology based and other controls will not provide for attainment of water quality standards. A TMDL is a determination of the amount of a pollutant from point, nonpoint, and natural background sources, including a Margin of Safety (MOS) that may be discharged to a water quality limited waterbody.

This document will set forth the U.S. Environmental Protection Agency's (EPA) rationale for approving the TMDLs for the aquatic life use (benthic) impairment in the Parker Creek watershed. EPA's rationale is based on the determination that the TMDLs meet the following seven regulatory conditions pursuant to 40 CFR §130.

1. The TMDL is designed to implement applicable water quality standards.
2. The TMDL includes a total allowable load as well as individual wasteload allocations (WLAs) and load allocations (LAs).
3. The TMDL considers the impacts of background pollutant contributions.
4. The TMDL considers critical environmental conditions.
5. The TMDL considers seasonal environmental variations.
6. The TMDL includes a MOS.
7. The TMDL has been subject to public participation.

In addition, these TMDLs considered reasonable assurance that the TMDL allocations assigned to nonpoint sources (NPSs) can be reasonably met.

II. Background

The Parker Creek watershed (VAT-D03R-01) is listed as benthic impaired on Virginia's Section 305(b) and Section 303(d) Water Quality Integrated Report. The benthic impaired segment of Parker Creek is located within the borders of Accomack County in Delmarva Peninsula, Virginia, and flows into the tidally influenced Parker Creek which then empties into the Atlantic Ocean. According to Virginia's Section 305(b) and Section 303(d) Water Quality Integrated Reports (Virginia Department of Environmental Quality (VADEQ) 2004 and 2006), "*quarterly biological monitoring at stations, 07-PAR004.35 and 07-PAR003.09, on Parker Creek indicated that the stream's benthic community is considered severely impaired.*" The impaired benthic segment is located in the free-flowing freshwater portion of Parker Creek and is 2.03 miles in length, extending from approximately 0.5 miles upstream of station, 7-PAR004.35, and ending at the tidal interface, approximately 0.2 miles downstream from station, 7-PAR003.09.

Parker Creek was first placed on the 2004 Section 303(d) List and is not a Consent Decree water. Dominant land uses in the watershed are agricultural (61%) and forest (25%).

The primary stressor causing the benthic impaired segment of Parker Creek was identified based on evaluations of candidate stressors that potentially could be impacting the stream. Based on the stressor identification analysis, the most probable stressor for the benthic community of Parker Creek was identified as nutrients with the limiting nutrient being total phosphorus (TP). Potential sources of TP in the watershed include one (1) point source and NPSs.

Improvement of the benthic invertebrate community in Parker Creek is dependent upon reducing point source and NPS TP loading to the stream. These measures should serve to improve benthic habitat and subsequently restore invertebrate populations in the stream. Therefore, a TP TMDL was developed for Parker Creek.

TP loadings from land areas were determined using the Generalized Watershed Loading Functions (GWLF) model. GWLF model simulations were performed for 2006 in order to reflect the period of most recent data collection. Average annual TP loads were computed for each land source based on a one year simulation period. Point source loads were computed based on the facility's average flow and average total phosphorus concentrations recorded in the 2006 Discharge Monitoring Report (DMR) data.

Table 1 provides the daily and annual TP loads that were developed for the Parker Creek Watershed. The United States Fish and Wildlife Service have been provided with a copy of the TMDL.

Table 1. Total Phosphorus TMDLs in the Parker Creek Watershed

	TMDL	Wasteload Allocation (WLA)	Load Allocation (LA)	Margin of Safety (10%)
Daily TP (lb/day)	3.0	1.8	0.9	0.3
Annual TP (lb/year)	1,111.1	664.2	335.8	111.1

III. Discussion of Regulatory Conditions

EPA finds that Virginia has provided sufficient information to meet all of the seven basic requirements for establishing aquatic life (Benthic) impairment TMDLs for the Parker Creek watershed. Additionally, Virginia provided reasonable assurance that the TMDLs can be met. EPA is therefore approving the TMDL. EPA's approval is outlined according to the regulatory requirements listed below.

1. The TMDL is designed to meet the applicable water quality standards.

Water quality standards consist of designated uses for a waterbody and the water quality criteria necessary to support those designated uses.

According to Virginia Water Quality Standards (VADEQ, 2007):

All State waters, including wetlands, are designated for the following uses: recreational uses, e.g., swimming and boating; the propagation and growth of a balanced, indigenous population of aquatic life, including game fish, which might reasonably be expected to inhabit them; wildlife; and the production of edible and marketable natural resources, e.g., fish and shellfish.

The General Criteria defined in Virginia Water Quality Standards provide general, narrative criteria for the protection of designated uses from substances that may interfere with attainment of such uses. The General Criteria states:

State waters, including wetlands, shall be free from substances attributable to sewage, industrial waste, or other waste in concentrations, amounts, or combinations which contravene established standards or interfere directly or indirectly with designated uses of such water or which are inimical or harmful to human, animal, plant, or aquatic life.

Based on Virginia's Section 305(b) and Section 303(d) Water Quality Integrated Report (VADEQ, 2004 and 2006), the listed segment of Parker Creek defined in Section 1.2 does not support the propagation and growth of aquatic life.

Stressor identification for the benthic impairment was performed using available monitoring and watershed data. The evaluation included looking at dissolved oxygen, temperature, pH, metals, organic chemicals, nutrients, toxic compounds, and field observations. Excessive nutrient levels was identified as the most probable stressors impacting benthic invertebrates in the biologically impaired segment of Parker Creek, with elevated nutrient concentrations observed downstream of the one major discharger (Perdue Farms, Inc.). Because stoichiometric nutrient ratios indicate that the Parker Creek is primarily a phosphorus limited stream, phosphorus is considered the most probable stressor affecting the benthic macroinvertebrate community.

VADEQ has not yet adopted a numeric standard for TP. Therefore, a TP endpoint was determined based on instream TP measurements at a reference stream, Unnamed Tributary of Holt Creek (UNT Holt Creek), located in Virginia's Eastern Shoreline. Based on the average instream TP concentration of the reference stream, it was concluded that a suitable endpoint for TP is 0.10 mg/l. This endpoint was applied over the entire year in the benthic impaired segment of Parker Creek.

2. The TMDL includes a total allowable load as well as individual wasteload allocations and load allocations.

Total Allowable Loads

The objective of the benthic TMDL for Parker Creek was to determine what reductions in TP from point and nonpoint sources are required to meet State water quality standards. The TMDL considers all significant sources contributing TP to the impaired streams. The sources

can be separated into nonpoint and point sources. The different sources in the TMDL are defined in the following equation:

$$TMDL = WLAs + LAs + MOS$$

Where:

WLA = wasteload allocation
LA = load allocation
MOS = margin of safety

Table 1 provides the daily and annual TP loads that were developed for the impaired watershed.

Wasteload Allocations

EPA regulations require that an approvable TMDL include individual WLAs for each point source. According to 40 CFR §122.44(d)(1)(vii)(B), "Effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with assumptions and requirements of any available WLA for the discharge prepared by the State and approved by EPA pursuant to 40 CFR §130.7." Furthermore, EPA has authority to object to the issuance of any National Pollutant Discharge Elimination System (NPDES) permit that is inconsistent with the WLAs established for that point source.

A wasteload allocation applies to Perdue Farms, Inc., the only individual permitted facility located within the Parker Creek watershed. Table 2 shows the WLA and the required reduction for the Perdue Farms, Inc. effluent.

Table 2. Wasteload Allocation for Parker Creek Watershed

WLA Category	Existing Load	Allocated Load	Existing Load	Allocated Load	Percent Reduction
Perdue Farms, Inc. VA0003808	5,366.6 lb/year	14.7 lb/day	664.2 lb/year	1.8 lb/day	87.6

Load Allocations

According to Federal regulations at 40 CFR §130.2(g), LAs are best estimates of the loading, which may range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting loading. Wherever possible, natural and NPS loads should be distinguished. Table 3 provides the existing and allocated loads of TP from NPSs.

6-15

Table 3. Load Allocation Summary for Parker Creek Watershed

Source	Land Use Type	Existing Load (lb/year)	Allocated Load (lb/year)	Percent Reduction
Nonpoint Source	Deciduous Forest	0.4	0.4	0.0
	Evergreen Forest	0.4	0.4	0.0
	Mixed Forest	0.0	0.0	0.0
	Pasture/Hay	35.3	24.7	29.9
	Cultivated Crop	267.0	187.1	29.9
	Barren Land	7.1	4.9	29.9
	Low intensity Dev	7.9	5.6	29.9
	Medium intensity Dev	23.8	16.7	29.9
	High intensity Dev	23.4	16.4	29.9
	Developed open space	10.1	7.1	29.9
	Groundwater	97.5	68.3	29.9
	Septic Systems	6.0	4.2	29.9
Total		**478.9**	**335.8**	**29.9**

3. The TMDLs consider the impacts of background pollution.

Background pollutant contributions were considered in the TMDL development process by quantifying the loads from forests and other natural areas in the watershed.

4. The TMDLs consider critical environmental conditions.

According to EPA's regulation 40 CFR §130.7(c)(1), TMDLs are required to take into account critical conditions for stream flow, loading, and water quality parameters. The intent of this requirement is to ensure that the water quality of the Parker Creek watershed is protected during times when it is most vulnerable.

Critical conditions are important because they describe the factors that combine to cause a violation of water quality standards and will help in identifying the actions that may have to be undertaken to meet water quality standards. Critical conditions are a combination of environmental factors (e.g., flow, temperature, etc.), which have an acceptably low frequency of occurrence. In specifying critical conditions in the waterbody, an attempt is made to use a reasonable "worst case" scenario condition. For example, stream analysis often uses a low flow (7Q10) design condition because the ability of the waterbody to assimilate pollutants without exhibiting adverse impacts is at a minimum.

In the case of Parker Creek, the primary stressor resulting in the benthic impairment in the river is excessive phosphorus loading. The TMDL was based on an instream endpoint for TP of 0.1 mg/l and was applied throughout the year ensuring that aquatic life will be protected during critical and noncritical periods of the year.

5. The TMDLs consider seasonal environmental variations.

Seasonal variations involve changes in stream flow and loadings as a result of hydrologic

and climatological patterns. In the continental United States, seasonally high flows normally occur in early spring from snow melt and spring rain, while seasonally low flows typically occur during the warmer summer and early fall drought periods.

Seasonal variations were explicitly incorporated in the modeling approach for this TMDL. GWLF is a continuous simulation model that incorporates seasonal variations in hydrology and total phosphorus loading by using a daily time-step for water balance calculations. Therefore, the one year simulation performed with GWLF adequately captures seasonal variations.

6. The TMDLs include a Margin of Safety.

This requirement is intended to add a level of safety to the modeling process to account for any uncertainty. The MOS may be implicit, built into the modeling process by using conservative modeling assumptions, or explicit, taken as a percentage of the WLA, LA, or TMDL.

An explicit MOS of ten percent was used for Parker Creek to account for uncertainties in the methodologies used to determine TP loadings.

7. The TMDL has been subject to public participation.

Public participation was solicited at every stage of TMDL development in order to receive input from stakeholders and to apprise the stakeholders of the progress made. Three public meetings were held. The first two public meetings were held at the Accomack County Planning District Office, Virginia, on March 27, 2007, and May 3, 2007, respectively. The final meeting was held on March 31, 2008, at the Accawmacke Elementary School in Accomack, Virginia. Copies of all presentations were available for public distribution. Each meeting was publicly noticed in the *Virginia Register*.

IV. Discussion of Reasonable Assurance

EPA requires that there be a reasonable assurance that a TMDL can be implemented. WLAs will be implemented through the NPDES permit process. According to 40 CFR §122.44(d)(1)(vii)(B), the effluent limitations for an NPDES permit must be consistent with the assumptions and requirements of any available WLA for the discharge prepared by the State and approved by EPA. Furthermore, EPA has authority to object to the issuance of an NPDES permit that is inconsistent with WLAs established for that point source. Virginia will utilize its State NPDES program to ensure that WLAs will be incorporated into permits for each source.

NPS controls to achieve LAs can be implemented through a number of existing programs such as Section 319 of the CWA, commonly referred to as the Nonpoint Source Program. Additional funding sources for implementation include the U.S. Department of Agriculture's Conservation Reserve Enhancement and Environmental Quality Incentive Programs, the Virginia State Revolving Loan Program, and the Virginia Water Quality Improvement Fund.

In general, Virginia intends for the required reductions to be implemented in an iterative

process that first addresses those sources with the largest impact on water quality. In both urban and rural areas, reducing the human bacteria loading from straight pipe discharges and failing septic systems will be a primary implementation focus because of their health implications. These components could be implemented through education on septic tank pump-outs, a septic system installation/repair/replacement program, and hookup to the existing wastewater treatment plant.

Additional TMDL implementation information can be found in Chapter 7 of the State's TMDL document. Watershed stakeholders will have the opportunity to participate in the development of the TMDL implementation plan.

TMDL Inclusion (end pt concentration) 6-18

Thompson, Debra (DEQ)

From: Thompson, Debra (DEQ)
Sent: Wednesday, April 13, 2011 5:48 PM
To: Howell, Jennifer (DEQ)
Cc: Everton, Roger (DEQ)
Subject: Perdue Farms, Inc (VA0003808) TMDL Modification

1/6

Jen, I am forwarding to you Allan Brockenbrough's note regarding wasteload allocation for Perdue. In light of his recommendation, this is a request to TMDL staff by permit staff to initiate a modification to the Parker Creek TMDL to revise flow to reflect more current conditions.

Thanks, Debbie

Debra L. Thompson
Environmental Engineer Senior
VA Department of Environmental Quality
5636 Southern Boulevard
Virginia Beach, VA 23462
(757) 518-2162 phone

NEW EMAIL ADDRESS:
debra.thompson@deq.virginia.gov
Office Info: http://www.deq.virginia.gov/regions/tidewater.html

The information in this e-mail may be viewed by others and is subject to disclosure under the Freedom of Information Act (FOIA)

From: Brockenbrough, Allan (DEQ)
Sent: Monday, April 11, 2011 3:03 PM
To: Thompson, Debra (DEQ)
Cc: Daub, Elleanore (DEQ)
Subject: RE: WLA question Perdue Farms, Inc (VA0003808)

The approach outlined below is consistent with the TMDL assuming that the flows in the TMDL are correct. The approach is still consistent with the TMDL in that the instream endpoint (TP of 0.10 mg/l) is maintained. However if the flows used in the TMDL are no longer current, the approach won't meet the letter of the TMDL (664.2 lbs/year TP). I'd suggest issuing the permit as discussed below but at the same time initiating a modification to the TMDL to reflect current flows and the same endpoint (which equates to roughly 820 lbs/yr TP).

From: Thompson, Debra (DEQ)
Sent: Monday, April 11, 2011 2:46 PM
To: Brockenbrough, Allan (DEQ)
Cc: Daub, Elleanore (DEQ)
Subject: RE: WLA question Perdue Farms, Inc (VA0003808)

Hi Allan,

6-9

Just want to add to the information...Perdue's long term average flow for past 5yrs is 2,69 mgd as reported on DMR's, which is higher than the flow used in the TMDL.....2.18 mgd.....
Will the higher flows allow a higher load to Parker Creek?

Debra L. Thompson
Environmental Engineer Senior
VA Department of Environmental Quality
5636 Southern Boulevard
Virginia Beach, VA 23462
(757) 518-2162 phone

2/6

NEW EMAIL ADDRESS:
debra.thompson@deq.virginia.gov
Office Info: http://www.deq.virginia.gov/regions/tidewater.html

The information in this e-mail may be viewed by others and is subject to disclosure under the Freedom of Information Act (FOIA)

From: Brockenbrough, Allan (DEQ)
Sent: Friday, April 08, 2011 10:29 AM
To: Thompson, Debra (DEQ)
Cc: Lott, Craig (DEQ)
Subject: RE: WLA question Perdue Farms, Inc (VA0003808)

Debra-

Craig just called to say that he ran this by Dave Lazarus and he didn't have any problem with it. Therefore it should hopefully pass muster with the TRO TMDL staff.

Allan

From: Brockenbrough, Allan (DEQ)
Sent: Thursday, April 07, 2011 1:16 PM
To: Thompson, Debra (DEQ)
Cc: Lott, Craig (DEQ)
Subject: RE: WLA question Perdue Farms, Inc (VA0003808)

Debra-

What Craig and I discussed was applying the same concentration-based limit to Outfalls 001, 002 and 007 along with a special condition that required an additional report of total annual load from all 3 outfalls only if there was a discharge from 002 and 007 during the preceding year. However, the requirement in both the VPDES (9 VAC 25-31-220.D.1.f.(2)) and NPDES (§122.44(d)(1)(vii)(B)) Regulations is that effluent limits to protect a narrative or numeric water quality criterion...."*are consistent with the assumptions and requirements of any available wasteload allocation*". Because (1) the endpoint for the TMDL was a TP concentration of 0.10 mg/l TP in Parker Creek (as opposed to a particular load to the watershed) and (2) the discharge makes up 100% of Parker Creek at the source, a reasonable case can be made that an effluent concentration limit by itself is consistent with the assumptions and requirements of the TMDL. TP also impacts the stream not as a toxic parameter but by causing algal growth

6-20

over a longer period of time. I therefore see no reason to apply the TMDL in terms of a daily limit. A monthly average concentration will protect the stream from excessive algal growth. I also understand from you that Outfall 002 has been plugged and will be removed from the permit.

I recommend the following as limits that are protective of the stream and consistent with the assumptions and requirements of the TMDL.....

3/6

Outfalls 001 and 007

- 0.10 mg/l monthly average (no load limit)
- no daily maximum limits

I would recommend monitoring at least 3D/W to ensure that the facility is operated in a consistent manner. Give me a call if you want to discuss further.

Allan

From: Lott, Craig (DEQ)
Sent: Wednesday, April 06, 2011 5:00 PM
To: Thompson, Debra (DEQ)
Cc: Brockenbrough, Allan (DEQ)
Subject: RE: WLA question Perdue Farms, Inc (VA0003808)

Debra,

Just checking, was Allan able to contact you regarding developing some wording? In case he wasn't able to yet, after he and I discussed the issues yesterday, we think we came up with a solution. I believe the plan is for him to call you and propose some wording that would work for both programs. When you all develop that, it will need to be run by Dave Lazarus. I know he has quite a few meetings tomorrow, but the sooner in the process the better. Thanks,

Craig

From: Thompson, Debra (DEQ)
Sent: Tuesday, April 05, 2011 11:44 AM
To: Lott, Craig (DEQ); Brockenbrough, Allan (DEQ)
Subject: RE: WLA question Perdue Farms, Inc (VA0003808)

Craig, thank you for your assistance on this issue....
The current permit has an outfall (002) which is used as a "recycle pond", and has not discharged in the past 10yrs, however, if necessary the facility could direct discharge to Parker Creek. The permit reissuance I am working on will include another similar scenario; outfall 007 is the "vegetated storm water pond" that is also receiving process area washdown and therefore will be reclassified as process/storm comingled flows. A 36" standpipe in the vegetated storm water pond would be the discharge mechanism, however, here again, there has not been a documented discharge from this pond in 2 permit cycles. Rather, the company diverts flows from the vegetated storm water pond to the WWTP.
How would the TMDL effect each of these two outfalls; 002 was previously permitted as process water and 007 is being addressed this permit action as process + storm? Outfall

6-21

002 and 007 each have all the parameters and limitations as outfall 001 (exception: NO WET limit, just a TMP requirement).
Thanks for your help, Debbie

Debra L. Thompson
Environmental Engineer Senior
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(757) 518-2162 phone

4/6

NEW EMAIL ADDRESS:
debra.thompson@deq.virginia.gov
Office Info: http://www.deq.virginia.gov/regions/tidewater.html

The information in this e-mail may be viewed by others and is subject to disclosure under the Freedom of Information Act (FOIA)

From: Lott, Craig (DEQ)
Sent: Tuesday, April 05, 2011 11:31 AM
To: Brockenbrough, Allan (DEQ)
Cc: Thompson, Debra (DEQ)
Subject: FW: WLA question

Allan,

Would you have a second this afternoon to discuss the Parker Creek TMDL/Purdue permit mentioned below? I just had a discussion with Debra Thompson and wanted to run a couple of ideas past you after I had time to look up a couple of things in the current bacterial TMDL. thanks,

Craig

Craig Lott
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Virginia Department of Environmental Quality
P.O. Box 1105
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Phone: (804) 698-4240
Fax: (804) 698-4116
craig.lott@deq.virginia.gov
http://www.deq.virginia.gov/tmdl

From: Lott, Craig (DEQ)
Sent: Monday, April 04, 2011 12:43 PM
To: Howell, Jennifer (DEQ)
Subject: RE: WLA question

Jennifer,

Also, I have a meeting at 2 and don't know how long that will last. Thanks,

Craig

6-22

Craig Lott
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5/6

From: Howell, Jennifer (DEQ)
Sent: Monday, April 04, 2011 12:28 PM
To: Lott, Craig (DEQ)
Subject: RE: WLA question

Hi Craig,
Debbie Thompson will be calling you later today. She is the permit writer. We figured it would be best for her to discuss with you since she knows all of the permit background.
Thanks for your help,
Jennifer

Jennifer S. Howell
TMDL Projects Coordinator
Virginia Department of Environmental Quality
Tidewater Regional Office
5636 Southern Blvd
Virginia Beach, VA 23462
(757) 518-2111
(757) 518-2009 fax
Jennifer.Howell@deq.virginia.gov

From: Lott, Craig (DEQ)
Sent: Monday, April 04, 2011 8:58 AM
To: Howell, Jennifer (DEQ)
Subject: RE: WLA question

Jennifer,

Sorry for not replying earlier, don't have enough information in the email. Could you and/or permit writer call today so we can discuss, probably some back and forth answers to questions figure it out. I've not had time to pull up the original TMDL I'll have to do, too. Just give me a call or just email me when you would be available.

Craig Lott
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Virginia Department of Environmental Quality
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craig.lott@deq.virginia.gov
http://www.deq.virginia.gov/tmdl

From: Howell, Jennifer (DEQ)
Sent: Monday, April 04, 2011 7:48 AM
To: Lott, Craig (DEQ)
Subject: RE: WLA question

6-23

Good morning Craig,
Have you had a chance to review my email below? Sorry to ask again, but the permit writer is pushing for an answer.
Thanks!
Jennifer

6/6

From: Howell, Jennifer (DEQ)
Sent: Thu 3/31/2011 8:16 AM
To: Lott, Craig (DEQ)
Subject: WLA question

Good morning Craig,

Here is another permit/WLA scenario that I could use some help with. A permit is being reissued for a facility that has a TMDL associated WLA. The WLA is for outfall #001. Outfalls 002 and 007 (storm water + process water) are being added and discharge at the same location as 001. However, neither of these outfalls are really intended to discharge according to the facility. But, the permit writer wants to make sure the permit is written to protect WQ in the event they do have a discharge. Would the same TMDL limits for 001 be applied to 002 and 007?

Thanks,

Jennifer

Jennifer S. Howell

TMDL Projects Coordinator

Virginia Department of Environmental Quality

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Tracking:

Perdue Farms, Inc
VA0003808

Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
10-Jan-05	6-Jan-05	001	FLOW	2.21	3.09			
10-Feb-05	10-Feb-05	001	FLOW	2.47	2.889			
10-Mar-05	9-Mar-05	001	FLOW	2.37	2.879			
10-Apr-05	8-Apr-05	001	FLOW	2.37	2.883			
10-May-05	9-May-05	001	FLOW	2.25	3.165			
10-Jun-05	10-Jun-05	001	FLOW	2.18	2.72			
10-Jul-05	8-Jul-05	001	FLOW	2.55	3.129			
10-Aug-05	11-Aug-05	001	FLOW	2.47	3.028			
10-Sep-05	12-Sep-05	001	FLOW	2.07	2.932			
10-Oct-05	11-Oct-05	001	FLOW	2.02	2.782			
10-Nov-05	7-Nov-05	001	FLOW	2.50	3.26			
10-Dec-05	9-Dec-05	001	FLOW	2.47	2.88			
10-Jan-06	11-Jan-06	001	FLOW	2.56	2.867			
10-Feb-06	6-Feb-06	001	FLOW	2.79	3.185			
10-Mar-06	10-Mar-06	001	FLOW	2.51	3.217			
10-Apr-06	7-Apr-06	001	FLOW	2.17	3.24			
10-May-06	10-May-06	001	FLOW	2.15	2.975			
10-Jun-06	5-Jun-06	001	FLOW	2.07	2.938			
10-Jul-06	10-Jul-06	001	FLOW	1.80	2.883			
10-Aug-06	10-Aug-06	001	FLOW	2.31	2.89			
10-Sep-06	8-Sep-06	001	FLOW	1.94	2.82			
10-Oct-06	10-Oct-06	001	FLOW	2.21	3.252			
10-Nov-06	8-Nov-06	001	FLOW	1.68	2.552			
10-Dec-06	8-Dec-06	001	FLOW	1.99	2.695			
10-Jan-07	9-Jan-07	001	FLOW	2.13	2.856			
10-Feb-07	9-Feb-07	001	FLOW	1.970	2.764			
10-Mar-07	9-Mar-07	001	FLOW	1.66	2.272			
10-Apr-07	9-Apr-07	001	FLOW	2.21	3.05			
10-May-07	9-May-07	001	FLOW	2.03	2.74			
10-Jun-07	8-Jun-07	001	FLOW	2.17	2.65			
10-Jul-07	10-Jul-07	001	FLOW	2.50	3.195			
10-Aug-07	10-Aug-07	001	FLOW	2.14	2.77			
10-Sep-07	7-Sep-07	001	FLOW	2.12	2.74			
10-Oct-07	10-Oct-07	001	FLOW	2.18	2.56			
10-Nov-07	9-Nov-07	001	FLOW	2.40	2.57			
10-Dec-07	10-Dec-07	001	FLOW	2.23	2.60			
10-Jan-08	8-Jan-08	001	FLOW	2.64	2.93			
10-Feb-08	11-Feb-08	001	FLOW	2.55	2.93			
10-Mar-08	10-Mar-08	001	FLOW	2.16	3.01			
10-Apr-08	14-Apr-08	001	FLOW	2.49	2.94			
10-May-08	9-May-08	001	FLOW	2.34	2.79			
10-Jun-08	11-Jun-08	001	FLOW	2.51	3.01			
10-Jul-08	10-Jul-08	001	FLOW	2.48	2.81			
10-Aug-08	11-Aug-08	001	FLOW	2.34	2.81			
10-Sep-08	9-Sep-08	001	FLOW	2.52	2.85			
10-Oct-08	10-Oct-08	001	FLOW	2.27	2.99			
10-Nov-08	10-Nov-08	001	FLOW	2.37	2.86			
10-Dec-08	9-Dec-08	001	FLOW	2.60	2.83			
10-Jan-09	9-Jan-09	001	FLOW	2.51	3.00			
10-Feb-09	9-Feb-09	001	FLOW	2.74	2.94			
10-Mar-09	10-Mar-09	001	FLOW	2.79	3.02			
10-Apr-09	10-Apr-09	001	FLOW	2.59	2.99			

6-23(a)

Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
10-May-09	11-May-09	001	FLOW	1.76	2.87			
10-Jun-09	10-Jun-09	001	FLOW	2.57	2.98			
10-Jul-09	9-Jul-09	001	FLOW	2.45	3.10			
10-Aug-09	10-Aug-09	001	FLOW	2.27	2.99			
10-Sep-09	11-Sep-09	001	FLOW	2.64	3.03			
10-Oct-09	9-Oct-09	001	FLOW	2.37	2.83			
10-Nov-09	10-Nov-09	001	FLOW	2.36	2.88			
10-Dec-09	8-Dec-09	001	FLOW	2.92	3.06			
10-Jan-10	8-Jan-10	001	FLOW	2.54	3.22			
10-Feb-10	9-Feb-10	001	FLOW	2.8	3.2			
10-Mar-10	8-Mar-10	001	FLOW	2.93	3.72			
10-Apr-10	8-Apr-10	001	FLOW	2.93	3.48			
10-May-10	7-May-10	001	FLOW	2.60	3.46			
10-Jun-10	10-Jun-10	001	FLOW	2.75	3.30			
10-Jul-10	9-Jul-10	001	FLOW	1.58	2.89			
10-Aug-10	9-Aug-10	001	FLOW	2.05	3.16			
10-Sep-10	10-Sep-10	001	FLOW	2.69	3.39			
10-Oct-10	7-Oct-10	001	FLOW	2.62	3.53			
10-Nov-10	9-Nov-10	001	FLOW	2.04	3.39			
10-Dec-10	8-Dec-10	001	FLOW	2.16	3.27			
10-Jan-11	10-Jan-11	001	FLOW	2.29	2.90			
10-Feb-11	4-Feb-11	001	FLOW	2.55	3.22			
10-Jan-05	6-Jan-05	001	PH	220.498		7.01		8.13
10-Feb-05	10-Feb-05	001	PH			7.22		8.31
10-Mar-05	9-Mar-05	001	PH			7.15		8.12
10-Apr-05	8-Apr-05	001	PH			6.61		8.31
10-May-05	9-May-05	001	PH			7.19		8.33
10-Jun-05	10-Jun-05	001	PH			6.75		8.13
10-Jul-05	8-Jul-05	001	PH			7.04		7.94
10-Aug-05	11-Aug-05	001	PH			7.03		8.03
10-Sep-05	12-Sep-05	001	PH			7.16		7.93
10-Oct-05	11-Oct-05	001	PH			7.19		8.01
10-Nov-05	7-Nov-05	001	PH			7.26		7.96
10-Dec-05	9-Dec-05	001	PH			7.3		8.33
10-Jan-06	11-Jan-06	001	PH			7.34		7.95
10-Feb-06	6-Feb-06	001	PH			7.43		8.23
10-Mar-06	10-Mar-06	001	PH			7.43		7.79
10-Apr-06	7-Apr-06	001	PH			7.28		7.78
10-May-06	10-May-06	001	PH			7.31		7.78
10-Jun-06	5-Jun-06	001	PH			7.4		7.88
10-Jul-06	10-Jul-06	001	PH			7.55		7.89
10-Aug-06	10-Aug-06	001	PH			7.4		7.84
10-Sep-06	8-Sep-06	001	PH			7.49		7.98
10-Oct-06	10-Oct-06	001	PH			7.42		7.92
10-Nov-06	8-Nov-06	001	PH			6.9		8.01
10-Dec-06	8-Dec-06	001	PH			7.54		8.12
10-Jan-07	9-Jan-07	001	PH			7.02		8.07
10-Feb-07	9-Feb-07	001	PH			7.49		8.05
10-Mar-07	9-Mar-07	001	PH			7.43		8.24
10-Apr-07	9-Apr-07	001	PH			7.71		8.39
10-May-07	9-May-07	001	PH			7.53		8.06

Long term Average Flow

199.06/74 = 2.69 mgd

Long term Max Flow

223.888/74 = 3.02

6-23

2.33

172.67

2.32

Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
10-Jun-07	8-Jun-07	001	PH			7.72		8.84
10-Jul-07	10-Jul-07	001	PH			7.33		7.92
10-Aug-07	10-Aug-07	001	PH			7.65		8.15
10-Sep-07	7-Sep-07	001	PH			7.56		8.05
10-Oct-07	10-Oct-07	001	PH			7.54		8.04
10-Nov-07	9-Nov-07	001	PH			7.33		8.01
10-Dec-07	10-Dec-07	001	PH			7.6		8.0
10-Jan-08	8-Jan-08	001	PH			7.6		8.0
10-Feb-08	11-Feb-08	001	PH			7.5		8.1
10-Mar-08	10-Mar-08	001	PH			7.6		8.1
10-Apr-08	14-Apr-08	001	PH			7.63		8.19
10-May-08	9-May-08	001	PH			7.2		8.1
10-Jun-08	11-Jun-08	001	PH			7.5		8.2
10-Jul-08	10-Jul-08	001	PH			7.6		8.1
10-Aug-08	11-Aug-08	001	PH			7.2		8.1
10-Sep-08	9-Sep-08	001	PH			7.3		8.2
10-Oct-08	10-Oct-08	001	PH			7.5		8.2
10-Nov-08	10-Nov-08	001	PH			7.6		8.7
10-Dec-08	9-Dec-08	001	PH			7.5		8.1
10-Jan-09	9-Jan-09	001	PH			7.5		8.2
10-Feb-09	9-Feb-09	001	PH			7.7		8.3
10-Mar-09	10-Mar-09	001	PH			7.6		8.3
10-Apr-09	10-Apr-09	001	PH			7.4		8.2
10-May-09	11-May-09	001	PH			7.6		8.2
10-Jun-09	10-Jun-09	001	PH			7.7		8.1
10-Jul-09	9-Jul-09	001	PH			7.6		8.2
10-Aug-09	10-Aug-09	001	PH			7.8		8.2
10-Sep-09	11-Sep-09	001	PH			7.8		8.2
10-Oct-09	9-Oct-09	001	PH			7.7		8.4
10-Nov-09	10-Nov-09	001	PH			7.8		8.5
10-Dec-09	8-Dec-09	001	PH			7.77		8.2
10-Jan-10	8-Jan-10	001	PH			7.7		8.1
10-Feb-10	9-Feb-10	001	PH			7.6		8.2
10-Mar-10	8-Mar-10	001	PH			7.4		8.0
10-Apr-10	8-Apr-10	001	PH			7.6		7.96
10-May-10	7-May-10	001	PH			7.3		8.2
10-Jun-10	10-Jun-10	001	PH			7.7		8.0
10-Jul-10	9-Jul-10	001	PH			7.6		8.1
10-Aug-10	9-Aug-10	001	PH			7.6		8.8
10-Sep-10	10-Sep-10	001	PH			7.8		8.2
10-Oct-10	7-Oct-10	001	PH			7.3		8.1
10-Nov-10	9-Nov-10	001	PH			7.78		8.42
10-Dec-10	8-Dec-10	001	PH			7.5		8.1
10-Jan-11	10-Jan-11	001	PH			7.65		8.36
10-Feb-11	4-Feb-11	001	PH			7.4		8.3
10-Aug-06	10-Aug-06	001	TSS	35	58		2	3
10-Sep-06	8-Sep-06	001	TSS	30	89		2	4
10-Oct-06	10-Oct-06	001	TSS	47	109		2	5
10-Nov-06	8-Nov-06	001	TSS	44	104		3	5
10-Dec-06	8-Dec-06	001	TSS	55	102		3	6
10-Jan-07	9-Jan-07	001	TSS	59	139		3	7

summer (may - Oct)
winter (Nov - april)

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Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
10-Feb-07	9-Feb-07	001	TSS	48	82		3	4
10-Mar-07	9-Mar-07	001	TSS	173	223		11	16
10-Apr-07	9-Apr-07	001	TSS	138	360		7	15
10-May-07	9-May-07	001	TSS	63	117		3	6
10-Jun-07	8-Jun-07	001	TSS	41	81		2	4
10-Jul-07	10-Jul-07	001	TSS	52	121		2	5
10-Aug-07	10-Aug-07	001	TSS	37	60		2	3
10-Sep-07	7-Sep-07	001	TSS	48	75		3	4
10-Oct-07	10-Oct-07	001	TSS	46	63		3	4
10-Nov-07	9-Nov-07	001	TSS	60	86		3	4
10-Dec-07	10-Dec-07	001	TSS	29	79		2	4
10-Jan-08	8-Jan-08	001	TSS	74	99		3.31	4.51
10-Feb-08	11-Feb-08	001	TSS	137	203		6	9
10-Mar-08	10-Mar-08	001	TSS	166	277		7	11
10-Apr-08	14-Apr-08	001	TSS	151	243		7	10
10-May-08	9-May-08	001	TSS	104	141		5	6
10-Jun-08	11-Jun-08	001	TSS	90	126		4	6
10-Jul-08	10-Jul-08	001	TSS	68	102		3	5
10-Aug-08	11-Aug-08	001	TSS	65	121		3	6
10-Sep-08	9-Sep-08	001	TSS	66	114		3	5
10-Oct-08	10-Oct-08	001	TSS	65	120		3	6
10-Nov-08	10-Nov-08	001	TSS	60	102		3	5
10-Dec-08	9-Dec-08	001	TSS	68	122		3	5
10-Jan-09	9-Jan-09	001	TSS	63	102		2	4
10-Feb-09	9-Feb-09	001	TSS	97	178		4	8
10-Mar-09	10-Mar-09	001	TSS	171	277		8	11
10-Apr-09	10-Apr-09	001	TSS	102	156		5	7
10-May-09	11-May-09	001	TSS	51	77		3	5
10-Jun-09	10-Jun-09	001	TSS	54	91		3	4
10-Jul-09	9-Jul-09	001	TSS	48	91		2	4
10-Aug-09	10-Aug-09	001	TSS	55	120		3	5
10-Sep-09	11-Sep-09	001	TSS	57	75		3	4
10-Oct-09	9-Oct-09	001	TSS	65	112		3	4.75
10-Nov-09	10-Nov-09	001	TSS	57	79		3	4
10-Dec-09	8-Dec-09	001	TSS	101	142		4	6
10-Jan-10	8-Jan-10	001	TSS	68	142		3	5
10-Feb-10	9-Feb-10	001	TSS	172	243		7.1	9.4
10-Mar-10	8-Mar-10	001	TSS	235	432		9	15
10-Apr-10	8-Apr-10	001	TSS	139	230		6	9
10-May-10	7-May-10	001	TSS	94	125		4	5
10-Jun-10	10-Jun-10	001	TSS	91	127		4	5
10-Jul-10	9-Jul-10	001	TSS	47	79		3	4
10-Aug-10	9-Aug-10	001	TSS	84	151		5	8
10-Sep-10	10-Sep-10	001	TSS	134	204		6	8
10-Oct-10	7-Oct-10	001	TSS	114	246		5	10
10-Nov-10	9-Nov-10	001	TSS	79	175		4	6
10-Dec-10	8-Dec-10	001	TSS	88	167		4.4	7.0
10-Jan-11	10-Jan-11	001	TSS	115	295		8	13
10-Feb-11	4-Feb-11	001	TSS	240	459		12	18
10-Jan-05	6-Jan-05	001	CL2, TOTAL				0	0
10-Feb-05	10-Feb-05	001	CL2, TOTAL				0	0

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summer (May - Oct)
winter (Nov - April)

Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
10-Mar-05	9-Mar-05	001	CL2, TOTAL				0	0
10-Apr-05	8-Apr-05	001	CL2, TOTAL				0	.01
10-May-05	9-May-05	001	CL2, TOTAL				0	0
10-Jun-05	10-Jun-05	001	CL2, TOTAL				0.0	0.0
10-Jul-05	8-Jul-05	001	CL2, TOTAL				0.00	0.00
10-Aug-05	11-Aug-05	001	CL2, TOTAL				0.0	0.0
10-Sep-05	12-Sep-05	001	CL2, TOTAL				<QL	<QL
10-Oct-05	11-Oct-05	001	CL2, TOTAL				<QL	<QL
10-Nov-05	7-Nov-05	001	CL2, TOTAL				<QL	<QL
10-Dec-05	9-Dec-05	001	CL2, TOTAL				<QL	<QL
10-Jan-06	11-Jan-06	001	CL2, TOTAL				<QL	<QL
10-Feb-06	6-Feb-06	001	CL2, TOTAL				<QL	<QL
10-Mar-06	10-Mar-06	001	CL2, TOTAL				<QL	<QL
10-Apr-06	7-Apr-06	001	CL2, TOTAL				<QL	<QL
10-May-06	10-May-06	001	CL2, TOTAL				<QL	<QL
10-Jun-06	5-Jun-06	001	CL2, TOTAL				<QL	<QL
10-Jul-06	10-Jul-06	001	CL2, TOTAL				<QL	<QL
10-Aug-06	10-Aug-06	001	CL2, TOTAL				<QL	<QL
10-Sep-06	8-Sep-06	001	CL2, TOTAL				<QL	<QL
10-Oct-06	10-Oct-06	001	CL2, TOTAL				0.00	0.00
10-Nov-06	8-Nov-06	001	CL2, TOTAL				<QL	<QL
10-Dec-06	8-Dec-06	001	CL2, TOTAL				<QL	<QL
10-Jan-07	9-Jan-07	001	CL2, TOTAL				<QL	<QL
10-Feb-07	9-Feb-07	001	CL2, TOTAL				<QL	<QL
10-Mar-07	9-Mar-07	001	CL2, TOTAL				<QL	<QL
10-Apr-07	9-Apr-07	001	CL2, TOTAL				<QL	<QL
10-May-07	9-May-07	001	CL2, TOTAL				<QL	<QL
10-Jun-07	8-Jun-07	001	CL2, TOTAL				<QL	<QL
10-Jul-07	10-Jul-07	001	CL2, TOTAL				<QL	<QL
10-Aug-07	10-Aug-07	001	CL2, TOTAL				<QL	<QL
10-Sep-07	7-Sep-07	001	CL2, TOTAL				<QL	<QL
10-Oct-07	10-Oct-07	001	CL2, TOTAL				<QL	<QL
10-Nov-07	9-Nov-07	001	CL2, TOTAL				<QL	<QL
10-Dec-07	10-Dec-07	001	CL2, TOTAL				<QL	<QL
10-Jan-08	8-Jan-08	001	CL2, TOTAL				<QL	<QL
10-Feb-08	11-Feb-08	001	CL2, TOTAL				<QL	<QL
10-Mar-08	10-Mar-08	001	CL2, TOTAL				<QL	<QL
10-Apr-08	14-Apr-08	001	CL2, TOTAL				<QL	<QL
10-May-08	9-May-08	001	CL2, TOTAL				<QL	<QL
10-Jun-08	11-Jun-08	001	CL2, TOTAL				<QL	<QL
10-Jul-08	10-Jul-08	001	CL2, TOTAL				<QL	<QL
10-Aug-08	11-Aug-08	001	CL2, TOTAL				<QL	<QL
10-Sep-08	9-Sep-08	001	CL2, TOTAL				<QL	<QL
10-Oct-08	10-Oct-08	001	CL2, TOTAL				<QL	<QL
10-Nov-08	10-Nov-08	001	CL2, TOTAL				<QL	<QL
10-Dec-08	9-Dec-08	001	CL2, TOTAL				NR	NR
10-Jan-09	9-Jan-09	001	CL2, TOTAL				NR	NR
10-Feb-09	9-Feb-09	001	CL2, TOTAL				NR	NR
10-Mar-09	10-Mar-09	001	CL2, TOTAL				NR	NR
10-Apr-09	10-Apr-09	001	CL2, TOTAL				NR	NR
10-May-09	11-May-09	001	CL2, TOTAL				0.0	0.0

summer (May - Oct)
winter (Nov - April)

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Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
10-Jun-09	10-Jun-09	001	CL2, TOTAL				NR	NR
10-Jul-09	9-Jul-09	001	CL2, TOTAL				NR	NR
10-Aug-09	10-Aug-09	001	CL2, TOTAL				NR	NR
10-Sep-09	11-Sep-09	001	CL2, TOTAL				NR	NR
10-Oct-09	9-Oct-09	001	CL2, TOTAL				NR	NR
10-Nov-09	10-Nov-09	001	CL2, TOTAL				NR	NR
10-Dec-09	8-Dec-09	001	CL2, TOTAL				NR	NR
10-Jan-10	8-Jan-10	001	CL2, TOTAL				NR	NR
10-Feb-10	9-Feb-10	001	CL2, TOTAL				NR	NR
10-Mar-10	8-Mar-10	001	CL2, TOTAL				NR	NR
10-Apr-10	8-Apr-10	001	CL2, TOTAL				NR	NR
10-May-10	7-May-10	001	CL2, TOTAL				NR	NR
10-Jun-10	10-Jun-10	001	CL2, TOTAL				NR	NR
10-Jul-10	9-Jul-10	001	CL2, TOTAL				NR	NR
10-Aug-10	9-Aug-10	001	CL2, TOTAL				NR	NR
10-Sep-10	10-Sep-10	001	CL2, TOTAL				NR	NR
10-Oct-10	7-Oct-10	001	CL2, TOTAL				NR	NR
10-Nov-10	9-Nov-10	001	CL2, TOTAL				NR	NR
10-Dec-10	8-Dec-10	001	CL2, TOTAL				NR	NR
10-Jan-11	10-Jan-11	001	CL2, TOTAL				NR	NR
10-Feb-11	4-Feb-11	001	CL2, TOTAL				NR	NR
10-Jan-05	6-Jan-05	001	COLIFORM, FECAL				2	
10-Feb-05	10-Feb-05	001	COLIFORM, FECAL				2	
10-Mar-05	9-Mar-05	001	COLIFORM, FECAL				2	
10-Apr-05	8-Apr-05	001	COLIFORM, FECAL				2	
10-May-05	9-May-05	001	COLIFORM, FECAL				2	
10-Jun-05	10-Jun-05	001	COLIFORM, FECAL				4.0	
10-Jul-05	8-Jul-05	001	COLIFORM, FECAL				5	
10-Aug-05	11-Aug-05	001	COLIFORM, FECAL				14	
10-Sep-05	12-Sep-05	001	COLIFORM, FECAL				12	
10-Oct-05	11-Oct-05	001	COLIFORM, FECAL				5	
10-Nov-05	7-Nov-05	001	COLIFORM, FECAL				3	
10-Dec-05	9-Dec-05	001	COLIFORM, FECAL				3	
10-Jan-06	11-Jan-06	001	COLIFORM, FECAL				2	
10-Feb-06	6-Feb-06	001	COLIFORM, FECAL				2	
10-Mar-06	10-Mar-06	001	COLIFORM, FECAL				8	
10-Apr-06	7-Apr-06	001	COLIFORM, FECAL				3	
10-May-06	10-May-06	001	COLIFORM, FECAL				15	
10-Jun-06	5-Jun-06	001	COLIFORM, FECAL				7	
10-Jul-06	10-Jul-06	001	COLIFORM, FECAL				23	
10-Aug-06	10-Aug-06	001	COLIFORM, FECAL				11	50
10-Sep-06	8-Sep-06	001	COLIFORM, FECAL				15	220
10-Oct-06	10-Oct-06	001	COLIFORM, FECAL				4	13
10-Nov-06	8-Nov-06	001	COLIFORM, FECAL				3	130
10-Dec-06	8-Dec-06	001	COLIFORM, FECAL				3	30
10-Jan-07	9-Jan-07	001	COLIFORM, FECAL				2	2
10-Feb-07	9-Feb-07	001	COLIFORM, FECAL				2	2
10-Mar-07	9-Mar-07	001	COLIFORM, FECAL				6	130
10-Apr-07	9-Apr-07	001	COLIFORM, FECAL				10	1600
10-May-07	9-May-07	001	COLIFORM, FECAL				11	50
10-Jun-07	8-Jun-07	001	COLIFORM, FECAL				2	2

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Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
10-Jul-07	10-Jul-07	001	COLIFORM, FECAL				4	17
10-Aug-07	10-Aug-07	001	COLIFORM, FECAL				4	17
10-Sep-07	7-Sep-07	001	COLIFORM, FECAL				3	27
10-Oct-07	10-Oct-07	001	COLIFORM, FECAL				2	8
10-Nov-07	9-Nov-07	001	COLIFORM, FECAL				4	23
10-Dec-07	10-Dec-07	001	COLIFORM, FECAL				2	2
10-Jan-08	8-Jan-08	001	COLIFORM, FECAL				2	2
10-Feb-08	11-Feb-08	001	COLIFORM, FECAL				2.83	30
10-Mar-08	10-Mar-08	001	COLIFORM, FECAL				2.38	8.0
10-Apr-08	14-Apr-08	001	COLIFORM, FECAL				2	2
10-May-08	9-May-08	001	COLIFORM, FECAL				2	2
10-Jun-08	11-Jun-08	001	COLIFORM, FECAL				2.5	30
10-Jul-08	10-Jul-08	001	COLIFORM, FECAL				4.15	13
10-Aug-08	11-Aug-08	001	COLIFORM, FECAL				2	13
10-Sep-08	9-Sep-08	001	COLIFORM, FECAL				3	130
10-Oct-08	10-Oct-08	001	COLIFORM, FECAL				2	2
10-Nov-08	10-Nov-08	001	COLIFORM, FECAL				2	7
10-Dec-08	9-Dec-08	001	COLIFORM, FECAL				2	4
10-Jan-09	9-Jan-09	001	COLIFORM, FECAL				2	4
10-Feb-09	9-Feb-09	001	COLIFORM, FECAL				2	2
10-Mar-09	10-Mar-09	001	COLIFORM, FECAL				2	2
10-Apr-09	10-Apr-09	001	COLIFORM, FECAL				3	23
10-May-09	11-May-09	001	COLIFORM, FECAL				3	8
10-Jun-09	10-Jun-09	001	COLIFORM, FECAL				3	17
10-Jul-09	9-Jul-09	001	COLIFORM, FECAL				4	30
10-Aug-09	10-Aug-09	001	COLIFORM, FECAL				2	2
10-Sep-09	11-Sep-09	001	COLIFORM, FECAL				3	7
10-Oct-09	9-Oct-09	001	COLIFORM, FECAL				3	300
10-Nov-09	10-Nov-09	001	COLIFORM, FECAL				2	2
10-Dec-09	8-Dec-09	001	COLIFORM, FECAL				2.9	80
10-Jan-10	8-Jan-10	001	COLIFORM, FECAL				2	2
10-Feb-10	9-Feb-10	001	COLIFORM, FECAL				2	4
10-Mar-10	8-Mar-10	001	COLIFORM, FECAL				2	4
10-Apr-10	8-Apr-10	001	COLIFORM, FECAL				2	2
10-May-10	7-May-10	001	COLIFORM, FECAL				2.14	4
10-Jun-10	10-Jun-10	001	COLIFORM, FECAL				4	23
10-Jul-10	9-Jul-10	001	COLIFORM, FECAL				3	25
10-Aug-10	9-Aug-10	001	COLIFORM, FECAL				4	30
10-Sep-10	10-Sep-10	001	COLIFORM, FECAL				4	30
10-Oct-10	7-Oct-10	001	COLIFORM, FECAL				3	23
10-Nov-10	9-Nov-10	001	COLIFORM, FECAL				2	4
10-Dec-10	8-Dec-10	001	COLIFORM, FECAL				2.0	2.0
10-Jan-11	10-Jan-11	001	COLIFORM, FECAL				2.30	8.0
10-Feb-11	4-Feb-11	001	COLIFORM, FECAL				2	7
10-Jan-05	6-Jan-05	001	DO			7.54		
10-Feb-05	10-Feb-05	001	DO			7.2		
10-Mar-05	9-Mar-05	001	DO			7.47		
10-Apr-05	8-Apr-05	001	DO			7.35		
10-May-05	9-May-05	001	DO			7.05		
10-Jun-05	10-Jun-05	001	DO			7.21		
10-Jul-05	8-Jul-05	001	DO			7.1		

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Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
10-Aug-05	11-Aug-05	001	DO			6.94		
10-Sep-05	12-Sep-05	001	DO			7.03		
10-Oct-05	11-Oct-05	001	DO			7.01		
10-Nov-05	7-Nov-05	001	DO			7.15		
10-Dec-05	9-Dec-05	001	DO			7.89		
10-Jan-06	11-Jan-06	001	DO			7.16		
10-Feb-06	6-Feb-06	001	DO			7.6		
10-Mar-06	10-Mar-06	001	DO			8.72		
10-Apr-06	7-Apr-06	001	DO			7.25		
10-May-06	10-May-06	001	DO			7.65		
10-Jun-06	5-Jun-06	001	DO			7.13		
10-Jul-06	10-Jul-06	001	DO			7.08		
10-Aug-06	10-Aug-06	001	DO			7.01		
10-Sep-06	8-Sep-06	001	DO			6.9		
10-Oct-06	10-Oct-06	001	DO			7.03		
10-Nov-06	8-Nov-06	001	DO			7.1		
10-Dec-06	8-Dec-06	001	DO			7.84		
10-Jan-07	9-Jan-07	001	DO			7.76		
10-Feb-07	9-Feb-07	001	DO			7.92		
10-Mar-07	9-Mar-07	001	DO			8.75		
10-Apr-07	9-Apr-07	001	DO			7.56		
10-May-07	9-May-07	001	DO			7.59		
10-Jun-07	8-Jun-07	001	DO			7.34		
10-Jul-07	10-Jul-07	001	DO			6.83		
10-Aug-07	10-Aug-07	001	DO			6.6		
10-Sep-07	7-Sep-07	001	DO			7.0		
10-Oct-07	10-Oct-07	001	DO			7.07		
10-Nov-07	9-Nov-07	001	DO			7.23		
10-Dec-07	10-Dec-07	001	DO			7.81		
10-Jan-08	8-Jan-08	001	DO			8.29		
10-Feb-08	11-Feb-08	001	DO			8.83		
10-Mar-08	10-Mar-08	001	DO			9.1		
10-Apr-08	14-Apr-08	001	DO			8.44		
10-May-08	9-May-08	001	DO			7.8		
10-Jun-08	11-Jun-08	001	DO			7.5		
10-Jul-08	10-Jul-08	001	DO			7.2		
10-Aug-08	11-Aug-08	001	DO			7.1		
10-Sep-08	9-Sep-08	001	DO			7.0		
10-Oct-08	10-Oct-08	001	DO			7.1		
10-Nov-08	10-Nov-08	001	DO			7.1		
10-Dec-08	9-Dec-08	001	DO			7.8		
10-Jan-09	9-Jan-09	001	DO			8.8		
10-Feb-09	9-Feb-09	001	DO			9.1		
10-Mar-09	10-Mar-09	001	DO			8.4		
10-Apr-09	10-Apr-09	001	DO			8.2		
10-May-09	11-May-09	001	DO			7.7		
10-Jun-09	10-Jun-09	001	DO			7.7		
10-Jul-09	9-Jul-09	001	DO			7.3		
10-Aug-09	10-Aug-09	001	DO			7.1		
10-Sep-09	11-Sep-09	001	DO			7.1		
10-Oct-09	9-Oct-09	001	DO			7.1		

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Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
10-Nov-09	10-Nov-09	001	DO			7.2		
10-Dec-09	8-Dec-09	001	DO			7.9		
10-Jan-10	8-Jan-10	001	DO			8.7		
10-Feb-10	9-Feb-10	001	DO			9.1		
10-Mar-10	8-Mar-10	001	DO			8.6		
10-Apr-10	8-Apr-10	001	DO			7.2		
10-May-10	7-May-10	001	DO			6.7		
10-Jun-10	10-Jun-10	001	DO			6.7		
10-Jul-10	9-Jul-10	001	DO			6.9		
10-Aug-10	9-Aug-10	001	DO			6.82		
10-Sep-10	10-Sep-10	001	DO			7.0		
10-Oct-10	7-Oct-10	001	DO			7.5		
10-Nov-10	9-Nov-10	001	DO			7.2		
10-Dec-10	8-Dec-10	001	DO			8.2		
10-Jan-11	10-Jan-11	001	DO			9		
10-Feb-11	4-Feb-11	001	DO			9.3		
10-Jan-05	6-Jan-05	001	PHOSPHORUS, TOTAL	11.79			1	
10-Feb-05	10-Feb-05	001	PHOSPHORUS, TOTAL	13.48			1	
10-Mar-05	9-Mar-05	001	PHOSPHORUS, TOTAL	13.93			1	
10-Apr-05	8-Apr-05	001	PHOSPHORUS, TOTAL	23.16			1	
10-May-05	9-May-05	001	PHOSPHORUS, TOTAL	19.45			1	
10-Jun-05	10-Jun-05	001	PHOSPHORUS, TOTAL	17.89			0.85	
10-Jul-05	8-Jul-05	001	PHOSPHORUS, TOTAL	41.74			1.65	
10-Aug-05	11-Aug-05	001	PHOSPHORUS, TOTAL	26.40			1.19	
10-Sep-05	12-Sep-05	001	PHOSPHORUS, TOTAL	27.50			1.29	
10-Oct-05	11-Oct-05	001	PHOSPHORUS, TOTAL	15.31			0.66	
10-Nov-05	7-Nov-05	001	PHOSPHORUS, TOTAL	33.89			1.70	
10-Dec-05	9-Dec-05	001	PHOSPHORUS, TOTAL	25.45			1.09	
10-Jan-06	11-Jan-06	001	PHOSPHORUS, TOTAL	13.29			0.64	
10-Feb-06	6-Feb-06	001	PHOSPHORUS, TOTAL	11.25			0.48	
10-Mar-06	10-Mar-06	001	PHOSPHORUS, TOTAL	29.90			1	
10-Apr-06	7-Apr-06	001	PHOSPHORUS, TOTAL	9.53			0.69	
10-May-06	10-May-06	001	PHOSPHORUS, TOTAL	15.35			0.79	
10-Jun-06	5-Jun-06	001	PHOSPHORUS, TOTAL	23.04			1.10	
10-Jul-06	10-Jul-06	001	PHOSPHORUS, TOTAL	5.64			0.94	
10-Aug-06	10-Aug-06	001	PHOSPHORUS, TOTAL	7.28			2.0	
10-Sep-06	8-Sep-06	001	PHOSPHORUS, TOTAL	10			0.64	
10-Oct-06	10-Oct-06	001	PHOSPHORUS, TOTAL	12.71			0.76	
10-Nov-06	8-Nov-06	001	PHOSPHORUS, TOTAL	6.0			0.31	
10-Dec-06	8-Dec-06	001	PHOSPHORUS, TOTAL	5.2			0.34	
10-Jan-07	9-Jan-07	001	PHOSPHORUS, TOTAL	6.89			0.57	
10-Feb-07	9-Feb-07	001	PHOSPHORUS, TOTAL	4.74			0.22	
10-Mar-07	9-Mar-07	001	PHOSPHORUS, TOTAL	14.27			1.10	
10-Apr-07	9-Apr-07	001	PHOSPHORUS, TOTAL	17			0.77	
10-May-07	9-May-07	001	PHOSPHORUS, TOTAL	1.13			0.26	
10-Jun-07	8-Jun-07	001	PHOSPHORUS, TOTAL	19			0.94	
10-Jul-07	10-Jul-07	001	PHOSPHORUS, TOTAL	41			1.89	
10-Aug-07	10-Aug-07	001	PHOSPHORUS, TOTAL	29			1.28	
10-Sep-07	7-Sep-07	001	PHOSPHORUS, TOTAL	31			1.58	
10-Oct-07	10-Oct-07	001	PHOSPHORUS, TOTAL	17			0.87	
10-Nov-07	9-Nov-07	001	PHOSPHORUS, TOTAL	25			1.24	

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Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
10-Dec-07	10-Dec-07	001	PHOSPHORUS, TOTAL	32			1.7	
10-Jan-08	8-Jan-08	001	PHOSPHORUS, TOTAL	12			0.6	
10-Feb-08	11-Feb-08	001	PHOSPHORUS, TOTAL	9			0.42	
10-Mar-08	10-Mar-08	001	PHOSPHORUS, TOTAL	8.3			0.4	
10-Apr-08	14-Apr-08	001	PHOSPHORUS, TOTAL	30			1.3	
10-May-08	9-May-08	001	PHOSPHORUS, TOTAL	11			0.49	
10-Jun-08	11-Jun-08	001	PHOSPHORUS, TOTAL	11			0.46	
10-Jul-08	10-Jul-08	001	PHOSPHORUS, TOTAL	34			1.5	
10-Aug-08	11-Aug-08	001	PHOSPHORUS, TOTAL	37			1.86	
10-Sep-08	9-Sep-08	001	PHOSPHORUS, TOTAL	16			0.84	
10-Oct-08	10-Oct-08	001	PHOSPHORUS, TOTAL	6			0.33	
10-Nov-08	10-Nov-08	001	PHOSPHORUS, TOTAL	20			0.9	
10-Dec-08	9-Dec-08	001	PHOSPHORUS, TOTAL	13			0.55	
10-Jan-09	9-Jan-09	001	PHOSPHORUS, TOTAL	8			0.36	
10-Feb-09	9-Feb-09	001	PHOSPHORUS, TOTAL	7			0.3	
10-Mar-09	10-Mar-09	001	PHOSPHORUS, TOTAL	11			0.6	
10-Apr-09	10-Apr-09	001	PHOSPHORUS, TOTAL	9			0.4	
10-May-09	11-May-09	001	PHOSPHORUS, TOTAL	6			0.4	
10-Jun-09	10-Jun-09	001	PHOSPHORUS, TOTAL	24			1.0	
10-Jul-09	9-Jul-09	001	PHOSPHORUS, TOTAL	11			1.0	
10-Aug-09	10-Aug-09	001	PHOSPHORUS, TOTAL	11			0.8	
10-Sep-09	11-Sep-09	001	PHOSPHORUS, TOTAL	36			1.6	
10-Oct-09	9-Oct-09	001	PHOSPHORUS, TOTAL	17			0.79	
10-Nov-09	10-Nov-09	001	PHOSPHORUS, TOTAL	12			0.53	
10-Dec-09	8-Dec-09	001	PHOSPHORUS, TOTAL	18			0.77	
10-Jan-10	8-Jan-10	001	PHOSPHORUS, TOTAL	4			0.38	
10-Feb-10	9-Feb-10	001	PHOSPHORUS, TOTAL	3			0.5	
10-Mar-10	8-Mar-10	001	PHOSPHORUS, TOTAL	11			0.82	
10-Apr-10	8-Apr-10	001	PHOSPHORUS, TOTAL	17			0.84	
10-May-10	7-May-10	001	PHOSPHORUS, TOTAL	8.5			0.46	
10-Jun-10	10-Jun-10	001	PHOSPHORUS, TOTAL	13			0.83	
10-Jul-10	9-Jul-10	001	PHOSPHORUS, TOTAL	17			1.5	
10-Aug-10	9-Aug-10	001	PHOSPHORUS, TOTAL	6			0.6	
10-Sep-10	10-Sep-10	001	PHOSPHORUS, TOTAL	8			0.65	
10-Oct-10	7-Oct-10	001	PHOSPHORUS, TOTAL	16			1.1	
10-Nov-10	9-Nov-10	001	PHOSPHORUS, TOTAL	6			0.47	
10-Dec-10	8-Dec-10	001	PHOSPHORUS, TOTAL	4.28			0.4	
10-Jan-11	10-Jan-11	001	PHOSPHORUS, TOTAL	7			0.62	
10-Feb-11	4-Feb-11	001	PHOSPHORUS, TOTAL	13			0.76	
10-Jan-05	6-Jan-05	001	NITROGEN, TOTAL (AS	3839	3839		166.00	166.00
10-Feb-05	10-Feb-05	001	NITROGEN, TOTAL (AS	3626	3626		163.00	163.00
10-Mar-05	9-Mar-05	001	NITROGEN, TOTAL (AS	3296	3296		142.00	142.00
10-Apr-05	8-Apr-05	001	NITROGEN, TOTAL (AS	3485	3485		151.00	151.00
10-May-05	9-May-05	001	NITROGEN, TOTAL (AS	3789	3789		145.00	145.00
10-Jun-05	10-Jun-05	001	NITROGEN, TOTAL (AS	3577	3577		170.00	170.00
10-Jul-05	8-Jul-05	001	NITROGEN, TOTAL (AS	3725	3725		156.00	156.00
10-Aug-05	11-Aug-05	001	NITROGEN, TOTAL (AS	4009	4009		183.00	183.00
10-Sep-05	12-Sep-05	001	NITROGEN, TOTAL (AS	4139	4139		213.00	213.00
10-Oct-05	11-Oct-05	001	NITROGEN, TOTAL (AS	2519	2519		118.00	118.00
10-Nov-05	7-Nov-05	001	NITROGEN, TOTAL (AS	3728	3728		148.00	148.00
10-Dec-05	9-Dec-05	001	NITROGEN, TOTAL (AS	3032	3032		140.00	140.00

Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
10-Jan-06	11-Jan-06	001	NITROGEN, TOTAL (AS	2910	2910		126.00	126.00
10-Feb-06	6-Feb-06	001	NITROGEN, TOTAL (AS	2441	2441		118.00	118.00
10-Mar-06	10-Mar-06	001	NITROGEN, TOTAL (AS	3340	3340		152.00	152.00
10-Apr-06	7-Apr-06	001	NITROGEN, TOTAL (AS	1947	1947		141.00	141.00
10-May-06	10-May-06	001	NITROGEN, TOTAL (AS	2956	2956		170.00	170.00
10-Jun-06	5-Jun-06	001	NITROGEN, TOTAL (AS	3002	3002		150.00	150.00
10-Jul-06	10-Jul-06	001	NITROGEN, TOTAL (AS	2800.49	2800.49		130.00	130.00
10-Aug-06	10-Aug-06	001	NITROGEN, TOTAL (AS	832	832		47.96	47.96
10-Sep-06	8-Sep-06	001	NITROGEN, TOTAL (AS	1249	1249		53	53
10-Oct-06	10-Oct-06	001	NITROGEN, TOTAL (AS	547	547		40.30	40.30
10-Nov-06	8-Nov-06	001	NITROGEN, TOTAL (AS	104	104		35	35
10-Dec-06	8-Dec-06	001	NITROGEN, TOTAL (AS	931	931		53.20	53.20
10-Jan-07	9-Jan-07	001	NITROGEN, TOTAL (AS	663	663		33.20	33.20
10-Feb-07	9-Feb-07	001	NITROGEN, TOTAL (AS	680	680		48.5	48.5
10-Mar-07	9-Mar-07	001	NITROGEN, TOTAL (AS	1337	1337		103	103
10-Apr-07	9-Apr-07	001	NITROGEN, TOTAL (AS	1128	1128		61	61
10-May-07	9-May-07	001	NITROGEN, TOTAL (AS	1069	1069		50	50
10-Jun-07	8-Jun-07	001	NITROGEN, TOTAL (AS	1342	1342		62	62
10-Jul-07	10-Jul-07	001	NITROGEN, TOTAL (AS	1766	2420		86	118
10-Aug-07	10-Aug-07	001	NITROGEN, TOTAL (AS	887	887		48	48
10-Sep-07	7-Sep-07	001	NITROGEN, TOTAL (AS	1180	1180		64	64
10-Oct-07	10-Oct-07	001	NITROGEN, TOTAL (AS	1197	1197		85	85
10-Nov-07	9-Nov-07	001	NITROGEN, TOTAL (AS	1170	1170		60	60
10-Dec-07	10-Dec-07	001	NITROGEN, TOTAL (AS	1448	1448		72	72
10-Jan-08	8-Jan-08	001	NITROGEN, TOTAL (AS	1296	1296		62	62
10-Feb-08	11-Feb-08	001	NITROGEN, TOTAL (AS	1793	1793		81	81
10-Mar-08	10-Mar-08	001	NITROGEN, TOTAL (AS	1352	1352		55	55
10-Apr-08	14-Apr-08	001	NITROGEN, TOTAL (AS	1892	2575		80	105
10-May-08	9-May-08	001	NITROGEN, TOTAL (AS	1527	1527		69	69
10-Jun-08	11-Jun-08	001	NITROGEN, TOTAL (AS	1601	1601		67	67
10-Jul-08	10-Jul-08	001	NITROGEN, TOTAL (AS	1577	1577		71	71
10-Aug-08	11-Aug-08	001	NITROGEN, TOTAL (AS	2130	2776		99	126
10-Sep-08	9-Sep-08	001	NITROGEN, TOTAL (AS	2674	3293		121	140
10-Oct-08	10-Oct-08	001	NITROGEN, TOTAL (AS	1869	2335		101	127
10-Nov-08	10-Nov-08	001	NITROGEN, TOTAL (AS	1826	2391		89	115
10-Dec-08	9-Dec-08	001	NITROGEN, TOTAL (AS	1961	2809		95	122
10-Jan-09	9-Jan-09	001	NITROGEN, TOTAL (AS	1169	1169		54	54
10-Feb-09	9-Feb-09	001	NITROGEN, TOTAL (AS	1472	1472		62	62
10-Mar-09	10-Mar-09	001	NITROGEN, TOTAL (AS	1753	1753		70	70
10-Apr-09	10-Apr-09	001	NITROGEN, TOTAL (AS	1782	1782		89	89
10-May-09	11-May-09	001	NITROGEN, TOTAL (AS	1316	1316		86	86
10-Jun-09	10-Jun-09	001	NITROGEN, TOTAL (AS	2270	2270		97	97
10-Jul-09	9-Jul-09	001	NITROGEN, TOTAL (AS	1012	1429		90	105
10-Aug-09	10-Aug-09	001	NITROGEN, TOTAL (AS	1361	1522		91	114
10-Sep-09	11-Sep-09	001	NITROGEN, TOTAL (AS	1682	1682		74	74
10-Oct-09	9-Oct-09	001	NITROGEN, TOTAL (AS	1674	1674		80	80
10-Nov-09	10-Nov-09	001	NITROGEN, TOTAL (AS	1500	2092		84.5	95.1
10-Dec-09	8-Dec-09	001	NITROGEN, TOTAL (AS	1680	1680		71	71
10-Jan-10	8-Jan-10	001	NITROGEN, TOTAL (AS	681	681		73	73
10-Feb-10	9-Feb-10	001	NITROGEN, TOTAL (AS	416	416		72	72
10-Mar-10	8-Mar-10	001	NITROGEN, TOTAL (AS	958	958		72	72

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Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
10-Apr-10	8-Apr-10	001	NITROGEN, TOTAL (AS	1309	1309		64	64
10-May-10	7-May-10	001	NITROGEN, TOTAL (AS	1534	1534		82.9	82.9
10-Jun-10	10-Jun-10	001	NITROGEN, TOTAL (AS	1015	1015		64	64
10-Jul-10	9-Jul-10	001	NITROGEN, TOTAL (AS	1214	1427		105	117
10-Aug-10	9-Aug-10	001	NITROGEN, TOTAL (AS	1146	1231		95.1	105
10-Sep-10	10-Sep-10	001	NITROGEN, TOTAL (AS	1036	1036		83	83
10-Oct-10	7-Oct-10	001	NITROGEN, TOTAL (AS	809	809		69	69
10-Nov-10	9-Nov-10	001	NITROGEN, TOTAL (AS	1080	1080		80	80
10-Dec-10	8-Dec-10	001	NITROGEN, TOTAL (AS	806	806		66	66
10-Jan-11	10-Jan-11	001	NITROGEN, TOTAL (AS	614	614		58	58
10-Feb-11	4-Feb-11	001	NITROGEN, TOTAL (AS	1584	1584		90	90
10-Jan-05	6-Jan-05	001	CYANIDE, TOTAL (AS C	0.12	0.12		5.00	5.00
10-Feb-05	10-Feb-05	001	CYANIDE, TOTAL (AS C	0.11	0.11		5.00	5.00
10-Mar-05	9-Mar-05	001	CYANIDE, TOTAL (AS C	0.12	0.12		5.00	5.00
10-Apr-05	8-Apr-05	001	CYANIDE, TOTAL (AS C	0.12	0.12		5.00	5.00
10-May-05	9-May-05	001	CYANIDE, TOTAL (AS C	0.13	0.13		5.00	5.00
10-Jun-05	10-Jun-05	001	CYANIDE, TOTAL (AS C	0.10	0.10		5.00	5.00
10-Jul-05	8-Jul-05	001	CYANIDE, TOTAL (AS C	0.11	0.11		5.00	5.00
10-Aug-05	11-Aug-05	001	CYANIDE, TOTAL (AS C	0.11	0.11		5.00	5.00
10-Sep-05	12-Sep-05	001	CYANIDE, TOTAL (AS C	0.10	0.10		5.00	5.00
10-Oct-05	11-Oct-05	001	CYANIDE, TOTAL (AS C	0.11	0.11		5.00	5.00
10-Nov-05	7-Nov-05	001	CYANIDE, TOTAL (AS C	0.13	0.13		5.00	5.00
10-Dec-05	9-Dec-05	001	CYANIDE, TOTAL (AS C	0.11	0.11		5.00	5.00
10-Jan-06	11-Jan-06	001	CYANIDE, TOTAL (AS C	0.12	0.12		5.00	5.00
10-Feb-06	6-Feb-06	001	CYANIDE, TOTAL (AS C	0.10	0.10		5.00	5.00
10-Mar-06	10-Mar-06	001	CYANIDE, TOTAL (AS C	0.11	0.11		5.00	5.00
10-Apr-06	7-Apr-06	001	CYANIDE, TOTAL (AS C	0.069	0.069		5.00	5.00
10-May-06	10-May-06	001	CYANIDE, TOTAL (AS C	0.09	0.09		5.00	5.00
10-Jun-06	5-Jun-06	001	CYANIDE, TOTAL (AS C	0.10	0.10		5.00	5.00
10-Jul-06	10-Jul-06	001	CYANIDE, TOTAL (AS C	0.11	0.11		5.00	5.00
10-Aug-06	10-Aug-06	001	CYANIDE, TOTAL (AS C	0.09	0.09		5.0	5.0
10-Sep-06	8-Sep-06	001	CYANIDE, TOTAL (AS C	0.14	0.14		6.00	6.00
10-Oct-06	10-Oct-06	001	CYANIDE, TOTAL (AS C	0.07	0.07		5.00	5.00
10-Nov-06	8-Nov-06	001	CYANIDE, TOTAL (AS C	0.01	0.01		5.0	5.0
10-Dec-06	8-Dec-06	001	CYANIDE, TOTAL (AS C	0.09	0.09		5.0	5.0
10-Jan-07	9-Jan-07	001	CYANIDE, TOTAL (AS C	0.10	0.10		5.0	5.0
10-Feb-07	9-Feb-07	001	CYANIDE, TOTAL (AS C	0.07	0.07		5.0	5.0
10-Mar-07	9-Mar-07	001	CYANIDE, TOTAL (AS C	0.06	0.06		5.0	5.0
10-Apr-07	9-Apr-07	001	CYANIDE, TOTAL (AS C	0.10	0.10		5.0	5.0
10-May-07	9-May-07	001	CYANIDE, TOTAL (AS C	0.11	0.11		5.0	5.0
10-Jun-07	8-Jun-07	001	CYANIDE, TOTAL (AS C	0.11	0.11		5.0	5.0
10-Jul-07	10-Jul-07	001	CYANIDE, TOTAL (AS C	0.10	0.10		5.0	5.0
10-Aug-07	10-Aug-07	001	CYANIDE, TOTAL (AS C	0.09	0.09		5.0	5.0
10-Sep-07	7-Sep-07	001	CYANIDE, TOTAL (AS C	0.02	0.02		1.0	1.0
10-Oct-07	10-Oct-07	001	CYANIDE, TOTAL (AS C	<QL	<QL		<QL	<QL
10-Nov-07	9-Nov-07	001	CYANIDE, TOTAL (AS C	<QL	<QL		<QL	<QL
10-Dec-07	10-Dec-07	001	CYANIDE, TOTAL (AS C	0.02	0.02		1.05	1.05
10-Jan-08	8-Jan-08	001	CYANIDE, TOTAL (AS C	0.025	0.025		1.20	1.20
10-Feb-08	11-Feb-08	001	CYANIDE, TOTAL (AS C	0.03	0.03		1.44	1.44
10-Mar-08	10-Mar-08	001	CYANIDE, TOTAL (AS C	0.06	0.06		2.4	2.4
10-Apr-08	14-Apr-08	001	CYANIDE, TOTAL (AS C	0.04	0.04		1.82	1.82

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Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
10-May-08	9-May-08	001	CYANIDE, TOTAL (AS C	0.04	0.04		2.0	2.0
10-Jun-08	11-Jun-08	001	CYANIDE, TOTAL (AS C	0.02	0.02		1.0	1.0
10-Jul-08	10-Jul-08	001	CYANIDE, TOTAL (AS C	0.03	0.03		1.4	1.4
10-Aug-08	11-Aug-08	001	CYANIDE, TOTAL (AS C	0.04	0.04		1.59	1.59
10-Sep-08	9-Sep-08	001	CYANIDE, TOTAL (AS C	0.06	0.06		2.4	2.4
10-Oct-08	10-Oct-08	001	CYANIDE, TOTAL (AS C	0.04	0.04		1.9	1.9
10-Nov-08	10-Nov-08	001	CYANIDE, TOTAL (AS C	0.02	0.02		1.0	1.0
10-Dec-08	9-Dec-08	001	CYANIDE, TOTAL (AS C	0.05	0.05		2.34	2.34
10-Jan-09	9-Jan-09	001	CYANIDE, TOTAL (AS C	0.02	0.02		1.0	1.0
10-Feb-09	9-Feb-09	001	CYANIDE, TOTAL (AS C	0.04	0.04		1.8	1.8
10-Mar-09	10-Mar-09	001	CYANIDE, TOTAL (AS C	0.07	0.07		2.6	2.6
10-Apr-09	10-Apr-09	001	CYANIDE, TOTAL (AS C	0.04	0.04		2.1	2.1
10-May-09	11-May-09	001	CYANIDE, TOTAL (AS C	0.03	0.03		1.73	1.73
10-Jun-09	10-Jun-09	001	CYANIDE, TOTAL (AS C	0.03	0.03		1.3	1.3
10-Jul-09	9-Jul-09	001	CYANIDE, TOTAL (AS C	0.02	0.02		1.5	1.5
10-Aug-09	10-Aug-09	001	CYANIDE, TOTAL (AS C	0.03	0.03		1.8	1.8
10-Sep-09	11-Sep-09	001	CYANIDE, TOTAL (AS C	0.04	0.04		1.6	1.6
10-Oct-09	9-Oct-09	001	CYANIDE, TOTAL (AS C	0.03	0.03		1.5	1.5
10-Nov-09	10-Nov-09	001	CYANIDE, TOTAL (AS C	0.04	0.04		1.9	1.9
10-Dec-09	8-Dec-09	001	CYANIDE, TOTAL (AS C	0.04	0.04		1.6	1.6
10-Jan-10	8-Jan-10	001	CYANIDE, TOTAL (AS C	0.01	0.01		1.0	1.0
10-Feb-10	9-Feb-10	001	CYANIDE, TOTAL (AS C	0.01	0.01		1.0	1.0
10-Mar-10	8-Mar-10	001	CYANIDE, TOTAL (AS C	.03	.03		2.0	2.0
10-Apr-10	8-Apr-10	001	CYANIDE, TOTAL (AS C	0.03	0.03		1.5	1.5
10-May-10	7-May-10	001	CYANIDE, TOTAL (AS C	0.03	0.03		1.76	1.76
10-Jun-10	10-Jun-10	001	CYANIDE, TOTAL (AS C	0.03	0.03		1.9	1.9
10-Jul-10	9-Jul-10	001	CYANIDE, TOTAL (AS C	0.03	0.03		2.0	2.0
10-Aug-10	9-Aug-10	001	CYANIDE, TOTAL (AS C	0.02	0.02		2.5	2.5
10-Sep-10	10-Sep-10	001	CYANIDE, TOTAL (AS C	0.06	0.06		5	5
10-Oct-10	7-Oct-10	001	CYANIDE, TOTAL (AS C	0.07	0.07		5.0	5.0
10-Nov-10	9-Nov-10	001	CYANIDE, TOTAL (AS C	0.07	0.07		5	5
10-Dec-10	8-Dec-10	001	CYANIDE, TOTAL (AS C	0.06	0.06		5.0	5.0
10-Jan-11	10-Jan-11	001	CYANIDE, TOTAL (AS C	0.05	0.05		5	5
10-Feb-11	4-Feb-11	001	CYANIDE, TOTAL (AS C	0.13	0.13		5	5
10-Jan-05	6-Jan-05	001	BOD5, NOV-APR	58	126		3	6
10-Feb-05	10-Feb-05	001	BOD5, NOV-APR	72	136		3	6
10-Mar-05	9-Mar-05	001	BOD5, NOV-APR	155	288		8	12
10-Apr-05	8-Apr-05	001	BOD5, NOV-APR	134	244		6	11
10-May-05	9-May-05	001	BOD5, NOV-APR	160	291		7	14
10-Dec-05	9-Dec-05	001	BOD5, NOV-APR	237	337		11	17
10-Jan-06	11-Jan-06	001	BOD5, NOV-APR	170	332		8	16
10-Feb-06	6-Feb-06	001	BOD5, NOV-APR	198	328		8	13
10-Mar-06	10-Mar-06	001	BOD5, NOV-APR	203	337		10	14
10-Apr-06	7-Apr-06	001	BOD5, NOV-APR	156	358		8.05	14.23
10-May-06	10-May-06	001	BOD5, NOV-APR	197	339		10	16
10-Dec-06	8-Dec-06	001	BOD5, NOV-APR	172	306		12	21
10-Jan-07	9-Jan-07	001	BOD5, NOV-APR	55	110		<QL	9
10-Feb-07	9-Feb-07	001	BOD5, NOV-APR	62	145		<QL	8.23
10-Mar-07	9-Mar-07	001	BOD5, NOV-APR	192	249		13	19
10-Apr-07	9-Apr-07	001	BOD5, NOV-APR	144	504		7	21
10-May-07	9-May-07	001	BOD5, NOV-APR	119	233		7	15

Summer (May-Oct)
winter (Nov-April)

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Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
10-Dec-07	10-Dec-07	001	BOD5, NOV-APR	<QL	<QL		<QL	<QL
10-Jan-08	8-Jan-08	001	BOD5, NOV-APR	<QL	<QL		<QL	<QL
10-Feb-08	11-Feb-08	001	BOD5, NOV-APR	<QL	116		<QL	5
10-Mar-08	10-Mar-08	001	BOD5, NOV-APR	<QL	<QL		<QL	<QL
10-Apr-08	14-Apr-08	001	BOD5, NOV-APR	<QL	100		<QL	5
10-May-08	9-May-08	001	BOD5, NOV-APR	97	372		4.4	16.7
10-Dec-08	9-Dec-08	001	BOD5, NOV-APR	<QL	<QL		<QL	<QL
10-Jan-09	9-Jan-09	001	BOD5, NOV-APR	<QL	<QL		<QL	<QL
10-Feb-09	9-Feb-09	001	BOD5, NOV-APR	<QL	362		<QL	16
10-Mar-09	10-Mar-09	001	BOD5, NOV-APR	<QL	191		<QL	8
10-Apr-09	10-Apr-09	001	BOD5, NOV-APR	<QL	<QL		<QL	<QL
10-May-09	11-May-09	001	BOD5, NOV-APR	<QL	168		<QL	13
10-Dec-09	8-Dec-09	001	BOD5, NOV-APR	98	122		4	5
10-Jan-10	8-Jan-10	001	BOD5, NOV-APR	105	173		5	7
10-Feb-10	9-Feb-10	001	BOD5, NOV-APR	135	192		5.8	7.4
10-Mar-10	8-Mar-10	001	BOD5, NOV-APR	164	218		7	9
10-Apr-10	8-Apr-10	001	BOD5, NOV-APR	128	177		5	7
10-May-10	7-May-10	001	BOD5, NOV-APR	120	202		5	7
10-Dec-10	8-Dec-10	001	BOD5, NOV-APR	61	91		3.4	5.0
10-Jan-11	10-Jan-11	001	BOD5, NOV-APR	81	123		5	8
10-Feb-11	4-Feb-11	001	BOD5, NOV-APR	132	200		6	8
10-Jun-05	10-Jun-05	001	BOD5, MAY-OCT	165	226		7.99	10.76
10-Jul-05	8-Jul-05	001	BOD5, MAY-OCT	155	318		6.80	12.56
10-Aug-05	11-Aug-05	001	BOD5, MAY-OCT	291	485		12.96	21.89
10-Sep-05	12-Sep-05	001	BOD5, MAY-OCT	239	675		14.24	28.99
10-Oct-05	11-Oct-05	001	BOD5, MAY-OCT	216	425		11.85	18.62
10-Nov-05	7-Nov-05	001	BOD5, MAY-OCT	256	418		11.61	17.22
10-Jun-06	5-Jun-06	001	BOD5, MAY-OCT	220	478		11.30	19.50
10-Jul-06	10-Jul-06	001	BOD5, MAY-OCT	222	507		12.84	24.48
10-Aug-06	10-Aug-06	001	BOD5, MAY-OCT	230	331		12.00	14.96
10-Sep-06	8-Sep-06	001	BOD5, MAY-OCT	249	347		15.00	21.21
10-Oct-06	10-Oct-06	001	BOD5, MAY-OCT	234	349		12	17
10-Nov-06	8-Nov-06	001	BOD5, MAY-OCT	170	368		12	21
10-Jun-07	8-Jun-07	001	BOD5, MAY-OCT	127	312		6	16
10-Jul-07	10-Jul-07	001	BOD5, MAY-OCT	92	275		4	13
10-Aug-07	10-Aug-07	001	BOD5, MAY-OCT	62	276		4	14
10-Sep-07	7-Sep-07	001	BOD5, MAY-OCT	106	382		5	20
10-Oct-07	10-Oct-07	001	BOD5, MAY-OCT	<QL	142		<QL	10
10-Nov-07	9-Nov-07	001	BOD5, MAY-OCT	<QL	<QL		<QL	12
10-Jun-08	11-Jun-08	001	BOD5, MAY-OCT	<QL	<QL		<QL	<QL
10-Jul-08	10-Jul-08	001	BOD5, MAY-OCT	<QL	<QL		<QL	<QL
10-Aug-08	11-Aug-08	001	BOD5, MAY-OCT	<QL	204		<QL	9
10-Sep-08	9-Sep-08	001	BOD5, MAY-OCT	<QL	190		<QL	8
10-Oct-08	10-Oct-08	001	BOD5, MAY-OCT	<QL	108		<QL	5
10-Nov-08	10-Nov-08	001	BOD5, MAY-OCT	<QL	<QL		<QL	<QL
10-Jun-09	10-Jun-09	001	BOD5, MAY-OCT	<QL	342		<QL	15
10-Jul-09	9-Jul-09	001	BOD5, MAY-OCT	<QL	<QL		<QL	<QL
10-Aug-09	10-Aug-09	001	BOD5, MAY-OCT	82	156		<5	8
10-Sep-09	11-Sep-09	001	BOD5, MAY-OCT	79	114		3	5
10-Oct-09	9-Oct-09	001	BOD5, MAY-OCT	68	129		3	6
10-Nov-09	10-Nov-09	001	BOD5, MAY-OCT	68	126		3	6

summer (may - Oct)
winter (Nov - April)

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Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
10-Jun-10	10-Jun-10	001	BOD5, MAY-OCT	97	140		4	5
10-Jul-10	9-Jul-10	001	BOD5, MAY-OCT	52	78		4	5
10-Aug-10	9-Aug-10	001	BOD5, MAY-OCT	61	106		3.4	6.3
10-Sep-10	10-Sep-10	001	BOD5, MAY-OCT	78	139		4	5
10-Oct-10	7-Oct-10	001	BOD5, MAY-OCT	83	162		4	7
10-Nov-10	9-Nov-10	001	BOD5, MAY-OCT	91	219		5	10
10-Jan-05	6-Jan-05	001	TSS, NOV-APR	82	169		4	8
10-Feb-05	10-Feb-05	001	TSS, NOV-APR	122	198		6	10
10-Mar-05	9-Mar-05	001	TSS, NOV-APR	112	175		6	8
10-Apr-05	8-Apr-05	001	TSS, NOV-APR	107	204		5	10
10-May-05	9-May-05	001	TSS, NOV-APR	105	263		5	13
10-Dec-05	9-Dec-05	001	TSS, NOV-APR	110	166		5	7
10-Jan-06	11-Jan-06	001	TSS, NOV-APR	87	113		4	6
10-Feb-06	6-Feb-06	001	TSS, NOV-APR	106	172		4	7
10-Mar-06	10-Mar-06	001	TSS, NOV-APR	113	194		5	7
10-Apr-06	7-Apr-06	001	TSS, NOV-APR	65	106		3.51	4.85
10-May-06	10-May-06	001	TSS, NOV-APR	62	79		3	5
10-Jun-05	10-Jun-05	001	TSS, MAY-OCT	81	133		4	6
10-Jul-05	8-Jul-05	001	TSS, MAY-OCT	93	170		4	7
10-Aug-05	11-Aug-05	001	TSS, MAY-OCT	130	221		6	11
10-Sep-05	12-Sep-05	001	TSS, MAY-OCT	64	153		4	7
10-Oct-05	11-Oct-05	001	TSS, MAY-OCT	67	130		4	7
10-Nov-05	7-Nov-05	001	TSS, MAY-OCT	123	261		6	11
10-Jun-06	5-Jun-06	001	TSS, MAY-OCT	42	82		2	4
10-Jul-06	10-Jul-06	001	TSS, MAY-OCT	29	78		1.69	3.60
10-Feb-05	10-Feb-05	001	TOXICITY, FINAL, CHRONIC					1.72
10-Mar-05	9-Mar-05	001	TOXICITY, FINAL, CHRONIC					1.00
10-Apr-05	8-Apr-05	001	TOXICITY, FINAL, CHRONIC					1.3
10-May-05	9-May-05	001	TOXICITY, FINAL, CHRONIC					1.0
10-Jun-05	10-Jun-05	001	TOXICITY, FINAL, CHRONIC					2.27
10-Jul-05	8-Jul-05	001	TOXICITY, FINAL, CHRONIC					1.72
10-Aug-05	11-Aug-05	001	TOXICITY, FINAL, CHRONIC					6.06
10-Jan-06	11-Jan-06	001	TOXICITY, FINAL, CHRONIC					6.1
10-Apr-06	7-Apr-06	001	TOXICITY, FINAL, CHRONIC					2.33
10-Jul-06	10-Jul-06	001	TOXICITY, FINAL, CHRONIC					>6.06
10-Jul-06	10-Jul-06	001	TOXICITY, FINAL, CHRONIC					>6.06
10-Oct-06	8-Sep-06	001	TOXICITY, FINAL, CHRONIC					1.00
10-Jan-07	8-Dec-06	001	TOXICITY, FINAL, CHRONIC					1
10-Apr-07	9-Feb-07	001	TOXICITY, FINAL, CHRONIC					1.0
10-Jul-07	10-Jul-07	001	TOXICITY, FINAL, CHRONIC					1.00
10-Oct-07	10-Oct-07	001	TOXICITY, FINAL, CHRONIC					1.0
10-Jan-08	9-Nov-07	001	TOXICITY, FINAL, CHRONIC					1.72
10-Apr-08	11-Feb-08	001	TOXICITY, FINAL, CHRONIC					1.00
10-Jul-08	10-Jul-08	001	TOXICITY, FINAL, CHRONIC					5.88
10-Oct-08	10-Oct-08	001	TOXICITY, FINAL, CHRONIC					1.00
10-Nov-08	10-Nov-08	001	TOXICITY, FINAL, CHRONIC					2.63
10-Jan-09	9-Jan-09	001	TOXICITY, FINAL, CHRONIC					1.33
10-Apr-09	10-Apr-09	001	TOXICITY, FINAL, CHRONIC					1.0
10-Jul-09	11-May-09	001	TOXICITY, FINAL, CHRONIC					1.0
10-Oct-09	11-Sep-09	001	TOXICITY, FINAL, CHRONIC					1.0
10-Jan-10	8-Dec-09	001	TOXICITY, FINAL, CHRONIC					1.00

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Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
10-Apr-10	8-Apr-10	001	TOXICITY, FINAL, CHRONIC					1.0
10-Jul-10	7-May-10	001	TOXICITY, FINAL, CHRONIC					1.720
10-Oct-10	7-Oct-10	001	TOXICITY, FINAL, CHRONIC					1.33
10-Jan-11	8-Dec-10	001	TOXICITY, FINAL, CHRONIC					1.33
10-Apr-11		001	TOXICITY, FINAL, CHRONIC					
10-Jun-05	10-Jun-05	001	AMMONIA, AS N MAY-C	1	1		0.04	0.06
10-Jul-05	8-Jul-05	001	AMMONIA, AS N MAY-C	1	2		0.06	0.10
10-Aug-05	11-Aug-05	001	AMMONIA, AS N MAY-C	1	1		0.04	0.07
10-Sep-05	12-Sep-05	001	AMMONIA, AS N MAY-C	1	1		<QL	<QL
10-Oct-05	11-Oct-05	001	AMMONIA, AS N MAY-C	1	4		<QL	<QL
10-Nov-05	7-Nov-05	001	AMMONIA, AS N MAY-C	1	2		<QL	<QL
10-Jun-06	5-Jun-06	001	AMMONIA, AS N MAY-C	1	3		0.07	0.18
10-Jul-06	10-Jul-06	001	AMMONIA, AS N MAY-C	1	3		<QL	<QL
10-Aug-06	10-Aug-06	001	AMMONIA, AS N MAY-C	2	5		<QL	<QL
10-Sep-06	8-Sep-06	001	AMMONIA, AS N MAY-C	2	10		<QL	<QL
10-Oct-06	10-Oct-06	001	AMMONIA, AS N MAY-C	1	6		0.07	0.22
10-Nov-06	8-Nov-06	001	AMMONIA, AS N MAY-C	2	14		<QL	1.04
10-Jun-07	8-Jun-07	001	AMMONIA, AS N MAY-C	1	2		<QL	<QL
10-Jul-07	10-Jul-07	001	AMMONIA, AS N MAY-C	3	16		<QL	0.84
10-Aug-07	10-Aug-07	001	AMMONIA, AS N MAY-C	1	3		<QL	<QL
10-Sep-07	7-Sep-07	001	AMMONIA, AS N MAY-C	1	2		<QL	<QL
10-Oct-07	10-Oct-07	001	AMMONIA, AS N MAY-C	<QL	<QL		<QL	<QL
10-Nov-07	9-Nov-07	001	AMMONIA, AS N MAY-C	<QL	<QL		<QL	<QL
10-Jun-08	11-Jun-08	001	AMMONIA, AS N MAY-C	<QL	<QL		<QL	<QL
10-Jul-08	10-Jul-08	001	AMMONIA, AS N MAY-C	<QL	<QL		<QL	<QL
10-Aug-08	11-Aug-08	001	AMMONIA, AS N MAY-C	30	457		1.30	19.65
10-Sep-08	9-Sep-08	001	AMMONIA, AS N MAY-C	<QL	<QL		<QL	<QL
10-Oct-08	10-Oct-08	001	AMMONIA, AS N MAY-C	<QL	<QL		<QL	<QL
10-Nov-08	10-Nov-08	001	AMMONIA, AS N MAY-C	<QL	<QL		<QL	<QL
10-Jun-09	10-Jun-09	001	AMMONIA, AS N MAY-C	<QL	<QL		<QL	<QL
10-Jul-09	9-Jul-09	001	AMMONIA, AS N MAY-C	<QL	<QL		<QL	<QL
10-Aug-09	10-Aug-09	001	AMMONIA, AS N MAY-C	<QL	<QL		<QL	<QL
10-Sep-09	11-Sep-09	001	AMMONIA, AS N MAY-C	<QL	<QL		<QL	<QL
10-Oct-09	9-Oct-09	001	AMMONIA, AS N MAY-C	<QL	<QL		<QL	<QL
10-Nov-09	10-Nov-09	001	AMMONIA, AS N MAY-C	<QL	<QL		<QL	<QL
10-Jun-10	10-Jun-10	001	AMMONIA, AS N MAY-C	3	24		0.1	1.0
10-Jul-10	9-Jul-10	001	AMMONIA, AS N MAY-C	<QL	<QL		<QL	<QL
10-Aug-10	9-Aug-10	001	AMMONIA, AS N MAY-C	<QL	<QL		<QL	<QL
10-Sep-10	10-Sep-10	001	AMMONIA, AS N MAY-C	<QL	<QL		<QL	<QL
10-Oct-10	7-Oct-10	001	AMMONIA, AS N MAY-C	<QL	<QL		<QL	<QL
10-Nov-10	9-Nov-10	001	AMMONIA, AS N MAY-C	<QL	<QL		<QL	<QL
10-Jan-05	6-Jan-05	001	AMMONIA, AS N NOV-A	1.25	2.04		0.06	0.10
10-Feb-05	10-Feb-05	001	AMMONIA, AS N NOV-A	2.06	4.43		0.09	0.19
10-Mar-05	9-Mar-05	001	AMMONIA, AS N NOV-A	1.26	1.79		0.06	0.09
10-Apr-05	8-Apr-05	001	AMMONIA, AS N NOV-A	1.26	2.24		0.06	0.11
10-May-05	9-May-05	001	AMMONIA, AS N NOV-A	1.23	2.33		0.06	0.18
10-Dec-05	9-Dec-05	001	AMMONIA, AS N NOV-A	1.56	2.47		<QL	<QL
10-Jan-06	11-Jan-06	001	AMMONIA, AS N NOV-A	1.87	11.90		<QL	<QL
10-Feb-06	6-Feb-06	001	AMMONIA, AS N NOV-A	1.70	2.60		<QL	<QL
10-Mar-06	10-Mar-06	001	AMMONIA, AS N NOV-A	1.00	1.66		<QL	<QL
10-Apr-06	7-Apr-06	001	AMMONIA, AS N NOV-A	1	2.18		<QL	<QL

summer

winter

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Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
10-May-06	10-May-06	001	AMMONIA, AS N NOV-A	1.18	2.21		0.06	0.11
10-Dec-06	8-Dec-06	001	AMMONIA, AS N NOV-A	1.2	3.6		<QL	<QL
10-Jan-07	9-Jan-07	001	AMMONIA, AS N NOV-A	1	3		<QL	<QL
10-Feb-07	9-Feb-07	001	AMMONIA, AS N NOV-A	1	2		<QL	<QL
10-Mar-07	9-Mar-07	001	AMMONIA, AS N NOV-A	19	40		1.3	2.72
10-Apr-07	9-Apr-07	001	AMMONIA, AS N NOV-A	1.3	2.7		<QL	<QL
10-May-07	9-May-07	001	AMMONIA, AS N NOV-A	1.10	1.60		<QL	<QL
10-Dec-07	10-Dec-07	001	AMMONIA, AS N NOV-A	<QL	<QL		<QL	<QL
10-Jan-08	8-Jan-08	001	AMMONIA, AS N NOV-A	<QL	<QL		<QL	<QL
10-Feb-08	11-Feb-08	001	AMMONIA, AS N NOV-A	<QL	<QL		<QL	<QL
10-Mar-08	10-Mar-08	001	AMMONIA, AS N NOV-A	<QL	<QL		<QL	<QL
10-Apr-08	14-Apr-08	001	AMMONIA, AS N NOV-A	<QL	<QL		<QL	<QL
10-May-08	9-May-08	001	AMMONIA, AS N NOV-A	<QL	<QL		<QL	<QL
10-Dec-08	9-Dec-08	001	AMMONIA, AS N NOV-A	<QL	<QL		<QL	<QL
10-Jan-09	9-Jan-09	001	AMMONIA, AS N NOV-A	<QL	<QL		<QL	<QL
10-Feb-09	9-Feb-09	001	AMMONIA, AS N NOV-A	<QL	<QL		<QL	<QL
10-Mar-09	10-Mar-09	001	AMMONIA, AS N NOV-A	<QL	<QL		<QL	<QL
10-Apr-09	10-Apr-09	001	AMMONIA, AS N NOV-A	<QL	<QL		<QL	<QL
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10-Jan-10	8-Jan-10	001	AMMONIA, AS N NOV-A	<QL	<QL		<QL	<QL
10-Feb-10	9-Feb-10	001	AMMONIA, AS N NOV-A	<QL	<QL		<QL	<QL
10-Mar-10	8-Mar-10	001	AMMONIA, AS N NOV-A	<QL	<QL		<QL	<QL
10-Apr-10	8-Apr-10	001	AMMONIA, AS N NOV-A	<QL	<QL		<QL	<QL
10-May-10	7-May-10	001	AMMONIA, AS N NOV-A	<QL	<QL		<QL	<QL
10-Dec-10	8-Dec-10	001	AMMONIA, AS N NOV-A	<QL	<QL		<QL	<QL
10-Jan-11	10-Jan-11	001	AMMONIA, AS N NOV-A	3	15		0.13	0.7
10-Feb-11	4-Feb-11	001	AMMONIA, AS N NOV-A	3	27		0.13	1.0
10-Jan-05	6-Jan-05	001	OIL & GREASE	23	23		1.00	1.00
10-Feb-05	10-Feb-05	001	OIL & GREASE	25	25		1.10	1.10
10-Mar-05	9-Mar-05	001	OIL & GREASE	24	24		1.00	1.00
10-Apr-05	8-Apr-05	001	OIL & GREASE	24	24		1.00	1.00
10-May-05	9-May-05	001	OIL & GREASE	26	26		1.00	1.00
10-Jun-05	10-Jun-05	001	OIL & GREASE	1	21		1.00	1.00
10-Jul-05	8-Jul-05	001	OIL & GREASE	22	22		1.00	1.00
10-Aug-05	11-Aug-05	001	OIL & GREASE	22	22		1.00	1.00
10-Sep-05	12-Sep-05	001	OIL & GREASE	23	23		1.00	1.00
10-Oct-05	11-Oct-05	001	OIL & GREASE	23	23		1.00	1.00
10-Nov-05	7-Nov-05	001	OIL & GREASE	25	25		1.00	1.00
10-Dec-05	9-Dec-05	001	OIL & GREASE	22	22		1.00	1.00
10-Jan-06	11-Jan-06	001	OIL & GREASE	22	22		1.00	1.00
10-Feb-06	6-Feb-06	001	OIL & GREASE	113	113		5.00	5.00
10-Mar-06	10-Mar-06	001	OIL & GREASE	99	99		5.00	5.00
10-Apr-06	7-Apr-06	001	OIL & GREASE	76	76		5.00	5.00
10-May-06	10-May-06	001	OIL & GREASE	75	75		5.00	5.00
10-Jun-06	5-Jun-06	001	OIL & GREASE	106	106		5.00	5.00
10-Jul-06	10-Jul-06	001	OIL & GREASE	120	120		5.0	5.00
10-Aug-06	10-Aug-06	001	OIL & GREASE	99	99		5.0	5.0
10-Sep-06	8-Sep-06	001	OIL & GREASE	115	115		5.00	5.00
10-Oct-06	10-Oct-06	001	OIL & GREASE	98	98		5.00	5.00
10-Nov-06	8-Nov-06	001	OIL & GREASE	49	49		5.00	5.00

Summer (May - Oct)

winter (Nov - April)

9-4338

Due Date	Received D	Outfall No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX
10-Dec-06	8-Dec-06	001	OIL & GREASE	85	85		5.00	5.00
10-Jan-07	9-Jan-07	001	OIL & GREASE	78	78		5.00	5.00
10-Feb-07	9-Feb-07	001	OIL & GREASE	75	75		5.0	5.0
10-Mar-07	9-Mar-07	001	OIL & GREASE	73	73		5	5
10-Apr-07	9-Apr-07	001	OIL & GREASE	99	99		5	5
10-May-07	9-May-07	001	OIL & GREASE	103	103		5	5
10-Jun-07	8-Jun-07	001	OIL & GREASE	102	102		5	5
10-Jul-07	10-Jul-07	001	OIL & GREASE	107	107		5	5
10-Aug-07	10-Aug-07	001	OIL & GREASE	69	69		5	5
10-Sep-07	7-Sep-07	001	OIL & GREASE	101	101		5	5
10-Oct-07	10-Oct-07	001	OIL & GREASE	82	82		5	5
10-Nov-07	9-Nov-07	001	OIL & GREASE	100	100		5	5
10-Dec-07	10-Dec-07	001	OIL & GREASE	101	101		5	5
10-Jan-08	8-Jan-08	001	OIL & GREASE	111	111		5	5
10-Feb-08	11-Feb-08	001	OIL & GREASE	114	114		5	5
10-Mar-08	10-Mar-08	001	OIL & GREASE	119	119		5	5
10-Apr-08	14-Apr-08	001	OIL & GREASE	117	117		5	5
10-May-08	9-May-08	001	OIL & GREASE	112	112		5	5
10-Jun-08	11-Jun-08	001	OIL & GREASE	118	118		5	5
10-Jul-08	10-Jul-08	001	OIL & GREASE	117	117		5	5
10-Aug-08	11-Aug-08	001	OIL & GREASE	110	110		5	5
10-Sep-08	9-Sep-08	001	OIL & GREASE	119	119		5	5
10-Oct-08	10-Oct-08	001	OIL & GREASE	91	91		5	5
10-Nov-08	10-Nov-08	001	OIL & GREASE	97	97		5	5
10-Dec-08	9-Dec-08	001	OIL & GREASE	116	116		5	5
10-Jan-09	9-Jan-09	001	OIL & GREASE	110	110		5	5
10-Feb-09	9-Feb-09	001	OIL & GREASE	117	117		5	5
10-Mar-09	10-Mar-09	001	OIL & GREASE	126	126		5	5
10-Apr-09	10-Apr-09	001	OIL & GREASE	116	116		5	5
10-May-09	11-May-09	001	OIL & GREASE	59	59		5	5
10-Jun-09	10-Jun-09	001	OIL & GREASE	124	124		5	5
10-Jul-09	9-Jul-09	001	OIL & GREASE	49	49		5	5
10-Aug-09	10-Aug-09	001	OIL & GREASE	102	102		5	5
10-Sep-09	11-Sep-09	001	OIL & GREASE	118	118		5	5
10-Oct-09	9-Oct-09	001	OIL & GREASE	99	99		5	5
10-Nov-09	10-Nov-09	001	OIL & GREASE	109	109		5	5
10-Dec-09	8-Dec-09	001	OIL & GREASE	119	119		5	5
10-Jan-10	8-Jan-10	001	OIL & GREASE	112	112		5	5
10-Feb-10	9-Feb-10	001	OIL & GREASE	96	96		5	5
10-Mar-10	8-Mar-10	001	OIL & GREASE	111	111		5	5
10-Apr-10	8-Apr-10	001	OIL & GREASE	103	103		5	5
10-May-10	7-May-10	001	OIL & GREASE	133	133		5	5
10-Jun-10	10-Jun-10	001	OIL & GREASE	131	131		5	5
10-Jul-10	9-Jul-10	001	OIL & GREASE	67	67		5	5
10-Aug-10	9-Aug-10	001	OIL & GREASE	63	63		5	5
10-Sep-10	10-Sep-10	001	OIL & GREASE	119	119		5	5
10-Oct-10	7-Oct-10	001	OIL & GREASE	90	90		5	5
10-Nov-10	9-Nov-10	001	OIL & GREASE	105	105		5	5
10-Dec-10	8-Dec-10	001	OIL & GREASE	<QL	<QL		<QL	<QL
10-Jan-11	10-Jan-11	001	OIL & GREASE	<QL	<QL		<QL	<QL
10-Feb-11	4-Feb-11	001	OIL & GREASE	<113	<113		<5	<5
10-Jan-05	6-Jan-05	002	FLOW					

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Groundwater

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1/3

Perdue Farms Inc.
Environmental Affairs
22520 Lankford Hwy
Accomac, VA 23301

April 11, 2011

Ms. Debra L. Thompson
Environmental Engineer Senior
Department of Environmental Quality
Tidewater Regional Office
5636 Southern Boulevard
Virginia Beach, VA 23462

RE: Groundwater monitoring around Perdue Farms Inc. Anaerobic Lagoon.

Dear Ms. Thompson,

In follow up to our meeting on Tuesday March 29th Perdue Farms Inc. has developed a plan to monitor the groundwater around the Accomac Anaerobic Lagoon. Three four inch, thirty foot deep monitoring wells PVC piped with ten foot .020 screens at the bottom will be installed as listed below.

In review of the information from the 40' DEQ well located near the woods west of the anaerobic lagoon it was found that during one period of time the level of the water in the well dropped to 20.10' below the surface. Due to this Perdue Farms recommends the installation of 30' wells around the anaerobic lagoon. Historical data from this well is enclosed.

Monitoring well #1 will be located at a location of N 37° 44' 07" by W 75° 39' 43"
Monitoring well # 2 will be located at a location of N 37° 44' 10" by W 75° 39' 47"
Monitoring well #3 will be located at a location of N 37° 44' 16' by W 75° 39' 38"

Wells 1 and 2 are located in the general direction of groundwater flow from the area of the torn liner in the anaerobic lagoon and well 3 is on the opposite side of the lagoon.

A drawing showing the location of each well in relation to the anaerobic lagoon is also enclosed.

Perdue will monitor the wells on a quarterly basis and report the following parameters: Conductivity, Chlorides, Total Dissolved Solids, pH, Nitrate-Nitrogen, Ammonia Nitrogen, TKN and water level.

Two old four inch, fifteen foot deep wells are in the area of the lagoon. One is near the anaerobic lagoon outside of the fence line below the new sludge bunker and the other is several hundred feet in the field about halfway between Perdue's fence and the DEQ monitoring well site. These wells are not included in

Randy Rhoades, Wastewater Manager
Office 757-787-5289
Fax 410-341-5079
mailto:Randy.Rhoades@Perdue.com

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our regular monitoring plans, because Perdue has no information on the construction of these wells and they are not located in the direction of groundwater flow from the anaerobic lagoon.

Perdue Farms Inc. is ready to install the monitoring wells and begin a monitoring program upon DEQ's approval of this plan.

Should you have any questions or need any further information, please do not hesitate to contact me at 757-787-5289 or via E-Mail.

2/3

Sincerely,

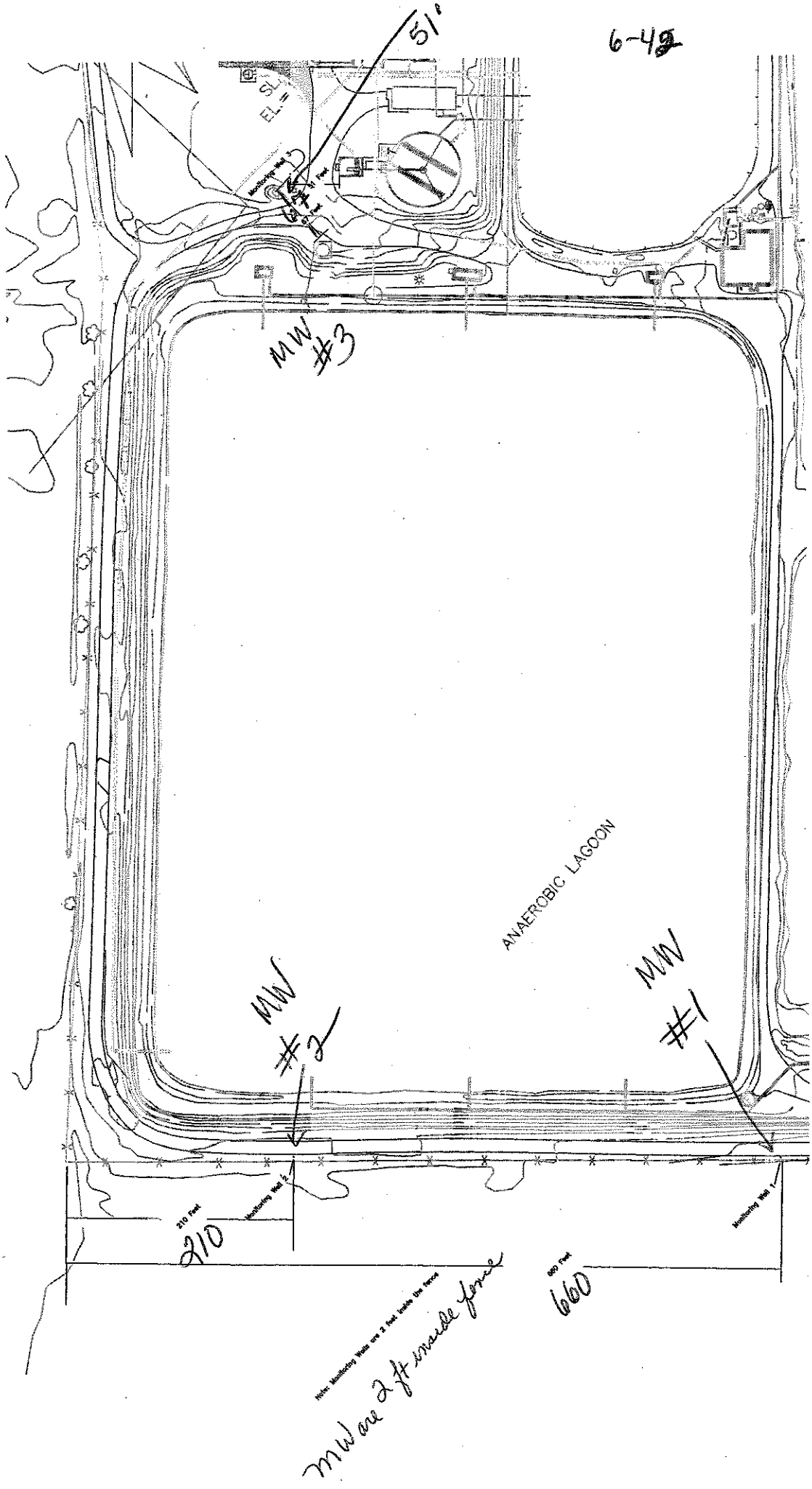
Randall B. Rhoades
Wastewater Manager
Accomac Complex

Randy Rhoades, Wastewater Manager
Office 757-787-5289
Fax 410-341-5079

mailto:Randy.Rhoades@Perdue.com

6-42

3/3


51'
EL.
Monitoring Well 3
MW #3
ANAEROBIC LAGOON
MW #2
MW #1
Monitoring Well 2
Monitoring Well 1
210 Feet
210
660 Feet
660
Note: Monitoring Wells are 2 feet inside the fence
mw are 2 ft inside fence

USGS Home
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National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater
Geographic Area: Virginia GO

News updated March, 2011

Groundwater levels for Virginia

- Additional information:
  - Annual Water Data Reports: Water Years 2002-09
  - Historical instantaneous flow data for Virginia: Instantaneous Data Archive - IDA
  - National Weather Service Advanced Hydrologic Prediction Service: River forecasts

Search Results -- 1 sites found

Search Criteria

Agency code = usgs
site_no list = • 374425075400004
Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 374425075400004 65K 30 SOW 114S

Accomack County, Virginia
Latitude 37°44'25", Longitude 75°40'00"
NAD27
Land-surface elevation 45.00 feet above NGVD29
The depth of the well is 40.00 feet below land surface.
The depth of the hole is 40.0 feet below land surface.
This well is completed in the Northern Atlantic Coastal Plain aquifer system (S100NATLCP) national aquifer.
This well is completed in the Quaternary System (110QRNR) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	Water level, feet below land surface	Status	Measuring Agency
1980-02-01		8.00		
1980-03-01		4.40		
1980-04-01		4.17		
1980-06-01		5.98		

Date	Time	Water level, feet below land surface	Status	Measuring Agency
1991-07-10		8.35		
1991-09-10		9.74		
1991-10-02		10.20		
1991-11-14		9.24		

1980-07-01		7.23		
1980-08-01		8.19		
1980-09-01		8.81		
1980-10-01		9.05		
1980-11-01		8.73		
1980-12-01		9.05		
1981-01-01		9.02		
1981-02-01		8.64		
1981-03-01		8.14		
1981-04-01		7.91		
1981-05-01		8.01		
1981-07-01		8.73		
1981-07-15		8.77		
1981-07-29		7.85		
1981-09-02		9.01		
1981-11-06		19.80		
1981-12-09		20.10		
1982-01-07		7.41		
1982-02-23		5.52		
1982-03-23		3.97		
1982-04-12		4.85		
1982-05-06		5.05		
1982-06-09		6.23		
1982-07-22		7.75		
1982-10-08		7.94		
1982-11-17		7.08		
1982-12-30		5.94		
1983-01-25		5.29		
1983-05-25		4.95		
1983-08-18		8.10		
1983-11-01		9.57		
1983-12-29		7.15		
1984-02-02		5.59		
1984-04-25		4.15		
1984-06-06		5.58		
1984-07-08		7.43		
1984-08-15		7.63		
1984-10-30		9.27		
1984-11-29		9.64		
1985-01-30		9.35		
1985-07-16		9.31		
1985-08-27		9.49		

1992-01-15		9.12		
1992-03-09		8.65		
1992-05-12		8.10		
1992-07-07		7.49		
1992-09-09		7.28		
1992-10-27		7.75		
1992-12-14		4.53		
1993-02-24		4.15		
1993-04-29		3.90		
1993-07-02		6.04		
1993-08-30		8.05		
1993-10-19		9.13		
1994-01-05		8.90		
1994-02-28		5.85		
1994-04-21		4.32		
1994-06-29		7.62		
1994-09-06		8.77		
1994-10-18		9.48		
1995-01-17		9.49		
1995-03-21		8.50		
1995-05-15		8.38		
1995-07-20		9.38		
1995-10-23		10.56		
1996-01-30		8.14		
1996-04-10		5.84		
1996-07-15		5.20		
1996-10-21		3.06		
1997-01-29		3.47		
1997-05-07		4.59		
1997-07-29		7.12		
1997-10-15		8.58		
1998-01-12		6.80		
1998-04-22		4.44		
1998-07-08		5.89		
1998-10-21		8.35		
1999-01-12		7.96		
1999-04-27		4.75		
1999-07-21		7.88		
1999-10-19		6.62		
2000-01-19		6.22		
2000-05-02		4.41		
2000-07-27		5.46		

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1985-10-01		9.17		
1985-11-13		7.05		
1986-01-14		6.31		
1986-02-19		4.47		
1986-06-17		8.20		
1986-07-16		9.07		
1986-08-05		9.40		
1986-09-23		8.60		
1986-11-11		9.54		
1987-01-06		8.03		
1987-03-17		4.65		
1987-04-28		4.50		
1987-06-16		7.10		
1987-08-11		8.32		
1987-09-15		9.48		
1987-11-10		10.30		
1988-01-06		10.10		
1988-03-01		7.73		
1988-04-26		7.60		
1988-06-14		8.04		
1988-08-02		9.00		
1988-10-05		10.01		
1988-11-15		10.05		
1989-01-10		10.35		
1989-03-07		8.55		
1989-04-19		5.40		
1989-06-20		7.70		
1989-08-16		4.00		
1989-10-03		4.45		
1989-11-14		4.90		
1990-01-03		3.84		
1990-02-27		3.73		
1990-05-08		4.70		
1990-06-19		4.60		
1990-08-07		7.29		
1990-10-11		7.70		
1990-12-04		9.45		
1991-01-23		7.20		
1991-03-26		4.80		
1991-05-22		6.98		

2000-10-05		6.49		
2001-02-21		6.98		
2001-04-10		5.05		
2001-07-26		7.62		
2001-10-09		8.36		
2002-01-16		9.62		
2002-04-24		8.45		
2002-07-23		9.89		
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2003-10-15		5.65		USGS
2004-01-21		3.43		USGS
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2004-07-20		6.18		USGS
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2005-01-25		3.52		USGS
2005-05-03		4.52		USGS
2005-07-27		6.53		USGS
2005-10-26		7.39		USGS
2006-02-15		5.74		USGS
2006-05-01	14:06 EDT	7.08		USGS
2006-07-25	11:02 EDT	7.65		USGS
2006-10-25	11:55 EDT	4.46		USGS
2007-02-28	10:57 EST	3.55		USGS
2007-06-06	11:25 EDT	5.28		USGS
2007-08-21	14:35 EDT	8.23		USGS
2007-11-29	12:25 EST	9.65		USGS
2008-01-08	11:10 EST	9.05		USGS
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2008-09-04	11:00 EDT	8.64		USGS
2008-11-20	14:55 EST	8.97		USGS

2009-03-12	14:02 EDT	7.27		USGS
2009-06-04	12:02 EDT	7.46		USGS
2009-09-22	10:44 EDT	7.67		USGS
2009-12-02	11:00 EST	5.36		USGS
2010-03-16	11:18 EDT	2.41		VA087
2010-06-23	10:28 EDT	7.17		VA087
2010-08-26	10:12 EDT	8.57		VA087
2010-12-08	10:46 EST	9.65		VA087
2011-02-14	10:35 EST	8.77		VA087

Explanation

Section	Code	Description
Status		The reported water-level measurement represents a static level
Measuring Agency		Not determined
Measuring Agency	USGS	US GEOLOGICAL SURVEY
Measuring Agency	VA087	VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY, VA

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Title: Groundwater for Virginia: Water Levels
URL: http://waterdata.usgs.gov/va/nwis/gwlevels?

Page Contact Information: Virginia Water Data Maintainer
Page Last Modified: 2011-04-04 12:04:06 EDT
2.61 2.6 nadww01

6-00047

Thompson, Debra (DEQ)

From: Siudyla, Eugene (DEQ)
Sent: Friday, April 08, 2011 3:17 PM
To: Thompson, Debra (DEQ); Thomas, Stephen (DEQ)
Subject: RE: Groundwater monitoring
Attachments: S36BW-211040810340.pdf

1/3

Debbie,

I have reviewed Perdue's groundwater monitoring plan dated 4/11/2011 and have the following comments:

- The proposed locations of the three down-gradient monitoring wells look good.

- As discussed at the 3/29/2011 meeting, because the anaerobic lagoon bottom only extends to about ten feet below the land surface, it is recommended that the three monitoring wells be installed to a depth of twenty feet instead of thirty feet. Possible seepage traveling laterally from the lagoon may not be detected in a well screened at a depth of twenty to thirty feet.

- The other well specifications in the plan of four inch PVC pipe with ten feet of .02 well screen at the bottom are reasonable. Typical monitoring well construction should be followed including a filter pack, annular sealant, and a concrete cap and apron (see the attached general monitoring well construction diagram from DEQ Guidance for VPDES and VPA Permit Ground Water Monitoring Plans). Once the monitoring wells have been completed , an as built diagram should be provided to DEQ.

- The ground water level data for the DEQ 40 feet deep research well located over 1000 feet west of the lagoon was provided. During the 31 years of record the water level dropped to below 20 feet below the surface only one time. That was during the severe drought of 1981 (20.1 feet on 12/9/81). Other than during that drought, the water levels ranged from 4 to 11 feet below the surface. Based on this data, 20 feet deep monitoring wells would be available for ground water quality monitoring except during a severe drought. This data supports installation of 20 feet deep monitoring wells.

- During the 3/29 meeting an up-gradient or background monitoring well was discussed to aid in the interpretation of the down-gradient groundwater monitoring data. It is recommended that the existing fifteen feet deep monitoring well located in the field west of the lagoon about halfway between Perdue's fence and the DEQ research well site be used as the up-gradient well as part of the regular quarterly monitoring program. It was installed for a land application project that was never completed. It is probably screened from five to fifteen feet or from ten to fifteen feet below the land surface. If this existing monitoring well is visibly damaged or Perdue is not comfortable using this well for monitoring, then I recommend that a new well be drilled next to it using the same well depth and well design as recommended for the down-gradient wells.

- As discussed previously, I recommend adding Total Phosphorus and Total Organic Carbon to Perdue's proposed ground water monitoring parameters list.

Let me know if you have any questions.

Gene

Gene Siudyla
Department of Environmental Quality
Tidewater Regional Office

Petroleum Storage Tank Remediation Program
(757) 518-2117
Eugene.Siudyla@deq.virginia.gov

6-98

From: Thompson, Debra (DEQ)
Sent: Tuesday, April 05, 2011 1:47 PM
To: Siudyla, Eugene (DEQ); Thomas, Stephen (DEQ)
Subject: FW: Groundwater monitoring

2/3

FYI...Looking at the parameters they have proposed I believe our list is a little different. I will include our revised parameter list with a response once we have all looked at the proposal.

Debra L. Thompson
Environmental Engineer Senior
VA Department of Environmental Quality
5636 Southern Boulevard
Virginia Beach, VA 23462
(757) 518-2162 phone

NEW EMAIL ADDRESS:
debra.thompson@deq.virginia.gov
Office Info: http://www.deq.virginia.gov/regions/tidewater.html

The information in this e-mail may be viewed by others and is subject to disclosure under the Freedom of Information Act (FOIA)

From: Rhoades, Randy [mailto:Randy.Rhoades@perdue.com]
Sent: Tuesday, April 05, 2011 1:27 PM
To: Thompson, Debra (DEQ)
Cc: Roberts, Bruce P
Subject: Groundwater monitoring

Hi Debra

Enclosed is our proposal for groundwater monitoring well locations and quarterly groundwater monitoring.

Just let me know if you have any questions, or suggestions.

Thanks

Randy Rhoades

Environmental Manager 1
Accomac Complex
Office 757-787-5289
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3/3

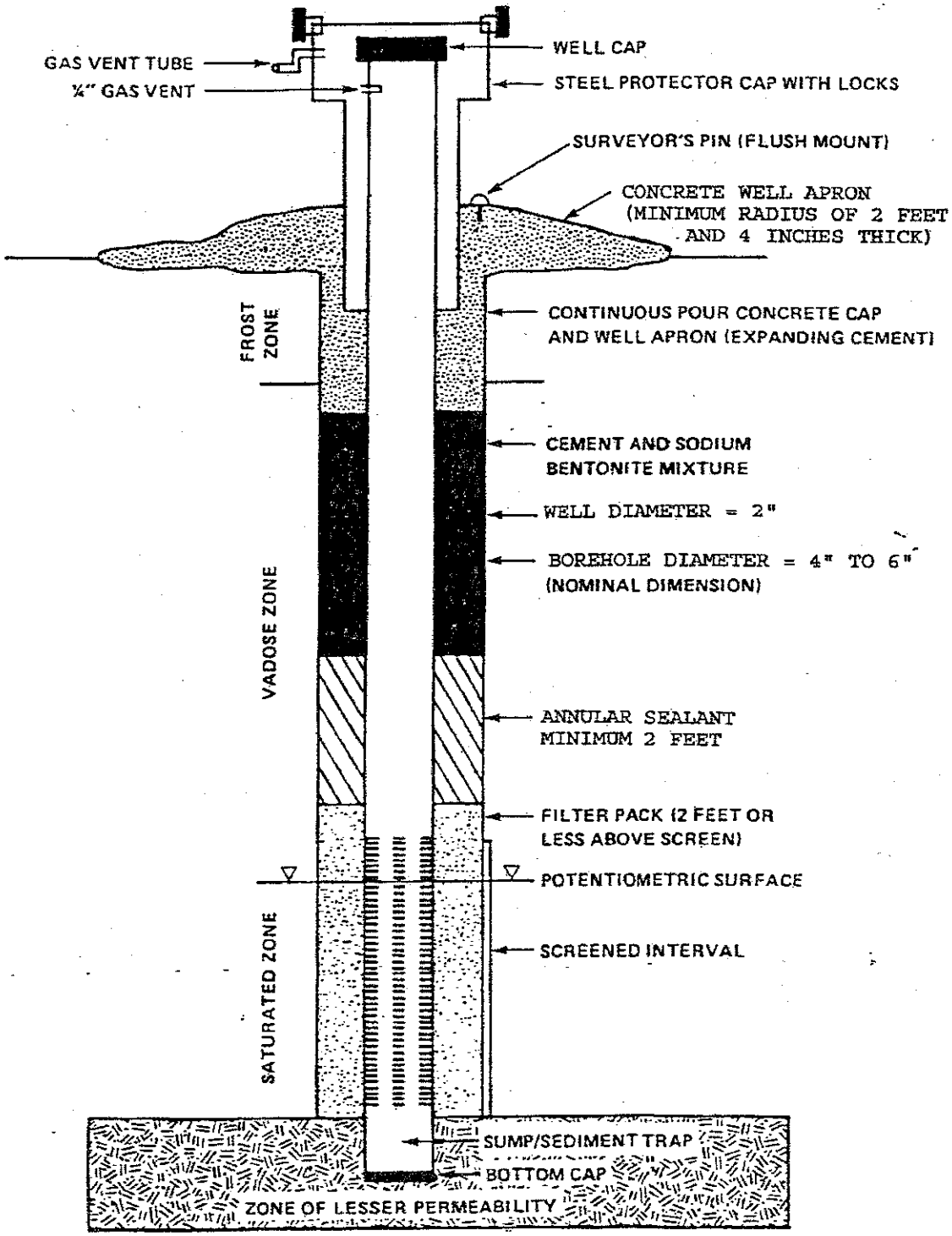

FIGURE 3-1. GENERAL MONITORING WELL – CROSS SECTION

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COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE
5636 Southern Boulevard, Virginia Beach, Virginia 23462
(757) 518-2000 Fax (757) 518-2009
www.deq.virginia.gov

Doug Domenech
Secretary of Natural Resources

David K. Paylor
Director

April 11, 2011

Mr. Randall Rhoades
Perdue Farms, Inc.
Wastewater Manager
Accomac Complex
22520 Lankford Highway
Accomac, VA 23301

RE: VPDES Permit No VA0003808 – Perdue Farms Incorporated
Ground Water Monitoring Proposal

Dear Mr. Rhoades:

Thank you for submittal of the ground water monitoring plan proposal for the Perdue Farms Accomac facility dated April 11, 2011. The TRO Regional Geologist, Gene Siudyla, has reviewed the proposal and DEQ offers the following comments:

- The proposed locations of the three down-gradient monitoring wells look good.

- As discussed at the 3/29/2011 meeting, because the anaerobic lagoon bottom only extends to about ten feet below the land surface, it is recommended that the three monitoring wells be installed to a depth of twenty feet instead of thirty feet. Possible seepage traveling laterally from the lagoon may not be detected in a well screened at a depth of twenty to thirty feet.

- The other well specifications in the plan of four inch PVC pipe with ten feet of .02 well screen at the bottom are reasonable. Typical monitoring well construction should be followed including a filter pack, annular sealant, and a concrete cap and apron (see the attached general monitoring well construction diagram from DEQ Guidance for VPDES and VPA Permit Ground Water Monitoring Plans). Once the monitoring wells have been completed, an as built diagram should be provided to DEQ.

- The ground water level data for the DEQ 40 feet deep research well located over 1000 feet west of the lagoon was provided. During the 31 years of record the water level dropped to below 20 feet below the surface only one time. That was during the severe drought of 1981 (20.1 feet on 12/9/81). Other than during that drought, the water levels ranged from 4 to 11 feet below the surface. Based on this data, 20 feet deep monitoring wells would be available for ground water quality monitoring except during a severe drought. This data supports installation of 20 feet deep monitoring wells.

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- During the 3/29 meeting an up-gradient or background monitoring well was discussed to aid in the interpretation of the down-gradient groundwater monitoring data. It is recommended that the existing fifteen feet deep monitoring well located in the field west of the lagoon about halfway between Perdue's fence and the DEQ research well site be used as the up-gradient well as part of the regular quarterly monitoring program. It was installed for a land application project that was never completed. It is probably screened from five to fifteen feet or from ten to fifteen feet below the land surface. If this existing monitoring well is visibly damaged or Perdue is not comfortable using this well for monitoring, then I recommend that a new well be drilled next to it using the same well depth and well design as recommended for the down-gradient wells.

- As discussed previously, I recommend adding Total Phosphorus and Total Organic Carbon to Perdue's proposed ground water monitoring parameters list. The complete parameter listing is as follows:

  Monitoring 1/3 Months: Static Water Level, Total Dissolved Solids, Ammonia Nitrogen, Specific Conductivity, pH, Nitrate Nitrogen (NO3), Total Kjeldahl Nitrogen (TKN), Total Phosphorus, Total Organic Carbon, Chlorides

  Monitoring 1/6 Months: Total Cyanide, Total Arsenic

The proposed ground water monitoring plan shall be approvable upon incorporation of the above recommendations. After review of these recommendations, it is requested that you contact me to discuss implementation and final approval of the plan. The approved plan monitoring and reporting requirements shall be included in the reissuance of VPDES No.VA0003808.

If you have any questions, or need clarification on any items discussed in this letter, please contact me at your earliest convenience.

Sincerely,

Debra L. Thompson

Debra L. Thompson
Environmental Engineer Senior

Cc: DEQ-TRO ECM
Mr. Bruce Roberts via email

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COMMONWEALTH of VIRGINIA

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Doug Domenech
Secretary of Natural Resources

David K. Paylor
Director

April 13, 2011

Mr. Randall Rhoades
Perdue Farms, Inc.
Wastewater Manager
Accomac Complex
22520 Lankford Highway
Accomac, VA 23301

RE: VPDES Permit No VA0003808 – Perdue Farms Incorporated
Ground Water Monitoring Proposal

Dear Mr. Rhoades:

Upon review of your comments dated April 13, 2011 received by email, the Ground Water Monitoring Program Plan is approved. The final approval contains one change from the conditional approval:

- removal of the 1/6 months monitoring for Total Cyanide and Total Arsenic. All other conditions and requirements stand and shall be incorporated into the VPDES Permit VA0003808 reissuance currently on track for June 2011.

Again, thank you for your timely submittal of the ground water monitoring plan proposal for the Perdue Farms Accomac facility and subsequent review and comments.

If you have any questions, or need clarification on any items discussed in this letter, please contact me at your earliest convenience.

Sincerely,

Debra L. Thompson

Debra L. Thompson
Environmental Engineer Senior

Cc: DEQ-TRO ECM
Mr. Bruce Roberts via email

ANTIDEGRADATION CALCULATIONS/BASELINES

All values in ug/l unless otherwise noted.

PARAMETER	FRESHWATER CRITERIA (FW)		PUBLIC WATER SUPPLY CRITERIA (PWS)	OTHER SURFACE WATERS CRITERIA	INSTREAM BACKGROUND DATA (Expected Value*)	ANTIDEGRADATION BASELINE			WATER QUALITY WASTE LOAD ALLOCATION (WQ-WLA)			ANTIDEGRADATION WASTE LOAD ALLOCATION (AD-WLA)		
	ACUTE	CHRONIC				ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH
METALS														
Antimony			14	4300										
Arsenic			50											
Arsenic III	360	190												
Barium			2000											
Cadmium	3.9(1)	1.1(1)												
Chromium III	1700(1)	210(1)												
Chromium VI	16	11												
Copper	18(1)	12(1)	1300											
Iron			300											
Lead	120(1)	14(1)	15											
Manganese			50											
Mercury	2.4	.012	.052	.053										
Nickel	180(1)	20(1)	610	4600										
Selenium	20	5	170	11000										
Silver	4.1(1)													
Zinc	120(1)	110(1)	5000											
PESTICIDES/PCB'S														
Aldrin	3	.3	.0013	.0014										
Chlordane	2.4	.0043	.0058	.0059										
Chlorpyrifos (Dursban)	.083	.041												

ANTIDEGRADATION CALCULATIONS/BASELINES

All values in ug/l unless otherwise noted.

PARAMETER	FRESHWATER CRITERIA (FW)		PUBLIC WATER SUPPLY CRITERIA (PWS)	OTHER SURFACE WATERS CRITERIA	INSTREAM BACKGROUND DATA (Expected Value*)	ANTIDEGRADATION BASELINE			WATER QUALITY WASTE LOAD ALLOCATION (WQ-WLA)			ANTIDEGRADATION WASTE LOAD ALLOCATION (AD-WLA)		
	ACUTE	CHRONIC				ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH
DDD			.0083	.0084										
DDE			.0059	.0059										
DDT	1.1	.001	.0059	.0059										
Demeton		.1												
2,4-dichloro-phenoxy acetic acid (2,4-D)			71											
Dieldrin	2.5	.0019	.0014	.0014										
Endosulfan	.22	.056	110	240										
Endrin	.18	.0023	.76	.81										
Guthion		.01												
Heptachlor	.52	.0038	.0021	.0021										
Hexachloro-cyclohexane (Lindane)	2	.08	7	25										
Kepone		0												
Malathion		.1												
Methoxychlor		.03	40											
Mirex		0												
Parathion	.065	.013												
PCB-1242		.014	.00044	.00045										
PCB-1254		.014	.00044	.00045										
PCB-1221		.014	.00044	.00045										
PCB-1232		.014	.00044	.00045										
PCB-1248		.014	.00044	.00045										

ANTIDEGRADATION CALCULATIONS/BASELINES

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PARAMETER	FRESHWATER CRITERIA (FW)		PUBLIC WATER SUPPLY CRITERIA (PWS)	OTHER SURFACE WATERS CRITERIA	INSTREAM BACKGROUND DATA (Expected Value*)	ANTIDEGRADATION BASELINE			WATER QUALITY WASTE LOAD ALLOCATION (WQ-WLA)			ANTIDEGRADATION WASTE LOAD ALLOCATION (AD-WLA)		
	ACUTE	CHRONIC				ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH
PCB-1260		.014	.00044	.00045										
PCB-1016		.014	.00044	.00045										
Toxaphene	.73	.0002	.0073	.0075										
2-(2,4,5-Trichlor-phenoxy) propionic acid (Silvex)			50											
BASE NEUTRAL EXTRACTABLES														
Acenaphthene			1200	2700										
Anthracene			9600	110000										
Benzo(a) anthracene			.044	.49										
Benzo(b) fluoranthene			.044	.49										
Benzo(k) fluoranthene			.044	.49										
Benzo(a) pyrene			.044	.49										
Butyl benzyl phthalate			3000	5200										
Chrysene			.044	.49										
Dibenz(a,h) anthracene			.044	.49										
Dibutyl phthalate			2700	12000										
1,2-Dichloro-benzene			2700	17000										

ANTIDEGRADATION CALCULATIONS/BASELINES

All values in ug/l unless otherwise noted.

PARAMETER	FRESHWATER CRITERIA (FW)		PUBLIC WATER SUPPLY CRITERIA (PWS)	OTHER SURFACE WATERS CRITERIA	INSTREAM BACKGROUND DATA (Expected Value*)	ANTIDEGRADATION BASELINE			WATER QUALITY WASTE LOAD ALLOCATION (WQ-WLA)			ANTIDEGRADATION WASTE LOAD ALLOCATION (AD-WLA)		
	ACUTE	CHRONIC				ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH
1,3-Dichloro-benzene			400	2600										
1,4-Dichloro-benzene			400	2600										
Diethyl phthalate			23000	120000										
Di-2-Ethylhexyl phthalate			18	59										
2,4-Dinitro-toluene			1.1	91										
Fluoranthene			300	370										
Fluorene			1300	14000										
Indeno (1,2,3-cd) pyrene			.044	.49										
Isophorone			6900	490000										
Nitrobenzene			17	1900										
Pyrene			960	11000										
1,2,4 Trichloro-benzene			260	950										
VOLATILES														
Benzene			12	710										
Bromoform			44	3600										
Carbon Tetrachloride			2.5	45										

ANTIDEGRADATION CALCULATIONS/BASELINES

All values in ug/l unless otherwise noted.

PARAMETER	FRESHWATER CRITERIA (FW)		PUBLIC WATER SUPPLY CRITERIA (PWS)	OTHER SURFACE WATERS CRITERIA	INSTREAM BACKGROUND DATA (Expected Value*)	ANTIDEGRADATION BASELINE			WATER QUALITY WASTE LOAD ALLOCATION (WQ-WLA)			ANTIDEGRADATION WASTE LOAD ALLOCATION (AD-WLA)		
	ACUTE	CHRONIC				ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH
Chloro-dibromo-methane			690	57000										
Chloroform			57	4700										
Dichloro-methane			47	16000										
Dichloro-bromomethane			5.6	460										
1,2-Dichloro-ethane			3.8	990										
1,1-Dichloro-ethylene			310	17000										
Ethylbenzene			3100	29000										
Monochloro-benzene			680	21000										
Tetrachloro-ethylene			320	3500										
Toluene			6800	200000										
Trichloro-ethylene			27	810										
Vinyl Chloride			20	5300										
ACIDS EXTRACTABLES														
2-Chloro-phenol			120	400										
2,4 Dichloro-phenol			93	790										
2,4 Dimethyl-phenol			540	2300										

ANTIDEGRADATION CALCULATIONS/BASELINES

All values in ug/l unless otherwise noted.

PARAMETER	FRESHWATER CRITERIA (FW)		PUBLIC WATER SUPPLY CRITERIA (PWS)	OTHER SURFACE WATERS CRITERIA	INSTREAM BACKGROUND DATA (Expected Value*)	ANTIDEGRADATION BASELINE			WATER QUALITY WASTE LOAD ALLOCATION (WQ-WLA)			ANTIDEGRADATION WASTE LOAD ALLOCATION (AD-WLA)		
	ACUTE	CHRONIC				ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH
Pentachloro-phenol	**	**	2.8	82										
Phenol			21000	4600000										
2,4,6-Trichloro-phenol			21	65										
MISCELLANEOUS														
Ammonia (as NH3-N)	***	***												
Chlorides	860000	230000	250000											
Chlorine, Total Residual	19	11												
Cyanide	22	5.2	700	215000										
Dioxin				1.2(2)										
Fecal Coliform (N/CML)														
Foaming Agents (as MBAS)			500											
Hydrogen Sulfide		2												
Nitrate			10000											
Sulfate			250000											
Total Dissolved Solids			500000											
Tributyltin	.46	.026												

* -- The expected value is calculated by the WLA computer model.

** -- Pentachlorophenol Acute Criterion = exp[1.005(pH)-4.83)]

Chronic Criterion = exp[1.005(pH)-5.29)]

*** -- See ammonia tables in the Water Quality Standards.

(1) --Values noted were based on a hardness of 100 and a water effect ratio (WER) of 1. If hardness data are available, use the following:

Acute Criterion = WER $\exp\{m_a[\ln(\text{hardness})]+b_a\}$

Chronic Criterion = WER $\exp\{m_c[\ln(\text{hardness})]+b_c\}$

	m_a	b_a	m_c	b_c
Cadmium	1.128	-3.828	.7852	-3.49
Chromium III	.8190	3.688	.819	1.561
Copper	.9422	-1.464	.8545	-1.465
Lead	1.273	-1.084	1.273	-3.259
Nickel	.846	1.312	.846	-.884
Silver	1.72	-6.25	-----	-----
Zinc	.8473	.8604	.8473	.7614

To maintain consistency when using these equations to calculate criteria, intermediate calculations should be rounded to four significant digits and the final criterion's value should be rounded to two significant digits.

(2) -- For dioxin, see 9 VAC 25-260-150 of the Water Quality Standards.

EXAMPLE: FRESH WATER - EFFLUENT DOMINATED (IWC > 50%)

Facility Flow 2.0 MGD Stream Flows 1Q10 = 0.5 MGD (for acute) 7Q10 = 0.8 MGD (for chronic)
30Q5 = 1.0 MGD (for human health) Harmonic Mean = 2.0 MGD (for carcinogens)

Zinc

Fresh Water Acute Criterion
WER $\exp\{m_a[\ln(\text{hardness})] + b_a\}$
$m_a = 0.8473$
Stream Hardness = 85
$b_a = 0.8604$
Criterion = 101.97 ug/l

Fresh Water Chronic Criterion
WER $\exp\{m_c[\ln(\text{hardness})] + b_c\}$
$m_c = 0.8473$
Stream Hardness = 85
$b_c = 0.7614$
Criterion = 92.36 ug/l

Human Health Criterion = NA

Instream Background (expected value) = 15 ug/l

Unused capacity acute = 101.97 - 15 = 86.97 ug/l chronic = 92.36 - 15 = 77.36 ug/l

AD BASELINE

Acute & Chronic = 25% (WQ Standard - Instream Background) + Instream Background

Acute = 0.25(101.97 - 15) + 15 or 0.25(86.97) + 15 = 36.7 ug/l

Chronic = 0.25(92.36 - 15) + 15 or 0.25(77.36) + 15 = 34.3 ug/l

Human Health = 10% (WQ Standard - Instream Background) + Instream Background

Human Health = NA

WASTE LOAD ALLOCATIONS

WQ-WLAa = 101.97 (.25 + 2.0) - (.25 X 15) / 2.0 = 112.8 ug/l (guidance notes to use complete mix with 1/2 1Q10)

WQ-WLAc = [92.36 (.4 + 2.0) - (.4 X 15)] / 2.0 = 107.8 ug/l (guidance notes to use complete mix with 1/2 7Q10)

WQ-WLAh = NA

AD-WLAa = [36.7 (.5 + 2.0) - (.5 X 15)] / 2.0 = 42.1 ug/l (use complete mix)

AD-WLAc = [34.3 (.8 + 2.0) - (.8 X 15)] / 2.0 = 42.0 ug/l (use complete mix)

AD-WLAh = NA

NOTE: The most stringent WLAs (AD-WLAa, 42.1; AD-WLAc, 42.0) are used in the computer model for determination of limits.

ATTACHMENT 7

SPECIAL CONDITIONS RATIONALE

VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS RATIONALE

Name of Condition:

B. Schedule of Compliance – TMDL Phosphorus Limit

Rationale: In accordance with the VPDES Permit Regulation, 9 VAC 25-31-250, and 40 CFR 122.47, the permit may, when appropriate, specify a schedule of compliance leading to compliance with the Clean Water Act, laws and regulations.

C. Schedule of Compliance – Construction of New Anaerobic Lagoon

Rationale: In accordance with the VPDES Permit Regulation, 9 VAC 25-31-250, and 40 CFR 122.47, the permit may, when appropriate, specify a schedule of compliance leading to compliance with the Clean Water Act, laws and regulations. New anaerobic lagoon is being constructed for the protection of water quality as the existing anaerobic lagoon developed a breach in the synthetic liner.

D. WET Schedule and Limitation

Rationale: Required by the State Water Control Law, Section 62.1-44.15 (3a) and the State's Water Quality Standards (9 VAC 25-260-20). In addition, the VPDES Permit Regulation, 9 VAC 25-31-220 D. and 40 CFR 122.44 (d) require limits necessary to meet water quality standards. In accordance with the VPDES Permit Regulation, 9 VAC 25-31-250, and 40 CFR 122.47, the permit may, when appropriate, specify a schedule of compliance leading to compliance with the Clean Water Act, laws and regulations. See Attachment 9 of this fact sheet for additional justification.

E. OTHER REQUIREMENTS OR SPECIAL CONDITIONS

1.a. Water Quality Standards Reopener

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-220 D requires effluent limitations to be established which will contribute to the attainment or maintenance of water quality criteria.

1.b. Nutrient Enriched Waters Reopener

Rationale: The Policy for Nutrient Enriched Waters, 9 VAC 25-40 -10 allows reopening of permits for discharges into waters designated as nutrient enriched if total phosphorus and total nitrogen in a discharge potentially exceed specified concentrations. The policy also anticipates that future total phosphorus and total nitrogen limits may be needed.

1.c. Nutrient Removal Facilities Reopener

Rationale: Optimize the operation and effectiveness of the nutrient removal treatment units with continued support of the goals of the Eastern Shore Coastal Basins Tributary Nutrient Reduction Strategy.

1.d. Total Maximum Daily Load (TMDL) Reopener

Rationale: For specified waters, Section 303(d) of the Clean Water Act requires the development of total maximum daily loads necessary to achieve the applicable water quality standards. The TMDL must take into account seasonal variations and a margin of safety. In addition, Section 62.1-44.19:7 of the State Water Control Law requires the development and implementation of plans to address impaired waters, including TMDLs. This condition allows for the permit to be either modified or, alternatively, revoked and reissued to incorporate the requirements of a TMDL once it is

developed. In addition, the reopener recognizes that, in according to Section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan or other wasteload allocation prepared under Section 303 of the Act.

2. Licensed Operator Requirement

Rationale: The Permit Regulation, 9 VAC 25-31-200 D and Code of Virginia 54.1-2300 et. seq., Rules and Regulations for Waterworks and Wastewater Works Operators (18 VAC 160-20-10 et seq.) requires licensure of operators.

3. Operations & Maintenance (O & M) Manual

Rationale: The State Water Control Law, Section 62.1-44.21 allows requests for any information necessary to determine the effect of the discharge on State waters. Section 401 of the Clean Water Act requires the permittee to provide opportunity for the state to review the proposed operations of the facility. In addition, 40 CFR 122.41 (e) requires the permittee, at all times, to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) in order to achieve compliance with the permit (includes laboratory controls and QA/QC).

4. Notification Levels

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-200 and 40 CFR 122.42 (a) require notification of the discharge of certain parameters at or above specific concentrations for existing manufacturing, commercial mining and silvicultural discharges.

5. Quantification Levels Under Part I.A.

Rationale: States are authorized to establish monitoring methods and procedures to compile and analyze data on water quality, as per 40 CFR part 130, Water Quality Planning and Management, subpart 130.4. Section b. of the special condition defines QL and is included per BPJ to clarify the difference between QL and MDL.

6. Compliance Reporting Under Part I.A.

Rationale: Defines reporting requirements for toxic parameters and some conventional parameters with quantification levels to ensure consistent, accurate reporting on submitted reports.

7. Materials Handling and Storage

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-50 A., prohibits the discharge of any wastes into State waters unless authorized by permit. The State Water Control Law, Sec. 62.1-44.18:2, authorizes the Board to prohibit any waste discharge which would threaten public health or safety, interfere with or be incompatible with treatment works or water use. Section 301 of the Clean Water Act prohibits the discharge of any pollutant unless it complies with specific sections of the Act.

8. Solids Handling and Disposal Plan

Rationale: The Biosolids Use Regulation, 12 VAC 5-585-330 and 340, specifies the general purpose and control requirements for an O&M manual in order to facilitate proper O&M of the facilities to meet the requirements of the regulation.

9. Minimum Freeboard

Rationale: Minimize the discharge of untreated wastewater to the groundwater or surface waters.

10. Ground Water Monitoring Plan

Rationale: Ground water monitoring will indicate whether the system integrity is being maintained and will determine if activities at the site are resulting in violations of the SWCB's Groundwater Standards.

11. New Anaerobic Lagoon Storage Facilities

Rationale: The operation must meet certain standards and specifications for the design, construction, operation and maintenance of the waste storage facility. This condition is used in 9 VAC 25-32-550, the Virginia Pollution Abatement (VPA) Permit Regulation (storage facilities).

12. Existing Anaerobic Lagoon Closure Plan Requirement

Rationale: The plan must propose and implement closure procedures to ensure proper closure of surface impoundments and/or storage lagoons for protection of surface and groundwater quality. In accordance with Guidance memo No. 05-2005 dated April 14, 2005 (Ellen Gilinski) "Procedures-Closure or Abandonment of Lagoon/STW".

F. STORM WATER MANAGEMENT CONDITIONS

1. General Storm Water Conditions

a. Sample Type

Rationale: This stipulates the proper sampling methodology for qualifying rain events from regulated storm water outfalls. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

b. Recording of Results

Rationale: This sets forth the information which must be recorded and reported for each storm event sampling (ie. date and duration event, rainfall measurement, and duration between qualifying events). It also requires the maintenance of daily rainfall logs which are to be reported. This condition is carried over from the previous storm water pollution prevention plan requirements contained in the EPA storm water baseline industrial general permit.

c. Sampling Waiver

Rationale: This condition allows the permittee to collect substitute samples of qualifying storm events in the event of adverse climatic conditions. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

d. Representative Discharge

Rationale: This condition allows the permittee to submit the results of sampling from one outfall as representative of other similar outfalls, provided the permittee can demonstrate that the outfalls are substantially identical. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

e. Quarterly Visual Examination of Storm Water Quality

Rationale: This condition requires that visual examinations of storm water outfalls take place at a specified frequency and sets forth what information needs to be checked and documented. These examinations assist with the evaluation of the pollution prevention plan by providing a simple, low cost means of assessing the quality of storm water discharge with immediate feedback. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

f. Releases of Hazardous Substances or Oil in Excess of Reportable Quantities

Rationale: This condition requires that the discharge of hazardous substances or oil from a facility be eliminated or minimized in accordance with the facility's storm water pollution prevention plan. If there is a discharge of a material in excess of a reportable quantity, it establishes the reporting requirements in accordance with state laws and federal regulations. In addition, the pollution prevention plan for the facility must be reviewed and revised as necessary to prevent a reoccurrence of the spill. Use of this

condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

g. Allowable Non-Storm Water Discharges

Rationale: The listed allowable non-storm water discharges are the same as those allowed by the EPA in their multi-sector general permit, and are the same non-storm water discharges allowed under the Virginia General VPDES Permit for Discharges of Storm Water Associated with Industrial Activity, 9 VAC 25-151-10 et seq. Allowing the same non-storm water discharges in VPDES individual permits provides consistency with other storm water permits for industrial facilities. The non-storm water discharges must meet the conditions in the permit.

2. Storm Water Pollution Prevention Plan

Rationale: The Clean Water Act 402(p) (2) (B) requires permits for storm water discharges associated with industrial activity. VPDES permits for storm water discharges must establish BAT/BCT requirements in accordance with 402(p)(3) of the Act. The Storm Water Pollution Prevention Plan is the vehicle proposed by EPA in the final NPDES General Permits for Storm Water Discharges Associated with Industrial Activity (Federal Register Sept 9, 1992) to meet the requirements of the Act. Additionally, the VPDES Permit Regulation, 9 VAC 25-31-220 K., and 40 CFR 122.44 (k) allow BMPs for the control of toxic pollutants listed in Section 307 (a)(1), and hazardous substances listed in Section 311 of the Clean Water Act where numeric limits are infeasible or BMPs are needed to accomplish the purpose/intent of the law.

ATTACHMENT 8

TOXICS MONITORING/TOXICS REDUCTION/ WET LIMIT RATIONALE

8-1

MEMORANDUM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE

5636 Southern Boulevard Virginia Beach, VA 23462

SUBJECT: Whole Effluent Toxicity (WET) Limit and TMPs for Perdue Farms, Inc. Accomac

TO: Debbie Thompson

FROM: Deanna Austin

DATE: 4/1/11

COPIES: TRO File

Perdue Farms Inc, located in Accomac, VA, processes and renders poultry. The facility has two outfalls under the current permit (expires 6/11) with toxicity monitoring. Outfall 001 discharges treated process wastewater to Parker Creek. This outfall currently has a WET limit of 1.724 TUc. Outfall 002 is an alternate outfall of 001 and has not been in use. Perdue has recently closed outfall 002 by concreting the pipe closed, therefore, outfall 002 will not be included in the reissued permit.

The permit writer has added outfall 007 to be similar to outfall 002 and has the possibility to discharge some process water and contaminated stormwater. Therefore, outfall 007 will be added for toxicity monitoring. Because outfall 007 is expected not to be used, toxicity monitoring frequency will be 1/6 months. This is only to allow less tracking on the part of DEQ. If for some reason the facility decides to use this outfall on a regular basis, the frequency of monitoring may be increased at the next permit reissuance depending upon toxicity results.

****Note: **As of 6/1/11 the facility has decided to close outfall 007 by the addition of concrete, therefore, outfall 007 will be removed from the permit. No toxicity monitoring will be required at outfall 007.**

Data reviewed for outfall 001 is attached to this memo. The facility was under a consent special order to resolve the toxicity issues at outfall 001 for part of the current permit term. Due to past history with this outfall for toxicity issues, the monitoring of C.d. at outfall 001 will continue in the renewed permit quarterly.

The following WET/TMP language is recommended for the reissuance of the Perdue Farms Accomac plant permit (VA0003808).

8-2

DESCRIPT	SPECIES	SAMPLEDT	SURVIVAL	NOEC	TU	TESTCOM	LAB
1st Quarter Chronic WET	C.d.	9/19/06	100	100	1	Limit 1.724 NOEC >58% 100% for both growth and survival	CBI
2nd Quarter Chronic WET	C.d.	10/3/06	100	100	1	Limit 1.724 NOEC >58% 90% survival in 100 and 75% effluent	CBI
Extra Chronic Consent Order	C.d.	11/14/06		100	1	100% NOEC for both survival and repro	CBI
Extra Chronic Consent Order	C.d.	12/12/06	100	100	1	100% NOEC for both survival and repro	CBI
3rd Quarter Chronic WET	C.d.	1/23/07	100	100	1	100% NOEC for both survival and repro	CBI
4th Quarter Chronic WET	C.d.	6/18/07	100	100		Limit 1.724 NOEC >58% 80% survival in 100% effluent	CBI
5th Quarter Chronic WET	C.d.	8/27/07	100	100		1st set of 6 required for the consent order	CBI
2nd Chronic Consent Order	C.d.	9/17/07	100	100	1	100% NOEC for both survival and repro	CBI
6th Quarter Chronic WET	C.d.	10/9/07	100	58	1.724	Limit 1.724 NOEC >58%	CBI
4th Chronic Consent Order	C.d.	11/13/07	100	100	1		CBI
7th Quarter Chronic WET	C.d.	1/22/08	100	100	1	Limit 1.724 NOEC >58% 80% survival in 100% effluent	CBI
8th Quarter Chronic WET	C.d.	5/5/08	100	43	2.33	Reported "ND" on the DMR due to flat resposnse curve	CBI
Extra Chronic with Side by Sides	C.d.	6/16/08	100	17	5.88	Side by side with UV. Side by sides also done using filtering and autoclaving.	CBI
9th Quarter Chronic WET	C.d.	7/28/08	100	100	1	Side by sides done with UV, filtration and autoclaving. All had less repro than the baseline sample. Email sent to facility.	CBI
Extra Consent Order	C.d.	8/25/08	100	100		Side by sides had Survival of 100% Auto, UV and Filter had Repro of 75%.	CBI
Extra Chronic Consent Order	C.d.	9/15/08	100	100	1	100% NOEC for both for all 3 side-by sides Autoclave, UV and filtration	CBI
10th Quarter Chronic WET	C.d.	10/20/08	100	38	2.63	Side by sides with UV filtration and autoclave Repro %, 43%, <17%, and 43%	CBI
Extra Chronic Consent Order	C.d.	11/11/08	100	75	1.33	Side by sides had Survival of 100% Auto, UV and Filter had Repro of 100%	CBI
Extra Chronic with Side by Sides	C.d.	12/8/08	100	75	1.33	Side by side with UV 100%, 100%. With Autoclave 75%, 75%. Filtration not done-contamination	CBI
11th Quarter Chronic WET	C.d.	1/27/09	100	58	1.72	Limit 1.724 NOEC >58%	CBI
Extra Consent Order	C.d.	2/23/09	100	75	1.33		
Extra Chronic Consent Order	C.d.	3/23/09	100	100			CBI
12th Quarter Chronic WET	C.d.	4/14/09	100	100	1	Limit 1.724 NOEC >58%	CBI
13th Quarter Chronic WET	C.d.	8/25/09	100	100	1	Limit 1.724 NOEC >58%	CBI
14th Quarter Chronic WET	C.d.	11/17/09	100	100	1	Limit 1.724 NOEC >58%	CBI
15th Quarter Chronic WET	C.d.	3/9/10	100	100	1	Limit 1.724 NOEC >58%	CBI
16th Quarter Chronic WET	C.d.	4/27/10	100	58	1.72	Limit 1.724 NOEC >58%	CBI
17th Quarter Chronic WET	C.d.	9/7/10	100	75	1.33	Limit 1.724 NOEC >58%	CBI
18th Quarter Chronic WET	C.d.	11/9/10	100	75	1.33	Limit 1.724 NOEC >58%	CBI

ATTACHMENT 9

MATERIAL STORED

Perdue Farms, Inc - Materials Stored onsite 9-1

VA0003808

Location Used	Chemical	Average Stored	
Plant	Carbon Dioxide	60000	Lbs
	Chemtreat BL-4356	40	Gal
	Chemtreat CL-1446	120	Gal
	Chemtreat F-55	50	Gal
	Chemtreat BL-1544	40	Gal
	Chentreat B-120	300	Lbs
	Chentreat B-121	300	Lbs
	Chemtreat B-141	300	Lbs
	Purate	1000	Gal
	Chlorine	110	Lbs
	Oil-Rando 1659	7356	Lbs
	Videojet-Inksource 168420	36	Gal
	Videojet-Inksource 168425	36	Gal
	Liquid Caustic soda 50%	660	Gal
	610 Synthetic Lubrication fluid	458.9	Lbs
	Chempak Cutting Oil	200	Lbs
	Cleaner Power Plus	130.2	Lbs
	Mineral Oil	780.2	Lbs
	Oil-drydene Paradene AW Hydraulic	3584.4	Lbs
	Rave Hi-Lube	2277.6	Lbs
	Sanova SAS 10%	4000	Gal
	Sodium Chlorite Sol 25%	4000	Gal
	Zerice 68	1028	Lbs
	Marination	1000	Lbs
	Jack Battery - Lead	145,800	Lbs
	jack Battery - Sulfuric Acid	1410	Lbs
	Molybdate Reagent	50	Oz
	Prochlor	200	Gal
	Prosolv cleaining liquid	325	Gal
Refrigeration	Z Dynachlor	250	Gal
	No. 6 Fuel Oil	20000	Gal
	Anhydrous Ammonia	59642	Lbs
	Carbon Dioxide	25000	Lbs
	Ethylene Glycol	511.7	Lbs
	Phosphoric Acid	727	Lbs
	Zerice 68	807.7	Lbs
Garage	Kerosene K-1	275	Gal
	Lead Free Gas	550	Gal
	No.2 Fuel Oli	15000	Gal
	Refrigeration Oil	25	Gal
	Windshield Washer	25	Gal
	Afco 5501 Hand Soap	50.6	Lbs

Location Used	Chemical	Average Stored	
	Drydene HD Lithium EP Grease	600	Lbs
	Drydene Syn Gear GL-5 Lub	121.3	Lbs
	Manammonium Phosphate - Fir	300	Lbs
	Oil - Blue Hydraulic 10	1998.3	Lbs
	Oil Drydene Diesel All	600	Lbs
	Oil Drydene Syn-Gear CD-50	422.2	Lbs
	Prestone Antifreeze	917.9	Lbs
	Propane	4236.5	Lbs
	Super HDX multi-vis 10W40	5885.2	Lbs
	Super Heavy Duty Brake Fluid	17.2	Lbs
	Universal Tractor Fluid	36.5	Lbs
Rendering	Sodium Tartrate Dihydrate	1000	Gal
	Caustic Soda Liquid All Grades	520	Gal
	Chemtreat CL-2150	40	Gal
	Chemtreat CL-25	55	Gal
	Chemtreat CL-4800	40	Gal
	Chemtreat BL-1544	100	Gal
	Dow Antifoam 1520	825	Gal
	No. 2 Fuel	15000	Gal
	No. 6 Fuel	30000	Gal
	Oil Rando 1659 HD	250	Gal
	Oil Lube	550	Gal
	R&O Hydraulic Oil ISO 68	200	Gal
	Santoquin Mixture 6 Preservative	600	Gal
	Sodium Hypochlorite 15%	5000	Gal
	Advantage Plus 1400 Inhibitor	1028	Lbs
	Pet Ox Liquid	197.1	Lbs
	Sodium Chloride	20000	lbs
	Chemtreat BL-4356	300	Gal
	Chemtreat CL-1446	350	Gal
	Chemtreat F-55	50	Gal
	Purate	1000	Gal
	Chemtreat B-120	800	Lbs
	Chemtreat B-141	500	Lbs
	Sulfuric Acid 77-100%	1400	Gal
Wastewater	Poultry Grease	588787	Lbs
	Propane	600	Lbs
	Chemtreat P-838E	800	Gal
	Sodium Aluminate 32%	4000	Gal
	Sodium Hypochlorite 12.5%	3500	Gal
	Hydrated Lime	48000	Lbs
	Sodium Bisulfite Solution 28%	1650	Gal

Location Used	Chemical	Average Stored	
	Sodium Hydroxide 50%	1650	Gal
	Diesel Fuel	1250	Gal
	Glycerine	6000	Gal
	No. 2 Fuel	1000	Gal
	Polyaluminum Chloride Sol	4100	Gal

ATTACHMENT 10

RECEIVING WATERS INFO./ TIER DETERMINATION/STORET DATA/ STREAM MODELING

10-1

M E M O R A N D U M

Department of Environmental Quality
Tidewater Regional Office

5636 Southern Boulevard Virginia Beach, VA 23462

SUBJECT: VPDES Application Requests
TO: Kristie Britt, TRO
FROM: Debbie Thompson, TRO
DATE: February 8, 2011
COPIES: TRO File - facility #445

An application has been received for the following facility:

VPDES #: **VA0003808** Facility Name: **Perdue Farms Incorporated**

Topo Map Name: **Accomac** **Quadrant: 120B**

Receiving Streams:

Outfalls 001-008: Parker Creek to Metomkin Bay to Atlantic Ocean
Outfall 009: Unnamed tributary to Folly Creek to Atlantic Ocean

Attached are Topographic Maps showing facility property boundaries and outfall location(s) for those included in this request.

Attached is a stream data Request Form **(if data is requested)**.

We request the following information from you:

1. _X_ Tier Determination. Tier: 1 impaired stream for benthics for Parker Creek & UT to Folly Creek Attachment 1
Please include a basis for the tier determination.

2. ____ Stream Data Requested for outfall(s) ____
["STREAM DATA RETRIEVAL REQUEST FORM" MUST be completed & included]

3. _X_ Is this facility mentioned in a Management Plan?
____ No ✓ Yes ____ No, but will be included when the Plan is updated.

4. _X_ Are limits contained in a Management Plan?
____ No ✓ Yes **(If Yes, Please include the basis for the limits.)** Attachment 2

5. _X_ Indicate outfall(s) which discharge directly to an impaired (Category 5) stream segment? 001-009 (002 deleted 4/2011)

6. _X_ Are outfall(s) WLAs contained in an approved TMDL?
____ No ✓ Yes **(If Yes, Please include the WLAs)**
Attachment 3 (see WLA issue 3-3)

Return Date Requested: _____

Date Returned: 2-28-11

10-2

2008 Impaired Waters - 303(d) List

Category 5 - Waters needing Total Maximum Daily Load Study

Chesapeake Bay/Atlantic/Small Coastal Basins

Cause Group Code / Impaired Use	Water Name / Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Date
D02E-11-SF	Little Cat Creek						
Shellfishing	Fecal Coliform	5B	0.096			2006	2018
D02E-12-SF	Arbuckle Creek & South Portion of Womans Bay						
Shellfishing	Fecal Coliform	5B	0.131			2006	2018
D02R-01-BAC	Pettit Branch						
Recreation	Escherichia coli	5A			1.74	1998	2010
D02R-01-BEN	Pettit Branch						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	5A			1.74	1996	2010
D03E-01-DO	Gargathy Creek						
Aquatic Life	Oxygen, Dissolved	5A	0.021			2004	2016
	Oxygen, Dissolved	5A	0.109			2006	2018
D03E-01-SF	Gargathy Creek						
Shellfishing	Fecal Coliform	5B	0.109			2004	2016
	Fecal Coliform	5B	0.021			2008	2020
D03E-02-BAC	Finney Creek - Upper						
Recreation	Fecal Coliform	5A	0.002			2004	2016
D03E-04-BAC	Folly Creek - Upper/ Middle						
Recreation	Enterococcus	5A	0.376			2006	2018
D03E-04-DO	Folly Creek - Middle						
Aquatic Life	Oxygen, Dissolved	5A	0.376			2006	2018
D03E-04-SF	Folly Creek - Upper/ Middle						
Shellfishing	Fecal Coliform	5B	0.326			1998	2010
D03E-05-BAC	Parker Creek -Middle/ Lower						
Recreation	Enterococcus	5A	0.047			2006	2018
D03E-05-SF	Parker Creek - Lower						
Shellfishing	Fecal Coliform	5B	0.029			1998	2010
D03E-07-BAC	Wachapreague Channel						
Recreation	Enterococcus	5A	0.032			2008	2020
D03E-07-SF	Wachapreague Channel						
Shellfishing	Fecal Coliform	5B	0.011			2008	2020
D03E-08-DO	Northam Creek						
Aquatic Life	Oxygen, Dissolved	5A	0.028			2004	2016
D03R-01-BAC	Parker Creek						
Recreation	Escherichia coli	5A			2.19	1994	2016
D03R-01-BEN	Parker Creek						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	5A			2.19	1994	2010
D03R-02-BAC	Gargathy Creek						
Recreation	Escherichia coli	5A			2.69	2004	2016

Attachment 1-1

10-3

2008 Impaired Waters - 303(d) List

Category 5 - Waters needing Total Maximum Daily Load Study

Chesapeake Bay/Atlantic/Small Coastal Basins

Cause Group Code / Impaired Use	Water Name / Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Date
D03R-02-BEN	Gargathy Creek						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	5A			2.69	2002	2014
D03R-03-BEN	Ross Branch						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	5A			3.07	2002	2014
D03R-04-BEN	Unnamed tributary to Folly Creek						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	5A			1.46	2002	2014
D03R-04-DO	Unnamed tributary to Folly Creek						
Aquatic Life	Oxygen, Dissolved	5A			1.46	2006	2018
D04E-01-BAC	Red Bank Creek - Middle						
Recreation	Enterococcus	5A	0.029			2008	2020
D04E-01-DO	Red Bank Creek						
Aquatic Life	Oxygen, Dissolved	5A	0.003			2004	2016
	Oxygen, Dissolved	5A	0.018			2008	2020
D04E-01-SF	Red Bank Creek						
Shellfishing	Fecal Coliform	5B	0.018			2006	2018
D04E-02-DO	Unnamed tributary to Red Bank Creek.						
Aquatic Life	Oxygen, Dissolved	5A	0.006			2004	2016
D04E-02-SF	Unnamed tributary to Red Bank Creek.						
Shellfishing	Fecal Coliform	5B	0.006			2006	2018
D04E-03-DO	Quinby Harbor-Upshur Bay						
Aquatic Life	Oxygen, Dissolved	5A	0.058			2006	2018
D04E-04-SF	Parting Creek - Upper						
Shellfishing	Fecal Coliform	5B	0.377			2008	2020
D04E-05-BAC	Machipongo River						
Recreation	Escherichia coli	5A	0.333			2008	2020
D04E-05-SF	Machipongo River						
Shellfishing	Fecal Coliform	5B	0.333			2008	2020
D04R-01-BAC	Red Bank Creek						
Recreation	Fecal Coliform	5A			1.27	2004	2016
D05E-01-BAC	Oyster Slip (Harbor) - Upper						
Recreation	Enterococcus	5A	0.034			2006	2018
D05E-01-SF	Oyster Slip (Harbor) - Upper						
Shellfishing	Fecal Coliform	5B	0.034			1998	2010
D05R-01-BAC	Taylor Creek						
Recreation	Fecal Coliform	5A			1.21	2002	2014
D05R-02-BAC	Holt Creek						
Recreation	Escherichia coli	5A			1.91	2004	2016

Attachment 1-2

10-4

Appendix A - List of Impaired (Category 5) Waters in 2008*

Chesapeake Bay/Atlantic/Small Coastal Basins

Cause Group Code **D03R-01-BAC** **Parker Creek**

Location: This cause encompasses the Riverine section of Parker Creek, from headwaters (at PERDUE plant - VA0003808) downstream to start of tidal waters (downstream of RM 2.9). Located northeast of Accomack.

City / County: Accomack Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

The Recreation Use is impaired based on Ecoli esceedance of the swimming criteria indicator (7-PAR003.09 - 8 violates / 16 obs.)

Parker Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.19**

Sources:

Source Unknown

Atachment 1-3

10-5

Appendix A - List of Impaired (Category 5) Waters in 2008*

Chesapeake Bay/Atlantic/Small Coastal Basins

Cause Group Code **D03R-01-BEN** **Parker Creek**

Location: This cause encompasses the Riverine section of Parker Creek, from headwaters (at PERDUE plant - VA0003808) downstream to start of tidal waters (downstream of RM 2.9). Located northeast of Accomack.

City / County: Accomack Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The Aquatic Life Use is impaired based on the Benthic population impacts as recorded at the following sample events: 7-PAR004.35 - severely impaired [[VI:S-'00,F-'00,S-'01,F-'01,S-'02,MI:F-'02] & 7-PAR003.09 - moderately impaired [MI:F-'00,F-'01,S-'02,F-'02].

Parker Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.19**

Sources:

Source Unknown

Attachment 1-4

10-6

Appendix A - List of Impaired (Category 5) Waters in 2008*

Chesapeake Bay/Atlantic/Small Coastal Basins

Cause Group Code **D03R-04-BEN** **Unnamed tributary to Folly Creek**

Location: This cause encompasses the headwaters downstream to start of tidal waters. Located east of Accomack, near Edge Hill Cemetary.

City / County: Accomack Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The Aquatic Life Use is imaired based on the streams Benthic population as recorded at the following sample events: 7-XDE000.40 - moderately impaired [MI: F-02,05;S-06; VI: F-01;S-02; S&F-04].

Unnamed tributary to Folly Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**1.46**

Sources:

Leaking Underground Storage Tanks

Source Unknown

Attachment 1-5

10-7

Appendix A - List of Impaired (Category 5) Waters in 2008*

Chesapeake Bay/Atlantic/Small Coastal Basins

Cause Group Code **D03R-04-DO** **Unnamed tributary to Folly Creek**

Location: This cause encompasses the headwaters downstream to start of tidal waters. Located east of Accomack, near Edge Hill Cemetary.

City / County: Accomack Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5A

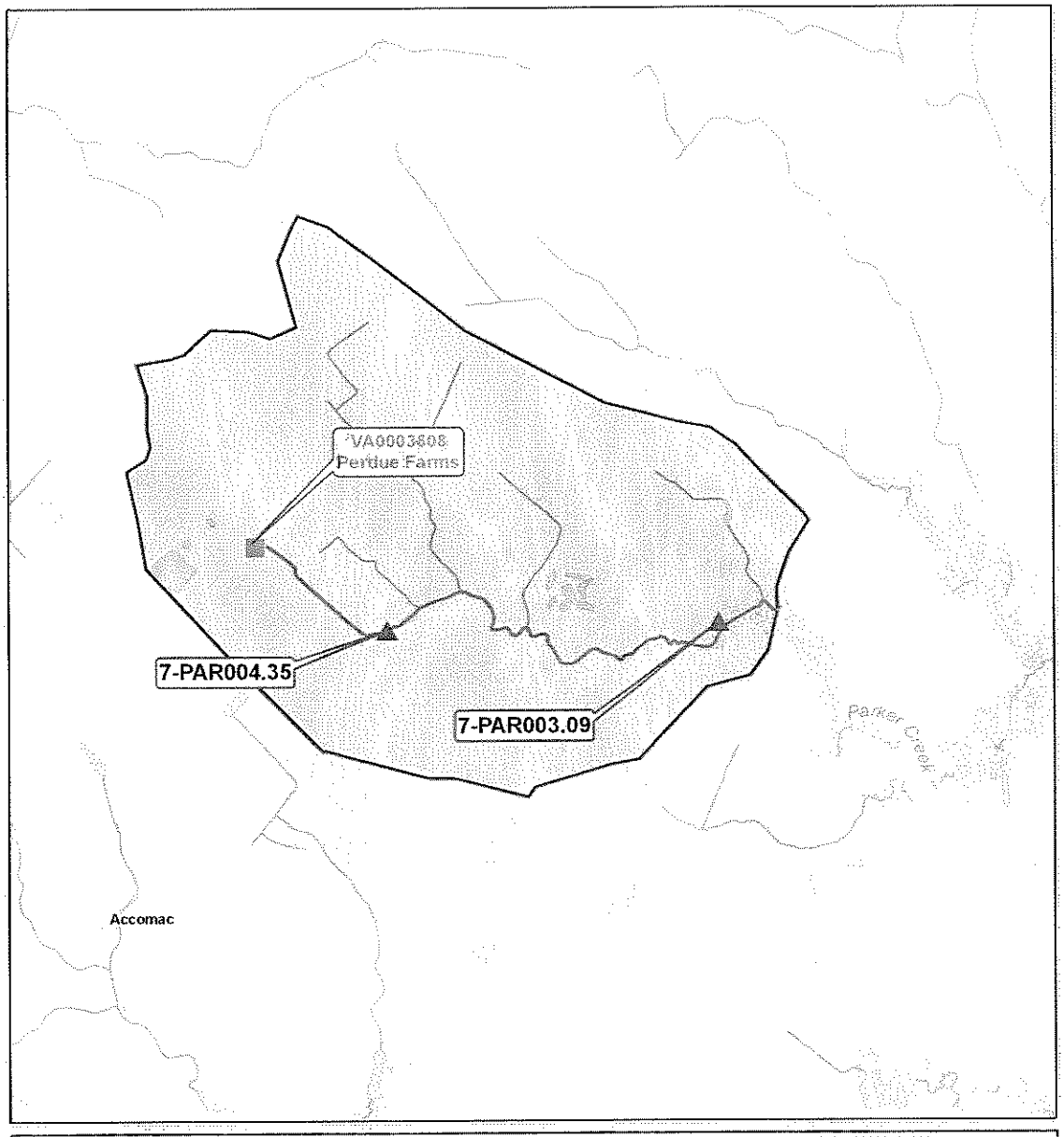
The Aquatic Life Use is impaired based on the DO concentrations that exceed the criteria for the parametner (2 violates / 7 obs.).

Unnamed tributary to Folly Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**1.46**

Sources:

Source Unknown

Attachment 1-6



Legend

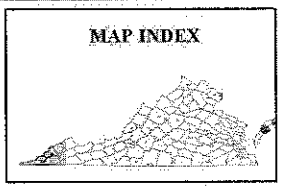
- Perdue Discharge Facility
- VA DEQ Stations
- 303(d) Impaired Segment
- Watershed Boundary
- Populated Places
- Waterbodies
- Swamp/Marsh
- Stream

N
W E
S

0 0.25 0.5 0.75 1 Miles

Sources: USGS, VADEQ, ESRI
Projection: NAD 1983 State Plane Virginia N+S

MAP INDEX



THE Louis Berger Group, INC.

ATTACHMENT 11

303(d) LISTED SEGMENTS

VAS-P03R	VA0021199	Richlands Regional WWTF	Clinch River	317.45	001	BOD_5, JUN-NOV	273	KG/D
VAS-P06R	VA0020745	Lebanon WWTP	Big Cedar Creek	5.22	001	BOD_5	91	KG/D
VAS-P11R	VA0077828	Coeburn Norton Wise Regional WWTP	Guest River	7.56	001	$CBOD_5$, JUN-NOV $CBOD_5$, DEC-MAY	303 379	KG/D KG/D
VAS-P15R	VA0029564	Duffield Industrial Park WWTP	North Fork Clinch River	21.02	001	BOD_5	36	KG/D
VAS-P17R	VA0020940	Big Stone Gap Regional WWTP	Powell River	177.38	001	$CBOD_5$, JUN-NOV	110	KG/D

Statutory Authority

§ 62.1-44.15 of the Code of Virginia and 33 USC § 1313(e) of the Clean Water Act.

Historical Notes

Derived from Virginia Register Volume 19, Issue 14, eff. April 24, 2003; amended, Virginia Register Volume 20, Issue 24, eff. September 8, 2004; Volume 21, Issue 9, eff. February 9, 2005; Volume 21, Issue 12, eff. March 23, 2005; Volume 22, Issue 2, eff. November 2, 2005; Volume 22, Issue 6, eff. December 28, 2005; Volume 23, Issue 11, eff. March 21, 2007; Volume 24, Issue 2, eff. November 15, 2007; Volume 25, Issue 20, eff. July 8, 2009.

9VAC25-720-100. Chowan River -- Dismal Swamp River Basin.

TMDL #	Stream Name	TMDL Title	City/County	WBID	Pollutant	WLA	Units
1.	Unnamed Tributary to Hurricane Branch	Benthic TMDL for Hurricane Branch Unnamed Tributary, Virginia	Nottoway	K16R	Sediment	60.9	T/YR
2.	Spring Branch	Total Maximum Daily Load Development for Spring Branch	Sussex	K32R	Phosphorus	145.82	KG/YR

Statutory Authority

§ 62.1-44.15 of the Code of Virginia and 33 USC § 1313(e) of the Clean Water Act.

Historical Notes

Derived from Virginia Register Volume 21, Issue 17, eff. June 1, 2005; amended, Virginia Register Volume 23, Issue 11, eff. March 21, 2007.

9VAC25-720-110. Chesapeake Bay -- Small Coastal – Eastern Shore River Basin.

A. Total maximum Daily Load (TMDLs).

TMDL #	Stream Name	TMDL Title	City/County	WBID	Pollutant	WLA	Units
1.	Parker Creek	Benthic Total Maximum Daily Load (TMDL) Development for Parker Creek, Virginia	Accomack	D03E	Total Phosphorus	664.2	Lbs/YR

B. Stream segment classifications, effluent limitations including water quality based effluent limitations, and waste load allocations.

Small Coastal and Chesapeake Bay-
TABLE B1—CURRENT STREAM SEGMENT CLASSIFICATION

Segment No.	Name	Current State Class
7-12A	Pocomoke Sound	EL
7-12B	Messongo Creek	EL
7-12C	Beasley Bay	EL
7-12D	Chesconessex Creek	EL
7-13	Onancock Creek	WQ
7-14	Pungoteague	WQ
7-12E	Nandua Creek	EL
7-15	Occohannock Creek	WQ
7-12F	Nassawadox Creek	EL
7-12G	Hungars Creek	EL

Appendic 2-1

7-12H	Cherrystone Inlet	EL
7-12I	South Bay	EL
7-12J	Tangier Island	
7-11A	Chincoteague	EL
7-11B	Hog Boque	EL
7-11C	Metomkim Bay	EL
7-11D	Machipongo River	EL
7-11E	South Ocean	EL

Small Coastal and Chesapeake Bay
TABLE B2 - EASTERN SHORE WASTELOAD ALLOCATIONS

		INTERIM WASTELOAD ALLOCATIONS(1)			FINAL WASTELOAD ALLOCATIONS		
		(Current Permit Limits)					
NAME	RECEIVING STREAM OR ESTUARY	BOD_5 (lb/d)	SUSPENDED SOLIDS (lb/d)	OIL & GREASE (lb/d)	BOD_5 (lb/d)	SUSPENDED SOLIDS (lb/d)	OIL & GREASE (lb/d)
Commonwealth of Va. Rest Area	Pitts Cr.	4.3	4.3	--	4.3	4.3	–
Edgewood Park	Bullbegger Cr.	0.80	0.80	--	0.80	0.80	–
Holly Farms	Sandy Bottom Cr.	167(3)	167(3)	10 mg/l	Stream survey/model and determination of final wasteload allocations planned for the summer of 1980.		
Taylor Packing Company	Messongo Cr.	7006(3)	13010(3)	--	Stream survey/model was run previously. No change in permit anticipated.		
No. Accomack E.S.	Messongo Cr.	1.8	1.4	--	1.8	1.4	–
Messick & Wessels Nelsonia	Muddy Cr.	30mg/l(4)	30mg/l(4)	--	Interim wasteload allocations may be changed based on BAT guidance.		
Whispering Pines Motel	Deep Cr.	4.8	4.8	--	4.8	4.8	–
Town of Onancock	Onancock Cr.	21	21	--	21	21	–
Messick & Wessels	Onancock Cr.	30mg/l(4)	30mg/l(4)	--	Interim wasteload allocations may be changed based on guidance.		
So. Accomack E.S.	Pungoteague Cr.	1.8	1.4	--	1.8	1.4	–
A & P Exmore	Nassawadox Cr.	0.38	0.38	--	0.38	0.38	–
Norstrom Coin Laundry	Nassawadox Cr.	60mg/l(4) max.	60mg/l(4) max.	--	Interim wasteload allocation may be changed based on BAT guidance.		
NH-Acc. Memorial Hospital	Warehouse Cr.	12.5	12.5	--	21.5	12.5	–
Machipongo E.S. & H.H. Jr. High	Trib. To Oresbus Cr.	5.2	5.2	--	5.2	5.2	–
Town of Cape Charles	Cape Charles Harbor	62.6	62.6	--	62.6	62.6	–
America House	Chesapeake Bay	5	5	--	5	5	–
U.S. Coast Guard Chesapeake Bay	Chesapeake Bay	--	--	10/mgl(5)	--	--	10/mgl (5)
U.S. Government Cape Charles AFB	Magothy Bay	Currently No Discharge					
Exmore Foods (Process Water)	Trib. To Parting Cr.	200	100	--	Stream survey/model and determination of final wasteload allocations planned for the summer of 1980.		
Exmore Foods (Sanitary)	Trib. To Parting Cr.	30mg/l(5)	30mg/l(5)	--	30mg/l(5)	30mg/l(5)	–
Perdue Foods (process water)	Parker Cr.	May-Oct 275 367 Nov-Apr. 612 797	--	--	Interim Permit in process. Stream survey/models were run. No substantial change in permit anticipated.		
Perdue Foods (parking lot)	Parker Cr.	30mg/l(5)	30mg/l(5)	--	30mg/l(5)	30mg/l(5)	–
Accomack Nursing Home	Parker Cr.	2.7	2.6	--	2.7	2.6	–
U.S. Gov't NASA Wallops Island	Mosquito Cr.	75	75	--	75	75	–
U.S. Gov't NASA Wallops Island	Cat Cr.	1.25	1.25	--	1.25	1.25	–

Appendix 2-2

Log #	Name	Rec Stream	Stream	Flow	CBOD mg/L/#D			D.O mg/L	FC mg/100	Treatment Operation
	Pacific Tea Company									Extended Aeration CL_2
15	Norstrom Coin Laundry	Nassawadox	Trib. To Nassawadox	.008						Sec., Extended Aeration, permit in process
17	N.H.-Acc. Memorial Hospital	Nassawadox	Warehouse Creek	.03	25/1.6		35/2.2	6.5	750	Secondary Aerated Lagoon, CL_2 Holding pond Stab-Lagoon
18	Machipongo E.S. & N.H. Jr. High School	Hungars Creek	Trib. To Oresbus	0.3(1)	30/5.2(2)		30/5.2(2)			Sec., Stab-Lagoon, Holding Pond no discharge in 4 yrs.
19	B & B Laundromat	Cherry Stone Inlet	Old Castle Creek							Prl. Septic Tank w/discharger
20	KMC Foods, Inc.	Cherry Stone Inlet								No-Discharge industry
21	Herbert West Laundromat	Cherry Stone Inlet	Kings Creek							Prl. Septic Tank w/Discharger
22	Town of Cape Charles	Cape Charles Harbor	Cape Charles Harbor	.165(2)	290/400 (3)		139/192(3)			Raw Sewage, Sewage Treatment to be completed by 1982
23	American House Inn	Chesapeake Bay	Chesapeake Bay		30/5(2)		30/5(2)			
24	U.S. Coast Guard	Chesapeake Bay	Chesapeake Bay	.001(2)	30/			5.0(2)	200(2)	Bilgewater
25	U.S. Gov't Cape Charles AFS	Magothy	Magothy	.001(2)				5.0(3)		Sec., CL_2, Aerated Lagoon, currently no-discharge
27	Exmore Frozen Foods	Machipongo	Trib. To Parting Cr.	.56	29/135		18/84	6.5		Grass Bays, Screening
28	Exmore Foods (Domestic)	Machipongo	Trib. To Parting Cr.	.02	5/0.8		9/1.5			Septic Tank, Sand Filter
30	Perdue Foods	Metomkin Bay	Parker Creek	1.7	11/156		15/213	6.5	150	Sec., Aerated Lagoon, Holding Pond, CL_2
31	Perdue Foods	Metomkin Bay	Parker Cr.	.01(4)			15/1.3			
32	Accomack Co. Nursing Home	Metomkin Bay	Parker Cr. North Fork	.011	20/1.8		28/2.6	6.5	100	Sec., Extended Aeration, Holding Pond, CL_2
33	U.S. Gov't NASA (Wallops Island)	Hog Creek	Cat Creek	.005	30/		30/			Sec., Stab., Pond, Holding Pond, CL_2
34	Robo Automatic Car	Chincoteague Channel	Little Simoneaton							
35	U.S. Gov't NASA	Chincoteague Channel	Mosquito Creek	.105	10.6/9.3 (3)	112/28	2.0/1.8			Sec., Trickling Filter
36	Trail's End Rec. Vehicle Dev.	Chincoteague Channel	Trib to Mosquito Cr.							Septic Tank and Drainfield
37	Coin-Op Laundromat	Chincoteague Channel	Chincoteague Channel							No discharge
38	F & G Laundromat	Chincoteague Channel	Chincoteague Channel	.005						

Appendix 2-3

11-4

Virginia Administrative Code

Database updated through February 9, 2011

CHAPTER 720

WATER QUALITY MANAGEMENT PLANNING REGULATION

9VAC25-720-10. Definitions.

The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

"Assimilative capacity" means the greatest amount of loading that a water can receive without violating water quality standards, significantly degrading waters of existing high quality, or interfering with the beneficial use of state waters.

"Best management practices (BMP)" means a schedule of activities, prohibition of practices, maintenance procedures and other management practices to prevent or reduce the pollution of state waters. BMPs include treatment requirements, operating and maintenance procedures, schedule of activities, prohibition of activities, and other management practices to control plant site runoff, spillage, leaks, sludge or waste disposal, or drainage from raw material storage.

"Best practicable control technology currently available (BPT)" means control measures required of point source discharges (other than POTWs) as determined by the EPA pursuant to § 304(b)(1) of the CWA (33 USC § 1251 et seq.) as of 1987.

"Board" means the State Water Control Board (SWCB).

"Chesapeake Bay Watershed" means the following Virginia river basins: Potomac River Basin (9VAC25-260-390 and 9VAC25-260-400), James River Basin (9VAC25-260-410, 9VAC25-260-415, 9VAC25-260-420, and 9VAC25-260-430), Rappahannock River Basin (9VAC25-260-440), Chesapeake Bay and small coastal basins (9VAC25-260-520, Sections 2 through 3g), and the York River Basin (9VAC25-260-530).

"Clean Water Act or Act (CWA)" means 33 USC § 1251 et seq. as amended, as of 1987.

"Delivery factor" means an estimate of the number of pounds of total nitrogen or total phosphorus delivered to tidal waters for every pound discharged from a permitted facility, as determined by the specific geographic location of the permitted facility, to account for attenuation that occurs during riverine transport between the permitted facility and tidal waters. Delivery factors shall be calculated using the Chesapeake Bay Program watershed model.

"Discharge" means when used without qualification, a discharge of a pollutant or any addition of any pollutant or combination of pollutants to state waters or waters of the contiguous zone or ocean or other floating craft when being used for transportation.

"Effluent limitation" means any restriction imposed by the board on quantities, discharge rates or concentrations of pollutants that are discharged from point sources into state waters.

"Effluent limitation guidelines" means a regulation published by EPA under the Act and adopted by the board.

"Effluent limited segment (EL)" means a stream segment where the water quality does and probably will continue to meet state water quality standards after the application of technology-based effluent limitations required by §§ 301(b) and 306 of the CWA (33 USC § 1251 et seq.) as of 1987.

"Environmental Protection Agency (EPA)" means the United States Environmental Protection Agency.

"Equivalent load" means 2,300 pounds per year of total nitrogen and 300 pounds per year of total phosphorus at a flow volume of 40,000 gallons per day; 5,700 pounds per year of total nitrogen and 760 pounds per year of total phosphorus at a flow volume of 100,000 gallons per day; and 28,500 pounds per year of total nitrogen and 3,800 pounds per year of total phosphorus at a flow volume of 500,000 gallons per day.

"Load or loading" means the introduction of an amount of matter or thermal energy into a receiving water. Loading may be either man-

Appendix 2-4

4.2 Waste Load Allocation

There are two industrial dischargers (Shore Life Care VA0063606 and Perdue Farms VA0003808) and one permitted animal feeding facility (VPG250084) in the Parker Creek watershed. However, waste load allocation was only applied to Perdue Farms, since the facility has a permit limit for fecal coliform.

4.3 Load Allocation Development and Scenarios

The reduction of loadings from nonpoint sources, including livestock, pets, and wildlife direct deposition, is incorporated into the load allocation. Fecal coliform loadings (daily load capacity of the bay) were calculated in the estuary of the Parker Creek watershed for obtaining the current load and allowable load. The current load is the maximum value of the 30 month geometric mean and the 90th percentile computed between 1998 (first time listed for bacteria) and 2004 (BST measurements). The required percent load reduction for the Parker Creek watershed is estimated by subtracting the allowable load from the present load, dividing it by the current load, and multiplying it by 100. **Table 4-1** and **Table 4-2** show the computed model results of current load, allowable load, and reduction for the geometric mean and 90th percentile for the watershed. The maximum values of the 90th percentile were used to calculate the load allocation and the TMDL in the watershed, since they represent the maximum current loads.

4.4 Parker Creek Allocation Plan and TMDL Summary

Waste Load Allocation

Waste load allocation is applied to Perdue Farms VA0003808. The allocated load including average flow and permitted monthly average fecal coliform concentration are shown in **Table 4-3.**

The allocated load for Perdue Farms is based on a 10 years average flow rate of 2.1 MGD (Perdue Farms has no permit limit for discharge flow) and the permitted monthly average of 200 counts/100ml for fecal coliform. No reductions are required for Perdue Farms.

Table 4-3: Waste Load Allocation for Fecal Coliform

Point Source	Facility Type	Avg Flow*	Permitted Monthly Avg	Allocated Load	Percent Reduction
		MGD	counts/100mL	counts/day	%
VA0003808	Perdue Farms	2.1	200	1.59E+10	-

* based on an average of 10 years

Load Allocation

The load allocation is based on Bacteria Source Tracking (BST) results for livestock, wildlife, human, and pets. The BST results are averages based on 11 samples taken at VDH-VSS station 98-1Y between October 2003 and September 2004. A complete reduction of all human sources is required, since fecal coliform from human sources are considered a serious concern in estuaries (VA DEQ, 2005). Reductions for wildlife are applied, because the reduction of controllable loads (humans, livestock, and pets) does not achieve the water quality standard for the estuary (VA DEQ, 2005). Allocations are developed using the proportion of these sources in the BST data. The requirements to meet the 90th percentile water quality standard of 49 MPN/100mL for Parker Creek are:

- 100 % reduction of the human sources.
- 100 % reduction of loading from livestock.
- 100 % reduction of loading from pets.
- 89 % reduction of loading from wildlife

Attachment 3-2

11-7

The bacteria TMDL (EPA approved 1/15/2008) assigned Perdue a Fecal Coliform limit of 200 counts/100 mL and a WLA of 1.59E+10 counts per day. However, in the current Water Quality Standards (January 6, 2011) the standard for bacteria in freshwater recreational use waters is E. Coli with a geometric mean of 126 CFU/ 100mL or a single sample maximum of 235 CFU/100mL. Therefore the TMDL is no longer protecting the recreational use with the current standard. I am not sure how the TMDL section will handle this situation. I have discussed this with Jennifer Howell and she is handling the situation with the TMDL Central Office. This may require a revision to the TMDL and therefore a revised WLA to account for the E. Coli standard. These changes (if needed) will be required to be in the Perdue Fact Sheet for the Conformance Review.

11-8

Virginia Department of Environmental Quality

Benthic Total Maximum Daily Load (TMDL) Development Parker Creek, Virginia

Prepared by

THE Louis Berger Group, INC.
2445 M Street, NW Washington, DC 20037

Draft Report

April 2008

EPA approved 1/15/2008

Attachment 3-4

11-9

Water/Wetlands

The amount of total phosphorus loading from water and wetland areas typically is not significant.

Barren Lands

Transitional lands represent areas of sparse vegetative cover often due to land use activities such as forest clearcuts and construction lands. Total phosphorus loads from transitional lands are typically low.

Nonpoint Source through seepage from groundwater

Nonpoint sources entering through seepage include dissolved inorganic and/or organic phosphorus forms and originate from agricultural phosphorus application and septic systems. Both sources have generally a low impact on total phosphorus levels in the seepage because of the high capacity of soils to precipitate out phosphorus with calcium and to adsorb phosphorus to iron or aluminum oxides/hydroxides.

5.3 Estimating Total Phosphorus Loads

5.3.1 Point Source Loadings

There are no permitted point sources in the reference watershed. In Parker Creek, there is one individual point source facility that discharges directly into Parker Creek (**Table 5-2**). For the purpose of TMDL development, annual point source loadings were computed for the individual point source facility based on the existing average flow and total phosphorus concentrations using discharge monitoring report (DMR) data in 2006. Annual existing loadings from the point source were calculated to be 5,367 lb/year, assuming the total phosphorus concentration in the effluent is 0.808 mg/L and an average design flow rate of 2.18 MGD (3.376 cfs).

Table 5-2: Point Sources in the Parker Creek Benthic Impaired Watershed

Facility Name	Permit Number	Daily Total Phosphorus Load* (lb/day)	Annual Total Phosphorus Load*(lb/yr)
Perdue Farms, Inc	VA0003808	14.70	5,367

*Based on existing average flow at 2.18 MGD and concentration at 0.808 mg/L in 2006

5.3.2 Nonpoint Source Total Phosphorus

For the purpose of TMDL development, annual phosphorus loadings from nonpoint sources and groundwater were determined using the Generalized Watershed Loading Functions (GWLF) model.

GWLF is a time variable simulation model that simulates hydrology, sediment, and nutrients loadings on a watershed basis. Observed daily precipitation data is required in GWLF as the basis for water budget calculations. Surface runoff, evapotranspiration and groundwater flows are calculated based on user specified parameters. Stream flow is the sum of surface runoff and groundwater discharge. Surface runoff is computed using the Soil Conservation Service Curve Number Equation. Curve numbers are a function of soils and land use type. Evapotranspiration is computed based on the method described by Hamon (1961) and is dependent upon temperature, daylight hours, saturated water vapor pressure, and a cover coefficient. Groundwater discharge to the stream is described by a lumped parameter watershed water balance for unsaturated and shallow saturated water zones. Infiltration to the unsaturated zone occurs when precipitation exceeds surface runoff and evapotranspiration. Percolation to the shallow saturated zone occurs when the unsaturated zone capacity is exceeded. The shallow saturated zone is modeled as a linear reservoir to calculate groundwater discharge. In addition, the model allows for seepage to a deep saturated zone.

Nutrient loading is a function of the land source areas present in the watershed. Multiple source areas may be defined based on land use type, the underlying soils type, and the management practices applied to the lands. The Universal Soil Loss Equation (USLE) is used to compute erosion for each source area and a total phosphorus delivery ratio is

Table 6- 2: Comparison of the Total Phosphorus Load to the Allowable TMDL Load					
Scenario	**Point Source (lb/year)**	**Nonpoint Sources (lb/ year)**	**Total Load (lb/ year)**	**Allowable Load (Target - MOS) (lb/ year)**	**Comparison to the Allowable Load (%)**
1	5366.6	478.9	5845.6	1000.0	82.9
2	3320.9	478.9	3799.9	1000.0	73.7
3	664.2	335.8	1000.0	1000.0	0.0

6.1.3 Wasteload Allocation

Wasteload allocation is applied to Perdue Farms, Inc., the only individual permitted facility located within the Parker Creek watershed. **Table 6-3** shows the wasteload allocation and the required reduction for the Perdue Farms, Inc effluent.

Table 6- 3: Wasteload Allocation for Parker Creek			
WLA Category	**Existing Load (lb/year)**	**Allocated Load (lb/year)**	**Percent Reduction**
Perdue Farms, Inc.	5366.6	664.2	87.6

6.1.4 Load Allocation

Load allocation will be applied to the land based loads in the watershed, and an equal percent reduction is required from all land sources except forested lands. Loads from forested lands are considered to be representative of the natural condition and therefore were not subject to reductions. The existing and allocated sediment loads for each nonpoint source in the Parker Creek impaired watershed are presented in **Table 6-4**. In addition, the necessary percent reduction is shown for each source.

Attachment 3-7

TABLE III(a)

VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List any changes FROM PREVIOUS PERMIT and give a brief rationale for the changes).

OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
001	BOD-summer	No change	294 lbs/d avg to 293 lbs/d avg 510 lbs/d max to 507 lbs/d max	Increase Flow revised to 2.69 MGD	DLT 3/11
	BOD-winter	No change	314 lbs/d avg to 312 lbs/d avg 510 lbs/d max to 507 l/d max	Same as above	DLT 3/11
	TSS	No change	392 lbs/d avg - 390 lbs/d avg 588 lbs/d max to 585 lbs/d max	Same as above	DLT 3/11
	Oil & Grease	No change	157 lbs/d avg to 156 lbs/d avg 274 lbs/d max to 3273 lbs/d max	Same as above	DLT 3/11
	Total Phosphorus (mg/l & lbs/d)	1/Month to 3-D/Week	Monthly average - no change 52 lbs/d avg to 50 lbs/d max (These limits expire on 6/29/15)	In accordance with Nutrient Regulation 9 VAC 25-40-10 and revised flows	DLT 3/11
	Total Phosphorus (mg/l)	NEW: 3-D/Week	0.10 mg/l monthly average (These limits are effective on 6/30/15)	In accordance with TMDL end point concentration (TMDL approved by EPA on 1/15/08)	DLT 4/11
001	Total Nitrogen	1/month to 2/month	No change in concentrations 2019 lbs/d avg to 2010 lbs/d avg 2881 lbs/d max to 2869 lbs/d max	In accordance with promulgated Federal Effluent Guidelines for Poultry & Meat Industry 40 CFR 432.112	DLT 3/11

OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
	Ammonia Nitrogen (summer)	No change	No change to lbs/d avg 75 lbs/d max to 73 lbs/d max	Revised flows	DLT 3/11
	Ammonia Nitrogen (winter)	No change	31 lbs/d avg to 30 lbs/d avg 101 lbs/d max to 98 lbs/d max	Same as above	DLT 3/11
	e.Coli	No monitoring to 3-D/Week	No limit to 126 n/cml monthly average	In accordance with water quality standards	DLT 3/11
002	All parameters and requirements deleted	All deleted; outfall eliminated by permanent seal to discharge pipe	All deleted; outfall eliminated by permanent seal to discharge pipe	All deleted; outfall eliminated by permanent seal to discharge pipe	DLT 3/11

OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
007	BOD-summer	No monitoring to 3-D/Week	No limit to 15 mg/l avg No limit to 26 mg/l max No limit to 337 lbs/d avg No limit to 583 lbs/d max	Federal Effluent Guidelines (ELG's) for the Poultry Industry 40 CFR 432.112	DLT 3/11
	BOD-winter	No change	No limit to 16 mg/l avg No limit to 26 mg/l max No limit to 359 lbs/d avg No limit to 583 l/d max	Same as above	DLT 3/11
	TSS	No change	No limit to 20 mg/l avg No limit to 30 mg/l max No limit to 449 lbs/d avg No limit to 673 lbs/d max	Same as above	DLT 3/11

OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
	Oil & Grease	No change	No limit to 8 mg/l avg No limit to 14 mg/l max No limit to 179 lbs/d avg No limit to 314 lbs/d max	Same as above	DLT 3/11
007	Total Phosphorus (mg/l & lbs/d)	1/Month to 3-D/Week	No limit to 2.0 mg/l No limit to 50 lbs/d max (These limits expire on 6/29/15)	In accordance with Nutrient Regulation 9 VAC 25-40-10 and revised flows	DLT 3/11
	Total Phosphorus (mg/l)	NEW: 3-D/Week	0.10 mg/l monthly average (These limits are effective on 6/30/15)	In accordance with TMDL end point concentration (Parker Creek TMDL approved by EPA on 11/07/08)	DLT 4/11
007	Total Nitrogen	1/month to 2/month	No limit to 103 mg/l avg No limit to 147 mg/l max No limit to 2312 lbs/d avg No limit to 3300 lbs/d max	In accordance with promulgated Federal Effluent Guidelines for Poultry & Meat Industry 40 CFR 432.112	DLT 3/11
	Ammonia Nitrogen (summer)	No change	No limit to 0.9 mg/l avg No limit to 2.9 mg/l max No limit to 23lbs/d avg No limit to 73 lbs/d max	In accordance with site specific NH3 limits and revised flows	DLT 3/11
	Ammonia Nitrogen (winter)	No change	No limit to 1.2 mg/l avg No limit to 3.9 mg/l max No limit to 30 lbs/d avg No limit to 98 lbs/d max	Same as above	DLT 3/11
	e.Coli	No monitoring to 3-D/Week	No limit to 126 n/cml monthly average	In accordance with water quality standards	DLT 3/11

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OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
	Fecal Coliform	No monitoring to 3-D/Week	No limit to 200 n/cml monthly average 400 n/cml maximum	In accordance with promulgated Federal Effluent Guidelines for Poultry & Meat Industry 40 CFR 432.112	DLT 3/11

OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL
REVISE: Toxics Monitoring Language	Updated to reflect review and evaluation of past data; delete 002, add 007	DLT 3/11
ADD: Water Quality Monitoring (Attachment A) For outfall 007	Outfall 007 is addressed in the reissuance as process + storm water. WQM Attachment A monitoring is warranted. Monitoring required 1/5 yrs if discharge occurs	DLT 3/11
REMOVE: TMDL Reopener Special Condition	Parker Creek TMDL Approved by EPA on 11/07/08 and By SWCB on 4/27/09	
ADD: Schedule of Compliance for Total Phosphorus - Outfall 001	TMDL end point concentration limit shall become effective 4 yrs from reissuance date	DLT 3/11
ADD: Ground Water Monitoring Program Requirements	Tear in anaerobic lagoon liner warrants GW monitoring. New plan approved on April 13, 2011	DLT 4/11
REVISE: Freeboard minimum increase from 1 ft to 2 ft	This increase is warranted based on recent inspections and the land application issues with the chicken facilities. This change has been implemented at all TRO chicken processors.	DLT 4/11
DELETE: BACTERIAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - ADDITIONAL INSTRUCTIONS	WQS limitation for e.coli included in Part I.A. No other bacteria language warranted	DLT 3/11

12-4

OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL
ADD: Special Condition for proper closure of existing anaerobic lagoon	Existing 24 MG anaerobic lagoon has a breach in the liner. Facility has proposed building new lagoon and closeout for existing impoundment. This condition stipulates certain conditions that must be met for proper closure.	DLT 7/11

TABLE III(b)

VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List any changes made DURING THE PEMIT PROCESS and give a brief rationale for the changes).

OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
001	Cyanide	1/month to 1/6months	No change	The data for this parameter has been BDL for the past permit term. Reduction of the frequency will not compromise the ability to evaluate the compliance with WQS and protection of surface water quality.	DLT 6/1/11
007	Outfall sealed delete all	Outfall sealed, deleted all	Outfall sealed, deleted all	Outfall permanently sealed June 2011	DLT 6/8/11

OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL
DELETE: Toxics Monitoring for outfall 007	Outfall permanently sealed no discharge to monitor. Permanently sealed June 2011	DLT 6/8/11
DLETE: Water Quality Monitoring – Attachment A for Outfall 007	Outfall permanently sealed no discharge to monitor. Permanently sealed June 2011	DLT 6/8/11
ADD: Schedule of Compliance for Construction of New Anaerobic Lagoon	Existing 24 MG anaerobic lagoon has a breach in the liner. Facility has proposed building new lagoon and closeout for existing impoundment. 24 months will be given for construction of new lagoon	DLT 7/11

OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL
ADD: Special Condition for proper closure of existing anaerobic lagoon	Existing 24 MG anaerobic lagoon has a breach in the liner. Facility has proposed building new lagoon and closeout for existing impoundment. This condition stipulates certain conditions must be met for proper closure.	DLT 7/11
ADD: TMDL Reopener Language	Removed in March 2011, but added back in based on citizen comments (Environmental Integrity Project Ltr received on 9/23/11 (via Email)	DLT 9/11
REVISED Interim TP Limit expiration date extended	Permit issued later than expected-Interim TP limits expire on August 31, 2015	DLT 9/11

ATTACHMENT 13

NPDES INDUSTRIAL PERMIT RATING WORKSHEET
AND
EPA PERMIT CHECKLIST

13-1

NPDES Permit Rating Work Sheet

✓ Regular Addition
___ Discretionary Addition
___ Score change, but no status change
___ Deletion

NPDES NO: |V|A|0|0|0|3|8|0|8|

Facility Name:

|P|E|R|D|U|E| |F|A|R|M|S| |I|N|C|

City: |A|C|C|O|M|A|C|

Receiving Water:
|P|A|R|K|E|R| |C|R|E|E|K|

Reach Number: |___|___|___|___|___|___|___|___|___|___|

Is this facility a steam electric power plant (SIC=4911) with one or more of the following characteristics?

1. Power output 500 MW or greater (not using a cooling pond/lake)
2. A nuclear power plant
3. Cooling water discharge greater than 25% of the receiving stream's 7Q10 flow rate

___ YES: score is 600 (stop here) _X_ NO (continue)

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

___ YES; score is 700 (stop here)
_X_ NO (continue)

FACTOR 1: Toxic Pollutant Potential

PCS SIC Code: |2|0|1|5| Primary SIC Code: |2|0|1|5|

Other SIC Codes: |2|0|7|7| |___|___|___| |___|___|___|___| |___|___|___|___|

Industrial Subcategory Code: |___|___|2| (Code 000 if no subcategory)

Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
___ No process waste streams	0	0	___ 3.	3	15	___ 7.	7	35
_X_ 1.	1	5	___ 4.	4	20	___ 8.	8	40
___ 2.	2	10	___ 5.	5	25	___ 9.	9	45
			___ 6.	6	30	___ 10.	10	50

Code Number Checked: |___|1|

Total Points Factor 1: |___|5|

FACTOR 2: Flow/Stream Flow Volume *(Complete Either Section A or Section B; check only one)*

Section A--Wastewater Flow Only Considered

Wastewater Type (See Instructions)			Code	Points
Type I:	Flow < 5 MGD	___	11	0
	Flow 5 to 10 MGD	___	12	10
	Flow > 10 to 50 MGD	___	13	20
	Flow > 50 MGD	___	14	30
Type II:	Flow < 1 MGD	___	21	10
	Flow 1 to 5 MGD	___	22	20
	Flow > 5 to 10 MGD	___	23	30
	Flow > 10 MGD	___	24	50
Type III:	Flow < 1 MGD	___	31	0
	Flow 1 to 5 MGD	___	32	10
	Flow > 5 to 10 MGD	___	33	20
	Flow > 10 MGD	___	34	30

Section B--Wastewater and Stream Flow Considered

Wastewater Type (See Instructions)	Percent of Instream Wastewater Concentration at Receiving Stream Low Flow		Code	Points
Type I/III:	< 10%	___	41	0
	> 10% to < 50%	___	42	10
	> 50%	___	43	20
Type II:	<10%	___	51	0
	> 10% to < 50%	___	52	20
	> 50%	_X_	53	30

Code Checked from Section A or B: |5|3|

Total Points Factor 2: |3|0|

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NPDES Permit Rating Work Sheet

NPDES No.: _V_|_A_|_0_|_0_|_0_|_3_|_8__|_0_|_8__|

FACTOR 3: Conventional Pollutants

(only when limited by the permit)

A. Oxygen Demanding Pollutant: (check one) _X_ BOD ___ COD ___ Other:_____

Permit Limits: (check one)		Code	Points
___	< 100 lbs/day	1	0
_X_	100 to 1000 lbs/day	2	5
___	>1000 to 3000 lbs/day	3	15
___	>3000 lbs/day	4	20

Code Checked: |_2__|

Points Scored: |_0_|_5_|

B. Total Suspended Solids (TSS)

Permit Limits: (check one)		Code	Points
___	< 100 lbs/day	1	0
_X_	100 to 1000 lbs/day	2	5
___	>1000 to 5000 lbs/day	3	15
___	>5000 lbs/day	4	20

Code Checked: |_2__|

Points Scored: |_0_|_5_|

C. Nitrogen Pollutant: (check one) ___ Ammonia _X_ Other: **Total Nitrogen**

Permit Limits: (check one)		Code	Points
___	< 300 lbs/day	1	0
___	300 to 1000 lbs/day	2	5
___	>1000 to 3000 lbs/day	3	15
_X_	>3000 lbs/day	4	20

Code Checked: |_4__|

Points Scored: |_2_|_0_|

Total Points Factor 3:|_3_|_0_|

FACTOR 4: Public Health Impact

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this includes any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above referenced supply.

___ YES (if yes, check toxicity potential number below)
_X_ NO (if no, go to Factor 5)

Determine the human health toxicity potential from Appendix A. Use the same SIC code and subcategory reference as in Factor 1. (Be sure to use the human health toxicity group column -- check one below)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
___ No process waste streams	0	0	___ 3.	3	0	___ 7.	7	15
_X_ 1.	1	0	___ 4.	4	0	___ 8.	8	20
___ 2.	2	0	___ 5.	5	5	___ 9.	9	25
			___ 6.	6	10	___ 10.	10	30

Code Number Checked:|___|_1__|

Total Points Factor 4: |___|_0__|

NPDES Permit Rating Work Sheet

NPDES No.: _V_|_A_|_0_|_0_|_0_|_3_|_8__|_0_|_8_

FACTOR 5: Water Quality Factors

A. Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-based federal effluent guidelines, or technology-based state effluent guidelines), or has a wasteload allocation been assigned to the discharge?

	Code	Points
_X_ Yes	1	10
___ No	2	0

B. Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?

	Code	Points
_X_ Yes	1	0
___ No	2	5

C. Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?

	Code	Points
_X_ Yes	1	10
___ No	2	0

Code Number Checked: A |_1__| B |_1__| C |_1__|

Points Factor 5: A |_1__|_0__| + B |_0__| + C |_1__|_0__| = |_2__|_0__| **TOTAL**

FACTOR 6: Proximity to Near Coastal Waters

A. Base Score: Enter flow code here (from Factor 2): |_5__|_3_| *Enter the multiplication factor that corresponds to the flow code:* |_0_|.6__|

Check appropriate facility HPRI Code (from PCS):

	HPRI #	*Code*	*HPRI Score*
___	1	1	20
___	2	2	0
_X_	3	3	30
___	4	4	0
___	5	5	20

Flow Code	Multiplication Factor
11, 31, or 41	0.00
12, 32, or 42	0.05
13, 33, or 43	0.10
14 or 34	0.15
21 or 51	0.10
22 or 52	0.30
23 or 53	0.60
24	1.00

HPRI code checked: |_3__|

Base Score: (HPRI Score) ___31.8_____ x (Multiplication Factor) _____0.10_____ = ____3.18_____ (TOTAL POINTS)

B. Additional Points--NEP Program
For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay?

	Code	Points
___ Yes	1	10
_X_ No	2	0

C. Additional Points--Great Lakes Area of Concern
for a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 areas of concern (see instructions)

	Code	Points
___ Yes	1	10
__X No	2	0

Code Number Checked: A |_3__| B |_2__| C |_2__|

Points Factor 6: A |_3__|_1__| + B |___|_0__| + C |___|_0__| = |____31____| **TOTAL**

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NPDES Permit Rating Work Sheet

NPDES No.: _V_|_A_|_0_|_0_|_0_|_3_|_8__|_0_|_8__|

SCORE SUMMARY

Factor	Description	Total Points
1	Toxic Pollutant Potential	5
2	Flow/Stream flow Volume	30
3	Conventional Pollutants	30
4	Public Health Impacts	0
5	Water Quality Factors	20
6	Proximity to Near Coastal Waters	31
	TOTAL (Factors 1-6)	**116**

S1. Is the total score equal to or greater than 80? _X_ Yes (Facility is a major) ___ No

S2. If the answer to the above question is no, would you like this facility to be discretionary major?
___ No
___ Yes (add 500 points to the above score and provide reason below:

Reason:

_____

_____

_____

_____

_____

NEW SCORE: __116_____

OLD SCORE: ___83_____

Debra L. Thompson

Permit Reviewer's Name

757-518-2162
Phone Number

March 17, 2011
Date

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Revised 2/2003

State "Transmittal Checklist" to Assist in Targeting Municipal and Industrial Individual NPDES Draft Permits for Review

Part I. State Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name: Perdue Farms, Incorporated

NPDES Permit Number: VA0003808

Permit Writer Name: Debra L. Thompson

Date:

Major [X] **Minor** [ ] **Industrial** [X] **Municipal** [ ]

I.A. Draft Permit Package Submittal Includes:	Yes	No	N/A
1. Permit Application?	X		
2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)?	X		
3. Copy of Public Notice?		X	
4. Complete Fact Sheet?	X		
5. A Priority Pollutant Screening to determine parameters of concern?	X		
6. A Reasonable Potential analysis showing calculated WQBELs?	X		
7. Dissolved Oxygen calculations?	X		
8. Whole Effluent Toxicity Test summary and analysis?	X		
9. Permit Rating Sheet for new or modified industrial facilities?	X		

I.B. Permit/Facility Characteristics	Yes	No	N/A
1. Is this a new, or currently unpermitted facility?		X	
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?	X		
3. Does the fact sheet **or** permit contain a description of the wastewater treatment process?	X		

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I.B. Permit/Facility Characteristics - cont.

	Yes	No	N/A
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?		X	
5. Has there been any change in streamflow characteristics since the last permit was developed?		X	
6. Does the permit allow the discharge of new or increased loadings of any pollutants?		X	
7. Does the fact sheet **or** permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?	X		
8. Does the facility discharge to a 303(d) listed water?	X		
a. Has a TMDL been developed and approved by EPA for the impaired water?	X		
b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?			
c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?	X		
9. Have any limits been removed, or are any limits less stringent, than those in the current permit?		X	
10. Does the permit authorize discharges of storm water?	X		
11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?		X	
12. Are there any production-based, technology-based effluent limits in the permit?	X		
13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?		X	
14. Are any WQBELs based on an interpretation of narrative criteria?	X		
15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations?		X	
16. Does the permit contain a compliance schedule for any limit or condition?	X		
17. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?		X	
18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?	X		
19. Is there any indication that there is significant public interest in the permit action proposed for this facility?	X		
20. Have previous permit, application, and fact sheet been examined?	X		

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Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Checklist – for POTWs

(To be completed and included in the record only for POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet or permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?			
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?			

II.B. Effluent Limits – General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?			
2. Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?			

II.C. Technology-Based Effluent Limits (POTWs)	Yes	No	N/A
1. Does the permit contain numeric limits for ALL of the following: BOD (or alternative, e.g., CBOD, COD, TOC), TSS, and pH?			
2. Does the permit require at least 85% removal for BOD (or BOD alternative) and TSS (or 65% for equivalent to secondary) consistent with 40 CFR Part 133?			
a. If no, does the record indicate that application of WQBELs, or some other means, results in more stringent requirements than 85% removal or that an exception consistent with 40 CFR 133.103 has been approved?			
3. Are technology-based permit limits expressed in the appropriate units of measure (e.g., concentration, mass, SU)?			
4. Are permit limits for BOD and TSS expressed in terms of both long term (e.g., average monthly) and short term (e.g., average weekly) limits?			
5. Are any concentration limitations in the permit less stringent than the secondary treatment requirements (30 mg/l BOD5 and TSS for a 30-day average and 45 mg/l BOD5 and TSS for a 7-day average)?			
a. If yes, does the record provide a justification (e.g., waste stabilization pond, trickling filter, etc.) for the alternate limitations?			

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?			
2. Does the fact sheet indicate that any WQBELs were derived from a completed and EPA approved TMDL?			
II.D. Water Quality-Based Effluent Limits – cont.	**Yes**	**No**	**N/A**
3. Does the fact sheet provide effluent characteristics for each outfall?			

4. Does the fact sheet document that a "reasonable potential" evaluation was performed?			
a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?			
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?			
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?			
d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations)?			
e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?			
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?			
6. For all final WQBELs, are BOTH long-term AND short-term effluent limits established?			
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?			
8. Does the record indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?			

II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters and other monitoring as required by State and Federal regulations?			
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?			
3. Does the permit require at least annual influent monitoring for BOD (or BOD alternative) and TSS to assess compliance with applicable percent removal requirements?			
4. Does the permit require testing for Whole Effluent Toxicity?			

II.F. Special Conditions	Yes	No	N/A
1. Does the permit include appropriate biosolids use/disposal requirements?			
2. Does the permit include appropriate storm water program requirements?			

II.F. Special Conditions – cont.	Yes	No	N/A
3. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			
4. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?			

5. Does the permit allow/authorize discharge of sanitary sewage from points other than the POTW outfall(s) or CSO outfalls [i.e., Sanitary Sewer Overflows (SSOs) or treatment plant bypasses]?			
6. Does the permit authorize discharges from Combined Sewer Overflows (CSOs)?			
a. Does the permit require implementation of the "Nine Minimum Controls"?			
b. Does the permit require development and implementation of a "Long Term Control Plan"?			
c. Does the permit require monitoring and reporting for CSO events?			
7. Does the permit include appropriate Pretreatment Program requirements?			

II.G. Standard Conditions	Yes	No	N/A
1. Does the **permit** contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?			

List of Standard Conditions – 40 CFR 122.41

Duty to comply
Duty to reapply
Need to halt or reduce activity not a defense
Duty to mitigate
Proper O & M
Permit actions

Property rights
Duty to provide information
Inspections and entry
Monitoring and records
Signatory requirement
Bypass
Upset

Reporting Requirements
- Planned change
- Anticipated noncompliance
- Transfers
- Monitoring reports
- Compliance schedules
- 24-Hour reporting
- Other non-compliance

2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for POTWs regarding notification of new introduction of pollutants and new industrial users [40 CFR 122.42(b)]?			

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Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Review Checklist – For Non-Municipals

(To be completed and included in the record for all non-POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet **or** permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?	X		
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?	X		

II.B. Effluent Limits – General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?	X		
2. Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?			X

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ)	Yes	No	N/A
1. Is the facility subject to a national effluent limitations guideline (ELG)?	X		
a. If yes, does the record adequately document the categorization process, including an evaluation of whether the facility is a new source or an existing source?	X		
b. If no, does the record indicate that a technology-based analysis based on Best Professional Judgement (BPJ) was used for all pollutants of concern discharged at treatable concentrations?			
2. For all limits developed based on BPJ, does the record indicate that the limits are consistent with the criteria established at 40 CFR 125.3(d)?	X		
3. Does the fact sheet adequately document the calculations used to develop both ELG and /or BPJ technology-based effluent limits?	X		
4. For all limits that are based on production or flow, does the record indicate that the calculations are based on a "reasonable measure of ACTUAL production" for the facility (not design)?	X		
5. Does the permit contain "tiered" limits that reflect projected increases in production or flow?	X		
a. If yes, does the permit require the facility to notify the permitting authority when alternate levels of production or flow are attained?		X	
6. Are technology-based permit limits expressed in appropriate units of measure (e.g., concentration, mass, SU)?	X		

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II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ) – cont.	Yes	No	N/A
7. Are all technology-based limits expressed in terms of both maximum daily, weekly average, and/or monthly average limits?	X		
8. Are any final limits less stringent than required by applicable effluent limitations guidelines or BPJ?		X	

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?	X		
2. Does the record indicate that any WQBELs were derived from a completed and EPA approved TMDL?	X		
3. Does the fact sheet provide effluent characteristics for each outfall?	X		
4. Does the fact sheet document that a "reasonable potential" evaluation was performed?	X		
a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?	X		
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?	X		
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?	X		
d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations where data are available)?	X		
e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?	X		
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?	X		
6. For all final WQBELs, are BOTH long-term (e.g., average monthly) AND short-term (e.g., maximum daily, weekly average, instantaneous) effluent limits established?	X		
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?	X		
8. Does the fact sheet indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?	X		

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II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters?	X		
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?	X		
3. Does the permit require testing for Whole Effluent Toxicity in accordance with the State's standard practices?	X		

II.F. Special Conditions	Yes	No	N/A
1. Does the permit require development and implementation of a Best Management Practices (BMP) plan or site-specific BMPs?		X	
a. If yes, does the permit adequately incorporate and require compliance with the BMPs?			
2. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?	X		
3. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?	X		

II.G. Standard Conditions	Yes	No	N/A
1. Does the **permit** contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?	X		

List of Standard Conditions – 40 CFR 122.41

Duty to comply
Duty to reapply
Need to halt or reduce activity not a defense
Duty to mitigate
Proper O & M
Permit actions

Property rights
Duty to provide information
Inspections and entry
Monitoring and records
Signatory requirement
Bypass
Upset

Reporting Requirements
- Planned change
- Anticipated noncompliance
- Transfers
- Monitoring reports
- Compliance schedules
- 24-Hour reporting
- Other non-compliance

2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for existing non-municipal dischargers regarding pollutant notification levels [40 CFR 122.42(a)]?	X		

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Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name	Debra L. Thompson
Title	Environmental Engineer Senior
Signature	Debra L. Thompson
Date	March 17, 2011

ATTACHMENT 14

CHRONOLOGY SHEET

14-1

VPDES Individual Permit

VPDES Individual Permit

Permit No: VA0003608 | User Manual | Application / Active / History | Facility: Perdue Farms Incorporated - Accomack

Owner: Perdue Farms Incorporated | Permit Writer: Thompson Debra L

General Information | Events | Special Conditions—Permit | Outfall Information/Limits | Billing Info | Land Application | GIS Information

Events

Code	Description	Date Anticipated	Date Completed	Comments
PREVFLED	Old expiration date		06/29/2011	
DTLP	Reissuance letter mailed		07/06/2010	
APRPHOCAL1	First Application Reminder Phone Call		09/06/2010	
APRPHOCAL2	Second Application Reminder Phone Call		11/06/2010	
APDU	Reissuance application due		01/07/2011	
APRD	Application received at RO 1st time		01/05/2011	
APRD2	Applic/Additional info received at RO 2nd ti		01/24/2011	LWK information
ROAPCP	Application Administratively complete		02/22/2011	
APCOMLET	App complete letter sent to permittee		03/01/2011	
DT1VDH	App sent to State Agencies (list in comme		01/18/2011	
DTC1VDH	Comments rec'vd from State Agencies on		01/25/2011	VDH Drinking water, no comments
APCP	Application totally / technically complete		03/01/2011	
DTSITE	Site visit		01/19/2011	
DTSITERP	Site inspection report		02/18/2011	
DTDDP	Draft permit developed		03/29/2011	
DTREV	Draft reviewed		04/13/2011	to MHS for review
DT1PLAN	FS/SOB draft permit sent to planning			
DTPLAN	Planning concurrence on draft permit			
DTEPA	FS/SOB draft permit sent to EPA/OWPS		04/20/2011	
DTC2EPA	EPA concurrence on draft permit	05/28/2011		5/10/11 email to EPA asking for comme
DTC2EPA	EPA concurrence on draft permit	07/01/2011		06/01/11 email to EPA w revisions for T
DTC2EPA	EPA concurrence on draft permit			07/ /11 email to EPA w add'l Comp Sch
DTOWN1	FS/SOB draft permit sent to owner		05/10/2011	
DTOBJ1	First time comments received from owne		05/13/2011	
DTOWN2	FS/SOB draft permit sent to owner 2nd tim		05/20/2011	
DTOWNC2	Second time comments received from ow		05/25/2011	
DTOWNC4	Owner concurrence of draft permit		06/03/2011	
DTPNAUT	Public notice authorization received from t		05/13/2011	
DTNEWS	Public notice letter sent to newspaper			
PN2CO	PN sent to CO for mailing list web site dist			
LGNPERM	Local gov't notification			
PNOT	Date of Public Notice			
PNHEAR	Public hearing date			
DTSIGN	Date Permit signed			
DTEFF	Permit effective			
DTDMRDUE	First DMR due			
FLED	Permit expires		06/29/2016	
MISC	Miscellaneous		02/28/2011	tier determination rec'd from planning
MISC	Miscellaneous		06/17/2011	2nd draft permit sent to EPA for revie
MISC	Miscellaneous		06/01/2011	Revised TMDL sent to PN by CO (no lo
MISC	Miscellaneous		04/19/2011	DP TO COMPLIANCE FOR REVIEW
MISC	Miscellaneous		02/08/2011	requested tier determination
APRD3	Applic/Additional info received at RO 3rd ti		02/17/2011	Updated latitude & longitude
DTC2EPA	EPA concurrence on draft permit			
DTMIF	App sent to Fed Agencies (list in commen		01/25/2011	
DTC1VDH	Comments rec'vd from State Agencies on		02/01/2011	DSS, no comments

ATTACHMENT 15

OTHER PERTINENT CORRESPONSDENCE/INFORMATION

Perdue Farms – Accomac Facility Anaerobic Lagoon Breach

- **January 19, 2011 – Facility Inspection; breach in the anaerobic lagoon liner observed for first time by DEQ**
- **January 25, 2011 – Conversation w/ Perdue regarding anaerobic lagoon; facility engineer suspects liner pulled away from submerged pipe in the area of lagoon; investigating further**
- **February 18, 2011 - Inspection Report to Facility w/ WL for inspection observations**
- **February 18, 2011 – WL for Anaerobic lagoon liner breach**
- **March 10, 2011 – Perdue response to technical inspection and WL**
- **March 17, 2011 – DEQ request Perdue for influent data for Anaerobic lagoon**
- **March 21, 2011 – Rec'd influent data from Perdue for evaluation by DEQ staff (draft VPDES permit to include GW monitoring) GW well information requested by TRO**
- **March 23, 2011 – Addt'l information rec'd from Perdue regarding GW wells and data**
- **March 29, 2011 – Meeting held at TRO to discuss breach in anaerobic lagoon liner**
- **April 5, 2011 – Proposed GW monitoring well locations rec'd from Perdue**
- **April 11, 2011 – DEQ approves GW well locations**
- **April 13, 2011 – Perdue begins GW well installation**
- **April 19, 2011 – WL issued (proper operation & maintenance of treatment units)**
- **May 6, 2011 – Perdue response to April 19th WL**
- **June 14, 2011 – Meeting @ Perdue Accomac facility (DEQ and Perdue staff)**
- **June 20, 2011 – Letter rec'd from Perdue addressing possible solutions for anaerobic lagoon liner breach…Proposed schedule for design/build for new anaerobic lagoon**
- **July 6, 2011 – Conference call b/t TRO and Central Office to discuss anaerobic lagoon breach and incorporation in to permit reissue**
- **July 11, 2011 – Revision to draft permit and factsheet to incorporate compliance schedule for anaerobic lagoon construction and closure of abandoned anaerobic lagoon**

15-2

ENVIRONMENTAL AFFAIRS
22520 Lankford Highway, Accomac VA 23301-1420
PHONE: (757) 787-5210 FAX: (757) 789-5410
email: brucep.roberts@perdue.com

June 20, 2011

Ms. Debra Thompson
Virginia Department of Environmental Quality
Tidewater Regional Office
5636 Southern Boulevard
Virginia Beach, VA 23462

Re: Perdue Farms Inc. - Accomac Complex
Anaerobic Lagoon Follow-up

Dear Ms. Thompson:

Pursuant to our meeting on June 14, 2011, below are the steps and proposed timetable for addressing the anaerobic lagoon liner at our Accomac complex.

As discussed at this meeting, Hazen and Sawyer have completed a preliminary "alternatives evaluation report" which outlined various options to address repairing or replacing the existing anaerobic lagoon. Their report provided a conceptual plan to segregate the section of the existing lagoon where the liner has been compromised and due to cost and the potential "unknown" variables associated with this approach, it was felt that repair was not a viable option. Based on this preliminary report, we believe the most effective solution is to abandon the existing lagoon in-place and consider other treatment alternatives which include:

- One, 13 million gallon covered anaerobic lagoon;
- Dual, 6.5 million gallon covered anaerobic lagoons;
- Dissolved Air Floatation ("DAF") pretreatment and;
- Moving Bed Biofilm Reactor ("MBBR").

We understand your concern regarding possible impacts to the groundwater as a result of the compromised liner and have installed a network of monitoring wells around the perimeter of the lagoon to be sampled quarterly. Recent monitoring has not indicated any detrimental impact on the groundwater as the ammonia and total Kjeldahl nitrogen (TKN) range from <0.2 ppm to 1.0 ppm. Additionally, the section of the compromised liner is from the sidewall of the lagoon and not the bottom, so we believe the integrity of the lagoon remains intact as any liquid escaping would likely follow the path of least resistance and migrate horizontally and not vertically. However, should the quarterly monitoring well sampling show a significant increasing trend in ammonia and TKN concentrations or if the outside of the lagoon begin to show signs of wetness, we will contact your office to determine the appropriate course of action to mitigate the situation. Finally, when the alternative treatment option is chosen, our plan is to pump the liquid portion out of the lagoon and allow the solids to biodegrade in-place over time. We believe that by removing the liquid, any potential source of

groundwater contamination will have been eliminated and the natural degradation of the solids is a cost-effective and environmentally sound approach.

Regarding the schedule of events, this project will require a significant and unplanned capital expenditure and must be reviewed and approved by our Executive Management. We propose the following schedule for your review and concurrence:

- Prepare a report on the alternative options and brief Executive Management by **June 29, 2011.**
- Submit finalized alternative option plan to DEQ by **July 20, 2011.**
- Request for proposal for engineering services by **July 27, 2011.**
- Receive bids back by **August 10, 2011.**
- Capital expenditure request for the design portion by **September 1, 2011.**
- Complete design phase by **January 15, 2012.**
- Capital expenditure request for construction by **March 1, 2012.**
- Begin construction by **April 30, 2012.**
- Abandon the existing anaerobic lagoon and bring the new treatment alternative on-line by **December 31, 2012.**

We appreciated the opportunity to meet with you, Roger and Steve and your willingness to work with us to resolve this matter. Should you have any questions of need additional information, please do not hesitate to contact me at (540) 296-0925.

Sincerely,

Paul B. Roberts

P. Bruce Roberts
Senior Environmental Manager

Select [illegible]

Cc: Lester Gray
Joe Campbell
Carl Johnson
Jeff Smith
Randy Rhoades

15-4

Thompson, Debra (DEQ)

From: Daub, Elleanore (DEQ)
Sent: Thursday, July 14, 2011 11:58 AM
To: Thompson, Debra (DEQ); Cunningham, Frederick (DEQ)
Subject: RE: REVISED DP VA0003808 for Perdue Farms (Anaerobic Lagoon)

Looks good to us.

elleanore.daub@deq.virginia.gov
Elleanore M. Daub
DEQ
Office of Water Permit and Compliance Assistance
629 East Main Street
Richmond VA 23219
(804)698-4111 Work
(804)698-4032 Fax

From: Thompson, Debra (DEQ)
Sent: Thursday, July 14, 2011 11:41 AM
To: Daub, Elleanore (DEQ); Cunningham, Frederick (DEQ)
Subject: REVISED DP VA0003808 for Perdue Farms (Anaerobic Lagoon)

Elle and Fred...TRO's LATEST version of Perdue compliance schedule and special condition for anaerobic lagoon...Thanks for your review....

please review the compliance schedule (Part I.C) and the two special conditions pertaining to the newly proposed anaerobic lagoon (Part I.D.11 and 12),

Debra L. Thompson
Environmental Engineer Senior
VA Department of Environmental Quality
5636 Southern Boulevard
Virginia Beach, VA 23462
(757) 518-2162 phone

NEW EMAIL ADDRESS:
debra.thompson@deq.virginia.gov
Office Info: http://www.deq.virginia.gov/regions/tidewater.html

The information in this e-mail may be viewed by others and is subject to disclosure under the Freedom of Information Act (FOIA)

15-5

Thompson, Debra (DEQ)

From: Siudyla, Eugene (DEQ)
Sent: Thursday, June 16, 2011 2:55 PM
To: Everton, Roger (DEQ); Thompson, Debra (DEQ)
Cc: Nold, Maria (DEQ)
Subject: RE: Perdue GW monitoring results

Roger,

Thanks for providing the Perdue GW monitoring results.

TKN and ammonia have been excellent indicator parameters of a release from anaerobic lagoons to ground water in the Tidewater Region. In addition, chloride, conductivity, TDS and TOC have also been excellent indicator parameters of a release from anaerobic lagoons.

I agree with Perdue staff that a detectable release to ground water is not evident in monitoring wells 1,2, 4, and the old well at the bunker. However, a detectable release is evident in monitoring well 3. All the indicator parameters except for ammonia are significantly higher in monitoring well 3 compared to the other four monitoring wells sampled. Also, nitrate is extremely high in monitoring well 3 indicating there is something unusual going on in the vicinity of monitoring well 3 (oxidizing conditions) causing the nitrogen form to be converted to nitrate.

You mentioned that you sketched in the ground water flow direction for the data set indicated by Perdue staff on the attached map. In order for the ground water flow direction to be determined, the elevations of the tops of all the wells would have to have been surveyed, and the ground water levels data would need to be converted to mean sea level or whatever datum used for the well survey. We need to see their water level data table, if we want to evaluate the quality of their ground water level data and the flow direction determination.

Let me know if you want to discuss this further.

Gene Siudyla
Department of Environmental Quality
Tidewater Regional Office
Petroleum Storage Tank Remediation Program
(757) 518-2117
Eugene.Siudyla@deq.virginia.gov

From: Everton, Roger (DEQ)
Sent: Thursday, June 16, 2011 7:11 AM
To: Siudyla, Eugene (DEQ); Thompson, Debra (DEQ)
Cc: Nold, Maria (DEQ)
Subject: Perdue GW monitoring results

Gene, Attached are the results of the first two GW monitoring samples at Perdue. The facility feels the absence of TKN and Ammonia in the well closest to the lagoon liner breach (well #2) indicates there has not been a detectable release from the lagoon. As I understand nitrogen is primarily in the form of TKN and ammonia in an anaerobic lagoon, with nitrate being insignificant. Do you agree that TKN and ammonia would be good indicators of a release from the lagoon. Would there be any significant change in the nitrogen form (i.e. to nitrate) in the shallow gw zone between the lagoon and the well? Are there any other data that stands out in the data set? Thanks

Groundwater Wells Analysis										
Well #	Well 1		Well 2		Well 3		Well 4			Fence
Location	Back of Lagoon at gate		Back of Lagoon at fence		Near DAF Bldg		Field			Old well at Bunker
Date	5/18/2011	6/2/2011	5/18/2011	6/2/2011	5/18/2011	6/2/2011	5/18/2011	6/2/2011	3/9/2011	3/9/2011
Chloride Mg/l	38	33	35	28	89	85	14	17	22	35
Total Phosphorus Mg/l	0.03	<0.02	0.03	0.02	0.13	0.03	0.06	0.02		
Nitrate Mg/l	1.05	1.63	13.10	14.20	26.27	33.95	7.10	7.40	10.88	19.15
Ammonia Mg/l	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TKN Mg/l	<0.2	<0.2	0.2	<0.2	1.0	1.0	0.3	<0.2	<0.2	<0.2
Depth of Water Ft.	9.00	9.20	11.48	11.67	11.02	11.91	11.40	11.62	11.22	10.67
pH S.U.	6.0	5.8	5.4	5.4	6.4	6.4	5.2	5.2	5.9	5.5
Conductivity Umhos/CM	302.2	248.9	332.2	308.3	1148.0	1158.0	180.6	173.0	355.5	457.6
TDS Mg/l	188	162	250	223	712	696	150	133	150	289
TOC Mg/l	6.0	7.0	4.0	8.0	39.0	68.0	<1.0	<1.0		

9-51

Perdue

Thompson 6/14

15-7

Thompson, Debra (DEQ)

From: Brockenbrough, Allan (DEQ)
Sent: Friday, April 01, 2011 3:18 PM
To: Thompson, Debra (DEQ)
Subject: RE: Perdue Farms, Inc Accomac, VA VPDES Permit VA0003808

Hey Debra-

I finally got to discuss this with Fred and we recommend a monthly average concentration limit consistent with the TMDL. I believe you said this equated to 0.08 mg/l. I would go with TP monitoring at least 3 days/week. We've had an issue with some facilities sample shopping and not feeding their alum consistently when sampling is only 1/W. I agree that a 4 yr schedule of compliance is appropriate. If the permittee objects to the monthly concentration limit then we can look at another approach but that seems to be the easiest route for ensuring compliance with the TMDL. We should probably get together on an appropriate QL and <QL reporting procedures. There are a couple of NVRO permits with 0.1 mg/l TP limits that we should probably look at.

Give me a call if you want to discuss.

Allan

From: Thompson, Debra (DEQ)
Sent: Friday, March 25, 2011 12:50 PM
To: Brockenbrough, Allan (DEQ)
Subject: Perdue Farms, Inc Accomac, VA VPDES Permit VA0003808

Hi Allan, working on reissuance and incorporation of Benthic TMDL. Facility discharge is to Atlantic Ocean. TP TMDL WLA = Daily TP - 1.8 lb/day and Annual TP - 664.2 lb/yr. Would a concentration limit be required? If not and instead monitoring only is required, would the frequency be daily? (kind of harsh) or would 1/week or 2/month be sufficient? Thanks,

Debra L. Thompson
Environmental Engineer Senior
VA Department of Environmental Quality
5636 Southern Boulevard
Virginia Beach, VA 23462
(757) 518-2162 phone

NEW EMAIL ADDRESS:
debra.thompson@deq.virginia.gov
Office Info: http://www.deq.virginia.gov/regions/tidewater.html

The information in this e-mail may be viewed by others and is subject to disclosure under the Freedom of Information Act (FOIA)

15-8

Thompson, Debra (DEQ)

From: Thompson, Debra (DEQ)
Sent: Thursday, June 09, 2011 3:51 PM
To: 'Smith.Mark@epamail.epa.gov'; Daub, Elleanore (DEQ)
Cc: McConathy, James (DEQ); Sauer, Mark (DEQ); Thomas, Stephen (DEQ)
Subject: Revised Draft Permit VA0003808-Perdue Farms, Inc
Attachments: DLT-VA0003808 Perdue Farms FS w Concentrations.doc; DLT-VA0003808 Perdue Farms Permit w Concentrations.doc

Mark, below is a summary of the revisions made to the draft permit for Perdue Farms, Inc, Accomac, VA. Attached are the revised draft permit and fact sheet documents for your review and approval. Should you need additional documentation or clarification on any item in the draft permit or fact sheet, please let me know and I will certainly provide it for you.

Thank you,

Debbie Thompson

VPDES Permit No. VA0003808 - Perdue Farms, Incorporated

Changes to the draft permit and/or factsheet are as follows:

1. TMDL-Changes are reflected in the factsheet

   The draft permit was originally sent to EPA for review on April 20, 2011. The draft permit included TP limits in concentration rather than daily load as expressed in the TMDL. Questions were raised about incorporation of the TMDL as a concentration limit without inclusion of the annual load requirements. After much discussion between Permits and TMDL staff at DEQ and EPA, the decision was made to modify the current TMDL and delete the annual load requirements.(See message below to Greg (EPA-TMDL) from Craig Lott (DEQ-TMDL). The TMDL modification language went to Public Notice on Wednesday, June 1, 2011.

2. Outfall 007

   This outfall was permanently sealed on June 8, 2011 and therefore all requirements for this outfall shall be deleted from the permit (Part 1.A monitoring, Water Quality Standards - Attachment A monitoring, and a Toxics Monitoring Program.

3. Point source discharges from this facility addressed in Permit No. VA0003808 is seven (7).

4. Long Term Avg Flow = 2.34 MGD

   The long term average flow calculation was incorrect in the documents you received on April 20, 2011. The correct long term average flow is 2.34 MGD. This value has been used to recalculate the mass load limits for BOD5, TSS, Oil & Grease and Total Nitrogen at outfall 001. No other recalculations have been made to this permit.

15-9

Other Attachments include, revised Factsheet and Draft Permit.

The following email was sent to EPA; approval received on June 1, 2011. TMDL mod sent on to PN on June 1, 2011.

Greg,

Hello. As we discussed Monday, DEQ TMDL staff have reviewed the Parker Creek TMDL, "Benthic Total Maximum Daily Load (TMDL) Development Parker Creek, Virginia" dated July 2008. The review indicated several areas to improve descriptions in the TMDL. The impaired stream segment's receiving water, in Accomack County, Virginia, is tidal Parker Creek and eventually the Atlantic Ocean. The Executive Summary 'Endpoint Determination' section states, "Based on the average instream total phosphorus concentration of the reference stream, it was concluded that a suitable endpoint for total phosphorus is 0.10 mg/L." This and other findings described throughout the report demonstrate that the impaired Parker Creek Benthic Aquatic Life Use endpoint is both concentration based and flow independent. The Parker Creek hydrodynamics are effluent dominated and the flow rate changes at the downstream TMDL outlet location are highly dependent upon flow changes at the Perdue permitted discharge outfall location in the headwaters. A description later in the report currently indicates that the daily and annual Waste Load Allocations (WLAs) should be load based and may be used to achieve the TMDL endpoint. This 'load' based mechanism to achieve this concentration endpoint creates confusion. The confusion is associated with the mechanism to restrict load to achieve a concentration endpoint and could result in a need to modify the TMDL when major natural or production originated changes in flow regime occur. While the TMDL concentration endpoint may be achieved, these flow regime changes, from either natural or permitted sources, should have no adverse impact on stream water quality or use attainment as described in the TMDL.

Proposed changes: TMDL equations and WLA equations should remain, but narrative reinforcement should describe that this is a concentration based nutrient TMDL. The concentration endpoint should be achieved by enforcement of the 0.10 mg/L total phosphorus permit limit, and appropriate implementation to achieve reductions in the original non point phosphorus sources in the watershed. The TMDL does not require flow restrictions to assure attainability of Parker Creek's benthic aquatic life use. Although overall loading may change at the TMDL outlet this should not impact stream water quality or attainment of the currently impaired use.

Thanks for your consideration. If you have any questions, please give me a call.

Craig

Craig Lott
Office of Watershed Programs
Virginia Department of Environmental Quality
P.O. Box 1105
Richmond, VA 23218
Phone: (804) 698-4240
Fax: (804) 698-4116
craig.lott@deq.virginia.gov
http://www.deq.virginia.gov/tmdl

Debra L. Thompson
Environmental Engineer Senior
VA Department of Environmental Quality
5636 Southern Boulevard
Virginia Beach, VA 23462
(757) 518-2162 phone

NEW EMAIL ADDRESS:
debra.thompson@deq.virginia.gov
Office Info: http://www.deq.virginia.gov/regions/tidewater.html

The information in this e-mail may be viewed by others and is subject to disclosure under the Freedom of Information Act (FOIA)

15-10

Recipient	Delivery
'Smith.Mark@epamail.epa.gov'	
Daub, Elleanore (DEQ)	Delivered: 6/9/2011 3:51 PM
McConathy, James (DEQ)	Delivered: 6/9/2011 3:51 PM
Sauer, Mark (DEQ)	Delivered: 6/9/2011 3:51 PM
Thomas, Stephen (DEQ)	Delivered: 6/9/2011 3:51 PM

15-11

COMMONWEALTH of VIRGINIA

Department of Health
DIVISION OF SHELLFISH SANITATION
109 Governor Street, Room 614-B
Richmond, VA 23219

Ph: 804-864-7487
Fax: 804-864-7481

MEMORANDUM

DATE: 2/1/2011

TO: Debra L. Thompson
Department of Environmental Quality

FROM: B. Keith Skiles, MPH, Classification Chief
Division of Shellfish Sanitation

SUBJECT: Perdue Farms, Inc.

City / County: Accomack

Waterbody: Parker Creek

Type: ☑ VPDES ☐ VMRC ☐ VPA ☐ VWP ☐ JPA ☐ Other:

Application / Permit Number: VA0003808

☐ The project will not affect shellfish growing waters.

☐ The project is located in approved shellfish growing waters, however, the activity as described will not require a change in classification.

☑ The project is located in condemned shellfish growing waters and the activity, as described, will not cause an increase in the size or type of the existing closure.

☐ The project will affect condemned shellfish waters and will not cause an increase in the size of the total condemnation. However, a prohibited area (an area from which shellfish relay to approved waters for self-purification is not allowed) will be required within a portion of the currently condemned area. See comments.

☐ A buffer zone (including a prohibited area) has been previously established in the vicinity of this discharge, however, the closure will have to be revised. Map attached.

☐ This project will affect approved shellfish waters. If this discharge is approved, a buffer zone (including a prohibited area) will be established in the vicinity of the discharge. Map attached.

☐ Other.

ADDITIONAL COMMENTS:

Area #: 98

bks

VDH Virginia Department of Health
www.vdh.virginia.gov

15-12

Conformance Review

Date: 8/23/2011

To: Kristie Britt, TRO

Permit Writer: Debra L. Thompson

Facility: Perdue Farms, Inc.

Permit Number: VA0003808

Issuance, Reissuance or Modification (if Modification describe): Reissuance

Permit Expiration Date: 6/30/2011

Waterbody ID (ex: VAT-G15E): VAT-D03E

Topo Name: Accomac, VA

Facility Address:22520 Lankford Highway, Accomac, VA 23301

Click here to enter text.

Please Review the subject VPDES permit Package [Application / Fact Sheet/ Part I] for conformance with the applicable Board Adopted plans and indicate one of the following:

	This Facility is **NOT MENTIONED** in an existing Board adopted water quality management planning document or TMDL applicable to the
Click here to enter text.	
	This Facility will be included
Click here to enter text.	
X	This Facility **IS MENTIONED** in an existing Board adopted water quality management planning document or TMDL applicable to the
Click here to enter text. Limits are assigned for TP(0.10) & fecal-Ecoli (200-126) in TMDLs EPA	
	The Facility **APPEARS TO CONFORM** with the plans. approved & Management Plan.
Click here to enter text.	
	This Facility **IS NOT IN CONFORMANCE** with the existing Board adopted water quality management planning document and/ or the TMDL applicable to the
Click here to enter text.	

Review will be completed in 15 days of receipt of request.

Additional Comments:

Click here to enter text. Kristie Britt

15-12(a)

TMDL Permit Review

Date: 9/2/2011

To: Jennifer Howell, TRO √ JSH 9/23/2011

Permit Writer: Debra L. Thompson

Facility: Perdue Farms, Inc..

Permit Number: VA0003808

Issuance, Reissuance or Modification (if Modification describe) : Reissuance

Permit Expiration Date: 6/29/2011

Waterbody ID (ex: VAT-G15E): VAT-DO3E Parker Creek to Metompkin Bay

Topo Name: Accomac

Facility Address:

Lankford Highway, Rt 13, Accomac, VA

Receiving Stream: Attached are topographic maps showing facility property boundaries and outfall(s) locations for those included in this request.

Stream Name: Parker Creek	
Outfall 009 37'44'7.224, 75'39'52.955 unnamed trib to Parker Creek	
Outfall #: 001	**Lat Lon: 37'44'15.684", 75'39'28.008"**
Outfall #: 003	**Lat Lon: 37'43'55.056", 75'39'25.956"**
Outfall #: 004	**Lat Lon: 37'43'55.056", 75'39'23.759"**
Stream Name (2): Parker Creek	
Click here to enter text.	
Outfall #: 005	**Lat Lon: 37'44'3.912", 75'39'11.159"**
Outfall #: 006	**Lat Lon: 34'44'6.575", 75'39'22.379"**
Outfall #: 008	**Lat Lon: 37'44'15.684", 75'39'22.379"**

If greater than 2 receiving streams or 3 outfalls per stream please provide a separate table with outfall listings and Latitude Longitude description.

Is there a design flow change? If yes give the change. None at this time

TMDL Review:

Is a TMDL IN PROGRESS for the receiving stream? NO	
Has a TMDL been APPROVED that includes the receiving stream?	
Yes	
If yes, Include TMDL Name, Pollutant(s) and date of approval:	
1) Bacteria Total Maximum Daily Load (TMDL) Development for the Parker Creek Watershed, Virginia: Fecal coliform & Enterococci: EPA Approved 1/15/2008 2) Benthic Total Maximum Daily Load (TMDL) Development Parker Creek, Virginia: TP: EPA Approved 11/7/2008	
Is the facility assigned a WLA from the TMDL?	Yes – see below
If Yes, what is the WLA?	
1) Fecal coliform: 1.59E+10 cfu/100mL – based on 10 yr ave flow rate of 2.1 MGD and permitted monthly FC ave of 200 cfu/100mL *The TMDL was developed by applying the Shellfish Use water quality criteria to the impaired waterbody because those criteria are more restrictive than the standards for the Recreation Use. 2) TP: 0.10 mg/L. This is a concentration-based endpoint determined by using reference conditions and is flow independent.	

Review will be completed in 30 days of receipt of request.

15-13

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
Fax (804) 698-4500 TDD (804) 698-4021
www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

RECEIVED – DEQ
AUG 08 2011
Tidewater Regional Office

August 4, 2011

Mr. Greg Voigt
US EPA Region III TMDL Coordinator
USEPA REGION 3 – 3WP12
1650 Arch Street
Philadelphia, PA 19103-2029

RE: Total Maximum Daily Load modifications for waste load allocations in the benthic TMDL for Parker Creek watershed.

Dear Mr. Voigt,

The purpose of this letter is to request a modification to the text in the benthic Total Maximum Daily Load (TMDL) developed for the tidal Parker Creek, located in Accomack County, Virginia. EPA Region III approved the benthic TMDL addressing Total Phosphorus impairment for the Parker Creek watershed on 11/7/2008. The modification submittal provides continuity between affected TMDL endpoint achievement and the original TMDL report.

Modification: The Parker Creek TMDL study will be changed to describe how a previously permitted facility, Perdue Farms, Inc in Accomack, VA (VPDES Permit No. VA0003808) will be required to assure compliance with the TMDL total phosphorus concentration endpoint, 0.10 mg/L. The Executive Summary 'Endpoint Determination' section states, "Based on the average instream total phosphorus concentration of the reference stream, it was concluded that a suitable endpoint for total phosphorus is 0.10 mg/L." The TMDL report indicates that the impaired Parker Creek Benthic Aquatic Life Use endpoint is both concentration based and flow independent. The concentration endpoint should be achieved by enforcement of the 0.10 mg/L total phosphorus permit limit, and appropriate reductions in the non point phosphorus sources in the watershed. The Parker Creek hydrodynamics are effluent dominated. The flow rate changes at the downstream TMDL outlet location are highly dependent upon permitted Perdue discharge flow changes in the headwaters. A description later in the report currently indicates that the daily and annual Waste Load Allocations (WLAs) should be load based and may be used to achieve the TMDL endpoint. This 'load' based mechanism to achieve this concentration endpoint creates confusion. While the TMDL concentration endpoint may be achieved, these flow regime changes, from either natural or permitted sources, should have no adverse impact on stream water quality or use attainment as described in the TMDL. The TMDL does not require flow restrictions to assure attainability of Parker Creek's benthic aquatic life use.

The combined changes do not affect the original TMDL equations and WLA equations, which will remain.

DEQ provided public notice and a 30-day comment period on the TMDL modifications which expired on July 20, 2011. No comments were received. DEQ is submitting this request for modification of the Parker Creek TMDL for EPA approval and have enclosed one printed copy of modified pages for this request.

Permit Details
Perdue Farms, Inc in Accomack, VA (VPDES Permit No. VA0003808) permit, which expired on June/30/2011, has been administratively continued. A proposed revised permit has been submitted to EPA and is pending TMDL modification approval.

TMDL Revisions
The following text from the Parker Creek TMDL report was affected by the described change, as follows:

p E-3: text added to the end of the paragraph in Executive Summary Section 'Endpoint Determination' is, "The impaired Parker Creek benthic Aquatic Life Use endpoint is both concentration based and flow independent."
p 6-3: text added to paragraph 2, Section 6.1.3, 'Wasteload Allocation', The Parker Creek hydrodynamics are effluent dominated and the flow rate changes at the downstream TMDL outlet location are highly dependent upon flow changes at the Perdue permitted discharge outfall location in the headwaters. While the TMDL concentration endpoint may be achieved, flow regime changes from either natural or permitted sources should have no adverse impact on stream water quality or use attainment as described in the TMDL. The TMDL does not require flow restrictions to assure attainability of Parker Creek's benthic aquatic life use.

In accordance with EPA's August 2003 letter to VADEQ, VADEQ hereby requests EPA approval of the proposed modification. If you or your staff has any questions, please contact me at (804) 698-4299.

Sincerely,

David L Lazarus

David Lazarus
Watershed Programs Manager
Office of Watershed Programs

Attachments
Replacement page(s)
cc: Charles Lunsford, VADCR
Sandra Mueller, VADEQ
Jennifer Howell, TRO TMDL coordinator
File CO

Potential sources of total phosphorus in the watershed include one point source and nonpoint sources.

Improvement of the benthic invertebrate community in Parker Creek is dependent upon reducing point source and nonpoint source total phosphorus loading to the stream. These measures should serve to improve benthic habitat and subsequently restore invertebrate populations in the stream. Therefore, a total phosphorus TMDL was developed for Parker Creek.

Endpoint Determination

VADEQ has not yet adopted a numeric standard for TP. Therefore, a total phosphorus endpoint was determined based on instream total phosphorus measurements at a reference stream, unnamed tributary of Holt Creek (UNT Holt Creek), located in Virginia's Eastern Shoreline. Based on the average instream total phosphorus concentration of the reference stream, it was concluded that a suitable endpoint for total phosphorus is 0.10 mg/L. This endpoint was applied over the entire year in the benthic impaired segment of Parker Creek. The impaired Parker Creek benthic Aquatic Life Use endpoint is both concentration based and flow independent.

Total Phosphorus Loading Determination

Total phosphorus sources within the benthic impaired Parker Creek watershed include both point and nonpoint sources. The only point source loading into the watershed is from an individual permitted discharge facility, Perdue Farms, Inc. Nonpoint sources include total phosphorus from agricultural and urban runoff.

Total phosphorus loads were determined for the impaired watershed in order to quantify the reductions necessary to achieve the designated aquatic life use for Parker Creek. Total phosphorus loadings from land areas were determined using the Generalized Watershed Loading Functions (GWLF) model. GWLF model simulations were performed for 2006 in order to reflect the period of most recent data collection. Average annual total phosphorus loads were computed for each land source based on a one year simulation period. Point source loads were computed based on the facility's average flow and average total phosphorus concentrations recorded in 2006 DMR data.

TMDL Allocation

Total phosphorus TMDL allocations for Parker Creek were based on the following equation.

$$TMDL = WLA + LA + MOS$$

Where:

TMDL= Total phosphorus Load of the Adjusted Reference Watershed

WLA = Wasteload Allocation

LA = Load Allocation

MOS = Margin of Safety

The wasteload allocation represents the total phosphorus load allocated to the point source. The load allocation represents the total phosphorus load allocated to nonpoint sources. A margin of safety is applied to account for uncertainty in methodologies and determination of total phosphorus loads. An explicit margin of safety of 10% was used for the Parker Creek TMDL.

The evaluated Parker Creek TMDL allocation scenarios considered phosphorus load reductions from point and nonpoint sources in the watershed. The wasteload allocation is applied to Perdue Farms, Inc., the only individual permitted facility located within the benthic impaired Parker Creek watershed. The load allocation will be applied to the land based loads in the watershed by taking an equal percent reduction from all land sources except forested lands. Loads from forested lands are considered to be representative of the natural condition and therefore were not subject to reductions.

The three scenarios considered in the Parker Creek TMDL development are presented in **Table E-1.** Scenarios 1 and 2 were used to derive scenario 3 that is the TMDL for Parker Creek. In all three scenarios, the load for nonpoint sources was estimated based on model results from GWLF in 2006. Scenario 1 represents the existing phosphorus loading conditions with the point source load from Perdue Farms, Inc. based on the average TP concentration from the 2006 DMR data (0.81 mg/L) and average flow (2.18 MGD). Scenario 2 examines the TP contribution from Perdue Farms Inc. to the total TP loading when using an effluent TP concentration of 0.50 mg/L and the average 2006

Table 6- 2: Comparison of the Total Phosphorus Load to the Allowable TMDL Load					
Scenario	Point Source (lb/year)	Nonpoint Sources (lb/year)	Total Load (lb/year)	Allowable Load (Target - MOS) (lb/year)	Comparison to the Allowable Load (%)
1	5366.6	478.9	5845.6	1000.0	82.9
2	3320.9	478.9	3799.9	1000.0	73.7
3	664.2	335.8	1000.0	1000.0	0.0

6.1.3 Wasteload Allocation

Wasteload allocation is applied to Perdue Farms, Inc., the only individual permitted facility located within the Parker Creek watershed. **Table 6-3** shows the wasteload allocation and the required reduction for the Perdue Farms, Inc effluent.

Table 6- 3: Wasteload Allocation for Parker Creek			
WLA Category	Existing Load (lb/year)	Allocated Load (lb/year)	Percent Reduction
Perdue Farms, Inc.	5366.6	664.2	87.6

The Parker Creek hydrodynamics are effluent dominated and the flow rate changes at the downstream TMDL outlet location are highly dependent upon flow changes at the Perdue permitted discharge outfall location in the headwaters. While the TMDL concentration endpoint may be achieved, flow regime changes from either natural or permitted sources should have no adverse impact on stream water quality or use attainment as described in the TMDL. The TMDL does not require flow restrictions to assure attainability of Parker Creek's benthic aquatic life use.

6.1.4 Load Allocation

Load allocation will be applied to the land based loads in the watershed, and an equal percent reduction is required from all land sources except forested lands. Loads from forested lands are considered to be representative of the natural condition and therefore were not subject to reductions. The existing and allocated sediment loads for each

nonpoint source in the Parker Creek impaired watershed are presented in **Table 6-4**. In addition, the necessary percent reduction is shown for each source.

Table 6- 4: Load Allocations Summary for Parker Creek

Source	Land Use Type	Existing Load (lb/year)	Allocated Load (lb/year)	Percent Reduction
Nonpoint Source	Deciduous Forest	0.4	0.4	0.0
	Evergreen Forest	0.4	0.4	0.0
	Mixed Forest	0.0	0.0	0.0
	Pasture/Hay	35.3	24.7	29.9
	Cultivated Crop	267.0	187.1	29.9
	Barren Land	7.1	4.9	29.9
	Low intensity Dev	7.9	5.6	29.9
	Medium intensity Dev	23.8	16.7	29.9
	High intensity Dev	23.4	16.4	29.9
	Developed open space	10.1	7.1	29.9
	Groundwater	97.5	68.3	29.9
	Septic Systems	6.0	4.2	29.9
	Total	478.9	335.8	29.9

6.2 Overall Recommended TMDL Allocations

The total daily TP TMDL load, wasteload allocation, load allocation, and margin of safety for Parker Creek are summarized in **Table 6-5** in lb/day. The wasteload allocation was based on the permitted facility design flow in million gallons per day and the TP endpoint concentration of 0.1 mg/L. The load allocation was estimated using the GWLF model. The nonpoint source model was set up using a daily time step (daily precipitation and temperature input) to calculate the annualized and average daily TP loads. The recommended daily allocations (lb/day) for each watershed source in the benthic impaired segment of Parker Creek are provided in **Table 6-6**.

Overall, the TP load in the benthic impaired Parker Creek watershed must be reduced by 82.9% to meet the established TMDL endpoint.

Table 6- 5: Total Phosphorus TMDL for the Parker Creek Watershed (lb/day)

TMDL	Wasteload Allocation (WLA)	Load Allocation (LA)	Margin of Safety (10%)
3.0	1.8	0.9	0.3

15-19

Thompson, Debra (DEQ)

From: Thompson, Debra (DEQ)
Sent: Monday, September 26, 2011 1:23 PM
To: 'Tarah Heinzen'
Subject: RE: Comments re. VA0003808 Permit renewal
Attachments: Perdue Farms-DEQ Response to EIP Comments.docx; VA0003808 Perdue Farms Revised Permit TP Interim Limit Date.docx; VA0003808 Perdue Farms Revised TMDL Condition Permit Page.docx

Good Afternoon Ms. Heinzen,

Attached are:

- DEQ response letter to comments
- Revised draft permit pages for TP Interim Limit Date
- Revised draft permit page for TMDL Reopener

Thank you for participating in the public notice/comment process for this permit action.

Regards,

Debra L. Thompson
Environmental Engineer Senior
VA Department of Environmental Quality
5636 Southern Boulevard
Virginia Beach, VA 23462
(757) 518-2162 phone

NEW EMAIL ADDRESS:
debra.thompson@deq.virginia.gov
Office Info: http://www.deq.virginia.gov/regions/tidewater.html

The information in this e-mail may be viewed by others and is subject to disclosure under the Freedom of Information Act (FOIA)

From: Tarah Heinzen [mailto:theinzen@environmentalintegrity.org]
Sent: Friday, September 23, 2011 4:19 PM
To: Thompson, Debra (DEQ)
Cc: michelemmerkel@hotmail.com; sedwards@fwwatch.org; Crystal Heide
Subject: Comments re. VA0003808 Permit renewal

Ms. Thompson,

Attached please find public comments on the draft Perdue Farms, Inc. VPDES permit renewal, permit number VA0003808, submitted on behalf of Assateague Coastkeeper, Food & Water Watch, and EIP.

Best,

Tarah Heinzen
Attorney
Environmental Integrity Project
One Thomas Circle NW, Suite 900

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September 23, 2011

Debra Thompson
Environmental Engineer Senior
Virginia Department of Environmental Quality
5636 Southern Boulevard
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Debra.thompson@deq.virginia.gov

Re: Perdue Farms, Incorporated VPDES Permit No. VA0003808

Dear Ms. Thompson,

The Environmental Integrity Project (EIP), Food & Water Watch and Assateague Coastkeeper respectfully submit the following comments on the draft Virginia Pollutant Discharge Elimination System (VPDES) Permit No. VA0003808 for the Perdue Farms, Incorporated facility located in Accomack County, Virginia (Perdue Farms).

I. Introduction

Perdue Farms is a large industrial poultry processing and rendering facility that discharges an average of 2.1 million gallons per day into the benthic impaired segment of Parker Creek.[1] It is the only permitted discharger in the Parker Creek watershed, and is largely responsible for the total phosphorus Total Maximum Daily Load (TMDL) that has been established.[2] Due to Perdue Farms' discharges, the benthic community in Parker Creek is classified as "severely impaired" by Virginia's 305(b)/303(d) Water Quality Integrated Reports.[3]

This facility has a significant history of permit violations – five quarters of non-compliance and seven effluent violations in the last three years.[4] It is vital for the prosperity of Parker Creek that Perdue Farms be held accountable through its renewed permit for its past noncompliance and phosphorus loading. Perdue Farms must meet the total phosphorus TMDL

[1] VDEQ, Benthic Total Maximum Daily Load Development Parker Creek, Virginia (Draft) (April 2008), at 2-9, *available at* http://www.deq.state.va.us/export/sites/default/tmdl/apptmdls/baycoast/parkerbc.pdf.
[2] *Id.*
[3] VDEQ, Virginia 305(b)/303(d) Water Quality Integrated Report to Congress and the EPA Administrator for the Period January 1, 2000 to December 31, 2004, *available at* http://www.deq.state.va.us/wqa/ir2006.html.
[4] Perdue Farms was noncompliant in Quarter 1 (April – June, 2008), Quarter 2 (July – September 2008), Quarter 3 (October – December 2008), Quarter 5 (April – June 2009) and Quarter 9 (April – June 2010), exceeding effluent limitations for ammonia – nitrogen once, toxicity twice, and total nitrogen four times. EPA, Enforcement and Compliance History Online (ECHO) Detailed Facility Report for Perdue Farms, Inc. (last visited Sept. 23, 2011) [hereinafter Perdue Farms ECHO Report].

as soon as possible under a stringent compliance schedule. Groundwater monitoring and soil testing must be mandatory around both the existing and proposed anaerobic lagoons. Based on Perdue Farms' noncompliance, monitoring requirements should be more rigorous, not less. Thus, the draft permit's lackadaisical monitoring of cyanide should be addressed. Perdue Farms is not entitled to a permit renewal – it is up to the discretion of VDEQ to grant the permit renewal, and this is VDEQ's opportunity to require stricter guidelines. Currently, however, the draft permit does not require stricter guidelines nor does it address any of the aforementioned concerns.

The VPDES permit for Perdue Farms expired on June 29, 2011. Perdue Farms submitted its renewal application to the Virginia Department of Environmental Quality (VDEQ) on December 30, 2010, and VDEQ made a draft permit available for public comment on August 24, 2011. VDEQ has a significant opportunity to improve the quality of Perdue Farms' receiving stream and improve compliance through this process, but the draft permit falls short of meeting Clean Water Act (CWA) and Virginia regulatory requirements.

The draft permit addresses two developments that arose during the previous permit period. First, the draft permit incorporates a TMDL for total phosphorus that was established in 2008 for Parker Creek. Increased total phosphorus loading from point and nonpoint sources has significantly impaired Parker Creek's benthic invertebrate community,[5] yet VDEQ did not reopen the previous Perdue permit to incorporate the TMDL. Timely implementation of this TMDL during the upcoming permit term promises to "improve benthic habitat and subsequently restore invertebrate populations in the stream."[6] Second, the draft permit requires groundwater monitoring and a closure plan for the anaerobic lagoon Perdue Farms is currently using, due to a tear in its liner. The draft permit also details several criteria that the replacement anaerobic lagoon must meet. These comments propose improvements to each aspect of Perdue's proposed VPDES permit.

Environmental Integrity Project (EIP), Food & Water Watch, and Assateague Coastkeeper have an interest in Perdue Farms' VPDES permit. EIP is a national non-profit organization dedicated to advocating for more effective enforcement of environmental laws, including the federal CWA. EIP works to improve state and federal regulation of water dischargers and to improve water quality in Virginia and throughout the Mid-Atlantic.

Assateague Coastkeeper is an employee of Assateague Coastal Trust (ACT), an environmental non-profit organization working to protect and enhance the natural resources of the Atlantic coastal bays watershed through advocacy, conservation, and education. ACT has an interest in this permit based on its own interests and those of its individual members in a representative capacity. ACT's organizational purposes are adversely affected by Perdue Farm's discharges, which degrade waters and adjacent lands and impair the habitability, the recreational value, and aesthetic benefits of the local communities.

Food & Water Watch is a national nonprofit organization working to ensure that the food, water and fish we consume is safe, accessible and sustainably produced. So that we can all enjoy

[5] *Id.*
[6] *Id.* at E-3.

and trust in what we eat and drink, Food and Water Watch helps people take charge of where their food comes from, keep clean, affordable, public tap water flowing freely to our homes, protect the environmental quality of oceans, work to ensure that the government to do its job protecting citizens, and educate about the importance of keeping the global commons — our shared resources — under public control. Food and Water Watch envisions a world where all people have access to enough affordable, healthy, and wholesome food and clean water to meet their basic needs — a world in which governments are accountable to their citizens and manage essential resources sustainably.

II. The Draft Permit's TMDL Provisions are Inadequate.

DEQ should accelerate the draft permit's unreasonably long schedule of compliance, clarify interim phosphorus limits and monitoring requirements, and open Perdue Farms' plan for meeting the TMDL requirements for public notice and comment.

Outfalls 001, 003, 004, 005, 006, and 008 discharge stormwater runoff and effluent from the Perdue Farms wastewater treatment plant into the benthic impaired segment of Parker Creek.[7] This segment is listed on Virginia's Section 305(b) Water Quality Integrated Report and 303(d) list of impaired waters due to quarterly biological monitoring that indicated Parker Creek's benthic community is "severely impaired."[8] Pursuant to the CWA, Virginia established a total phosphorus TMDL for this impaired segment and the Environmental Protection Agency (EPA) approved it in November of 2008.[9]

The draft permit adopts the TMDL total phosphorus concentration limit of 0.10 mg/L by implementing a nearly four year compliance period, despite the fact that this TMDL has been in place for nearly three years. This amount of time is unreasonable and will delay critical water quality protections. Perdue's current phosphorus discharges average several times the concentration the facility must meet in its proposed permit, and have reached more than 18 times that limit[10]; delays in compliance with the TMDL will clearly result in significant further phosphorus pollution into Parker Creek.

The National Pollution Elimination Discharge System (NPDES) regulations and Virginia Water Control Board (WCB) regulations each state that any schedules of compliance "shall require compliance *as soon as possible*, but not later than the applicable statutory deadline under the CWA."[11] The WCB regulations go on to specifically state that the schedule of compliance for permit renewals and modifications should allow for a "*reasonable* period of time, not to exceed the term of the permit" to attain compliance.[12] Moreover, both NPDES and WCB regulations mandate that the schedule of compliance establish interim requirements if the

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[7] NPDES Application, Form 2C; VDEQ, Benthic Total Maximum Daily Load Development Parker Creek, *supra* note 2, at 2-9.
[8] VDEQ, Virginia 305(b)/303(d) Water Quality Integrated Report, *supra* note 3.
[9] 33 U.S.C. § 1313(d); U.S. EPA, Decision Rationale Total Maximum Daily Loads Aquatic Life Use (Benthic) Impairment Parker Creek Watershed, Accomack County, Virginia (November 7, 2008), *available at* http://www.epa.gov/reg3wapd/tmdl/VA_TMDLs/ParkerCreekBenthic/ParkerCreekDR.pdf.
[10] Perdue Farms ECHO Report, *supra* note 4.
[11] 40 CFR Part 122.47(a)(1); 9VAC25-31-25(A)(1) (emphasis added).
[12] 9VAC25-31-25(A)(3) (emphasis added).

schedule exceeds one year from the date of permit issuance, and the time between interim dates cannot surpass one year.[13]

The proposed compliance schedule in Perdue's draft permit does not require compliance as soon as possible, nor does it allow for only a reasonable period of time for compliance. First, the draft permit proposes to allow Perdue Farms eighteen months simply to select an engineering firm. Perdue Farms has already had three years to do this; Perdue knew that the TMDL had been established in 2008, and should have taken steps to comply despite the fact that VDEQ failed to reopen its now-expired permit. At this point, Perdue should already be submitting a final, approvable plan to VDEQ if it expects a permit renewal. VDEQ should require that Perdue Farms select an engineering firm within six months of the permit effective date at the most, and accelerate the remaining compliance dates in the Schedule of Compliance for Nutrient Limitations accordingly.

Perdue Farms is the only permitted facility discharging into Parker Creek,[14] making this permit all the more critical to restoring water quality and the benthic community in the stream. To add an additional four years to achieve the TMDL Perdue has known about for several years already will further damage the severely impaired Parker Creek, making it more difficult for the Creek to attain its water quality standards.[15]

Additionally, the draft permit states that the interim limits for total phosphorus will expire on June 29, 2015, but the Schedule of Compliance states that Perdue Farms does not need to comply with the TMDL until September 1, 2015.[16] This means that for two months there will be no phosphorus limits applicable to the facility. As stated above, this will further impair Parker Creek. Moreover, in the past three years Perdue Farms has had five quarters in non-compliance and seven effluent exceedances.[17] Clearly Perdue Farms cannot currently even attain compliance with its existing technology-based permit limits, and must be required to upgrade its facility without an inexplicably long compliance schedule or gaps in the applicability of phosphorus limits. Assuming VDEQ does not accelerate Perdue's compliance schedule, it should require that the interim limits expire on September 1, 2015 or when the facility meets its TMDL requirements, whichever comes sooner.

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[13] 40 CFR Part 122.47(a)(3); 9VAC25-31-25(A)(4).

[14] *Supra* note 2, at E-2.

[15] "Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the State Water Control Law (§ 62.1-44.2 et seq. of the Code of Virginia) and the federal Clean Water Act (33 USC § 1251 et seq.)" 9VAC25-260-5. These standards consist of a "designated use or uses for the waters of the Commonwealth and water quality criteria for such waters based upon such uses." *Id.* Designated uses for all state waters, including wetlands, include "recreational uses, e.g., swimming and boating; the propagation and growth of a balanced, indigenous population of aquatic life, including game fish, which might reasonably be expected to inhabit them; wildlife; and the production of edible and marketable natural resources, e.g., fish and shellfish." 9VAC25-260-10. The general water quality criteria states that, "State waters, including wetlands, shall be free from substances attributable to sewage, industrial waste, or other waste in concentrations, amounts, or combinations which contravene established standards or interfere directly or indirectly with designated uses of such water or which are inimical or harmful to human, animal, plant, or aquatic life." 9VAC25-260-20.

[16] Authorization to Discharge Under the Virginia Pollutant Discharge Elimination System and the Virginia State Water Control Law, published August 24, 2011 (hereinafter VPDES Draft Permit), at 2, 6.

[17] Perdue Farms ECHO Report, *supra* note 4.

The final permit should also clarify the monitoring requirements necessary for total phosphorus while Perdue Farms comes into compliance and thereafter. In the Limitations and Monitoring Requirements section of the draft permit, Perdue Farms is required to monitor total phosphorus three times per week, but footnote (d) of this section states that "[n]o monitoring or reporting [of phosphorus] is required until after the completion of the [compliance] schedule."[18] NPDES regulations require that monitoring results be reported at least once a year.[19] Federal CWA regulations require that monitoring must include "type, intervals, and frequency sufficient to yield data which are representative of the monitored activity."[20] Further, this monitoring "must be conducted according to a test procedure specified in the permit for such pollutants."[21] VDEQ must clarify the inconsistency of monitoring requirements in the draft permit, and the final permit must consistently require adequate monitoring.

Lastly, VDEQ must make Perdue Farms' plan for meeting the TMDL available for public notice and comment. The goal of the NPDES and TMDL program is to ensure water quality standards are met through best available control technologies. The CWA gives the public the right to review and comment on Perdue Farms' proposed methods for meeting the TMDL, to ensure that the technology it proposes to use will meet the water quality-based effluent limitation in its permit and bring Parker Creek into compliance with water quality standards. EIP, Food & Water Watch and Assateague Coastkeeper request notification when Perdue Farms submits its plan and when the notice and comment period begins.

III. The Permit Should Contain a TMDL Reopener.

Although the total phosphorus TMDL was established in 2008, there is a possibility that it will be modified during the permit period. In the event that new evidence indicates that restoring Parker Creek will require a stronger total phosphorus TMDL, VDEQ should insert a TMDL Reopener requirement, similar to the TMDL Reopener in Perdue Farms' expired permit,[22] into the final permit. Unlike the previous permit provision, however, this reopener should be mandatory, requiring VDEQ to incorporate any new TMDLs into Perdue's VPDES permit without delay until the permit expires. EIP, Food & Water Watch and Assateague Coastkeeper request notification if VDEQ reopens Perdue Farms' permit for TMDL modification or any other reason.

IV. Perdue's Permit Should Require Continued Groundwater and Soil Testing as Part of the Existing Anaerobic Lagoon Closure Plan and for Operation of the New Anaerobic Lagoon.

Due to a tear in the liner of the current anaerobic lagoon, Perdue Farms is installing groundwater monitoring wells and a new anaerobic lagoon.[23] This development is clearly necessary, due to the existing risk of groundwater contamination, but concerns remain about the

[18] VPDES Draft Permit, at 1, 2.
[19] 40 CFR 122.44(i)(3).
[20] 40 CFR 122.48(b).
[21] 40 CFR 122.44(i)(iv).
[22] Authorization to Discharge Under the Virginia Pollutant Discharge Elimination System and the Virginia State Water Control Law, June 30, 2006 – June 29, 2011 (hereinafter VPDES Current Permit), at 13.
[23] VPDES Permit Program Fact Sheet for VA003808, at 55.

draft permit's closure plan for the existing lagoon and the monitoring requirements at the new lagoon. Virginia has established groundwater standards for pollutants discharged by Perdue Farms, such as cyanide,[24] and the proposed requirement for the new lagoon lack monitoring necessary to ensure that these standards are met.

Under the draft permit, VDEQ will require that Perdue Farms submit a closure plan for approval once the new anaerobic lagoon is operational.[25] Perdue's application should have included such a closure plan, so VDEQ and the public have the opportunity to review the proposal and determine whether it will protect ground and surface water quality. To ensure that groundwater contamination does not arise post-closure, VDEQ should require that groundwater monitoring and soil testing continue once the existing anaerobic lagoon is closed. In addition, the permit should include a meaningful contaminant limit that, once reached, would initiate additional inspection and remedial actions. This idea has already been adopted by VDEQ in the draft permit for the Groundwater Monitoring Program.[26] Under this program, Perdue Farms is required to monitor groundwater wells around the existing anaerobic lagoon four times per year during the permit period. The permit states that "[i]f monitoring results indicate that any unit has contaminated the groundwater, the permittee shall submit a corrective action plan within 60 days of being notified by the Tidewater Regional Office. The plan shall set forth the steps to be taken by the permittee to ensure that the contamination source is eliminated or that the contaminant plume is contained on the permittee's property."[27] VDEQ should extend this concept to the closure plan.

Similarly, VDEQ should require Perdue to install groundwater monitoring wells up- and down-gradient from the new anaerobic lagoon, and to monitor monthly. The permit should also include contaminant limits that trigger additional inspection and remedial actions for each parameter Perdue currently must monitor. This will ensure that, if a leak does occur, Perdue Farms and VDEQ will know about the contamination and be able to resolve the problem as soon as possible. The more quickly the problem can be addressed, the less harm to the environment and the less costly it will be for Perdue Farms to fix. Moreover, the final permit should consider Perdue's history of groundwater pollution; without such monitoring, groundwater discharges may infiltrate into nearby surface waters, leading to illegal violations of state Water Quality Standards.

V. Monitoring for Cyanide Should Occur Once Per Month.

Cyanide is a potentially deadly chemical. It can cause heart damage, brain damage, and even result in death.[28] Aquatic life is particularly sensitive to cyanide — concentrations greater

[24] 9VAC25-280.
[25] VPDES Draft Permit, at 14.
[26] *Id.* at 13.
[27] *Id.* at 13.

[28] Dep't of Health and Human Services Centers for Disease Control and Prevention, Cyanide Fact Sheet (2003) *available at* http://www.bt.cdc.gov/agent/cyanide/basics/pdf/cyanide-facts.pdf.

than 0.1 mg/L are lethal to many species.[29] It is critically important that cyanide be kept out of the environment, and that any contamination is quickly discovered and remedied.

Under Perdue Farms' current permit, the facility must test for cyanide once per month.[30] Despite the fact that Perdue has reported significantly increased cyanide concentrations from its 001 outfall discharge point since August 2010,[31] the draft permit will only require Perdue to test for cyanide once every six months.[32] VDEQ provides absolutely no reason to adopt this significantly less stringent monitoring frequency in the application materials. Perdue Farms has shown, through implementing its current permit,[33] that it can conduct monitoring for cyanide once per month. Due to Perdue Farms' repeated effluent limitation violations for total nitrogen, ammonia, and toxicity over the past several years, as well as its sudden increase in the concentration of cyanide in its discharges, VDEQ should maintain at least the current monitoring frequency for cyanide and all monitored pollutants.

VI. Conclusion

Perdue Farms has a substantial history of noncompliance. These violations require a permit that is more, not less, stringent in its monitoring requirements. Parker Creek is already a sensitive stream with a severely impaired benthic community, and stricter monitoring is necessary to give the stream an opportunity to recover. As the only permitted discharger into Parker Creek, Perdue Farms is responsible for ensuring adequate monitoring and compliance with the total phosphorus TMDL as soon as possible.

For the foregoing reasons, EIP respectfully requests that VDEQ revise the draft VPDES permit for Perdue Farms to further protect Parker Creek and the Parker Creek Watershed.

Thank you for your consideration.

Sincerely,

Tarah Heinzen
Attorney
Environmental Integrity Project
One Thomas Circle NW, Suite 900
Washington, D.C. 20005
202-263-4441
theinzen@environmentalintegrity.org

Michele Merkel
Attorney

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[29] EPA, Reviews of the Environmental Effects of Pollutants: V. Cyanide, at 10 (1978) *available at* http://www.epa.gov/nscep/index.html.
[30] VPDES Current Permit, at 1.
[31] Perdue Farms ECHO Report.
[32] VPDES Draft Permit, at 1.
[33] VPDES Current Permit, at 1.

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COMMONWEALTH of VIRGINIA

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September 26, 2011

Ms. Tarah Heinzen
Attorney
Environmental Integrity Project
One Thomas Circle NW, Suite 900
Washington, DC 20005

RE: Perdue Farms Incorporated VPDES Permit No. VA0003808

Dear Ms. Heinzen;

The Department of Environmental Quality-Tidewater Regional Office (DEQ-TRO) received comments via email on the above reference permit on Friday, September 23, 2011. The comments received have been reviewed. I would like to respond to your comments in the order they were presented in your letter.

- Part II-The Draft Permit's TMDL Provisions are Inadequate
  The interim limits for total phosphorus will be extended until August 31, 2015 ensuring total phosphorus limitations will be effective at all times. The TMDL total phosphorus limitation will be effective September 1, 2015.

- Part III-The Permit Should Contain a TMDL Reopener
  A TMDL Reopener clause will be included in the permit for reissuance.

- Part IV-Perdue's Permit Should Require Continued Groundwater and Soil Testing as Part of the Existing Anaerobic Lagoon Closure Plan and for Operation of the New Anaerobic Lagoon
  The proposed draft permit requires quarterly groundwater monitoring both upgradient and down gradient of the existing lagoon and submittal, approval and implementation of a closure plan. For the new anaerobic lagoon, groundwater protection is addressed in the proposed permit by requiring the storage facilities to include a properly designed and installed liner. Such liner shall be either a synthetic liner of at least twenty mils thickness or a compacted soil liner of at least one-foot thickness with a maximum permeability rating of 0.0014 inches per

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hour in accordance with DEQ Guidance Memorandum 98-2010 "VPDES Permit and VPA Permit Groundwater Monitoring Plans" dated September 30, 1998.

- Part V-Monitoring for Cyanide Should Occur Once Per Month
  The current permit and proposed draft permit Cyanide limitation is expressed in micrograms per liter (ug/l) not milligrams per liter (mg/l). This limit, 7.6 ug/l is equal to 0.0076 mg/l, and is 131 times more restrictive than the value referenced in your letter (0.1 mg/l). Both the limit and the monitoring frequency proposed in the draft permit are written to be protective of the water quality standard and to generate data for evaluation of permit compliance. We feel the limit and the monitoring frequency are adequate to protect aquatic life and the environment and to determine the permittee's compliance with the numerical limit.

We appreciate your review of the draft permit and the comments presented in your letter. The revised sections of the draft permit are enclosed for your information. We feel we have addressed your comments and concerns as best possible and intend to move forward with reissuance of the permit. Thank you very much for your participation in the draft permit process. We will notify you if the reissued permit undergoes modification for the TMDL or other reason as requested in your letter.

Sincerely,

Debra L. Thompson

Debra L. Thompson
Environmental Engineer Senior

Cc: DEQ-TRO ECM