MWD_WQ0013321001_CO_20150129_Final Investigation Report

Texas Commission on Environmental Quality
Investigation Report

The TCEQ is committed to accessibility. If you need assistance in accessing this document, please contact oce@tceq.texas.gov

Customer: City of Wimberley
Customer Number: CN603592239

Regulated Entity Name: BLUE HOLE MANAGEMENT
Regulated Entity Number: RN101610350

Investigation # 1223197

Investigator: MICHAEL DANIELS

Conducted: 01/29/2015 -- 01/29/2015

Program(s): WASTEWATER

Investigation Type: Compliance Investigation

Additional ID(s): WQ0013321001

Incident Numbers

Site Classification DOMESTIC LAND DISPOSAL

NAIC Code: 221320
SIC Code: 4952

Location: ONE MILE NORTHEAST OF THE INTERSECTION OF RR 12 AND RR 2325

Address: ,
, ,

Local Unit: REGION 11 - AUSTIN
Activity Type(s): WWTLPCCIDS - WW TLAP CCI Discretionary

Principal(s):

Role	Name
RESPONDENT	CITY OF WIMBERLEY

Contact(s):

Role	Title	Name	Phone	
Regulated Entity Mail Contact	CITY ADMINISTRATOR	MR DON FERGUSON	Cell	(512) 847-0025 (512) 748-6758
Participated in Investigation	CITY ADMINISTRATOR	MR DON FERGUSON		
Participated in Investigation	PROJECT MANAGER	MR JASON TYLER	Cell	(405) 664-4207
Participated in Investigation	OPERATOR	MR ALLAN SMITH		
Participated in Investigation	ENVIRONMENTAL COMPLIANCE MANAGER	MR JIM WOLFE		

Other Staff Member(s):

Role	Name
QA Reviewer	JULIE PEVEHOUSE
Supervisor	SHAWN STEWART

Associated Check List

Checklist Name	Unit Name
WQ DOMESTIC CCI - INTERIM	WWTP
WQ GENERAL CCI CHECKLIST	WWTP
WQ INVESTIGATION - EQUIPMENT MONITORING AND SAMPLING revised 06/2013	WWTP
WQ LAND APPLICATION CHECKLIST	WWTP

Investigation Comments:

INTRODUCTION
The City of Wimberley Blue Hole Wastewater Treatment Facility (WWTF) was investigated by Michael Daniels on January 29, 2015, to determine compliance with applicable wastewater treatment regulations. This investigation is considered a discretionary land application investigation. The regulated entity compliance history was verified prior to the investigation. Notification of the investigation was given on January 20, 2015. A verbal exit interview, explaining the results of the investigation, was conducted on the same day of the investigation with Severn Trent Project Manager, Jason Tyler, and City of Wimberley City Manager, Don Ferguson. A copy of the TCEQ Exit Interview Form was emailed to Mr. Tyler and Mr. Ferguson on February 3, 2015. Based on the findings of this investigation, a Notice of Violation (NOV) Letter was issued to document a violation and to acknowledge compliance.

GENERAL FACILITY AND PROCESS INFORMATION
The City of Wimberley Blue Hole WWTF is permitted to dispose a daily average flow of 0.015 MGD to eleven pressure dosed absorption beds with a total surface area of 94,500 square feet of non-public access land. The water quality permit for this facility is in the interim phase of the permit. The package plant is an activated sludge process that operates in the extended aeration mode. The package plant process units include an equalization basin, aeration basin, clarifier, sludge holding tank, and effluent pumps. The two sources of influent are the nursing home and the park. The collection system includes two lift stations. There have been no significant plant modifications or collection system upgrades since the last compliance investigation.

Operator Status
The chief operator for this facility is Allan Smith. Mr. Smith has a B wastewater treatment operator license. The collection system is supervised by Mr. Tyler who has an A wastewater treatment operator license. The City of Wimberley Blue Hole WWTF permit requires a Category D license or higher. The facility is required to be operated a minimum of five days per week by the licensed operator and the operator must be available by telephone or pager seven days per week. The investigation found that the operator requirements in the permit were met.

Disinfection and Process Control
Documentation of process control results was provided. The operator records the flow and rainfall five days per week. The operator also measures pH once per week. The permit requires the pH to be measured a minimum of once per month. Five minute and thirty minute settleable solids concentration in the aeration basin are tested by the operator at least once per month. Total suspended solids (TSS) concentration in the aeration basin is monitored twice per month. The dissolved oxygen concentration in the aeration basin is tested once per week. Disinfection is not required in the interim phase of the permit.

Flow Measuring Device
The primary and secondary effluent flow measuring devices include a 30-degree V-notch weir, Milltronics OCM III UltraSonic flow meter and totalizer. A flow measuring device calibration check was performed and it was determined that Fluid Meter Services had calibrated the flow meter with the staff gauge using the wrong units, tenths of a foot instead of inches. This resulted in the flow meter over reporting the actual flow. Fluid Meter Services recalibrated the flow meter on February 2, 2015, see attached flow meter calibration certification.

Facility Sampling/Testing/Lab
Effluent samples are collected by the operator. The samples are analyzed by Aqua-Tech Laboratories for BOD. The effluent samples are also tested for TSS by the laboratory. TSS is not required to be monitored by the permit. The operator performs pH analyses. Chlorine is not required to be tested by the permit. The contract laboratory used by the permittee was accredited by TCEQ to perform the analytical methods.

Investigator Sampling/Testing
Effluent samples were collected by the investigator after the final treatment unit and prior to land application from a sampling tap. The sample analysis results are attached to this report. The sample results were compliant with the permit limits. At the time of the investigation, the treated wastewater appeared to be free of foaming, floating materials, sludge deposits, or odors. The color of the treated effluent was clear. The land disposal site was inspected and appeared to have good ground cover. Treated effluent was observed to have surfaced in one small area. The leak was repaired on February 3, 2015, and documentation was sent to the TCEQ Austin Region Office, see attached.

Sludge Handling/Transporter
Leineweber Plumbing, TCEQ Transporter ID #20302, hauls sludge from this facility to Micro Dirt, TCEQ Municipal Solid Waste Processing Registration #42016, for further processing. For the last annual sludge reporting period ending July 2014, 12,000 gallons of wet sludge was hauled. The sludge was tested in 2013 for herbicides, pesticides, PCBs, mercury, metals, fecal coliform, semivolatile and volatile organic compounds, nitrogen compounds, solids, and oxygen consumption. No issues were found in the analysis results.

BACKGROUND
The last compliance investigation was conducted on April 10, 2012. No violations were alleged and a General Compliance Letter was issued. There are no outstanding or active alleged violations; no pending or existing open enforcement cases; no unauthorized discharges reported in the last 18 months; or no reported effluent violations in the last 12 months. Effluent results are not reported on DMRs, since this is a land application site. Effluent results were reviewed during the investigation. There was one complaint investigation since the last compliance investigation. No violations were alleged and a General Compliance Letter was issued. The City of Wimberley currently has a major permit amendment request with TCEQ to increase flow and to discharge 0.075 MGD to Deer Creek.

ADDITIONAL INFORMATION
Compliance Documentation
Requested records were orderly and readily available for review. Copies of monthly operations records included flow, rainfall, pH, influent and effluent BOD concentration, aeration basin TSS and VSS concentration, settleable solids, sludge depth, dissolved oxygen concentration, sludge processing volumes, equipment run times, and pH meter QA/QC. Laboratory analysis records were reviewed for 2014. No BOD exceedances occurred. Maintenance records for 2014 were provided and are attached to this report. A copy of December 2014 operations records and the 2014 soil sampling results are also attached to this report.

NOV Date 03/05/2015 **Method** WRITTEN

ALLEGED VIOLATION(S) NOTED AND RESOLVED

ASSOCIATED TO A NOTICE OF VIOLATION

Track Number: 563117 **Resolution Status Date: 3/2/2015**

Violation Start Date: Unknown **Violation End Date:** 2/4/2015

30 TAC Chapter 305.125(1)

PERMIT WQ0013321001, Page 23, Item 4
Special Provisions

Alleged Violation:

Investigation: 1223197 Comment Date: 03/02/2015
Failed to prevent ponding of effluent on the irrigation field. On January 29, 2015, one area in the irrigation field was observed to have surfaced effluent.

Recommended Corrective Action: Repair the leak and send compliance documentation to the TCEQ Austin Region Office.
Resolution: Adequate compliance documentation was received on February 4, 2015, to resolve this violation.

On February 3, 2015, the pipe was repaired and the area was backfilled.

Additional Issues

Description Is the percent error between the recorded flow and the calculated flow within 10%?

Additional Comments

On January 29, 2015, the effluent flow meter was observed to have been miscalibrated. On February 2, 2015, Fluid Meter Services recalibrated the flow meter. The flow meter had been over reporting the actual flow.

Signed Michael Daniel **Date** 2-March-2015

Environmental Investigator

Signed [illegible] **Date** 3/4/15

Supervisor

Attachments: (in order of final report submittal)

___Enforcement Action Request (EAR)

X Letter to Facility (specify type) : FINAL

Investigation Report

X Sample Analysis Results

___Manifests

___Notice of Registration

___Maps, Plans, Sketches

___Photographs

X Correspondence from the facility

X Other (specify) :

Operations & Maintenance Records

Exit Interview Form

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Zak Covar, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 5, 2015

Certified Mail # 91 7199 9991 7033 2847 5900
Return Receipt Requested

Mr. Don Ferguson, City Administrator
City of Wimberley
PO Box 2027
Wimberley, TX 78676

Re: Notice of Violation for Compliance Evaluation Investigation at:
Blue Hole WWTF, Blue Hole Park, Wimberley (Hays County), Texas
RN101610350, TCEQ Additional ID: WQ#0013321-001, Investigation No. 1223197

Dear Mr. Ferguson:

On January 29, 2015, Michael Daniels of the Texas Commission on Environmental Quality (TCEQ) Austin Region Office conducted an investigation of the above-referenced regulated entity to evaluate compliance with applicable requirements for wastewater treatment. Enclosed is a summary which lists the investigation findings. During the investigation, an alleged violation was identified for which compliance documentation was required. Based on the information you have provided, the TCEQ has adequate documentation to resolve the alleged violation. Therefore, no further action is required. In addition, please see the enclosed Additional Issue.

In the listing of the alleged violation, we have cited applicable requirements, including TCEQ rules. Please note that both the rules themselves and the agency brochure entitled *Obtaining TCEQ Rules* (GI 032) are located on our agency website at http://www.tceq.state.tx.us for your reference. If you would like a hard copy of this brochure mailed to you, you may call and request one from either the Austin Region Office at (512) 339-2929 or the Central Office Publications Ordering Team at 512-239-0028.

The TCEQ appreciates your assistance in this matter. Please note that the Legislature has granted TCEQ enforcement powers which we may exercise to ensure compliance with environmental regulatory requirements. If you have additional information that we are unaware of, you have the opportunity to contest the violation documented in this notice. Should you choose to do so, you must notify the Austin Region Office within 10 days from the date of this letter. At that time, Ms. Carolyn Runyon will schedule a violation review meeting to be conducted within 21 days from the date of this letter.

If you or members of your staff have any questions, please feel free to contact Mr. Michael Daniels in the Austin Region Office at (512) 339-2929.

Sincerely,

Shawn Stewart
Water Program Work Leader
Austin Region Office

SS/mjd

enclosure: Summary of Investigation Findings

cc: Mr. Jason Tyler, Project Manager, Severn Trent, 14050 Summit Dr., Suite 113, Austin, TX 78728 (include Summary of Investigation Findings)

Summary of Investigation Findings

BLUE HOLE MANAGEMENT	Investigation # 1223197 Investigation Date: 01/29/2015
, HAYS COUNTY,	
Additional ID(s): WQ0013321001	

ALLEGED VIOLATION(S) NOTED AND RESOLVED ASSOCIATED TO A NOTICE OF VIOLATION

Track No: 563117

30 TAC Chapter 305.125(1)

PERMIT WQ0013321001, Page 23, Item 4
Special Provisions

Alleged Violation:

Investigation: 1223197 Comment Date: 03/02/2015

Failed to prevent ponding of effluent on the irrigation field. On January 29, 2015, one area in the irrigation field was observed to have surfaced effluent.

Recommended Corrective Action: Repair the leak and send compliance documentation to the TCEQ Austin Region Office.

Resolution: Adequate compliance documentation was received on February 4, 2015, to resolve this violation. On February 3, 2015, the pipe was repaired and the area was backfilled.

ADDITIONAL ISSUES

Description	Additional Comments
Is the percent error between the recorded flow and the calculated flow within 10%?	On January 29, 2015, the effluent flow meter was observed to have been miscalibrated. On February 2, 2015, Fluid Meter Services recalibrated the flow meter. The flow meter had been over reporting the actual flow.

INVESTIGATION SAMPLE RESULTS

Regulated Entity Name: City of Wimberley Blue Hole WWTF
Authorization ID(s): WQ0013321-001
Date of Investigation: January 29, 2015

Sampling Location & Parameter	Measured Value	Authorized Limit	Type Sample	COC ID No.	Primary Source of Wastewater or Waste
Final Effluent					
pH	8.3 std. units	6 ≤ pH ≤ 9	grab	Field measurement	domestic
BOD (5 day)	3.72 mg/L	35 mg/L	grab	1503497	domestic

Environmental Laboratory Services
The Solution Lab

LCRA Environmental Laboratory Services
3505 Montopolis Drive
Austin, TX 78744
Phone: (512)356-6022
Fax: (512)356-6021

February 11, 2015

MICHAEL DANIELS
TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY
PO BOX 13087, REGION 11
AUSTIN, TX 78711

RE: Final Analytical Report
ELS Workorder Q1503497

Attn: MICHAEL DANIELS

Enclosed are the analytical results for sample(s) received by LCRA Environmental Laboratory Services. Results reported herein conform to the most current NELAP standards, where applicable, unless otherwise narrated in the body of the report. This final report provides results related only to the sample(s) as received for the above referenced work order.

Thank you for selecting ELS for your analytical needs. If you have any questions regarding this report, please contact us at (512) 356-6022. We look forward to assisting you again.

Authorized for release by:

Ariana Dean
Project Manager
ariana.dean@lcra.org

Enclosures

NELAP ACCREDITED TNI LABORATORY

T104704218-14-10

This report may not be reproduced, except in full,
and with written approval from LCRA Environmental Laboratory Services.

Environmental Laboratory Services
The Solution Lab

LCRA Environmental Laboratory Services
3505 Montopolis Drive
Austin, TX 78744
Phone: (512)356-6022
Fax: (512)356-6021

SAMPLE SUMMARY

Workorder: Q1503497

Lab ID	Sample ID	Matrix	Date Collected	Date Received
Q1503497001	WIMBERLEY 001	Aqueous	1/29/2015 11:20	1/29/2015

This report may not be reproduced, except in full,
and with written approval from LCRA Environmental Laboratory Services.

Environmental Laboratory Services
The Solution Lab

LCRA Environmental Laboratory Services
3505 Montopolis Drive
Austin, TX 78744
Phone: (512)356-6022
Fax: (512)356-6021

ANALYTICAL RESULTS

Workorder: Q1503497

Lab ID:	**Q1503497001**	Date Received:	1/29/2015 13:36	Matrix:	Aqueous
Sample ID:	**WIMBERLEY 001**	Date Collected:	1/29/2015 11:20	Sample Type:	SAMPLE
Project ID:	**MIKE DANIELS**				

Parameters	Results	Units	LOD	PQL	MCL	DF	Prepared	By	Analyzed	By	Qual
BOD, 5 DAY, 20°C											
Analysis Desc: SM5210B			Preparation Method: SM5210B								
			Analytical Method: SM5210B								
Biochemical Oxygen Demand	3.72	mg/L	2.00	2.00		2	01/30/15 10:41:00	ML	01/30/15 10:41:00	ML	

This report may not be reproduced, except in full,
and with written approval from LCRA Environmental Laboratory Services.

Environmental Laboratory Services
The Solution Lab

LCRA Environmental Laboratory Services
3505 Montopolis Drive
Austin, TX 78744
Phone: (512)356-6022
Fax: (512)356-6021

QUALITY CONTROL DATA

Workorder: Q1503497

QC Batch: WET/6194 **Analysis Method:** SM5210B

QC Batch Method: SM5210B

Associated Lab Samples: Q1503497001

METHOD BLANK: 415307

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Biochemical Oxygen Demand	mg/L	<1.00	1.00	

SAMPLE DUPLICATE: 415310 ORIGINAL: Q1503240001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
Biochemical Oxygen Demand	mg/L	1.53	1.49	2.65	30.4	

This report may not be reproduced, except in full,
and with written approval from LCRA Environmental Laboratory Services.

LCRA Environmental Laboratory Services
3505 Montopolis Drive
Austin, TX 78744
Phone: (512)356-6022
Fax: (512)356-6021

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: Q1503497

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
Q1503497001	WIMBERLEY 001			SM5210B	WET/6194

This report may not be reproduced, except in full,
and with written approval from LCRA Environmental Laboratory Services.

Environmental Laboratory Services
The Solution Lab

LCRA Environmental Laboratory Services
Request for Analysis Chain-of-Custody Record

LCRA - Environmental Lab
3505 Montopolis Dr.
Austin, TX 78744

Phone: (512) 356-6022 or 1-800-776-5272
Fax: (512) 356-6021
https://els.lcra.org

Lab ID#: Q150349-7
Client PO:
Invoice To: TCEQ FOD R-11

Project:	Wimberly	Client:	TCEQ	Report To:	michael.daniels@tceq.texas.gov
Collector:	MJO	Contact:	Michael Daniels		
Event#:	001	Phone:	512-239-7095		

LAB USE ONLY	Sample ID *	Collection * Date*	Collection * Time * HH:MM	Matrix* (AQ = Aqueous, S = Solid, T = Tissue, DW = Drinking Water)	Container(s) Type/Preservative/Number * COMPOSITE Y/N	FILTERED Y/N	1L-P	Requested Analysis * BOD	1
001	001	1/29/15	1120	AQ	G	N	X	X	
2									
3									
4									
5									
6									
7									
8									
9									
10									

Transfers	Relinquished By	Date/Time	Received By	Date/Time
1	MJO	29 Jan 2015 / 1336	[signature]	1/29/15 1336
2				
3				

Cooler Temp: #	T#	Obs.	Corr.
1	7	0.8	0.7
2			

Client Special Instructions:

Lab Use Only:

Note: Relinquishing sample(s) and signing the COC, client agrees to accept and is bound by the ELS Standard Terms and Conditions. All fields with an asterisk (*) are required to be completed.

Q1503497
140563

Michael Daniels

From: Michael Daniels
Sent: Tuesday, February 03, 2015 2:09 PM
To: 'jason.tyler@stservices.com'; 'dferguson@cityofwimberley.com'
Subject: Exit Interview Form Blue Hole WWTP Compliance Inspection
Attachments: Exit Interview Form.pdf

3-Feb-2015

Jason / Don, please see attached Exit Interview Form. The records were in very good order and provide good documentation of the process control, operations and maintenance. Let me know if you have any questions.

Sincerely,
Michael Daniels, P.E.
Environmental Investigator
Water Program
TCEQ Austin Region Office
512-239-7095

TCEQ EXIT INTERVIEW FORM: Potential Violations and/or Records Requested

Regulated Entity/Site Name	Blue Hole WWTF			TCEQ Add. ID No. RN No. (optional)	WQ0013321-001 RN101610350
Investigation Type	CCI	Contact Made In-House (Y/N)	Purpose of Investigation	Wastewater Compliance	
Regulated Entity Contact	Jason Tyler		Telephone No.	405-664-4207	Date Contacted
Title	Project Manager		Fax No.		Date ~~Faxed~~ emailed 3-Feb-2015

NOTICE: The information provided in this form is intended to provide clarity to issues that have arisen during the investigation process between the TCEQ and the regulated entity named above and *does not represent final TCEQ findings related to violations*. Any potential or alleged violations discovered after the date on this form will be communicated by telephone to the regulated entity representative prior to the issuance of a notice of violation or enforcement. Conclusions drawn from this investigation, including additional violations or potential violations discovered (if any) during the course of this investigation, will be documented in a final investigation report.

Issue		For Records Request: identify the necessary records, the company contact and date due to the agency. For Alleged and Potential Violation issues: include the rule in question with the clearly described potential problem. Other type of issues: fully describe.	
No.	Type[1]	Rule Citation (if known)	Description of Issue
1	PV	Page 5, Item 5	Flow meter was mis-calibrated by FMS
2	PV	Page 23, Item 4	One area in irrigation field was observed to have ponding
3	RR	Page 23, Item 5	Request spread sheet formatted records to show on-off status of each irrigation zone daily

[1]Issue Type Can Be One or More of: AV (Alleged Violation), PV (Potential Violation), O (Other), or RR (Records Request)

Did the TCEQ document the regulated entity named above operating without proper authorization?	☐ Yes	☒ No
Did the investigator advise the regulated entity representative that continued operation is not authorized?	☐ Yes	☒ No

Document Acknowledgment. Signature on this document establishes only that the regulated entity (company) representative received a copy of this document and associated continuation pages on the date noted. If contact was made by telephone, document will be faxed to regulated entity; therefore, signature not required.

Michael Daniels Michael Daniel	3-Feb-2015		
Investigator Name (Signed & Printed)	Date	Regulated Entity Representative Name (Signed & Printed)	Date

If you have questions about any information on this form, please contact your local TCEQ Regional Office.
Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, call 512-239-3282.

White Copy: Regulated Entity Representative Yellow Copy: TCEQ

(Note: Use additional pages as necessary) Page 1 of 1

TCEQ-20085 (Rev. 6/07)

Michael Daniels

From: Tyler, Jason <Jason.Tyler@STServices.com>
Sent: Wednesday, February 04, 2015 9:59 AM
To: Michael Daniels; dferguson@cityofwimberley.com
Cc: Hester, Kristi; Wolfe, James; Manuel, Scott
Subject: Re: Exit Interview Form Blue Hole WWTP Compliance Inspection
Attachments: Wimberley TCEQ CA 1 29 2015.pdf

Mr. Daniels
I have attached a copy of the field work order for the irrigation field repair. Also attached, is a copy of the recalibration by FMS and a blank copy of the irrigation field utilization log. I only included one month of the irrigation log as an example. The entire year has been printed and will be kept at the WWTP in a 3 ring binder. Please let me know if any further action or documentation is needed.

Sincerely,

Jason Tyler
Project Manager
Severn Trent
405-664-4207

From: Tyler, Jason
Sent: Tuesday, February 3, 2015 3:37 PM
To: Michael Daniels; dferguson@cityofwimberley.com
Cc: Hester, Kristi; Wolfe, James
Subject: Re: Exit Interview Form Blue Hole WWTP Compliance Inspection

Mr. Daniels,
I have received the Exit Interview Form. All concerns have been addressed. I will forward the pertinent documentation as soon as the calibration record is received from FMS. I expect this documentation by 4 February 2015.
Jason Tyler
Severn Trent

From: Michael Daniels <michael.daniels@tceq.texas.gov>
Sent: Tuesday, February 3, 2015 2:09 PM
To: Tyler, Jason; dferguson@cityofwimberley.com
Subject: Exit Interview Form Blue Hole WWTP Compliance Inspection

3-Feb-2015

Jason / Don, please see attached Exit Interview Form. The records were in very good order and provide good documentation of the process control, operations and maintenance. Let me know if you have any questions.

Sincerely,
Michael Daniels, P.E.

SEVERN TRENT SERVICES Work Order

District: COWIM **WO#:** 1053504 **Dept:** 5520 **WO Type:** IR **Resp:** OPS **Issued:** 2/2/2015

Asset ID/Description: COWIM-SP1/City of Wimberely Wastewater Treatment Plant #1

Activity Code/Description: IRGENREP/Relocate, Repair, Replace or Recondition an Irrigation System Asset

Address/Location: 333 Blue Hole Rd

Additional Address/Location or Task Details: Repair irrigation leak. Leak is flagged. DateSched: 02/03/15

Req By: Jason **Assigned To:** Michael A Picciandra **GL Code:** 41000

Utility Staking #: **UCC Start:** **UCC End:**

OLD Meter ID: **Read:** **Attachment(s):** 0 **Special Class:**

NEW Meter ID: **Read:** **L-B-S:** **Gallons Flushed:**

Date Complete: 2-3-15 **Backcharge To:**

Material / Inventory ID	Vendor / Description	PO# / P-Card	Qty	Price
FC Clamps	Dist. I	I		

Labor / Equipment ID	Job Class	Date	Time In	Time Out	OT?
604366 111234		02-3-15	830	1200	R
603798 - 111233		02-03-15	830	1200	R
603799		2-3-15	830	1200	R

Manager Review Requested: Yes No **Manager Name:** **Billing Notification:** Yes No

Field Comments:
Hand Dig leak area - Made Repair and backfilled.
* also for 2 additional leaks - made repairs.

No Problem Found **Customer Responsibility** **New WO** **New Asset** **Void WO/Reason:**

Jason
2/4/15

MP

FMS FLUID METER SERVICE, CORP.

7304 McNell Rd. #604
Austin, TX 78729
512-258-3594

Certificate of Calibration

TO Severn Trent

Wimberley WWTP

Blue Hole

LOCATION
Effluent

DATE 2-2-2015

MAKE/MODEL Siemens Milltronics OCM III

TYPE Open Channel

S/N N/A

PMD 30° V-notch

READ 01644265 x 10

UNIT OF MEASUREMENT Gallons

SIGNATURE

* Staff gauge is in actual inches, not engineers feet.
* meter was setup in engineers feet.
* reprogrammed meter, & tested. (now 100%)
* meter was overregistering
* max head @ 6" = 53.63 Gpm was: 82.11
* dropped flow to zero, staff gauge is level

City of Wimberley Drip Field Utilization Record

✓ = ON X = OFF

Field #	1	2	3	4	5	6	7	8	9	10	11
2/1/2015											
2/2/2015											
2/3/2015											
2/4/2015											
2/5/2015											
2/6/2015											
2/7/2015											
2/8/2015											
2/9/2015											
2/10/2015											
2/11/2015											
2/12/2015											
2/13/2015											
2/14/2015											
2/15/2015											
2/16/2015											
2/17/2015											
2/18/2015											
2/19/2015											
2/20/2015											
2/21/2015											
2/22/2015											
2/23/2015											
2/24/2015											
2/25/2015											
2/26/2015											
2/27/2015											
2/28/2015											

Operations Records
December 2014

CITY OF WIMBERLEY
WASTEWATER TREATMENT PLANT
FLOW / RAINFALL / CL2 RESIDUAL RECORD

PERMIT NO: WQ0013321001 Month: December, 2014

Day	Date	Effluent Flow (MGD)	Rain Inches	PH Effluent
Mon	12/1/14	0.005	0	
Tue	12/2/14	0.007	0	7.41
Wed	12/3/14	0.008	0	
Thu	12/4/14	0.007	0	
Fri	12/5/14	0.006	0	
Sat	12/6/14	0.006		
Sun	12/7/14	0.006		
Mon	12/8/14	0.007	0	
Tue	12/9/14	0.008	0	8
Wed	12/10/14	0.008	0	
Thu	12/11/14	0.007	0	
Fri	12/12/14	0.006	0	
Sat	12/13/14	0.006		
Sun	12/14/14	0.006		
Mon	12/15/14	0.008	0	
Tue	12/16/14	0.006	0	
Wed	12/17/14	0.008	0.1	7.83
Thu	12/18/14	0.008	0	
Fri	12/19/14	0.006	0	
Sat	12/20/14	0.005		
Sun	12/21/14	0.006		
Mon	12/22/14	0.007	0	8.52
Tue	12/23/14	0.007	0.4	
Wed	12/24/14	0.006	0	
Thu	12/25/14	0.006	0	
Fri	12/26/14	0.007	0	
Sat	12/27/14	0.006		
Sun	12/28/14	0.007		
Mon	12/29/14	0.007	0.3	8.14
Tue	12/30/14	0.008	0.1	
Wed	12/31/14			
Min		0.005		7.41
Max		0.008	0.4	8.52
Avg		0.007	0.04	7.98
Sum		0.201	0.9	

SIGNATURE OF OPERATOR:
CERTIFICATE No.:
COMMENTS:
Grab Sample 1/month
3 Hr Peak Flow GPM

CITY OF WIMBERLEY
WASTEWATER TREATMENT PLANT

		LABORITORY DATA														
		Effluent			Influent			Aeration								
Date	DATE	BOD		E.coli	BOD			TSS	VSS	Weather	Rain Inches	Air Temp	Flow#1 Final Eff	Flow Final Eff Kgal	SV5 AER #1	SV30 AER #1
12/1/14	12/1/14									Cloudy	0	41	15969	5		
12/2/14	12/2/14	1			247			4070	3170	Cloudy	0	46	15974	7	65	40
12/3/14	12/3/14									Cloudy	0	59	15981	8		
12/4/14	12/4/14									Cloudy	0	68	15989	7		
12/5/14	12/5/14									Cloudy	0	73	15996	6		
12/6/14	12/6/14												16002	6		
12/7/14	12/7/14												16008	6		
12/8/14	12/8/14									Partly Cloudy	0	63	16014	7		
12/9/14	12/9/14	1						4470	3170	Partly Cloudy	0	66	16021	8	60	40
12/10/14	12/10/14									Partly Cloudy	0	63	16029	8		
12/11/14	12/11/14									Cloudy	0	65	16037	7		
12/12/14	12/12/14									Cloudy	0	66	16044	6		
12/13/14	12/13/14												16050	6		
12/14/14	12/14/14												16056	6		
12/15/14	12/15/14									Partly Cloudy	0	71	16062	8		
12/16/14	12/16/14	3			277			4350	3350	Partly Cloudy	0	62	16070	6		
12/17/14	12/17/14									Cloudy	0.1	50	16076	8	77	50
12/18/14	12/18/14									Cloudy	0	57	16084	8		
12/19/14	12/19/14									Cloudy	0	54	16092	6		
12/20/14	12/20/14												16098	5		
12/21/14	12/21/14												16103	6		
12/22/14	12/22/14	1						4300	3300	Partly Cloudy	0	71	16109	7	78	48
12/23/14	12/23/14									Cloudy	0.4	48	16116	7		
12/24/14	12/24/14									Clear	0	58	16123	6		
12/25/14	12/25/14									Clear	0	61	16129	6		
12/26/14	12/26/14									Partly Cloudy	0	70	16135	7		
12/27/14	12/27/14												16142	6		
12/28/14	12/28/14												16148	7		
12/29/14	12/29/14	1						4330	3370	Partly Cloudy	0.3	57	16155	7	66	42
12/30/14	12/30/14									Cloudy	0.1	44	16162	8		
12/31/14													16170			
	Min	1.0			247			4070	3170			41		5	60	40
	Max	3.0			277			4470	3370		0.4	73		8	78	50
	Avg	1.4			262			4304	3272		0.0	60		6.7	69	44
	Sum										0.9			201		

SI

CITY OF WIMBERLEY
WASTEWATER TREATMENT PLANT

Date	Clar #1 Sldg Ht	DO AER #1	DO AER #2	DO Clar #1	DO Eff #1	Wasted #1 Gal	Decant #1 Gal	Sludge Gal Hauled	Influent Flow #1	Influent Flow #1 Kgal	Blwr #1 ETM	Blwr #1 Hours	Blwr #2 ETM	Blwr #2 Hours	Blwr#1 Fltr Srvc	Blwr#2 Fltr Srvc	EQ #1 ETM	EQ #2 ETM
12/1/14									7951.7	0.9	27461	21.7	19289	0			3069.5	2253
12/2/14	60	9.26	9.22		8.73	625	1112		7952.6	1.1	27482	24.8	19289	0			3070.3	2254
12/3/14	60					347	521		7953.7	0.4	27507	24.3	19289	0			3071.3	2255
12/4/14	60					243			7954.1	0.7	27531	22.8	19289	0			3072.4	2255
12/5/14	48					208			7954.8	1.2	27554	24.3	19289	0			3073.1	2256
12/6/14									7956	1.3	27579	24.3	19289	0			3074.1	2257
12/7/14									7957.3	1.2	27603	24.3	19289	0			3075	2258
12/8/14						139			7958.5	1.8	27627	24.7	19289	0	Cleaned		3076	2258
12/9/14	48	8.49	8.84	1.69	9.32		556		7960.3	0.5	27652	23.8	19289	0			3077	2259
12/10/14						208			7960.8	0.3	27676	24.1	19289	0			3078.1	2260
12/11/14	60					417		3000	7961.1	1.1	27700	23.7	19289	0			3079	2261
12/12/14	60					382			7962.2	0.8	27723	23.9	19289	0			3079.9	2262
12/13/14									7963	0.8	27747	23.9	19289	0			3080.8	2262
12/14/14									7963.8	0.8	27771	23.9	19289	0			3081.6	2263
12/15/14	60					348			7964.6	1.3	27795	25.7	19289	0			3082.5	2263
12/16/14						243			7965.9	0.4	27821	25	19289	0			3083.5	2265
12/17/14	48	8.07	8.09	1.05	6.39	348			7966.3	0.5	27846	25.9	19289	0			3084.4	2265
12/18/14						208			7966.8	0.8	27872	23.4	19289	0			3085.4	2266
12/19/14						208			7967.6	1.1	27895	22.6	19289	0			3086.4	2267
12/20/14									7968.7	1	27918	22.5	19289	0			3087.2	2268
12/21/14									7969.7	1.1	27940	22.6	19289	0			3088.1	2268
12/22/14	50	8.09	8.40	1.98	8.3	208			7970.8	1.1	27963	24.7	19289	0			3088.9	2269
12/23/14						200			7971.9	14.8	27988	23.8	19289	0			3090.1	2270
12/24/14						100			7986.7	1.7	28011	24.7	19289	0			3091	2271
12/25/14						208			7988.4	1.4	28036	24.4	19289	0	Cleaned		3091.8	2272
12/26/14	72					200			7989.8	1.3	28060	24.9	19289	0			3092.4	2273
12/27/14									7991.1	1.4	28085	24.8	19289	0			3093.4	2273
12/28/14									7992.5	1.3	28110	24.9	19289	0			3094.3	2274
12/29/14	60	8.32	8.3	2.6	8.31	208			7993.8	0.6	28135	21.4	19289	0			3095.3	2275
12/30/14						100			7994.4	0.8	28156	25.3	19289	0			3096	2276
12/31/14									7995.2		28182		19289				3097.1	2277
	48	8.07	8.09	1.05	6.39	100	521	3000		0.3		21.4						
	72	9.26	9.22	2.56	9.32	625	1112	3000		14.8		25.9						
	57	8.45	8.56	1.82	8.21	257.4	729.7	3000		1.45		24.04						
										43.5		721.1						

SI

CITY OF WIMBERLEY
WASTEWATER TREATMENT PLANT

Date	EQ #1 Hours	EQ #2 Hours	Irr Pump #1 ETM	Irr Pump #2 ETM	Irr Pump #1 Hours	Irr Pump #2 Hours	Cal pH Std 1	Cal pH Std 2	Cal pH Std 3	Cal pH Slope	Cal pH Slope var	pH Effluent	Smpl Temp #1 C	Smpl Time Read	Smpl Time Take
12/1/14	0.8	0.5	1228.8	1155.6	0.4	0.3									
12/2/14	1	0.8	1229.2	1155.9	0.4	0.5	4.01	7	10.01	100	5.3	7.41	14	1502	1458
12/3/14	1.1	0.8	1229.6	1156.4	0.5	0.5									
12/4/14	0.7	0.8	1230.1	1156.9	0.4	0.4									
12/5/14	1	0.6	1230.5	1157.3	0.4	0.4									
12/6/14	0.9	0.7	1230.9	1157.7	0.3	0.3									
12/7/14	1	0.6	1231.2	1158	0.4	0.4									
12/8/14	1	0.8	1231.6	1158.4	0.6	0.5									
12/9/14	1.1	0.6	1232.2	1158.9	0.5	0.5	4.01	7	10.01	100	5.3	8	17	1537	1531
12/10/14	0.9	1.1	1232.7	1159.4	0.4	0.4									
12/11/14	0.9	0.9	1233.1	1159.8	0.5	0.5									
12/12/14	0.9	0.6	1233.6	1160.3	0.4	0.4									
12/13/14	0.8	0.7	1234	1160.7	0.4	0.4									
12/14/14	0.9	0.6	1234.4	1161.1	0.4	0.4									
12/15/14	1	1.1	1234.8	1161.5	0.5	0.5									
12/16/14	0.9	0.8	1235.3	1162	0.4	0.4									
12/17/14	1	0.9	1235.7	1162.4	0.4	0.4	4.01	7	10.01	100	5.3	7.83	15	1728	1726
12/18/14	1	0.9	1236.1	1162.8	0.5	0.5									
12/19/14	0.8	0.6	1236.6	1163.3	0.4	0.4									
12/20/14	0.9	0.7	1237	1163.7	0.3	0.3									
12/21/14	0.8	0.6	1237.3	1164	0.4	0.4									
12/22/14	1.2	0.9	1237.7	1164.4	0.5	0.5	4.01	7	10.01	100	5.3	8.52	18	1333	1328
12/23/14	0.9	0.8	1238.2	1164.9	0.4	0.4									
12/24/14	0.8	0.9	1238.6	1165.3	0.5	0.5									
12/25/14	0.6	0.9	1239.1	1165.8	0.4	0.4									
12/26/14	1	0.8	1239.5	1166.2	0.4	0.5									
12/27/14	0.9	0.8	1239.9	1166.7	0.5	0.4									
12/28/14	1	0.8	1240.4	1167.1	0.4	0.5									
12/29/14	0.7	1	1240.8	1167.6	0.4	0.4	4.01	7	10.01	100	5.3	8.14	14	1711	1503
12/30/14	1.1	1.2	1241.2	1168	0.5	0.6									
12/31/14			1241.7	1168.6											
	0.6	0.5			0.3	0.3	4.01	7	10.01	100	5.3	7.41	14	1333	1328
	1.2	1.2			0.6	0.6	4.01	7	10.01	100	5.3	8.52	18	1728	1726
	0.92	0.7933			0.43	0.43	4.01	7	10.01	100	5.3	7.98	15.6	1562	1509
	27.6	23.8			12.9	13									

SI

Sampling Records - December 2014

Bryan Facility:
635 Phil Gramm Boulevard
Bryan, TX 77807
(979) 778-3707
Fax (979) 778-3193

Aqua-Tech LABORATORIES, INC.

Austin Facility:
7500 Hwy 71 W, Suite 105
Austin, TX 78735
(512) 301-9559
Fax (512) 301-9552

Analytical Report

Severn Trent

Report Printed: 12/16/14 12:10

X022081

Wimberley WWTP Effluent — Sample Collected 12/02/14 [illegible]:10 by CLIENT — Type: Grab — Matrix: Non Potable — C-O-C #: X022081

Lab ID# X022081-01	Result	Units	Notes	MDL	Adj. MDL	SQL	Lab	Analyzed	Method	
General Chemistry										
BOD (5 day)	<1	mg/L		1	1	1	*Austin*	12/04/14 07:47 DC	SM5210 B, 2001	*NEL*

Wimberley WWTP Aeration — Sample Collected 12/02/14 [illegible]:50 by CLIENT — Type: Grab — Matrix: Non Potable — C-O-C #: X022081

Lab ID# X022081-02	Result	Units	Notes	MDL	Adj. MDL	SQL	Lab	Analyzed	Method	
General Chemistry										
Total Suspended Solids	4070	mg/L		1	333	333	*Austin*	12/04/14 10:40 HL	SM2540 D, 1997	*NEL*
Total Volatile Suspended Solids	3170	mg/L		1	333	333	*Austin*	12/04/14 10:40 HL	SM2540E, 1997	*INF*

Wimberley WWTP Influent — Sample Collected 12/02/14 [illegible]:55 by CLIENT — Type: Grab — Matrix: Non Potable — C-O-C #: X022081

Lab ID# X022081-03	Result	Units	Notes	MDL	Adj. MDL	SQL	Lab	Analyzed	Method	
General Chemistry										
BOD (5 day)	247	mg/L		1	78	78	*Austin*	12/04/14 07:47 DC	SM5210 B, 2001	*NEL*

Wimberley WWTP Digester — Sample Collected 12/02/14 [illegible]:40 by CLIENT — Type: Grab — Matrix: Solid — C-O-C #: X022081

Lab ID# X022081-04	Result	Units	Notes	MDL	Adj. MDL	SQL	Lab	Analyzed	Method	
General Chemistry										
% Solids	1.28	% by Weight		0.10	0.10	0.10	*Austin*	12/05/14 12:08 DC	SM 20 2540 G	*NEL*

Explanation of Notes

BOD-01 Dilution water blanks fell outside of acceptance criteria of 0.2 mg/L.

Bryan Facility:
635 Phil Gramm Boulevard
Bryan, TX 77807
(979) 778-3707
Fax (979) 778-3193

Aqua-Tech LABORATORIES INC.

Austin Facility:
7500 Hwy 71 W, Suite 105
Austin, TX 78735
(512) 301-9559
Fax (512) 301-9552

Analytical Report

Severn Trent

Report Printed: 12/16/14 17:42

X022438

Wimberley WWTP Effluent

Sample Collected 12/09/14 11:45 by CLIENT | *Type* Grab | *Matrix* Non Potable | *C-O-C #* X022438

Lab ID# X022438-01	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	
General Chemistry										
BOD (5 day)	<1	mg/L		1	1	1	*Austin*	12/11/14 07:45 DC	SM5210 B, 2001	*NEL*

Wimberley WWTP Aeration

Sample Collected 12/09/14 11:40 by CLIENT | *Type* Grab | *Matrix* Non Potable | *C-O-C #* X022438

Lab ID# X022438-02	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	
General Chemistry										
Total Suspended Solids	4470	mg/L		1	333	333	*Austin*	12/11/14 09:44 HL	SM2540 D, 1997	*NEL*
Total Volatile Suspended Solids	3170	mg/L		1	333	333	*Austin*	12/11/14 09:44 HL	SM2540E, 1997	*INF*

Explanation of Notes

BOD-01 Dilution water blanks fell outside of acceptance criteria of 0.2 mg/L.

QD-02 Result is outside of acceptance criteria. Due to holding time constraints the sample cannot be re-analyzed.

Bryan Facility:
635 Phil Gramm Boulevard
Bryan, TX 77807
(979) 778-3707
Fax (979) 778-3193

Aqua-Tech LABORATORIES INC.

Austin Facility:
7500 Hwy 71 W, Suite 105
Austin, TX 78735
(512) 301-9559
Fax (512) 301-9552

Analytical Report

Severn Trent

Report Printed: 12/23/14 17:26

X022980

Wimberley WWTP Effluent

Sample Collected 12/16/14 10:05 by CLIENT | *Type* Grab | *Matrix* Non Potable | *C-O-C #* X022980

Lab ID# X022980-01	Result	Units	Note	MDL	Adj. MDL	SQL	Lab	Analyzed	Method	
General Chemistry										
BOD (5 day)	**3**	mg/L		1	1	1	*Austin*	12/18/14 07:47 DC	SM5210 B, 2001	*NEL*

Wimberley WWTP Aeration

Sample Collected 12/16/14 10:10 by CLIENT | *Type* Grab | *Matrix* Non Potable | *C-O-C #* X022980

Lab ID# X022980-02	Result	Units	Note	MDL	Adj. MDL	SQL	Lab	Analyzed	Method	
General Chemistry										
Total Suspended Solids	**4350**	mg/L		1	500	500	*Austin*	12/18/14 13:20 HL	SM2540 D, 1997	*NEL*
Total Volatile Suspended Solids	**3350**	mg/L		1	500	500	*Austin*	12/18/14 13:20 HL	SM2540E, 1997	*INF*

Wimberley WWTP Influent

Sample Collected 12/16/14 11:25 by CLIENT | *Type* Grab | *Matrix* Non Potable | *C-O-C #* X022980

Lab ID# X022980-03	Result	Units	Note	MDL	Adj. MDL	SQL	Lab	Analyzed	Method	
General Chemistry										
BOD (5 day)	**277**	mg/L		1	78	78	*Austin*	12/18/14 07:47 DC	SM5210 B, 2001	*NEL*

Explanation of Notes

BOD-01 Dilution water blanks fell outside of acceptance criteria of 0.2 mg/L.

Bryan Facility:
635 Phil Gramm Boulevard
Bryan, TX 77807
(979) 778-3707
Fax (979) 778-3193

Aqua-Tech LABORATORIES INC.

Austin Facility:
7500 Hwy 71 W, Suite 105
Austin, TX 78735
(512) 301-9559
Fax (512) 301-9552

Analytical Report

Severn Trent

Report Printed: 12/30/14 16:27

X023429

Wimberley WWTP Effluent — *Sample Collected:* 12/22/14 11:42 by CLIENT — *Type:* Grab — *Matrix:* Non Potable — *C-O-C #:* X023429

Lab ID# X023429-01	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	
General Chemistry										
BOD (5 day)	1	mg/L		1	1	1	*Austin*	12/24/14 05:46 WWK	SM5210 B, 2001	*NEL*

Wimberley WWTP Aeration — *Sample Collected:* 12/22/14 11:30 by CLIENT — *Type:* Grab — *Matrix:* Non Potable — *C-O-C #:* X023429

Lab ID# X023429-02	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	
General Chemistry										
Total Suspended Solids	4300	mg/L		1	333	333	*Austin*	12/24/14 10:53 DC	SM2540 D, 1997	*NEL*
Total Volatile Suspended Solids	3300	mg/L		1	333	333	*Austin*	12/24/14 10:53 DC	SM2540E, 1997	*INF*

Bryan Facility:
635 Phil Gramm Boulevard
Bryan, TX 77807
(979) 776-3707
Fax (979) 776-3193

Aqua-Tech LABORATORIES INC.

Austin Facility:
7500 Hwy 71 W, Suite 105
Austin, TX 78735
(512) 301-9559
Fax (512) 301-9552

Analytical Report

Severn Trent

Report Printed: 1/8/15 16:33

X023921

Wimberley WWTP Effluent — Sample Collected: 12/29/14 11:15 by CLIENT — Type: Grab — Matrix: Non Potable — C-O-C #: X023921

Lab ID# X023921-01	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	
General Chemistry										
BOD (5 day)	1	mg/L	B	1	1	1	*Austin*	12/31/14 07:30 HL	SM5210 B, 2001	*NEL*

Wimberley WWTP Aeration — Sample Collected: 12/29/14 11:10 by CLIENT — Type: Grab — Matrix: Non Potable — C-O-C #: X023921

Lab ID# X023921-02	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	
General Chemistry										
Total Suspended Solids	4330	mg/L		1	333	333	*Austin*	12/31/14 14:21 WWK	SM2540 D, 1997	*NEL*
Total Volatile Suspended Solids	3370	mg/L		1	333	333	*Austin*	12/31/14 14:21 WWK	SM2540E, 1997	*INF*

Explanation of Notes

B	Analyte is found in the associated blank as well as in the sample.
BOD-01	Dilution water blanks fell outside of acceptance criteria of 0.2 mg/L.
QD-02	Result is outside of acceptance criteria. Due to holding time constraints the sample cannot be re-analyzed.

Department	District	Asset ID	WO Type	Milestone	WO #	Activity	Activity Desc	Location	Additional Location or Task Details	Status	Comments	Date Initiated	Date Complete
5520	COWIM	COWIM-SP1	SP	Closed	815174	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	blower 1 failure		1/31 processing invoice from Hamilton Respond to blower fail alarm. Pump showing locked motor. Amps null. Inform Phil. Called operator Chuck out and informed of issue.	1/10/2014	2/17/2014
5520	COWIM		AD	Closed	816572	ADSECTAG	Purchase Security Tags	COWIM District Area	Purchase security tags for lift stations			1/13/2014	1/16/2014
5520	COWIM	COWIM-SP1	SP	Closed	819315	SPINVPRB	Investigate a Problem at a Sewer Treatment Plant	333 Blue Hole Rd	Call out high level		Called out due to high level. Repair done on wo 820326.	1/16/2014	1/20/2014
5520	COWIM	COWIM-SP1	SP	Closed	820326	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	Dialer called out EQ high level		EQ in very high level. The floats were hung up in the rags. Broke up rags from around the floats and turned on one pump to pump station down. Pumped about half way down and the plant started backing up. Had to turn off pump to let the plant process flow. Turned pump back on and it got to normal level. Turned both pumps on in auto and all is normal. PSI was called out to troubleshoot pump 1 with high run time. Pump 1 & 3 were both tripped out. Pulled all three pumps. Removed rags from pump 2 and reset pump, but it was still tripping breaker. Megged motor and it shorted to ground. Pump 2 was clear and pump 3 was full of rags. Motor was tripping breaker. Megged motor and it shorted to ground also. Pulled both pump 1 & 3 for repair/replacement. Installed jumper wire to the alternator to bring pump 2 on when any pump is called for.	1/17/2014	2/10/2014
5520	COWIM	COWIM-LS1	LS	Closed	825716	LSINVPRB	Investigate a Problem at a Lift Station	333 Blue Hole Rd	Call out common pump alarm		Station was in alarm. Reset alarm and checked pump and station. Pump was working station at normal level.	1/27/2014	1/27/2014
5520	COWIM	COWIM-SP1	SP	Closed	827267	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	EQ Pump # 2 high run times, pumping slower than normal			1/29/2014	4/1/2014
5520	COWIM	COWIM-SP1	SP	Closed	827269	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	Pump 1 high run times		Pulled EQ pump #1 removed rags. Notified city management	1/29/2014	3/6/2014
5520	COWIM	COWIM-SP1	SP	Closed	842251	SPLAB	Purchase Laboratory Services for Sewer Treatment Plant	333 Blue Hole Rd	Collect samples for pollutant analysis		Collected samples for permit delivered to lab. Wimberly pays district direct.	2/19/2014	4/17/2014
5520	COWIM	COWIM-SP1	SP	Closed	842272	SPLAB	Purchase Laboratory Services for Sewer Treatment Plant	333 Blue Hole Rd	Collect soil samples for required annual irrigation soil analysis			2/19/2014	3/25/2014
5520	COWIM	COWIM-LS1	LS	Closed	849041	LSGENREP	General Repair or Maintenance of an Asset at a Lift Station	333 Blue Hole Rd	generator repair		troubleshoot power source on generator, found signs of smoked connections in the control panel panel will need to be replaced and reprogrammed obtaining price for approval	2/28/2014	4/1/2014
5520	COWIM	COWIM-SP1	SP	Closed	850650	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	DIALER CALLED OUT / BLOWER FAILURE DateSched: 03/02/14		Checked out blower and found VFD tripped out. Reset and checked for proper operation. All is ok now.	3/4/2014	3/10/2014
5520	COWIM	COWIM-SP1	SP	Closed	852364	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	EQ basin lead float not working		Replaced bad lead floation EQ basin. Need to add float. Purchased float and replaced.	3/6/2014	4/11/2014
5520	COWIM	COWIM-LS1	LS	Closed	853259	LSGENREP	General Repair or Maintenance of an Asset at a Lift Station	333 Blue Hole Rd	Generator not working - battery issue		Purchased and replaced bad battery	3/7/2014	4/11/2014
5520	COWIM	COWIM-LS1	LS	Closed	856779	LSGENREP	General Repair or Maintenance of an Asset at a Lift Station	333 Blue Hole Rd	repair pump # 2		overhaul pump # 2	3/13/2014	4/2/2014
5520	COWIM	COWIM-LS1	LS	Closed	878988	LSGENREP	General Repair or Maintenance of an Asset at a Lift Station	333 Blue Hole Rd	replace pump # 3 DateSched: 05/02/14		e-mails: 5/1/14 picked up pump from Hamilton Electric 5/13/14	4/14/2014	5/13/2014
5520	COWIM	COWIM-LS1	LS	Closed	879493	LSGENREP	General Repair or Maintenance of an Asset at a Lift Station	333 Blue Hole Rd	Pump #3 found tripped		Called PSI and spoke with them several time regarding problem.	4/15/2014	4/17/2014
5520	COWIM	COWIM-LS1	LS	Closed	880856	LSGENREP	General Repair or Maintenance of an Asset at a Lift Station	333 Blue Hole Rd	repair pump #2 - link to wo 856779; was closed prior to receipt of invoice		Link to wo 856779; was closed before receipt of invoice.	4/16/2014	4/16/2014

Maintenance Records 2014

Department	District	Asset ID	WO Type	Milestone	WO #	Activity	Activity Desc	Location	Additional Location or Task Details	Status	Comments	Date Initiated	Date Complete
5520	COWIM	COWIM-SP1	SP	Closed	882232	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	Blower #2 tripps - given error code OL1		adjusted blow off valve and VFD for blower #2	4/18/2014	5/29/2014
5520	COWIM	COWIM-LS1	LS	Closed	894647	LSGENREP	General Repair or Maintenance of an Asset at a Lift Station	333 Blue Hole Rd	Pump #2 excessive run time		called out PSI and spoke to them about rag problem.	5/6/2014	5/8/2014
5520	COWIM	COWIM-SP1	SP	Closed	896025	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	repair generator per Holt quote		e-mails: 5/1/14	5/7/2014	5/14/2014
5520	COWIM	COWIM-SP1	SP	Closed	899813	SPINVPRB	Investigate a Problem at a Sewer Treatment Plant	333 Blue Hole Rd	Blower failure		Received call for blower failure. Called Chuck who reset clarifier and blower #2. Cody answered calls regarding gate code, plant location, and where to reset blower and clarifier.	5/13/2014	5/13/2014
5520	COWIM	COWIM-LS1	LS	Closed	909048	LSGENREP	General Repair or Maintenance of an Asset at a Lift Station	333 Blue Hole Rd	repair pump # 2		overhaul pump #2 reference wo#856779	5/27/2014	5/27/2014
5520	COWIM	COWIM-SP1	SP	Closed	914684	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	Transfer line and return line stopped up		e-mail: 6/4/14 Used brush and was able to unstop transfer line. Rags stuck in end of it. Called Mike P. and Jose came out with Jet vac to unstop RAS line. Jet vac transfer line. Unplug transfer line with jet machine water pressure back	6/3/2014	6/2/2014
5520	COWIM	COWIM-SP1	SP	Closed	917151	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	clear blockage on RAS line. DateSched: 06/03/14		e-mail: 6/4/14 Take jet machine to unclog return line pulled rags and wire brush out of pipe.	6/6/2014	6/3/2014
5520	COWIM	COWIM-SP1	SP	Closed	917852	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	blower failure		Dispatched Robert to check out blower failure. Rick - switched over to blower #2. respond to blower failure alarm. Tripped on VFD fault. Reset and put back in auto. Checked amps, all well.	6/9/2014	6/9/2014
5520	COWIM	COWIM-SP1	SP	Closed	918390	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	RAS line stopped up		RAS line stopped up. Called Mike and he sent Jose with jetter. Worked with onsite auger to try and remove stoppage until jetter arrived. Jetted line and RAS still wasn't working. Found the blockage and was able to use auger to pull large ball of rags out of line. Jetted line again to make sure that it was clear. RAS is working again	6/9/2014	6/3/2014
5520	COWIM	COWIM-LS1	LS	Closed	920766	LSGENREP	General Repair or Maintenance of an Asset at a Lift Station	333 Blue Hole Rd	High run times pump 1		Pump #1 taken into Hamilton. They will send it in to the factory for possible warrenty repair. Will make new WO to install when the pump is returned. 8/7- email	6/12/2014	6/25/2014
5520	COWIM	COWIM-LS1	LS	Closed	922548	LSINVPRB	Investigate a Problem at a Lift Station	333 Blue Hole Rd	Call out common pump alarm		Found pump 1 tripped. Reset pump and alarm. Pump 1 makes a horrible noise when it is on, and it set the alarm off again. Turned pump 1 off alarm and it wouldn't reset. Called Bobby with PSI and he was able to get alarm to reset. Scheduled for Bobby to come out and pull pumps and check panel. PSI invoice on WO 920766	6/16/2014	6/15/2014
5520	COWIM	COWIM-LS1	LS	Closed	926463	LSCLEAN	Cleaning at a Lift Station	333 Blue Hole Rd	Clean lift station		Scheduled for 6/24 at 10 am, but couldn't get approval for getting water from local hydrant. 7/1 WWTS cleaned lift station to floor, lots of grit and rags. Also pulled an old string of wire out that was on the floor. 6/18- email	6/20/2014	7/1/2014
5520	COWIM	COWIM-LS1	LS	Closed	928076	LSGENREP	General Repair or Maintenance of an Asset at a Lift Station	333 Blue Hole Rd	Pump #1 not working - pump #2 has high run times		Cleaned pumps 2 & 3, pump #1 showed open winding, sent to shop for warranty evaluation. 8/7- email	6/24/2014	6/26/2014
5520	COWIM	COWIM-SP1	SP	Closed	933680	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	blower 1 broken belts		Replaced belts on the blower. Will need to order more belts because there is only one left.	7/1/2014	7/8/2014

Department	District	Asset ID	WO Type	Milestone	WO #	Activity	Activity Desc	Location	Additional Location or Task Details	Status	Comments	Date Initiated	Date Complete
5520	COWIM	COWIM-LS1	LS	Closed	933683	LSGENREP	General Repair or Maintenance of an Asset at a Lift Station	333 Blue Hole Rd	pump 2 high run times		8/20- repaired under warranty, emailed Don, SM Called Bobby with PSI and scheduled to have pump pulled.	7/1/2014	7/23/2014
5520	COWIM	COWIM-SP1	SP	Closed	933689	SPSUPPLY	Purchase Supplies for a Sewer Treatment Plant	333 Blue Hole Rd	Belts for blowers			7/1/2014	7/15/2014
5520	COWIM	COWIM-LS1	LS	Closed	935701	LSINVPRB	Investigate a Problem at a Lift Station	333 Blue Hole Rd	Call out for common pump alarm		Checked lift station and reset alarm. Checked both pumps and both were working. Checked run time on pumps. Pump 2 has 1.7 hours and pump 3 has 1.0 hours. Everything is working fine.	7/3/2014	7/2/2014
5520	COWIM	COWIM-SP1	SP	Closed	937391	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	Alarm call blower failure		Called out for blower failure - turned on blower #1 - checked plant.	7/8/2014	7/8/2014
5520	COWIM	COWIM-SP1	IR	Closed	948826	IRGENREP	Relocate, Repair, Replace or Recondition an Irrigation System Asset	333 Blue Hole Rd	Repair leaks in drip field		e-mail: 7/25/14 Hand dig and repair 1 1/2 pvc line at drip fields. Repair 5 different spots.	7/25/2014	7/29/2014
5520	COWIM	COWIM-SP1	SP	Closed	955061	SPINVPRB	Investigate a Problem at a Sewer Treatment Plant	333 Blue Hole Rd	Blower failure gen running		Checked plant and found blower #2 off. Turned on blower #1 and everything is working ok	8/4/2014	8/4/2014
5520	COWIM	COWIM-SP1	SP	Closed	955878	SPINVPRB	Investigate a Problem at a Sewer Treatment Plant	333 Blue Hole Rd	Gen running alarm		Gen running alarm. Called dialer back and everything is clear and working	8/5/2014	8/15/2014
5520	COWIM	COWIM-LS1	LS	Closed	955890	LSGENREP	General Repair or Maintenance of an Asset at a Lift Station	333 Blue Hole Rd	High run times pump #2 - clogged pump, shop invoice for repairs and reinstall on WO998976		8/20- emailed Don, SM - 10/10, open windings in pump, est. cost for shop repair $1150 plus re-install. SM	8/5/2014	10/20/2014
5520	COWIM	COWIM-SP1	SP	Closed	971407	ENVMISC	Miscellaneous Compliance Duties Performed for a District	333 Blue Hole Rd			Annual sludge report	8/28/2014	8/28/2014
5520	COWIM	COWIM-SP1	SP	Closed	971710	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	Dialer not working - no dial tone		Set up appointment for phone line repair at plant.	8/29/2014	8/29/2014
5520	COWIM	COWIM-SP1	SP	Closed	974830	SPINVPRB	Investigate a Problem at a Sewer Treatment Plant	333 Blue Hole Rd	Alarm call high level eq basin		EQ basin high level netted rags from under floats. Pumped down EQ basin slowly to not overload the plant until a normal level was recorded. EQ basin needs to be cleaned	9/4/2014	9/4/2014
5520	COWIM	COWIM-SP1	SP	Closed	978992	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	EQ basin pump #2 not working			9/11/2014	10/20/2014
5520	COWIM	COWIM-SP1	SP	Closed	984675	SPINVPRB	Investigate a Problem at a Sewer Treatment Plant	333 Blue Hole Rd	call out for blower failure		Blower #1 tripped. Turned on blower #2 and will investigate further during regular hours.	9/22/2014	9/24/2014
5520	COWIM	COWIM-LS1	LS	Closed	988132	LSGENREP	General Repair or Maintenance of an Asset at a Lift Station	333 Blue Hole Rd	Alternator not working		10/10, cost to replace Alternator not to exceed $500, emailed to Don SM Replaced pump alternator. Alarm dialer indicates low batteries. Replaced batteries but alarm dialer fails when power is off. Dialer needs repair or replacement	9/26/2014	10/6/2014
5520	COWIM	COWIM-SP1	SP	Closed	996402	PMFLWMTR	Flow Meter PM (Calibration) must verify work type	333 Blue Hole Rd	Annual flow meter calibration check, TCEQ required		Est. Cost: $1,100 for 2 meters, 10/13- emailed, SM Called FMS to schedule and scheduled for 10/24. On 10/24 checked calibration on effluent meter and meter was right on. Tried to check calibration on Influent meter, but meter was showing no flow when there was flow. Meter failed. Recommended replacing meter	10/9/2014	10/24/2014
5520	COWIM	COWIM-SP1	SP	Closed	996604	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	repair leaks in drip fields DateSched: 10/09/14		Repair dripfield lines 8 different spots. Hand dig and made repairs.	10/10/2014	10/9/2014
5520	COWIM	COWIM-SP1	SP	Closed	997954	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	Blower failure alarm		Possible power fluctuation caused by blower failing. Reset and checked. Everything is now normal. Belts are slightly loose. Called about state code and question on blowers and plant.	10/14/2014	10/17/2014
5520	COWIM	COWIM-LS1	LS	Closed	998976	LSGENREP	General Repair or Maintenance of an Asset at a Lift Station	333 Blue Hole Rd	repair pump # 1 has blow by in wet well, reinstall repaired pump #2, removed for repairs on WO955890 DateSched: 10/17/14		*Waiting on PSI Also picked up repaired pump #2 and installed.	10/15/2014	11/15/2014

Department	District	Asset ID	WO Type	Milestone	WO #	Activity	Activity Desc	Location	Additional Location or Task Details	Status	Comments	Date Initiated	Date Complete
5520	COWIM	COWIM-LS1	LS	Closed	1000731	LSINVPRB	Investigate a Problem at a Lift Station	333 Blue Hole Rd	Called out common pump alarm		Checked lift station and all pumps are working. LS pumped down to normal levels. Everything appears to be normal. Reset alarm.	10/20/2014	10/20/2014
5520	COWIM	COWIM-SP1	SP	Closed	1001361	SPSUPPLY	Purchase Supplies for a Sewer Treatment Plant	333 Blue Hole Rd	Purchase DO probe kit for WWTP DO meter.			10/20/2014	10/21/2014
5520	COWIM	COWIM-SP1	SP	Closed	1008607	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	EQ pump #1 not working		Both pumps pulled. #1 was full of rags.	11/3/2014	11/5/2014
5520	COWIM	COWIM-SP1	SP	Closed	1011264	SPINVPRB	Investigate a Problem at a Sewer Treatment Plant	333 Blue Hole Rd	Investigate auto dialer not answering		11/7 Checked phone linw and found it was fine. Dialer was not working so pulled it to send in for repairs. 11/10 Checked alarm dialer operation. Sent dialer in for repair. 11/14 Installed temporary alarm dialer at sewer plant.	11/6/2014	
5520	COWIM	COWIM-SP1	SP	Initiated	1015055	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	Replace inflow meter	ONHOLD		11/13/2014	
5520	COWIM	COWIM-LS1	LS	Closed	1015806	LSINVPRB	Investigate a Problem at a Lift Station	333 Blue Hole Rd	Respond to pump #2 failure alarm		Monitored via telephone, wet well level being maintained, Allan will investigate during normal hours.	11/17/2014	11/21/2014
5520	COWIM	COWIM-SP1	SP	Closed	1018578	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	Blower failure		Blower #2 shows overload on VFD and will not run for more than three minutes. Replaced belts on blower #1 and put into operation.	11/21/2014	11/15/2014
5520	COWIM	COWIM-SP1	SP	Initiated	1033288	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	install mag-meter at wwtp on influent line, remove old meter and cut-in new meter. DateSched: 12/15/14		12/15 pick up mag meter at FMS - deliver to office.	12/20/2014	
5520	COWIM	COWIM-SP1	SP	Audit	1038176	SPINVPRB	Investigate a Problem at a Sewer Treatment Plant	333 Blue Hole Rd	alarm call zone 2 - blower failure		Reset blower and checked plant. Everything is running ok.	1/5/2015	1/12/2015
5520	COWIM	COWIM-SP1	SP	Initiated	1038859	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	Blower #2 not working - runs for a minute and then trips			1/6/2015	
5520	COWIM	COWIM-SP1	SP	Audit	1040897	SPGENREP	General Repair or Maintenance of an Asset at a Sewer Treatment Plant	333 Blue Hole Rd	Generator not working - no power	ONHOLD	Replaced battery and battery charger in generator. Ran generator for about ten minutes.	1/8/2015	1/14/2015
5515	COWIM	COWIM-SP1	SP	Initiated	1043104	SPLAB	Purchase Laboratory Services for Sewer Treatment Plant	333 Blue Hole Rd	Collect soil samples for required annual irrigation soil analysis			1/12/2015	
5520	COWIM	COWIM-SP1	SP	Audit	1044037	SPINVPRB	Investigate a Problem at a Sewer Treatment Plant	333 Blue Hole Rd	Removed temporary auto dialer and install repaired alarm dialer at SP1	ONHOLD	Installed reapired auto dialer at SP1 link to WO 1011264 - was closed by manager prior to work completion	1/14/2015	1/6/2015
5520	COWIM	COWIM-SP1	IR	Initiated	1044454	IRGENREP	Relocate, Repair, Replace or Recondition an Irrigation System Asset	333 Blue Hole Rd	Repair leaks in fields 5, 7, & 9			1/15/2015	

Soil Monitoring Plan

City of Wimberley Waste Water Treatment Plant

Permit #: WQ0013321001

Sample Collection Time: Jan. 1st through Feb. 15th of each year.

Sample Type: Composite (minimum of 11 sub samples for each monitoring area at each depth required)

Total Irrigation Area: approx. 2.7 acres

Number of Monitoring Areas (Max. area size (not defined) acres): 1

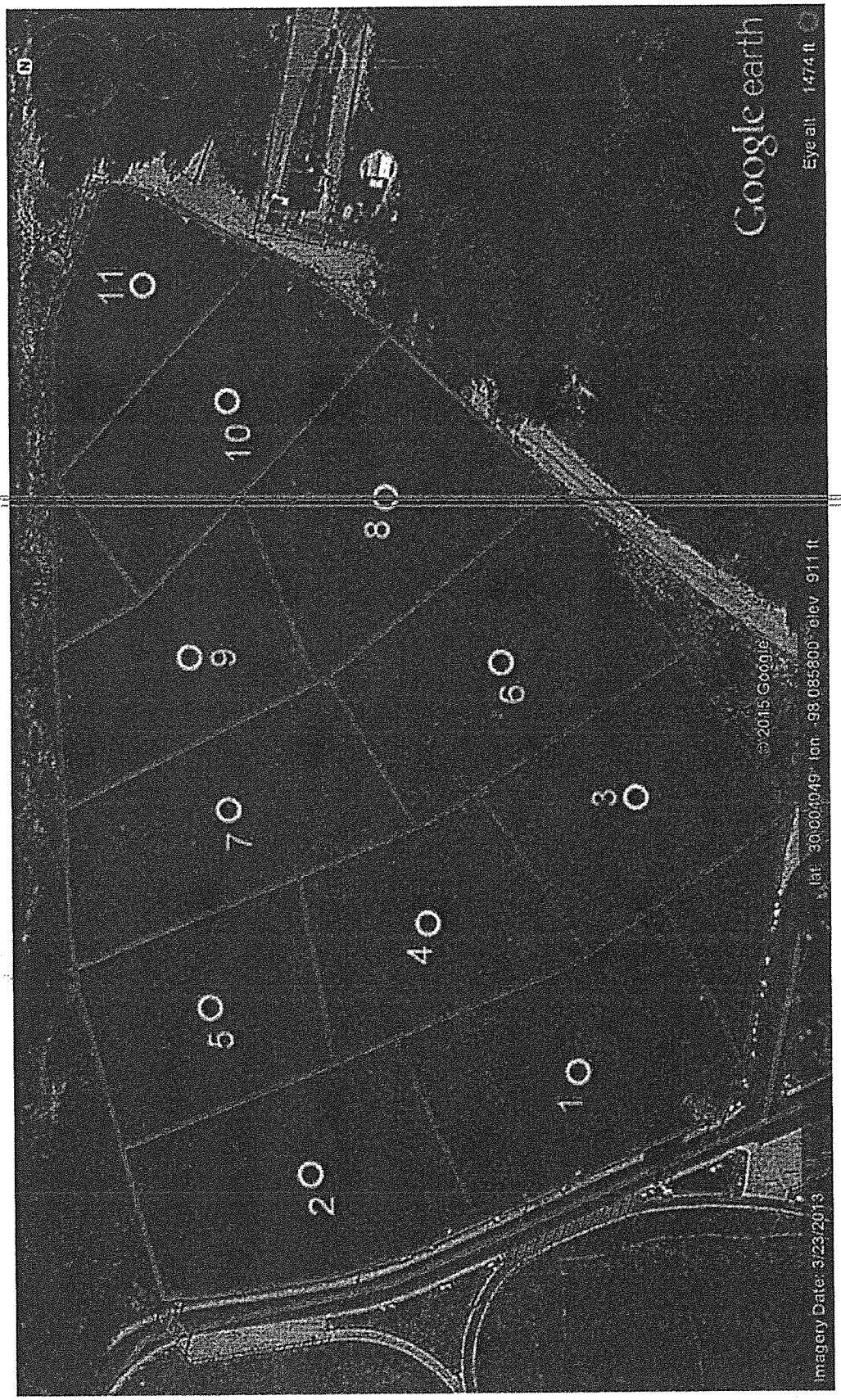
Number of Samples (each Monitoring Area): 1 – 0-6" depth
1 – 6"-18" depth
1 – 18"-30" depth

Directions for collecting samples:

a) Soil analysis for the Drip Irrigation field shall be performed annually in Mid-January.
b) Samples shall be collected from the 11 locations on the attached "Soil Sample Site Plan".
c) At least one core will be collected from each site at the three depths required. The cores for each depth will be combined and thoroughly mixed to obtain a representative sample, resulting in one sample for each of the required depths (0 to 6", 6" to 18" and 18" to 30"). This process will yield a total of three samples.

City of Wimberley

Drip Field Soil Sample Site Plan



8. Prior to commencing irrigation disposal of treated effluent, the permittee shall obtain representative soil samples from the root zones of the disposal site and analyze the samples as outlined in the following paragraph.

   An annual analysis of a representative soil sample taken from the root zone of the irrigated site shall be made. Each soil boring shall be separated into three samples according to the following depth zones: 0 to 6 inches, 6 to 18 inches and 18 to 30 inches below the ground surface. Each zone shall be thoroughly mixed prior to being analyzed. Sampling procedures shall employ accepted techniques of soil science for obtaining representative analytical results. Analysis shall be performed for pH, total nitrogen, potassium, phosphorus and conductivity.

9. The permittee shall maintain a long term contract with the owner(s) of the land application site which is authorized for use in this permit, or own the land authorized for land application of treated effluent.

10. If the effluent is to be transferred to a holding pond or tank, re-chlorination prior to the effluent being delivered into the irrigation system will be required. A trace chlorine residual shall be maintained in the effluent at the point of irrigation application.

11. Adequate signs shall be erected stating that the irrigation water is from a non-potable water supply. Said signs shall consist of a red slash superimposed over the international symbol for drinking water accompanied by the message "DO NOT DRINK THE WATER" in both English and Spanish. All piping transporting the effluent shall be clearly marked with these same signs.

12. Spray fixtures for the irrigation system shall be of such design that they cannot be operated by unauthorized personnel.

13. Irrigation with effluent shall be accomplished only when the area specified is not in use.

14. Permanent transmission lines shall be installed from the holding pond to each tract of land to be irrigated utilizing effluent from that pond.

15. Facilities for the retention of treated or untreated wastewater shall be adequately lined to control seepage. The following methods of pond lining are acceptable.

    a. In-situ clay soils or placed and compacted clay soils meeting the following requirements:

       1) More than 30% passing a No. 200 mesh sieve
       2) Liquid limit greater than 30%
       3) Plasticity index greater than 15
       4) A minimum thickness of 2 feet
       5) Permeability equal to or less than $1x10^{-7}$ cm/sec (*)
       6) Soil compaction will be 95% standard proctor at optimum moisture content (*)

       (*) For new and/or modified ponds only.

    b. Membrane lining with a minimum thickness of 20 mils, and an underdrain leak detection system.

    c. An alternate method of pond lining may be utilized with prior approval from the Executive Director.

    The permittee shall furnish certification by a Texas Licensed Professional Engineer that the completed pond lining meets the appropriate criteria above prior to utilization of the facilities. The certification shall be sent to the TCEQ Regional Office (MC Region 11) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division.

16. The permittee shall comply with the requirements of 30 TAC Section 309.13 (a) through (d). In addition, by ownership of the required buffer zone area, the permittee shall comply with the requirements of 30 TAC Section 309.13(c).

Bryan Facility:
635 Phil Gramm Blvd.
Bryan, TX 77807
(979) 778-3707
Fax (979) 778-3193

Aqua-Tech LABORATORIES, INC.

Austin Facility:
7500 Hwy 71 W, Suite 105
Austin, TX 78735
(512) 301-9559
Fax (512) 301-9552

Analytical Report

Form: SWH 081313 FIN

Severn Trent
Attn: Scott Manuel
14050 Summit Drive Suite 113
Austin, TX 78728

Report Printed: 4/18/14 12:35
Work Order: X005694
Received: 03/25/14 12:57

Sample ID#	Collected	Collected By	Type	Matrix	C-O-C #
X005694-01	3/25/14 11:30	CLIENT	Comp	Solid	267833

Wimberely WWTP Soil 0-6 Inches

Inorganic Parameters (Bryan Facility)

	Analysis	SQL	Result	Units	Analyzed	Method #
ANR	Total Kjeldahl Nitrogen as N	146	803	mg/kg dry	04/11/14 12:00 PWH	SM 20 4500 NH3 G

Plant Available Parameters

	Analysis	SQL	Result	Units	Analyzed	Method #
ANR	pH (1:2 Soil Extract)		8.1 S-01	Std Units	03/31/14 15:00 TAM	TAMU - 1:2 Soil Extract
ANR	Conductivity @ 25 C (1:2 Extract)	2	335 S-01	umhos/cm	03/31/14 15:00 TAM	TAMU - 1:2 Soil Extract
ANR	NO3 as N (Extractable)		1 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU
ANR	Ammonium as NH4		14.6 S-01	ppm	03/31/14 15:00 TAM	TAMU - KCl Extract
ANR	Phosphorus (Plant Available)		62 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU
ANR	Potassium (Plant Available)		473 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU
ANR	Calcium (Plant Available)		13086 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU
ANR	Magnesium (Plant Available)		422 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU
ANR	Sodium (Plant Available)		51 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU
ANR	Sulfur (Plant Available)		25 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU

The above sample was received in acceptable condition according to Aqua-Tech Laboratories, Inc. procedures and 40 CFR, Chapter I, Subchapter D, Part 136.3, TABLE II.-*Required containers, preservation techniques, and holding times,* unless otherwise noted above.

The following prefixes to each analysis name indicate certification:

- NEL NELAC accredited parameter
- NS Subcontracted to a NELAC certified testing facility
- ANR Accreditation not required by the State of Texas
- INFO For informational purposes only (not NELAC accredited or reportable to TCEQ)

June M. Brien
Report approved by:
June M. Brien (Technical Director)

The analyses summarized in this report were performed by Aqua-Tech Laboratories, Inc. unless otherwise noted. Aqua-Tech Laboratories, Inc. holds accreditation from the State of Texas in accordance with NELAC / NELAP (Certificate number T104704371).

The results in this report apply only to the samples analyzed. This analytical report must be reproduced in its entirety unless written permission is granted by Aqua-Tech Laboratories, Inc.

www.aqua-techlabs.com
corp@aqua-techlabs.com

ACCREDITED IN ACCORDANCE WITH nelac
NELAP Cert. T104704371

Aqua-Tech Laboratories, Inc.
635 Phil Gramm Blvd.
Bryan, TX 77807

Analytical Report

Form: SWH 081313 FIN

Report Printed: 4/18/14 12:35
Work Order: X005694
Received: 03/25/14 12:57

Severn Trent

Sample ID#	Collected	Collected By	Type	Matrix	C-O-C #
X005694-02	3/25/14 11:40	CLIENT	Comp	Solid	267833

Wimberely WWTP Soil 6-18 Inches

Inorganic Parameters (Bryan Facility)

	Analysis	SQL	Result	Units	Analyzed	Method #
ANR	Total Kjeldahl Nitrogen as N	146	965	mg/kg dry	04/11/14 12:00 PWH	SM 20 4500 NH3 G

Plant Available Parameters

	Analysis	SQL	Result	Units	Analyzed	Method #
ANR	pH (1:2 Soil Extract)		8.1 S-01	Std Units	03/31/14 15:00 TAM	TAMU - 1:2 Soil Extract
ANR	Conductivity @ 25 C (1:2 Extract)	2	363 S-01	umhos/cm	03/31/14 15:00 TAM	TAMU - 1:2 Soil Extract
ANR	NO3 as N (Extractable)		1 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU
ANR	Ammonium as NH4		18.7 S-01	ppm	03/31/14 15:00 TAM	TAMU - KCl Extract
ANR	Phosphorus (Plant Available)		64 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU
ANR	Potassium (Plant Available)		534 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU
ANR	Calcium (Plant Available)		15229 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU
ANR	Magnesium (Plant Available)		462 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU
ANR	Sodium (Plant Available)		48 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU
ANR	Sulfur (Plant Available)		26 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU

The above sample was received in acceptable condition according to Aqua-Tech Laboratories, Inc. procedures and 40 CFR, Chapter I, Subchapter D, Part 136.3, TABLE II.-*Required containers, preservation techniques, and holding times,* unless otherwise noted above.

The following prefixes to each analysis name indicate certification:

- NEL — NELAC accredited parameter
- NS — Subcontracted to a NELAC certified testing facility
- ANR — Accreditation not required by the State of Texas
- INFO — For informational purposes only (not NELAC accredited or reportable to TCEQ)

June M. Brien

Report approved by:
June M. Brien (Technical Director)

The analyses summarized in this report were performed by Aqua-Tech Laboratories, Inc. unless otherwise noted. Aqua-Tech Laboratories, Inc. holds accreditation from the State of Texas in accordance with NELAC / NELAP (Certificate number T104704371).

The results in this report apply only to the samples analyzed. This analytical report must be reproduced in its entirety unless written permission is granted by Aqua-Tech Laboratories, Inc.

www.aqua-techlabs.com
corp@aqua-techlabs.com

NELAP Cert. T104704371

Aqua-Tech Laboratories, Inc.
635 Phil Gramm Blvd.
Bryan, TX 77807

Analytical Report

Form: SWH 081313 FIN

Report Printed: 4/18/14 12:35
Work Order: X005694
Received: 03/25/14 12:57

Severn Trent

Sample ID#	Collected	Collected By	Type	Matrix	C-O-C #
X005694-03	3/25/14 11:50	CLIENT	Comp	Solid	267833

Wimberely WWTP Soil 18-30 Inches

Inorganic Parameters (Bryan Facility)

	Analysis	SQL	Result	Units	Analyzed	Method #
ANR	Total Kjeldahl Nitrogen as N	151	837	mg/kg dry	04/11/14 12:00 PWH	SM 20 4500 NH3 G

Plant Available Parameters

	Analysis	SQL	Result	Units	Analyzed	Method #
ANR	pH (1:2 Soil Extract)		8.1 S-01	Std Units	03/31/14 15:00 TAM	TAMU - 1:2 Soil Extract
ANR	Conductivity @ 25 C (1:2 Extract)	2	325 S-01	umhos/cm	03/31/14 15:00 TAM	TAMU - 1:2 Soil Extract
ANR	NO3 as N (Extractable)		1 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU
ANR	Ammonium as NH4		17.7 S-01	ppm	03/31/14 15:00 TAM	TAMU - KCl Extract
ANR	Phosphorus (Plant Available)		68 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU
ANR	Potassium (Plant Available)		515 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU
ANR	Calcium (Plant Available)		12655 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU
ANR	Magnesium (Plant Available)		430 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU
ANR	Sodium (Plant Available)		45 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU
ANR	Sulfur (Plant Available)		21 S-01	ppm	03/31/14 15:00 TAM	Mehlich 3 - TAMU

The above sample was received in acceptable condition according to Aqua-Tech Laboratories, Inc. procedures and 40 CFR, Chapter I, Subchapter D, Part 136.3, TABLE II.-*Required containers, preservation techniques, and holding times,* unless otherwise noted above.

The following prefixes to each analysis name indicate certification:

- NEL — NELAC accredited parameter
- NS — Subcontracted to a NELAC certified testing facility
- ANR — Accreditation not required by the State of Texas
- INFO — For informational purposes only (not NELAC accredited or reportable to TCEQ)

Report approved by:
June M. Brien (Technical Director)

The analyses summarized in this report were performed by Aqua-Tech Laboratories, Inc. unless otherwise noted. Aqua-Tech Laboratories, Inc. holds accreditation from the State of Texas in accordance with NELAC / NELAP (Certificate number T104704371).

The results in this report apply only to the samples analyzed. This analytical report must be reproduced in its entirety unless written permission is granted by Aqua-Tech Laboratories, Inc.

www.aqua-techlabs.com
corp@aqua-techlabs.com

NELAP Cert. T104704371

Aqua-Tech Laboratories, Inc.
635 Phil Gramm Blvd.
Bryan, TX 77807

Analytical Report

Form: SWH 081313 FIN

Severn Trent

Report Printed: 4/18/14 12:35
Work Order: X005694
Received: 03/25/14 12:57

Notes and Definitions

S-01	Please note this analysis was not performed in-house, but by a subcontracting facility. The subcontract report is included as an attachment.
NR	Not Reported
RPD	Relative Percent Difference
% R	Percent Recovery
dry	Results with the "dry" unit designation are reported on a "dry weight" basis.
SQL	The SQL (Sample Quantitation Limit) is the value below which the chemical of concern cannot reliably be detected. The SQL includes all sample dilutions and / or concentrations and is a function of the MQL (Method Quantitation Limit).

All samples are reported on an "as received" basis unless the designation "dry" is added to the reported unit.

Copies of Aqua-Tech Laboratories, Inc. procedures and individual sampling plans are available upon request. Note that samples are collected by Aqua-Tech Laboratories, Inc. personnel unless otherwise noted in the "Collected By" field of this report as "Client" or "CLT".

Any subcontracted data summarized in this report is indicated by the S-01 qualifier. A copy of the original report from the subcontract laboratory is available upon request.

Inorganic Parameters (Austin Facility) - Quality Control Report

Total Solids - SM 20 2540 G — Batch M046852

	SQL	Result	Units	Analyzed	QC Check	QC Limits	QC Flag
Blank	0.10	<0.10	% by Weight	03/26/14 15:03 HP	Acceptable	< SQL	
Duplicate	0.10	71.5	% by Weight	03/26/14 15:03 HP	3.14 RPD	9.43 RPD	

Inorganic Parameters (Bryan Facility) - Quality Control Report

Total Kjeldahl Nitrogen as N - SM 20 4500 NH3 G — Batch M047117

	SQL	Result	Units	Analyzed	QC Check	QC Limits	QC Flag
Blank	0.50	<0.50	mg/kg wet	04/11/14 12:00 PWH	Acceptable	< SQL	
Duplicate	146	849	mg/kg dry	04/11/14 12:00 PWH	5.57 RPD	33.6 RPD	
Matrix Spike	146	2590	mg/kg dry	04/11/14 12:00 PWH	102 % R	64.4 - 141 %R	
Matrix Spike Dup	146	2640	mg/kg dry	04/11/14 12:00 PWH	105 % R, 3.11 RPD	64.4 - 141 %R, 33.6 RPD	
LCS	0.50	5.98	mg/kg wet	04/11/14 12:00 PWH	99.7 % R	73.5 - 126 %R	
LCS Dup	0.50	5.84	mg/kg wet	04/11/14 12:00 PWH	97.4 % R, 2.31 RPD	73.5 - 126 %R, 30 RPD	

Sample Preparation / Extraction Summary

Sample ID	Analyte	Prepared	Analyst	Prep Method	Initial	Final	Batch
X005694-01	Total Kjeldahl Nitrogen as N	4/7/14 11:15	PWH	SM20 4500 Norg C	0.10338 g	25 mL	M047117
X005694-02	Total Kjeldahl Nitrogen as N	4/7/14 11:15	PWH	SM20 4500 Norg C	0.1043 g	25 mL	M047117
X005694-03	Total Kjeldahl Nitrogen as N	4/7/14 11:15	PWH	SM20 4500 Norg C	0.1005 g	25 mL	M047117

Aqua-Tech LABORATORIES, INC.

Chain-of-Custody & Analysis Request

Bryan Lab: ☐
635 Phil Gramm Blvd.
Bryan, Texas 77807
Phone: (979) 778-3707
Fax: (979) 778-3193

Austin Lab: ☒
7500 W. Hwy. 71, Suite 105
Austin, Texas 78735
Phone: (512) 301-9559
Email: corp@aqua-techlabs.com

C-O-C # 267833

ACCREDITED IN ACCORDANCE WITH nelac

T104704371

Client / Project Name: COWIM

* DEFINITIONS: DW - Drinking Water; NP - Non-Potable Water; S – Solid; CM – Custody Maintained; CTU – Custody Transfer Unbroken

LAB USE ONLY (Initials KK)

Field Sample ID	Start Date / Time	End Date / Time	Composite Type	Sample Matrix*	Container Volume	Container Type	Sample Pres. #	Analysis Requested	Cooler ID	Bottle pH	Sub-contract	Lab ID #
0-6	3-25-14 1050	3-25-14 1100	C	Soil	0.5L	P	1	pH, Cond, TKN, Nitrate, Amm, Plant Avail: K, Ca, Mg, S, P, Na	Cut	–	TAMU	-01A
6-18	1105	1110	C	Soil	0.5L					–		-02A
18-30	1115	1120	C	Soil	0.5L					–		-03A
0-6	1125	1130	C	Soil	0.25L					–		-01B
6-18	1135	1140	C	Soil	0.25L					–		-02B
18-30	1145	1150	C	Soil	0.25L					–		-03B
								NFE KK				

X005694

By relinquishing the above samples to Aqua-Tech, the client agrees to the following terms. Samples will be analyzed by a method that is within Aqua-Tech Laboratories' NELAC fields of accreditation. Analytes requiring a certified method that is not within Aqua-Tech's fields of accreditation will be subcontracted to a NELAC certified lab that is certified for that method. Clients will be notified of the subcontract lab's details. Other analytes not requiring accreditation will be analyzed by a compendial method. If a specific method is required, the client will note the method in the "Analysis Requested" column. The client approves all method modifications documented by Aqua-Tech or the subcontract lab. A current list of Aqua-Tech's NELAC fields of accreditation and other methods are available on request.

Relinquished by: (print & sign) ☐Client ☐ATL Field ☐Sampler	Date	Time	Sample Info. (X all that apply)	Rec'd by: (print & sign) ☐Client ☐ATL Field	Date	Time	Sample Info. (X all that apply)
Jose Navarro	03-25	1257	☐Iced ☐Chilled/Refrig ☐Cust. Sealed ☐Not Chilled	NFE KK			☐Rec'd Chilled ☐Cond Good ☐CTU ☐Iced in Transit
Relinquished by: (print & sign) ☐Client ☐ATL Field	Date	Time	☐Iced ☐Chilled/Refrig ☐CM ☐Not Chilled	Rec'd by: (print & sign) ☐Client ☐ATL Field	Date	Time	☐Rec'd Chilled ☐Cond Good ☐CTU ☐Iced in Transit
Relinquished by: (print & sign) ☐Client ☐ATL Field arrival in Lab	Date	Time	☐Iced ☐Chilled/Refrig ☐CM ☐Not Chilled	Rec'd by: (print & sign) ☒Received in Lab Kelly Kalanski	Date 3-25-14	Time 1257	☒Rec'd Iced ☐Not Rec'd Iced ☒CTU ☐Cond Good

Field Sample ID	Time	pH	D.O.	Cl_2	Flow
		NFE KK			

Client Address and Phone #: ST

Client Comments:

pH Paper ID#:	1 ≤ 6 °C (not frozen)	2 = H_2SO_4	3 = HCl	4 = HNO_3
5 = $Na_2S_2O_3$	6 = NaOH	7 =	8 =	9 =

Sample Pres.

Laboratory Comments:

(The below documents condition at receipt in Laboratory by Sample Custodian. Lab location noted by check box at top of C-O-C.)

Cooler ID:	Temp °C:	Therm ID:	Cooler ID:	Temp °C:	Therm ID:
Cut	2.4 / 2.6 CT	065744		NFE KK	

Page 6 of 11 X005694_1 SWH 081313 FIN 04 18 14 1235

8. Monitoring requirements contained in the permit are suspended from the effective date of the permit until plant startup. The permittee shall provide written notice to the TCEQ Regional Office (MC Region 11) and the Applications Review and Processing Team (MC 148) of the Water Quality Division at least forty-five (45) days prior to plant startup.

9. The permittee shall erect adequate signs stating that the irrigation water is from a non-potable water supply for any area where treated effluent is stored or where there exist hose bibs or faucets. Signs shall consist of a red slash superimposed over the international symbol for drinking water accompanied by the message "DO NOT DRINK THE WATER" in both English and Spanish. All piping transporting the effluent shall be clearly marked with these same signs.

10. Permanent transmission lines shall be installed from the storage/dosing tank to each subsurface irrigation area.

11. The permittee shall comply with the requirements of 30 TAC Section 309.13 (a) through (d). In addition, by ownership of the required buffer zone area, the permittee shall comply with the requirements of 30 TAC Section 309.13(e).

12. The permittee shall maintain a long term contract with the owner(s) of the land application site which is authorized for use in this permit, or own the land authorized for land application of treated effluent.

13. Irrigation with effluent shall be accomplished only when the area specified is not in use.

14. The permittee is granted a variance to the site requirements and design criteria in Chapter 222, Subsurface Area Drip Dispersal Systems according to 30 TAC Section 222.31(l).

15. The permittee shall pump and haul wastewater from the facility to prevent the discharge of treated or untreated wastewater if complete shutdown of the wastewater treatment facility becomes necessary or if the storage capacity is exceeded.

16. The permittee shall obtain representative soil samples from the root zones of the irrigation area prior to commencing land application of treated effluent. Composite sampling techniques shall be used. Each composite sample shall represent no more than 11.5 with no less than 15 subsamples representing each composite sample. Subsamples shall be composited by like sampling depth and soil type for analysis and reporting. Soil types are soils that have like topsoil or plow layer textures. These soils shall be sampled individually from 0 to 6 inches, 6 inches to 18 inches and 18 inches to 30 inches below ground level. The permittee shall sample and analyze soils in mid-January of each year. Soil samples shall be analyzed within 30 days of sample procurement.

The permittee shall provide annual soil analyses of the irrigation area for pH [2:1 (v/v) water/soil mixture]; electrical conductivity [2:1 (v/v) water/soil mixture]; total Kjeldahl nitrogen (TKN); nitrate-nitrogen and ammonium-nitrogen (from a 1N KCL soil extract); total nitrogen (organic-nitrogen + nitrate-nitrogen + ammonium-nitrogen); plant-available potassium, calcium, magnesium, sulfur and phosphorus. The plant nutrient parameters shall be analyzed on a plant-available basis. Phosphorus shall be analyzed according to the Mehlich III procedure with inductively coupled plasma and potassium, calcium, magnesium, sodium, and sulfur may also be analyzed in the Mehlich III soil extract. Plant-available phosphorus, potassium, calcium, magnesium, sodium and sulfur shall be reported on a dry weight basis in mg/kg; electrical conductivity, in mmho/cm [same as deciSiemens/meter (dS/m)]; and pH, in standard units. Kjeldahl procedures that use methods that rely on mercury as a catalyst are not acceptable. Amendments shall be reported on the year effected.

The permittee shall provide a copy of this plan to the analytical laboratory prior to sample analysis. The permittee shall submit the results of the soil sample analyses with copies of the laboratory reports to the TCEQ Regional Office (MC Region 11) and the Water Quality Compliance Monitoring Team (MC 224) of the

Page 7 of 11 X005694_1 SWH 081313 FIN 04 18 14 1235

Suzanne Rudd

From: Kelly Kukowski
Sent: Tuesday, March 25, 2014 2:45 PM
To: Suzanne Rudd
Subject: FW: Soil Analysis
Attachments: 20140325142951328.pdf

FYI

From: Manuel, Scott [mailto:Scott.Manuel@STServices.com]
Sent: Tuesday, March 25, 2014 2:41 PM
To: Kelly Kukowski
Subject: RE: Soil Analysis

You should be receiving soil samples for the systems listed below, please use the attached analysis for all of them.

Hays County WCID #1
Hays County MUD #4
Reunion Ranch
River Place MUD
Senna Hills MUD
West Travis County Public Utility Agency
Wimberely, City of

Please let me know if you have any questions,

Scott Manuel
Area Manager
Severn Trent Services
14050 Summit Dr., Ste. 113A
Austin, Texas 78728
O: 512-246-0498
C: 512-844-1039
F: 512-416-0024
E: scott.manuel@stservices.com

From: Kelly Kukowski [mailto:kkukowski@aqua-techlabs.com]
Sent: Tuesday, March 25, 2014 11:55 AM
To: Manuel, Scott
Cc: Suzanne Rudd
Subject: Soil Analysis

Hi Scott,
Jose dropped off soil samples yesterday for Hays 4 and Hays 1 but did not know what analyses were needed. Do you have a list of analysis for these sites that you would like to be run?

Thank you,

TEXAS A&M AGRILIFE EXTENSION

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
2478 TAMU
College Station, TX 77843-2478
979-845-4816 (phone)
979-845-5958 (FAX)
Visit our website: http://soiltesting.tamu.edu

Report generated for:
Aqua Tech Labs
7500 W Hwy 71 Ste 105
Austin, TX 78735

Sample received on: 3/31/2014
Printed on: 4/3/2014
Area Represented: not provided

Brazos County
Laboratory Number: 409500
Customer Sample ID: X005694-01A
Crop Grown: NO CROP GIVEN

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.
pH	8.1	(5.8)		Mod. Alkaline						
Conductivity	335	(-)	umho/cm	None						Fertilizer Recommended
Nitrate-N	1	(-)	ppm**				CL*			
Phosphorus	62	(0)	ppm							
Potassium	473	(0)	ppm							
Calcium	13,086	(180)	ppm							
Magnesium	422	(50)	ppm							
Sulfur	25	(13)	ppm							
Sodium	51	(-)	ppm							
Iron										
Zinc										
Manganese										
Copper										
Boron										
Limestone Requirement										
Ammonium-N	14.6		ppm							

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

New online fertilizer calculators have been placed on the laboratory's website to determine appropriate fertilizers to purchase and determine their application rates.
http://soiltesting.tamu.edu/webpages/calculator.html

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

PlantAnalysisVer. 2.19

TEXAS A&M AGRILIFE EXTENSION

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
2478 TAMU
College Station, TX 77843-2478
979-845-4816 (phone)
979-845-5958 (FAX)
Visit our website: http://soiltesting.tamu.edu

Report generated for:
Aqua Tech Labs
7500 W Hwy 71 Ste 105
Austin, TX 78735

Sample received on: 3/31/2014
Printed on: 4/3/2014
Area Represented: not provided

Brazos County
Laboratory Number: 409501
Customer Sample ID: X005694-02A
Crop Grown: NO CROP GIVEN

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.	
pH	8.1	(5.8)	-	Mod. Alkaline							
Conductivity	363	(-)	umho/cm	None				CL*			Fertilizer Recommended
Nitrate-N	1	(-)	ppm**								
Phosphorus	64	(0)	ppm								
Potassium	534	(0)	ppm								
Calcium	15,229	(180)	ppm								
Magnesium	462	(50)	ppm								
Sulfur	26	(13)	ppm								
Sodium	48	(-)	ppm								
Iron											
Zinc											
Manganese											
Copper											
Boron											
Limestone Requirement											
Ammonium-N	18.7		ppm								

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

New online fertilizer calculators have been placed on the laboratory's website to determine appropriate fertilizers to purchase and determine their application rates.
http://soiltesting.tamu.edu/webpages/calculator.html

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

PrsAnalysisVer. 2.1.0

TEXAS A&M AGRILIFE EXTENSION

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
2478 TAMU
College Station, TX 77843-2478
979-845-4816 (phone)
979-845-5958 (FAX)
Visit our website: http://soiltesting.tamu.edu

Report generated for:
Aqua Tech Labs
7500 W Hwy 71 Ste 105
Austin, TX 78735

Sample received on: 3/31/2014
Printed on: 4/3/2014
Area Represented: not provided

Brazos County
Laboratory Number: 409502
Customer Sample ID: X005694-03A
Crop Grown: NO CROP GIVEN

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.
pH	8.1	(5.8)		Mod. Alkaline						
Conductivity	325	(-)	umho/cm	None						
Nitrate-N	1	(-)	ppm**				CL*			
Phosphorus	68	(0)	ppm							
Potassium	515	(0)	ppm							
Calcium	12,655	(180)	ppm							
Magnesium	430	(50)	ppm							
Sulfur	21	(13)	ppm							
Sodium	45	(-)	ppm							
Iron										
Zinc										
Manganese										
Copper										
Boron										
Limestone Requirement										
Ammonium-N	17.7		ppm							

Fertilizer Recommended

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

New online fertilizer calculators have been placed on the laboratory's website to determine appropriate fertilizers to purchase and determine their application rates.
http://soiltesting.tamu.edu/webpages/calculator.html

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

PlantAnalysisVer. 2.191

Aqua-Tech LABORATORIES, INC.

Chain-of-Custody & Analysis Request

Bryan Lab: ☐
635 Phil Gramm Blvd.
Bryan, Texas 77807
Phone: (979) 778-3707
Fax: (979) 778-3193

Austin Lab: ☒
7500 W. Hwy. 71, Suite 105
Austin, Texas 78735
Phone: (512) 301-9559
Email: corp@aqua-techlabs.com

C-O-C # 267882

ACCREDITED IN ACCORDANCE WITH nelac

T104704371

Client / Project Name: Aqua-Tech Laboratories, Inc.

* DEFINITIONS: DW - Drinking Water; NP - Non-Potable Water; S - Solid; CM - Custody Maintained; CTU - Custody Transfer Unbroken

LAB USE ONLY (Initials _____)

Field Sample ID	Start Date / Time	End Date / Time	Composite Type	Sample Matrix*	Container Volume	Container Type	Sample Freq.	Analysis Requested	Cooler ID	Bottle PH	Sub-contract	Lab ID #
X005694-01A	03-25-14 1050	03-25-14 1130	Comp	S	0.5L	P	1	pH, conductivity, NO3N; NH4N; Plant Available – P K Ca Mg S				
X005694-02A	03-25-14 1105	03-25-14 1140	Comp	S	0.5L	P	1	pH, conductivity, NO3N; NH4N; Plant Available – P K Ca Mg S				
X005694-03A	03-25-14 1115	03-25-14 1150	Comp	S	0.5L	P	1	pH, conductivity, NO3N; NH4N; Plant Available – P K Ca Mg S				

All analyses must be performed by a TNI approved method certified by the TCEQ. Contact ATL's sample custodian via voice and email if your methods do not meet this criteria.

Relinquished by: (print & sign) ☒ Client ☐ ATL Field ☐ Sampler	Date	Time	Sample Info (X all that apply)	Rec'd by: (print & sign) ☐ Client ☐ ATL Field	Date	Time	Sample Info (X all that apply)
Kelly Kukowski Kelly Kukowski	3-27-14	1615	☒ Iced ☐ Chilled/Refrig ☒ Cust. Sealed ☐ Not Chilled	LONE STAR – airbill # 7R043233			☐ Rec'd Chilled ☐ Cond Good ☐ CTU ☐ Iced in Transit
Relinquished by: (print & sign) ☐ Client ☐ ATL Field arrival in Lab	Date	Time	☐ Iced ☐ Chilled/Refrig ☐ CM ☐ Not Chilled	Rec'd by: (print & sign) ☒ Received in Lab I Wa Skom	3/31/14	830	☐ Rec'd Iced ☐ Not Rec'd Iced ☐ CTU ☒ Cond Good

Subcontracted to – TAMU Soil Lab
Subcontract Lab Comments as Needed:

Aqua-Tech Comments and Special Instructions:

Return cooler to Austin location.

Email report to corp@aqua-techlabs.com

Sample Preservation

pH Paper ID#:	1 ≤ 6 °C (not frozen)	2 = H_2SO_4	3 = HCl	4 = HNO_3
5 = $Na_2S_2O_3$	6 = NaOH	7 =	8 =	9 =

(Line below documents condition at receipt in Laboratory by Sample Custodian. Lab location noted by check box at top of C-O-C.)

Cooler ID:	Temp °C: / CT	Therm ID:	Cooler ID:	Temp °C: / CT	Therm ID: