

**OSAGE BEACH / LAKE OZARK
JOINT SEWER BOARD MEETING AGENDA
August 15, 2017 @ 4:00 p.m.
LAKE OZARK CITY HALL**

1. CALL TO ORDER

2. ROLL CALL

Mayor, Lake Ozark, Johnnie Franzekos
Mayor, Osage Beach, John Olivarri
City Administrator, Osage Beach, Jeana Woods
City Administrator, Lake Ozark, Dave Van Dee
Alderman, Lake Ozark, Gerry Murawski
Alderman, Osage Beach, Richard Ross
Public Works Director, Osage Beach, Nick Edelman
Public Works Director, Lake Ozark, Matt Michalik
Resident Member, Mr. Gary Hamner

3. MINUTES

Regular Meeting; July 18, 2017

PAGE NUMBERS

3-4

PUBLIC COMMENT

This time is set aside on the Agenda for citizens and visitors to address the Joint Sewer Commission on any topic that is not a Public Hearing. The Joint Sewer Commission welcomes input and feedback from the public. Speakers will be restricted to three minutes for non-agenda items; five minutes for agenda items unless otherwise permitted. Minutes may not be donated or transferred from one speaker to another.

4. REPORTS

Bill List	5-15
Revenue Budget Analysis	17
Expenditure Budget Analysis	19
Income & Expense Summary	21
Check Registers & Bank Statements	25-26
 Alliance Report of Operations	 27-63
Approval of Flow Chart	

5. OLD BUSINESS:

A. None

6. NEW BUSINESS:

- A. Discussion and update in regard to securing a backup generator.

7. ADDITIONAL DISCUSSION ITEMS

8. ADJOURNMENT

THE NEXT MEETING WILL BE SEPTEMBER 19, 2017, 4:00 PM @ LAKE
OZARK CITY HALL

LAKE OZARK-OSAGE BEACH
JOINT SEWER BOARD
Meeting Minutes-July 18, 2017

CALL TO ORDER:

Mayor Johnnie Franzeskos called the meeting to order at 4:00pm on Tuesday, July 18, 2017 at Lake Ozark City Hall

ROLL CALL:

Mayor, City of Lake Ozark, Johnnie Franzeskos-Present
Mayor, Osage Beach, John Olivarri-Absent
City Administrator, Osage Beach-Jeana Woods-Present
City Administrator, City of Lake Ozark-Dave Van Dee-Present
Alderman, Osage Beach-Richard Ross-Absent
Alderman, Lake Ozark-Gerry Murawski-Present
Public Works Director, Osage Beach, Nick Edelman-Present
Public Works Director, City of Lake Ozark-Matt Michalik-Present
Resident Member, Mr. Gary Hamner-Absent

AMENDED AGENDA: City Administrator Woods made a motion to approve the amended agenda, seconded by City Administrator Van Dee. Motion passed unanimously.

MINUTES:

Public Works Director Michalik made a motion to approve the meeting minutes of June 20, 2017, seconded by Alderman Murawski. Motion passed unanimously.

REPORTS:

City Administrator Woods made a motion to approve the Bills List, seconded by City Administrator Van Dee, motion passed unanimously.

The Revenue Budget, Expenditure Budget Analysis, Income & Expense Summary and Check Registers and Bank Statements were reviewed. Motion was made by Public Works Director Edelman to acknowledge the review of the documents. Seconded by City Administrator Van Dee. Motion passed unanimously.

Alliance Report of Operations for June was 1.918 mgd. They had 2.9 inches of precipitation measured at the WWTP in June.

Operationally, the plant's discharge was excellent, with an effluent monthly average BOD of 1.4 mg/l and TSS of 1.6 mg/l respectively for June, which represents a 99.3 +% or better removal.

The MLSS average for both aeration basins was 3,285 mg/l in June. The total dry weight sludge inventory for June totaled 194,610 pounds. There were 75 tanker loads or 277,500 gallons of biosolids land applied in June. They also received 33 tanker loads or 82,500 gallons of septage for the month of June.

APPROVAL OF FLOW CHART

Motion was made by Alderman Murawski to approve the Flow Chart, seconded by Public Works Director Michalik, motion passed unanimously.

OLD BUSINESS: None

NEW BUSINESS:

A. Discussion and possible action on repair quote for the GMC 7000 truck from Roemer's Heavy Equipment and Truck Repair.

Discussion was held regarding whether we had the funds to move forward with the repairs. Karri Bell reported the funds would be allocated from the normal maintenance fund. Motion was made by Alderman Murawski to approve the repairs, seconded by Public Works Director Michalik. Motion passed unanimously.

B. Review of 2016 Joint Sewer Audit from Gerding, Korte & Chitwood, CPA's. Karri Bell addressed the commission and discussed the results of the audit.

C. Discussion and possible action regarding FEMA/SEMA application. Gary Hutchcraft with Alliance discussed the forms that were provided. City Administrator Van Dee made a motion to accept the review of the documents, seconded by Alderman Murawski. Motion passed unanimously.

ADJOURNMENT:

At 4:11pm Alderman Murawski made a motion to adjourn, seconded by Public Works Director Michalik, motioned passed unanimously.

Approved On:

Mayor, Johnnie Franzekos

City Clerk, Kimberly Baker

JOINT SEWER BOARD
BILL LIST
AUGUST 15, 2017

OPERATING FUND BILLS PAID PRIOR TO BOARD MEETING:	\$ -
OPERATING FUND BILLS TO BE PAID:	\$ 39,771.72
EQUIPMENT REPLACEMENT FUND BILLS PAID PRIOR TO BOARD MEETING:	\$ -
EQUIPMENT REPLACEMENT FUND BILLS TO BE PAID:	\$ -
TOTAL	\$ 39,771.72

OPERATING FUND BILLS PAID PRIOR TO BOARD MEETING:

Account	Check	Paid To:	Description:	Amount:
				\$ -
				\$ -
				\$ -
				\$ -
			TOTAL	\$ -

OPERATING FUND BILLS TO BE PAID:

Account	Check	Paid To:	Description:	Amount:
4185	3608	Ameren MO	July Service	\$ 9,309.73
4000	3609	Equipment Replacement Fund	Payment into ER Fund	\$ 3,467.00
4170	3610	Alliance Water Resources, Inc.	Management Fee	\$ 25,935.82
4160	3611	Alliance Water Resources, Inc.	Hauled Waste	\$ 580.00
4020	3612	Alliance Water Resources, Inc.	Main & Repair	\$ 479.17
				\$ -
				\$ -
				\$ -
			TOTAL	\$ 39,771.72

EQUIPMENT REPLACEMENT FUND BILLS PAID PRIOR TO BOARD MEETING:

Account	Check	Paid To:	Description:	Amount:
				\$ -
				\$ -
			TOTAL	\$ -

EQUIPMENT REPLACEMENT FUND BILLS TO BE PAID:

Account	Check	Paid To:	Description:	Amount:
				\$ -
				\$ -
			TOTAL	\$ -



AmerenMissouri.com
1.877.426.3736
PO Box 88068 Chicago, IL 60680-1068
Ameren payment processing center

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Account Number 4580005832
Customer Name ALLIANCE WATER RESOURCES INC
Service Address 3 ANDERSON RD.,
LAKE OZARK, MO 65049

AMOUNT DUE \$9,208.07

Due Date 08/29/2017

Current Detail for Statement 08/08/2017

Total Electric Charges \$9,208.07

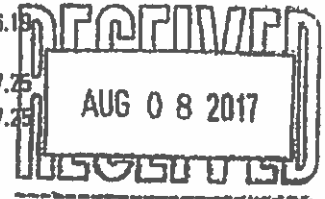
Amount After Due Date \$9,346.19

Total Amount Due \$9,208.07

Previous Statement \$9,037.25

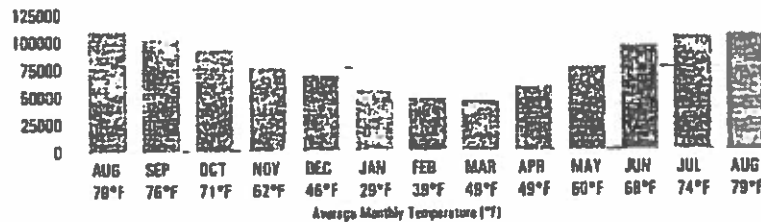
Total Payments \$9,037.25

Payment Received. Thank You.



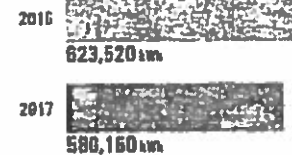
Electric Usage History

Electric Usage in Kilowatt Hours (kWh)



Electric Usage Summary (kWh)

So far this year, you're using 7% less than last year.



Usage from Jan-Aug for 2016 & 2017

13072
00218 2272875 000431 000841 00010002

Keeping You Informed.

Update your account information so we can contact you when crews are working in your neighborhood. Fill out the slip and mail it in or update your online account. Don't have an online account? Sign up today at AmerenMissouri.com.



» See next page for service details.

Keep this portion for your records.

Page 1 of 4

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Amount Due Due Date

\$9,208.07

August 29, 2017

Delinquent Amount After Due Date Account Number

\$9,346.19

4580005832

Amount Enclosed \$

>000218 2272875 0002 092139 102

ALLIANCE WATER RESOURCES INC
PO BOX 1985
LAKE OZARK, MO 65048-1985

AMEREN MISSOURI
PO BOX 88068
CHICAGO IL 60680-1068

60600000 0045800058302 000009208070 000009208070



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Electric Service Details Service from 07/06/2017 to 08/06/2017 (31 days)

Electric Meter Read

METER NUMBER	SERVICE FROM- TO	NB DAYS	USAGE TYPE	READING TYPE	CURRENT READING	PREVIOUS READING	READING DIFFERENCE	MULTIPLIER	USAGE
11673321	07/06 - 08/06	31	Total kWh	Actual	41838.0000	41288.0000	550.0000	160.0000	104800.0000
11673321	07/06 - 08/06	31	Peak kW	Actual	1.0940	0.0000	1.0940	160.0000	175.0400

Usage Summary

Total kWh	104800.0000	Peak kW	175.0000
Billing Demand	175.0000	Total Billing Demand	175.0000

Rate 3M Large General Service

DESCRIPTION	USAGE	UNIT	RATE	CHARGE
Demand Charge	175.00	kW	@ \$ 5.40000000	\$945.00
Energy Charge/Hours Used	26,260.00	kWh	@ \$ 0.10580000	\$2,777.25
Energy Charge/Hours Used	35,000.00	kWh	@ \$ 0.07860000	\$2,786.00
Energy Charge/Hours Used	42,750.00	kWh	@ \$ 0.05350000	\$2,287.13
Customer Charge				\$95.07
Fuel Adjustment Charge	104,000.00	kWh	@ \$ 0.00069000	\$71.76
Energy Efficiency Program Charge	104,000.00	kWh	@ \$ 0.00030000	\$31.20
Energy Efficiency Investment Charge	104,000.00	kWh	@ \$ 0.00206400	\$214.66
Total Service Amount				\$9,208.07
Total Electric Charges				\$9,208.07

Payments Since Previous Statement

DATE RECEIVED	AMOUNT
July 26, 2017	\$9,037.25

Questions? Contact Ameren Missouri at 1.877.426.3736 or visit AmerenMissouri.com.

Page 2 of 4

Address Changes or Corrections

Name _____
 Address _____
 City, State, Zip _____
 Phone Number _____

AmerenMissouri.com/WaysToPay



ONLINE
E-CHECK



PHONE
866.268.3729



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FIND A PAY STATION AT
AMERENMISSOURI.COM
PAYSTATION



ONLINE
CREDIT CARD



MAIL
STUB & CHECK



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1.877.426.3736
PO Box 88068 Chicago, IL 60680-1068
Ameren payment processing center

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Account Number 5580005920
Customer Name ALLIANCE WATER RESOURCES INC
Service Address 3 ANDERSON RD
LAKE OZARK, MO 65048

AMOUNT DUE \$101.66

Due Date 08/29/2017

Current Detail for Statement 08/08/2017

Total Electric Charges \$101.66

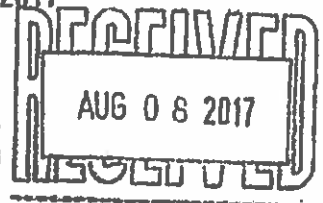
Amount After Due Date \$103.18

Total Amount Due \$101.66

Previous Statement \$350.38

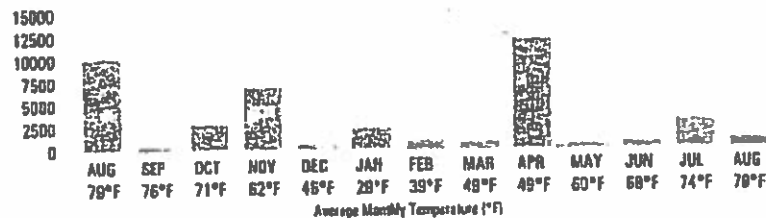
Total Payments \$350.38

Payment Received. Thank You.



Electric Usage History

Electric Usage in Kilowatt Hours (kWh)



Electric Usage Summary (kWh)

So far this year, you're using 42.6% less than last year

2016 34,470 kWh

2017 19,770 kWh

Usage from Jan-Aug for 2016 & 2017

13073
000217 2272875 000419 000637 00010002

Keeping You Informed

Update your account information so we can contact you when crews are working in your neighborhood. Fill out the slip and mail it in or update your online account. Don't have an online account? Sign up today at AmerenMissouri.com.



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Page 1 of 4

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Amount Due \$101.66 Due Date August 28, 2017

Delinquent Amount After Due Date \$103.18 Account Number 5580005920

Amount Enclosed \$

>000217 2272875 0002 092139 102

ALLIANCE WATER RESOURCES INC
PO BOX 1985
LAKE OZARK, MO 65049-1985

AMEREN MISSOURI
PO BOX 88068
CHICAGO IL 60680-1068

90633000 0055800059200 000000101660 000000101660



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 Ameren payment processing center

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Electric Service Details Service from 07/06/2017 - 08/06/2017 (31 days)

Electric Meter Read

METER NUMBER	SERVICE FROM TO	NO. DAYS	USAGE TYPE	READING TYPE	CURRENT READING	PREVIOUS READING	READING DIFFERENCE	MULTIPLIER	USAGE
88041275	07/06 - 08/06	31	Total kWh	Actual	15937.0000	15867.0000	70.0000	10.0000	700.0000
88041275	07/06 - 08/06	31	Peak kW	Actual	6.5660	0.0000	6.5660	10.0000	65.6600

Usage Summary

Total kWh 700.0000

Rate 2M Sm Gen Svc - 3 Ph w/Dmd

Threshold - Peak Demand

DESCRIPTION	USAGE	UNIT	RATE	CHARGE
Total Energy Charge	700.00	kWh	@ \$ 0.11200000	\$78.40
Customer Charge				\$21.43
Fuel Adjustment Charge	700.00	kWh	@ \$ 0.00069000	\$0.48
Energy Efficiency Program Charge	700.00	kWh	@ \$ 0.00010000	\$0.07
Energy Efficiency Investment Charge	700.00	kWh	@ \$ 0.00182800	\$1.28
			Total Service Amount	\$101.66
			Total Electric Charges	\$101.66

Payments Since Previous Statement

DATE RECEIVED	AMOUNT
July 25, 2017	\$350.38

Questions? Contact Ameren Missouri at 1.877.426.3736 or visit AmerenMissouri.com.

Page 2 of 4

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 Address _____
 City, State, Zip _____
 Phone Number _____

AmerenMissouri.com/WaysToPay



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E-CHECK



PHONE
866.268.3729



IN PERSON
FIND A PAY STATION AT
AMERENMISSOURI.COM/
PAYSTATION



ONLINE
CREDIT CARD



MAIL
STUB & CHECK

Alliance Water Resources, Inc.
Professional Water and Wastewater Operations
 205 South Keene Street
 Columbia, Missouri 65201
 (573) 874-8080 Fax (573) 443-0833

SOLD TO:

Lake Ozark/Osage Beach Joint Utility Board
 c/o Karri Bell
 City of Osage Beach
 1000 City Parkway
 Osage Beach, MO 65065

INVOICE

Invoice No: 7487

Invoice Date: 1-Aug-17

Customer No: 20220

Terms: 30 days

REFERENCE	DESCRIPTION	AMOUNT
	Wastewater Plant operating service for month of: Aug-17	
	Base Fee	\$25,935.82
TOTAL DUE		\$25,935.82

Alliance Water Resources, Inc.

Professional Water and Wastewater Operations
206 South Keene Street
Columbia, Missouri 65201
(573) 874-8080 Fax (573) 443-0833

INVOICE

Invoice No: 7466

Invoice Date: 31-Jul-17

Customer No: 20220

Terms: 30 days

SOLD TO:

Lake Ozark/Osage Beach Joint Utility Board
c/o Karri Bell
City of Osage Beach
1000 City Parkway
Osage Beach, MO 65065

REFERENCE	DESCRIPTION	AMOUNT
	Hauled waste payments for the month of Jul-17	
	12 Hauled Waste Loads @ \$48.334 each	\$580.00
	This is the final AWR Invoice for 2017 / per contract \$8,000.00	
TOTAL DUE		\$580.00

Alliance Water Resources, Inc.
Professional Water and Wastewater Operations
 206 South Keane Street
 Columbia, Missouri 65201
 (573) 874-8080 Fax (573) 443-0833

SOLD TO:

Lake Ozark/Osage Beach Joint Utility Board
 c/o Kari Bell
 City of Osage Beach
 1000 City Parkway
 Osage Beach, MO 65065

INVOICE

Invoice No: 7468
Invoice Date: 1-Aug-17
Customer No: 20220
Terms: 30 days

REFERENCE	DESCRIPTION	AMOUNT
	Jani King - 1 Invoice - 50%	\$225.00
	Grainger - 1 Invoice - 50%	\$149.17
	HD Supply - 1 Invoice - 50%	\$105.00
TOTAL DUE		\$478.17



Remit To:
 MAJESTIC FRANCHISING INC DBA JANI-KING COLUMBIA
 14821 W. 95TH STREET
 LENEXA KS 68215
 (573) 442-8455

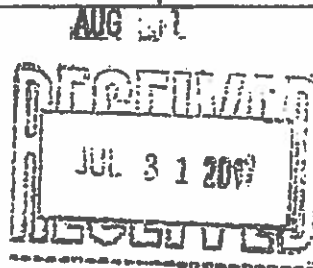
Invoice	
Date 07/26/2017	Number CLM07170174
Due Date Upon Receipt	Cust # 017014
Invoice Amount \$ 450.00	Amount Remitted

Sold To:
 ALLIANCE WATER RESOURCES

For:
 Same as Sold To

#3 ANDERSON RD

LAKE OZARK MO 65049



Make All Checks Payable To: MAJESTIC FRANCHISING INC DBA JANI-KING COLUMBIA
 RETURN THIS PORTION WITH YOUR PAYMENT

MAJESTIC FRANCHISING INC DBA JANI-KING COLUMBIA
 Commercial Cleaning Services
 (573) 442-8455



Sold To:
 ALLIANCE WATER RESOURCES
 #3 ANDERSON RD
 LAKE OZARK MO 65049

For:
 Same as Sold To

Invoice No	Date	Cust No	Slsmn No	PO Number	Franchisee	Due Date
CLM07170174	07/26/2017	017014			BIG 3 ENTERPRISES, LLC	Upon Receipt
Quantity	Description				Unit Price	Extended Price
1	STRIP /WAX OF OFFICE, LAB, HALLS, CONF RM, RESTROOMS				450.00	450.00
GL Acct#: <u>6700-20 \$225.00</u> <u>1220-20 \$225.00</u>				4020		
Signature: <u><i>Randy Futeberg</i></u>						
Date: <u>7/31/17</u>						
Make All Checks Payable To:						
MAJESTIC FRANCHISING INC DBA JANI-KING COLUMBIA						
Amount of Sale					\$ 450.00	
Sales Tax					\$ 0.00	
Total					\$ 450.00	

GRAINGER

808 N. CEDARBROOK AVE.
SPRINGFIELD, MO 65802-2522
www.grainger.com

PAGE 1

ORIGINAL INVOICE

GRAINGER ACCOUNT NUMBER 858374754
INVOICE NUMBER 9509550821
INVOICE DATE 07/25/2017
DUE DATE 08/24/2017
AMOUNT DUE \$313.37

SHIP TO

ALLIANCE WATER RESOURCES
3 ANDERSON RD
LAKE OZARK MO 65049-0000

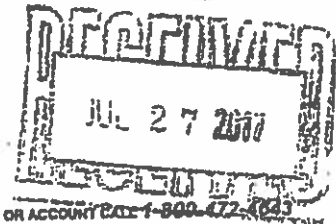
PO NUMBER.
CALLER.
CUSTOMER PHONE.
ORDER NUMBER.
INCO TERMS

GARY
GARY HUTCHCRAFT
6733850453
1298768235
FOB ORIGIN

BILL TO
ALLIANCE WATER RESOURCES
PO BOX 1985
LAKE OZARK MO 65049-1985

THANK YOU!

FBI NUMBER 38-1168280
FOR QUESTIONS ABOUT THIS INVOICE OR ACCOUNT CALL 1-800-472-4843



PO LINE #	ITEM #	DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL
	2GNL2	SUPP PROTECTR,20A,3P,C,277/480VAC,125VDC MANUFACTURER # MG24468 Delivery #6367117383 Date Shipped:07/25/2017 Carrier: UPS GROUND No of Pkgs:1 Wt: 0.800 Trk #:12Y625A50313791856 SHIPPED FROM: DC MINOOKA 005 701 GRAINGER WAY,MINOOKA,IL 60447-9998 GL Acct#: 16705-209164.20 1220-20 \$49.17 Signature: Gary Hutchcraft Date: 7/27/17	1	287.85	287.85

THIS PURCHASE IS GOVERNED EXCLUSIVELY BY GRAINGER'S TERMS OF SALE, INCLUDING: (A) DISPUTE RESOLUTION REMEDIES, AND (B) CERTAIN WARRANTY AND DAMAGES LIMITATIONS AND DISCLAIMERS IN EFFECT AT THE TIME OF THE ORDER, WHICH ARE INCORPORATED BY REFERENCE HEREIN. GRAINGER'S TERMS OF SALE ARE AVAILABLE AT WWW.GRAINGER.COM. RETURNS PRODUCT RETURN INSTRUCTIONS ARE AVAILABLE AT WWW.GRAINGER.COM.RETURNS

These items are sold for domestic consumption. If exported, purchaser assumes full responsibility for export controls. Diversion contrary to US law prohibited.

INVOICE SUB TOTAL 287.85
SHIPPING 10.48
TAX 15.04

PAY THIS INVOICE, NO STATEMENT WILL BE SENT. PAYMENT TERMS Net 30 days IN U.S. DOLLARS.

AMOUNT DUE \$313.37

PLEASE DETACH THIS PORTION AND RETURN WITH YOUR PAYMENT

BILL TO:

ALLIANCE WATER RESOURCES
PO BOX 1985
LAKE OZARK MO 65049-1985
UNITED STATES OF AMERICA

REMIT TO:
GRAINGER
DEPT. 858374754
P.O. BOX 419267
KANSAS CITY, MO 64141-6267

858374754950955062110000313371000150410000000100000017082472

X

ACCOUNT NUMBER
858374754

DATE
07/25/2017

INVOICE NUMBER
9509550621

AMOUNT DUE
\$313.37

FOR COMMENTS OR CHANGE OF ADDRESS, ENTER INFORMATION ON REVERSE SIDE

1830 Craig Park Court
St. Louis, MO 63146

Invoice # H506827
Invoice Date 7/18/17
Account # 116902
Sales Rep STEVEN BURKE
Phone # 573-348-1273
Branch # 136 Osage Beach, MO
Total Amount Due \$225.70

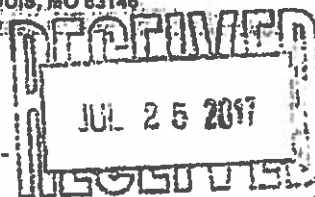
Remit To:
HD SUPPLY WATERWORKS, LTD.
PO BOX 28330
ST LOUIS, MO 63146

803 1 MB 0.423 E0414X 10850 02880521180 S2 P4459272 0001:0001

ALLIANCE WATER RESOURCES INC
PO BOX 1985
LAKE OZARK MO 65049-1985

Shipped to:

CUSTOMER PICK-UP



Thank you for the opportunity to serve you! We appreciate your prompt payment.

Date Ordered	Date Shipped	Customer PO #	Job Name	Job #	Bill of Lading	Shipped Via	Invoice #
7/18/17	7/18/17	STOCK	STOCK			YOUR TRUCK	H506827

Product Code	Description	Quantity		B/O	Price	UM	Extended Price
		Ordered	Shipped				
96CHL100	100# DRUM GRANULAR CHLORINE	1	1		210.00000	EA	210.00

GL Acct#: 6705-20 \$120.70 1220-20 \$105.00
Signature: *[Handwritten Signature]* 4020
Date: 7/25/17

Paperless Billing
- Expedites delivery.
- Save trees.
- Go GREEN.

Register Now for Our New Customer Portal

Online ADVANTAGE

www.hdsupplywaterworks.com

HDSUPPLY
WATERWORKS

Local Knowledge
Local Experience
Local Service, Nationwide®

Freight Delivery Handling Restock Misc.

Subtotal: 210.00
Other: 0.00
Tax: 15.70
Invoice Total: \$225.70

Terms: NET 30

Ordered By: GARY

This transaction is governed by and subject to HD Supply Waterworks' standard terms and conditions, which are incorporated by reference and accepted. To review these terms and conditions, please visit: www.waterworks.hdsupply.com/TandC.

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**MONTH-TO-DATE AND YEAR-TO-DATE
REVENUE/BUDGET ANALYSIS**

Account Number	Account Name	7/31/2017				2017 Budget	2017 Actual as of 7/31/2017	2017 July Revenue	Percent YTD
		2015 Actual	2016 Actual						
3020	Osage Beach	477,172.03	475,802.57	473,000.00		277,857.73	39,687.66	59%	
3010	Lake Ozark	72,827.98	74,197.42	77,000.00		42,975.59	6,145.67	56%	
3100	Interest	54.79	368.52	200.00		425.74	50.47	213%	
3060	Waste Haulers' Fee	32,400.00	33,460.00	35,000.00		19,140.00	4,300.00	55%	
Total Operating Fund		582,454.80	583,828.51	585,200.00		340,399.06	50,183.80	58%	
E/R Fund Income		2,188.83	2,847.67	1,500.00		508.58	64.50	34%	
TOTAL INCOME		584,643.63	586,676.18	586,700.00		340,907.64	50,248.30	58%	

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**MONTH-TO-DATE AND YEAR-TO-DATE
EXPENDITURE/BUDGET ANALYSIS
7/31/2017**

Account Number	Account Name	2015 Actual	2016 Actual	2017 Budget	2017 Actual as of 7/31/2017	2017 July Expenses	Percent YTD
4000	Equipment Replace Fund	41,606.04	41,606.04	41,604.00	24,269.17	3,467.00	58%
4010	ERF Repayment	0.00	0.00	0.00	0.00	0.00	0%
4020	*Maintenance & Repair	33,878.90	18,735.50	28,000.00	115,226.35	708.54	412%
4140	Insurance	16,306.00	16,977.00	17,500.00	17,144.00	0.00	98%
4150	***Vehicle Repair/Maint	1,508.78	951.93	8,000.00	6,452.94	0.00	81%
4160	Haulers Fees to Contractor	8,000.00	8,000.00	8,000.00	7,420.00	1,650.00	93%
4170	Contract Management	296,233.08	303,638.88	312,750.00	181,550.74	25,935.82	58%
4185	Electric	76,751.19	72,637.17	77,000.00	36,426.97	9,387.63	47%
4190	Bank Charges	0.00	14.85	0.00	0.00	0.00	0%
4200	Audit	2,000.00	2,158.50	2,200.00	2,200.00	2,200.00	100%
4220	Professional Service	2,369.99	9,193.09	0.00	1,200.00	0.00	0%
4240	Capital Purchases	0.00	0.00	150,000.00	0.00	0.00	0%
	Totals	478,653.98	473,912.96	645,054.00	391,890.17	43,348.99	61%
	**E/R Expenses	1,869.72	7,980.42	26,500.00	4,171.02	169.50	16%
	TOTAL EXPENSES	480,523.70	481,893.38	671,554.00	396,061.19	43,518.49	59%
	**Equipment & Replacement						
	Normal E/R	10,000.00					500.00
	Replace impellers for RAS pumps	7,500.00					1,500.00
	Rebuild Arm Support Clarifier #2	5,000.00					8,000.00
	Replace doors	4,000.00					8,000.00
		26,500.00					2,000.00
	***Vehicle Repair/Maint						
	Vehicle Maintenance	3,000.00					1,000.00
	Tires for Sludge Truck	5,000.00					7,000.00
		8,000.00					28,000.00
	2016 Budget						
	#1 Aeration Basin grit removal						107,249.88

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OPERATING FUND INCOME AND EXPENSE SUMMARY
7/31/2017

Beginning Balance	230,790.91
Income - Osage Beach	39,687.66
Income - Lake Ozark	6,145.67
Income - Other	-
Income - Waste Haulers' Fees	4,300.00
Interest - Checking	50.47
Income - CD Interest	-
Transfers From E/R Fund	-
Transfers to E/R Fund	(3,467.00)
Expenses	(39,881.99)
Ending Fund Balance	237,625.72
Central Bank - NOW Acct.	89,135.46
First Bank of the Lake - Money Mkt.	100,515.11
CD St. Elizabeth, 3/18 #400886	50,175.15
Outstanding Checks:	(2,200.00)
Deposit in Transit:	-
	237,625.72

EQUIPMENT REPLACEMENT FUND INCOME AND EXPENSE SUMMARY
7/31/2017

Beginning Balance	504,502.25
Interest - Checking	64.50
Income - CD Interest	-
Transfers From E/R Fund	3,467.00
Transfers to E/R Fund	-
Income - Miscellaneous	-
Expenses	(169.50)
Ending Fund Balance	507,864.25
First Bank of the Lake - Money Mkt.	154,523.57
CD Providence Bank, 10/17 #1268880	201,566.60
CD First Bank of the Lake, 01/18 #101318429	101,598.93
CD St. Elizabeth, 3/18 #485431	50,175.15
Deposit in Transit	-
Outstanding Checks:	-
	507,864.25

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Operating Fund
CHECK REGISTER - JOINT SEWER BOARD OPERATION FUND

	reconciled balance 3/31/17				54,263.79
3582	Ameren MO	X	4,233.30	-	50,030.49
3583	Equipment Replacement Fund	X	3,467.00		46,563.49
3584	Alliance Water Resources, Inc.	X	25,935.82		20,627.67
3585	Alliance Water Resources, Inc.	X	2,050.00		18,577.67
3586	Alliance Water Resources, Inc.	X	835.21		17,742.46
3587	Roemer's Heavy Equip & Truck	X	1,082.32		16,660.14
3588	Naught Naught	X	167.00	-	16,493.14
3589	JCI Industries	X	1,630.00	-	14,863.14
	Deposit LO	X	-	6,433.58	21,296.72
	Deposit OB	X		39,399.76	60,696.48
	Deposit	X		800.00	61,496.48
	Interest	X		5.00	61,501.48
	reconciled balance 4/30/17				61,501.48
3590	Ameren MO	X	4,410.67	-	57,090.81
3591	Equipment Replacement Fund	X	3,467.00		53,623.81
3592	Alliance Water Resources, Inc.	X	25,935.82		27,687.99
3593	Alliance Water Resources, Inc.	X	400.00		27,287.99
3594	Alliance Water Resources, Inc.	X	603.55		26,684.44
	Deposit LO	X	-	5,362.98	32,047.42
	Deposit OB	X		40,470.35	72,517.77
	Deposit	X		4,640.00	77,157.77
	Interest	X		6.56	77,164.33
	reconciled balance 5/31/17				77,164.33
3595	Ameren MO	X	9,413.41	-	67,750.92
3596	Equipment Replacement Fund	X	3,467.00		64,283.92
3597	Alliance Water Resources, Inc.	X	25,935.82		38,348.10
3598	Alliance Water Resources, Inc.	X	2,320.00		36,028.10
3599	Alliance Water Resources, Inc.	X	1,374.90		34,653.20
3600	CED Inc.	X	2,450.00	-	32,203.20
3601	White Industrial Seismology	X	1,200.00	-	31,003.20
	Deposit LO	X	-	5,996.29	36,999.49
	Deposit OB	X		39,837.04	76,836.53
	Deposit	X		3,300.00	80,136.53
	Interest	X		6.84	80,143.37
	reconciled balance 6/30/17				80,143.37
3602	Ameren MO	X	9,387.63	-	70,755.74
3603	Equipment Replacement Fund	X	3,467.00		67,288.74
3604	Alliance Water Resources, Inc.	X	25,935.82		41,352.92
3605	Alliance Water Resources, Inc.	X	1,650.00		39,702.92
3606	Alliance Water Resources, Inc.	X	708.54		38,994.38
3607	Gerding, Korte & Chitwood		2,200.00	-	36,794.38
	Deposit LO	X	-	6,145.67	42,940.05
	Deposit OB	X		39,687.66	82,627.71
	Deposit	X		4,300.00	86,927.71
	Interest	X		7.75	86,935.46
	reconciled balance 7/31/17				86,935.46

E/N



RETURN SERVICE REQUESTED

LAKE OZARK OSAGE BEACH JOINT SEWER
TREATMENT PLANT BOARD
1000 CITY PKWY
OSAGE BEACH MO 65065-3058

Period 07/01/2017 - 07/31/2017 Page 1 of 2

Web Address
www.centralbank.net

M

Your Financial Summary on July 31, 2017

	Bank Deposits	Totals
Bank Deposit Accounts:		
Checking	\$ 89,135.46	
Bank Deposit Total		\$ 89,135.46
Total Assets:	\$ 89,135.46	\$ 89,135.46

Detailed Explanation of Account Balances and Other Assets

Basic Plus Interest Checking

No. 000007297		Beginning Balance June 30, 2017		\$	80,143.37
Deposits					
July 18	Deposit				6,145.67
July 18	Deposit				39,687.66
July 26	Deposit				4,300.00
July 31	Interest Earned				7.75
Total				+\$	50,141.08
Checks					
Check No.	Date Paid	Amount	Check No.	Date Paid	Amount
3602	July 26	9,387.63	3605	July 24	1,650.00
3603	July 21	3,467.00	3606	July 24	708.54
3604	July 24	25,935.82			
Total				-\$	41,148.99
Ending Balance July 31, 2017				\$	89,135.46

Number of days since last statement/interest cycle 31
Beginning and ending dates for calculation of statement/interest cycle are 07/01/2017 through 07/31/2017
Average collected balance 91,186.00
Interest rate 0.10%
Annual percentage yield earned 0.10%

End of Bank Deposits

JSB - CHECK REGISTERS 2017

CHECK REGISTER - JOINT SEWER BOARD EQUIPMENT REPLACEMENT FUND

	reconciled balance 3/31/17		-	244,924.04
	Interest	X	94.32	245,018.36
	Deposit	X	3,467.00	248,485.36
	reconciled balance 4/30/17		-	248,485.36
	Interest	X	112.95	248,598.31
	Deposit	X	3,467.00	252,065.31
	reconciled balance 5/31/17		-	252,065.31
1018	VOID			252,065.31
1019	HD Supply Waterworks	X	2,837.77	249,227.54
1020	G&L Welding	X	1,163.75	248,063.79
	Interest	X	103.17	248,166.96
	Deposit	X	3,467.00	251,633.96
	reconciled balance 6/30/17		.	251,633.96
1021	Alliance Water Resources	X	169.50	251,464.46
	Interest	X	107.22	251,571.68
	Deposit	X	3,467.00	255,038.68
	reconciled balance 7/31/17			255,038.68



4558 Osage Beach Pkwy, Suite 100
Osage Beach, MO 65065
(573) 348-2265

ACCOUNT:
DOCUMENTS:

PAGE: 1
07/31/2017
2

00089 2684428 10Z ATM 608.45.1 5

LAKE OZARK-OSAGE BEACH JOINT SEWER TREAT
SEWER BD.-TREATMENT PLANT BD.
1000 CITY PKWY
OSAGE BEACH MO 65065-3058



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BUSINESS MONEY MARKET ACCOUNT

(BUSINESS MONEY MARKET)

LAST STATEMENT 06/30/17 251,633.96
2 CREDITS 3,574.22
1 DEBITS 169.50
THIS STATEMENT 07/31/17 255,038.68

DEPOSITS
REF #.....DATE.....AMOUNT REF #.....DATE.....AMOUNT REF #.....DATE.....AMOUNT
07/20 3,467.00

OTHER CREDITS
DESCRIPTION DATE AMOUNT
INTEREST 07/31 107.22

CHECKS
CHECK #..DATE.....AMOUNT CHECK #..DATE.....AMOUNT CHECK #..DATE.....AMOUNT
1021 07/24 169.50

INTEREST
AVERAGE LEDGER BALANCE: 252,932.28 INTEREST EARNED: 107.22
AVERAGE AVAILABLE BALANCE: 252,484.92 DAYS IN PERIOD: 31
INTEREST PAID THIS PERIOD: 107.22 ANNUAL PERCENTAGE YIELD EARNED: .50%
INTEREST PAID 2017: 715.22

*** CONTINUED ***



NOTICE: SEE REVERSE SIDE FOR IMPORTANT INFORMATION



**OPERATING
DIVISIONS**



Atchison County
Bonne Terre
Boonville
Bowling Green
Buchanan County #1
Cameron
Cape Girardeau
Carroll County #1
Clay County
Craig
East Central Missouri
Water & Sewer
Authority
Elsberry
Franklin County #1
Franklin County #3
Henry County
Water Company
Henry County #3
Kimberling City
Lake Ozark/
Osage Beach
Lincoln County #1
Neosho
Nevada
Parkville
Phelps County #2
Platte County #C-1
Proctor & Gamble
Ralls County #1
Russellville
Sedalia
St Charles County #2
St Genevieve
Versailles
Maquoketa
Tipton
South Fulton

REPORT OF OPERATIONS

**LAKE OZARK/OSAGE BEACH
Joint Wastewater Treatment Plant No. 1**

Month of July 2017

Submitted by Alliance Water Resources, Inc. for the

August 2017

Joint Sewer Board Meeting

SUMMARY OF FACILITY OPERATION

The Lake Ozark/Osage Beach Joint WWTP produced superior effluent quality throughout the month and was in full compliance with effluent limitations established in NPDES Permit No.MO-0103241. No leaks, no spills, and no unauthorized releases to waters of the state. No work related lost time accidents have occurred during the month.

Detailed information relating to plant performance and operations is presented as follows.

PLANT EFFLUENT QUALITY

	BOD mg/l	TSS mg/l	pH	E.coli Colonies/100 ml	Coliform	Ammonia as N mg/L	O&G mg/L	Metals Selenium ug/L
Monthly Average	1.3	0.9	NA	< 20		0.12	< 5.0	< 1.0
Peak Day	1.5	1.0	8.2	< 20		0.40	< 5.0	< 1.0
Percent Removal	99.4	99.7	NA	NA		NA	NA	NA

NPDES EFFLUENT LIMITATIONS

	BOD mg/l	TSS mg/l	pH	E.coli Colonies/100 ml	Coliform	Ammonia as N mg/L	O&G mg/L	Metals Selenium ug/ L
Monthly Average	30	30	6-9	126		1.2	10	4.0
Weekly Average	45	45		630				
Daily Max						6.0	15	8.1

PLANT HYDRAULIC AND ORGANIC LOADING

The average daily influent flow for the month was 2.175 MGD or 73% of Permitted flow with Lake Ozark contributing 12% of the total flow and Osage Beach contributing 88%. Daily influent flow BOD and TSS data is presented in Table A. Daily flow for the month and rainfall are shown in Figure 2. A three-year flow history for each of the two cities is presented in Table B.

Organic loading for the month was 128518 pounds of BOD.

BIOSOLIDS APPLICATION AND INVENTORY

Plant personnel land applied 20 tanker loads of bio-solids during the month equivalent to a total of 74,000 gallons and 21,631 pounds dry weight solids.

407,110 pounds of dry weight solids have been land applied year to date.

Bio-solids inventory in the storage tanks at the end of the month was 512,500 gallons with a level of 4.5 feet in Tank 1 and 5.5 feet in Tank 2.

WASTEHAULERS

The plant received 43 loads of septage during the month totaling 107,500 gallons.

WWTP OPERATIONS

- Decanting digesters and wasting weekly.
- Normal operations.

WWTP MAINTENANCE AND REPAIR

- Performed routine maintenance throughout the month as per Antero Maintenance Data Management schedule. (New version of Operator 10 Software)
- We had a phase out on our incoming power on the 21st of July which caused one of the breakers in the control panel of the Pista grit system to fail. We ordered a replacement on the 25th and received it on the 27th and got it back in service that same day.
- The dodge pickup wouldn't start on the 25th of July, so we towed it up to Roemers and he said the fuel pump was out. He had to take the bed off the truck to install the new pump and had it finished on the 31st.
- We replaced two UV bulbs on the 28th of July which were old Wedeco bulbs with over 17,000 hrs. on them.

SAFETY

- We conducted our monthly routine Safety Meeting on Excavation Safety on the 6th of July.

REGULATORY AGENCY, INSPECTION AND REPORTS

- We filled out the EDMR on MDNR's website on the 3rd of August.
- We received the lab results for our annual WET test on the 10th of July and we passed with 100% survival. (see attachment)
- We received the lab results for our 3rd quarter 503 Regs on the 20th of July and everything looked good. (see attachment)
- We also received the lab results for our annual in-house DMRQA study 37 on the 24th of July and had acceptable results on all parameters. (see attachment)

MISCELLANEOUS AND RECOMMENDATIONS

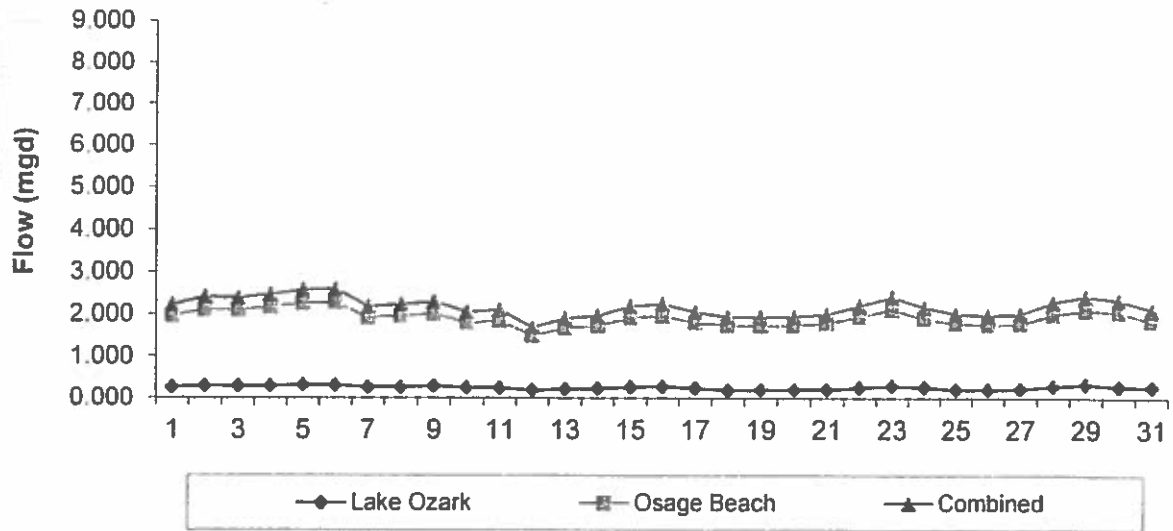
- We would like to Thank Matt and the City of Lake Ozark for sending their service truck with an employee to assist us with lifting the RAS pump out of the basement. Many Thanks!

TABLE A
LAKE OZARK/OSAGE BEACH WWTP

MONTH OF **July** 2017

DATE		FLOW					BOD 5 MG/L			TSS MG/L		
	RAIN FALL IN.	LO mgd	OB mgd	COMB mgd	% LO	% OB	LO mg/l	OB mg/l	COMB mg/l	LO mg/l	OB mg/l	COMB mg/l
1-Jul	0	0.265	1.961	2.226	11.9	88.1						
2-Jul	0	0.301	2.119	2.420	12.4	87.6						
3-Jul	0	0.292	2.098	2.390	12.2	87.8						
4-Jul	0	0.297	2.178	2.475	12.0	88.0						
5-Jul	2	0.320	2.254	2.574	12.4	87.6						
6-Jul	1.6	0.313	2.284	2.597	12.1	87.9						
7-Jul	0	0.263	1.916	2.179	12.1	87.9	150	203	203	108	176	288
8-Jul	0	0.263	1.968	2.231	11.8	88.2						
9-Jul	0	0.289	2.010	2.299	12.6	87.4						
10-Jul	0	0.256	1.792	2.048	12.5	87.5						
11-Jul	0	0.247	1.849	2.096	11.8	88.2						
12-Jul	0	0.194	1.494	1.688	11.5	88.5						
13-Jul	0	0.227	1.681	1.908	11.9	88.1						
14-Jul	0.25	0.238	1.729	1.967	12.1	87.9	243	145	215	222	140	286
15-Jul	0	0.274	1.920	2.194	12.5	87.5						
16-Jul	0	0.286	1.960	2.246	12.7	87.3						
17-Jul	0	0.244	1.815	2.059	11.9	88.1						
18-Jul	0	0.199	1.742	1.941	10.3	89.7						
19-Jul	0	0.207	1.732	1.939	10.7	89.3						
20-Jul	0	0.214	1.738	1.952	11.0	89.0						
21-Jul	0	0.211	1.793	2.004	10.5	89.5	360	415	268	324	618	322
22-Jul	0	0.261	1.949	2.210	11.8	88.2						
23-Jul	0	0.302	2.119	2.421	12.5	87.5						
24-Jul	0	0.268	1.901	2.169	12.4	87.6						
25-Jul	0	0.214	1.795	2.009	10.7	89.3						
26-Jul	0	0.216	1.763	1.979	10.9	89.1						
27-Jul	0.8	0.232	1.782	2.014	11.5	88.5						
28-Jul	0.5	0.296	1.999	2.295	12.9	87.1	343	168	228	258	172	308
29-Jul	0	0.342	2.092	2.434	14.1	85.9						
30-Jul	0	0.287	2.062	2.349	12.2	87.8						
31-Jul	0	0.274	1.852	2.126	12.9	87.1						
SUM	5.2	8.092	59.347	67.439								
AVG		0.261	1.914	2.175	12	88	274	233	229	228	277	301
NOTE: BOLD PRINT INDICATES WEEKEND DAYS												

Daily Flow
Figure 1



Effect of Rainfall on Flow
Figure 2

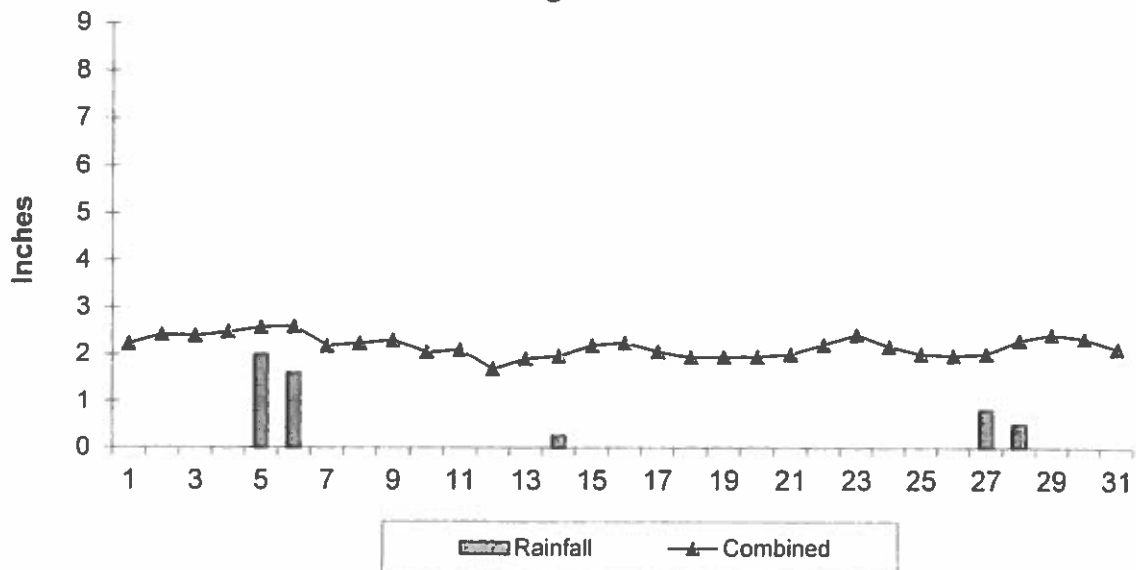
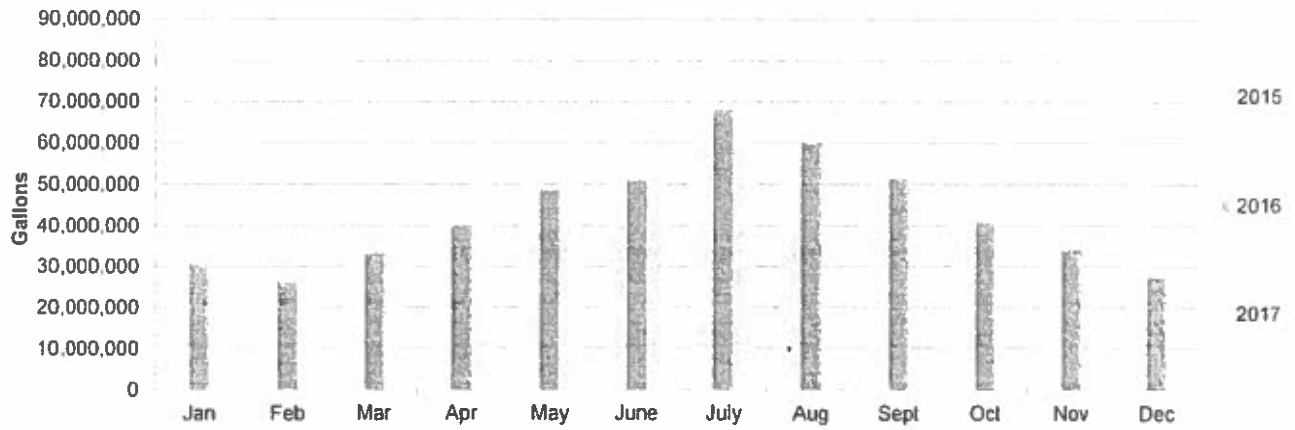


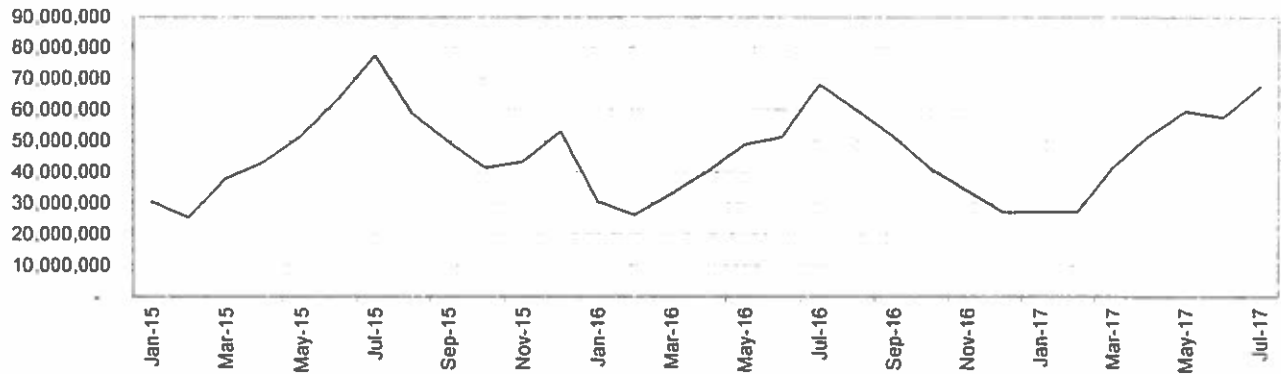
TABLE B
JOINT SEWER BOARD
Monthly Flows

<u>2015</u>	<u>RAINFALL</u>	<u>OSAGE BEACH</u>		<u>LAKE OZARK</u>		<u>TOTAL</u>	<u>%</u>
January	0.9	26,319,000	87%	4,085,000	13%	30,404,000	100%
February	1.4	21,892,000	86%	3,465,000	14%	25,357,000	100%
March	4.5	32,996,000	87%	4,920,000	13%	37,916,000	100%
April	4.0	37,220,000	86%	5,945,000	14%	43,165,000	100%
May	7.2	44,456,000	86%	7,209,000	14%	51,665,000	100%
June	7.1	54,745,000	86%	8,769,000	14%	63,514,000	100%
July	9.7	66,474,000	86%	10,871,000	14%	77,345,000	100%
August	3.5	51,695,000	88%	7,327,000	12%	59,022,000	100%
September	3.1	43,144,000	87%	6,531,000	13%	49,675,000	100%
October	1.8	36,230,000	87%	5,216,000	13%	41,446,000	100%
November	10.8	37,047,000	86%	6,247,000	14%	43,294,000	100%
December	11.7	44,392,000	84%	8,603,000	16%	52,995,000	100%
	65.7	496,610,000	87%	79,188,000	13%	575,798,000	100%
<u>2016</u>	<u>RAINFALL</u>	<u>OSAGE BEACH</u>		<u>LAKE OZARK</u>		<u>TOTAL</u>	<u>%</u>
January	0.8	26,604,000	87%	4,001,000	13%	30,605,000	100%
February	0.8	22,444,000	86%	3,661,000	14%	26,105,000	100%
March	3.1	28,785,000	87%	4,251,000	13%	33,036,000	100%
April	5.3	35,053,000	87%	5,231,000	13%	40,284,000	100%
May	7.0	42,126,000	86%	6,704,000	14%	48,830,000	100%
June	1.2	44,599,000	87%	6,545,000	13%	51,144,000	100%
July	8.7	59,190,000	87%	8,793,000	13%	67,983,000	100%
August	7.7	51,798,000	86%	8,171,000	14%	59,969,000	100%
September	6.0	44,634,000	87%	6,655,000	13%	51,289,000	100%
October	0.5	36,156,000	88%	5,029,000	12%	41,185,000	100%
November	1.2	29,750,000	87%	4,357,000	13%	34,107,000	100%
December	0.8	23,139,000	86%	3,914,000	14%	27,053,000	100%
	45.4	467,718,000	87%	71,221,000	13%	538,939,000	100%
<u>2017</u>	<u>RAINFALL</u>	<u>OSAGE BEACH</u>		<u>LAKE OZARK</u>		<u>TOTAL</u>	<u>%</u>
January	2.5	23,440,000	86%	3,909,000	14%	27,349,000	100%
February	0.7	23,345,000	86%	3,812,000	14%	27,157,000	100%
March	3.8	36,554,000	88%	4,844,000	12%	41,398,000	100%
April	9.8	44,665,000	87%	6,723,000	13%	51,388,000	100%
May	8.1	51,527,000	87%	7,979,000	13%	59,506,000	100%
June	2.9	50,926,000	88%	6,618,000	12%	57,544,000	100%
July	5.2	59,347,000	88%	8,092,000	12%	67,439,000	100%
August							
September							
October							
November							
December							
	33.0	289,804,000	87%	41,977,000	13%	331,781,000	100%

Monthly Influent Flow
Figure 3A

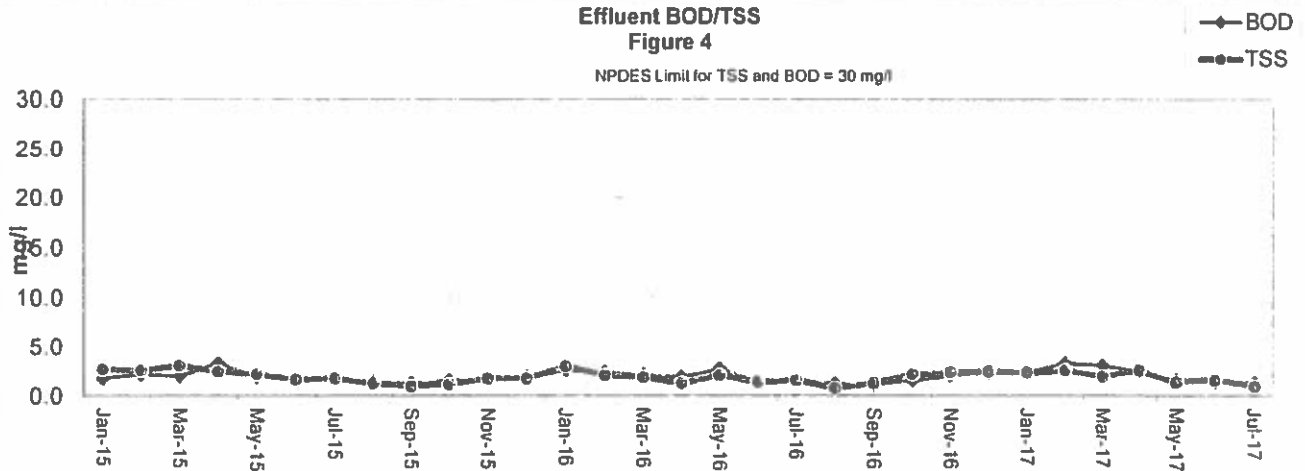


Monthly Influent Flow
Figure 3B

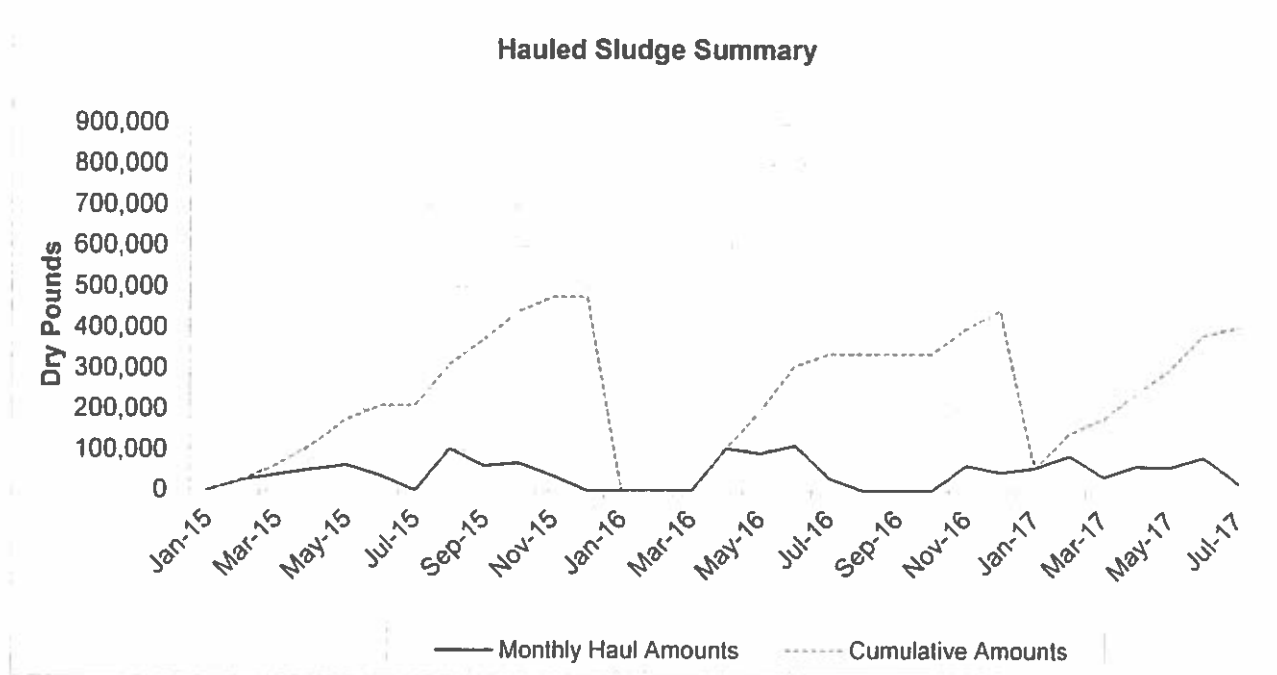
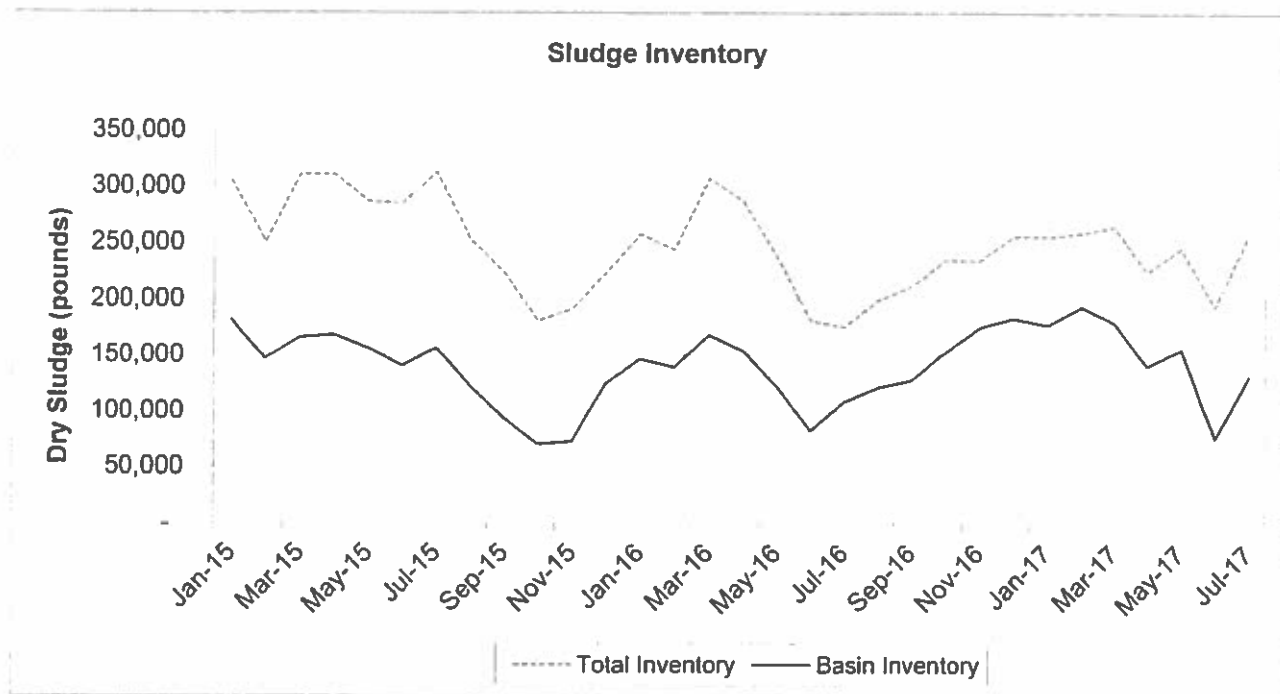


Effluent BOD/TSS
Figure 4

NPDES Limit for TSS and BOD = 30 mg/l

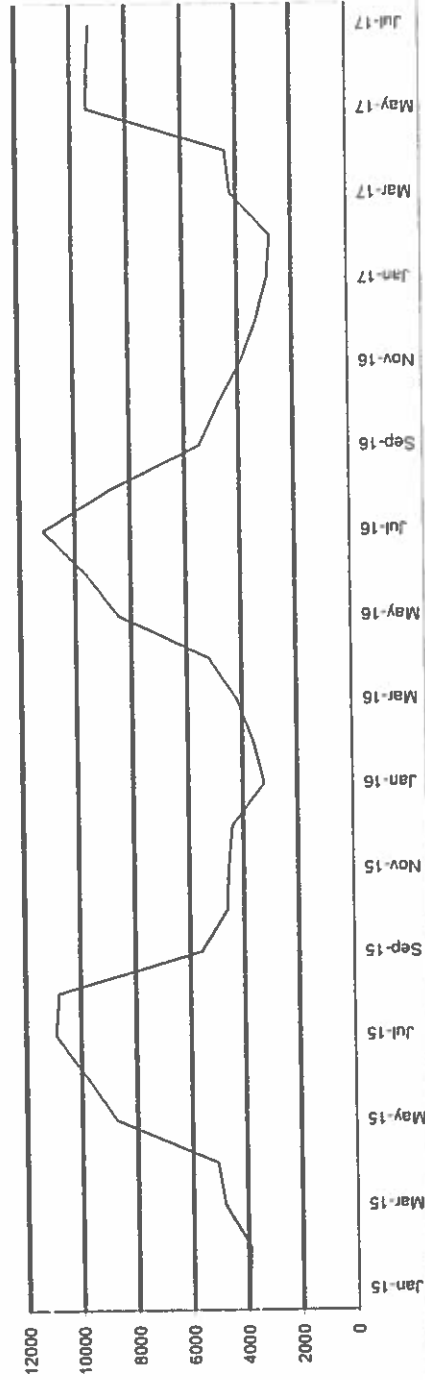


Date	Loads	Hauled Sludge			Annual Cumulative # Dry	Basin Depths			# Dry	Blanket Depths			MLSS Inventory			Blanket and MLSS Inventory			Total Dry Sludge Inventory	Accepted Septage Loads	Septage Gallons
		Gallons	# Dry	% Solids		Tank #1	Tank #2	AB #1		Basin Gallons	Clarf #1	Clarf #2	Clarf #3	MLSS AB #1	MLSS AB #2	Gallons	# Dry	% Solids			
Jan-15	0	-	0	4.4%	-	5.5	5.5	0.0	495,000	181,645	2.0	2.0	0.0	3,900	4,160	123,385	0.00403	305,030	22	55,000	
Feb-15	20	74,000	24,069	3.9%	24,069	6.0	4.0	0.0	450,000	146,366	1.0	1.0	0.0	3,580	3,290	3,635,524	0.00344	250,516	21	52,500	
Mar-15	34	125,800	36,603	3.7%	62,672	5.5	6.5	0.0	540,000	165,704	1.0	2.0	2.0	5,040	4,250	3,740,142	0.00465	310,595	11	27,500	
Apr-15	44	162,800	50,607	3.7%	113,279	6.0	6.0	0.0	540,000	167,861	2.5	2.0	1.0	5,180	4,000	3,723,357	0.00459	310,393	23	57,500	
May-15	55	203,500	61,284	3.6%	174,563	5.5	6.0	0.0	517,500	155,845	1.5	2.0	4.0	4,030	4,110	3,835,879	0.00407	286,049	26	65,000	
Jun-15	35	129,500	35,024	3.2%	209,587	8.0	3.5	0.0	517,500	139,981	2.0	1.0	3.0	4,630	4,550	3,783,570	0.00459	284,798	37	92,500	
Jul-15	0	-	0	3.2%	209,587	6.5	6.5	0.0	585,000	156,125	1.0	2.0	1.0	5,470	4,660	3,696,714	0.00507	312,282	44	110,000	
Aug-15	107	395,900	102,356	3.1%	311,943	6.5	4.0	0.0	472,500	122,160	0.5	1.0	0.5	4,170	4,400	3,648,357	0.00429	252,693	44	110,000	
Sep-15	55	203,500	60,420	3.6%	372,363	5.5	1.5	0.0	315,000	93,525	1.0	1.0	1.0	4,480	3,570	3,678,952	0.00362	223,925	32	80,000	
Oct-15	59	218,300	67,949	3.7%	440,312	4.0	1.0	0.0	225,000	70,034	1.0	1.0	1.0	3,310	3,920	3,678,952	0.00384	180,952	22	55,000	
Nov-15	30	111,000	35,734	3.9%	476,046	3.0	2.0	0.0	225,000	72,434	1.0	3.0	1.0	3,440	4,330	3,714,476	0.00384	191,237	19	47,500	
Dec-15	0	-	0	3.9%	476,046	4.5	4.0	0.0	382,500	124,412	2.0	0.5	1.5	4,460	1,940	3,709,547	0.00369	257,551	21	52,500	
Jan-16	0	-	0	3.9%	-	5.0	5.0	0.0	450,000	146,367	0.5	0.5	0.0	3,760	3,610	3,617,762	0.00347	244,260	6	15,000	
Feb-16	0	-	0	3.9%	-	6.0	3.5	0.0	427,500	168,322	2.0	2.0	1.0	4,570	4,320	3,714,476	0.00426	307,571	44	110,000	
Mar-16	0	-	0	3.9%	-	5.5	5.0	0.0	472,500	153,914	2.5	2.5	1.0	5,540	3,180	3,732,238	0.00372	238,766	40	100,000	
Apr-16	96	318,200	103,652	3.9%	103,652	5.5	3.0	0.0	382,500	122,423	1.0	5.0	1.0	3,770	3,670	3,750,000	0.00321	181,494	30	75,000	
May-16	77	284,900	91,185	3.8%	194,837	5.5	0.0	0.0	270,000	82,339	1.5	1.0	1.5	2,570	3,340	3,679,952	0.00219	175,618	46	111,000	
Jun-16	99	366,300	111,706	3.7%	306,543	6.0	0.0	0.0	382,500	108,577	1.0	1.0	1.0	1,740	2,530	3,678,952	0.00255	199,462	43	96,000	
Jul-16	28	103,500	29,408	3.4%	335,951	4.5	4.0	0.0	427,500	121,222	1.0	1.0	1.0	2,880	2,220	3,678,952	0.00275	211,825	42	94,500	
Aug-16	0	-	0	3.4%	335,951	6.0	3.5	0.0	450,000	127,502	1.0	1.0	1.0	2,890	2,690	3,678,952	0.00267	235,045	35	75,500	
Sep-16	0	-	0	3.4%	335,951	5.0	5.0	0.0	540,000	153,122	1.0	1.0	1.0	1,740	3,600	3,678,952	0.00277	234,497	11	20,000	
Oct-16	0	-	0	3.4%	335,951	6.5	5.5	0.0	540,000	175,285	1.0	0.0	1.5	-	3,770	1,882,904	0.00377	234,497	25	54,500	
Nov-16	52	192,400	62,457	3.9%	398,408	6.5	5.5	0.0	540,000	183,393	1.0	0.0	1.0	-	4,700	1,861,190	0.0047	256,348	28	54,500	
Dec-16	36	133,200	45,237	4.1%	443,645	7.5	4.5	0.0	540,000	177,132	1.0	0.0	1.0	-	5,080	1,861,190	0.00508	255,986	15	37,500	
Jan-17	47	173,000	58,748	3.9%	502,393	6.0	6.0	0.0	540,000	179,589	1.5	0.0	2.0	-	4,080	1,913,499	0.00508	258,991	5	12,500	
Feb-17	68	251,600	86,649	4.1%	567,448	5.5	7.0	0.0	562,500	193,720	3.0	0.0	1.0	-	5,400	1,896,714	0.0054	285,019	41	102,500	
Mar-17	33	122,100	34,808	3.4%	623,850	7.5	6.5	0.0	630,000	179,589	1.0	0.0	1.5	-	4,630	2,184,858	0.00463	224,939	8	20,000	
Apr-17	58	218,300	61,994	3.4%	685,844	6.5	4.5	0.0	495,000	140,573	8.0	10.0	1.5	3,420	2,480	3,666,119	0.00295	246,426	45	116,000	
May-17	51	188,700	58,556	3.8%	744,400	7.0	4.0	0.0	495,000	156,228	1.0	1.5	0.5	4,530	3,000	3,762,833	0.00377	194,610	33	82,500	
Jun-17	75	277,500	85,724	3.7%	830,124	2.5	3.0	0.0	247,500	76,457	3.0	2.5	1.5	4,670	3,650	3,657,238	0.00416	258,426	43	107,500	
Jul-17	20	74,000	21,631	3.5%	851,755	4.5	5.5	0.0	450,000	131,540	1.0	1.0	0.5	4,670	3,650	3,657,238	0.00416	258,426	43	107,500	

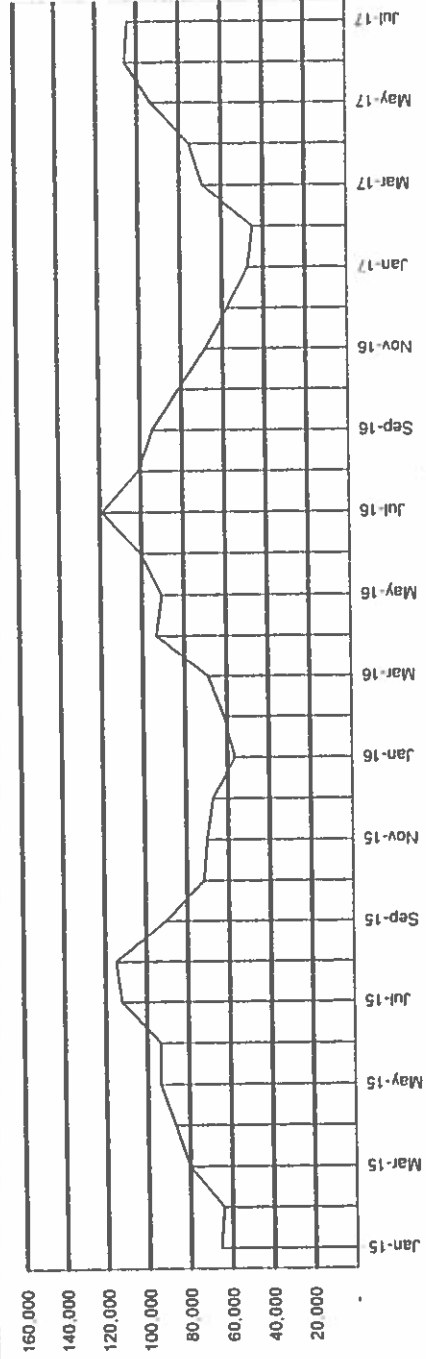


Electric Cost

	Electric Cost	Kilowatts Used
Jan-15	3947	65,860
Feb-15	3901	64,300
Mar-15	4821	80,190
Apr-15	5084	87,050
May-15	8707	93,810
Jun-15	9772	93,490
Jul-15	10912	112,040
Aug-15	10807	114,770
Sep-15	5585	90,520
Oct-15	4620	71,940
Nov-15	4556	70,170
Dec-15	4413	67,300
Jan-16	3223	56,290
Feb-16	3613	61,740
Mar-16	4195	69,020
Apr-16	5235	93,310
May-16	8446	90,640
Jun-16	9618	100,670
Jul-16	11166	119,020
Aug-16	8627	101,260
Sep-16	5460	94,280
Oct-16	4737	81,500
Nov-16	3903	68,360
Dec-16	3324	57,810
Jan-17	2904	47,480
Feb-17	2796	45,240
Mar-17	4233	69,210
Apr-17	4411	75,480
May-17	9413	93,494
Jun-17	9388	106,070
Jul-17	9310	104,700



Kilowatts Used





MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL QUALITY
 Discharge Monitoring Report For Municipal Wastewater Treatment Plants

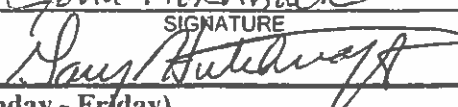
NAME OF FACILITY						LOCATION ADDRESS & CITY							COUNTY/REGION	
Lake of the Ozarks Regional WWTP #1						#3 Anderson Road							Miller/SWRO	
MONTH/YEAR		PERMIT NUMBER				OUTFALL NUMBER		TYPE TREATMENT FACILITY						
Jul-17		MO-0103241				#001		Oxidation Ditch/UV/Sludge Holding-sludge is land applied						
INFLUENT						EFFLUENT							% Removal	
DATE	pH UNITS	BOD mg/L	TSS mg/L	TEMP °C	FLOW MGD	pH UNITS	BOD mg/L	TSS mg/L	Ammonia as N mg/l	DO mg/L	E. coli COLFRM #/100 ML	TEMP °C	BOD mg/L	TSS mg/L
1	7.5			23.2	2.236	8.0				5.9		24.1		
2	7.4			23.4	2.453	8.0				5.2		24.2		
3	7.4			24.3	2.426	8.0				5.2	< 20	25.3		
4	7.5			23.7	2.548	8.1				5.3		24.6		
5	7.3			23.4	2.717	8.0				4.2		24.2		
6	7.3			22.9	2.771	8.1			0.40	4.7		23.9		
7	7.5	203	288	23.7	2.245	8.0	1.1	0.8		4.7		24.6	99.5	99.7
8	7.4			22.7	2.241	8.0				4.9		23.8		
9	7.5			23.4	2.235	8.1				4.6		23.3		
10	7.4			23.9	2.114	8.1				4.8	< 20	25.3		
11	7.5			24	2.099	8.2				4.7		25.4		
12	7.4			24.3	1.645	8.2				4.9		25.6		
13	7.3			25	1.844	8.0			0.05	5.2		26.4		
14	7.5	215	222	24.3	1.945	8.1	1.1	0.9		5.0		25.7	99.5	99.6
15	7.4			24.6	2.079	8.1				4.9		24.7		
16	7.5			25.2	2.210	8.0				4.9		24.3		
17	7.4			25.5	2.011	8.1				5.0	< 20	25.2		
18	7.3			25.1	1.923	8.1				5.2		25.9		
19	7.3			24.2	1.772	8.0				5.1		25.7		
20	7.5			25.8	1.892	8.0			0.01	5.4		26.9		
21	7.4	268	322	25.4	1.952	8.1	1.5	1.0		5.5		25.8	99.4	99.7
22	7.4			25.4	2.030	8.1				5.3		26.4		
23	7.4			25.2	2.330	8.1				5.2		25.6		
24	7.4			25.3	2.074	8.1				4.0	< 20	26.1		
25	7.4			25.1	1.913	8.0				7.0		26.2		
26	7.4			25.3	1.862	8.0				5.1		26.6		
27	7.5			24.8	1.942	8.0			0.02	5.5		25.4		
28	7.3	228	308	25.2	2.299	8.1	1.4	1.0		4.4		25.8	99.4	99.7
29	7.5			25.4	2.143	8.0				5.2		25.9		
30	7.5			24.6	2.296	8.0				6.1		25		
31	7.6			24.5	2.066	8.1				5.9	< 20	24.4		
Total					66.313									
Avg		229	285	24	2.139		1.3	0.9	0.12	5.1	< 20	25.2	99.4	99.7
Min	7.3	203	222	23	1.645	8.0	1.1	0.8	0.01	4.0	< 20	23.3	99.4	99.6
Max	7.6	268	322	26	2.771	8.2	1.5	1.0	0.40	7.0	< 20	26.9	99.5	99.7

MONTHLY MONITORING					QUARTERLY MONITORING					
DATE	Oil & Grease mg/L	Selenium µg/L	SM1 Hardness mg/L	SM2 Hardness mg/L	Phosphorus mg/L	SM1 Phosphorus mg/L	T. Nitrogen mg/L	SM1 T. Nitrogen mg/L	TR. Cadmium ug/L	TR. Copper µg/L
1										
2										
3										
4										
5	< 5.0	< 1.0	210	308	2.6	0.10	5.1	1.3	< 5.0	< 10.0
6										
7										
8										
9										
10										
11										
12										
13										
14										
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22										
23										
24										
25										
26										
27										
28										
29										
30										
31										
Total	< 5.0	< 1.0	210	308	2.6	< 0.10	5.1	1.3	< 5.0	< 10.0
Avg	< 5.0	< 1.0	210	308	2.6	< 0.10	5.1	1.3	< 5.0	< 10.0
Min	< 5.0	< 1.0	210	308	2.6	< 0.10	5.1	1.3	< 5.0	< 10.0
Max	< 5.0	< 1.0	210	308	2.6	< 0.10	5.1	1.3	< 5.0	< 10.0

OPERATIONAL CONTROLS/LABORATORY TEST REQUIRED FOR "ACTIVATED SLUDGE" PROCESSES

DATE	SLUDGE DISP. LBS. DRY WEIGHT	#1 Aeration Basin, O-Ditch, Etc.				#2 Aeration Basin, O-Ditch, Etc.				*Weather Conditions		
		MIXED LIQUOR				MIXED LIQUOR				*Outside Ambient Temp ° F	*RAIN inches	Time
		* DO mg/l	** MLSS mg/l	*Settleability		* DO mg/l	** MLSS mg/l	*Settleability				
				*30 min ml	Temp ° C			*30 min ml	Temp ° C			
1		2.5	3,740	390	23.9	2.5	2,290	240	23.7	70	0	7:30
2		2.0	4,200	450	23.9	2.2	2,020	210	23.8	64	0	7:30
3		2.3	3,880	310	25.2	1.7	3,630	320	24.7	71	0	7:30
4		2.0	3,850	390	24.2	2.0	3,470	320	24.2	71	0	7:30
5		1.5	3,180	420	23.7	1.4	3,360	310	23.5	71	2	7:30
6		2.0	4,390	410	23.7	1.7	3,550	310	23.5	71	1.6	7:30
7		1.8	3,690	330	24.2	1.5	3,880	370	23.9	73	0	7:30
8		2.0	3,900	300	23.9	1.5	3,840	330	23.9	67	0	7:30
9		2.0	3,610	330	23.8	1.8	3,630	340	23.8	68	0	7:30
10		2.2	4,320	440	25.7	1.9	3,560	330	24.9	77	0	7:30
11		2.1	3,520	390	25.7	2.2	3,860	380	25.3	77	0	7:30
12		2.4	3,890	360	25.6	1.8	3,810	380	25.1	78	0	7:30
13		2.6	4,160	350	26.5	1.7	4,260	390	25.8	77	0	7:30
14		2.4	3,430	340	25.5	1.6	4,490	450	25.1	74	0.25	7:30
15		2.3	4,040	330	25.3	1.9	4,160	420	25.3	72	0	7:30
16		2.2	3,560	320	24.7	1.9	4,550	420	24.7	69	0	7:30
17		1.8	4,140	450	25	1.6	3,340	330	25	73	0	7:30
18		1.8	4,230	440	26.1	1.6	3,510	350	25.4	73	0	7:30
19	6,017	1.8	4,170	400	25.2	1.6	3,370	370	25.1	77	0	7:30
20	8,208	1.9	3,900	380	26.4	1.9	4,010	400	25.8	75	0	7:30
21		2.3	4,200	400	25.1	3.0	3,320	320	25.4	74	0	7:30
22		2.0	3,950	380	25.8	2.1	4,100	380	25.8	79	0	7:30
23		2.1	4,160	370	24.7	2.6	3,750	350	24.8	75	0	7:30
24		1.7	3,740	390	25.9	1.5	3,890	410	25.9	75	0	7:30
25	3,703	3.0	2,940	400	25.6	1.8	4,120	470	25.8	71	0	7:30
26	3,703	1.8	3,770	410	26.2	1.6	4,230	450	26.2	75	0	7:30
27		1.6	4,290	420	25	1.5	4,220	430	25	75	0.8	7:30
28		1.6	4,730	490	25.7	1.6	3,810	420	25.4	73	0.5	7:30
29		1.6	4,250	560	25.4	1.6	3,690	370	25.4	68	0	7:30
30		1.9	4,390	580	24.2	2.1	3,530	380	24.6	64	0	7:30
31		2.0	4,610	550	24.1	1.8	3,650	400	24.3	65	0	7:30

COMMENTS

TESTS PERFORMED BY (PRINT) John Hornback	SIGNATURE 	PHONE # (573)365-0455	DATE 8/3/2017
REPORT APPROVED BY (PRINT) Gary Hutchcraft	SIGNATURE 	PHONE # (573)365-0455	DATE 8/3/2017

*Required Daily (Monday - Friday)

**Required 1/week

State of Missouri
Department of Natural Resources
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Dep. of Natural Resources
(REGIONAL OFFICE)
Southwest Regional Office
2040 W. Woodland
Springfield, MO 65807-5912
4178914300
4178914399 (fax)

PERMITTEE NAME/ADDRESS

NAME Lake of the Ozarks Regional WWTP I
ADDRESS #1 Anderson Road
LAKE OZARK, MO 65049

MO0103241		001 A	
PERMIT NUMBER		DISCHARGE NUMBER	
MONITORING PERIOD			
YEAR	MO	DAY	TO
2017	07	01	2017 07 31

NOTE: READ PERMIT AND FEDERAL INSTRUCTIONS
BEFORE COMPLETING THIS FORM

Parameter		MASS	Unit	CONCENTRATION	Unit	FREQUENCY OF ANALYSIS	SAMPLE TYPE	LAB CODE
BOD 5-day 20 deg. C (B0520)	REPORTD	*****	*****	*****	1.5	1.3	Weekly	24 Hour Composite
Stage Type: End of Pipe	REQRMTD	*****	*****	*****	Weekly Average: 45	Monthly Average: 30	Weekly	24 Hour Composite
BOD 5-day percent removal (R0110)	REPORTD	*****	*****	*****	*****	99.4	Monthly	Calculated
Stage Type: End of Pipe	REQRMTD	*****	*****	*****	*****	Monthly Average Minimum: 85	Monthly	Calculated
Escherichia coli form (E. Coli) (S1040)	REPORTD	*****	*****	*****	<20	<20	Weekly	Grab
Stage Type: End of Pipe	REQRMTD	*****	*****	*****	7 Day Geometric Mean: 631	30 Day Geometric Mean: 126	Weekly	Grab
Flow in conduit or thru treatment plant (S0150)	REPORTD	2.771	2.139	Mgal/d	*****	*****	Daily	Total Measured
Stage Type: End of Pipe	REQRMTD	Daily Maximum Monitoring Required	Monthly Average Monitoring Required	*****	*****	*****	Daily	Total Measured
Nitrogen ammonia total (as N) (N0610)	REPORTD	*****	*****	*****	0.40	0.12	Weekly	Grab
Stage Type: End of Pipe	REQRMTD	*****	*****	*****	Daily Maximum: 6.0	Monthly Average: 1.2	Weekly	Grab
Oil and grease (soxhlet extr.) (or) (N0550)	REPORTD	*****	*****	*****	<5.0	<5.0	Monthly	Grab
Stage Type: End of Pipe	REQRMTD	*****	*****	*****	Daily Maximum: 15	Monthly Average: 10	Monthly	Grab
pH (R0400)	REPORTD	*****	*****	*****	8.0	8.2	Weekly	Grab
Stage Type: End of Pipe	REQRMTD	*****	*****	*****	Minimum: 6.5	Maximum: 9.0	Weekly	Grab

GENERAL PERMIT REQUIREMENTS OR COMMENTS
OR TREATMENT PLANT COMMENTS
PARALLEL DISCHARGE COMMENTS

I certify under penalty of law that this document and all attachments were prepared under the direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

OPERATOR IN RESPONSIBLE CHARGE		7305
Gary Hutchcraft		CERTIFICATE NUMBER
TYPED OR PRINTED NAME		573-365-0455
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE
Garry F Hutchcraft		2017-08-03 11:27:46
TYPED OR PRINTED NAME		Date

Page 1

State of Missouri
Department of Natural Resources
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Dep. of Natural Resources
(REGIONAL OFFICE)
Southwest Regional Office
2040 W. Woodland
Springfield, MO 65807-5912
4178914300
4178914399 (fax)

PERMITTEE NAME/ADDRESS

NAME Lake of the Ozarks Regional WWTP I
ADDRESS #1 Anderson Road
LAKE OZARK, MO 65049

MO0103241		001 A	
PERMIT NUMBER		DISCHARGE NUMBER	
MONITORING PERIOD			
YEAR	MO	DAY	TO
2017	07	01	2017 07 31

NOTE: READ PERMIT AND FEDERAL INSTRUCTIONS
BEFORE COMPLETING THIS FORM

Parameter		MASS	Unit	CONCENTRATION	Unit	FREQUENCY OF ANALYSIS	SAMPLE TYPE	LAB CODE
Selenium (Se), total recoverable (W0981)	REPORTD	*****	*****	<1.0	*****	<1.0	Weekly	Grab
Stage Type: End of Pipe	REQRMTD	*****	*****	Daily Maximum: 9.1	*****	Monthly Average: 4.0	Monthly	Grab
Suspended Solids, percent removal (R1011)	REPORTD	*****	*****	*****	*****	99.7	Weekly	Grab
Stage Type: End of Pipe	REQRMTD	*****	*****	*****	*****	Monthly Average Minimum: 85	Monthly	Calculated
Total Suspended Solids (TSS) (N0570)	REPORTD	*****	*****	*****	1.5	1.3	Weekly	24 Hour Composite
Stage Type: End of Pipe	REQRMTD	*****	*****	*****	Weekly Average: 45	Monthly Average: 30	Weekly	24 Hour Composite

GENERAL PERMIT REQUIREMENTS OR COMMENTS
OR TREATMENT PLANT COMMENTS
PARALLEL DISCHARGE COMMENTS

I certify under penalty of law that this document and all attachments were prepared under the direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

OPERATOR IN RESPONSIBLE CHARGE		7305
Garry Hutchcraft		CERTIFICATE NUMBER
TYPED OR PRINTED NAME		573-365-0455
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE
Garry F Hutchcraft		2017-08-03 11:27:46
TYPED OR PRINTED NAME		Date

Page 2

PERMITTEE NAME/ADDRESS

State of Missouri
Department of Natural Resources

Dep. of Natural Resources
(REGIONAL OFFICE)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)Southwest Regional Office
2040 W. Woodland
Springfield, MO 65807-5988
4178914300
4178914399 (fax)NAME Lake of the Ozarks Regional WWTP
ADDRESS 87 Anderson Road
LAKE OZARK, MO 65049MO0103241 SM2 A
PERMIT NUMBER DISCHARGE NUMBER

MONITORING PERIOD

FROM YEAR MO DAY TO YEAR MO DAY
2017 07 01 2017 07 31NOTE: RE-APPROPRIATE AND GENERAL INSTRUCTIONS
FOR THE COMPLETE DMR FORM

Parameter		MASS	Unit	CONCENTRATION	Unit	FREQUENCY OF ANALYSIS	SAMPLE TYPE	LAB CODE
Hardness, total (as CaCO ₃) (000000)	REPORTD	*****	*****	308	*****	308	Weekly	24 Hour Composite
Stage Type: Instream Monitoring	REQRMNT	*****	*****	Daily Maximum Monitoring Required	*****	Monthly Average Monitoring Required	Monthly	Grab

GENERAL PERMIT REQUIREMENTS OF COMPLIANCE
FOR THE DISCHARGE CONTINUES
FOR THE DISCHARGE CONTINUES

I, the undersigned, certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on an inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

OPERATOR IN RESPONSIBLE CHARGE			
Garv. Hutchcraft		7505	
TYPED OR PRINTED NAME		CERTIFICATE NUMBER	
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE	
Garv. F. Hutchcraft		573-565-0155	
TYPED OR PRINTED NAME		Date	
Garv. F. Hutchcraft		2017-08-03 11:27:46	
SIGNATURE			

Page 3

State of Missouri
Department of Natural Resources
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Dep. of Natural Resources
(REGIONAL OFFICE)
Southwest Regional Office
2040 W. Woodland
Springfield, MO 65807-5912
4178914300
4178914399 (fax)

PERMITTEE NAME/ADDRESS

NAME Lake of the Ozarks Regional WWTP I
ADDRESS 43 Anderson Road
LAKE OZARK, MO 65049

MO0103241		001 B	
PERMIT NUMBER		DISCHARGE NUMBER	
MONTHLY MONITORING PERIOD			
YEAR	MO	DAY	YEAR
2017	07	01	10

NOTE: BE ADVISED THAT ALL DISCHARGES MUST BE REPORTED TO THE REGIONAL OFFICE BY THE 15TH OF THE FOLLOWING MONTH.

Parameter		MASS	Unit	CONCENTRATION	Unit	FREQUENCY OF ANALYSIS	SAMPLE TYPE	LAB CODE
Cadmium, total recoverable (01113)	REPORTD	*****		<5.0	*****	<5.0	Quarterly	Grab
Stage Type: End of Pipe	REQRMNT	*****		Daily Maximum Monitoring Required	*****	Monthly Average Monitoring Required	Quarterly	Grab
Copper, total recoverable (01119)	REPORTD	*****		<10.0	*****	<10.0	Quarterly	Grab
Stage Type: End of Pipe	REQRMNT	*****		Daily Maximum Monitoring Required	*****	Monthly Average Monitoring Required	Quarterly	Grab
Nitrogen, total (as N) (00600)	REPORTD	*****		5.1	*****	5.1	Quarterly	Grab
Stage Type: End of Pipe	REQRMNT	*****		Daily Maximum Monitoring Required	*****	Monthly Average Monitoring Required	Quarterly	Grab
Phosphorus, total (as P) (00665)	REPORTD	*****		2.6	*****	2.6	Quarterly	Grab
Stage Type: End of Pipe	REQRMNT	*****		Daily Maximum Monitoring Required	*****	Monthly Average Monitoring Required	Quarterly	Grab

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OR STATE-SPECIFIC COMMENTS
PARAMETER-SPECIFIC COMMENTS

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OPERATOR IN RESPONSIBLE CHARGE		7305
Gar. Hutchcraft		CERTIFICATE NUMBER
TYPED OR PRINTED NAME		573-365-0455
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		2017-08-03 11:42:56
Gar. F Hutchcraft	Gar. F Hutchcraft	Date
TYPED OR PRINTED NAME	SIGNATURE	

Page 1

State of Missouri
Department of Natural Resources
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Dep. of Natural Resources
(REGIONAL OFFICE)
Southwest Regional Office
2040 W. Woodland
Springfield, MO 65807-5912
4178914300
4178914399 (fax)

PERMITTEE NAME/ADDRESS

NAME Lake of the Ozarks Regional WWTP I
ADDRESS 43 Anderson Road
LAKE OZARK, MO 65049

MO0103241		SMI A	
PERMIT NUMBER		DISCHARGE NUMBER	
MONTHLY MONITORING PERIOD			
YEAR	MO	DAY	YEAR
2017	07	01	10

NOTE: BE ADVISED THAT ALL DISCHARGES MUST BE REPORTED TO THE REGIONAL OFFICE BY THE 15TH OF THE FOLLOWING MONTH.

Parameter		MASS	Unit	CONCENTRATION	Unit	FREQUENCY OF ANALYSIS	SAMPLE TYPE	LAB CODE
Nitrogen, total (as N) (00600)	REPORTD	*****		1.3	*****	1.3	Quarterly	Grab
Stage Type: Instream Monitoring	REQRMNT	*****		Daily Maximum Monitoring Required	*****	Monthly Average Monitoring Required	Quarterly	Grab
Phosphorus, total (as P) (00665)	REPORTD	*****		0.10	*****	0.10	Quarterly	Grab
Stage Type: Instream Monitoring	REQRMNT	*****		Daily Maximum Monitoring Required	*****	Monthly Average Monitoring Required	Quarterly	Grab

GENERAL PERMIT REQUIREMENTS OR COMMENTS
OR STATE-SPECIFIC COMMENTS
PARAMETER-SPECIFIC COMMENTS

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

OPERATOR IN RESPONSIBLE CHARGE		7305
Gar. Hutchcraft		CERTIFICATE NUMBER
TYPED OR PRINTED NAME		573-365-0455
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		2017-08-03 11:42:56
Gar. F Hutchcraft	Gar. F Hutchcraft	Date
TYPED OR PRINTED NAME	SIGNATURE	

Page 2

State of Missouri
Department of Natural Resources
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Dep. of Natural Resources
(REGIONAL OFFICE)
Southwest Regional Office
2040 W. Woodland
Springfield, MO 65807-6013
4178914300
4178914399 (fax)

PERMITTEE NAME/ADDRESS

NAME Lake of the Ozarks Regional WWT
ADDRESS #5 Anderson Road
LAKE OZARK, MO 65049

MONITORING PERIOD					
PERMIT NUMBER	DISCHARGE NUMBER				
MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
2017	01	01	2017	12	31

FROM

TO

NOTE: READ PERMIT AND GENERAL DISCHARGE CONDITIONS BEFORE COMPLETING THIS FORM

Parameter		MASS	Unit	CONCENTRATION	Unit	FREQUENCY OF ANALYSIS	SAMPLE TYPE	LAB CODE
Toxicity, ceriodaphnia acute (61425)	REPORTED	*****	*****	0	*****	Annual	24 Hour Composite	
Stage Type: End of Pipe	REQUIRED	*****	*****	Daily Maximum Monitoring Required	*****	Annual	24 Hour Composite	
Toxicity, pimephales acute (61427)	REPORTED	*****	*****	0	*****	Annual	24 Hour Composite	
Stage Type: End of Pipe	REQUIRED	*****	*****	Daily Maximum Monitoring Required	*****	Annual	24 Hour Composite	

GENERAL PERMIT REQUIREMENTS OR COMMENTS,
OR ADDITIONAL COMMENTS
PLEASE REPEAT HERE COMMENTS

I certify under penalty of perjury that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my review of the prepared information, I believe this system and those persons directly responsible for gathering the information and submitting it, in the past six months, have acted in accordance with the law and have not knowingly or negligently made or caused any material misstatements, omissions, or falsehoods in this document.

OPERATOR IN RESPONSIBLE CHARGE	
Gary Hutchcraft	7305
TYPED OR PRINTED NAME	CERTIFICATE NUMBER
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE
Gary F Hutchcraft	573-365-2145
TYPED OR PRINTED NAME	2017-08-05 11:51:05
SIGNATURE	Date

Page 1

LAKE OZAWAKABE BEACH WHPPT
Open area report

LAKE OZAWAKABE BEACH WHPPT
Open area report

LINE	ITEM	PLANT PATTERNS										PLANT PATTERNS AND LOTS AND OPEN BOUNDING										TOTAL		TOTAL	
		1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	11	12		
1	RI	0.25	1.66	2.25	7.48	21.2	C	0	70	1.740	1.80	104	7.65	2.5	2.200	2.60	105	7.73	2.5	1.0	1.0	2.30	9.97	5.6	2.11
2	RI	0.10	2.10	2.42	7.39	21.3	C	0	64	4.700	4.90	107	7.66	2.0	2.020	2.10	104	7.75	2.2	1.0	2.0	1.0	2.41	5.95	1.2
3	RI	0.10	2.10	2.42	7.39	21.3	C	0	71	1.830	1.10	160	7.72	2.1	1.630	1.20	161	7.73	1.7	1.5	1.0	1.0	2.25	8.00	5.2
4	RI	0.25	2.00	2.40	7.44	21.3	C	0	71	1.830	1.90	101	7.73	2.0	1.470	1.30	97	7.79	2.0	1.0	1.0	1.0	2.44	8.05	5.1
5	BP	0.10	2.24	2.57	7.29	21.2	R	2.0	71	1.860	4.00	132	7.67	1.5	1.360	1.10	92	7.66	1.4	1.0	1.5	1.0	2.71	5.99	2.2
6	BP	0.10	2.24	2.57	7.29	21.2	PC	1.0	71	4.360	4.10	91	7.71	2.0	3.560	1.10	87	7.73	2.0	1.0	1.5	1.0	2.71	5.97	2.2
7	BP	0.10	2.16	2.49	7.18	21.7	C	0	71	3.000	1.30	77	7.68	2.0	1.840	1.70	91	7.77	1.5	2.0	2.5	1.5	2.24	8.02	4.8
8	BP	0.10	2.16	2.49	7.18	21.7	C	0	64	3.900	1.30	77	7.68	2.0	1.840	1.70	91	7.77	1.5	2.0	2.5	1.5	2.24	8.02	4.8
9	BP	0.10	2.16	2.49	7.18	21.7	C	0	68	1.610	1.00	91	7.71	2.0	1.600	1.40	94	7.74	1.8	1.5	2.0	1.5	2.33	8.05	4.6
10	BP	0.10	2.16	2.49	7.18	21.7	C	0	71	4.140	4.00	109	7.70	1.8	1.140	1.40	91	7.73	1.6	1.0	2.0	1.5	2.14	8.10	4.8
11	BP	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
12	BP	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
13	BP	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
14	BP	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
15	BP	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
16	BP	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
17	BP	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
18	BP	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
19	BP	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
20	GH	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
21	GH	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
22	BP	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
23	BP	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
24	BP	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
25	RI	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
26	RI	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
27	BP	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
28	BP	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
29	RI	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
30	RI	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
31	DP	0.10	2.16	2.49	7.18	21.7	C	0	77	4.320	4.00	102	7.77	2.2	1.560	1.60	91	7.75	1.9	2.0	2.0	1.5	2.14	8.10	4.8
TOTAL																									
MAX																									
MIN																									
AVG																									

Use following abbreviations: R=road, S=slope, L=horizontal, C=circular, PC=point, AB=

Date: 8/12/2017

Approved by: CH

Prepared by: CH, PH, TP

June 26 2017

Gary Hutchcraft
Alliance Water Resources
#3 Anderson Road
Lake Ozark, MO 65049

2017
WET TEST

Re Lab Project Number: 60246950
Client Project ID: Wet Test

Dear:

Enclosed are the analytical results for sample(s) received by the laboratory. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any question concerning this report, please feel free to contact me.

Sincerely,



Tim Harrell
Tim.Harrell@pacelabs.com
Technical Director

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical Services, Inc.
808 West McKay, Frontenac, KS 66763

LABORATORY REPORT:

CLIENT: Gary Hutchcraft
Alliance Water Resources
#3 Anderson Road
Lake Ozark, MO 65049

Date Reported: 6-26-17
Date Initiated: 6-21-17
Time Set: 13:40
Date Terminated: 6-23-17

BIOMONITORING STUDY

ACUTE TOXICITY

Permit # MO-0103241

FINDING AND CONCLUSIONS:

Acute toxicity testing was performed on duplicate samples of effluent collected from the Alliance Water Resources Lake Ozark WWTP effluent discharge. Acute toxicity, as defined by significant mortality for at least one of two aquatic test species during a 48 hour period of exposure, was not detected in Ceriodaphnia exposed to the 100% effluent (AEC), and was not detected in fathead minnows exposed to the 100% effluent. The LC50 for the Ceriodaphnia was >100% with a TUa <1 and >100% with a TUa <1 for the Pimephales. The test species utilized in this test were the water flea, Ceriodaphnia dubia and the fathead minnow, Pimephales promelas. Detailed results of the toxicity testing are provided in the Acute Toxicity Reports. In addition to the acute toxicity testing, water temperature, pH, dissolved oxygen, total hardness, total alkalinity, conductivity, and chlorine determinations were performed on the effluent and control samples.

SAMPLING PROCEDURES:

Alliance Water Resources Lake Ozark WWTP personnel collected a sample at the Alliance Water Resources Lake Ozark WWTP effluent discharge. The sample was preserved with ice and transported to Pace Analytical by Commercial Carrier.

REPORT OF LABORATORY ANALYSIS

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INTRODUCTION:

The purpose of this test was to determine the acute toxicity of the Alliance Water Resources Lake Ozark WWTP effluent on the freshwater invertebrate, Ceriodaphnia dubia and the fathead minnow, Pimephales promelas. These tests were conducted at Pace Analytical Services, Inc., Frontenac, KS.

TEST ORGANISMS:

Ceriodaphnia dubia - The genetic stock of Ceriodaphnia dubia used in this acute toxicity Test were originally obtained from a private breeder. Ceriodaphnia are cultured in house at Pace Analytical Services, Inc. Culture methods of Ceriodaphnia were obtained from EPA821-C-02-006 November 2002.

Pimephales promelas - The fathead minnows used in this acute toxicity test were cultured in-house at Pace Analytical Services, Inc., Frontenac, KS and/or were obtained from a private breeder. Fathead minnows are maintained at Pace Analytical Services until use for acute toxicity between the ages of 1 and 14 days. Information for culturing fathead minnows was taken from EPA821-C-02-006 November 2002.

MATERIALS AND METHODS:

Procedures used in the acute toxicity tests are described in Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (USEPA, 2002).

Alliance Water Resources Lake Ozark WWTP personnel collected the effluent tested from the Alliance Water Resources Lake Ozark WWTP discharge. Testing was performed using a 100% effluent, an upstream, a series of dilution, and a synthetic control. The toxicity test was initiated within 36 hours of sample collection.

Effluent and synthetic control test solutions were not aerated during the testing period.

Ceriodaphnia ACUTE METHODS:

This static test was ran using 40 ml glass vials containing 25 ml of test solution. Food was administered before the test. Five Ceriodaphnia neonates (<24 hr old) were randomly selected and placed in each of 4 replicates of test solution. A total of 20 organisms per concentration were tested. Observations of mortality were made at 24 and 48 hours of exposure.

REPORT OF LABORATORY ANALYSIS

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Pimephales ACUTE METHODS:

This static toxicity test was conducted using 500 ml polypropylene container as test chambers containing 250 ml of test solution. Food was administered prior to test initiation, but not during the testing period. Ten Pimephales, 1 - 14 days old, from a single spawn, were randomly selected and placed in each of 4 test chambers. A total of 40 organisms were exposed to each test concentration. Observations of mortality were made at 24 and 48 hours of exposure.

WATER QUALITY METHODS:

Prior to test initiation, temperature, dissolved oxygen, pH, total alkalinity, total hardness, and total residual chlorine were measured in the effluent and in the controls. At 24 and 48 hours of exposure, temperature, dissolved oxygen, pH, and conductance were measured in the effluent sample and the controls.

DATA ANALYSIS:

Statistically significant ($p < 0.05$) mortality is determined by Dunnet's procedure using average percent survival of each test concentration versus the average survival of the controls. If significant mortality occurs, median lethal concentrations (LC50) are calculated using effluent concentrations and their corresponding percent mortality data. The LC50's and the 95% confidence intervals are calculated where appropriate by the Spearman-Kärber method. TUa is calculated by $TUa = 100/LC50$. Statistical analysis is accomplished by following steps in EPA/600/4-90/027f, August 1993 and by use of Toxstat version 3.4.

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc.

RESULTS:

THE Ceriodaphnia MORTALITY RESULTS - There was no significant mortality observed of the freshwater invertebrate, Ceriodaphnia dubia, during the 48 hour exposure period to the 100% effluent concentrations. There was no significant mortality in the synthetic control. The LC50 value of the sample to Ceriodaphnia is approximately >100%.

Ceriodaphnia MORTALITY DATA

ALIVE

CONC.	REP #	0 HOURS	24 HOURS	48 HOURS	% MORT
SYNTHETIC	1	5	5	5	0
"	2	5	5	5	0
"	3	5	5	5	0
"	4	5	5	5	0
Upstream	1	5	5	5	0
"	2	5	5	5	0
"	3	5	5	5	0
"	4	5	5	5	0
6.25%	1	5	5	5	0
"	2	5	5	5	0
"	3	5	5	5	0
"	4	5	5	5	0
12.5%	1	5	5	5	0
"	2	5	5	5	0
"	3	5	5	5	0
"	4	5	5	5	0
25%	1	5	5	5	0
"	2	5	5	5	0
"	3	5	5	5	0
"	4	5	5	5	0
50%	1	5	5	5	0
"	2	5	5	5	0
"	3	5	5	5	0
"	4	5	5	5	0
100%	1	5	5	5	0
"	2	5	5	5	0
"	3	5	5	5	0
"	4	5	5	5	0

AVG. MORTALITY @ AEC (100% EFFLUENT) = 0.0%

REPORT OF LABORATORY ANALYSIS

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THE Pimephales RESULTS - Minnows exposed to effluent collected at the Alliance Water Resources Lake Ozark WWTP effluent discharge exhibited no significant mortality in the 100% effluent concentration during the 48 hr exposure period. The synthetic control showed no significant mortality during the testing period. The LC50 value of the effluent to fathead minnows is estimated to be >100%.

CONC.	REP #	0 HOURS	24 HOURS	48 HOURS	% MORTALITY
SYNTHETIC	1	10	10	10	0
"	2	10	10	10	0
"	3	10	10	10	0
"	4	10	10	10	0
Upstream	1	10	10	10	0
"	2	10	10	10	0
"	3	10	10	10	0
"	4	10	10	10	0
6.25%	1	10	10	10	0
"	2	10	10	10	0
"	3	10	10	10	0
"	4	10	10	10	0
12.5%	1	10	10	10	0
"	2	10	10	10	0
"	3	10	10	10	0
"	4	10	10	10	0
25%	1	10	10	10	0
"	2	10	10	10	0
"	3	10	10	10	0
"	4	10	10	10	0
50%	1	10	10	10	0
"	2	10	10	10	0
"	3	10	10	10	0
"	4	10	10	10	0
100%	1	10	10	10	0
"	2	10	10	10	0
"	3	10	10	10	0
"	4	10	10	10	0

AVG. MORTALITY @ AEC (100% EFFLUENT) = 0.0%

REPORT OF LABORATORY ANALYSIS

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PACE # 60246950

Pace Analytical Services, Inc
9608 Loiret Blvd
Lenexa, KS 66219
Phone: 913.599.5665
Fax: 913.599.1759

WATER CHEMISTRY RESULTS:

Total residual chlorine (Cl₂) - The sample from the Alliance Water Resources Lake Ozark WWTP had <0.1 mg/l detectable level of total residual chlorine upon receipt in the laboratory.

Dissolved Oxygen (D.O.) - Dissolved oxygen reading of the 100% effluent was 8.00 mg/l after being raised to the test temperature of 25° C. At termination D.O. was 7.50 mg/l in the 100% effluent, which falls into acceptable limits. Aeration was not required in this test.

pH - The pH of the 100% effluent was 8.30 upon receipt in the laboratory and the synthetic control had a 7.48. At termination the pH measurement in the 100% effluent was 8.67.

Conductance - The conductance of the 100% effluent was 1361 umhos and the synthetic control was 328 umhos.

REPORT OF LABORATORY ANALYSIS

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INITIAL WATER QUALITY:

Initial Measurements Synthetic Water						
pH	D.O. (mg/l)	Cond. (umhos)	Cl2 (mg/l)	Temp (C)	Hard (mg/l)	Alk (mg/l)
7.48	8.20	338	<0.1	25.0	94	62

Initial Measurements of 100% Effluent						
PH	D.O. (mg/l)	Cond. (umhos)	Cl2 (mg/l)	Temp (C)	Hard (mg/l)	Alk (mg/l)
8.30	8.00	1361	<0.1	25.0	380	294

Initial Measurements of Upstream						
PH	D.O. (mg/l)	Cond. (umhos)	Cl2 (mg/l)	Temp (C)	Hard (mg/l)	Alk (mg/l)
8.14	8.10	704	<0.1	25.0	294	282

TEST WATER QUALITY:

24-hour Water Quality Measurements				
EFFLUENT CONC (%)	PH	D.O. (mg/l)	TEMP (C)	COND. (umhos)
Synthetic	7.48	7.40	25.1	354
Upstream	8.41	7.50	25.1	715
6.25%	8.42	7.50	25.1	736
12.5%	8.43	7.50	25.1	788
25%	8.46	7.50	25.1	804
50%	8.54	7.60	25.1	922
100%	8.60	7.60	25.1	1385

48-hour Water Quality Measurements				
EFFLUENT CONC (%)	PH	D.O. (mg/l)	TEMP (C)	COND. (umhos)
Synthetic	7.79	7.20	25.0	361
Upstream	8.50	7.30	25.0	791
6.25%	8.52	7.30	25.0	804
12.5%	8.54	7.40	25.0	815
25%	8.57	7.40	25.0	832
50%	8.60	7.50	25.0	960
100%	8.67	7.50	25.0	1401

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QUALITY ASSURANCE:

The absence of control mortality during this test indicated the health of the organisms and indicated that any significant mortality in the test concentrations is not due to contaminants or variations in test conditions. Reference toxicity tests are routinely performed by staff members of our Toxicology Department.

REFERENCE TOXICANT (NaCl)

Ceriodaphnia

OF LIVE ORGANISMS

CONC OF TOXICANT	TEST INITIATION	24 HOUR EXPOSURE	48 HOUR EXPOSURE
3.0 g/l	20	4	0
2.5 g/l	20	16	10
2.0 g/l	20	20	18
1.5 g/l	20	20	20
1.0 g/l	20	20	20

LC50 = 2.5 g/l NaCl

REFERENCE TOXICANT (NaCl)

Pimephales

OF LIVE ORGANISMS

CONC OF TOXICANT	TEST INITIATION	24 HOUR EXPOSURE	48 HOUR EXPOSURE
10.0 g/l	40	10	0
8.0 g/l	40	35	25
6.0 g/l	40	39	37
4.0 g/l	40	40	40
2.0 g/l	40	40	40

LC50 = 8.27g/l NaCl

Submitted By:

Tim Harrell

Timothy Harrell
Technical Director

REPORT OF LABORATORY ANALYSIS

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MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
WHOLE EFFLUENT TOXICITY (WET) TEST REPORT
(TO BE ATTACHED TO WET TESTS FOR SUBMISSION TO THE REGULATORY AUTHORITY)

PART A - TO BE COMPLETED IN FULL BY PERMITTEE

FACILITY NAME
LAKE OF THE OZARKS REGIONAL WWTP #1

PERMIT NUMBER
MO-0103241

COLLECTOR NAME
GARY HUTCHCRAFT

TEST SITE NAME AND DESCRIPTION
Bowl-in Hollow Creek

PERMIT ALLOWABLE EFFLUENT CONCENTRATION (AEC)
100%

SAMPLE NUMBER
EFFLUENT 6024645000 UPSTREAM 6024645000.3

PERMITTED EFFLUENT DAILY MAXIMUM LIMITATION FOR
CHLORINE **N/A** mg/L

DATE AND TIME COLLECTED **6/22/17 0900** UPSTREAM **6/30/17 0905**

PERMIT OUTFALL NUMBER
OUTFALL # 001

EFFLUENT SAMPLE TYPE (CHECK ONE)
☒ 24 HR COMPOSITE ☐ GRAB ☐ OTHER

UPSTREAM SAMPLE TYPE (CHECK ONE)
☐ 24 HR COMPOSITE ☒ GRAB ☐ OTHER

PERMITTED EFFLUENT DAILY MAXIMUM LIMITATION FOR
AMMONIA **6.0** mg/L

PART B - TO BE COMPLETED IN FULL BY PERFORMING LABORATORY

PERFORMING LABORATORY
PAGE ANALYTICAL SERVICES

FINAL REPORT NUMBER
60246950

DATE OF LAST REFERENCE TOXICANT TESTING
6/6/17

DATE AND TIME SAMPLES RECEIVED AT LABORATORY
6/21/17 8:15

SAMPLE DECHLORINATED PRIOR TO ANALYSIS? ☐ YES ☒ NO
EFFLUENT **UPSTREAM**

SAMPLE FILTERED PRIOR TO ANALYSIS? ☐ YES ☒ NO
EFFLUENT **UPSTREAM**

FILTER MESH SIZE **2**

SAMPLE SEPARATED DURING TESTING?
☐ YES ☒ NO

PH ADJUSTED? ☐ YES ☒ NO
EFFLUENT **UPSTREAM**

TEST TYPE
ACUTE

TEST DURATION
48 HOURS

TEST METHOD
EPA 2002 AND 2000

TEST START DATE AND TIME
6/21/17 13:40

TEST ORGANISM #1 AND AGE
DUBIA <24 HOURS

90 PERCENT OR GREATER SURVIVAL IN
SYNTHETIC CONTROL? ☒ YES ☐ NO

EFFLUENT ORGANISM #1 PERCENT MORTALITY
AT AEC
0

UPSTREAM ORGANISM #1 PERCENT MORTALITY
0

TEST RESULT AT AEC FOR ORGANISM #1
☒ PASS ☐ FAIL

TEST END DATE AND TIME
6/23/17 13:50

TEST ORGANISM #2 AND AGE
FATHEAD 8 DAYS

DILUTION WATER USED TO ACHIEVE AEC
UPSTREAM

EFFLUENT ORGANISM #2 PERCENT MORTALITY
AT AEC
0

UPSTREAM ORGANISM #2 PERCENT MORTALITY
0

TEST RESULT AT AEC FOR ORGANISM #2
☒ PASS ☐ FAIL

PART A - TO BE COMPLETED IN FULL BY PERMITTEE

PARAMETER	RESULT	METHOD	WHEN ANALYZED
Temperature °C	25.0	SM 2550B	6/21/17
pH Standard Units	8.30	7.95SM 4500-H+ B	6/21/17
Conductance µMhos	1361	EPA 120.1	6/21/17
Dissolved Oxygen mg/L	8.00	SM 4500-O G	6/21/17
Total Residual Chlorine mg/L	<1	SM 4500-CL G	6/21/17
Unionized Ammonia mg/L	<.1	EPA 350.1	7/10/17
* Total Alkalinity mg/L	294	SM 2320 B	6/21/17
* Total Hardness mg/L	380	SM2340 C	6/21/17

* Recommended by EPA guidance, not a required analysis

1. Samples shall only be filtered if indigenous organisms are present that may be confused with, or attack the test organisms.
2. Filters shall have a sieve size of 60 microns or greater.

CONTINUED ON PAGE 2

WHOLE EFFLUENT TOXICITY (WET) TEST REPORT (Continued)
 (TO BE ATTACHED TO WET TESTS FOR SUBMISSION TO THE REGULATORY AUTHORITY)

MINIMUM REQUIRED ANALYTICAL RESULTS FOR THE 100 PERCENT UPSTREAM SAMPLE³

PARAMETER	RESULT	METHOD	WHEN ANALYZED
Temperature °C	25.0	SM 2550B	6/21/17
pH Standard Units	8.19	SM 4500-H+ B	6/21/17
Conductance µMhos	704	EPA 120.1	6/21/17
Dissolved Oxygen mg/L	8.10	SM 4500-O G	6/21/17
Total Residual Chlorine mg/L	<.1	SM 4500-CL G	6/21/17
Unionized Ammonia mg/L	<.1	EPA 350.1	7/10/17
* Total Alkalinity mg/L	282	SM 2320 B	6/21/17
* Total Hardness mg/L	294	SM2340 C	6/21/17

* Recommended by EPA guidance, not a required analysis.

PRELIMINARY TEST ACCEPTABILITY MATRIX (FOR USE BY PERMITTEE IN DETERMINING TEST VALIDITY)
MINIMUM REQUIRED ANALYTICAL RESULTS FOR THE 100 PERCENT UPSTREAM SAMPLE³

PERMIT ALLOWABLE EFFLUENT CONCENTRATION, or AEC: As indicated on permit. Test is invalid otherwise.

EFFLUENT SAMPLE TYPE: As indicated on permit. Test is invalid otherwise.

TEST TYPE: Acute Static Non-Renewal Test or other as indicated on permit. Test is invalid otherwise.

TEST DURATION: Forty-eight hours or as indicated on permit. Test is invalid otherwise.

TEST ORGANISMS: As indicated on permit. Test is invalid otherwise.

DILUTION WATER USED TO ACHIEVE AEC: Upstream receiving water required if available.

TEST METHOD: The only acceptable method is the most current edition of *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, or other as specifically assigned by EPA for determining National Pollutant Discharge Elimination System, or NPDES, compliance. Test is invalid otherwise.

TEST START DATE AND TIME: Unless otherwise specified in writing by EPA, if >36 hours lapse between collection and initiation, test is invalid.

FILTER MESH SIEVE SIZE: Unless otherwise specified in writing by EPA, if sieve size is smaller than 60 microns, test is invalid.

90 PERCENT OR GREATER SURVIVAL IN LABORATORY CONTROL(S) (Y/N): If no, test is invalid.

PARAMETER	RESULT	NOTES	WHEN ANALYZED
Temperature °C	0 – 6	Unless received by the laboratory on the same day as collected, values outside this range invalidate the test.	Upon receipt

³ Where no upstream control is available, enter results from laboratory or synthetic control.

July 20, 2017

Gary Hutchcraft
Alliance Water Resources
#3 Anderson Road
Lake Ozark, MO 65049

2017 3RD.
QUARTER
503'S

RE: Project: 503
Pace Project No.: 60248088

Dear Gary Hutchcraft:

Enclosed are the analytical results for sample(s) received by the laboratory between July 06, 2017 and July 07, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Heather Wilson
heather.wilson@pacelabs.com
1(913)563-1407
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 503
Pace Project No: 60248088

Sample: FC #1 Lab ID: 60248088001 Collected: 07/05/17 10:07 Received: 07/06/17 08:50 Matrix: Solid
Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Analytical Method: SM 9222D Preparation Method: SM 9222D								
MBIO 9222DS Fecal Coliform								
Fecal Coliforms	2809	CFU/g	28.1	1	07/06/17 09:40	07/07/17 10:00		H3 R5, u3
Analytical Method: ASTM D2974								
Percent Moisture								
Percent Moisture	96.4	%	0.50	1		07/10/17 16:23		
Analytical Method: SM 2540G								
2540G Total Percent Solids								
Total Solids	3.6	%	0.10	1		07/10/17 16:23		

Sample: FC #2 Lab ID: 60248088002 Collected: 07/05/17 10:08 Received: 07/06/17 08:50 Matrix: Solid
Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Analytical Method: SM 9222D Preparation Method: SM 9222D								
MBIO 9222DS Fecal Coliform								
Fecal Coliforms	2915	CFU/g	29.2	1	07/06/17 09:40	07/07/17 10:00		H3 R5, u3
Analytical Method: ASTM D2974								
Percent Moisture								
Percent Moisture	96.6	%	0.50	1		07/10/17 16:26		
Analytical Method: SM 2540G								
2540G Total Percent Solids								
Total Solids	3.4	%	0.10	1		07/10/17 16:26		

Sample: FC #3 Lab ID: 60248088003 Collected: 07/05/17 10:09 Received: 07/06/17 08:50 Matrix: Solid
Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Analytical Method: SM 9222D Preparation Method: SM 9222D								
MBIO 9222DS Fecal Coliform								
Fecal Coliforms	2907	CFU/g	29.1	1	07/06/17 09:40	07/07/17 10:00		H3 R5, u3
Analytical Method: ASTM D2974								
Percent Moisture								
Percent Moisture	96.6	%	0.50	1		07/10/17 16:28		
Analytical Method: SM 2540G								
2540G Total Percent Solids								
Total Solids	3.4	%	0.10	1		07/10/17 16:28		

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ANALYTICAL RESULTS

Project 503
Pace Project No 60248088

Sample: FC #4 Lab ID: 60248088004 Collected: 07/05/17 10:10 Received: 07/06/17 08:50 Matrix: Solid
Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Analytical Method: SM 9222D Preparation Method: SM 9222D								
MBIO 9222DS Fecal Coliform								
Fecal Coliforms	5650	CFU/g	28.3	1	07/06/17 09:40	07/07/17 10:00		H3.R5. u3
Analytical Method: ASTM D2974								
Percent Moisture	96.5	%	0.50	1		07/10/17 16:29		
Analytical Method: SM 2540G								
2540G Total Percent Solids	3.5	%	0.10	1		07/10/17 16:29		
Total Solids								

Sample: FC #5 Lab ID: 60248088005 Collected: 07/05/17 10:11 Received: 07/06/17 08:50 Matrix: Solid
Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Analytical Method: SM 9222D Preparation Method: SM 9222D								
MBIO 9222DS Fecal Coliform								
Fecal Coliforms	8333	CFU/g	27.8	1	07/06/17 09:40	07/07/17 10:00		H3.R5. u3
Analytical Method: ASTM D2974								
Percent Moisture	96.4	%	0.50	1		07/10/17 16:30		
Analytical Method: SM 2540G								
2540G Total Percent Solids	3.6	%	0.10	1		07/10/17 16:30		
Total Solids								

Sample: FC #6 Lab ID: 60248088006 Collected: 07/05/17 10:12 Received: 07/06/17 08:50 Matrix: Solid
Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Analytical Method: SM 9222D Preparation Method: SM 9222D								
MBIO 9222DS Fecal Coliform								
Fecal Coliforms	2915	CFU/g	29.2	1	07/06/17 09:40	07/07/17 10:00		H3.R5. u3
Analytical Method: ASTM D2974								
Percent Moisture	96.6	%	0.50	1		07/10/17 16:31		
Analytical Method: SM 2540G								
2540G Total Percent Solids	3.4	%	0.10	1		07/10/17 16:31		
Total Solids								

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ANALYTICAL RESULTS

Project: 503
Pace Project No: 60248088

Sample: FC #7 Lab ID: 60248088007 Collected: 07/05/17 10:13 Received: 07/06/17 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform								
Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	2809	CFU/g	28.1	1	07/06/17 09:40	07/07/17 10:00		H3.R5, u3
Geometric Mean								
Analytical Method: SM 2710B								
Fecal Coliforms	3682	CFU/g	28.1	1		07/07/17 10:00		
Percent Moisture								
Analytical Method: ASTM D2974								
Percent Moisture	96.4	%	0.50	1		07/10/17 16:34		
2540G Total Percent Solids								
Analytical Method: SM 2540G								
Total Solids	3.6	%	0.10	1		07/10/17 16:34		

Sample: 503 REGS Lab ID: 60248088008 Collected: 07/05/17 10:05 Received: 07/07/17 11:18 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Red. Interference								
Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	4.9	mg/kg	1.4	1	07/17/17 14:50	07/19/17 18:33	7440-38-2	
Cadmium	2.8	mg/kg	0.68	1	07/17/17 14:50	07/19/17 18:33	7440-43-9	
Chromium	42.0	mg/kg	0.68	1	07/17/17 14:50	07/19/17 18:33	7440-47-3	
Copper	619	mg/kg	1.4	1	07/17/17 14:50	07/19/17 18:33	7440-50-8	
Lead	26.7	mg/kg	0.68	1	07/17/17 14:50	07/19/17 18:33	7439-92-1	
Molybdenum	11.9	mg/kg	2.7	1	07/17/17 14:50	07/19/17 18:33	7439-98-7	
Nickel	22.0	mg/kg	0.68	1	07/17/17 14:50	07/19/17 18:33	7440-02-0	
Potassium	2600	mg/kg	67.9	1	07/17/17 14:50	07/19/17 18:33	7440-09-7	
Selenium	6.9	mg/kg	2.0	1	07/17/17 14:50	07/19/17 18:33	7782-49-2	
Silver	3.8	mg/kg	0.95	1	07/17/17 14:50	07/19/17 18:33	7440-22-4	
Zinc	1190	mg/kg	13.6	1	07/17/17 14:50	07/19/17 18:33	7440-66-6	
7471 Mercury								
Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	ND	mg/kg	0.38	1	07/14/17 17:11	07/17/17 16:14	7439-97-6	
Percent Moisture								
Analytical Method: ASTM D2974								
Percent Moisture	96.3	%	0.50	1		07/10/17 16:36		
2540G Total Percent Solids								
Analytical Method: SM 2540G								
Total Solids	3.7	%	0.10	1		07/10/17 16:36		
Plant Available Nitrogen								
Analytical Method: SM 2710B								
Plant Available Nitrogen	19000	mg/kg	2.0	1		07/19/17 13:18		
Total Organic Nitrogen Soil								
Analytical Method: TKN-NH3 Calculation								
Total Organic Nitrogen	44000	mg/kg	50.0	1		07/18/17 12:45		

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ANALYTICAL RESULTS

Project 503
Pace Project No 60248088

Sample: 503 REGS Lab ID: 60248088008 Collected 07/05/17 10:05 Received: 07/07/17 11:18 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No	Qual
350.1 Ammonia Analytical Method: EPA 350.1								
Nitrogen, Ammonia	14500	mg/kg	136	5		07/10/17 15:09	7664-41-7	
351.2 Total Kjeldahl Nitrogen Analytical Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	58500	mg/kg	6180	5		07/18/17 10:26	7727-37-9	
365.4 Total Phosphorus Analytical Method: EPA 365.4 Preparation Method: EPA 365.4								
Phosphorus	24300	mg/kg	1330	5	07/10/17 09:46	07/11/17 11:21	7723-14-0	
9056 IC Anions Analytical Method: EPA 9056 Preparation Method: EPA 9056								
Nitrate as N	ND	mg/kg	27.0	1	07/16/17 08:00	07/16/17 15:39	14797-55-8	
Nitrite as N	ND	mg/kg	27.0	1	07/16/17 08:00	07/16/17 15:39	14797-65-0	

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CWA - Non-Potable Water
FINAL Performance Evaluation Report
NSI Laboratory Proficiency Testing Program
Study DMRQA-37 - Shipped: 03/24/2017 - Closed: 07/07/2017 - Reports Printed On: 07/14/2017
Participant USEPA Labcode: MO01096

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate: AP-1693
1-800-234-7837



This evaluation report is being submitted to:
Lake of the Ozarks Regional WWTP #1
Attention: Gary Hutchcraft
PO Box 1985
Lake Ozark, MO, 65049

LabCode and Accreditation Information:

Send Results to: EPA Only
EPA Lab Code: MO01096
State Lab Code:
Primary Agency: EPA Region VII -- EPA Region VIII(WWPD/WENF)
Bryant C. Harris
Water Enforcement 1201 Renner Blvd.
Lenexa, KS 66219
Reports to : EPA Region VII

Participant Information

NSI Lab Code: N05248
Permittee Code: MO0103241

This report was submitted by Gary Hutchcraft, Local Manager II.

Lake of the Ozarks Regional WWTP #1
PO Box 1985
Lake Ozark, MO, 65049
573-365-0455

Please contact Mark Hammersia at NSI Lab Solutions if you have any questions about this report
(800) 234-7837 - mark.hammersia@nsilabsolutions.com

MIC-003 Total and Fecal Coliform - Lake of the Ozarks Regional WWTP #1 - NSI Lab Solutions/DMRQA-37

NELAC Analyte #	Analyte	NELAC Method Code	Method Description	Reported Value Mean*	Study Value	Assigned Value	Units	EPA Code ¹	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
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2525	E coli, MF	n/a	SM 9222B 21ED	930	475	475	cfu/100mL	MO01096	14.0 to 8640	ACCEPT	7/17/17	GARY HUTCHCRAFT
2500	Total Coliform, MF	--	Not Reported --									
2500	Total Coliform, MPN	--	Not Reported --									
2530	Fecal Coliform, MF	--	Not Reported --									
2530	Fecal Coliform, MPN	--	Not Reported --									
2525	E coli, MPN	--	Not Reported --									

PEI-026 Demand - Lake of the Ozarks Regional WWTP #1 - NSI Lab Solutions/DMRQA-37

NELAC Analyte #	Analyte	NELAC Method Code	Method Description	Reported Value Mean*	Study Value	Assigned Value	Units	EPA Code ¹	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
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1530	ROD	n/a	SM 5210B 21ED	47.3	60.1	55.7	mg/L	MO01096	29.7 to 83.7	ACCEPT	7/14/17	GARY HUTCHCRAFT
1565	COD	--	Not Reported --									
2040	TOC	--	Not Reported --									
1555	CBOD	--	Not Reported --									

PEI-035 pH - Lake of the Ozarks Regional WWTP #1 - NSI Lab Solutions/DMRQA-37

NELAC Analyte #	Analyte	NELAC Method Code	Method Description	Reported Value Mean*	Study Value	Assigned Value	Units	EPA Code ¹	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
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1900	pH	n/a	SM 4500H+B 21ED	7.37	7.27	7.22	units	MO01096	7.02 to 7.42	ACCEPT	7/17/17	GARY HUTCHCRAFT
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PEI-079 Residue - Lake of the Ozarks Regional WWTP #1 - NSI Lab Solutions/DMRQA-37

NELAC Analyte #	Analyte	NELAC Method Code	Method Description	Reported Value Mean*	Study Value	Assigned Value	Units	EPA Code ¹	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
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1960	Non-Filterable Residue (TSS)	n/a	SM 2540D 21ED	54.0	49.9	54.1	mg/L	MO01096	42.4 to 61.6	ACCEPT	7/17/17	GARY HUTCHCRAFT
1950	Total Solids	--	Not Reported --									

PEI-138 Simple Nutrients - Lake of the Ozarks Regional WWTP #1 - NSI Lab Solutions/DMRQA-37

NELAC Analyte #	Analyte	NELAC Method Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	EPA Code ¹	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1515	Ammonia as N	n/a	SM 4500NH3D 21ED	10.2	11.1	10.7	mg/L	2.21	MO01096	8.53 to 12.8	ACCEPT	7/14/17	GARY HUTCHCRAFT
1810	Nitrate as N	-- Not Reported --											
1870	Orthophosphate as P	-- Not Reported --											
1820	Nitrate-nitrite as N	-- Not Reported --											

Assigned Values

All assigned values are established in a manner compliant with the current NELAC FOT for Non-Potable Water. With the exception of TDS and Specific Conductance assigned values are equal to the analytically verified gravimetric true value of the PT sample. For TDS and Specific Conductance, the assigned value is set at the robust study mean.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. A total of 10 randomly chosen samples are taken from the production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <0.50%.

Batch Homogeneity

Each individual PT sample batch is thoroughly mixed in production and guaranteed to be homogeneous. Homogeneity is verified analytically according to in-house SOP.

Stability

Each analyte has been verified stable through the end of the PT study by either long term monitoring or study closing stability testing.

Acceptance Limits

Acceptance limits are set according to current NELAC limits. Where no limits are set by NELAC, limits are set to ± 3 standard deviations around the study mean after outlier correction.

Accredited Analytes

All analytes are included under our ISO 17043/ITNI scope of accreditation (Certificate #: AP-1693) unless otherwise noted with an asterisk (*).

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

* The study mean and standard deviation are presented after outlier correction and are based upon pooled reported results without consideration for analytical technology.

¹ If present, the EPA Code of the lab that actually performed the analysis for this analyte.

Reviewed/Approved By: _____

Mark Hammersla, President

Date: _____

Mark Hammersla 7/20/17

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