
Woodland Acres Wastewater Facility Improvements - KY0091600
Design Considerations – Construction Permit Application
Date: February 14, 2022

Introduction

The purpose of this document is to specifically address the criteria used for the design of various improvements to the Woodland Acres Wastewater Treatment Facility, and to describe pertinent information required in Section IV - "Design Considerations" of the Construction Permit Application for said improvements.

Design Criteria

The process flow diagram for the proposed improvements is included in Section A of the appendix to this specific document.

Raw sewage will continue to enter the facility directly from the gravity collection system to the existing wet weather surge basin. A new 4,100 gallon wet weather tank will be added to the process to increase the amount of wet weather storage to approximately 10,000 gallons, providing additional relief for the processes downstream. Three new Zoeller 841 influent grinder pumps will be added to the existing surge tank. Two of the new pumps will be used with duplex control panel to feed the treatment plant, while the third pump will be added and used with a simplex control panel to feed the new wet weather tank when the water level in the surge tank rises to its high water level. The new wet weather tank will be equipped with an overflow directed into the aeration tanks. The system will be able to meet the pumping requirements with any pump pump out of service.

To supplement the existing extended aeration plant, an IFAS cage (detailed on sheet P3) will be placed in the existing tank to remove approximately 70% of the influent BOD. Two additional blowers will be added to the process to provide enough oxygen for the IFAS addition, additional post-aeration, and the existing processes.

The two existing blowers will continue to be utilized. One existing blower will become a redundant standby blower (that can be used to supply air to either extended aeration, the IFAS cage, and post-aeration tank or just to the aerobic digester). The other existing blower will be dedicated for providing aeration to the aerobic digester.

Four 3/8" flex cap diffusers will be added to the existing contact tank to assist the plant in meeting its 7.0 mg/L effluent Dissolved Oxygen minimum concentration.

Based on the level of redundancy in the design, we believe the plant qualifies for classification as Grade A Reliability. A transfer switch will be installed that allows the use of a backup generator which will provide sufficient power for the entire facility including the blowers, allowing continuous use of all

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treatment processes. The aerobic digester blowers will have redundancy made available with the use of the existing extended aeration blower as a standby.

A summary of the design criteria used for unit process sizing is included in Section B of the Appendix including IFAS and Aerobic Digestion Calculations. Each process was designed in accordance with the 2014 version of Ten State Standards for Wastewater Facilities and 401 KAR 5:005.

Site Location

A site plan can be found in the plan documents which clearly shows the site boundaries and the position of the site in reference to those boundaries.

The facility is designed as an open-air plant, so multiple techniques will be used to minimize the negative impact of the plant improvements towards the local population including odor and noise. The aerobic digester will continuously be aerated to maintain aerobic conditions, significantly reducing the potential for odor generation.

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Appendix

Section A - Process Flow Diagram

Section B - Summary of Design Criteria

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Section A – Process Flow Diagram

PLANT INFLUENT FLOW

Q_{ADF} = 25,000 GPD BOD = 225 MG/L
 Q_{PDF} = 75,000 GPD TSS = 225 MG/L
 Q_{PHF} = 100,000 GPD TKN = 40 MG/L

EFFLUENT PARAMETERS

BOD: 10 MG/L
 TSS: 30 MG/L
 NH₃-N: 4 MG/L IN WINTER
 10 MG/L IN SUMMER
 E-COLI-130 MPN/100 ML
 TOTAL RESIDUAL CHLORINE: 0.011 MG/L
 MIN. DO: 7.0 MG/L MIN.

DESIGN CRITERIA:

IFAS (CAGES)

NO. OF IFAS CAGES: 1
 DIMENSIONS: 4'x6'x10' (SWD)
 TOTAL CAGE VOLUME = 1,795 GALLONS
 INF. BOD = 225 MG/L, 47 LBS/DAY
 EFF. BOD TARGET = 68 MG/L, 14 LBS/DAY
 HRT @ ADF = 1.7 HRS
 MEDIA SURFACE RQD. = 937 M²
 MEDIA VOLUME RQD. (W/650 M²/M³ MEDIA) = 51 CF
 MEDIA VOLUME PROPOSED: 72 CF
 MEDIA FILL % = 30 %
 SCFM RQD. = 46 SCFM

WET-WEATHER STORAGE

NEW TANK VOLUME: 4,100 GAL
 NEW TANK HRT @ ADF: 3.94 HR
 TOTAL WET WEATHER VOLUME AT PLANT
 (INCLUDING EXISTING WET WEATHER TANK):
 10,832 GAL
 TOTAL WET WEATHER STORAGE RETENTION
 TIME AT ADF: 10.4 HR

WET WEATHER/INFLUENT PUMPS

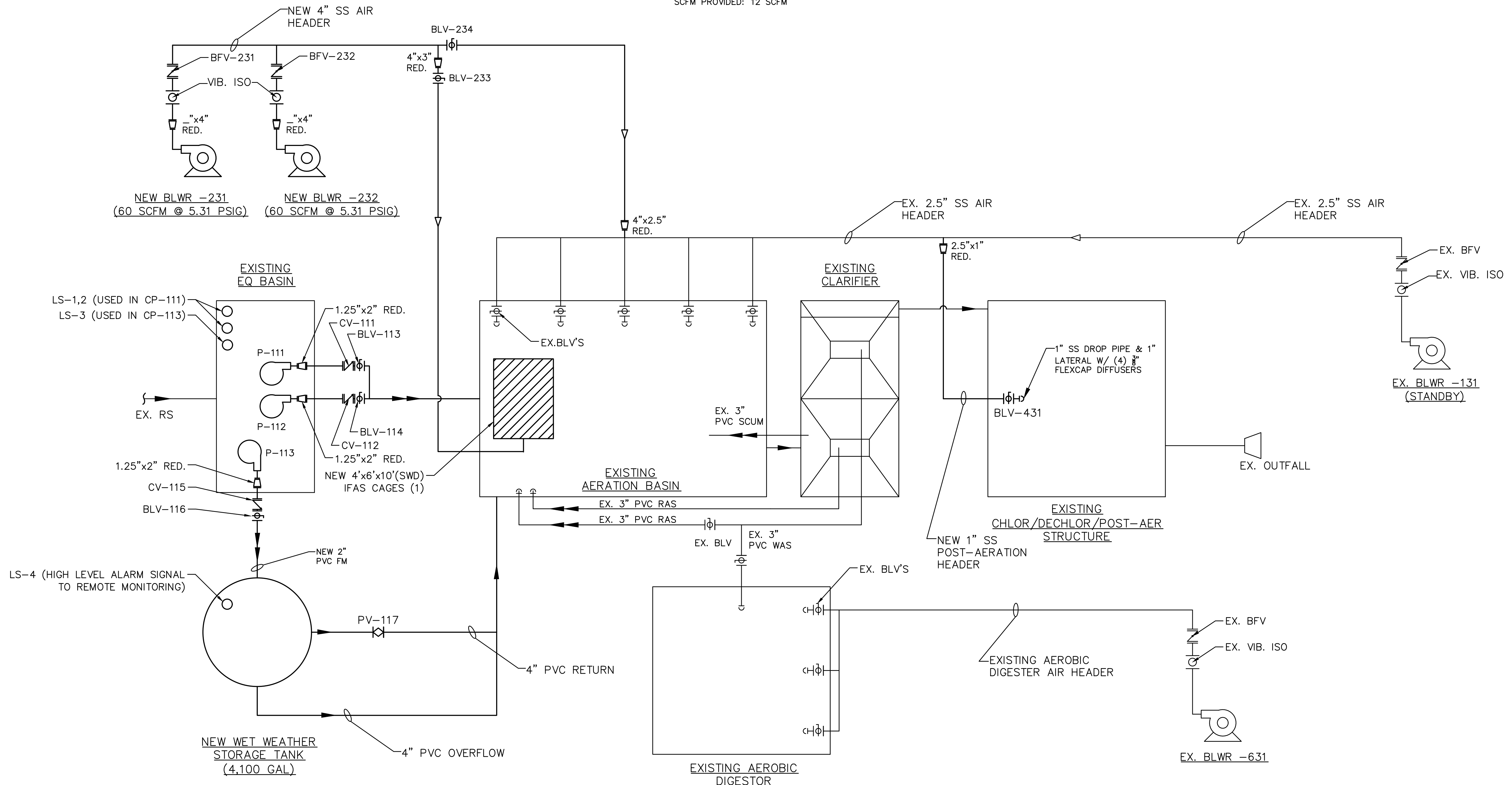
P-111,112,113;
 MODEL: ZOELLER 841 GRINDER PUMP
 TDH: 30'
 GPM: 55 GPM

NEW BLOWERS

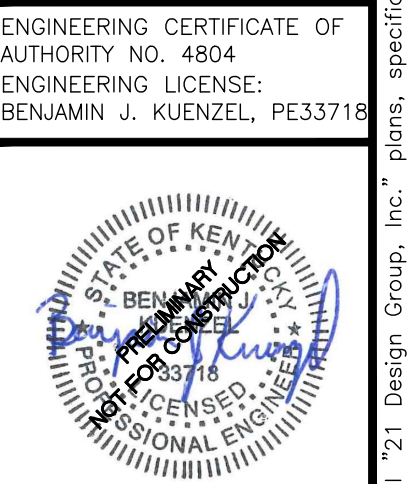
BLWR 231, 232,
 FUNCTION: EXTENDED AERATION, IFAS
 CAGES, RAS/WAS AIRLIFTS,
 POST-AERATION
 TOTAL SCFM RQD.: 118 SCFM
 SCFM/BLOWER: 59 SCFM
 DISCHARGE PRESSURE: 5.35 PSIG
 NO. OF BLOWERS: 1 EX. DEDICATED
 BLOWER, 2 NEW BLOWERS

CONTACT TANKS / POST-AERATION

VOLUME: 4,525 GAL
 HRT @ PHF: 65 MINUTES
 THE TANK WILL HAVE FOUR FLEXCAP
 DIFFUSERS USED FOR POST-AERATION TO
 MEET DO EFFLUENT MIN. OF 7 mg/L
 AIR FLOW RATE: 20 SCFM/1,000 CF
 SCFM PROVIDED: 12 SCFM



WOODLAND ACRES WWTF IMPROVEMENTS
 HEMLOCK DRIVE
 BULLITT, KENTUCKY



SEAL DATE:	2/1/2022
DRAWN BY:	KAR
PROJ NUMBER:	0613-19
DATE:	2/1/2022
DRAWING NO:	P1

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Section B – Summary of Design Criteria

MBBR Design Criteria
Woodland Acres
February 9, 2022

Plant Influent Characteristics

1	Annual Average Daily Flow	25,000	gpd
2	Maximum Monthly Average Daily Flow	25,000	gpd
3	Peak Daily Flow	75,000	gpd
4	Peak Hourly Flow (w/out Equalization)	100,000	gpd
5	Influent BOD	225	mg/L
6	Influent BOD	46.9	lbs/day
7	Influent TSS	225	mg/L
8	Influent TSS	46.9	lbs/day
9	Influent NH3-N	35	mg/L
10	Influent NH3-N	7.3	lbs/day
11	Influent TKN	40	mg/L
12	Influent TKN	8.3	lbs/day
13	Influent pH	7	
14	Water Temperature	12	deg-C

Roughing MBBR Influent Characteristics

15	Annual Average Daily Flow	25,000	gpd
16	Maximum Monthly Average Daily Flow	25,000	gpd
17	Peak Daily Flow (w/Equalization)	75,000	gpd
18	Peak Hourly Flow (w/Equalization)	100,000	gpd
19	Influent BOD	225	mg/L
20	Influent BOD	46.9	lbs/day
21	Influent TSS	225	mg/L
22	Influent NH3-N	35	mg/L
23	Influent TKN	40	mg/L
24	Design Influent TKN	40	mg/L
25	Influent pH	7	
26	MBBR Effluent Water Temperature	10	deg-C

Roughing MBBR Sizing Summary

27	No. of Tanks Cages Proposed	3	
28	Length of Each	5.5	ft
29	Width of Each	3.5	ft
30	Side Water Depth of Each	10.0	ft
31	Tank Height of Each	12.0	ft
32	Volume of Each	1,440	gallons
33	Volume Total	4,320	gallons
34	Hydraulic Retention Time at Annual Average Flow	4.15	hours
35	Hydraulic Retention Time at Maximum Monthly Average Flow	4.15	hours
36	Hydraulic Retention Time at Peak Hourly Flow	1.04	hours
37	Total Media Surface Area Requirement	937	m ²
38	Total Media Surface Area Proposed	3,189	m ²

<u>MBBR Aeration</u>		<u>Stage 1</u>	
39	Target BOD Effluent (70% Removal)	68	mg/L
40	AOR (lbs/day)	49	lbs/day
41	Assumed Diffuser Subm. at AWL (ft.)	9.25	ft
42	Elevation (ft.)	442	ft
43	Alpha	0.70	
44	Beta	0.9	
45	Target DO Residual (MBBR Process) (mg/L)	3.0	mg/L
46	SOR (lbs/day)	118	lbs/day
47	Target Diffuser Efficiency/ft. Submergence	1.1	%
48	Airflow Required for MBBR Aeration (scfm)	46	scfm
49	Airflow per 1,000 scfm	79	scfm/1,000 cf
50	No. of Blowers	2	(Shared)
51	Type of Blower	PD	
52	Discharge Pressure	5.31	psig
<u>Extended Aeration</u>			
53	Target BOD Effluent	5	mg/L
54	Target NH3-N Effluent	3	mg/L
55	AOR (lbs/day)	43	lbs/day
56	Assumed Diffuser Subm. at AWL (ft.)	9.25	ft
57	Elevation (ft.)	442	ft
58	Alpha	0.70	
59	Beta	0.9	
60	Target DO Residual (Ex. Aeration Process) (mg/L)	2.00	mg/L
61	SOR (lbs/day)	87	lbs/day
62	Target Diffuser Efficiency/ft. Submergence	1.10	%
63	Airflow Required for Extended Aeration (scfm)	41	scfm
64	No. of Blowers	2	(Shared)
65	Type of Blower	PD	
66	Discharge Pressure	5.31	psig

Blower Requirement Summary

67	<u>NEW BLWR'S-231, 232</u>		
68	Airflow Required for MBBR Aeration (scfm)	46	scfm
69	Airflow Required for Extended Aeration (scfm)	41	scfm
70	Airflow Required for RAS/WAS Airlifts (scfm)	20	scfm
71	Airflow Required for Post-Aeration (scfm)	12	scfm
72	Total SCFM Required	118	scfm
73	Assumed Overall Efficiency	0.62	
74	Estimated BHP Required (Total):	4.3	bhp
75	NPHP (Total)	5	bhp
76	No. Blowers	2	
77	Type of Blower	PD	
78	Discharge Pressure	5.31	psig

Existing Tank Sizing Summary

79	<u>Extended Aeration Zone</u>		
80	Tank Length	30.0	ft
81	Tank Width	9.0	ft
82	Side Water Depth	10.0	ft
83	Zone Volume	20,196	gal
84	HRT at Average Daily Flow	19.39	hr
85	HRT at Peak Hourly Flow	4.85	hr
86	<u>Wet Weather Storage Basin</u>		
87	Tank Length	10.0	ft
88	Tank Width	9.0	ft
89	Side Water Depth	10.0	ft
90	Zone Volume	6,732	gal
91	HRT at Average Daily Flow	6.46	hr
92	HRT at Peak Hourly Flow	1.62	hr
93	<u>Existing Post-Aeration/Contact Tank</u>		
94	No. of Contact Tanks	1	
95	Contact Tank Length	11	ft
96	Contact Tank Width	11	ft
97	Contact Tank Depth	5	ft
98	Contact Tank Volume	4,525	gallons
99	Contact Tank Hydraulic Retention Time at PHF	65	minutes
100	Airflow Required for CCT	20	scfm/1,000 cf
101	Total SCFM Required	12	scfm

New Wet Weather Storage Basin

102	Tank Diameter	9.92	ft
103	Tank Depth	7.17	ft
104	Volume of New Tank	4,100	gallons
105	Hydraulic Retention Time of New Tank at ADF	3.94	hr
106	Total Equalization Volume	10,832	gallons
107	Total Wet Weather Storage Retention Time at PHF	10.40	hr

Effluent Parameters

108	Effluent SBOD (Design Target)	5	mg/L
109	Effluent SBOD (Design Target)	1.0	lbs/day
110	Effluent NH3-N	3.0	mg/L
111	Effluent NH3-N	0.6	lbs/day
112	Effluent TSS	30	mg/L
113	Effluent TSS	6.3	lbs/day
114	E. Coli	130/240	mpn/100 mL

COMMONWEALTH OF KENTUCKY
ENERGY AND ENVIRONMENT CABINET
OFFICE OF ADMINISTRATIVE HEARINGS
FILE NO. DOW-19-3-0204
AI NO. 479

ENVIRONMENTAL ADMIN. HEARING OFFICER VIRGINIA BAKER GORLEY

ENERGY AND ENVIRONMENT CABINET

PETITIONER

vs.

WOODLAND ACRES UTILITIES, LLC, et. al.

RESPONDENTS

HEARING OFFICER'S REPORT AND RECOMMENDED SECRETARY'S ORDER

I. Summary of Proceedings

A Petition for Review was filed by the Petitioner, Energy and Environment Cabinet (“Cabinet”), on February 4, 2021. The petition alleged the Respondents, Woodland Acres Utilities, LLC (“Woodland”), Joseph B. Murphy (“Joseph Murphy”), and Mary Suzanne Murphy (“Mary Murphy”), owned or operated the Woodland Acres Wastewater Treatment Plant (the “Facility”), located on Lot 57, Parcel 036-S00-15-005, in Shepherdsville, Kentucky, Bullitt County (the “Property”). The Cabinet further alleged that the Respondents violated certain terms of the Kentucky Pollutant Discharge Elimination System Permit (“KPDES Permit”) issued to Woodland and certain regulatory requirements.¹

¹ On November 3, 2017, DOW issued a Notice of Violation (the “2017 NOV”) to the Respondents for the following forty-three (43) violations:

- a. 401 KAR 5:065 Section 2(1) for failing to submit Discharge Monitoring Reports (“DMRs”) for October 2016 through September 2017 [12 counts];
- b. 401 KAR 5:065 Section 2(1) for failing to properly operate and maintain the Facility as required;
- c. 401 KAR 5:005 Section 11 for failing to properly maintain and/or operate the disinfection unit for the Facility;
- d. 401 KAR 5:065 Section 2(1) for failing to comply with the following effluent limitations for the months indicated [29 counts]:
 - i. Carbonaceous Biochemical Oxygen Demand (“CBOD”) in Jan, April, June, July, September, October, and Dec 2016, and Feb and March 2017;

The Cabinet filed a Motion to Dismiss this action on March 10, 2022. The Cabinet stated in support of its Motion to Dismiss that this case involves violations that occurred at the Facility between November 2017 and September 2020. During that time, the Facility was owned by

-
- ii. E-coli in Feb, March, April and August 2016, and Jan, Feb, March, April, and Aug 2017;
 - iii. Ammonia in March, Oct, and Dec 2016, and March 2017;
 - iv. Total Suspended Solids in April, Oct, and Dec 2016, and March 2017; and
 - v. Dissolved Oxygen in Jan, May, and July 2016.

On June 25, 2019, the Cabinet issued a Notice of Violation (the “June 2019 NOV”) to the Respondents for violating 401 KAR 5:065 Section 2(1) by failing to comply with the monitoring and reporting requirements of the Facility’s KPDES Permit for December 2018.

On September 5, 2019, the Cabinet issued a Notice of Violation (the “Sept 2019 NOV”) to the Respondents for the following thirteen (13) violations:

- a. 401 KAR 5:065 Section 2(1) for failing to submit DMRs for January, February, or March 2016, in violation of the terms and conditions of the Facility’s KPDES Permit [3 counts]; and
- b. 401 KAR 5:065 Section 2(1) for failing to submit quarterly DMRs from 2016 2nd Quarter through 2018 3rd Quarter [10 counts].

On October 31, 2019, the Cabinet issued a Notice of Violation (the “Oct 2019 NOV”) to the Respondents for violating 401 KAR 5:065 Section 2(1) by failing to comply with the monitoring and reporting requirements of the Facility’s KPDES Permit in March and June 2019 [2 counts].

On December 11, 2019, the Cabinet issued a Notice of Violation (the “Dec 2019 NOV”) to the Respondents for violating 401 KAR 5:065 Section 2(1) by failing to comply with the monitoring and reporting requirements of the Facility’s KPDES Permit in September 2019.

On May 28, 2020, the Cabinet issued a Notice of Violation (the “May 2020 NOV”) to the Respondents for twenty-three (23) violations of 401 KAR 5:065 Section 2(1) for:

- a. exceeding the 30-day and 7-day geometric average E. Coli limits in September and December 2019 [4 counts];
- b. exceeding the monthly and weekly average limits for CBOD in June and September and December 2019 [4 counts];
- c. exceeding the loading monthly average, loading maximum weekly average, and concentration monthly average limits for Total Suspended Solids in June and September 2019 [6 counts];
- d. exceeding the loading monthly average, loading maximum weekly average, and concentration monthly average for Total Ammonia Nitrogen in June and September 2019 [6 counts];
- e. exceeding the concentration monthly and daily average limits for Residual Chlorine in June 2019 [2 counts]; and
- f. failing to comply with the monitoring and reporting requirements of the Facility’s KPDES Permit in December 2019.

On September 30, 2020, the Cabinet issued a Notice of Violation (the “Sept 2020 NOV”) to the Respondents for the following five (5) violations:

- a. 401 KAR 5:065 Section 2(1) for exceeding the concentration monthly average for Total Ammonia Nitrogen in March 2020; and
- b. 401 KAR 5:065 Section 2(1) for exceeding the loading monthly average, loading maximum weekly average, concentration monthly average, and concentration maximum weekly average for CBOD in March 2020 [4 counts].

Woodland. However, Woodland was administratively dissolved in 2011. Joseph Murphy was the sole member of Woodland. The Facility was situated on real property jointly owned by Joseph Murphy and Mary Murphy. From 2011 to 2020, Joseph Murphy had sole responsibility for operating the Facility owned by the Woodland. Mary Murphy did not participate in the management or operation of the Facility.

The Cabinet further states on March 9, 2021, Joseph and Mary Murphy sold the Facility and the real property on which it is situated to Bluegrass Water Utilities Operating Company, LLC (“BWU”) for ten thousand dollars (\$10,000). On April 15, 2021, the KPDES Permit for the Facility was transferred from Woodland to BWU. If there are any violations in the operation of the Facility after March 9, 2021, the Cabinet will address those with the new owner. The Cabinet also stated that on December 1, 2021, Joseph Murphy died.

Under those stated circumstances, the Cabinet requested to dismiss this action since there were no remedial measures any of the Respondents could perform, and the Cabinet decided not to pursue Joseph Murphy’s estate for civil penalties. The Respondents did not file an objection to the Motion to Dismiss. This report recommends that the Motion to Dismiss be granted, and this matter be dismissed.

II. Statements of Fact and Conclusions of Law

1. A Petition for Review was filed by the Petitioner, Energy and Environment Cabinet, (“Cabinet”) on February 4, 2021².

2. The petition alleged the Respondents, Woodland Acres Utilities, LLC, Joseph B. Murphy, and Mary Suzanne Murphy, owned or operated the Woodland Acres Wastewater

² See, Docket Entry 1.

Treatment Plant, located on Lot 57, Parcel 036-S00-15-005, in Shepherdsville, KY, Bullitt County.³

3. The Cabinet further alleged that the Respondents violated certain terms of its KPDES Permit and certain regulatory requirements.⁴

4. On April 13, 2021, the Respondents filed an answer.⁵

5. On March 10, 2022, the Cabinet filed a Motion to Dismiss this matter.⁶ The reasons stated for the Motion to Dismiss are described in the Summary above.

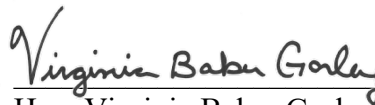
6. No objection to the Motion to Dismiss was filed by the Respondents.

7. Since no objection was filed to the Petitioner's Motion to Dismiss, the Hearing Officer recommends that the Secretary grant the motion.

III. RECOMMENDATIONS

Based upon the foregoing Findings of Fact and Conclusions of Law, the Hearing Officer recommends that the Secretary enter the attached final Secretary's Order.

So Recommended on 04/15/2022.



Hon. Virginia Baker Gorley
Environmental Administrative Hearing Officer
Office of Administrative Hearings
Energy and Environment Cabinet
211 Sower Boulevard
Frankfort, Kentucky 40601
Telephone: 502-564-7312
Facsimile: 502-564-4973

³ Id.

⁴ Id.

⁵ See, Docket Entry 7.

⁶ See, Docket Entry 14.

EXCEPTION RIGHTS

Pursuant to KRS 224.10-440, any party may file exceptions to this Report and Recommended Order within fourteen (14) days of receipt of this Report. The Secretary will then consider this Report, any Exceptions, and the Recommended Order and decide this case.

CERTIFICATE OF SERVICE

I hereby certify that a true and accurate copy of the foregoing Hearing Officer's Report and Recommended Secretary's Order was served on 04/15/2022 by certified U.S. mail, postage pre-paid, to the following:

Certified Mail No. 70210350000184312412
Hon. Robert C. Moore
Hon. Katherine Moore Donnelly
Sites & Harbison PLLC
421 West Main Street
P.O. Box 634
Frankfort, KY 40602-0634

Certified Mail No. 7021 0350 0001 8431 2429
Mary Murphy
379 Brookville Circle
Brooks, KY 40109

Certified Mail No. 7020 3160 0001 7831 5017
Joseph Murphy
379 Brookville Circle
Brooks, KY 40109

Certified Mail No. 7020 3160 0001 7831 5024
Woodland Acres Utilities, LLC
c/o Hon. Robert C. Moore, Registered Agent
Sites & Harbison PLLC
421 West Main Street
P.O. Box 634
Frankfort, KY 40602-0634

Served via electronic mail, return receipt requested:

Hon. Nancy S. Hancock
Office of Legal Services
Energy and Environment Cabinet
300 Sower Blvd., 3rd Floor
Frankfort, KY 40601
Nancy.hancock@ky.gov

Received by: _____
Date: _____

Paige Tate
Docket Coordinator

Distribution:
DOW
Virginia Baker Gorley, E.A. Hearing Officer

Filed 8/12/2022 OAH

COMMONWEALTH OF KENTUCKY
ENERGY AND ENVIRONMENT CABINET
OFFICE OF ADMINISTRATIVE HEARINGS
FILE NO. DOW-19-3-0204

AI NO. 479

ENVIRONMENTAL ADMIN. HEARING OFFICER VIRGINIA BAKER GORLEY

ENERGY AND ENVIRONMENT CABINET

PETITIONER

vs.

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SECRETARY'S ORDER

This matter came before the Secretary upon the Report and Recommended Secretary's Order of Hearing Officer Virginia Baker Gorley. After considering the Report and Recommended Secretary's Order, and any Exceptions filed thereto, and being otherwise sufficiently advised,

IT IS HEREBY ORDERED AND ADJUDGED AS FOLLOWS:

1. The Hearing Officer's Report and Recommended Secretary's Order entered in the record on April 15, 2022, are adopted and incorporated by reference and made a part herein, as if set forth verbatim in this Secretary's Order ("Order").
2. The Energy and Environment Cabinet's Motion to Dismiss its Petition for Review is GRANTED.
3. The above matter of Energy and Environment Cabinet v. Woodland Acres Utilities, LLC, Joseph B. Murphy, and Mary Suzanne Murphy, File No. DOW-19-3-0204, is DISMISSED in its entirety.

This is a **FINAL AND APPEALABLE** Order.

SO ENTERED, this 12th day of August, 2022.



FOR

REBECCA W. GOODMAN, SECRETARY
ENERGY AND ENVIRONMENT CABINET

APPEAL RIGHTS

In accordance with the provisions of KRS 224.10-470, appeals may be taken from Final Orders of the Cabinet by filing in Circuit Court a Petition for Review. Such Petition must be filed within thirty (30) days from the entry of the Final Order, and a copy of the Petition must be served upon the Secretary of the Cabinet.

CERTIFICATE OF SERVICE

I hereby certify that a true and accurate copy of the foregoing Secretary's Order was served on August 12, 2022 by first class mail, postage pre-paid, to the following:

Hon. Robert C. Moore
Hon. Katherine Moore Donnelly
Sites & Harbison PLLC
421 West Main Street
P.O. Box 634
Frankfort, KY 40602-0634

Served via electronic mail to:

Hon. Nancy S. Hancock
Office of Legal Services
Energy and Environment Cabinet
300 Sower Blvd., 3rd Floor
Frankfort, KY 40601
Nancy.hancock@ky.gov

Beth A. Ritchie
Docket Coordinator

Distribution:
DOW
Virginia Baker Gorley, E.A. Hearing Officer
L. Davis

COMMONWEALTH OF KENTUCKY
ENERGY AND ENVIRONMENT CABINET
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¹ On November 3, 2017, DOW issued a Notice of Violation (the “2017 NOV”) to the Respondents for the following forty-three (43) violations:

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- b. 401 KAR 5:065 Section 2(1) for failing to submit quarterly DMRs from 2016 2nd Quarter through 2018 3rd Quarter [10 counts].

On October 31, 2019, the Cabinet issued a Notice of Violation (the “Oct 2019 NOV”) to the Respondents for violating 401 KAR 5:065 Section 2(1) by failing to comply with the monitoring and reporting requirements of the Facility’s KPDES Permit in March and June 2019 [2 counts].

On December 11, 2019, the Cabinet issued a Notice of Violation (the “Dec 2019 NOV”) to the Respondents for violating 401 KAR 5:065 Section 2(1) by failing to comply with the monitoring and reporting requirements of the Facility’s KPDES Permit in September 2019.

On May 28, 2020, the Cabinet issued a Notice of Violation (the “May 2020 NOV”) to the Respondents for twenty-three (23) violations of 401 KAR 5:065 Section 2(1) for:

- a. exceeding the 30-day and 7-day geometric average E. Coli limits in September and December 2019 [4 counts];
- b. exceeding the monthly and weekly average limits for CBOD in June and September and December 2019 [4 counts];
- c. exceeding the loading monthly average, loading maximum weekly average, and concentration monthly average limits for Total Suspended Solids in June and September 2019 [6 counts];
- d. exceeding the loading monthly average, loading maximum weekly average, and concentration monthly average for Total Ammonia Nitrogen in June and September 2019 [6 counts];
- e. exceeding the concentration monthly and daily average limits for Residual Chlorine in June 2019 [2 counts]; and
- f. failing to comply with the monitoring and reporting requirements of the Facility’s KPDES Permit in December 2019.

On September 30, 2020, the Cabinet issued a Notice of Violation (the “Sept 2020 NOV”) to the Respondents for the following five (5) violations:

- a. 401 KAR 5:065 Section 2(1) for exceeding the concentration monthly average for Total Ammonia Nitrogen in March 2020; and
- b. 401 KAR 5:065 Section 2(1) for exceeding the loading monthly average, loading maximum weekly average, concentration monthly average, and concentration maximum weekly average for CBOD in March 2020 [4 counts].

Woodland. However, Woodland was administratively dissolved in 2011. Joseph Murphy was the sole member of Woodland. The Facility was situated on real property jointly owned by Joseph Murphy and Mary Murphy. From 2011 to 2020, Joseph Murphy had sole responsibility for operating the Facility owned by the Woodland. Mary Murphy did not participate in the management or operation of the Facility.

The Cabinet further states on March 9, 2021, Joseph and Mary Murphy sold the Facility and the real property on which it is situated to Bluegrass Water Utilities Operating Company, LLC (“BWU”) for ten thousand dollars (\$10,000). On April 15, 2021, the KPDES Permit for the Facility was transferred from Woodland to BWU. If there are any violations in the operation of the Facility after March 9, 2021, the Cabinet will address those with the new owner. The Cabinet also stated that on December 1, 2021, Joseph Murphy died.

Under those stated circumstances, the Cabinet requested to dismiss this action since there were no remedial measures any of the Respondents could perform, and the Cabinet decided not to pursue Joseph Murphy’s estate for civil penalties. The Respondents did not file an objection to the Motion to Dismiss. This report recommends that the Motion to Dismiss be granted, and this matter be dismissed.

II. Statements of Fact and Conclusions of Law

1. A Petition for Review was filed by the Petitioner, Energy and Environment Cabinet, (“Cabinet”) on February 4, 2021².

2. The petition alleged the Respondents, Woodland Acres Utilities, LLC, Joseph B. Murphy, and Mary Suzanne Murphy, owned or operated the Woodland Acres Wastewater

² See, Docket Entry 1.

Treatment Plant, located on Lot 57, Parcel 036-S00-15-005, in Shepherdsville, KY, Bullitt County.³

3. The Cabinet further alleged that the Respondents violated certain terms of its KPDES Permit and certain regulatory requirements.⁴

4. On April 13, 2021, the Respondents filed an answer.⁵

5. On March 10, 2022, the Cabinet filed a Motion to Dismiss this matter.⁶ The reasons stated for the Motion to Dismiss are described in the Summary above.

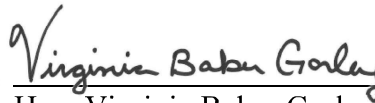
6. No objection to the Motion to Dismiss was filed by the Respondents.

7. Since no objection was filed to the Petitioner's Motion to Dismiss, the Hearing Officer recommends that the Secretary grant the motion.

III. RECOMMENDATIONS

Based upon the foregoing Findings of Fact and Conclusions of Law, the Hearing Officer recommends that the Secretary enter the attached final Secretary's Order.

So Recommended on 04/15/2022.



Hon. Virginia Baker Gorley
Environmental Administrative Hearing Officer
Office of Administrative Hearings
Energy and Environment Cabinet
211 Sower Boulevard
Frankfort, Kentucky 40601
Telephone: 502-564-7312
Facsimile: 502-564-4973

³ Id.

⁴ Id.

⁵ See, Docket Entry 7.

⁶ See, Docket Entry 14.

EXCEPTION RIGHTS

Pursuant to KRS 224.10-440, any party may file exceptions to this Report and Recommended Order within fourteen (14) days of receipt of this Report. The Secretary will then consider this Report, any Exceptions, and the Recommended Order and decide this case.

CERTIFICATE OF SERVICE

I hereby certify that a true and accurate copy of the foregoing Hearing Officer's Report and Recommended Secretary's Order was served on 04/15/2022 by certified U.S. mail, postage pre-paid, to the following:

Certified Mail No. 70210350000184312412
Hon. Robert C. Moore
Hon. Katherine Moore Donnelly
Sites & Harbison PLLC
421 West Main Street
P.O. Box 634
Frankfort, KY 40602-0634

Certified Mail No. 7021 0350 0001 8431 2429
Mary Murphy
379 Brookville Circle
Brooks, KY 40109

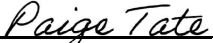
Certified Mail No. 7020 3160 0001 7831 5017
Joseph Murphy
379 Brookville Circle
Brooks, KY 40109

Certified Mail No. 7020 3160 0001 7831 5024
Woodland Acres Utilities, LLC
c/o Hon. Robert C. Moore, Registered Agent
Sites & Harbison PLLC
421 West Main Street
P.O. Box 634
Frankfort, KY 40602-0634

Served via electronic mail, return receipt requested:

Hon. Nancy S. Hancock
Office of Legal Services
Energy and Environment Cabinet
300 Sower Blvd., 3rd Floor
Frankfort, KY 40601
Nancy.hancock@ky.gov

Received by: _____
Date: _____



Docket Coordinator

Distribution:
DOW
Virginia Baker Gorley, E.A. Hearing Officer

COMMONWEALTH OF KENTUCKY
ENERGY AND ENVIRONMENT CABINET
DIVISION OF ENFORCEMENT
CASE NO. DOW 21-3-0030

IN RE: Woodland Acres Utilities, LLC
Woodland Acres WWTP
57 Hemlock Drive
Shepherdsville, KY 40165
AI No. 479
Activity ID No. ERF20210001

AGREED ORDER

WHEREAS, the parties to this Agreed Order, the Energy and Environment Cabinet (hereinafter "Cabinet") and Bluegrass Water Utility Operating Company, LLC (hereinafter "BWUOC") state:

STATEMENTS OF FACT

1. The Cabinet is charged with the statutory duty of enforcing KRS Chapter 224 and the regulations promulgated pursuant thereto.
2. BWUOC is an active Kentucky Limited Liability Company in good standing that owns and operates utilities and whose principal address according to the Kentucky Secretary of State, is 1650 Des Peres Road, Suite 303, St. Louis, Missouri 63131.
3. Woodland Acres Wastewater Treatment Plant (hereinafter "Woodland Acres WWTP" or "facility"), is located at 57 Hemlock Drive, Shepherdsville, Kentucky 40165. The facility has a design capacity of 0.025 million gallons per day and discharges to an unnamed tributary to Mud Run.
4. Woodland Acres WWTP is currently owned and operated by Woodland Acres Utilities, LLC. The facility's discharges are permitted under Kentucky Pollutant Discharge

Elimination Systems (hereinafter "KPDES") permit number KY0091600, issued by the Cabinet's Division of Water (hereinafter "DOW"). The facility's KPDES permit expires on March 31, 2021.

5. Woodland Acres Utilities, LLC, is an inactive for-profit Kentucky corporation in bad standing, according to the Kentucky Secretary of State.

6. BWUOC has indicated to the Cabinet that it plans to acquire Woodland Acres WWTP, provided it receives from the Kentucky Public Service Commission ("Commission") all approvals required to make the acquisition. If the Commission approves the acquisition, BWUOC plans to assume ownership and operation of Woodland Acres WWTP on or around March 1, 2021.

7. BWUOC has contracted with a third-party firm to produce an engineering memorandum detailing the status of and repairs needed at Woodland Acres WWTP (Exhibit A). This report was submitted to the Cabinet on or about January 26, 2021.

8. If it receives all required Commission approvals, BWUOC has indicated to the Cabinet that it plans to make substantial repairs and/or upgrades to the facility to address the deficiencies noted in Exhibit A.

NOW THEREFORE, in the interest of providing corrective actions to Woodland Acres WWTP, the parties hereby consent to the entry of this Agreed Order and agree as follows:

REMEDIAL MEASURES

9. BWUOC shall notify the Cabinet in writing that it has assumed ownership and operation of Woodland Acres WWTP within fifteen (15) days of acquiring the facility.

10. Within fifteen (15) days of assuming ownership and operation of the facility, BWUOC shall submit a "Change in Ownership Certification" to the Cabinet.

11. At all times, commencing with assuming ownership of the facility, BWUOC shall provide for proper operation and maintenance of the facility in accordance with 401 KAR 5:065

Section 2(1).

12. Within thirty (30) days of execution of this Agreed Order, BWUOC shall submit to the Cabinet for review and acceptance, a written Corrective Action Plan (hereinafter "CAP") to bring the facility into compliance with its KPDES permit and correct the deficiencies noted in Exhibit A. The CAP shall include, but not be limited to, an identification of actions BWUOC shall implement to ensure compliance that includes; proper operation and maintenance to its sewage treatment system, collection system, and disinfection unit. The CAP shall also include a list of all actions necessary to ensure the completion of upgrades to its facility including a list of completion dates for each action. Include in the CAP a final compliance date for completion of all remedial measures listed;

- A. Upon review of the CAP, the Cabinet may, in whole or in part, (1) accept or (2) decline and provide comments to BWUOC identifying the deficiencies. Upon receipt of Cabinet comments, BWUOC shall have ninety (90) days to revise and resubmit the CAP for review and acceptance. Upon resubmittal, the Cabinet may, in whole or in part, (1) accept or (2) disapprove and provide comments to BWUOC identifying the deficiencies. Upon such resubmittal, if the CAP is disapproved, the Cabinet may deem BWUOC to be out of compliance with this Agreed Order for failure to timely submit the CAP. The parties to this Agreed Order may also agree in writing to further extend the period in which BWUOC and the Cabinet accept a revised and resubmitted CAP.
- B. BWUOC may request an amendment of the accepted CAP by writing the Director of the Division of Enforcement at 300 Sower Blvd., Frankfort,

Kentucky 40601 and stating the reasons for the request. If granted, the amended CAP shall not affect any provision of this Agreed Order unless expressly provided in the amended CAP. This does not require an amendment request pursuant to paragraph 20 of this Agreed Order.

- C. Upon Cabinet acceptance of all or any part of the CAP, the amended CAP or any accepted part thereof (provided that the accepted part is not dependent upon implementation of any part not yet accepted), shall be deemed incorporated into this Agreed Order as an enforceable requirement of this Agreed Order. This does not require an amendment request pursuant to paragraph 20 of this Agreed Order.

13. So long as BWUOC is in compliance with the terms and conditions of this Agreed Order, the Cabinet's Division of Enforcement agrees to hold any formal enforcement action for numeric permit parameter violations for the KPDES permit described in paragraph 4, in abeyance. Should BWUOC fail to comply with the terms and conditions of this Agreed Order, the Cabinet may seek formal enforcement action that would have otherwise been held in abeyance.

14. By the final compliance date in the accepted CAP, BWUOC shall be in full compliance with its KPDES permit.

15. All submittals required by the terms of this Agreed Order shall be submitted to: Division of Enforcement, Attention: Director, 300 Sower Blvd., Frankfort, Kentucky, 40601.

MISCELLANEOUS PROVISIONS

16. This Agreed Order shall be of no force and effect unless BWUOC assumes ownership and operations of Woodland Acres WWTP.

17. This Agreed Order addresses only the items described above. Other than the matters agreed to by entry of this Agreed Order, nothing contained herein shall be construed to waive or to limit any remedy or cause of action by the Cabinet based on statutes or regulations under its jurisdiction and BWUOC reserves its defenses thereto. The Cabinet expressly reserves its right at any time to issue administrative orders and to take any other action it deems necessary that is not inconsistent with this Agreed Order, including the right to order all necessary remedial measures, assess penalties for violations, or recover all response costs incurred, and BWUOC reserves its defenses thereto.

18. This Agreed Order shall not prevent the Cabinet from issuing, reissuing, renewing, modifying, revoking, suspending, denying, terminating, or reopening any permit to BWUOC. BWUOC reserves its defenses thereto, except that BWUOC shall not use this Agreed Order as a defense.

19. BWUOC waives its right to any hearing on the matters admitted herein. However, failure by BWUOC to comply strictly with any or all of the terms of this Agreed Order shall be grounds for the Cabinet to seek enforcement of this Agreed Order in Franklin Circuit Court and to pursue any other appropriate administrative or judicial action under KRS Chapter 224 and the regulations promulgated pursuant thereto.

20. The Agreed Order may not be amended except by a written order of the Cabinet's Secretary or a designee thereof. BWUOC may request an amendment by writing the Director of the Division of Enforcement at 300 Sower Blvd., Frankfort, Kentucky 40601, and stating the reasons for the request. If granted, the amended Agreed Order shall not affect any provision of this Agreed Order unless expressly provided in the amended Agreed Order.

21. The Cabinet does not, by its consent to the entry of this Agreed Order, warrant or aver in any manner that BWUOC's complete compliance with this Agreed Order will result in compliance with the provisions of KRS Chapter 224 and the regulations promulgated pursuant thereto. Notwithstanding the Cabinet's review and approval of any plans formulated pursuant to this Agreed Order, BWUOC shall remain solely responsible for compliance with the terms of KRS Chapter 224 and the regulations promulgated thereto, this Agreed Order, and any permit and compliance schedule requirements.

22. BWUOC shall give notice of this Agreed Order to any purchaser, lessee or successor in interest prior to the transfer of ownership and/or operation of any part of the facility occurring prior to termination of this Agreed Order, shall notify the Cabinet that such notice has been given, and shall follow all statutory requirements for a transfer.

23. This Agreed Order applies specifically and exclusively to the unique facilities referenced herein and is inapplicable to any other facility.

24. Compliance with this Agreed Order is not conditional on the receipt of any federal, state, or local funds.

25. This Agreed Order shall be of no force and effect unless and until it is entered by the Secretary or a designee thereof as evidenced by his or her signature thereon. If this Agreed Order contains any date by which BWUOC is to take any action or cease any activity, and the Secretary enters the Agreed Order after that date, then BWUOC is nonetheless obligated to have taken the action or ceased the activity by the date contained in this Agreed Order.

TERMINATION

26. This Agreed Order shall terminate upon BWUOC's completion of all requirements described in this Agreed Order. BWUOC may submit written notice to the Cabinet when it believes

all requirements have been performed. The Cabinet shall notify BWUOC in writing whether it concurs that all requirements of this Agreed Order have been completed. The Cabinet reserves its right to enforce this Agreed Order, and BWUOC reserves its right to file a petition for hearing pursuant to KRS 224.10-420(2) contesting the Cabinet's determination.

CASE NO. DOW 21-3-0030

AGREED TO BY:


Josiah Cox (Aug 10, 2021 11:19 CDT)

Josiah Cox, President
Bluegrass Water Utility Operating Company, LLC

Aug 10, 2021

Date

CASE NO. DOW 21-3-0030

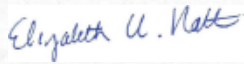
APPROVAL RECOMMENDED BY:



Michael B. Kroeger, Director(Assistant)
Division of Enforcement

9/9/2021

Date



Elizabeth U. Natter, Executive Director
Office of General Counsel

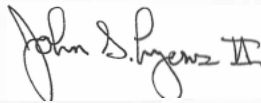
10/6/2021

Date

ORDER

Wherefore, the foregoing Agreed Order is entered as the final Order of the Energy and Environment Cabinet this 6th day of October, 2021.

ENERGY AND ENVIRONMENT CABINET



John S. Lyons, Deputy Secretary
Authorized Designee, Rebecca W. Goodman,
Secretary Energy & Environment Cabinet

CERTIFICATE OF SERVICE

I hereby certify that a true and accurate copy of the foregoing **AGREED ORDER** was mailed, postage prepaid, to the following this 6th day of October, 2021.

Bluegrass Water Utility Operating Company, LLC
Attn: Jacob Freeman
1650 Des Peres Road, Suite 303
St. Louis, MO 63131

And ~~mailed, messenger to~~: Electronically mailed to:

Michael B. Kroeger, Director
Division of Enforcement
300 Sower Blvd.
Frankfort, Kentucky 40601

Elizabeth U. Natter, Executive Director
Office of General Counsel
Energy and Environment Cabinet
300 Sower Blvd.
Frankfort, Kentucky 40601



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Exhibit A

Woodland Acres – Woodland Acres WWTP KY0096100
Kentucky
Engineering Memorandum
Date: September 11, 2020

Introduction

The Woodland Acres wastewater treatment facility is located in Shepherdsville, Kentucky approximately 17 miles south of Louisville, Kentucky. This facility services 121 parcels. The system operates under Kentucky DEP Permit number KY0096100 and Agency ID number 479.

Wastewater Treatment Facility Existing Conditions

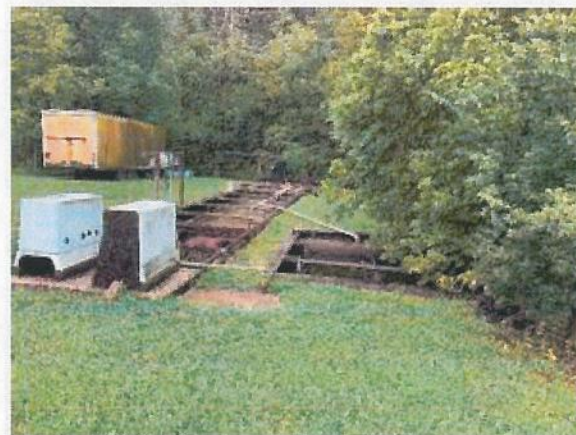
The plant is authorized to discharge up to 25,000 gallons per day (gpd) by the KDEP per the operating permit.

A summary of the existing permit limits are described below:

- BOD5 – 10/15 mg/L (Monthly average/Maximum Weekly Average)
- TSS – 30/45 mg/L
- NH3-N – 4/6 mg/L in Summer
- NH3-N – 10/15 mg/L in Winter
- E-Coli – 130/240 mpn/100 ml
- Total Residual Chlorine – 0.011/0.019 mg/L
- Dissolved Oxygen – 7.0 mg/L minimum

The subdivision has 121 parcels and little additional buildout would seem possible. Based off of the number of possible connections and assuming 250 gpd of flow per customer, 30,000 gpd of average daily flow would be expected when the available lots are fully occupied.

A review was performed of EPA's Echo compliance website which lists violations of wastewater treatment plants across the country. The Woodland Acres wastewater treatment plant has exceeded permit limitations several times in recent months and years for E-Coli, BOD, and Ammonia.



Civil Engineering
Surveying & Mapping
Potable Water
Wastewater Treatment



Civil Site Design
Construction Support
Transportation
Wastewater Collection

The existing facility includes an extended aeration package plant including a mechanically cleaned bar rack screen, a single aeration basin, equalization basin with two influent pumps (one portable), aerobic digestion, rapid sand filter, and a chlorine contact tank. Dechlorination is utilized downstream of disinfection.

The packaged plant has aged and shows significant signs of wear and corrosion. The blowers and diffusers are in need of replacement, and one of the two RAS lines has broken off into the aeration basin. The basin appears to have been modified over time with changes to original structural components. The basin does not include handrail needed to protect operators or visitors from falling into the package plant.

Functionally, the system also has some limitations:

- The entire community is challenged by high ground water levels. The site visit was conducted during a moderate storm event that resulted in significant stormwater challenges in the streets and wastewater flow challenges at the plant. During the visit the blowers had been turned off to inventory solids, and both influent pumps were continuously pumping at what appeared to be a rate higher than the plant was capable of processing. When the blowers were turned on briefly, the noise was significant and the discharge pressure was likely excessive.
- According to operators, the all gravity collection system results in significant I&I, impacting system performance.
- The blower discharge pressure may be excessively high..
- The operator believes it is necessary to turn off aeration during wet weather events to minimize the loss of solids and to retain a healthy biomass.
- The tertiary treatment basin (rapid sand filter, contact tank and dechlorination tank) is highly corroded.
- There is no ideal place for chlorine tablet addition or dechlorination tablet addition.
- There is no flow monitoring at this time.
- The facility includes significant amounts of exposed wiring.

The fencing around most of the site is generally in relatively good condition, and there is significance footprint available for the addition of improvements.

Currently no remote monitoring is in place at the site. This makes it difficult for the operators to know when the facility is failing. Operational monitoring should be completed to monitor the quality of effluent, which should then be compared to the operating permit.

Wastewater Treatment Facility Recommended Improvements

- The condition of the tank calls for taking the facility off line for structural repair, at a minimum to include the addition of access bridge improvements, safety handrail, welding repairs, and the addition of a new RAS line from one of the hopper bottomed clarifiers to the front end of the plant. Because of this, it makes sense to take advantage of the down time to upgrade the

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Washington, MO 63090

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636-432-5029

system to an MBBR treatment system to simplify operations and improve performance during wet weather events. The conversion from extended aeration activated sludge to MBBR will include the addition of baffle walls, new diffusers, new blowers, media, and media retention sieves.

- The smaller footprint MBBR will allow a fraction of the existing tank to be used for digestion. The new system will generate significantly less sludge than the existing extended aeration system as well, so sludge handling needs will significantly decrease.
- The 10' foot deep clarifier is adequate for a fixed film type system, and will function much better in this application than with the existing activated sludge system.
- The effluent from the three stage MBBR will be evenly distributed into and through the clarifier, and the level control in the clarifier will be maintained with the addition of a weir trough and weir.
- A flow meter will be installed in the clarifier effluent piping, in route to the contact tank.
- Peroxyacetic acid will be introduced directly into the contact tank in lieu of attempting to install chlorination and dechlorination tablet feeders in the limited hydraulic profile. The PAA chemical requires less contact time, and will more consistently achieve the necessary disinfection objectives.
- Alum will be introduced into the clarifier to improve settleability when required to consistently achieve solids reduction and in turn, BOD effluent limit compliance.
- The existing chlorine contact tank will be equipped with diffusers to help in meeting the dissolved oxygen effluent limit.
- Three blowers will replace the existing two blowers. One will serve the aeration tank needs, air lift needs, and post-aeration needs; one will serve the digester needs; and one will serve as standby for both applications.

Wastewater Collection System Understanding

While no mapping was provided, the collection system consists of only gravity collection.

According to the operator, the collection system consists of 8" and 10" gravity sewers, and the high groundwater table results in significant peak flow events at the facility. Wastewater enters the wastewater treatment plant through a gravity sewer.

Wastewater Collection System Recommended Improvements

- The system should be evaluated to create mapping and develop GIS shapefiles for future maintenance. System mapping at the fingertips of the operators will enhance the level of service and timing of responses to emergency and customer issues.
- Perform smoke testing, perform video inspection at selected locations, evaluate systems and create GIS based maintenance priority list.

Civil Engineering
Surveying & Mapping
Potable Water
Wastewater Treatment



Civil Site Design
Construction Support
Transportation
Wastewater Collection

APPENDIX



Blowers, EQ Basin, and Electrical Cables



Electrical Boxes and
Electrical Cabling

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Washington, MO 63090

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Civil Engineering
Surveying & Mapping
Potable Water
Wastewater Treatment

21 DESIGN

Civil Site Design
Construction Support
Transportation
Wastewater Collection



**EQ Basin, Portable Pump Discharge,
Digester, Miscellaneous Electrical Cables**



**Clarifier Performance During Wet Weather
(and No Aeration in Aeration Tank)**

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Washington, MO 63090

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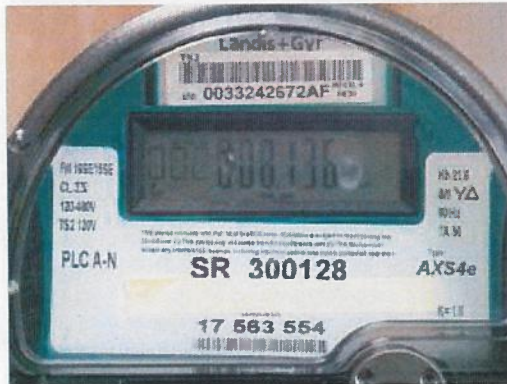
Civil Engineering
Surveying & Mapping
Potable Water
Wastewater Treatment



Civil Site Design
Construction Support
Transportation
Wastewater Collection



Chlor/Dechlor Structure



WWTP Electrical Meter

1351 Jefferson St., Suite 301
Washington, MO 63090

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636-432-5029

DOW 21-3-0030 - Woodland Acres AO

Final Audit Report

2021-08-10

Created:	2021-08-09
By:	Mandy Keubler (mkeubler@cswrgroup.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAA34IsUeBgv9Zo22gFKtqDBsCuVD7dvOqg

"DOW 21-3-0030 - Woodland Acres AO" History

-  Document created by Mandy Keubler (mkeubler@cswrgroup.com)
2021-08-09 - 9:19:16 PM GMT- IP address: 71.10.211.134
-  Document emailed to Josiah Cox (jcox@cswrgroup.com) for signature
2021-08-09 - 9:19:44 PM GMT
-  Email viewed by Josiah Cox (jcox@cswrgroup.com)
2021-08-10 - 4:19:15 PM GMT- IP address: 12.127.143.250
-  Document e-signed by Josiah Cox (jcox@cswrgroup.com)
Signature Date: 2021-08-10 - 4:19:25 PM GMT - Time Source: server- IP address: 12.127.143.250
-  Agreement completed.
2021-08-10 - 4:19:25 PM GMT

DOWCSIPhotos050421

Lake Columbia































CHAIN OF CUSTODY RECORD

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET

Program/DOW: 106 NPS SDWA Stream Survey Groundwater Wild Rivers Tox. Test Ref. Reach Lakes Pretreatment BMP ERT

Program/DWM: RCRA UST TSCA Solid Waste Fed. CERCLA St. CERCLA

Program/AQ: Air Toxics/Canister # _____ Air Quality

Fund Source _____ Site # _____ Other Program _____

SITE LOCATION: Lake Columbia, Hillview # 1 FACILITY NO.: _____ COUNTY: Bullitt x 2

FIELD ID #	DATE/TIME	DESCRIPTION OF SITE	MATRIX	NUMBER OF CONTAINERS	PRESERVATION	ANALYSIS REQUESTED	LAB USE ONLY
Lake Columbia PH-2.0	Date: <u>5/5/21</u> Time: <u>10:45</u> <input checked="" type="checkbox"/> am <input type="checkbox"/> pm	Lake Columbia FINAL EFFLUENT CBOD / TSS AKGWA #: _____	<input type="checkbox"/> Liquid <input type="checkbox"/> Solid <input type="checkbox"/> Chemical <input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Other	_ Glass 1000 ml <u>1</u> Plastic 1000 ml _ VOA 40 ml _ Glass 140 ml _ 280 ml _ Other: _____	<input checked="" type="checkbox"/> Ice <input checked="" type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HNO ₃ <input type="checkbox"/> HCl <input type="checkbox"/> Other	<input type="checkbox"/> ABN <input type="checkbox"/> VOC <input type="checkbox"/> NH ₃ <input type="checkbox"/> TO14 <input type="checkbox"/> TOC <input checked="" type="checkbox"/> TSS <input type="checkbox"/> Cl <input type="checkbox"/> HERB <input type="checkbox"/> TKN <input checked="" type="checkbox"/> BOD <input type="checkbox"/> CN <input type="checkbox"/> T. METALS <input type="checkbox"/> O&G <input type="checkbox"/> PAH <input type="checkbox"/> FP <input type="checkbox"/> PEST/PCB <input type="checkbox"/> TDS <input type="checkbox"/> ALK <input type="checkbox"/> TCLP <input type="checkbox"/> N/P PEST <input type="checkbox"/> BTEX <input type="checkbox"/> ORTHO/P <input type="checkbox"/> OTHER: _____	Sample # _____ Report # _____
Lake Columbia PH-2.0	Date: <u>5/5/21</u> Time: <u>10:45</u> <input checked="" type="checkbox"/> am <input type="checkbox"/> pm	Lake Columbia Final Effluent NH ₃ N / T phosphorus AKGWA #: _____	<input type="checkbox"/> Liquid <input type="checkbox"/> Solid <input type="checkbox"/> Chemical <input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Other	_ Glass 1000 ml <u>1</u> Plastic 1000 ml _ VOA 40 ml _ Glass 140 ml _ 280 ml _ Other: _____	<input checked="" type="checkbox"/> Ice <input checked="" type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HNO ₃ <input type="checkbox"/> HCl <input type="checkbox"/> Other	<input type="checkbox"/> ABN <input type="checkbox"/> VOC <input checked="" type="checkbox"/> NH ₃ <input type="checkbox"/> TO14 <input type="checkbox"/> TOC <input type="checkbox"/> TSS <input type="checkbox"/> Cl <input type="checkbox"/> HERB <input type="checkbox"/> TKN <input type="checkbox"/> BOD <input type="checkbox"/> CN <input type="checkbox"/> T. METALS <input type="checkbox"/> O&G <input type="checkbox"/> PAH <input type="checkbox"/> FP <input type="checkbox"/> PEST/PCB <input type="checkbox"/> TDS <input type="checkbox"/> ALK <input type="checkbox"/> TCLP <input type="checkbox"/> N/P PEST <input type="checkbox"/> BTEX <input type="checkbox"/> ORTHO/P <input checked="" type="checkbox"/> OTHER: <u>T P103</u>	Sample # _____ Report # <u>AS01619</u>
Hillview #1 PH-2.0	Date: <u>5/5/21</u> Time: <u>11:45</u> <input checked="" type="checkbox"/> am <input type="checkbox"/> pm	Hillview #1 Final Effluent CBOD / TSS AKGWA #: _____	<input type="checkbox"/> Liquid <input type="checkbox"/> Solid <input type="checkbox"/> Chemical <input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Other	_ Glass 1000 ml _ Plastic 1000 ml _ VOA 40 ml _ Glass 140 ml _ 280 ml _ Other: _____	<input type="checkbox"/> Ice <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HNO ₃ <input type="checkbox"/> HCl <input type="checkbox"/> Other	<input type="checkbox"/> ABN <input type="checkbox"/> VOC <input type="checkbox"/> NH ₃ <input type="checkbox"/> TO14 <input type="checkbox"/> TOC <input checked="" type="checkbox"/> TSS <input type="checkbox"/> Cl <input type="checkbox"/> HERB <input type="checkbox"/> TKN <input checked="" type="checkbox"/> BOD <input type="checkbox"/> CN <input type="checkbox"/> T. METALS <input type="checkbox"/> O&G <input type="checkbox"/> PAH <input type="checkbox"/> FP <input type="checkbox"/> PEST/PCB <input type="checkbox"/> TDS <input type="checkbox"/> ALK <input type="checkbox"/> TCLP <input type="checkbox"/> N/P PEST <input type="checkbox"/> BTEX <input type="checkbox"/> ORTHO/P <input type="checkbox"/> OTHER: _____	Sample # _____ Report # _____

Metals: As Ba Cd Cr Pb Hg Se Ag
 Cu Fe Mn Zn Other _____

Inspector(s): _____

2.2°C 1K-B

Relinquished by: <u>Rodney Haskell</u>	Date: <u>5-5-21</u>	Received by: <u>Jennifer Clark</u>
Representing: _____	Time: <u>13:25</u>	Representing: <u>Wdep</u>
Relinquished by: _____	Date: _____	Received by: _____
Representing: _____	Time: _____	Representing: _____

CONTINUATION PAGE 2 of 2

SITE LOCATION: Lake Columbia, Hillview #1 FACILITY NO.: _____ COUNTY: Bullitt

FIELD ID #	DATE TIME	DESCRIPTION OF SITE	MATRIX	NUMBER OF CONTAINERS	PRESERVATION	ANALYSIS REQUESTED	pH	LAB USE ONLY
Hillview #1 PH-2.0	Date: 5/5/21 Time: 11:45 am	Hillview #1 Final Effluent NH ₃ N / Tphos AKGWA #: _____	<input type="checkbox"/> Liquid <input type="checkbox"/> Solid <input type="checkbox"/> Chemical <input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Other	___ Glass 1000 ml <input checked="" type="checkbox"/> Plastic 1000 ml ___ VOA 40 ml ___ Glass 140 ml ___ 280 ml ___ Other:	<input checked="" type="checkbox"/> Ice <input checked="" type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HNO ₃ <input type="checkbox"/> HCl <input type="checkbox"/> Other	<input type="checkbox"/> ABN <input type="checkbox"/> VOC <input checked="" type="checkbox"/> NH ₃ <input type="checkbox"/> TO14 <input type="checkbox"/> TOC <input type="checkbox"/> TSS <input type="checkbox"/> Cl <input type="checkbox"/> HERB <input type="checkbox"/> TKN <input type="checkbox"/> BOD <input type="checkbox"/> CN <input type="checkbox"/> T. METALS <input type="checkbox"/> O&G <input type="checkbox"/> PAH <input type="checkbox"/> FP <input type="checkbox"/> PEST/PCB <input type="checkbox"/> TDS <input type="checkbox"/> ALK <input type="checkbox"/> TCLP <input type="checkbox"/> N/P PEST <input type="checkbox"/> BTEX <input type="checkbox"/> ORTHO/P <input checked="" type="checkbox"/> OTHER: <u>T phos</u>		Sample # <u>AS01620</u> Report #
	Date: / / Time: am pm	AKGWA #: _____	<input type="checkbox"/> Liquid <input type="checkbox"/> Solid <input type="checkbox"/> Chemical <input type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Other	___ Glass 1000 ml ___ Plastic 1000 ml ___ VOA 40 ml ___ Glass 140 ml ___ 280 ml ___ Other:	<input type="checkbox"/> Ice <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HNO ₃ <input type="checkbox"/> HCl <input type="checkbox"/> Other	<input type="checkbox"/> ABN <input type="checkbox"/> VOC <input checked="" type="checkbox"/> NH ₃ <input type="checkbox"/> TO14 <input type="checkbox"/> TOC <input type="checkbox"/> TSS <input type="checkbox"/> Cl <input type="checkbox"/> HERB <input type="checkbox"/> TKN <input type="checkbox"/> BOD <input type="checkbox"/> CN <input type="checkbox"/> T. METALS <input type="checkbox"/> O&G <input type="checkbox"/> PAH <input type="checkbox"/> FP <input type="checkbox"/> PEST/PCB <input type="checkbox"/> TDS <input type="checkbox"/> ALK <input type="checkbox"/> TCLP <input type="checkbox"/> N/P PEST <input type="checkbox"/> BTEX <input type="checkbox"/> ORTHO/P <input type="checkbox"/> OTHER: _____		Sample # Report #
	Date: / / Time: am pm	AKGWA #: _____	<input type="checkbox"/> Liquid <input type="checkbox"/> Solid <input type="checkbox"/> Chemical <input type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Other	___ Glass 1000 ml ___ Plastic 1000 ml ___ VOA 40 ml ___ Glass 140 ml ___ 280 ml ___ Other:	<input type="checkbox"/> Ice <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HNO ₃ <input type="checkbox"/> HCl <input type="checkbox"/> Other	<input type="checkbox"/> ABN <input type="checkbox"/> VOC <input type="checkbox"/> NH ₃ <input type="checkbox"/> TO14 <input type="checkbox"/> TOC <input type="checkbox"/> TSS <input type="checkbox"/> Cl <input type="checkbox"/> HERB <input type="checkbox"/> TKN <input type="checkbox"/> BOD <input type="checkbox"/> CN <input type="checkbox"/> T. METALS <input type="checkbox"/> O&G <input type="checkbox"/> PAH <input type="checkbox"/> FP <input type="checkbox"/> PEST/PCB <input type="checkbox"/> TDS <input type="checkbox"/> ALK <input type="checkbox"/> TCLP <input type="checkbox"/> N/P PEST <input type="checkbox"/> BTEX <input type="checkbox"/> ORTHO/P <input type="checkbox"/> OTHER: _____		Sample # Report #
	Date: / / Time: am pm	AKGWA #: _____	<input type="checkbox"/> Liquid <input type="checkbox"/> Solid <input type="checkbox"/> Chemical <input type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Other	___ Glass 1000 ml ___ Plastic 1000 ml ___ VOA 40 ml ___ Glass 140 ml ___ 280 ml ___ Other:	<input type="checkbox"/> Ice <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HNO ₃ <input type="checkbox"/> HCl <input type="checkbox"/> Other	<input type="checkbox"/> ABN <input type="checkbox"/> VOC <input type="checkbox"/> NH ₃ <input type="checkbox"/> TO14 <input type="checkbox"/> TOC <input type="checkbox"/> TSS <input type="checkbox"/> Cl <input type="checkbox"/> HERB <input type="checkbox"/> TKN <input type="checkbox"/> BOD <input type="checkbox"/> CN <input type="checkbox"/> T. METALS <input type="checkbox"/> O&G <input type="checkbox"/> PAH <input type="checkbox"/> FP <input type="checkbox"/> PEST/PCB <input type="checkbox"/> TDS <input type="checkbox"/> ALK <input type="checkbox"/> TCLP <input type="checkbox"/> N/P PEST <input type="checkbox"/> BTEX <input type="checkbox"/> ORTHO/P <input type="checkbox"/> OTHER: _____		Sample # Report #
	Date: / / Time: am pm	AKGWA #: _____	<input type="checkbox"/> Liquid <input type="checkbox"/> Solid <input type="checkbox"/> Chemical <input type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Other	___ Glass 1000 ml ___ Plastic 1000 ml ___ VOA 40 ml ___ Glass 140 ml ___ 280 ml ___ Other:	<input type="checkbox"/> Ice <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HNO ₃ <input type="checkbox"/> HCl <input type="checkbox"/> Other	<input type="checkbox"/> ABN <input type="checkbox"/> VOC <input type="checkbox"/> NH ₃ <input type="checkbox"/> TO14 <input type="checkbox"/> TOC <input type="checkbox"/> TSS <input type="checkbox"/> Cl <input type="checkbox"/> HERB <input type="checkbox"/> TKN <input type="checkbox"/> BOD <input type="checkbox"/> CN <input type="checkbox"/> T. METALS <input type="checkbox"/> O&G <input type="checkbox"/> PAH <input type="checkbox"/> FP <input type="checkbox"/> PEST/PCB <input type="checkbox"/> TDS <input type="checkbox"/> ALK <input type="checkbox"/> TCLP <input type="checkbox"/> N/P PEST <input type="checkbox"/> BTEX <input type="checkbox"/> ORTHO/P <input type="checkbox"/> OTHER: _____		Sample # Report #

Inspector(s): _____

Metals: As Ba Cd Cr Pb Hg Se Ag
 Cu Fe Mn Zn Other _____