APR 27 2012

RON H. NOBLE
DIRECT DIAL: 813-222-1175
RNOBLE@FOWLERWHITE.COM

Southwest District

April 26, 2012

VIA E-MAIL AND REGULAR U.S. MAIL

Mr. James Dregne Ms. Beth Knauss Hazardous Waste Section Florida Department of Environmental Protection 13051 N. Telecom Parkway Temple Terrace, Fl. 33637

Re: Draft Sampling Plan for Aqua Clean Environmental Co., Inc.

Customer Wastewater Characterization

Dear Jim and Beth:

Thank you for meeting with Mike Zellars of Aqua Clean and me last week to discuss outstanding issues for resolution of the 2011 Warning Letter issued by the Department to Aqua Clean. The purpose of this correspondence is to submit the proposed Sampling Plan to the Department on behalf of Aqua Clean to further characterize and evaluate influent wastewaters from Aqua Clean's customers.

Aqua Clean has retained the professional consulting and engineering services of Brown and Caldwell to assist on this project. Mr. Everett Gill of Brown and Caldwell is a Professional Engineer and recognized expert on industrial wastewater pre-treatment facilities and EPA's Centralized Waste Treatment Rule. Brown and Caldwell has prepared the draft Sampling Plan based upon meetings and input from the City of Lakeland. The proposed Sampling Plan sets forth a "tiered" approach for the periodic characterization and testing of customer wastewaters based upon the volume of wastewater and the type of wastewater generated by each customer. Aqua Clean intends to establish a single Sampling Plan for future waste characterization activities for purposes of consistency and accuracy as opposed to having multiple Sampling Plans with various entities or agencies.

FOWLER WHITE BOGGS P.A.

TAMPA • FORT MYERS • TALLAHASSEE • JACKSONVILLE • FORT LAUDERDALE



Mr. James Dregne Ms. Beth Knauss April 26, 2012 Page 2

We welcome any comments the Department may have in connection with the proposed Sampling Plan. In the interim, please do not hesitate to contact me should you have any questions regarding the above matters or if the Department requires any additional information.

Sincerely yours,

FOWLER WHITE BOGGS P.A.

Ron H. Noble

Enclosure

cc: Mr. Mike Zellars (w/out Enclosure) Everett Gill, P.E. (w/out Enclosure)



Technical Memorandum

1560 Sawgrass Corporate Parkway, 4th Floor Sunrise, FL 33323

Tel: 954-331-4650 Fax: 561-684-9902

Prepared for: Aqua Clean Environmental Co., Inc.

Project Title: Tiered Approach for Influent Sampling

Project No: 142636

Technical Memorandum

Subject: Tiered Approach for Influent Sampling

Date: April 18, 2012

To: Mike Zellars, General Manager, Aqua Clean

Ron Noble, Fowler White Boggs

From: Everett Gill, P.E., Brown and Caldwell

Prepared by:

Everett Gill, P.E.

Reviewed by:

Limitations:

This is a draft memorandum and is not intended to be a final representation of the work done or recommendations made by Brown and Caldwell. It should not be relied upon; consult the final report.

This document was prepared solely for Aqua Clean in accordance with professional standards at the time the services were performed and in accordance with the contract between Aqua Clean and Brown and Caldwell. This document is governed by the specific scope of work authorized by Aqua Clean; it is not intended to be relied upon by any other party except for regulatory authorities contemplated by the scope of work. We have relied on information or instructions provided by Aqua Clean and other parties and, unless otherwise expressly indicated, have made no independent investigation as to the validity, completeness, or accuracy of such information.

1. Introduction

Aqua Clean Environmental Co., Inc. (Aqua Clean) owns and operates an industrial wastewater pretreatment facility in the City of Lakeland, Florida (Lakeland). This facility treats non-hazardous industrial wastewater and is regulated by the Centralized Waste Treatment (CWT) rule (40 CFR 437). Under this rule, Aqua Clean is permitted to receive wastewaters that are regulated under Subpart B (Oils Treatment and Recovery) and Subpart C (Organics Treatment and Recovery).

Lakeland has requested that Aqua Clean prepare a sampling plan and schedule in order to evaluate that Aqua Clean's current customer waste profiles have not changed and to establish a protocol for initial waste profiles to be performed on all new customers consistent with the requirements of the Wastewater Discharge Permit.

The purpose of this sampling plan and schedule will outline the <u>minimum</u> sampling for customers based upon a tiered approach to address Lakeland's concerns with respect to the type of wastewater and volume of wastewater provided by each customer. Some wastewaters are relatively consistent, while others are more variable. This sampling plan addresses variations in wastewater characteristics based on industry type. Aqua Clean is permitted to accept oil and organics waste, however it is not permitted, nor is it equipped, to treat Subpart A waste (Metals Bearing Waste). The testing proposed includes a comprehensive metals sampling in order to evaluate if a wastewater should not be accepted, including wastewaters that may fall in the Subpart B (Oil) category but contain metal concentrations above the threshold to be considered a Subpart A wastewater. This sampling is not designed to evaluate treatment efficiency of constituents; that testing is conducted per the requirements of the Periodic Certification Statements and the Initial Certification Statement testing.

The treatment plant Operator will be responsible for identifying more frequent testing or additional wastewater constituents that warrant additional testing beyond the minimum listed in this TM. Circumstances which may cause the Operator to require additional testing include (but are not limited to):

- Increased solids concentration or turbidity compared to typical delivery
- Change in odor or appearance in the wastewater
- Change in delivery times or delivery trucks
- Uncharacteristically high volume of wastewater for a particular client
- Increase in wastewater delivery after a long period of no delivery

2. Analytical by Industry

The recommended tiered approach for testing is based on a combination of flows as well as industry type. Some industries such as landfill leachate require a higher number of analyses due to changing constituents as opposed to other industries, such as petroleum contact water, where the constituents are typically consistent from load to load, however the concentrations may vary. Industries and customers with high volumes or more frequent changes in wastewater characteristics are expected to be evaluated at a higher frequency.

2.1 All Shipments

All wastewaters delivered to Aqua Clean will require a Material Data Certification Sheet. This sheet is provided in Appendix A.

2.2 New Customers

As described above, all new customers require a Material Data Certification Sheet profile. Additionally, all new customers will first be categorized into one of the following industry types (described in subsequent sections):

- Subpart B Petroleum Contact Water Small Volume
- Subpart B Contaminated Groundwater From Petroleum Sources
- Subpart B Petroleum Contact Water Large Volume
- Subpart C Contaminated Groundwater from Non-petroleum Sources
- Subpart C Non-Specific Organic Wastewater
- Subpart C Landfill Leachate
- Subpart C Small Volume Organic Wastewater

Prior to accepting the wastewater, Aqua Clean will perform an initial characterization based on the Tiered sampling plan described below; subsequent sampling frequency will depend on industry type.

2.3 Subpart B - Oil

This subpart includes wastewaters that have an oil and grease (O&G) concentration typically >100 mg/L or is generated from a process where oil is the contaminant of concern regardless of the O&G concentration, such as contaminated groundwater from petroleum sources.

2.3.1 Petroleum Contact Water - Small Volume

These wastewaters are typically characterized by high concentrations of oil and low concentrations of metals. The constituents of this wastewater typically do not significantly change between shipments. This wastewater will be tested a minimum of one time per year for Tier 1 Oil (Table 1) constituents.

Table 1. Recommended Subpart B (Oils Treatment and Recovery) - Tier 1 Sampling			
Parameter Type	Parameter	Analyze Onsite	
Conventional	Flow	Yes (Discharge Volume/Flow Meters	
	рН	Yes (Probe)	
Metals	Cadmium	Yes (ICP)	
	Chromium	Yes (ICP)	
	Copper	Yes (ICP)	
	Nickel	Yes (ICP)	
	Zinc	Yes (ICP)	
	Molybdenum	Yes (ICP)	

2.3.2 Contaminated Groundwater from Petroleum Sources

The consulting engineer for contaminated groundwater sources typically has extensive data on this type of wastewater. If this data is not available, or the Operator had indications that the wastewater characterization may have changed, the wastewater will be analyzed for Subpart B, Tier 1 constituents as listed in Table 1 for a minimum of one time per year.

2.3.3 Petroleum Contact Water - Large Volume

As with the small volume petroleum contact wastewaters, these wastewaters are typically characterized by high concentrations of oil and low concentrations of metals. Clients that deliver a larger volume (50,000 gallons/year or more) of this wastewater will increase testing to a minimum of two times per year based on the Tier 2 – Oils Treatment and Recovery constituent list.

Parameter Type	Parameter	Analyze Onsite
Conventional	Flow	Yes (Discharge Volume/Flow Meters
	pH	Yes (Probe)
	Glycol	Yes
Metals	Cadmium	Yes (ICP)
	Chromium	Yes (ICP)
	Copper	Yes (ICP)
	Nickei	Yes (ICP)
	Zinc	Yes (ICP)
	Molybdenum	Yes (ICP)

2.4 Subpart C - Organics

This subpart includes wastewaters that have oil and grease concentrations <100 mg/L and contain metal concentrations less than the Subpart A limits, or do not originate from a metals process. These wastewaters typically have a high concentration of organic compounds; however some wastewaters with low organic compound concentrations, such as contaminated groundwater from non-petroleum sources, also require pretreatment under this subpart.

2.4.1 Contaminated Groundwater from Non-Petroleum Sources

The consulting engineer for contaminated groundwater sources typically has extensive data on this type of wastewater. If this data is not available, or the Operator has indications that the wastewater characteristics may have changed, the wastewater will be analyzed for Subpart C, Tier 1 constituents as listed in Table 3. The testing will be conducted one time per year minimum.

Table 3. Re	ecommended Subpart C (Organics Tr	eatment) - Tier 1 Sampling	
Parameter Type	Parameter	Analyze Onsite	
Conventional	Flow	Yes (Discharge Volume/Flow Mete	
	pH	Yes (Probe)	
31-34-41	COD (Surrogate for BOD)	Yes (COD used as surrogate for BOD)	
Metals	Cadmium	Yes (ICP)	
	Chromium	Yes (ICP)	
	Copper	Yes (ICP)	
	Nickel	Yes (ICP)	
	Zinc	Yes (ICP)	
	Molybdenum	Yes (ICP)	

2.4.2 Non-Specific Organic Wastewater

Organic wastewater from a facility that does not fall into one of the other defined organics categories, and the volume is greater than 1,000 gallons per year, will be considered a Tier 2 Organics. These wastewaters constituents will be evaluated at a minimum of two times per year. The constituents for Tier 2 Organics sampling are listed in Table 4.

Table 4. Recommended Subpart C (Organics Treatment) - Tier 2 Sampling			
Parameter Type	Parameter	Analyze Cosite	
Conventional	Flow	Yes (Discharge Volume/Flow Meters	
	pH	Yes (Probe)	
	COD (Surrogate for BOD)	Yes (COD used as surrogate for BOD)	
	Glycol	Yes	
Metals	Cadmium	Yes (ICP)	
	Chromium	Yes (ICP)	
	Copper	Yes (ICP)	
	Nickel	Yes (ICP)	
· · · · · · · · · · · · · · · · · · ·	Zinc	Yes (ICP)	
	Molybdenum	Yes (ICP)	

2.4.3 Landfill Leachate

Landfills collect extensive analytical data that is provided to Aqua Clean. If characterization data is not provided, then Aqua Clean will analyze the wastewater per the requirements of the Tier 3 Organics constituents listed in Table 5; the Tier 3 list includes all compounds in Aqua Clean's discharge permit. A minimum testing for Tier 3 Organics list will be conducted one time per year.

Parameter Type	Parameter	Analyze Onsite
Conventional	Flow	Yes (Discharge Volume/Flow Meters)
	BCD	No/Yes (COD as surrogate)
	TSS	No
	TN	No
	Oil and Grease (total)	No
	Conductivity	Yes (Probe)
	рН	Yes (Probe)
	Cyanide	No
Metais	Arsenic	Yes (ICP)
	Cadmium	Yes (ICP)
	Mercury	No
	Molybdenum	Yes (ICP)
	Nickel	Yes (ICP)
	Selenium	Yes (ICP)
	Silver	Yes (ICP)
	Chromium	Yes (ICP)
	Cobalt	Yes (ICP)
	Copper	Yes (ICP)
·	Lead	Yes (ICP)
	Tin	No
	Zinc	Yes (ICP)
Organics	Benzene	No
· · · · · · · · · · · · · · · · · · ·	Ethyl Benzene	No
	Toluene	No

Parameter Type	Parameter	Analyze Onsite
	Xylene	No
	Bis(2-ethylhexyl) Phthalate	No
	Carbazole	No
	o-Cresol	No
	p-Cresol	No
	n-Decane	No
	Fluoranthene	No
	n-Octadecane	No
	2,4,6 - Trichlorophenol	No

2.4.4 Small Volume Organic Wastewater

Wastewater from a facility that does not fall in the previous categories and is less than 1,000 gallons will only require a Material Data Certification Sheet unless the possibility of metals is suspected, then analysis per the requirements of Tier 1 Organics (Table 3) will be conducted.

Attachment A: Material Data Certification Sheet

MATERIAL DATA CERTIFICATION SHEET

AQUA CLEAN ENVIRONMENTAL CO., INC. 3210 WHITTEN ROAD LAKELAND, FL 33811

PHONE: (863) 644-0665 FAX: (863) 646-1880

New ProfileAmendment			
GENERATOR INFORMATION	ŗ		
•			
Address:			
		Zip:	
Contact:			
Phone:	Fax:		
BILLING INFORMATION Bill To:			
Address:			
City:	State:	Zip:	
Phone:	Fax:		
TRANSPORTATION INFORM Transporter:	IATION	· •	
Estimated		and the second s	
Total Gallons	Shipping Container Drum	Shipping Frequency One Time	
Actual	□ Tanker	☐ Week	
Total Gallons	Other	☐ Month	
to the second se		☐ Year ☐ Other	
D.O.T. SHIPPING NAME:			
MATERIAL COMPOSITION Component		Concentration %	

MATERIAL INFORMATION

		□ 140-200 □ >200	
pH 🚨	Exact	2-5 🗆 5-9 🗀 9-12.	5 🗀 >12.5
Specific Gravity	0.8	□ 0.8-1.0 □ 1.0 □	11-1.2 🗀 >1.2
Reactive		3 No	
%Liquid	%Solid		
• —		%Sludge	
Phases	☐ Single ☐ Doub		
Viscosity	☐ Low ☐ Medi	um 🗅 High	
Odor	□ None □ Mild	□ Strong	
Color/Appearance	ce:	•	
• •	he contaminants appear b		•
<u>Contaminants</u>	Amount Present(mg/l)	<u>Contaminants</u>	Amount Present(mg/l)
Arsenic		Chloromethane	
Cadmium		1,2 Dichlorobenzene	
Chromium		1,4 Dichlorobenzene	
Copper		Ethylbenzene	
Cyanide		Methyl Chloride	
Lead		Methyl Ethyl Ketone	
Mercury		Methylene Chloride	
Molybdenum		Naphthalene	
Nickel			ne
Selenium		Tetrachloroethylene	
Silver		Toluene	
Zinc		1,2,4-Trichlorbenzene	
Benzene		1,1,1-Trichlorbenzene	
Cabon Tetrachloride		1,1,2-Trichlorbenzene	
Chlorobenzene		Trichloroethylene	
Chlorethane		Vinyl Chloride	
		viiiyi Otilottao	
Is this certification mad	le "applying knowledge of is used?" U Yes U No	the hazard characteristic	cs of the waste in light of
•	sused! La res La No	•	
CERTIFICATION			
Are any pesticides, herbid	cides or dioxin present?	I Yes D No	
Are any biotoxic component	ents present in the material:	such as cyanide, chlorine.	ethylene glycol, etc.)?
☐ Yes ☐ No	•		out, including gry con, cron, c
Are any PCBs present in	the material? Yes	3 No	
	iel present? Yes	3 No	
	he definition of a hazardous		Part 261 and the Florida
Hazardous Waste Regula	ations? Yes No	waste according to 4001 1	Trait 201 and the Florida
-			
GENERATOR'S CERT			
is complete and accura material is the specified be the specified material	ate to the best of my know id material as defined by the al as defined by any of the ressed against or expense	ledge and ability. I certifule above conditions. If notes above conditions. I am	liable for any and all
Authorized Signature		Printed Name	
Title	Date		