ASHLAND

Ashland Aqualon Functional Ingredients

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July 7, 2009

CERTIFIED MAIL/RETURN RECEIPT REQUESTED

Mr. Jeremy Kazio, Permit Writer
Department of Environmental Quality
Piedmont Regional Office
4949-A Cox Road
Glen Allen, Virginia 23060-6295

RECEIVED
JUL 08 2009
PRO

Dear Mr. Kazio:

2009 VPDES WATER QUALITY MONITORING REPORT (VA0003492)

Enclosed are Hercules Incorporated's 1/5 year Water Quality (WQ) Criteria monitoring results. The individual outfall-specific forms for Outfalls 005 and 006 that you provided in February 2009 were used. Universal Laboratories (UL) observed quantification levels (QL's) equal to or (in most cases) well below those indicated on the forms. Enclosed is the laboratory report that covers the sampling for both WQ analyses and Form 2C (VPDES permit application). When the lab reviewed data, they discovered a need to improve their QL for cadmium for 005 results, so low-level Cd has been added to our June sampling for dissolved metals. For this, we have included our monthly (June) analysis report. Intake 007 data is part of the enclosed 005/006 data set. Intake 007 is an intake for 005. For consistency, we did as much of its analysis as practical at the same time.

For nil values, we reported less than (<) and entered the QL value. This is our normal practice; however, the lab had experienced the need for other practices in other regulatory regions. In the form's QL column, we replaced footnote (5)'s, which indicates the permittee specifies the QL. I verified with you and then replaced footnote (5)s with the QLs reported by UL. Otherwise, actual QLs are indicated on the attached laboratory reports.

We used the type samples specified on the form. Where the form allowed either grab (G) or composite (C), we generally did the type sampling otherwise specified by DEQ for that test. The sample type not used was deleted from the Sample Type column.

There are no radiation sources on site except for a few in-door self-luminating EXIT signs and smoke detectors. There are no potentially exposed sources in drainage areas. This analysis should not be needed in the future. We determined that a few of the analyses are not applicable (NA) because we are not an oil refinery or paper mill, and we are not discharging into salt water (SW) nor waters upstream of public water service (PWS). For those we entered NA instead of numerical result.

If you have any questions or require additional information, you may call me at (804) 541-4390.

Very truly yours,

William E. Perkinson

William E. Perkinson
Environmental Engineer

WEP:lbr
Enclosures
State5yrMonitoring0609.doc

Aqualon

ATTACHMENT A
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY CRITERIA MONITORING-Outfall 005

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY	
METALS							
7440-36-0	Antimony, dissolved	(3)	140000	< 5	G	1/5 YR	14
7440-38-2	Arsenic, dissolved	(3)	160	< 5	G	1/5 YR	10
7440-39-3	Barium, dissolved	(3)	5	42	G	1/5 YR (PWS)	200
7440-43-9	Cadmium, dissolved	(3)	2.0	0.8	G	1/5 YR	0.3
16065-83-1	Chromium III, dissolved [8]	(3)	290	< 5	G	1/5 YR	3.6
18540-29-9	Chromium VI, dissolved [8]	(3)	7.4	< 5	G	1/5 YR	1.6
7440-50-8	Copper, dissolved	(3)	6.9	8	G	1/5 YR	0.5
7439-89-6	Iron, dissolved	(3)	50	340	G	1/5 YR (PWS)	30
7439-92-1	Lead, dissolved	(3)	51	8	G	1/5 YR	0.5
7439-96-5	Manganese, dissolved	(3)	1	426	G	1/5 YR (PWS)	5.1
7439-97-6	Mercury, dissolved	(3)	0.65	< 0.02	G	1/5 YR	1.0
7440-02-0	Nickel, dissolved	(3)	92	6	G	1/5 YR	0.9
7782-49-2	Selenium, dissolved	(3)	9.3	< 5	G	1/5 YR	2.0
7440-22-4	Silver, dissolved	(3)	1.9	< 1.0	G	1/5 YR	0.2
7440-28-0	Thallium, dissolved	(4)	5	< 5	G	1/5 YR	
7440-66-6	Zinc, dissolved	(3)	59	239	G	1/5 YR	3.6
PESTICIDES/PCB'S							
309-00-2	Aldrin	608	0.05	< 0.04	C	1/5 YR	
57-74-9	Chlordane	608	0.2	< 0.2	C	1/5 YR	
2921-88-2	Chlorpyrifos (synonym = Dursban)	622	0.1	< 0.1	C	1/5 YR	
72-54-8	DDD	608	0.1	< 0.1	C	1/5 YR	
72-55-9	DDE	608	0.1	< 0.1	C	1/5 YR	
50-29-3	DDT	608	0.1	< 0.04	C	1/5 YR	
8065-48-3	Demeton	(4)	10	< 10	C	1/5 YR	
60-57-1	Dieldrin	608	0.1	< 0.04	C	1/5 YR	
959-98-8	Alpha-Endosulfan	608	0.1	< 0.04	C	1/5 YR	
33213-65-9	Beta-Endosulfan	608	0.1	< 0.04	C	1/5 YR	
1031-07-8	Endosulfan Sulfate	608	0.1	< 0.04	C	1/5 YR	
72-20-8	Endrin	608	0.1	< 0.04	C	1/5 YR	
7421-93-4	Endrin Aldehyde	(4)	0.1	< 0.1	C	1/5 YR	
86-50-0	Guthion	622	1	< 1	C	1/5 YR	
76-44-8	Heptachlor	608	0.05	< 0.04	C	1/5 YR	
1024-57-3	Heptachlor Epoxide	(4)	0.05	< 0.05	C	1/5 YR	
319-84-6	Hexachlorocyclohexane Alpha-BHC	608	0.04	< 0.04	C	1/5 YR	

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
319-85-7	Hexachlorocyclohexane Beta-BHC	608	0.04	< 0.04	C	1/5 YR
58-89-9	Hexachlorocyclohexane Gamma-BHC or Lindane	608	0.04	< 0.04	C	1/5 YR
143-50-0	Kepone	(9)	1	< 1	C	1/5 YR
121-75-5	Malathion	(4)	0.04	< 0.04	C	1/5 YR
72-43-5	Methoxychlor	(4)	0.1	< 0.1	C	1/5 YR
2385-85-5	Mirex	(4)	0.2	< 0.2	C	1/5 YR
56-38-2	Parathion	(4)	0.1	< 0.1	C	1/5 YR
11096-82-5	PCB 1260	608	1.0	< 0.5	C	1/5 YR
11097-69-1	PCB 1254	608	1.0	< 0.5	C	1/5 YR
12672-29-6	PCB 1248	608	1.0	< 0.5	C	1/5 YR
53469-21-9	PCB 1242	608	1.0	< 0.5	C	1/5 YR
11141-16-5	PCB 1232	608	1.0	< 0.5	C	1/5 YR
11104-28-2	PCB 1221	608	1.0	< 0.5	C	1/5 YR
12674-11-2	PCB 1016	608	1.0	< 0.5	C	1/5 YR
1336-36-3	PCB Total	608	7.0	< 0.5	C	1/5 YR
8001-35-2	Toxaphene	608	5.0	< 01	C	1/5 YR
BASE NEUTRAL EXTRACTABLES						
83-32-9	Acenaphthene	625	10.0	< 5	C	1/5 YR
120-12-7	Anthracene	625	10.0	< 5	C	1/5 YR
92-87-5	Benzidine	(4)	5	< 5	C	1/5 YR
56-55-3	Benzo (a) anthracene	625	10.0	< 5	C	1/5 YR
205-99-2	Benzo (b) fluoranthene	625	10.0	< 5	C	1/5 YR
207-08-9	Benzo (k) fluoranthene	625	10.0	< 5	C	1/5 YR
50-32-8	Benzo (a) pyrene	625	10.0	< 5	C	1/5 YR
111-44-4	Bis 2-Chloroethyl Ether	(4)	5	< 5	C	1/5 YR
39638-32-9	Bis 2-Chloroisopropyl Ether	(4)	5	< 5	C	1/5 YR
85-68-7	Butyl benzyl phthalate	625	10.0	< 5	C	1/5 YR
91-58-7	2-Chloronaphthalene	(4)	5	< 5	C	1/5 YR
218-01-9	Chrysene	625	10.0	< 5	C	1/5 YR
53-70-3	Dibenz(a,h)anthracene	625	20.0	< 5	C	1/5 YR
84-74-2	Dibutyl phthalate (synonym = Di-n-Butyl Phthalate)	625	10.0	< 5	C	1/5 YR
95-50-1	1,2-Dichlorobenzene	624	10.0	< 5	C	1/5 YR
541-73-1	1,3-Dichlorobenzene	624	10.0	< 5	C	1/5 YR
106-46-7	1,4-Dichlorobenzene	624	10.0	< 5	C	1/5 YR
91-94-1	3,3-Dichlorobenzidine	(4)	5	< 5	C	1/5 YR
84-66-2	Diethyl phthalate	625	10.0	< 5	C	1/5 YR
117-81-7	Di-2-Ethylhexyl Phthalate	625	10.0	< 5	C	1/5 YR
131-11-3	Dimethyl phthalate	(4)	5	< 5	C	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
121-14-2	2,4-Dinitrotoluene	625	10.0	< 5	C	1/5 YR
122-66-7	1,2-Diphenylhydrazine	(4)	5	< 5	C	1/5 YR
206-44-0	Fluoranthene	625	10.0	< 5	C	1/5 YR
86-73-7	Fluorene	625	10.0	< 5	C	1/5 YR
118-74-1	Hexachlorobenzene	(4)	5	< 5	C	1/5 YR
87-68-3	Hexachlorobutadiene	(4)	5	< 5	C	1/5 YR
77-47-4	Hexachlorocyclopentadiene	(4)	5	< 5	C	1/5 YR
67-72-1	Hexachloroethane	(4)	5	< 5	C	1/5 YR
193-39-5	Indeno(1,2,3-cd)pyrene	625	20.0	< 5	C	1/5 YR
78-59-1	Isophorone	625	10.0	< 5	C	1/5 YR
98-95-3	Nitrobenzene	625	10.0	< 5	C	1/5 YR
62-75-9	N-Nitrosodimethylamine	(4)	5	< 5	C	1/5 YR
621-64-7	N-Nitrosodi-n-propylamine	(4)	5	< 5	C	1/5 YR
86-30-6	N-Nitrosodiphenylamine	(4)	5	< 5	C	1/5 YR
129-00-0	Pyrene	625	10.0	< 5	C	1/5 YR
120-82-1	1,2,4-Trichlorobenzene	625	10.0	< 5	C	1/5 YR
VOLATILES						
107-02-8	Acrolein	(4)	100	< 100	C	1/5 YR
107-13-1	Acrylonitrile	(4)	5	< 5	C	1/5 YR
71-43-2	Benzene	624	10.0	< 1	C	1/5 YR
75-25-2	Bromoform	624	10.0	< 1	C	1/5 YR
56-23-5	Carbon Tetrachloride	624	10.0	< 1	C	1/5 YR
108-90-7	Chlorobenzene (synonym = monochlorobenzene)	624	50.0	< 1	C	1/5 YR
124-48-1	Chlorodibromomethane	624	10.0	< 1	C	1/5 YR
67-66-3	Chloroform	624	10.0	< 1	C	1/5 YR
75-09-2	Dichloromethane (synonym = methylene chloride)	624	20.0	< 1	C	1/5 YR
75-27-4	Dichlorobromomethane	624	10.0	< 1	C	1/5 YR
107-06-2	1,2-Dichloroethane	624	10.0	< 1	C	1/5 YR
75-35-4	1,1-Dichloroethylene	624	10.0	< 1	C	1/5 YR
156-60-5	1,2-trans-dichloroethylene	(4)	1	< 1	C	1/5 YR
78-87-5	1,2-Dichloropropane	(4)	1	< 1	C	1/5 YR
542-75-6	1,3-Dichloropropene	(4)	1	< 1	C	1/5 YR
100-41-4	Ethylbenzene	624	10.0	< 1	C	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
74-83-9	Methyl Bromide	(4)	1.0	< 1.0	C	1/5 YR
79-34-5	1,1,2,2-Tetrachloroethane	(4)	1.0	< 1.0	C	1/5 YR
127-18-4	Tetrachloroethylene	624	10.0	< 1.0	C	1/5 YR
10-88-3	Toluene	624	10.0	< 1	C	1/5 YR
79-00-5	1,1,2-Trichloroethane	(4)	1	< 1	C	1/5 YR
79-01-6	Trichloroethylene	624	10.0	< 1	C	1/5 YR
75-01-4	Vinyl Chloride	624	10.0	< 1	C	1/5 YR
RADIONUCLIDES						
	Strontium 90 (pCi/L)	(4)	(5)	See attached	G	1/5 YR
	Tritium (pCi/L)	(4)	(5)	See attached	G	1/5 YR
	Beta Particle & Photon Activity (mrem/yr)	(4)	(5)	See attached	G	1/5 YR
	Gross Alpha Particle Activity (pCi/L)	(4)	(5)	See attached	G	1/5 YR
ACID EXTRACTABLES [6]						
95-57-8	2-Chlorophenol	625	10.0	< 5	C	1/5 YR
120-83-2	2,4 Dichlorophenol	625	10.0	< 5	C	1/5 YR
105-67-9	2,4 Dimethylphenol	625	10.0	< 5	C	1/5 YR
51-28-5	2,4-Dinitrophenol	(4)	5	< 5	C	1/5 YR
534-52-1	2-Methyl-4,6-Dinitrophenol	(4)	5	< 5	C	1/5 YR
87-86-5	Pentachlorophenol	625	50.0	< 5	C	1/5 YR
108-95-2	Phenol	625	10.0	< 5	C	1/5 YR
88-06-2	2,4,6-Trichlorophenol	625	10.0	< 5	C	1/5 YR
MISCELLANEOUS						
	Ammonia as NH3-N	350.1	200	2600	C	1/5 YR
16887-00-6	Chlorides	(4)	(5)	NA	C	1/5 YR (FW and PWS)
7782-50-5	Chlorine Produced Oxidant	(4)	(5)	NA	G	1/5 YR (SW)
7782-50-5	Chlorine, Total Residual	(4)	100	< 100	G	1/5 YR
57-12-5	Cyanide, Total	(4)	10.0	< 5	G	1/5 YR
94-75-7	2,4 Dichlorophenoxy acetic acid (synonym = 2,4-D)	(4)	(5)	NA	G or C	1/5 YR (PWS)
1746-01-6	Dioxin (2,3,7,8-tetrachlorodibenzo-p-dioxin) (ppq)	1613	0.00001	NA	G or C	1/5 YR [Paper Mills & Oil Refineries]
N/A	*E. coli / Enterococcus* (N/CML)	(4)	1.0	< 1	G	1/5 YR
N/A	Foaming Agents (as MBAS)	(4)	200	< 200	G	1/5 YR (PWS)
7783-06-4	Hydrogen Sulfide	(4)	100	< 100	G	1/5 YR
14797-55-8	Nitrate as N (mg/L)	(4)	100	7750	C	1/5 YR (PWS)

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
N/A	Sulfate (mg/L)	(4)	2500	108700	C	1/5 YR (PWS)
N/A	Total Dissolved Solids (mg/L)	(4)	(5)	NA	C	1/5 YR (PWS)
60-10-5	Tributyltin [7]	NBSR 85-3295	0.03	< 0.03	G	1/5 YR
93-72-1	2-(2,4,5-Trichlorophenoxy) propionic acid (synonym = Silvex)	(4)	(5)	NA	G or C	1/5 YR (PWS)

Karl R. Bostaph / Plant Manager

Name of Principal Executive Officer or Authorized Agent/Title

7/7/09

Signature of Principal Officer or Authorized Agent/Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. Sec. 1001 and 33 U.S.C. Sec. 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

FOOTNOTES:

(1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

The quantification levels indicated for the metals are actually Specific Target Values developed for this permit. The Specific Target Value is the approximate value that may initiate a wasteload allocation analysis. Target values are not wasteload allocations or effluent limitations. The Specific Target Values are subject to change based on additional information such as hardness data, receiving stream flow, and design flows.

Units for the quantification level are micrograms/liter unless otherwise specified.

Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained.

(2) Sample Type

G = Grab = An individual sample collected in less than 15 minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and report the average results provided that the individual grab results are also reported. For grab metals samples, the individual samples shall be filtered and preserved immediately upon collection.

C = Composite = A 24-hour **(PW - Revise as required to require same composite duration as BOD_5)** composite unless otherwise specified. The composite shall be a combination of individual samples, taken proportional to flow, obtained at hourly or smaller time intervals. The individual samples may be of equal volume for flows that do not vary by ± 10 percent over a 24-hour period.

(3) A specific analytical method is not specified; however a target value for each metal has been established. An appropriate method to meet the target value shall be selected from the following list of EPA methods (or any approved method presented in 40 CFR Part 136). If the test result is less than the method QL, a "<[QL]" shall be reported where the actual analytical test QL is substituted for [QL].

Metal	Analytical Method
Antimony	1638; 1639
Arsenic	206.5; 1632
Chromium[9]	1639
Cadmium	1637; 1638; 1639; 1640
Chromium VI	218.6; 1639
Copper	1638; 1640
Lead	1637; 1638; 1640
Mercury	245.7; 1631
Nickel	1638; 1639; 1640

Nickel	1638; 1639; 1640
Selenium	1638; 1639
Silver	1638
Zinc	1638; 1639

(4) Any approved method presented in 40 CFR Part 136.

(5) The QL is at the discretion of the permittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.

(6) Testing for phenol requires continuous extraction.

(7) Analytical Methods: NBSR 85-3295 or DEQ's approved analysis for Tributyltin may also be used [See A Manual for the Analysis of Butyltins in Environmental Systems by the Virginia Institute of Marine Science, dated November 1996].

(8) Both Chromium III and Chromium VI may be measured by the total chromium analysis. If the result of the total chromium analysis is less than or equal to the lesser of the Chromium III or Chromium VI method QL, the results for both Chromium III and Chromium VI can be reported as "<[QL]", where the actual analytical test QL is substituted for [QL].

(9) The lab may use SW846 Method 8270D provided the lab has an Initial Demonstration of Capability, has passed a PT for Kepone, and meets the acceptance criteria for Kepone as given in Method 8270D

ATTACHMENT A
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY CRITERIA MONITORING-Outfall 006

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
			METALS			
7440-36-0	Antimony, dissolved	(3)	100000	< 5	G	1/5 YR
7440-38-2	Arsenic, dissolved	(3)	150	< 5	G	1/5 YR
7440-39-3	Barium, dissolved	(3)	5	46	G	1/5 YR (PWS)
7440-43-9	Cadmium, dissolved	(3)	5.7	< 5	G	1/5 YR
16065-83-1	Chromium III, dissolved [8]	(3)	370	< 5	G	1/5 YR
18540-29-9	Chromium VI, dissolved [8]	(3)	7.2	< 5	G	1/5 YR
7440-50-8	Copper, dissolved	(3)	20	5	G	1/5 YR
7439-89-6	Iron, dissolved	(3)	50	200	G	1/5 YR (PWS)
7439-92-1	Lead, dissolved	(3)	68	< 5	G	1/5 YR
7439-96-5	Manganese, dissolved	(3)	1	282	G	1/5 YR (PWS)
7439-97-6	Mercury, dissolved	(3)	0.63	< 0.02	G	1/5 YR
7440-02-0	Nickel, dissolved	(3)	100	< 5	G	1/5 YR
7782-49-2	Selenium, dissolved	(3)	8.9	< 5	G	1/5 YR
7440-22-4	Silver, dissolved	(3)	14	< 5	G	1/5 YR
7440-28-0	Thallium, dissolved	(4)	5	< 5	G	1/5 YR
7440-66-6	Zinc, dissolved	(3)	160	16	G	1/5 YR
			PESTICIDES/PCB'S			
309-00-2	Aldrin	608	0.05	< 0.04	C	1/5 YR
57-74-9	Chlordane	608	0.2	< 0.2	C	1/5 YR
2921-88-2	Chlorpyrifos (synonym = Dursban)	622	0.1	< 0.1	C	1/5 YR
72-54-8	DDD	608	0.1	< 0.1	C	1/5 YR
72-55-9	DDE	608	0.1	< 0.1	C	1/5 YR
50-29-3	DDT	608	0.1	< 0.04	C	1/5 YR
8065-48-3	Demeton	(4)	10	< 10	C	1/5 YR
60-57-1	Dieldrin	608	0.1	< 0.04	C	1/5 YR
959-98-8	Alpha-Endosulfan	608	0.1	< 0.04	C	1/5 YR
33213-65-9	Beta-Endosulfan	608	0.1	< 0.04	C	1/5 YR
1031-07-8	Endosulfan Sulfate	608	0.1	< 0.04	C	1/5 YR
72-20-8	Endrin	608	0.1	< 0.04	C	1/5 YR
7421-93-4	Endrin Aldehyde	(4)	0.1	< 0.1	C	1/5 YR
86-50-0	Guthion	622	1.0	< 1.0	C	1/5 YR
76-44-8	Heptachlor	608	0.05	< 0.04	C	1/5 YR
1024-57-3	Heptachlor Epoxide	(4)	0.05	< 0.05	C	1/5 YR
319-84-6	Hexachlorocyclohexane Alpha-BHC	608	0.05	< 0.05	C	1/5 YR

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58-89-9	Hexachlorocyclohexane Gamma-BHC or Lindane	608	0.04	< 0.04	C	1/5 YR
143-50-0	Kepone	(9)	1	< 1	C	1/5 YR
121-75-5	Malathion	(4)	0.04	< 0.04	C	1/5 YR
72-43-5	Methoxychlor	(4)	0.1	< 0.1	C	1/5 YR
2385-85-5	Mirex	(4)	0.2	< 0.2	C	1/5 YR
56-38-2	Parathion	(4)	0.1	< 0.1	C	1/5 YR
11096-82-5	PCB 1260	608	1.0	< 0.5	C	1/5 YR
11097-69-1	PCB 1254	608	1.0	< 0.5	C	1/5 YR
12672-29-6	PCB 1248	608	1.0	< 0.5	C	1/5 YR
53469-21-9	PCB 1242	608	1.0	< 0.5	C	1/5 YR
11141-16-5	PCB 1232	608	1.0	< 0.5	C	1/5 YR
11104-28-2	PCB 1221	608	1.0	< 0.5	C	1/5 YR
12674-11-2	PCB 1016	608	1.0	< 0.5	C	1/5 YR
1336-36-3	PCB Total	608	7.0	< 0.5	C	1/5 YR
8001-35-2	Toxaphene	608	5.0	< 1	C	1/5 YR
	BASE NEUTRAL EXTRACTABLES					
83-32-9	Acenaphthene	625	10.0	< 5	C	1/5 YR
120-12-7	Anthracene	625	10.0	< 5	C	1/5 YR
92-87-5	Benzidine	(4)	5	< 5	C	1/5 YR
56-55-3	Benzo (a) anthracene	625	10.0	< 5	C	1/5 YR
205-99-2	Benzo (b) fluoranthene	625	10.0	< 5	C	1/5 YR
207-08-9	Benzo (k) fluoranthene	625	10.0	< 5	C	1/5 YR
50-32-8	Benzo (a) pyrene	625	10.0	< 5	C	1/5 YR
111-44-4	Bis 2-Chloroethyl Ether	(4)	5	< 5	C	1/5 YR
39638-32-9	Bis 2-Chloroisopropyl Ether	(4)	5	< 5	C	1/5 YR
85-68-7	Butyl benzyl phthalate	625	10.0	< 5	C	1/5 YR
91-58-7	2-Chloronaphthalene	(4)	5	< 5	C	1/5 YR
218-01-9	Chrysene	625	10.0	< 5	C	1/5 YR
53-70-3	Dibenz(a,h)anthracene	625	20.0	< 5	C	1/5 YR
84-74-2	Dibutyl phthalate (synonym = Di-n-Butyl Phthalate)	625	10.0	< 5	C	1/5 YR
95-50-1	1,2-Dichlorobenzene	624	10.0	< 5	C	1/5 YR
541-73-1	1,3-Dichlorobenzene	624	10.0	< 5	C	1/5 YR
106-46-7	1,4-Dichlorobenzene	624	10.0	< 5	C	1/5 YR
91-94-1	3,3-Dichlorobenzidine	(4)	5	< 5	C	1/5 YR
84-66-2	Diethyl phthalate	625	10.0	< 5	C	1/5 YR
117-81-7	Di-2-Ethylhexyl Phthalate	625	10.0	< 5	C	1/5 YR
131-11-3	Dimethyl phthalate	(4)	5	< 5	C	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
121-14-2	2,4-Dinitrotoluene	625	10.0	< 5	C	1/5 YR
122-66-7	1,2-Diphenylhydrazine	(4)	5	< 5	C	1/5 YR
206-44-0	Fluoranthene	625	10.0	< 5	C	1/5 YR
86-73-7	Fluorene	625	10.0	< 5	C	1/5 YR
118-74-1	Hexachlorobenzene	(4)	5	< 5	C	1/5 YR
87-68-3	Hexachlorobutadiene	(4)	5	< 5	C	1/5 YR
77-47-4	Hexachlorocyclopentadiene	(4)	5	< 5	C	1/5 YR
67-72-1	Hexachloroethane	(4)	5	< 5	C	1/5 YR
193-39-5	Indeno(1,2,3-cd)pyrene	625	20.0	< 5	C	1/5 YR
78-59-1	Isophorone	625	10.0	< 5	C	1/5 YR
98-95-3	Nitrobenzene	625	10.0	< 5	C	1/5 YR
62-75-9	N-Nitrosodimethylamine	(4)	5	< 5	C	1/5 YR
621-64-7	N-Nitrosodi-n-propylamine	(4)	5	< 5	C	1/5 YR
86-30-6	N-Nitrosodiphenylamine	(4)	5	< 5	C	1/5 YR
129-00-0	Pyrene	625	10.0	< 5	C	1/5 YR
120-82-1	1,2,4-Trichlorobenzene	625	10.0	< 5	C	1/5 YR
	VOLATILES					
107-02-8	Acrolein	(4)	100	< 100	C	1/5 YR
107-13-1	Acrylonitrile	(4)	5	< 5	C	1/5 YR
71-43-2	Benzene	624	10.0	< 1	C	1/5 YR
75-25-2	Bromoform	624	10.0	< 1	C	1/5 YR
56-23-5	Carbon Tetrachloride	624	10.0	< 1	C	1/5 YR
108-90-7	Chlorobenzene (synonym = monochlorobenzene)	624	50.0	< 1	C	1/5 YR
124-48-1	Chlorodibromomethane	624	10.0	< 1	C	1/5 YR
67-66-3	Chloroform	624	10.0	< 1	C	1/5 YR
75-09-2	Dichloromethane (synonym = methylene chloride)	624	20.0	< 1	C	1/5 YR
75-27-4	Dichlorobromomethane	624	10.0	< 1	C	1/5 YR
107-06-2	1,2-Dichloroethane	624	10.0	< 1	C	1/5 YR
75-35-4	1,1-Dichloroethylene	624	10.0	< 1	C	1/5 YR
156-60-5	1,2-trans-dichloroethylene	(4)	1	< 1	C	1/5 YR
78-87-5	1,2-Dichloropropane	(4)	1	< 1	C	1/5 YR
542-75-6	1,3-Dichloropropene	(4)	1	< 1	C	1/5 YR
100-41-4	Ethylbenzene	624	10.0	< 1	C	1/5 YR
74-83-9	Methyl Bromide	(4)	1	< 1	C	1/5 YR
79-34-5	1,1,2,2-Tetrachloroethane	(4)	1	< 1	C	1/5 YR
127-18-4	Tetrachloroethylene	624	10.0	< 1	C	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
10-88-3	Toluene	624	10.0	< 1	C	1/5 YR
79-00-5	1,1,2-Trichloroethane	(4)	1	< 1	C	1/5 YR
79-01-6	Trichloroethylene	624	10.0	< 1	C	1/5 YR
75-01-4	Vinyl Chloride	624	10.0	< 1	C	1/5 YR
	RADIONUCLIDES					
	Strontium 90 (pCi/L)	(4)	(5)	See attached	G	1/5 YR
	Tritium (pCi/L)	(4)	(5)	See attached	G	1/5 YR
	Beta Particle & Photon Activity (mrem/yr)	(4)	(5)	See attached	G	1/5 YR
	Gross Alpha Particle Activity (pCi/L)	(4)	(5)	See attached	G	1/5 YR
	ACID EXTRACTABLES[6]					
95-57-8	2-Chlorophenol	625	10.0	< 5	C	1/5 YR
120-83-2	2,4 Dichlorophenol	625	10.0	< 5	C	1/5 YR
105-67-9	2,4 Dimethylphenol	625	10.0	< 5	C	1/5 YR
51-28-5	2,4-Dinitrophenol	(4)	5	< 5	C	1/5 YR
534-52-1	2-Methyl-4,6-Dinitrophenol	(4)	5	< 5	C	1/5 YR
87-86-5	Pentachlorophenol	625	50.0	< 5	C	1/5 YR
108-95-2	Phenol	625	10.0	< 5	C	1/5 YR
88-06-2	2,4,6-Trichlorophenol	625	10.0	< 5	C	1/5 YR
	MISCELLANEOUS					
	Ammonia as NH3-N	350.1	200	< 200	C	1/5 YR
16887-00-6	Chlorides	(4)	(5)	NA	C	1/5 YR (FW and PWS)
7782-50-5	Chlorine Produced Oxidant	(4)	(5)	NA	G	1/5 YR (SW)
7782-50-5	Chlorine, Total Residual	(4)	100	< 100	G	1/5 YR
57-12-5	Cyanide, Total	(4)	10.0	< 5	G	1/5 YR
94-75-7	2,4 Dichlorophenoxy acetic acid (synonym = 2,4-D)	(4)	(5)	NA	G or C	1/5 YR (PWS)
1746-01-6	Dioxin (2,3,7,8-tetrachlorodibenzo-p-dioxin) (ppq)	1613	0.00001	NA	G	1/5 YR [Paper Mills & Oil Refineries]
N/A	*E. coli / Enterococcus* (N/CML)	(4)	1	<1	G	1/5 YR
N/A	Foaming Agents (as MBAS)	(4)	200	< 200	G	1/5 YR (PWS)
7783-06-4	Hydrogen Sulfide	(4)	100	< 100	G	1/5 YR
14797-55-8	Nitrate as N (mg/L)	(4)	100	1020	C	1/5 YR (PWS)
N/A	Sulfate (mg/L)	(4)	250	80100	C	1/5 YR (PWS)
N/A	Total Dissolved Solids (mg/L)	(4)	(5)	NA	C	1/5 YR (PWS)
60-10-5	Tributyltin [7]	NBSR 85-3295	0.03	< 0.03	G	1/5 YR
93-72-1	2-(2,4,5-Trichlorophenoxy) propionic acid (synonym = Silvex)	(4)	(5)	NA	G or C	1/5 YR (PWS)

Karl R. Bostaph / Plant Manager

Name of Principal Executive Officer or Authorized Agent/Title

7/7/09

Signature of Principal Officer or Authorized Agent/Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. Sec. 1001 and 33 U.S.C. Sec. 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

FOOTNOTES:

(1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

The quantification levels indicated for the metals are actually Specific Target Values developed for this permit. The Specific Target Value is the approximate value that may initiate a wasteload allocation analysis. Target values are not wasteload allocations or effluent limitations. The Specific Target Values are subject to change based on additional information such as hardness data, receiving stream flow, and design flows.

Units for the quantification level are micrograms/liter unless otherwise specified.

Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained.

(2) Sample Type

G = Grab = An individual sample collected in less than 15 minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and report the average results provided that the individual grab results are also reported. For grab metals samples, the individual samples shall be filtered and preserved immediately upon collection.

C = Composite = A 24-hour **(PW - Revise as required to require same composite duration as BOD_5)** composite unless otherwise specified. The composite shall be a combination of individual samples, taken proportional to flow, obtained at hourly or smaller time intervals. The individual samples may be of equal volume for flows that do not vary by +/- 10 percent over a 24-hour period.

(3) A specific analytical method is not specified; however a target value for each metal has been established. An appropriate method to meet the target value shall be selected from the following list of EPA methods (or any approved method presented in 40 CFR Part 136). If the test result is less than the method QL, a "<[QL]" shall be reported where the actual analytical test QL is substituted for [QL].

Metal	Analytical Method
Antimony	1638; 1639
Arsenic	206.5; 1632
Chromium[9]	1639
Cadmium	1637; 1638; 1639; 1640
Chromium VI	218.6; 1639
Copper	1638; 1640
Lead	1637; 1638; 1640
Mercury	245.7; 1631
Nickel	1638; 1639; 1640
Selenium	1638; 1639
Silver	1638
Zinc	1638; 1639

(4) Any approved method presented in 40 CFR Part 136.

(5) The QL is at the discretion of the permittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.

(4) Any approved method presented in 40 CFR Part 136.

(5) The QL is at the discretion of the permittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.

(6) Testing for phenol requires continuous extraction.

(7) Analytical Methods: NBSR 85-3295 or DEQ's approved analysis for Tributyltin may also be used [See A Manual for the Analysis of Butyltins in Environmental Systems by the Virginia Institute of Marine Science, dated November 1996].

(8) Both Chromium III and Chromium VI may be measured by the total chromium analysis. If the result of the total chromium analysis is less than or equal to the lesser of the Chromium III or Chromium VI method QL, the results for both Chromium III and Chromium VI can be reported as "<[QL]", where the actual analytical test QL is substituted for [QL].

(9) The lab may use SW846 Method 8270D provided the lab has an Initial Demonstration of Capability, has passed a PT for Kepone, and meets the acceptance criteria for Kepone as given in Method 8270D

UNIVERSAL LABORATORIES

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TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

Order ID: 0903393

(REPORT DATE)
15-Jun-09

TO: Ashland Aqualon Functional Ingredients
1111 Hercules Road
Hopewell Va 23860
ATTN: Bill Perkinson

Project ID: N/A
Project # N/A
Site: OF-005 Grab
Matrix: Wastewater
Comments for Order:

UL Sample Number: 0903393-005
Sample ID: OF-005 Grab
Grab Date/Time: 4/9/2009 13:00
Composite Start: N/A
Composite Stop: N/A
Collected By: newjoh

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Enterococci	Enterolert 96 well	<	col/100 ml	1	4/9/2009 17:18:00	AB
OIL and Grease (HEM)	EPA 1664	<	mg/L	5	4/13/2009 10:20:00	AB
Antimony (dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Arsenic (Dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Barium (Dissolved)	EPA 200.7	0.042	mg/L	0.005	4/10/2009 13:07:00	EK
Cadmium (Dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Chromium III (Dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Copper (dissolved)	EPA 200.7	0.008	mg/L	0.001	4/10/2009 13:07:00	EK
Iron (Dissolved)	EPA 200.7	0.34	mg/L	0.05	4/10/2009 13:07:00	EK
Lead (dissolved)	EPA 200.7	0.008	mg/L	0.005	4/10/2009 13:07:00	EK
Manganese (Dissolved)	EPA 200.7	0.426	mg/L	0.005	4/10/2009 13:07:00	EK
Nickel (Dissolved)	EPA 200.7	0.006	mg/L	0.005	4/10/2009 13:07:00	EK
Selenium (Dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Silver (Dissolved)	EPA 200.7	<	mg/L	0.001	4/10/2009 10:31:00	EK
Thallium (Dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Zinc (dissolved)	EPA 200.7	0.239	mg/L	0.005	4/10/2009 13:07:00	EK

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
EPA LAB CODE VA00912
0903393-005

Gross Alpha & Beta	EPA 900 Series	See Attached	pCi/L		5/13/2009 06:37:00	SUB
Strontium 90	EPA 900 Series	See Attached	pCi/L		5/14/2009 09:01:00	SUB
Tritium	EPA 900 Series	See Attached	pCi/L		4/28/2009 19:00:00	SUB
TBT Tributyltin	GC/FPD	<	ng/l	30	5/13/2009 19:18:00	BD
Mercury (Dissolved)	SM-3112 B	<	mg/L	0.0002	4/13/2009 14:23:00	EK
Hexavalent Chromium (Dissolv	SM-3500 Cr/D	<	mg/L	0.005	4/10/2009 10:36:00	EK
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	4/15/2009 10:30:00	LS
Sulfide	SM-4500 S2/E	<	mg/L	0.04	4/16/2009 08:55:00	AB
Surfactants-MBAS	SM-5540 C	<	mg/L	0.2	4/10/2009 10:00:00	CK

Comments for Sample ID 0903393-005

No comments

Respectfully Submitted,

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003

North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543

EPA LAB CODE VA00912

0903393-005

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REPORT OF ANALYSIS

Order ID: 0903393

(REPORT DATE)
15-Jun-09

TO: **Ashland Aqualon Functional Ingredients**
1111 Hercules Road
Hopewell Va 23860
ATTN: Bill Perkinson

UL Sample Number: 0903393-002
Sample ID: OF-005 Composite
Grab Date/Time: N/A
Composite Start: 04/08/09 11:15
Composite Stop: 04/09/09 11:15
Collected By: Client

Project ID: N/A
Project # N/A
Site: OF-005 Composite
Matrix: Wastewater
Comments for Order:

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Sulfate	ASTM D516-02	108.7	mg/L	2.5	4/14/2009 17:31:00	LS
Aluminum (Total)	EPA 200.7	0.668	mg/L	0.005	4/10/2009 13:07:00	EK
Antimony (Total)	EPA 200.7	0.006	mg/L	0.005	4/10/2009 13:07:00	EK
Arsenic (Total)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Barium (Total)	EPA 200.7	0.044	mg/L	0.005	4/10/2009 13:07:00	EK
Beryllium (Total)	EPA 200.7	<	mg/L	0.001	4/10/2009 13:07:00	EK
Boron (Total)	EPA 200.7	0.054	mg/L	0.005	4/10/2009 14:15:00	EF
Cadmium (Total)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Chromium (Total)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Cobalt (Total)	EPA 200.7	0.009	mg/L	0.001	4/10/2009 13:07:00	EK
Copper (Total)	EPA 200.7	0.014	mg/L	0.001	4/10/2009 13:07:00	EK
Iron (Total)	EPA 200.7	0.76	mg/L	0.05	4/10/2009 13:07:00	EK
Lead (Total)	EPA 200.7	0.008	mg/L	0.005	4/10/2009 13:07:00	EK
Manganese (Total)	EPA 200.7	0.499	mg/L	0.001	4/10/2009 13:07:00	EK
Molybdenum (Total)	EPA 200.7	0.004	mg/L	0.003	4/10/2009 13:07:00	EK
Nickel (Total)	EPA 200.7	0.007	mg/L	0.005	4/10/2009 13:07:00	EK

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
EPA LAB CODE VA00912
0903393-002

Selenium (Total)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Silver (Total)	EPA 200.7	<	mg/L	0.005	4/10/2009 10:31:00	EK
Thallium (Total)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Tin (Total)	EPA 200.7	<	mg/L	0.005	4/13/2009 14:02:00	EK
Titanium (Total)	EPA 200.7	**0.019**	mg/L	0.005	4/10/2009 13:07:00	EK
Zinc (Total)	EPA 200.7	**0.242**	mg/L	0.005	4/10/2009 13:07:00	EK
Bromide	EPA 300.0	**See Attached**			4/10/2009 21:13:00	SUB
Ammonia 7664-41-7	EPA 350.1	**2.6**	mg/L	0.2	4/10/2009 15:54:00	LS
Total Kjeldahl Nitrogen (TKN)	EPA 351.2/353.2	**2.9**	mg/L	0.2	4/11/2009 16:28:00	LS
Nitrate-Nitrite	EPA 351.2/353.2	**7.75**	mg/L	0.1	4/11/2009 16:28:00	LS
Total Nitrogen	EPA 351.2/353.2	**10.6**	mg/L	0.2	4/11/2009 16:28:00	LS
Total Phosphorus	EPA 365.1	**0.12**	mg/L	0.02	4/10/2009 17:16:00	LS
4,4'-DDD 72-54-8	EPA 608	<	ug/L	0.1	4/14/2009 03:31:00	BD
4,4'-DDE 72-55-9	EPA 608	<	ug/L	0.1	4/14/2009 03:31:00	BD
Alpha-BHC 319-84-6	EPA 608	<	ug/L	0.04	4/14/2009 03:31:00	BD
Beta-BHC 319-85-7	EPA 608	<	ug/L	0.04	4/14/2009 03:31:00	BD
Delta-BHC 319-86-8	EPA 608	<	ug/L	0.05	4/14/2009 03:31:00	BD
Endrin Aldehyde 7421-93-4	EPA 608	<	ug/L	0.1	4/14/2009 03:31:00	BD
Endrin Ketone 53494-70-5	EPA 608	<	ug/L	0.1	4/14/2009 03:31:00	BD
Heptachlor Epoxide 1024-57-3	EPA 608	<	ug/L	0.05	4/14/2009 03:31:00	BD
Aldrin 309-00-2	EPA 608	<	ug/L	0.04	4/14/2009 03:31:00	BD
Chloropyriphos (Dursban)	EPA 608	<	ug/L	0.1	4/14/2009 03:31:00	BD
Chlordane 57-74-9	EPA 608	<	ug/L	0.2	4/14/2009 03:31:00	BD
4,4'-DDT 50-29-3	EPA 608	<	ug/L	0.04	4/14/2009 03:31:00	BD
Demeton 8065-48-3	EPA 608	<	ug/L	10	4/14/2009 03:31:00	BD

Dieldrin 60-57-1	EPA 608	<	ug/L	0.04	4/14/2009 03:31:00	BD
Endosulfan I 959-98-8	EPA 608	<	ug/L	0.04	4/14/2009 03:31:00	BD
Endosulfan II 33123-65-9	EPA 608	<	ug/L	0.04	4/14/2009 03:31:00	BD
Endosulfan Sulfate 1031-07-8	EPA 608	<	ug/L	0.04	4/14/2009 03:31:00	BD
Endrin 72-20-8	EPA 608	<	ug/L	0.04	4/14/2009 03:31:00	BD
Guthion	EPA 608	<	ug/L	1	4/14/2009 03:31:00	BD
Heptachlor 76-44-8	EPA 608	<	ug/L	0.04	4/14/2009 03:31:00	BD
Lindane 58-89-9	EPA 608	<	ug/L	0.04	4/14/2009 03:31:00	BD
Malathion 121-75-5	EPA 608	<	ug/L	0.04	4/14/2009 03:31:00	BD
Methoxychlor 72-43-5	EPA 608	<	ug/L	0.1	4/14/2009 03:31:00	BD
Mirex 2385-85-5	EPA 608	<	ug/L	0.2	4/14/2009 03:31:00	BD
Parathion 56-38-2	EPA 608	<	ug/L	0.1	4/14/2009 03:31:00	BD
PCB-1016 12674-11-2	EPA 608	<	ug/L	0.5	4/14/2009 03:31:00	BD
PCB-1221 104-28-2	EPA 608	<	ug/L	0.5	4/14/2009 03:31:00	BD
PCB-1232 11141-16-5	EPA 608	<	ug/L	0.5	4/14/2009 03:31:00	BD
PCB-1248 12672-29-6	EPA 608	<	ug/L	0.5	4/14/2009 03:31:00	BD
PCB-1254 11097-69-1	EPA 608	<	ug/L	0.5	4/14/2009 03:31:00	BD
PCB-1260 11096-82-5	EPA 608	<	ug/L	0.5	4/14/2009 03:31:00	BD
PCB-1242 53469-21-9	EPA 608	<	ug/L	0.5	4/14/2009 03:31:00	BD
Toxaphene 8001-35-2	EPA 608	<	ug/L	1	4/14/2009 03:31:00	BD
Kepone 143-50-0	EPA 608	<	ug/L	1	4/14/2009 03:31:00	BD
Dichlorodifluoromethane 75-71-8	EPA 624	<	ug/l	1	4/16/2009 00:59:00	JS
Benzene 71-43-2	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
Bromoform 75-25-2	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
Carbon Tetrachloride 56-23-5	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS

Bromomethane 74-83-9	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
Dibromochloromethane 124-48-1	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
Chloroform 67-66-3	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
Bromodichloromethane 75-27-4	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
Methylene Chloride 75-09-2	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
2-Chloroethyl Vinyl Ether 110-75-8	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
1,1,1-Trichloroethane 71-55-6	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
1,2-Dichloroethane 107-06-2	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
1,3-Dichlorobenzene 541-73-1	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
Ethyl Benzene 100-41-4	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
Chlorobenzene 108-90-7	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
Chloroethane 75-00-3	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
Tetrachloroethene 127-18-4	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
Toluene 108-88-3	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
1,1-Dichloroethane 75-34-3	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
Vinyl Chloride 75-01-4	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
1,1,2-Trichloroethane 79-00-5	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
1,1,2,2-Tetrachloroethane 79-34-5	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
1,1-Dichloroethylene 75-35-4	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
1,4-Dichlorobenzene 106-46-7	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
Methyl ethyl ketone 78-93-3	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
Trichloroethylene 79-01-6	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
Acrolein 107-02-8	EPA 624	<	ug/L	100	4/16/2009 00:59:00	JS
Trichlorofluoromethane 75-69-4	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
Acrylonitrile 107-13-1	EPA 624	<	ug/L	5	4/16/2009 00:59:00	JS

Trans-1,3-dichloropropene 10061-02-6	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
1,2-Dichloropropane 78-87-5	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
Trans-1,2-dichloroethene 156-60-5	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
1,3-Dichloropropene 542-75-8	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
Total Xylenes	EPA 624	<	ug/L	2	4/16/2009 00:59:00	JS
Bis (Chloromethyl) Ether 542-88-1	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
Cis-1,3-dichloropropene 10061-01-5	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
Chloromethane 74-87-3	EPA 624	<	ug/L	1	4/16/2009 00:59:00	JS
1,2-Diphenylhydrazine (azoben	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Acenaphthylene 208-96-8	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Benzo(a)anthracene 56-55-3	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Benzo(b)fluoranthene 205-99-2	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Benzo[k]fluoranthene 207-08-9	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Chrysene 218-01-9	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Dibenzo(a,h)anthracene 53-70-3	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
1,2-Dichlorobenzene 95-50-1	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
1,3,-Dichlorobenzene 541-73-1	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
1,4-Dichlorobenzene 106-46-7	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
2,4-Dinitrotoluene 121-14-2	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Naphthalene 91-20-3	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Bis(2-chloroethoxy)methane 111-91-1	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Bis(2-ethylhexyl) Phthalate 117-81-7	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Fluoranthene 206-44-0	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Fluorene 86-73-7	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Isophorone 78-59-1	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD

Indeno(1,2,3-cd)pyrene 193-39-05	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
2,6-Dinitrotoluene 606-20-2	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Pyrene 129-00-0	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
4-Chlorophenyl Phenyl Ether 7005-72-3	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Pentachlorophenol 87-86-5	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Phenol 108-95-2	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
2,4,6-Trichlorophenol 88-06-2	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Anthracence 120-12-7	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Acenaphthene 83-32-9	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
4-Bromophenyl-phenylether 101-55-3	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Di-n-butyl Phthalate 84-74-2	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
2,4-Dichlorophenol 120-83-2	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Phenanthrene 85-01-8	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
2,4-Dimethylphenol 105-67-9	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
2-Chlorophenol 95-57-8	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Nitrobenzene 98-95-3	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
1,2,4-Trichlorobenzene 120-82-1	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Butyl Benzyl Phthalate 85-68-7	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Diethyl Phthalate 84-66-2	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Benzidine 92-87-5	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Bis(2-chloroethyl) Ether 111-44-4	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Bis(2-chloroisopropyl) Ether 108-60-1	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
2-Chloronaphthalene 91-58-7	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
3,3'-Dichlorobenzidine 91-94-1	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Di-n-octyl Phthalate 117-81-7	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD

Dimethyl Phthalate 131-11-3	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Benzo [a]pyrene 50-32-8	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Hexachlorobenzene 118-74-1	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Hexachlorobutadiene 87-68-3	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Benzo(ghi)perylene 191-24-2	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Hexachlorocyclopentadiene 77-74-4	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Hexachloroethane 67-72-1	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
N-Nitrosodimethylamine 62-75-9	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
N-Nitrosodi-n-propylamine 621-64-7	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
N-Nitrosodiphenylamine 86-30-6	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
2,4-Dinitrophenol 51-28-5	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
2-Methyl-4,6-dinitrophenol 534-52-1	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
2-Nitrophenol 88-75-5	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
4-Nitrophenol 100-02-7	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
4-Chloro-3-methylphenol 59-50-7	EPA 625	<	ug/L	5	4/15/2009 21:12:00	BD
Color	SM 2120	See Attached			4/10/2009 19:25:00	SUB
Mercury (Total)	SM-3112 B	<	mg/L	0.0002	4/13/2009 14:23:00	EK
Total Magnesium	SM-3120 B	4.98	mg/L	0.05	4/10/2009 13:07:00	EK
Flouride	SM-4500 F/C	0.5	mg/L	0.1	4/15/2009 16:45:00	LS
Sulfite	SM-4500 SO3/B	<	mg/L	0.5	4/9/2009 17:38:00	AB
Total Phenolics	SM-510 A/C	<	mg/L	0.1	4/14/2009 11:45:00	LS
BOD5 5118-0000	SM-5210	<	mg/L	2	4/10/2009 10:29:00	AB

Comments for Sample ID 0903393-002

OF-005 EPA 624 Manual composite 4/8 11:15-05:15

Respectfully Submitted,

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

Order ID: 0903393

(REPORT DATE)
15-Jun-09

TO: **Ashland Aqualon Functional Ingredients**
1111 Hercules Road
Hopewell Va 23860
ATTN: Bill Perkinson

Project ID: N/A
Project # N/A
Site: OF-006 Grab
Matrix: Wastewater

UL Sample Number: 0903393-006
Sample ID: OF-006 Grab
Grab Date/Time: 4/9/2009 13:37
Composite Start: N/A
Composite Stop: N/A
Collected By: newjoh

Comments for Order:

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Enterococci	Enterolert 96 well	5	col/100 ml	1	4/9/2009 17:18:00	AB
OIL and Grease (HEM)	EPA 1664	<	mg/L	5	4/13/2009 10:20:00	AB
Antimony (dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Arsenic (Dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Barium (Dissolved)	EPA 200.7	0.046	mg/L	0.005	4/10/2009 13:07:00	EK
Cadmium (Dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Chromium III (Dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Copper (dissolved)	EPA 200.7	0.005	mg/L	0.001	4/10/2009 13:07:00	EK
Iron (Dissolved)	EPA 200.7	0.20	mg/L	0.05	4/10/2009 13:07:00	EK
Lead (dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Manganese (Dissolved)	EPA 200.7	0.282	mg/L	0.005	4/10/2009 13:07:00	EK
Nickel (Dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Selenium (Dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Silver (Dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 10:31:00	EK
Thallium (Dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Zinc (dissolved)	EPA 200.7	0.016	mg/L	0.005	4/10/2009 13:07:00	EK

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
EPA LAB CODE VA00912
0903393-006

Gross Alpha & Beta	EPA 900 Series	See Attached	pCi/L		5/13/2009 06:37:00	SUB
Strontium 90	EPA 900 Series	See Attached	pCi/L		5/14/2009 09:02:00	SUB
Tritium	EPA 900 Series	See Attached	pCi/L		4/28/2009 19:32:00	SUB
TBT Tributyltin	GC/FPD	<	ng/l	30	5/13/2009 19:44:00	BD
Mercury (Dissolved)	SM-3112 B	<	mg/L	0.0002	4/13/2009 14:23:00	EK
Hexavalent Chromium (Dissolv	SM-3500 Cr/D	<	mg/L	0.005	4/10/2009 10:36:00	EK
Total Cyanide	SM-4500 CN/C/E	<	mg/L	0.005	4/15/2009 10:30:00	LS
Sulfide	SM-4500 S2/E	<	mg/L	0.04	4/16/2009 08:55:00	AB
Surfactants-MBAS	SM-5540 C	<	mg/L	0.2	4/10/2009 10:00:00	CK

Comments for Sample ID 0903393-006

No comments

Respectfully Submitted,

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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TOLL-FREE: (800) 695-2162
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REPORT OF ANALYSIS

Order ID: 0903393

(REPORT DATE)
15-Jun-09

TO: Ashland Aqualon Functional Ingredients
1111 Hercules Road
Hopewell Va 23860
ATTN: Bill Perkinson

UL Sample Number: 0903393-003
Sample ID: OF-006 Composite
Grab Date/Time: N/A
Composite Start: 04/08/09 11:30
Composite Stop: 04/09/09 11:30
Collected By: Client

Project ID: N/A
Project # N/A
Site: OF-006 Composite
Matrix: Wastewater
Comments for Order:

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Sulfate	ASTM D516-02	**80.1**	mg/L	2.5	4/14/2009 17:31:00	LS
Aluminum (Total)	EPA 200.7	**0.679**	mg/L	0.005	4/10/2009 13:07:00	EK
Antimony (Total)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Arsenic (Total)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Barium (Total)	EPA 200.7	**0.051**	mg/L	0.005	4/10/2009 13:07:00	EK
Beryllium (Total)	EPA 200.7	<	mg/L	0.001	4/10/2009 13:07:00	EK
Boron (Total)	EPA 200.7	**0.050**	mg/L	0.005	4/10/2009 14:21:00	EF
Cadmium (Total)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Chromium (Total)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Cobalt (Total)	EPA 200.7	**0.002**	mg/L	0.001	4/10/2009 13:07:00	EK
Copper (Total)	EPA 200.7	**0.012**	mg/L	0.001	4/10/2009 13:07:00	EK
Iron (Total)	EPA 200.7	**1.81**	mg/L	0.05	4/10/2009 13:07:00	EK
Lead (Total)	EPA 200.7	**0.008**	mg/L	0.005	4/10/2009 13:07:00	EK
Manganese (Total)	EPA 200.7	**0.342**	mg/L	0.001	4/10/2009 13:07:00	EK
Molybdenum (Total)	EPA 200.7	**0.006**	mg/L	0.003	4/10/2009 13:07:00	EK
Nickel (Total)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
EPA LAB CODE VA00912
0903393-003

Selenium (Total)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Silver (Total)	EPA 200.7	<	mg/L	0.005	4/10/2009 10:31:00	EK
Thallium (Total)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Tin (Total)	EPA 200.7	<	mg/L	0.005	4/13/2009 14:02:00	EK
Titanium (Total)	EPA 200.7	**0.052**	mg/L	0.005	4/10/2009 13:07:00	EK
Zinc (Total)	EPA 200.7	**0.030**	mg/L	0.005	4/10/2009 13:07:00	EK
Bromide	EPA 300.0	**See Attached**			4/10/2009 21:28:00	SUB
Ammonia 7664-41-7	EPA 350.1	<	mg/L	0.2	4/10/2009 15:54:00	LS
Total Kjeldahl Nitrogen (TKN)	EPA 351.2/353.2	**0.8**	mg/L	0.2	4/11/2009 16:28:00	LS
Nitrate-Nitrite	EPA 351.2/353.2	**1.02**	mg/L	0.1	4/11/2009 16:28:00	LS
Total Nitrogen	EPA 351.2/353.2	**1.8**	mg/L	0.2	4/11/2009 16:28:00	LS
Total Phosphorus	EPA 365.1	**0.16**	mg/L	0.02	4/10/2009 17:16:00	LS
4,4'-DDD 72-54-8	EPA 608	<	ug/L	0.1	4/14/2009 04:07:00	BD
4,4'-DDE 72-55-9	EPA 608	<	ug/L	0.1	4/14/2009 04:07:00	BD
Alpha-BHC 319-84-6	EPA 608	<	ug/L	0.04	4/14/2009 04:07:00	BD
Beta-BHC 319-85-7	EPA 608	<	ug/L	0.04	4/14/2009 04:07:00	BD
Delta-BHC 319-86-8	EPA 608	<	ug/L	0.05	4/14/2009 04:07:00	BD
Endrin Aldehyde 7421-93-4	EPA 608	<	ug/L	0.1	4/14/2009 04:07:00	BD
Endrin Ketone 53494-70-5	EPA 608	<	ug/L	0.1	4/14/2009 04:07:00	BD
Heptachlor Epoxide 1024-57-3	EPA 608	<	ug/L	0.05	4/14/2009 04:07:00	BD
Aldrin 309-00-2	EPA 608	<	ug/L	0.04	4/14/2009 04:07:00	BD
Chloropyriphos (Dursban)	EPA 608	<	ug/L	0.1	4/14/2009 04:07:00	BD
Chlordane 57-74-9	EPA 608	<	ug/L	0.2	4/14/2009 04:07:00	BD
4,4'-DDT 50-29-3	EPA 608	<	ug/L	0.04	4/14/2009 04:07:00	BD
Demeton 8065-48-3	EPA 608	<	ug/L	10	4/14/2009 04:07:00	BD

Dieldrin 60-57-1	EPA 608	<	ug/L	0.04	4/14/2009 04:07:00	BD
Endosulfan I 959-98-8	EPA 608	<	ug/L	0.04	4/14/2009 04:07:00	BD
Endosulfan II 33123-65-9	EPA 608	<	ug/L	0.04	4/14/2009 04:07:00	BD
Endosulfan Sulfate 1031-07-8	EPA 608	<	ug/L	0.04	4/14/2009 04:07:00	BD
Endrin 72-20-8	EPA 608	<	ug/L	0.04	4/14/2009 04:07:00	BD
Guthion	EPA 608	<	ug/L	1	4/14/2009 04:07:00	BD
Heptachlor 76-44-8	EPA 608	<	ug/L	0.04	4/14/2009 04:07:00	BD
Lindane 58-89-9	EPA 608	<	ug/L	0.04	4/14/2009 04:07:00	BD
Malathion 121-75-5	EPA 608	<	ug/L	0.04	4/14/2009 04:07:00	BD
Methoxychlor 72-43-5	EPA 608	<	ug/L	0.1	4/14/2009 04:07:00	BD
Mirex 2385-85-5	EPA 608	<	ug/L	0.2	4/14/2009 04:07:00	BD
Parathion 56-38-2	EPA 608	<	ug/L	0.1	4/14/2009 04:07:00	BD
PCB-1016 12674-11-2	EPA 608	<	ug/L	0.5	4/14/2009 04:07:00	BD
PCB-1221 104-28-2	EPA 608	<	ug/L	0.5	4/14/2009 04:07:00	BD
PCB-1232 11141-16-5	EPA 608	<	ug/L	0.5	4/14/2009 04:07:00	BD
PCB-1248 12672-29-6	EPA 608	<	ug/L	0.5	4/14/2009 04:07:00	BD
PCB-1254 11097-69-1	EPA 608	<	ug/L	0.5	4/14/2009 04:07:00	BD
PCB-1260 11096-82-5	EPA 608	<	ug/L	0.5	4/14/2009 04:07:00	BD
PCB-1242 53469-21-9	EPA 608	<	ug/L	0.5	4/14/2009 04:07:00	BD
Toxaphene 8001-35-2	EPA 608	<	ug/L	1	4/14/2009 04:07:00	BD
Kepone 143-50-0	EPA 608	<	ug/L	1	4/14/2009 04:07:00	BD
Dichlorodifluoromethane 75-71-8	EPA 624	<	ug/l	1	4/16/2009 02:52:00	JS
Benzene 71-43-2	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
Bromoform 75-25-2	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
1,2-Dichloropropane 78-87-5	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS

Carbon Tetrachloride 56-23-5	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
Dibromochloromethane 124-48-1	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
Chloroform 67-66-3	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
Methylene Chloride 75-09-2	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
2-Chloroethyl Vinyl Ether 110-75-8	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
Bromodichloromethane 75-27-4	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
1,1,1-Trichloroethane 71-55-6	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
1,3-Dichlorobenzene 541-73-1	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
Ethyl Benzene 100-41-4	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
Chlorobenzene 108-90-7	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
Chloroethane 75-00-3	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
1,2-Dichloroethane 107-06-2	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
Tetrachloroethene 127-18-4	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
1,2-Dichlorobenzene 95-50-1	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
Toluene 108-88-3	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
Trichloroethene 79-01-6	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
1,1-Dichloroethane 75-34-3	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
Vinyl Chloride 75-01-4	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
1,1-Dichloroethylene 75-35-4	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
1,4-Dichlorobenzene 106-46-7	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
Methyl ethyl ketone 78-93-3	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
Acrolein 107-02-8	EPA 624	<	ug/L	100	4/16/2009 02:52:00	JS
Trichlorofluoromethane 75-69-4	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
Acrylonitrile 107-13-1	EPA 624	<	ug/L	5	4/16/2009 02:52:00	JS
1,2-Dichloroethene (total) 540-59-0	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS

Trans-1,3-dichloropropene 10061-02-6	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
Trans-1,2-dichloroethene 156-60-5	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
1,3-Dichloropropene 542-75-8	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
Total Xylenes	EPA 624	<	ug/L	2	4/16/2009 02:52:00	JS
Bromomethane 74-83-9	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
1,1,2,2-Tetrachloroethane 79-34-5	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
1,1,2-Trichloroethane 79-00-5	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
Bis (Chloromethyl) Ether 542-88-1	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
Cis-1,3-dichloropropene 10061-01-5	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
Chloromethane 74-87-3	EPA 624	<	ug/L	1	4/16/2009 02:52:00	JS
1,2-Diphenylhydrazine (azoben	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Acenaphthylene 208-96-8	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Benzo(a)anthracene 56-55-3	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Benzo(b)fluoranthene 205-99-2	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Benzo[k]fluoranthene 207-08-9	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Benzo [a]pyrene 50-32-8	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Chrysene 218-01-9	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
1,2-Dichlorobenzene 95-50-1	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
1,3,-Dichlorobenzene 541-73-1	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
1,4-Dichlorobenzene 106-46-7	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
2,4-Dinitrotoluene 121-14-2	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Naphthalene 91-20-3	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Bis(2-chloroethoxy)methane 111-91-1	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Bis(2-ethylhexyl) Phthalate 117-81-7	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Fluoranthene 206-44-0	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD

Fluorene 86-73-7	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Isophorone 78-59-1	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Indeno(1,2,3-cd)pyrene 193-39-05	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
2,6-Dinitrotoluene 606-20-2	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Pyrene 129-00-0	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
4-Chlorophenyl Phenyl Ether 7005-72-3	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Pentachlorophenol 87-86-5	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Phenol 108-95-2	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
2,4,6-Trichlorophenol 88-06-2	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Anthracence 120-12-7	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Acenaphthene 83-32-9	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
4-Bromophenyl-phenylether 101-55-3	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Di-n-butyl Phthalate 84-74-2	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
2,4-Dichlorophenol 120-83-2	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Phenanthrene 85-01-8	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
2-Chlorophenol 95-57-8	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Nitrobenzene 98-95-3	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
1,2,4-Trichlorobenzene 120-82-1	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Butyl Benzyl Phthalate 85-68-7	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Diethyl Phthalate 84-66-2	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Benzidine 92-87-5	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Bis(2-chloroethyl) Ether 111-44-4	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Bis(2-chloroisopropyl) Ether 108-60-1	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
2-Chloronaphthalene 91-58-7	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
3,3'-Dichlorobenzidine 91-94-1	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD

Di-n-octyl Phthalate 117-81-7	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Dimethyl Phthalate 131-11-3	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Hexachlorobenzene 118-74-1	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Dibenzo(a,h)anthracene 53-70-3	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Hexachlorobutadiene 87-68-3	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Benzo(ghi)perylene 191-24-2	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Hexachlorocyclopentadiene 77-74-4	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Hexachloroethane 67-72-1	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
N-Nitrosodimethylamine 62-75-9	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
N-Nitrosodi-n-propylamine 621-64-7	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
2,4-Dimethylphenol 105-67-9	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
N-Nitrosodiphenylamine 86-30-6	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
2,4-Dinitrophenol 51-28-5	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
2-Methyl-4,6-dinitrophenol 534-52-1	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
2-Nitrophenol 88-75-5	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
4-Nitrophenol 100-02-7	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
4-Chloro-3-methylphenol 59-50-7	EPA 625	<	ug/L	5	4/15/2009 21:42:00	BD
Color	SM 2120	See Attached			4/10/2009 19:25:00	SUB
Mercury (Total)	SM-3112 B	<	mg/L	0.0002	4/13/2009 14:23:00	EK
Total Magnesium	SM-3120 B	6.44	mg/L	0.05	4/10/2009 13:07:00	EK
Flouride	SM-4500 F/C	0.2	mg/L	0.1	4/15/2009 16:45:00	LS
Sulfite	SM-4500 SO3/B	<	mg/L	0.5	4/9/2009 17:38:00	AB
Total Phenolics	SM-510 A/C	<	mg/L	0.1	4/14/2009 11:45:00	LS
BOD5 5118-0000	SM-5210	<	mg/L	2	4/10/2009 10:29:00	AB

Comments for Sample ID 0903393-003

OF-006 EPA 624 Manual composite 4/8 11:30-4/9 05:30

Respectfully Submitted,

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

Order ID: 0903393

(REPORT DATE)
15-Jun-09

TO: Ashland Aqualon Functional Ingredients
1111 Hercules Road
Hopewell Va 23860
ATTN: Bill Perkinson

UL Sample Number: 0903393-004
Sample ID: Intake OF-007 Grab
Grab Date/Time: 4/9/2009 11:37
Composite Start: N/A
Composite Stop: N/A
Collected By: newjoh

Project ID: N/A
Project # N/A
Site: Intake OF-007 Grab
Matrix: Wastewater
Comments for Order:

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Enterococci	Enterolert 96 well	<	col/100 ml	1	4/9/2009 17:18:00	AB
OIL and Grease (HEM)	EPA 1664	<	mg/L	5	4/13/2009 10:20:00	AB
Antimony (dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Arsenic (Dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Barium (Dissolved)	EPA 200.7	0.056	mg/L	0.005	4/10/2009 13:07:00	EK
Cadmium (Dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Chromium III (Dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Copper (dissolved)	EPA 200.7	0.022	mg/L	0.001	4/10/2009 13:07:00	EK
Iron (Dissolved)	EPA 200.7	0.50	mg/L	0.05	4/10/2009 13:07:00	EK
Lead (dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Manganese (Dissolved)	EPA 200.7	0.485	mg/L	0.005	4/10/2009 13:07:00	EK
Nickel (Dissolved)	EPA 200.7	0.008	mg/L	0.005	4/10/2009 13:07:00	EK
Selenium (Dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Silver (Dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 10:31:00	EK
Thallium (Dissolved)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Zinc (dissolved)	EPA 200.7	0.223	mg/L	0.005	4/10/2009 13:07:00	EK

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
EPA LAB CODE VA00912
0903393-004

Gross Alpha & Beta	EPA 900 Series	See Attached	pCi/L		5/13/2009 06:37:00	SUB
Strontium 90	EPA 900 Series	See Attached	pCi/L		5/14/2009 09:01:00	SUB
Tritium	EPA 900 Series	See Attached	pCi/L		4/28/2009 18:28:00	SUB
TBT Tributyltin	GC/FPD	<	ng/l	30	6/5/2009 20:01:00	BD
Mercury (Dissolved)	SM-3112 B	<	mg/L	0.0002	4/13/2009 14:23:00	EK
Hexavalent Chromium (Dissolv	SM-3500 Cr/D	<MI Matrix Interference.	mg/L	0.005	4/10/2009 10:36:00	EK
Total Cyanide	SM-4500 CN/C/E	< MS	mg/L	0.005	4/15/2009 10:30:00	LS
Sulfide	SM-4500 S2/E	<	mg/L	0.04	4/16/2009 08:55:00	AB
Surfactants-MBAS	SM-5540 C	<	mg/L	0.2	4/10/2009 10:00:00	CK

Comments for Sample ID 0903393-004

No comments

Respectfully Submitted,

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003

North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543

EPA LAB CODE VA00912

0903393-004

UNIVERSAL LABORATORIES

20 Research Drive , Hampton, Va 23666

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TOLL-FREE: (800) 695-2162
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REPORT OF ANALYSIS

Order ID: 0904182

(REPORT DATE)
17-Apr-09

TO: **Ashland Aqualon Functional Ingredients**
1111 Hercules Road
Hopewell Va 23860
ATTN: Bill Perkinson

Project ID: N/A
Project # N/A
Site: Intake OF-007 Grab
Matrix: Wastewater

UL Sample Number: **0904182-001**
Sample ID: Intake OF-007 Grab
Grab Date/Time: 4/13/2009 13:00
Composite Start: N/A
Composite Stop: N/A
Collected By: newjoh

Comments for Order:

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Fecal Coliform (MPN)	SM-9221 E	**170**	mpn/100ml	2	4/13/2009 15:49:00	AB

Comments for Sample ID 0904182-001
No comments

Respectfully Submitted,

Carol Klamer

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003

North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543

EPA LAB CODE VA00912

0904182-001

UNIVERSAL LABORATORIES

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REPORT OF ANALYSIS

Order ID: 0904182

(REPORT DATE)
17-Apr-09

TO: **Ashland Aqualon Functional Ingredients**
1111 Hercules Road
Hopewell Va 23860
ATTN: Bill Perkinson

Project ID: N/A
Project # N/A
Site: OF-006 Grab
Matrix: Wastewater
Comments for Order:

UL Sample Number: **0904182-002**
Sample ID: OF-006 Grab
Grab Date/Time: 4/13/2009 13:20
Composite Start: N/A
Composite Stop: N/A
Collected By: newjoh

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Fecal Coliform (MPN)	SM-9221 E	**49**	mpn/100ml	2	4/13/2009 15:49:00	AB

Comments for Sample ID 0904182-002
No comments

Respectfully Submitted,

Carol Klemmer

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003

North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543

EPA LAB CODE VA00912

0904182-002

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REPORT OF ANALYSIS

Order ID: 0904182

(REPORT DATE)
17-Apr-09

TO: **Ashland Aqualon Functional Ingredients**
1111 Hercules Road
Hopewell Va 23860
ATTN: Bill Perkinson

Project ID: N/A
Project # N/A
Site: OF-005 Grab
Matrix: Wastewater

UL Sample Number: **0904182-003**
Sample ID: OF-005 Grab
Grab Date/Time: 4/13/2009 13:10
Composite Start: N/A
Composite Stop: N/A
Collected By: newjoh

Comments for Order:

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Fecal Coliform (MPN)	SM-9221 E	**540**	mpn/100ml	2	4/13/2009 15:49:00	AB

Comments for Sample ID 0904182-003
No comments

Respectfully Submitted,
Carol Klamer

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
EPA LAB CODE VA00912
0904182-003

CHAIN-OF-CUSTODY

UNIVERSAL LABORATORIES

20 Research Drive
Hampton, VA 23666

Phone: (757) 865-0880
Fax: (757) 865-8014

Company	Ashland
Street/Box	
City/State	
Phone	Fax
Contact:	
Job No.	P.O. No.

Analysis Required

Sample ID	Date/Time	Sampled By	Matrix	Sample Type	Field Notes	Preservative	Preservative (FC/TRN)	Preservative	Preservative	Preservative	Preservative	Preservative	Preservative	Log Number
OF-007	4/13/09 1300	JN	WW	C (G)		✓								0904182
OF-006	↓ 1320	↓	↓	C (G)		✓								
OF-005	↓ 1310	↓	↓	C (G)		✓								
				C G										
				C G										
				C G										
				C G										
				C G										
				C G										
				C G										
				C G										
				C G										

Comments:

Cooler Temp at LI 3°C Pres √

Possible Hazards:

Disposal: Lab ☐ Client ☐ Charge ☐

Due Date:

Express Service

Express Service Approval

Relinquished By	Signature	Company	Date/Time
Received By	Signature	Company UL	Date/Time 09/13/09 1500
Relinquished By	Signature	Company UL	Date/Time 9/13/09 1500
Received By	Signature	Company	Date/Time
Relinquished By	Signature	Company	Date/Time
Received By	Signature	Company	Date/Time

Work Order No.

Delivery Order

Trans ☐ P.U. ☐ Grab ☐ Comp ☐

Shipping/Delivery Charges

Composite Start / Composite Stop

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

Order ID: 0905195

(REPORT DATE)
16-Jun-09

TO: **Ashland Aqualon Functional Ingredients**
1111 Hercules Road
Hopewell Va 23860
ATTN: Bill Perkinson

UL Sample Number: **0905195-001**
Sample ID: OF-005 Composite
Grab Date/Time: N/A
Composite Start: 06/08/09 09:50
Composite Stop: 06/09/09 09:50
Collected By: Client

Project ID: VPDES Monthly
Project # VA0003492
Site: OF-005 Composite
Matrix: Wastewater

Comments for Order:

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Chemical Oxygen Demand	HACH 8000	**16**	mg/L	10	6/15/2009 09:40:00	LS
Total Suspended Solids	SM-2540 D	**8.0**	mg/L	1	6/11/2009 17:30:00	LW

Comments for Sample ID 0905195-001
No comments

Respectfully Submitted,

Carol Klemmer

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
EPA LAB CODE VA00912

0905195-001

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

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TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

Order ID: **0905195**

(REPORT DATE)
16-Jun-09

TO: **Ashland Aqualon Functional Ingredients**
1111 Hercules Road
Hopewell Va 23860
ATTN: Bill Perkinson

UL Sample Number: **0905195-002**
Sample ID: OF-005 Grab
Grab Date/Time: 6/9/2009 09:50
Composite Start: N/A
Composite Stop: N/A
Collected By: Client

Project ID: VPDES Monthly
Project # VA0003492
Site: OF-005 Grab
Matrix: Wastewater

Comments for Order:

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Cadmium (Dissolved Low-Leve	EPA 200.7	**0.8**	ug/L	0.3	6/12/2009 09:51:00	EK
Zinc (dissolved)	EPA 200.7	**0.404**	mg/L	0.005	6/12/2009 09:51:00	EK
Hardness as CaCO3-EDTA	SM-2340 C	**160**	mg/L	2	6/15/2009 11:46:00	LS

Comments for Sample ID 0905195-002
No comments

Respectfully Submitted,

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
EPA LAB CODE VA00912

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

Order ID: 0905195

(REPORT DATE)
16-Jun-09

TO: **Ashland Aqualon Functional Ingredients**
1111 Hercules Road
Hopewell Va 23860
ATTN: Bill Perkinson

UL Sample Number: **0905195-005**
Sample ID: OF-006 Composite
Grab Date/Time: N/A
Composite Start: 06/08/09 10:30
Composite Stop: 06/09/09 10:30
Collected By: Client

Project ID: VPDES Monthly
Project # VA0003492
Site: OF-006 Composite
Matrix: Wastewater

Comments for Order:

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Chemical Oxygen Demand	HACH 8000	**20**	mg/L	10	6/15/2009 09:40:00	LS
Total Suspended Solids	SM-2540 D	**6.2**	mg/L	1	6/11/2009 17:30:00	LW

Comments for Sample ID 0905195-005
No comments

Respectfully Submitted,

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
EPA LAB CODE VA00912

0905195-005

Universal Laboratories
20 Research Drive Hampton, Va.
Phone (757) 865-0860 Fax (757) 865-8014

EXPRESS LOG-IN CHAIN OF CUSTODY

UL ORDER ID **0905195**

Order Comment:

Pre-Log Date: Thursday, May 14, 2009

Samples Must Be Received on or Before:

HERCHOPE Ashland Aqualon Functional Ingredients
1111 Hercules Road
Hopewell Va 23860

ProjectID: VPDES Monthly

Project Notes:

QuoteID: Q0901119
Permit Number: VA0003492
ProjectLocation:

Customer Contact: Bill Perkinson
Phone Number: 804-541-4390
FaxNumber: (804) 541-4496

0905195-001	**OF-005 Composite**		**Sample Date/Time**	6/8/09 9:50 6/9/09 9:50	**Sampler Initials**	WMS
			Field Reading			
Wastewater	COD	Chemical Oxygen Demand			**Container Type** HDPE	**Preservative** H2SO4 pH<2/4C
(3)	TSS	Total Suspended Solids			HDPE	Refrigerate, 4 C
0905195-002	**OF-005 Grab**		**Sample Date/Time**	6/9/09 9:50 / / :	**Sampler Initials**	WMS
			Field Reading			
Wastewater	HRD	Hardness as CaCO3-EDTA			**Container Type** HDPE	**Preservative** HNO3 pH<2
(2)	ZNID	Zinc (Dissolved)			HDPE (acid wash	Filter HNO3 ph<2
0905195-003	**OF-005 Grab**		**Sample Date/Time**	/ / : / / :	**Sampler Initials**	
			Field Reading			
Field Services	~~FILTER~~	Filtration Apparatus			**Container Type** N/A	**Preservative** N/A
0905195-004	**OF-005 Composite**		**Sample Date/Time**	6/10/09 : / / :	**Sampler Initials**	Calmik
			Field Reading			
Field Services	TRANS	Transportation			**Container Type** N/A	**Preservative** N/A
0905195-005	**OF-006 Composite**		**Sample Date/Time**	6/8/09 10:30 6/9/09 10:30	**Sampler Initials**	WMS
			Field Reading			
Wastewater	COD	Chemical Oxygen Demand			**Container Type** HDPE	**Preservative** H2SO4 pH<2/4C
(3)	TSS	Total Suspended Solids			HDPE	Refrigerate, 4 C

HERCHOPE Ashland Aqualon Functional Ingredients
1111 Hercules Road
Hopewell Va 23860

Customer Contact: Bill Perkinson

Phone Number: 804-541-4390
FaxNumber: (804) 541-4496

ProjectID: VI DEQ Monthly

Project Notes:

QuoteID: Q0901119
Permit Number: VA0003492
ProjectLocation:

Comments:

Cooler Temp @ Log-in 4 4°
Preservation

CN int check | Phenol in check | NH3 int check | BOD int check

Relinquished By Signature:	Company: Aqualon	Date/Time: 6/10/09 1438
Received By Signature:	Company: UL	Date/Time: 6/10/09 1438
Relinquished By Signature:	Company: UL	Date/Time: 6/10/09 1712
Received By Signature:	Company: UL	Date/Time: 6/10/09 1712
Relinquished By Signature:	Company:	Date/Time:
Received By Signature:	Company:	Date/Time:

UNIVERSAL LABORATORIES

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TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

REPORT OF ANALYSIS

Order ID: 0903393

(REPORT DATE)
15-Jun-09

TO: **Ashland Aqualon Functional Ingredients**
1111 Hercules Road
Hopewell Va 23860
ATTN: Bill Perkinson

UL Sample Number: 0903393-001
Sample ID: Intake OF-007 Comp
Grab Date/Time: N/A
Composite Start: 04/08/09 11:00
Composite Stop: 04/09/09 11:00
Collected By: Client

Project ID: N/A
Project # N/A
Site: Intake OF-007 Comp
Matrix: Wastewater
Comments for Order:

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
Sulfate	ASTM D516-02	**73.0**	mg/L	2.5	4/14/2009 17:31:00	LS
Aluminum (Total)	EPA 200.7	**0.891**	mg/L	0.005	4/10/2009 13:07:00	EK
Antimony (Total)	EPA 200.7	**0.008**	mg/L	0.005	4/10/2009 13:07:00	EK
Arsenic (Total)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Barium (Total)	EPA 200.7	**0.061**	mg/L	0.005	4/10/2009 13:07:00	EK
Beryllium (Total)	EPA 200.7	<	mg/L	0.001	4/10/2009 13:07:00	EK
Boron (Total)	EPA 200.7	**0.100**	mg/L	0.005	4/10/2009 13:07:00	EK
Cadmium (Total)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Chromium (Total)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Cobalt (Total)	EPA 200.7	**0.006**	mg/L	0.001	4/10/2009 13:07:00	EK
Copper (Total)	EPA 200.7	**0.027**	mg/L	0.001	4/10/2009 13:07:00	EK
Iron (Total)	EPA 200.7	**0.94**	mg/L	0.05	4/10/2009 13:07:00	EK
Lead (Total)	EPA 200.7	**0.006**	mg/L	0.005	4/10/2009 13:07:00	EK
Manganese (Total)	EPA 200.7	**0.606**	mg/L	0.001	4/10/2009 13:07:00	EK
Molybdenum (Total)	EPA 200.7	**0.006**	mg/L	0.003	4/10/2009 13:07:00	EK
Nickel (Total)	EPA 200.7	**0.010**	mg/L	0.005	4/10/2009 13:07:00	EK

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003
North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543
EPA LAB CODE VA00912
0903393-001

Selenium (Total)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Silver (Total)	EPA 200.7	0.083	mg/L	0.005	4/10/2009 10:31:00	EK
Thallium (Total)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Tin (Total)	EPA 200.7	0.044	mg/L	0.005	4/13/2009 14:02:00	EK
Titanium (Total)	EPA 200.7	<	mg/L	0.005	4/10/2009 13:07:00	EK
Zinc (Total)	EPA 200.7	0.228	mg/L	0.005	4/10/2009 13:07:00	EK
Bromide	EPA 300.0	See Attached			4/10/2009 20:57:00	SUB
Ammonia 7664-41-7	EPA 350.1	0.9	mg/L	0.2	4/10/2009 15:54:00	LS
Total Kjeldahl Nitrogen (TKN)	EPA 351.2/353.2	1.7	mg/L	0.2	4/11/2009 16:28:00	LS
Nitrate-Nitrite	EPA 351.2/353.2	4.87	mg/L	0.1	4/11/2009 16:28:00	LS
Total Nitrogen	EPA 351.2/353.2	6.6	mg/L	0.2	4/11/2009 16:28:00	LS
Total Phosphorus	EPA 365.1	0.06	mg/L	0.02	4/10/2009 17:16:00	LS
4,4'-DDD 72-54-8	EPA 608	<	ug/L	0.1	4/14/2009 02:15:00	BD
4,4'-DDE 72-55-9	EPA 608	<	ug/L	0.1	4/14/2009 02:15:00	BD
Alpha-BHC 319-84-6	EPA 608	<	ug/L	0.04	4/14/2009 02:15:00	BD
Beta-BHC 319-85-7	EPA 608	<	ug/L	0.04	4/14/2009 02:15:00	BD
Delta-BHC 319-86-8	EPA 608	<	ug/L	0.05	4/14/2009 02:15:00	BD
Endrin Aldehyde 7421-93-4	EPA 608	<	ug/L	0.1	4/14/2009 02:15:00	BD
Endrin Ketone 53494-70-5	EPA 608	0.1	ug/L	0.1	4/14/2009 02:15:00	BD
Heptachlor Epoxide 1024-57-3	EPA 608	<	ug/L	0.05	4/14/2009 02:15:00	BD
Aldrin 309-00-2	EPA 608	<	ug/L	0.04	4/14/2009 02:15:00	BD
Chloropyriphos (Dursban)	EPA 608	<	ug/L	0.1	4/14/2009 02:15:00	BD
Chlordane 57-74-9	EPA 608	<	ug/L	0.2	4/14/2009 02:15:00	BD
4,4'-DDT 50-29-3	EPA 608	<	ug/L	0.04	4/14/2009 02:15:00	BD
Demeton 8065-48-3	EPA 608	<	ug/L	10	4/14/2009 02:15:00	BD

Dieldrin 60-57-1	EPA 608	<	ug/L	0.04	4/14/2009 02:15:00	BD
Endosulfan I 959-98-8	EPA 608	<	ug/L	0.04	4/14/2009 02:15:00	BD
Endosulfan II 33123-65-9	EPA 608	<	ug/L	0.04	4/14/2009 02:15:00	BD
Endosulfan Sulfate 1031-07-8	EPA 608	<	ug/L	0.04	4/14/2009 02:15:00	BD
Endrin 72-20-8	EPA 608	<	ug/L	0.04	4/14/2009 02:15:00	BD
Guthion	EPA 608	< .	ug/L	1	4/14/2009 02:15:00	BD
Heptachlor 76-44-8	EPA 608	<	ug/L	0.04	4/14/2009 02:15:00	BD
Lindane 58-89-9	EPA 608	<	ug/L	0.04	4/14/2009 02:15:00	BD
Malathion 121-75-5	EPA 608	< .	ug/L	0.04	4/14/2009 02:15:00	BD
Methoxychlor 72-43-5	EPA 608	<	ug/L	0.1	4/14/2009 02:15:00	BD
Mirex 2385-85-5	EPA 608	< .	ug/L	0.2	4/14/2009 02:15:00	BD
Parathion 56-38-2	EPA 608	< .	ug/L	0.1	4/14/2009 02:15:00	BD
PCB-1016 12674-11-2	EPA 608	<	ug/L	0.5	4/14/2009 02:15:00	BD
PCB-1221 104-28-2	EPA 608	<	ug/L	0.5	4/14/2009 02:15:00	BD
PCB-1232 11141-16-5	EPA 608	<	ug/L	0.5	4/14/2009 02:15:00	BD
PCB-1248 12672-29-6	EPA 608	<	ug/L	0.5	4/14/2009 02:15:00	BD
PCB-1254 11097-69-1	EPA 608	<	ug/L	0.5	4/14/2009 02:15:00	BD
PCB-1260 11096-82-5	EPA 608	<	ug/L	0.5	4/14/2009 02:15:00	BD
PCB-1242 53469-21-9	EPA 608	<	ug/L	0.5	4/14/2009 02:15:00	BD
Toxaphene 8001-35-2	EPA 608	<	ug/L	1	4/14/2009 02:15:00	BD
Kepone 143-50-0	EPA 608	< .	ug/L	1	4/14/2009 02:15:00	BD
Dichlorodifluoromethane 75-71-8	EPA 624	<	ug/l	1	4/15/2009 21:13:00	JS
Benzene 71-43-2	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Bromoform 75-25-2	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
1,2-Dichloropropane 78-87-5	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS

Carbon Tetrachloride 56-23-5	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Dibromochloromethane 124-48-1	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Chloroform 67-66-3	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Methylene Chloride 75-09-2	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
2-Chloroethyl Vinyl Ether 110-75-8	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Bromodichloromethane 75-27-4	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
1,1,1-Trichloroethane 71-55-6	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
1,2-Dichloroethane 107-06-2	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Ethyl Benzene 100-41-4	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Chlorobenzene 108-90-7	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Chloroethane 75-00-3	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Tetrachloroethene 127-18-4	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
1,2-Dichlorobenzene 95-50-1	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Toluene 108-88-3	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
1,1-Dichloroethane 75-34-3	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Vinyl Chloride 75-01-4	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Total Xylenes	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
1,1-Dichloroethylene 75-35-4	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
1,4-Dichlorobenzene 106-46-7	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Methyl ethyl ketone 78-93-3	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Trichloroethylene 79-01-6	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Acrolein 107-02-8	EPA 624	<	ug/L	100	4/15/2009 21:13:00	JS
Trichlorofluoromethane 75-69-4	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Acrylonitrile 107-13-1	EPA 624	<	ug/L	5	4/15/2009 21:13:00	JS
1,2-Dichloroethene (total) 540-59-0	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS

Trans-1,3-dichloropropene 10061-02-6	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Trans-1,2-dichloroethene 156-60-5	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
1,3-Dichloropropene 542-75-8	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Bromomethane 74-83-9	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
1,1,2,2-Tetrachloroethane 79-34-5	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
1,1,2-Trichloroethane 79-00-5	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Bis (Chloromethyl) Ether 542-88-1	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Cis-1,3-dichloropropene 10061-01-5	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
Chloromethane 74-87-3	EPA 624	<	ug/L	1	4/15/2009 21:13:00	JS
1,2-Diphenylhydrazine (azoben	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Acenaphthylene 208-96-8	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Benzo(a)anthracene 56-55-3	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Benzo(b)fluoranthene 205-99-2	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Benzo[k]fluoranthene 207-08-9	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Benzo [a]pyrene 50-32-8	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Chrysene 218-01-9	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
N-Nitroso-di-n-propylamine 621-64-7	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
1,2-Dichlorobenzene 95-50-1	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
1,3,-Dichlorobenzene 541-73-1	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
1,4-Dichlorobenzene 106-46-7	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
2,4-Dinitrotoluene 121-14-2	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Naphthalene 91-20-3	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Bis(2-chloroethoxy)methane 111-91-1	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Bis(2-ethylhexyl) Phthalate 117-81-7	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Fluoranthene 206-44-0	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD

Fluorene 86-73-7	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Isophorone 78-59-1	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Indeno(1,2,3-cd)pyrene 193-39-05	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
2,6-Dinitrotoluene 606-20-2	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Pyrene 129-00-0	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
4-Chlorophenyl Phenyl Ether 7005-72-3	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Pentachlorophenol 87-86-5	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Phenol 108-95-2	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
2,4,6-Trichlorophenol 88-06-2	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Anthracence 120-12-7	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Acenaphthene 83-32-9	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
4-Bromophenyl-phenylether 101-55-3	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Di-n-butyl Phthalate 84-74-2	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
2,4-Dichlorophenol 120-83-2	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Phenanthrene 85-01-8	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
2,4-Dimethylphenol 105-67-9	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
2-Chlorophenol 95-57-8	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Nitrobenzene 98-95-3	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
1,2,4-Trichlorobenzene 120-82-1	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Butyl Benzyl Phthalate 85-68-7	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Diethyl Phthalate 84-66-2	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Benzidine 92-87-5	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Bis(2-chloroethyl) Ether 111-44-4	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Bis(2-chloroisopropyl) Ether 108-60-1	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
2-Chloronaphthalene 91-58-7	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD

3,3'-Dichlorobenzidine 91-94-1	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Di-n-octyl Phthalate 117-81-7	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Dimethyl Phthalate 131-11-3	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Hexachlorobenzene 118-74-1	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Dibenzo(a,h)anthracene 53-70-3	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Hexachlorobutadiene 87-68-3	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Benzo(ghi)perylene 191-24-2	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Hexachlorocyclopentadiene 77-74-4	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Hexachloroethane 67-72-1	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
N-Nitrosodimethylamine 62-75-9	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
N-Nitrosodiphenylamine 86-30-6	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
2,4-Dinitrophenol 51-28-5	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
2-Methyl-4,6-dinitrophenol 534-52-1	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
2-Nitrophenol 88-75-5	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
4-Nitrophenol 100-02-7	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
4-Chloro-3-methylphenol 59-50-7	EPA 625	<	ug/L	5	4/15/2009 20:42:00	BD
Chemical Oxygen Demand 4556	HACH 8000	21	mg/L	10	4/14/2009 10:27:00	LS
Color	SM 2120	See Attached			4/10/2009 19:25:00	SUB
Total Suspended Solids	SM-2540 D	8.9	mg/L	1	4/11/2009 12:24:00	LS
Total Magnesium	SM-3120 B	5.72	mg/L	0.05	4/10/2009 13:07:00	EK
Flouride	SM-4500 F/C	0.3	mg/L	0.1	4/15/2009 16:45:00	LS
Sulfite	SM-4500 SO3/B	<	mg/L	0.5	4/9/2009 17:38:00	AB
Total Phenolics	SM-510 A/C	<	mg/L	0.1	4/14/2009 11:45:00	LS
BOD5 5118-0000	SM-5210	<	mg/L	2	4/10/2009 10:29:00	AB
Total Organic Carbon	SM-5310 C	See Attached	mg/L	1	4/16/2009 07:30:00	SUB

Comments for Sample ID 0903393-001

Intake OF-007 EPA 624 Manual composite 4/8 11:00-4/9 05:00

Respectfully Submitted,

EBERLINE SERVICES

EBERLINE ANALYTICAL CORPORATION
601 SCARBORO ROAD
OAK RIDGE, TENNESSEE 37830
PHONE (865) 481-0683
FAX (865) 483-4621

EBS-OR-28786

May 29, 2009

Mike Jennings
Universal Laboratories
20 Research Drive
Hampton, VA 23666

CASE NARRATIVE
Work Order # 09-04068-OR

SAMPLE RECEIPT

This work order contains three water samples received 4/17/2009. All samples were analyzed for Strontium-90, Tritium and Gross Alpha/Beta.

CLIENT ID	LAB ID
0903393-004	09-04068-17
0903393-005	09-04068-18
0903393-006	09-04068-19

ANALYTICAL METHODS

Strontium-90 was analyzed using EIChroM Method SRW01 Modified. Gross Alpha/Beta was performed using EPA Method 900.0 Modified. Tritium was performed using EPA Method 906.0 modified.

ANALYTICAL RESULTS

Combined Standard Uncertainty is reported at 2-sigma value.

STRONTIUM-90

Samples were prepared by acid digestion as appropriate for the matrix. Chemical separations were conducted using EIChroM stabilized chemical resins. Subsequent extractions of Strontium-90 were conducted and Yttrium-90 was allowed to reach radioactive equilibrium. The Yttrium-90 fraction of each sample was selectively eluted onto a steel planchet and evaporated to dryness. Chemical recovery was determined by use of a stable Strontium carrier. Sample activities were determined by gas flow proportional counting. Sample results were corrected for Yttrium-90 decay after elution.

Samples demonstrated non-detect equivalent results for Strontium-90 activity. Chemical recovery was acceptable for all samples. Results for the Strontium-90 method blank demonstrated non-detect equivalent activity. Results for the Strontiuim-90 replicate demonstrated an acceptable relative percent difference and normalized difference. Results for the Strontium-90 laboratory control sample demonstrated an acceptable percent recovery.

ANALYTICAL RESULTS CONTINUED

TRITIUM

A representative aliquot of each sample was transferred into a round-bottomed distillation flask and attached to a single stage still. A portion of the middle distillation fraction was transferred to a liquid scintillation vial and scintillation cocktail was added. Samples were then counted by beta liquid scintillation.

Samples demonstrated non-detect equivalent results for Tritium activity. Results for the Tritium method blank demonstrated non-detect equivalent activity. Results for the Tritium laboratory control sample demonstrated an acceptable percent recovery.

GROSS ALPHA/BETA

Samples were prepared by evaporation of representative volumetric aliquots acidified with HNO_3. Reduced samples were then transferred to steel planchets for final evaporation to dryness and flaming if appropriate. Samples were then counted on a gas proportional counter. Results were corrected as required for inherent self-absorption based on residual mass present.

Samples demonstrated near background equivalent results for Gross Alpha and Beta activity. Due to a high Total Solids content, Gross Alpha result for sample fraction #18 (Client ID: 0903393-005) demonstrated a slightly high detection limit. Results for the Gross Alpha and Beta method blank demonstrated background equivalent activity. Results for the Gross Alpha and Beta laboratory control sample demonstrated an acceptable percent recovery.

CERTIFICATION OF ACCURACY

I certify that this data report is in compliance with the terms and conditions of the Purchase Order, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the cognizant project manager or his/her designee to be accurate as verified by the following signature.

M.R. McDougall
Laboratory Manager

Date: 5/29/2009

Eberline Analytical
Final Report of Analysis

Report To:

Mike Jennings
Universal Laboratories
20 Research Drive
Hampton, VA 23666

Work Order Details:

SDG:	**09-04068**
Purchase Order:	090413001
Analysis Category:	ENVIRONMENTAL
Sample Matrix:	WA

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date/Time	Batch ID	Analyst	Analyte	Method	Result	CU	CSU	MDA	Report Units
09-04068-01	LCS	KNOWN	04/20/09 00:00	4/17/2009	5/13/09 6:37	09-04068	MHightower	Gross Alpha	EPA 900.0 Modified	3.13E+02	1.34E+01			pCi/l
09-04068-01	LCS	SPIKE	04/20/09 00:00	4/17/2009	5/13/09 6:37	09-04068	MHightower	Gross Alpha	EPA 900.0 Modified	3.56E+02	8.40E+00	8.56E+00	4.09E-01	pCi/l
09-04068-02	MBL	BLANK	04/20/09 00:00	4/17/2009	5/13/09 6:36	09-04068	MHightower	Gross Alpha	EPA 900.0 Modified	-5.20E-02	1.02E-01	1.02E-01	2.73E-01	pCi/l
09-04068-17	TRG	0903393-004	04/09/09 11:37	4/17/2009	5/13/09 6:37	09-04068	MHightower	Gross Alpha	EPA 900.0 Modified	5.30E-01	8.13E-01	8.13E-01	1.69E+00	pCi/l
09-04068-18	TRG	0903393-005	04/09/09 13:00	4/17/2009	5/13/09 6:37	09-04068	MHightower	Gross Alpha	EPA 900.0 Modified	2.72E-01	1.36E+00	1.36E+00	3.09E+00	pCi/l
09-04068-19	TRG	0903393-006	04/09/09 13:37	4/17/2009	5/13/09 6:37	09-04068	MHightower	Gross Alpha	EPA 900.0 Modified	6.86E-01	1.23E+00	1.23E+00	2.62E+00	pCi/l
09-04068-01	LCS	KNOWN	04/20/09 00:00	4/17/2009	5/13/09 6:37	09-04068	MHightower	Gross Beta	EPA 900.0 Modified	2.41E+02	7.24E+00			pCi/l
09-04068-01	LCS	SPIKE	04/20/09 00:00	4/17/2009	5/13/09 6:37	09-04068	MHightower	Gross Beta	EPA 900.0 Modified	2.86E+02	6.28E+00	6.31E+00	8.78E-01	pCi/l
09-04068-02	MBL	BLANK	04/20/09 00:00	4/17/2009	5/13/09 6:36	09-04068	MHightower	Gross Beta	EPA 900.0 Modified	-7.86E-02	2.95E-01	2.95E-01	6.38E-01	pCi/l
09-04068-17	TRG	0903393-004	04/09/09 11:37	4/17/2009	5/13/09 6:37	09-04068	MHightower	Gross Beta	EPA 900.0 Modified	5.07E+00	1.66E+00	1.66E+00	3.00E+00	pCi/l
09-04068-18	TRG	0903393-005	04/09/09 13:00	4/17/2009	5/13/09 6:37	09-04068	MHightower	Gross Beta	EPA 900.0 Modified	4.99E+00	1.94E+00	1.94E+00	3.64E+00	pCi/l
09-04068-19	TRG	0903393-006	04/09/09 13:37	4/17/2009	5/13/09 6:37	09-04068	MHightower	Gross Beta	EPA 900.0 Modified	2.07E+00	1.76E+00	1.76E+00	3.54E+00	pCi/l
09-04068-01	LCS	KNOWN	04/20/09 00:00	4/17/2009	5/14/09 9:02	09-04068	JPachella	Strontium-90	ElChroM SRW01 Modified	5.09E+01	2.85E-01			pCi/l
09-04068-01	LCS	SPIKE	04/20/09 00:00	4/17/2009	5/14/09 9:02	09-04068	JPachella	Strontium-90	ElChroM SRW01 Modified	5.01E+01	1.28E+00	1.57E+00	5.81E-01	pCi/l
09-04068-02	MBL	BLANK	04/20/09 00:00	4/17/2009	5/14/09 9:01	09-04068	JPachella	Strontium-90	ElChroM SRW01 Modified	5.65E-01	3.14E-01	3.15E-01	6.08E-01	pCi/l
09-04068-03	DUP	0903393-004	04/09/09 11:37	4/17/2009	5/14/09 9:01	09-04068	JPachella	Strontium-90	ElChroM SRW01 Modified	1.14E+00	5.90E-01	5.90E-01	1.13E+00	pCi/l
09-04068-17	DO	0903393-004	04/09/09 11:37	4/17/2009	5/14/09 9:01	09-04068	JPachella	Strontium-90	ElChroM SRW01 Modified	1.08E+00	6.25E-01	6.25E-01	1.21E+00	pCi/l
09-04068-18	TRG	0903393-005	04/09/09 13:00	4/17/2009	5/14/09 9:01	09-04068	JPachella	Strontium-90	ElChroM SRW01 Modified	9.25E-01	7.08E-01	7.09E-01	1.41E+00	pCi/l
09-04068-19	TRG	0903393-006	04/09/09 13:37	4/17/2009	5/14/09 9:02	09-04068	JPachella	Strontium-90	ElChroM SRW01 Modified	9.82E-01	6.06E-01	6.07E-01	1.19E+00	pCi/l
09-04068-01	LCS	KNOWN	04/20/09 00:00	4/17/2009	4/28/09 9:56	09-04068	JPachella	Tritium	EPA 906.0 Modified	9.31E+03	3.35E+01			pCi/l
09-04068-01	LCS	SPIKE	04/20/09 00:00	4/17/2009	4/28/09 9:56	09-04068	JPachella	Tritium	EPA 906.0 Modified	8.12E+03	5.62E+02	1.06E+03	5.51E+02	pCi/l
09-04068-02	MBL	BLANK	04/20/09 00:00	4/17/2009	4/28/09 10:28	09-04068	JPachella	Tritium	EPA 906.0 Modified	0.00E+00	2.98E+02	2.98E+02	5.19E+02	pCi/l
09-04068-17	TRG	0903393-004	04/09/09 11:37	4/17/2009	4/28/09 18:28	09-04068	JPachella	Tritium	EPA 906.0 Modified	1.99E+02	3.10E+02	3.11E+02	5.27E+02	pCi/l
09-04068-18	TRG	0903393-005	04/09/09 13:00	4/17/2009	4/28/09 19:00	09-04068	JPachella	Tritium	EPA 906.0 Modified	2.00E+02	3.13E+02	3.13E+02	5.30E+02	pCi/l
09-04068-19	TRG	0903393-006	04/09/09 13:37	4/17/2009	4/28/09 19:32	09-04068	JPachella	Tritium	EPA 906.0 Modified	3.87E+02	3.09E+02	3.12E+02	5.12E+02	pCi/l

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original

EBERLINE SERVICES

EBERLINE ANALYTICAL CORPORATION
601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

Analytics Corporation
10329 Stony Run Lane
Ashland, VA 23005
Phone: (804)365-3000
Fax: (804)365-3002

April 15, 2009

MIKE JENNINGS
UNIVERSAL LABORATORIES
20 RESEARCH DR
HAMPTON, VA 23666

Purchase Order:

Client ID: 0903393
Workorder: 9100003

Dear MIKE JENNINGS:

Enclosed are the analytical results for sample(s) received by the laboratory on on Friday, April 10, 2009. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

Unless otherwise specified all analyses of solid materials are based on dry weight.

The signature at the end of this report certify that the results are based on the referenced methods and unless otherwise noted meet the requirements of NELAC.

Reported results relate only to the items tested, as received by the laboratory

On-site analysis (analysis ASAP) is recommended for the following tests: pH, temperature, dissolved oxygen, residual chlorine and sulfite. Whenperformed off-site, these tests do not meet NELAC standards.

Abbreviations:ug/L = micrograms per Liter, mg/L = milligrams per Liter, ug/g = micrograms per gram, mg/kg = milligrams per kilogramug/wp = micrograms per wipe, ug/ml = micrograms per millimeter, uS = microsiemens per centimeter at 25 degrees Celciusppb = parts per billion, DF = Dilution Factor

If you have any questions concerning this report, please feel free to call Client Services at 1-800-888-8061.

Sincerely,

Dawn Casto

Enclosures

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Analytics Corporation.

Analytics Corporation
10329 Stony Run Lane
Ashland, VA 23005
Phone: (804)365-3000
Fax: (804)365-3002

SAMPLE SUMMARY

Workorder: 9100003 0903393

Lab ID	Sample ID	Matrix	Date Collected	Date Received
9100003001	0903393-001	Aqueous Liquid	4/9/2009 00:00	4/10/2009 10:00
9100003002	0903393-002	Aqueous Liquid	4/9/2009 00:00	4/10/2009 10:00
9100003003	0903393-003	Aqueous Liquid	4/9/2009 00:00	4/10/2009 10:00

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Analytics Corporation
10329 Stony Run Lane
Ashland, VA 23005
Phone: (804)365-3000
Fax: (804)365-3002

ANALYTICAL RESULTS

Workorder: 9100003 0903393

Lab ID: **9100003001**
Sample ID: **0903393-001**

Date Received: 4/10/2009 10:00
Date Collected: 4/9/2009 00:00

Matrix: Aqueous Liquid
Samp Type: NA

Parameters	Results	Units	Report Limit	DF	Prepared	By	Analyzed	By	Qual
Analysis Desc: SM 2120 B			Analytical Method: SM 2120 B						
Color	10.0	CU	5.00	1			4/10/2009 19:25	JWB	
Analysis Desc: EPA 300.0			Analytical Method: EPA 300.0						
Bromide	<0.500	mg/L	0.500	1			4/10/2009 20:57	KDD	

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Analytics Corporation
10329 Stony Run Lane
Ashland, VA 23005
Phone: (804)365-3000
Fax: (804)365-3002

ANALYTICAL RESULTS

Workorder: 9100003 0903393

Lab ID: **9100003002**
Sample ID: **0903393-002**

Date Received: 4/10/2009 10:00
Date Collected: 4/9/2009 00:00

Matrix: Aqueous Liquid
Samp Type: NA

Parameters	Results	Units	Report Limit	DF	Prepared	By	Analyzed	By	Qual
Analysis Desc: SM 2120 B			Analytical Method: SM 2120 B						
Color	5.00	CU	5.00	1			4/10/2009 19:25	JWB	
Analysis Desc: EPA 300.0			Analytical Method: EPA 300.0						
Bromide	<0.500	mg/L	0.500	1			4/10/2009 21:13	KDD	

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Analytics Corporation
10329 Stony Run Lane
Ashland, VA 23005
Phone: (804)365-3000
Fax: (804)365-3002

ANALYTICAL RESULTS

Workorder: 9100003 0903393

Lab ID: **9100003003** Date Received: 4/10/2009 10:00 Matrix: Aqueous Liquid
Sample ID: **0903393-003** Date Collected: 4/9/2009 00:00 Samp Type: NA

Parameters	Results	Units	Report Limit	DF	Prepared	By	Analyzed	By	Qual
Analysis Desc: SM 2120 B			Analytical Method: SM 2120 B						
Color	60.0	CU	5.00	1			4/10/2009 19:25	JWB	1
Analysis Desc: EPA 300.0			Analytical Method: EPA 300.0						
Bromide	<0.500	mg/L	0.500	1			4/10/2009 21:28	KDD	

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Analytics Corporation
10329 Stony Run Lane
Ashland, VA 23005
Phone: (804)365-3000
Fax: (804)365-3002

ANALYTICAL RESULTS QUALIFIERS

Workorder: 9100003 0903393

PARAMETER QUALIFIERS

[1] All samples filtered due to the turbid nature of the samples. Sample 9100003003 was slightly turbid after filtration.

CERTIFICATE OF ANALYSIS

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ANALYTICS

Account Name: UNIVERSAL LABS

Sample Container Receipt Form: 0903383 -

Sample Identification	001	002	003					
Type of Container	250P	→	→					
Number of Containers	2	→	→					
Temperature on Arrival	4	→	→					
pH on Arrival	6	→	→					
Chlorine on Arrival (ppm)	→	→	→					
VOA Sample Condition	→	→	→					
General Condition	OK	→	→					
	<0.02	→	→					
Notes and comments								

P=Plastic; G=Glass, Am=Amber, VOA=VOA vial

** Samples received in _____ for VOC's in soil. See attached for details on sample containers for low level VOC's in soil.

Sample Custodian James Altieri Date 4-10-09

JAMES ALTIERI

TO: ANALYTICS

CHAIN-OF-CUSTODY

UNIVERSAL LABORATORIES

20 Research Drive
Hampton, VA 23666

Phone: (757) 865-0880
Fax: (757) 865-8014

Company	Universal Labs
Street/Box	
City/State	
Phone	Fax
Contact:	
Job No.	P.O. No.

Analysis Required: BROMIDE, COLOR

Sample ID	Date/Time	Sampled By	Matrix	Sample Type	Field Notes	Preservative	Preservative	Preservative	Preservative	Preservative	Preservative	Preservative	Preservative	Log Number
	4/9/09 MS			C G										
0903393-001	1142			C G										
	4/9/09 MS			C G										
0903393-002	1144			C G										
	4/9/09 MS			C G										
0903393-003	1142			C G										
				C G										
				C G										
				C G										
				C G										
				C G										
				C G										
				C G										

Comments:

Cooler Temp at Li 4°C Pres √

Possible Hazards:

Disposal: Lab ☐ Client ☐ Charge ☐

Due Date:

Express Service

Express Service Approval

Relinquished By	Signature	Company UL	Date/Time 4/9/09 17:00
Received By	Signature Jack Hewitt	Company UL	Date/Time 4/10/09 0530
Relinquished By	Signature Jack Hewitt	Company UL	Date/Time 4/10/09 1125
Received By	Signature	Company ANALYTICS	Date/Time 4/10/09 1125
Relinquished By	Signature	Company	Date/Time
Received By	Signature	Company	Date/Time

Work Order No.

Delivery Order

Trans ☐ P.U. ☐ Grab ☐ Comp ☐

Shipping/Delivery Charges

Composite Start / Composite Stop

Primary Laboratories, Inc.

7423 Lee Davis Road • Mechanicsville, VA 23111 • Telephone (804) 559-9004 • Fax (804) 559-9306

ANALYTICAL LABORATORY REPORT

16-Apr-09

Universal Laboratories
Attn: Mike Jennings
20 Research Drive
Hampton, Virginia 23666

Date Received: 13-Apr-09
Date Sampled: 9-Apr-09
Work Order No: 0904111-01
Client ID: **0903393-001 Intake OF-007 Comp**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Tech. Initials
TOC	4.08	1.00	mg/L	5310 C	16-Apr-09 at 7:30	PB

* All methods are Standard Methods 18th Edition unless otherwise noted.

Signature: _____ Date: 4/16/09
Parry L. Bragg
Laboratory Manager

These analytical results are based upon materials provided by the client and are intended for the exclusive use of the client. These analytical results represent the best judgement of Primary Laboratories, Inc. Primary Laboratories, Inc. assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report. This report is not to be reproduced except with the written approval of Primary Laboratories, Inc.

NC Certification # 504
DCLS # 237

Universal Laboratories
Subcontract Chain of Custody

20 Research Drive
Hampton, Va 23666
Phone: 757-865-0880
Fax: 757-865-8014

Friday, April 10, 2009

Purchase Order: 090410019

U.L. Contact: Mike Jennings

To: Dave Stoneman
Primary Labs

0904111

Sample #	Sample ID	Test		Method	Matrix	Collection Date Time
0903393-001	Intake OF-007 Comp	TOC	Total Organic Carbon	SM-5310 C	Wastewater	4/9/2009

Shipped By: [✓] UL_Courier [ ] Federal Express

Comments:

Cooler Temp @ Log-in
Preservation

Relinquished By Signature:		Company: UL	Date/Time: 4/10/09 16:00
Received By Signature:	Jack Fauver	Company: UL	Date/Time: 4/13/09 0530
Relinquished By Signature:	Jack Fauver	Company: UL	Date/Time: 4/13/09 1050
Received By Signature:	Jordan Beaz	Company: PLI	Date/Time: 4/13/09 10:50
Relinquished By Signature:		Company:	Date/Time:
Received By Signature:		Company:	Date/Time:

To log-in fridge for Monday AM delivery

CHTO

Universal Laboratories
20 Research Drive Hampton, Va.
Phone: (757) 865-0880 Fax: (757) 865-0881

EXPRESS LOG-IN CHAIN OF CUSTODY

UL ORDER ID **0903393**

Pre-Log Date: Thursday, March 26, 2009

Samples Must Be Received on or Before:

Order Comment:

HERCHOPE Ashland Aqualon Functional Ingredients
1111 Hercules Road
Hopewell Va 23860

Customer Contact: Bill Perkinson
Phone Number: 804-541-4390
FaxNumber: (804) 541-4496

ProjectID:

Project Notes:

QuoteID: Q0902134
Permit Number:
ProjectLocation:

0903393-001 Intake OF-007 Comp

Sample Date/Time 04/08/09 11:00 04/09/09 11:00 **Sampler Initials** Client

Field Reading

Wastewater

								Container Type	Preservative
PHEN	Total Phenolics	TP	Total Phosphorous					Amber Glass	H2SO4 pH<2/4C
EPA 608	Chlorinated Pesticides & PCB's	EPA 608	Chlorinated Pesticides (WQM List)	EPA 625	Semi-Volatile Organic Compounds	EPA 625	Semi-Volatile Organic Compounds (WQM)	Amber Glass	Refrigerate, 4 C
SO3	Sulfite							HDPE	Analyze Immediately
COD	Chemical Oxygen Demand	NH3	Ammonia	TN	Total Nitrogen (TKN + NN)			HDPE	H2SO4 pH<2/4C
FIE	Flouride							HDPE	None Required
BOD	Biochemical Oxygen Demand	BROMID	Bromide	COLOR	Color	SO4	Sulfate	HDPE	Refrigerate, 4 C
TSS	Total Suspended Solids								
AGIT	Silver (Total)	ALIT	Aluminum (Total)	ASIT	Arsenic (Total)	BAIT	Barium (Total)	HDPE (acid wash	HNO3 pH<2
BEIT	Beryllium (Total)	BOIT	Boron (Total)	CDIT	Cadmium (Total)	COIT	Cobalt (Total)		
CRIT	Chromium (Total)	CUIT	Copper (Total)	FEIT	Iron (Total)	MNIT	Manganese (Total)		
MOIT	Molybdenum (Total)	NIIT	Nickel (Total)	PBIT	Lead (Total)	SBIT	Antimony (Total)		
SEIT	Selenium (Total)	SNIT	Tin (Total)	TIIT	Titanium (Total)	TLIT	Thallium (Total)		
ZNIT	Zinc (Total)								
EPA 624	Volatile Organic Compounds	EPA 624	Volatile Organic Compounds (WQM)	4/8/09 1100, 1700, 2300 - 4/9/09 0500				VOA	HCL pH<2/Ascorbic acid (i
TOC	Total Organic Carbon							VOAA	H2SO4 pH<2/4C

26

* 2 TB

0903393-002 OF-005 Composite

Sample Date/Time 04/08/09 11:15 04/09/09 11:15 **Sampler Initials** Client

Field Reading

Wastewater

								Container Type	Preservative
PHEN	Total Phenolics	TP	Total Phosphorous					Amber Glass	H2SO4 pH<2/4C
EPA 608	Chlorinated Pesticides & PCB's	EPA 608	Chlorinated Pesticides (WQM List)	EPA 625	Semi-Volatile Organic Compounds	EPA 625	Semi-Volatile Organic Compounds (WQM)	Amber Glass	Refrigerate, 4 C
SO3	Sulfite							HDPE	Analyze Immediately
NH3	Ammonia	TN	Total Nitrogen (TKN + NN)					HDPE	H2SO4 pH<2/4C
FIE	Flouride							HDPE	None Required
BOD	Biochemical Oxygen Demand	BROMID	Bromide	COLOR	Color	SO4	Sulfate	HDPE	Refrigerate, 4 C

23

* 2 TB

HERCHOPE Ashland Aqualon Functional Ingredients

1111 Hercules Road

Hopewell Va 23860

Customer Contact: Bill Perkinson

Phone Number: 804-541-4390

FaxNumber: (804) 541-4496

ProjectID:

Project Notes:

QuoteID: Q0902134

Permit Number:

ProjectLocation:

Wastewater

AGIT	Silver (Total)	ALIT	Aluminum (Total)	ASIT	Arsenic (Total)	BAIT	Barium (Total)	HDPE (acid wash	HNO3 pH<2
BEIT	Beryllium (Total)	CDIT	Cadmium (Total)	COIT	Cobalt (Total)	CRIT	Chromium (Total)		
CUIT	Copper (Total)	FEIT	Iron (Total)	HG	Total Mercury	MNIT	Manganese (Total)		
MOIT	Molybdenum (Total)	NIIT	Nickel (Total)	PBIT	Lead (Total)	SBIT	Antimony (Total)		
SEIT	Selenium (Total)	SNIT	Tin (Total)	TIIT	Titanium (Total)	TLIT	Thallium (Total)		
ZNIT	Zinc (Total)								
EPA 624	Volatile Organic Compounds	EPA 624	Volatile Organic Compounds (WQM)	4/8/09 1115, 1715, 2315 4/9/09 0515				VOA	HCL pH<2/Ascorbic acid (i

0903393-003 **OF-006 Composite** **Sample Date/Time** 04/08/09 11:30 04/09/09 11:30 **Sampler Initials** Client

Field Reading

Wastewater

								Container Type	Preservative
PHEN	Total Phenolics	TP	Total Phosphorous					Amber Glass	H2SO4 pH<2/4C
EPA 608	Chlorinated Pesticides & PCB's	EPA 608	Chlorinated Pesticides (WQM List)	EPA 625	Semi-Volatile Organic Compounds	EPA 625	Semi-Volatile Organic Compounds (WQM)	Amber Glass	Refrigerate, 4 C
SO3	Sulfite							HDPE	Analyze Immediately
NH3	Ammonia	TN	Total Nitrogen (TKN + NN)					HDPE	H2SO4 pH<2/4C
FIE	Flouride							HDPE	None Required
BOD	Biochemical Oxygen Demand	BROMID	Bromide	COLOR	Color	SO4	Sulfate	HDPE	Refrigerate, 4 C
AGIT	Silver (Total)	ALIT	Aluminum (Total)	ASIT	Arsenic (Total)	BAIT	Barium (Total)	HDPE (acid wash	HNO3 pH<2
BEIT	Beryllium (Total)	CDIT	Cadmium (Total)	COIT	Cobalt (Total)	CRIT	Chromium (Total)		
CUIT	Copper (Total)	FEIT	Iron (Total)	HG	Total Mercury	MNIT	Manganese (Total)		
MOIT	Molybdenum (Total)	NIIT	Nickel (Total)	PBIT	Lead (Total)	SBIT	Antimony (Total)		
SEIT	Selenium (Total)	SNIT	Tin (Total)	TIIT	Titanium (Total)	TLIT	Thallium (Total)		
ZNIT	Zinc (Total)								
EPA 624	Volatile Organic Compounds	EPA 624	Volatile Organic Compounds (WQM)	4/8/09 ~~1115~~ 1130, ~~1715~~ 1730, ~~2315~~ 2330 4/9/09 ~~0515~~ 0530				VOA	HCL pH<2/Ascorbic acid (i

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x2TB

0903393-004 **Intake OF-007 Grab** **Sample Date/Time** 04/09/09 11:37 ___/___/___ ___:___ **Sampler Initials** JN

Field Reading

Wastewater

		Container Type	Preservative
MBAS	Surfactants-MBAS	Amber Glass	Refrigerate, 4 C
GROSS	Gross Alpha & Beta	CUBE	HNO3 pH<2
Tritium	Tritium	CWM	Refrigerate, 4 C
HS	Sulfide	HDPE	2N zinc acetate/NaOH pH
CR6D	Hexavalent Chromium (Dissolved)	HDPE	Filter and Refrigerate, 4 C
CN	Total Cyanide	HDPE	NaOH pH>12
SR90	Strontium 90	HDPE	Refrigerate, 4 C

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HERCHOPE Ashland Aqualon Functional Ingredients

1111 Hercules Road

Hopewell Va 23860

Customer Contact: Bill Perkinson

Phone Number: 804-541-4390

FaxNumber: (804) 541-4496

ProjectID:

Project Notes:

QuoteID: Q0902134

Permit Number:

ProjectLocation:

Wastewater

AGID	Silver (Dissolved)	ASID	Arsenic (Dissolved)	BAID	Barium (Dissolved)	CDID	Cadmium (Dissolved)	HDPE (acid wash	Filter HNO3 ph<2
CR3D	Chromium III (Dissolved)	CUID	Copper (Dissolved)	FEID	Iron (Dissolved)	HGD	Dissolved Mercury		
MNID	Manganese (Dissolved)	NIID	Nickel (Dissolved)	PBID	Lead (Dissolved)	SBID	Antimony (Dissolved)		
SEID	Selenium (Dissolved)	TLID	Thallium (Dissolved)	ZNID	Zinc (Dissolved)	Filter @ 1149			
TBT	TBT Tributyltin							Polycarbonate	HCL pH< 2/4C
ENTER	Enterococci							Sterile	Na2S2O3/4C
OGT	Oil & Grease (HEM)							WMG (solvent rins	H2SO4 pH<2/4C

0903393-005 **OF-005 Grab** **Sample Date/Time** 04/09/09 13:00 **Sampler Initials** JN

Field Reading

Wastewater

		Container Type	Preservative
MBAS	Surfactants-MBAS	Amber Glass	Refrigerate, 4 C
GROSS	Gross Alpha & Beta	CUBE	HNO3 pH<2
Tritium	Tritium	CWM	Refrigerate, 4 C
HS	Sulfide	HDPE	2N zinc acetate/NaOH pH
CR6D	Hexavalent Chromium (Dissolved)	HDPE	Filter and Refrigerate, 4 C
CN	Total Cyanide	HDPE	NaOH pH>12
SR90	Strontium 90	HDPE	Refrigerate, 4 C

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AGID	Silver (Dissolved)	ASID	Arsenic (Dissolved)	BAID	Barium (Dissolved)	CDID	Cadmium (Dissolved)	HDPE (acid wash	Filter HNO3 ph<2
CR3D	Chromium III (Dissolved)	CUID	Copper (Dissolved)	FEID	Iron (Dissolved)	HGD	Dissolved Mercury		
MNID	Manganese (Dissolved)	NIID	Nickel (Dissolved)	PBID	Lead (Dissolved)	SBID	Antimony (Dissolved)		
SEID	Selenium (Dissolved)	TLID	Thallium (Dissolved)	ZNID	Zinc (Dissolved)	Filter @ 1310			
TBT	TBT Tributyltin							Polycarbonate	HCL pH< 2/4C
ENTER	Enterococci							Sterile	Na2S2O3/4C
OGT	Oil & Grease (HEM)							WMG (solvent rins	H2SO4 pH<2/4C

0903393-006 **OF-006 Grab** **Sample Date/Time** 04/09/09 13:37 **Sampler Initials** JN

Field Reading

Wastewater

		Container Type	Preservative
MBAS	Surfactants-MBAS	Amber Glass	Refrigerate, 4 C
GROSS	Gross Alpha & Beta	CUBE	HNO3 pH<2
Tritium	Tritium	CWM	Refrigerate, 4 C
HS	Sulfide	HDPE	2N zinc acetate/NaOH pH
CR6D	Hexavalent Chromium (Dissolved)	HDPE	Filter and Refrigerate, 4 C

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HERCHOPE Ashland Aqualon Functional Ingredients

1111 Hercules Road
Hopewell Va 23860

ProjectID:

Project Notes:

QuoteID: Q0902134
Permit Number:
ProjectLocation:

Customer Contact: Bill Perkinson

Phone Number: 804-541-4390
FaxNumber: (804) 541-4496

Wastewater

CN	Total Cyanide							HDPE	NaOH pH>12
SR90	Strontium 90							HDPE	Refrigerate, 4 C
AGID	Silver (Dissolved)	ASID	Arsenic (Dissolved)	BAID	Barium (Dissolved)	CDID	Cadmium (Dissolved)	HDPE (acid wash	Filter HNO3 ph<2
CR3D	Chromium III (Dissolved)	CUID	Copper (Dissolved)	FEID	Iron (Dissolved)	HGD	Dissolved Mercury		
MNID	Manganese (Dissolved)	NIID	Nickel (Dissolved)	PBID	Lead (Dissolved)	SBID	Antimony (Dissolved)		
SEID	Selenium (Dissolved)	TLID	Thallium (Dissolved)	ZNID	Zinc (Dissolved)	Filter @ 1349			
TBT	TBT Tributyltin							Polycarbonate	HCL pH< 2/4C
ENTER	Enterococci							Sterile	Na2S2O3/4C
OGT	Oil & Grease (HEM)							WMG (solvent rins	H2SO4 pH<2/4C

0903393-007 **Intake OF-007 Grab**
Sample Date/Time 04/09/09 ___:___ ___/___/___ ___:___
Field Reading
Sampler Initials JN
Field Services GRAB Grab Sample
Container Type N/A **Preservative** N/A

0903393-008 **OF-006 Grab**
Sample Date/Time ___/___/___ ___:___ ___/___/___ ___:___
Field Reading
Sampler Initials
Field Services GRAB Grab Sample
Container Type N/A **Preservative** N/A

0903393-009 **OF-005 Grab**
Sample Date/Time ___/___/___ ___:___ ___/___/___ ___:___
Field Reading
Sampler Initials
Field Services GRAB Grab Sample TRANS Transportation
Container Type N/A **Preservative** N/A

Comments: TRIP BLANK 3/27/09 1015 (6) EPA624

Cooler Temp @ Log-in 3°C
Preservation 4°/7/2

CN int check Nos Phenol in check Nos NH3 int check BOD int check Nos

Relinquished By Signature:	*Company:* UL	*Date/Time:* 04/09/09 1700
Received By Signature:	*Company:* UL	*Date/Time:* 4/9/09 1700
Relinquished By Signature:	*Company:*	*Date/Time:*
Received By Signature:	*Company:*	*Date/Time:*
Relinquished By Signature:	*Company:*	*Date/Time:*
Received By Signature:	*Company:*	*Date/Time:*