

New York State Department of Environmental Conservation  
Division of Materials Management  
Albany, New York 12233-7253

88

2019  
PERMITTED FACILITY ANNUAL REPORT  
BIOSOLIDS LAND APPLICATION  
6 NYCRR Part 361-2

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DIVISION OF  
MATERIALS MANAGEMENT

This annual report is for the year of operation from January 01, 2019 to December 31, 2019

Annual Report Form Due: No Later than March 1, 2020

This form is for biosolids land application facilities that are permitted under Subpart 361-2 previously 360-4 of Part 360. Permits for existing permitted facilities issued a permit prior to November 2017 remain in effect until their expiration date, unless a modification or a department-initiated modification is issued.

Forms for all solid waste management facilities can be found at <http://www.dec.ny.gov/chemical/52706.html>. If you have any questions on this form, please e-mail [organicrecycling@dec.ny.gov](mailto:organicrecycling@dec.ny.gov).

Failure to provide the required information requested is a violation of Environmental Conservation Law. Timely submission of a properly completed form to the Department's Regional Office that has jurisdiction over your facility and to the Department's Central Office is required to meet the Annual Report requirements of 6 NYCRR Part 360.

Attach additional sheets if space on the pages is insufficient or supplementary information is required or appropriate.

PERMITTED FACILITY NAME: Leo Dickson & Sons, Inc.  
PERMIT NUMBER: 8-4699-0012/00001  
SW FACILITY ACTIVITY NUMBER: (Ex. 35AP0099 or 59L04) SILOS  
COUNTY WHERE LAND APPLICATION OCCURS: Steuben

DEC USE ONLY  
Region: SWIMS:  
MATRIX:  
Date Reviewed:  
Reviewed By:  
Data Entered:

**2019**

**Permitted Facility**

**Annual Report**

**Leo Dickson & Sons, Inc.**

**8-4699-00012/00001**

5226 Bonny Hill Road

Bath, NY 14810

**PERMITTED BIOSOLIDS LAND APPLICATION ANNUAL REPORT  
SECTION 1 – FACILITY INFORMATION**

FACILITY INFORMATION			
FACILITY NAME: Leo Dickson & Sons, Inc.			
FACILITY LOCATION ADDRESS: 5226 Bonny Hill Road	FACILITY CITY: Bath	STATE: NY	ZIP CODE: 14810
FACILITY TOWN: Thurston, Cameron, Bath	FACILITY COUNTY: Steuben	FACILITY PHONE NUMBER: 607-776-7997	
NYSDEC REGION #: 8			
FACILITY CONTACT: Mary Rayeski		CONTACT PHONE NUMBER: 607-776-7997	
CONTACT EMAIL ADDRESS: maryrayeski@gmail.com			
OWNER INFORMATION			
OWNER NAME: Phil, Larry, Jay Leo Dickson & Sons Dickson		OWNER PHONE NUMBER: 607-776-7997	
OWNER ADDRESS: 5226 Bonny Hill Rd	OWNER CITY: Bath	STATE: NY	ZIP CODE: 14810
OWNER CONTACT: Phil Dickson	OWNER CONTACT EMAIL ADDRESS: phildickson1@hotmail.com		
OPERATOR INFORMATION			
OPERATOR NAME: <input checked="" type="checkbox"/> Same as owner			
PREFERENCES			
Preferred address to receive correspondence: <input checked="" type="checkbox"/> Facility location address <input type="checkbox"/> Owner address <input type="checkbox"/> Other (provide):			
Preferred email address: <input checked="" type="checkbox"/> Facility Contact <input type="checkbox"/> Owner Contact <input type="checkbox"/> Other (provide):			
Preferred individual to receive correspondence: <input checked="" type="checkbox"/> Facility Contact <input type="checkbox"/> Owner <input type="checkbox"/> Owner Contact <input type="checkbox"/> Other (provide):			
Did you operate in 2019? <input checked="" type="checkbox"/> Yes; Complete this form. <input type="checkbox"/> No; Complete and submit Sections 1 and 12. If you no longer plan to operate and wish to relinquish your permit/registration associated with this solid waste management activity, please notify the regional office of your intent. See attachment for Regional Office addresses and contacts.			

**Permitted Facility Name:** Leo Dickson & Sons, Inc.  
**Permit Number:** 8-4699-0012/00001  
**County Where Land Application Occurs:** Steuben  
**POTW Name:** Leo Dickson & Sons, Inc.  
**POTW Mailing Address:** 5226 Bonny Hill Road, Bath, NY 14810  
**POTW City/Town/Village:** Town of Cameron, Thurston, Bath  
**Operator Telephone:** 607-776-7997  
**Land Application Site Owner Name:** Leo Dickson & Sons, Dickson's Environmental Services, Inc., Dickson Landholding, LLC.  
**Land Application Site Address:** 5226 Bonny Hill Road, Bath, NY 14810  
**Land Application City/Town/Village:** Town of Cameron, Thurston, Bath

**SECTION 1 (continued) – FACILITY INFORMATION**

POTW NAME (If different from facility information above)		
POTW MAILING ADDRESS:		
POTW CITY/TOWN/VILLAGE:	STATE:	ZIP CODE:
OPERATOR NAME:	OPERATOR TELEPHONE:	OPERATOR EMAIL:

**SECTION 2 – TRANSPORTER INFORMATION**

NAME OF TRANSPORTER COMPANY: <i>Dickson Environmental Services, Inc</i>	
PART 364 NUMBER: <i>8A-195</i>	TRANSPORTER PHONE NUMBER: <i>607-776-7997</i>

**SECTION 3 – SUMMARY OF APPLICATION INFORMATION**

Total Acres Land Applied: *see attached* acres

Total Biosolids Land Applied During Reporting Period: *see attached* dry tons

Total Biosolids Landfilled During Reporting Period: *1000* dry tons

Import

Date	Source	Source	Tons	Gallons
1/2/2019	Dewatered	Upstate	19.33	
1/3/2019	Dewatered	Upstate	23	
1/4/2018	Dewatered	Upstate	25.84	
	Dewatered	Upstate	28.15	
	Dewatered	Upstate	23.91	
1/10/2019	Dewatered	Upstate	20.77	
	Dewatered	Upstate	12.15	
1/11/2019	Dewatered	Upstate	17.34	
1/15/2019	Dewatered	Upstate	24	
1/15/2019	Dewatered	Upstate	23.01	
1/16/2019	Dewatered	Upstate	24.11	
1/17/2019	Dewatered	Upstate	23.76	
1/18/2019	Dewatered	Upstate	18.23	
1/19/2019	Dewatered	Upstate	20.62	
1/21/2019	Upstate	Roll Off	13.63	
1/22/2019	Upstate	Roll Off	11.45	
1/23/2019	Upstate	Sidedump	21.14	
1/24/2019	Upstate	Roll Off	17.88	
1/25/2019	Upstate	Roll Off	19.01	
1/25/2019	Upstate	Sidedump	24.76	
1/26/2019	Upstate	Roll Off	12.23	
1/30/2019	Upstate	Sidedump	18.88	
2/4/2019	Upstate	Sidedump	19.85	
2/5/2019	Upstate	Sidedump	11.91	
2/7/2019	Upstate	Sidedump	15.03	
2/8/2019	Upstate	Roll Off	18.87	
2/8/2019	Upstate	Sidedump	16.22	
2/11/2019	Upstate	SD	20.58	
2/12/2019	Upstate	SD	16.05	
	Upstate	RO	21.44	
2/14/2019	Upstate	SD	25.37	
	Upstate	RO	16.79	
2/15/2019	Upstate	SD	24.47	

	Upstate	SD	13.69
2/16/2019	Upstate	RO	12.28
2/19/2019	Upstate	RO	17.24
	Upstate	SD	22.21
2/20/2019	Upstate	RO	16.8
2/21/2019	Upstate	RO	16.8
	Upstate	SD	23.98
2/22/2019	Upstate	RO	15.51

2/25/2019	Upstate	RO	15.54	
2/25/2019	Upstate	RO	15.54	
2/26/2019	Upstate	RO	14.39	
2/27/2019	Upstate	RO	17	
	Upstate	SD	22.25	
2/28/2019	Upstate	RO	16.23	
3/1/2019	upstate	SD	15.8	
	Upstate	RO	12.32	
3/5/2019	Upstate	RO	16.57	
	upstate	SD	18.35	
	Upststate	RO	15.64	
3/8/2019	Upstate	RO	13.69	
3/9/2019	Upstate	SD	24	
3/11/2019	Upstate	RO	13.47	
3/12/2019	Upstate	SD	21.11	
	Upstate	RO	16.49	
3/13/2019	Upstate	SD	19	
	Upstate	RO	14.62	
	Upstate	RO	12.63	
3/14/2019	Upstate	SD	17.05	
8/15/2019	animal feed out of animal feed tank at bunker	Animal Feed Whey for cows		5000.00
10/9/2019	Dietricks	Roll off	6.17	
10/11/2019	Dietricks	Liquid from Lagoon		20000.00
10/11/2019	Dietricks	Roll off	10.54	
10/12/2019	Dietricks	Liquid From Lagoon		31500.00

10/14/2019	Dietricks	Liquid from Lagoon		30677.00
10/15/2019	animal Feed Tank at farm	water/condense		5000.00
10/16/2019	Dietricks	Liquid from Lagoon		27842.00
10/17/2019	Dietricks	Liquid from Lagoon		17754.00
10/18/2019	Dietricks	Liquid from Lagoon		15053.00
10/18/2019	Kerry Bio Science	Liquid		7000
10/25/2019	Kerry Bio Science	waste water		7,000.00
10/31/2019	DFA	sludge	10.5	
10/31/2019	DFA	sludge	10.5	
11/6/2019	Kerry Bio Science	waste water		14,000.00
11/7/2019	Kerry Bio Science	waste water		10,000.00
11/8/2019	DFA	waste water		24,605.00
11/9/2019	DFA	waste water		18,714.00
11/9/2019	Kerry Bio Science	waste water		7,000.00
11/10/2019	DFA	waste water		6,065.00
11/12/2019	Kerry Bio Science	waste water		6,417.00
11/12/2019	DFA	Sludge	10.11	
11/16/2019	DFA	waste water		7000.00
11/19/2019	Kerry	waste water		14,000.00
11/26/2019	DFA dewatered	DFA	9.02	
11/27/2019	DFA dewatered	DFA	15.45	
12/5/2019	Kerry Bio Science	waste water		7,000.00
12/5/2019	DFA	waste water		13,300.00
12/5/2019	Kerry Bio Science	waste water		6,300.00
12/5/2019	DFA	waste water		19,800.00
12/6/2019	DFA	waste water		12,464.00
12/7/2019	DFA	waste water		32,618.00
12/10/2019	DFA	dewatered	15.32	
12/11/2019	Kerry Bio Science	waste water		7,000.00
12/16/2019	Kerry Bio Science	waste water		7,000.00
12/17/2019	DFA	Dewatered	12.83	
12/27/2019	DFA	waste water		19230.00
12/28/2019	DFA	waste water		13770.00
12/31/2019	DFA	waste water		20259.00



12/31/2019	DFA	waste water		7029.00
1/2/2020	DFA	waste water		26822.00
1/10/2020	DFA	waste water		6,233.00
1/11/2020	DFA	waste water		13,432.00

1,220.42 486,884.00

Biosolids  
Import

Date	Source	Source	Tons	Gallons
10/15/2019	Perry	sludge	53.48	P1B
10/17/2019	Perry	sludge	52.17	P1B
10/18/2019	Perry	sludge	51.56	W6
10/18/2019	Cayuga Hgts	sludge	18.45	W6
10/18/2019	Watkins Glen	sludge	19.02	W6
10/21/2019	Waverly	sludge	18.87	W6
10/23/2019	Dryden	sludge	8.06	W6
10/30/2019	Cayuga Hgts	sludge	16.08	W6
10/30/2019	Owego	sludge	15.88	W6
1/15/1900	Dryden WWTP	Biosolids Sludge	15.23	W8
11/13/2019	Watkins Glen	Biosolids Sludge	18.81	W8
11/15/2019	Warsaw	Biosolids Sludge	16.06	W8
11/18/2019	Owego Village	sludge	28.8	w8
11/19/2019	Watkins Glen	sludge	17.65	w8
11/19/2019	Owego Village	sludge	46.17	w8
11/20/2019	Owego Village	sludge	29.97	w8
11/25/2019	Canisteo Sludge	Canisteo Sludge	11.98	upper LWR Pad
11/26/2019	Canisteo Sludge	Canisteo Sludge	10.63	upper LWR Pad
12/9/2019	Dryden	dewatered	17.17	LWR Pad
12/9/2019	Cayuga Hgts	dewatered	16.93	LWR Pad
12/10/2019	Avon	dewatered	22.29	LWR Pad
12/10/2019	Waverly	dewatered	20.11	LWR Pad

525.37

Export

2019

DATE	Source	Export	Tons
Monday, July 22, 2019	Mortality compost	Steve Orcutt	168
Tuesday, July 23, 2019	Mortality Compost	Steve Orcutt	168
Wednesday, July 24, 2019	Mortality Compost	Steve Orcutt	168
Thursday, July 25, 2019	Mortality Compost	Steve Orcutt	168
Friday, July 26, 2019	Mortality Compost	Steve Orcutt	168
Saturday, July 27, 2019	Mortality Compost	Steve Orcutt	168
Sunday, July 28, 2019	Mortality Compost	Steve Orcutt	168
Tuesday, July 30, 2019	Screened Mortality Compost	Casella, Ontario Landfill	50
Wednesday, July 31, 2019	Screened Mortality Compost	Casella, Ontario Landfill	50
Thursday, August 1, 2019	Screened Mortality Compost	Casella, Ontario Landfill	50
Friday, August 2, 2019	Screened Mortality Compost	Casella, Ontario Landfill	100
Monday, August 5, 2019	biosolids, compost	Casella, Ontario Landfill	50
Tuesday, August 6, 2019	biosolids, compost	Casella, Ontario Landfill	50
Wednesday, August 7, 2019	biosolids, compost	Casella, Ontario Landfill	50
Thursday, August 8, 2019	biosolids, compost	Casella, Ontario Landfill	50
Friday, August 9, 2019	biosolids, compost	Casella, Ontario Landfill	50
Monday August 12, 2019	biosolids, compost	Casella, Ontario Landfill	50
Tuesday, August 13, 2019	biosolids, compost	Casella, Ontario Landfill	50
Monday, August 19, 2019	biosolids, compost	Casella, Ontario Landfill	35
Tuesday, August 20, 2019	biosolids, compost	Casella, Ontario Landfill	35
Thursday, August 22, 2019	biosolids, compost	Casella, Ontario Landfill	35
Friday, August 23, 2019	biosolids, compost	Casella, Ontario Landfill	35
Monday, August 26, 2019	biosolids, compost	Casella, Ontario Landfill	35
Tuesday, August 27, 2019	biosolids, compost	Casella, Ontario Landfill	35
Wednesday, August 28, 2019	biosolids, compost	Casella, Ontario Landfill	70
Thursday, August 29, 2019	biosolids, compost	Casella, Ontario Landfill	70
Friday, August 30, 2019	biosolids, compost	Casella, Ontario Landfill	70
Friday, December 20, 2019	Avon Sludge	Steuben County Landfill	23.4
			2219.4

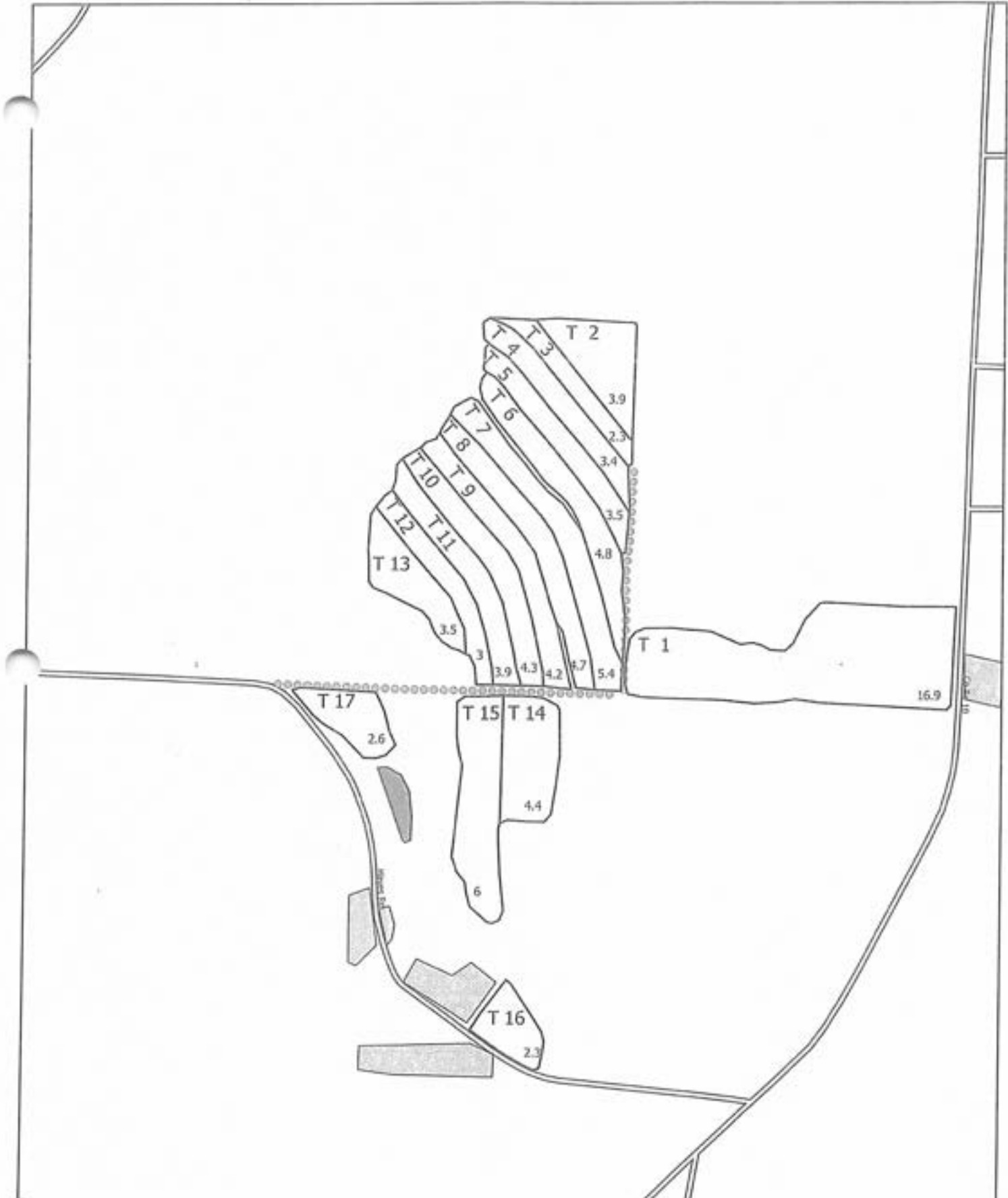
### SECTION 4 – BIOSOLIDS ANALYSES

Please attach sampling analyses and laboratory reports for each biosolids source as required under Part 360 or your permit. Copies of original laboratory results must be attached. All results, except pH and Total Solids, must be on a dry weight basis.

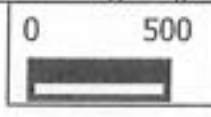
**Summarize data in table below or attached document.  
Print additional pages as needed.**

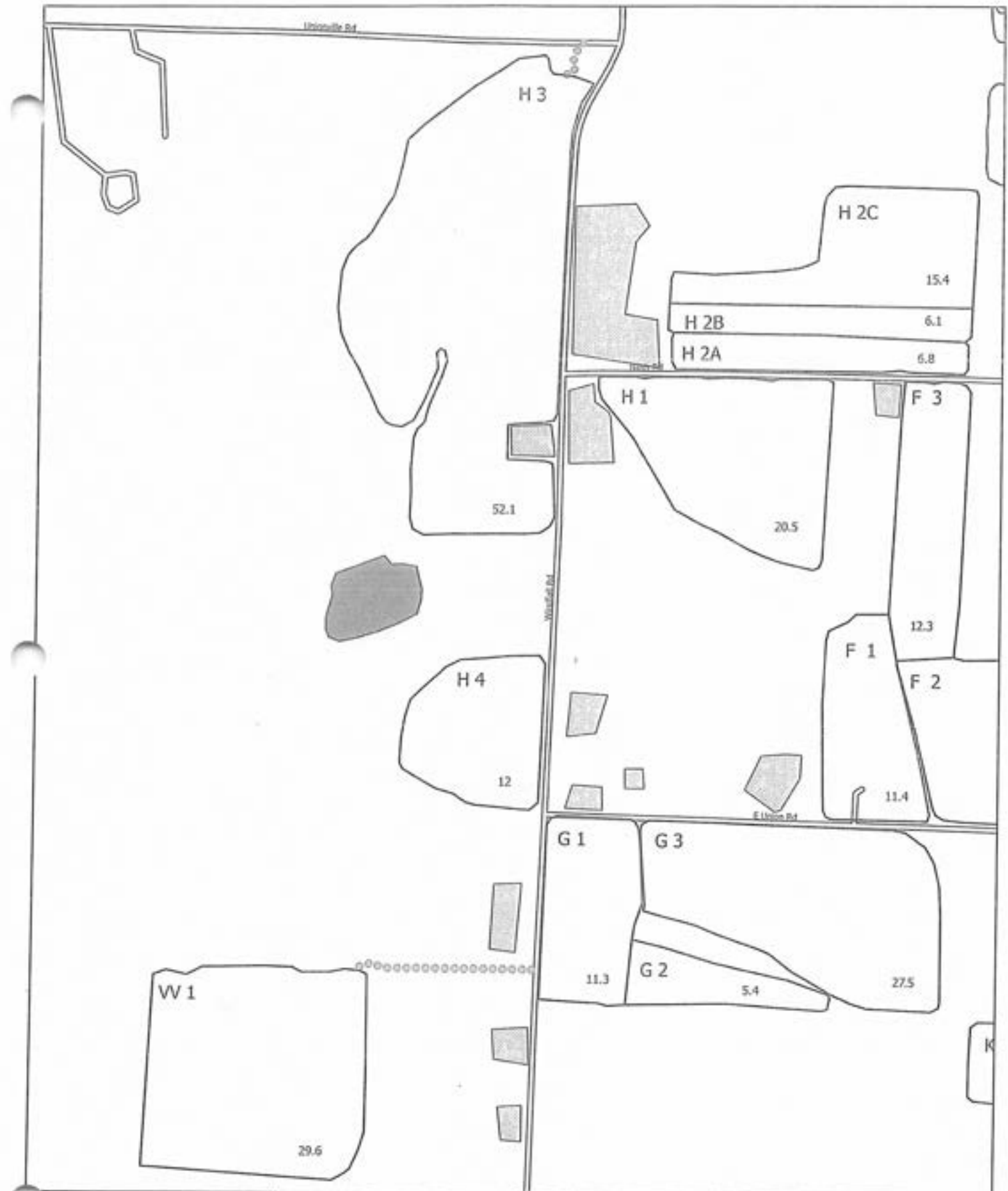
Analysis Date =====>					Permit Pre 2017 Regs.  Monthly Conc. (mg/kg)	Permit Post 2017 Regs.  Max. Conc. (mg/kg)
<i>See attached</i>						
Arsenic (mg/kg)					41	41
Cadmium (mg/kg)					21	10
Chromium (mg/kg)					1,000	1,000
Copper (mg/kg)					1,500	1,500
Lead (mg/kg)					300	300
Mercury (mg/kg)					10	10
Molybdenum (mg/kg)					40	40
Nickel (mg/kg)					200	200
Selenium (mg/kg)					100	100
Zinc (mg/kg)					2,500	2,500
TKN (mg/kg)						
Ammonia Nitrogen (mg/kg)						
Nitrate (mg/kg)						
Total Phosphorus (mg/kg)						
Total Potassium (mg/kg)						
pH (s.u.)						
Total Solids( %)						
Total Volatile Solids (%)						

# **2019 Land Application Data**

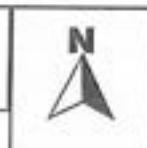
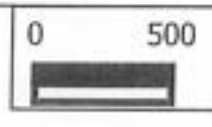


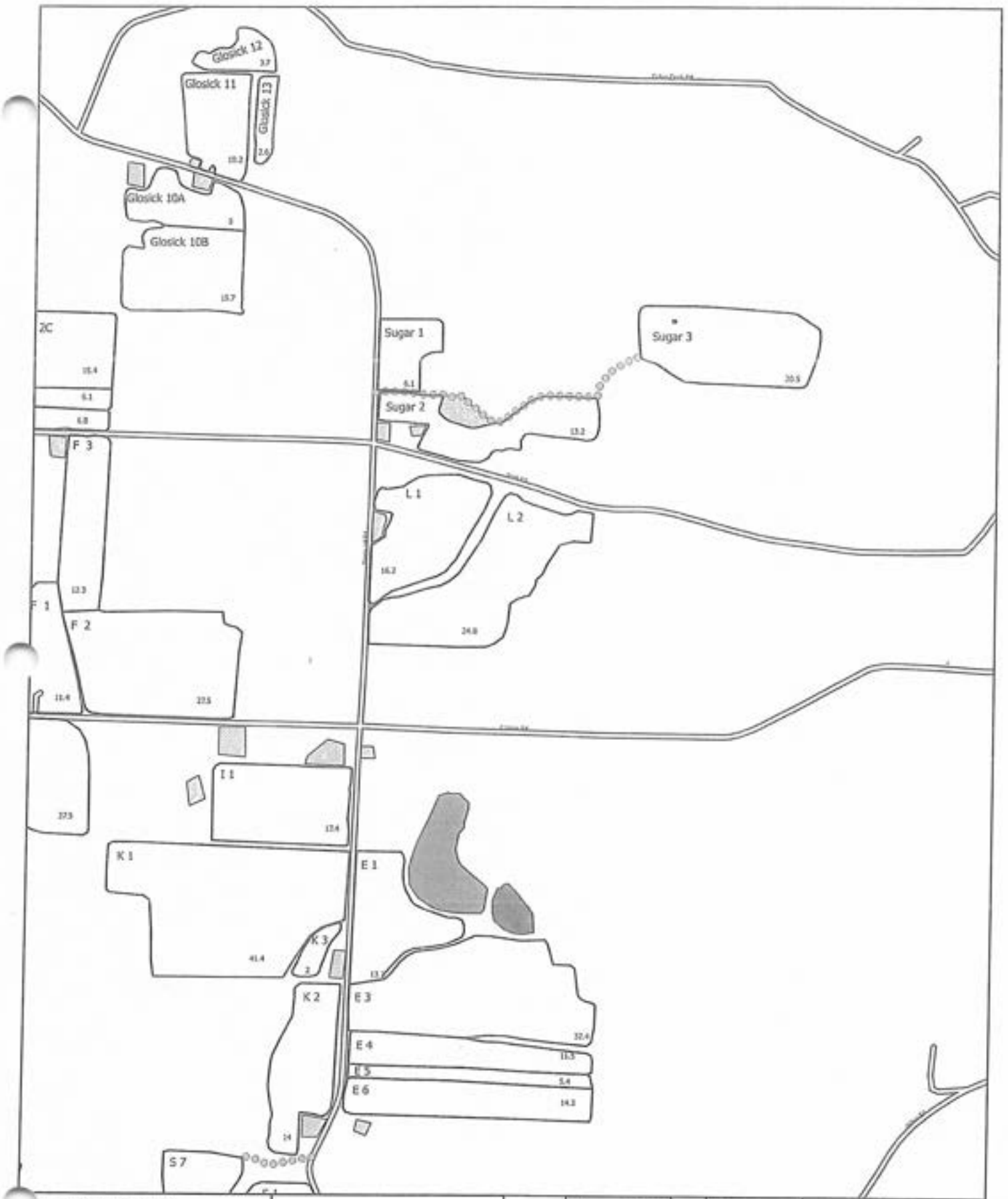
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 Farm #953  
 Map#: 1  
 05-10-2018



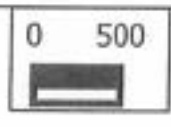


© Dickson & Sons  
 Farm #953  
 Map#: 2  
 05-10-2018

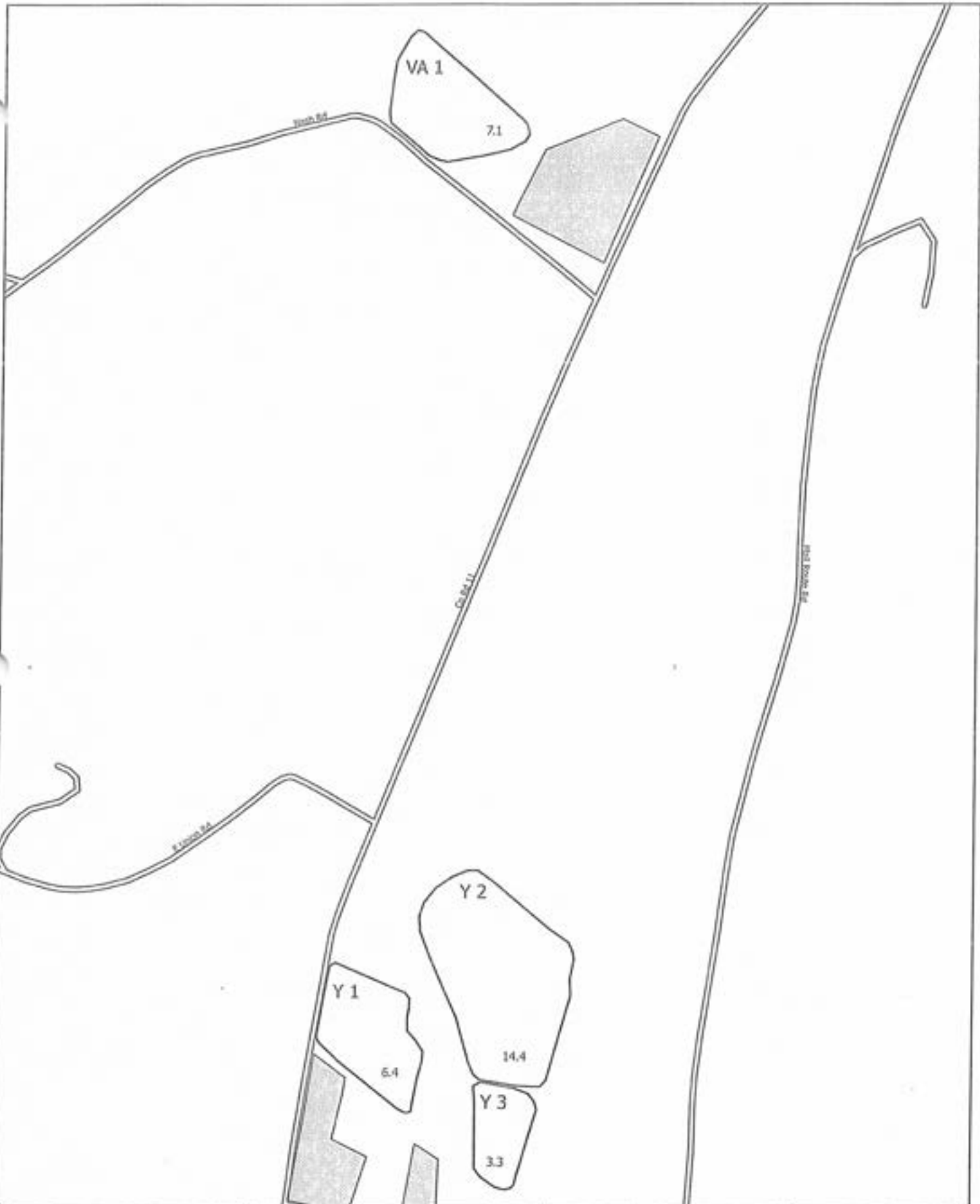




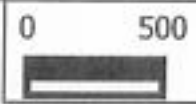
Dickson & Sons  
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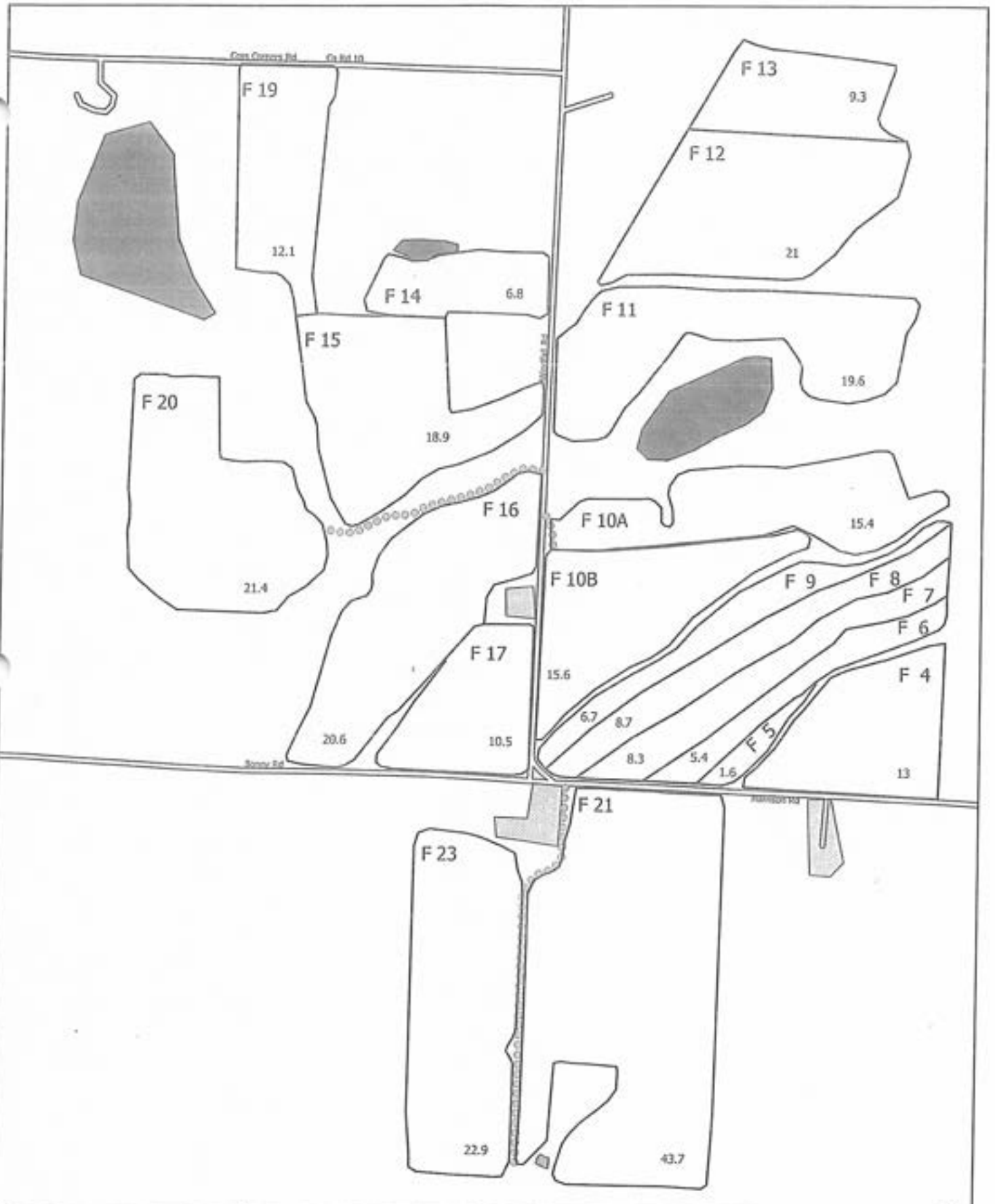




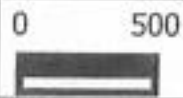


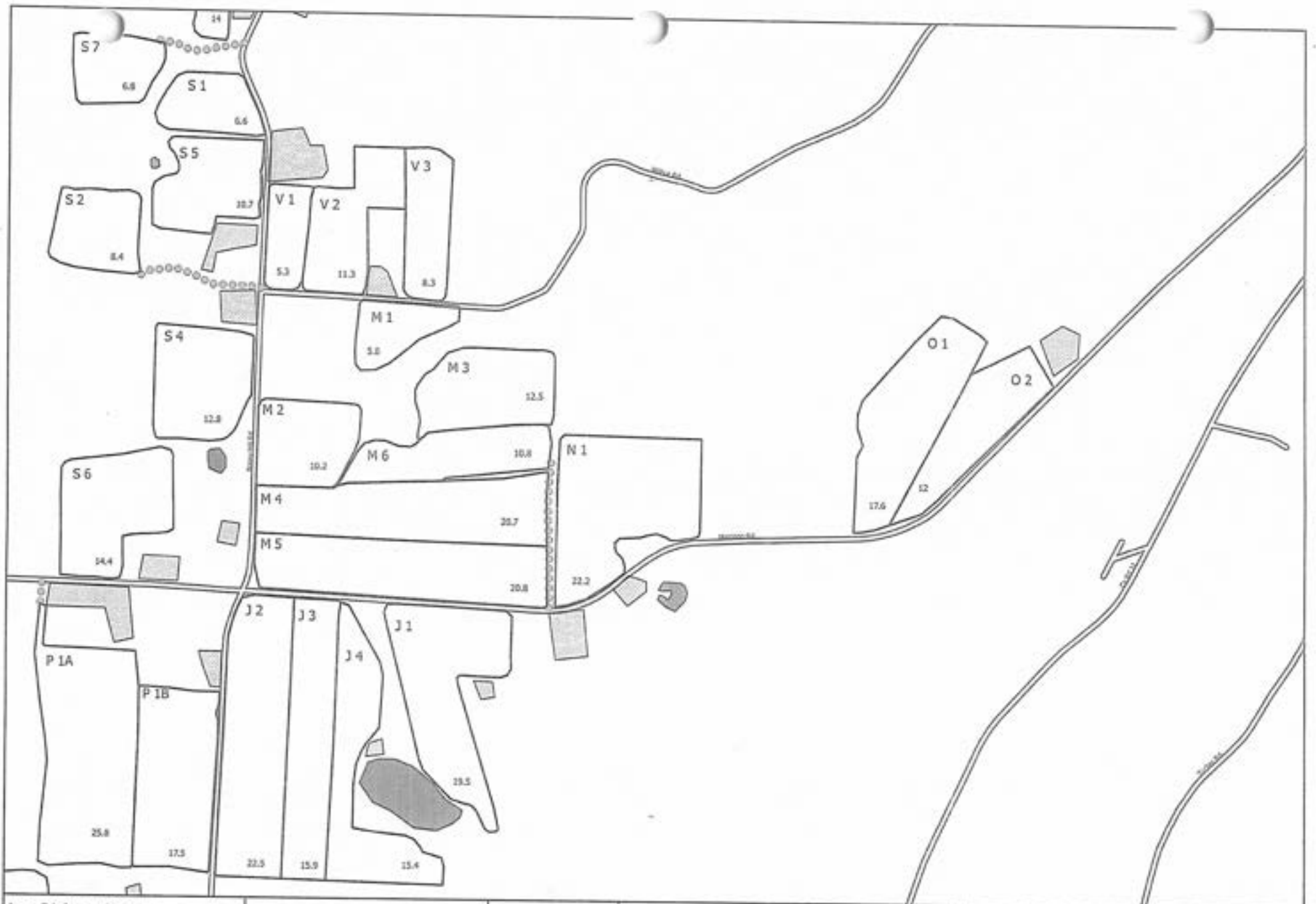
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Map#: 4  
05-10-2018





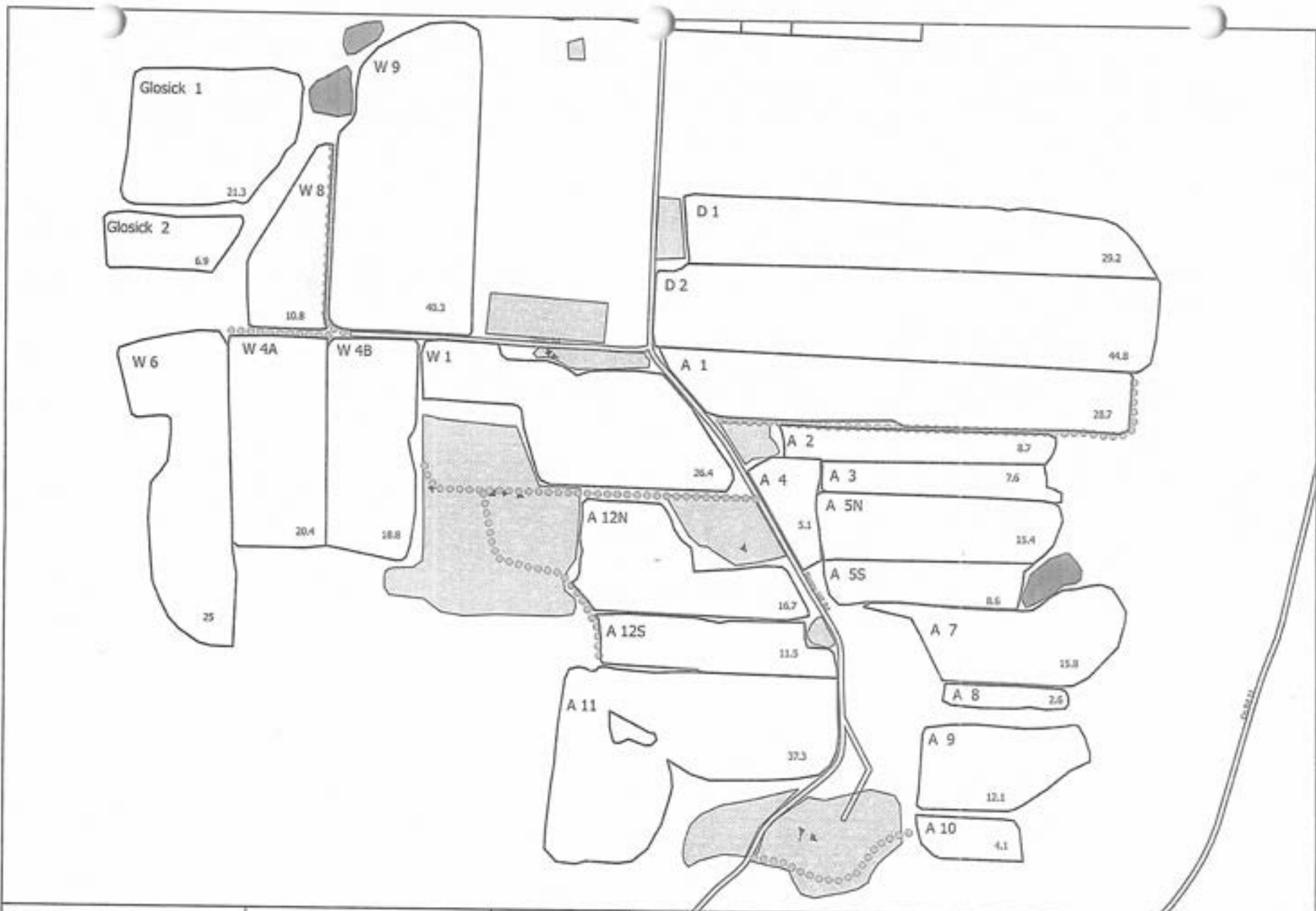
o Dickson & Sons  
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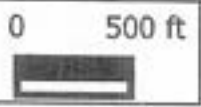


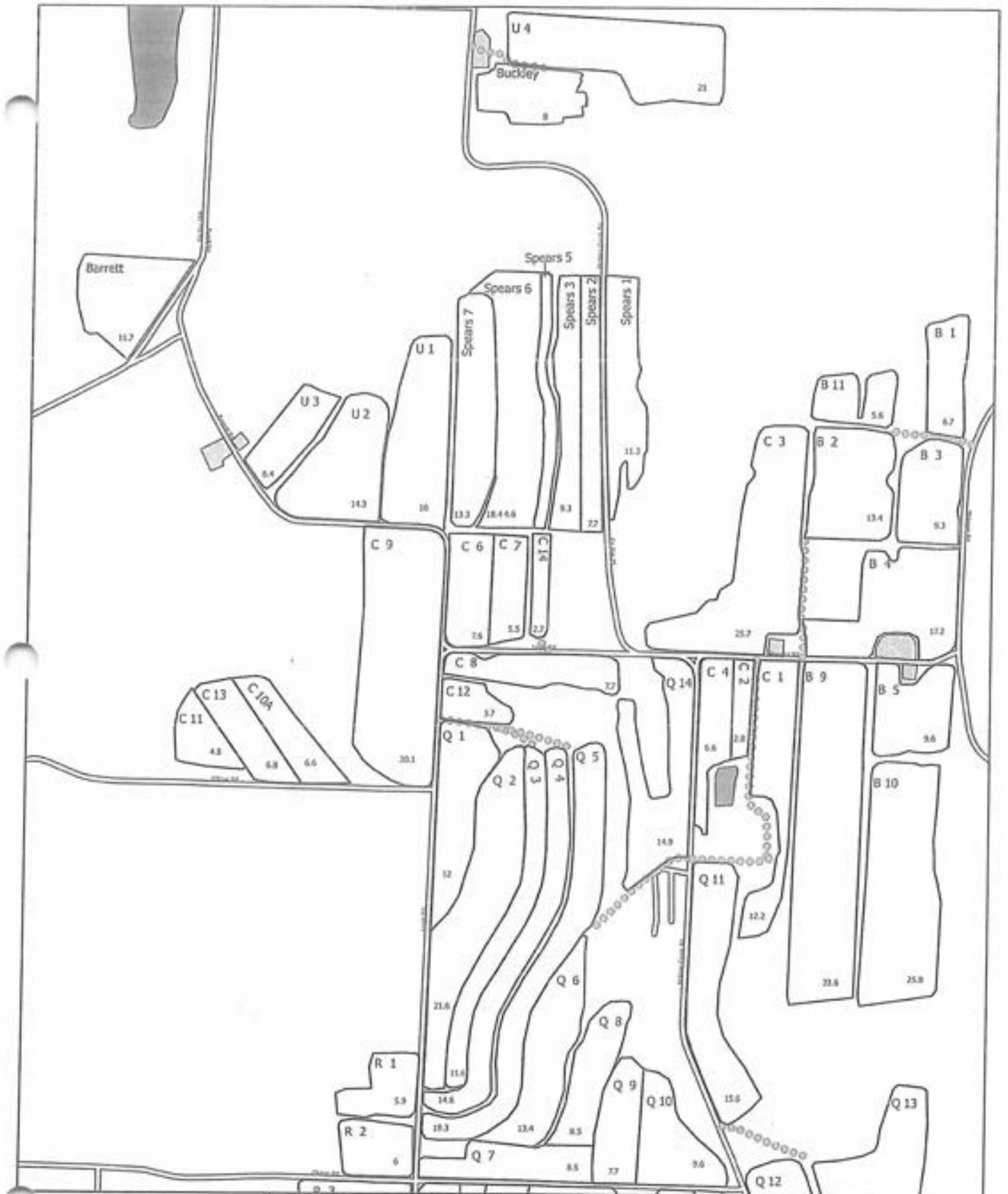
Leo Dickson & Sons  
 Farm #953  
 Map #6  
 05-10-2018



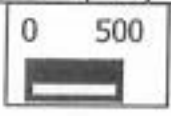


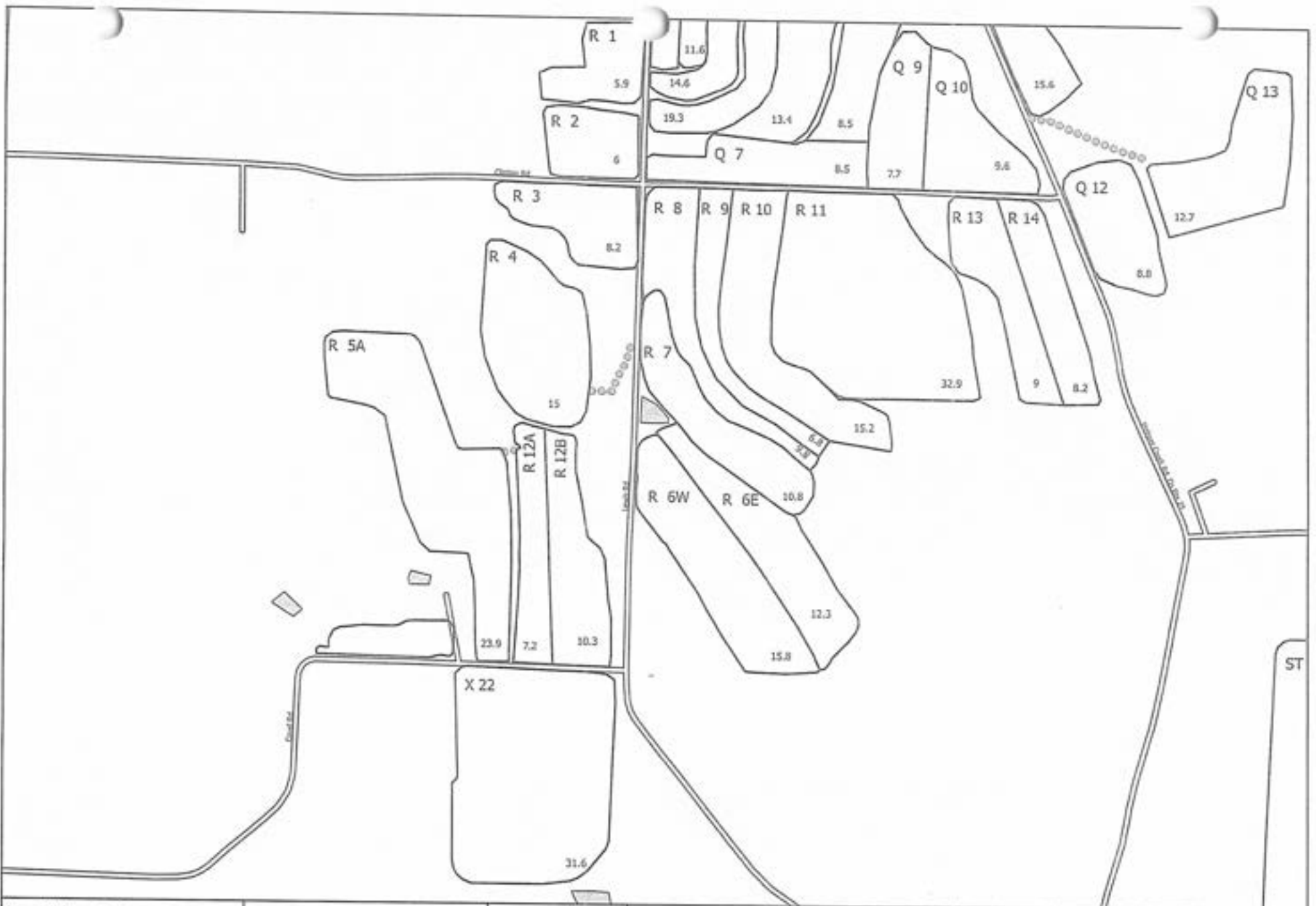
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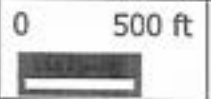


Dickson & Sons  
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 05-10-2018

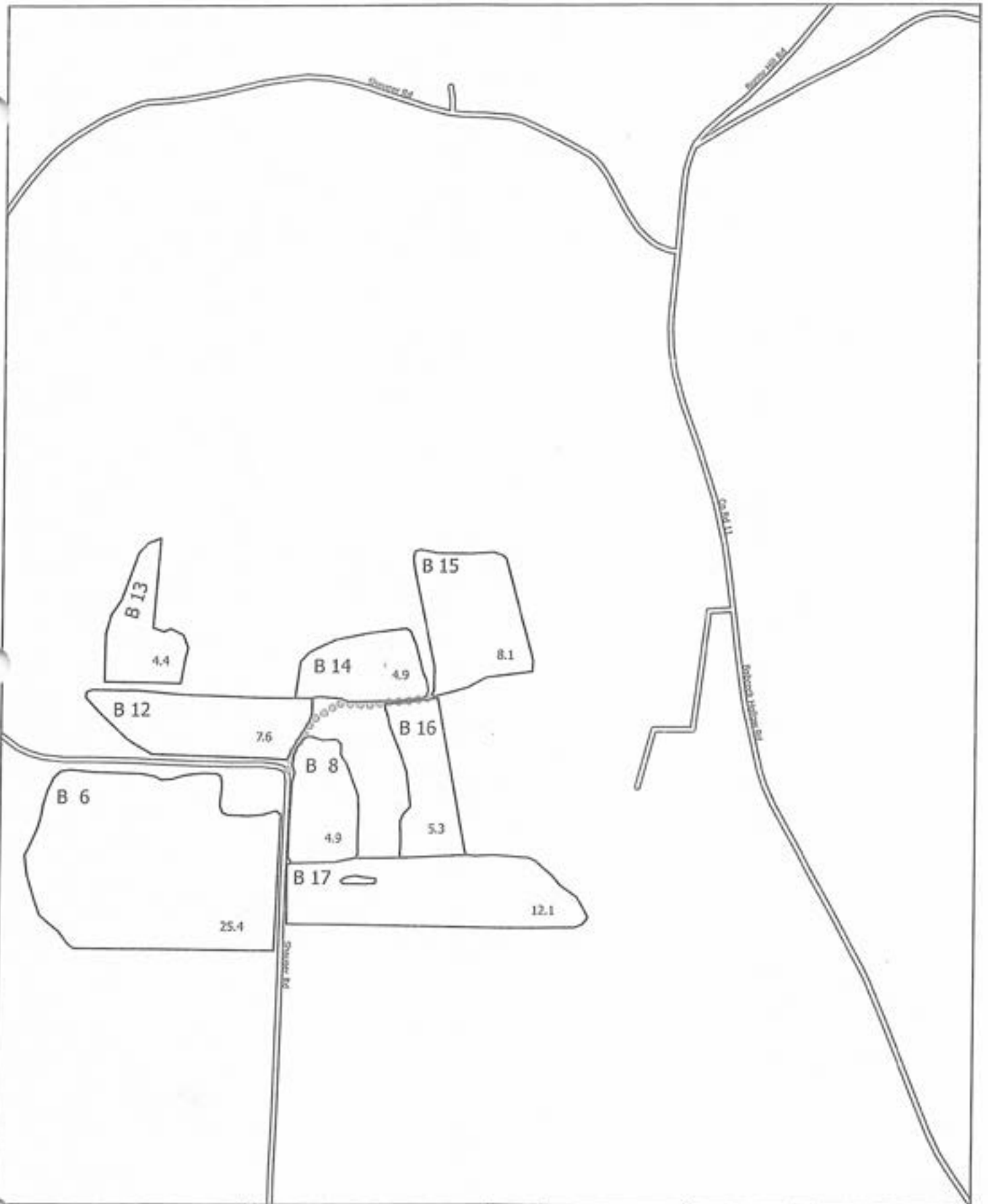




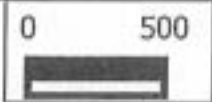
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 Map #9  
 05-10-2018



Western New York  
**CROP MANAGEMENT**

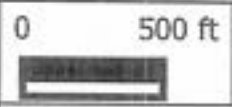


Geo Dickson & Sons  
 Farm #953  
 Map#: 10  
 05-10-2018



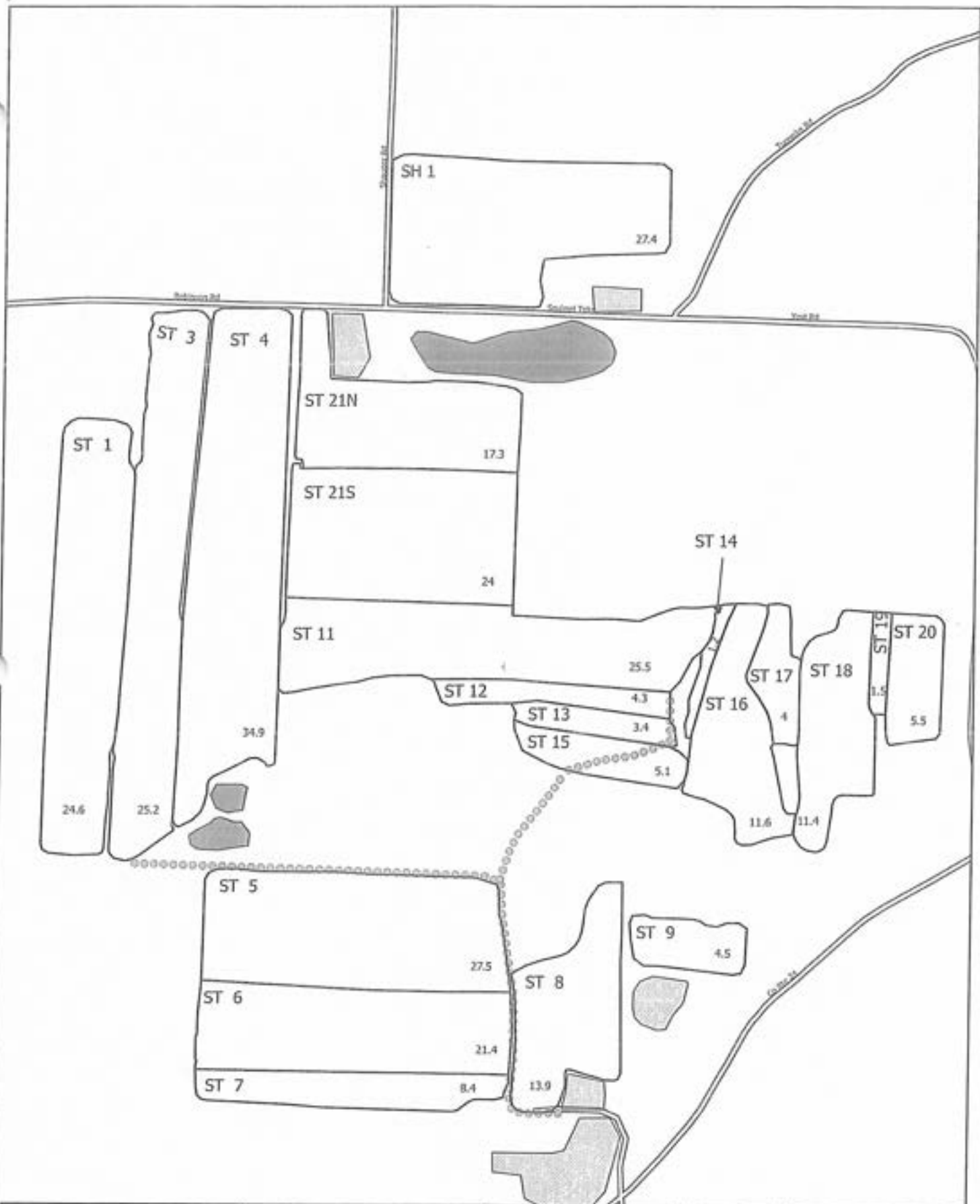


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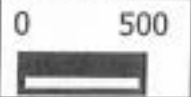


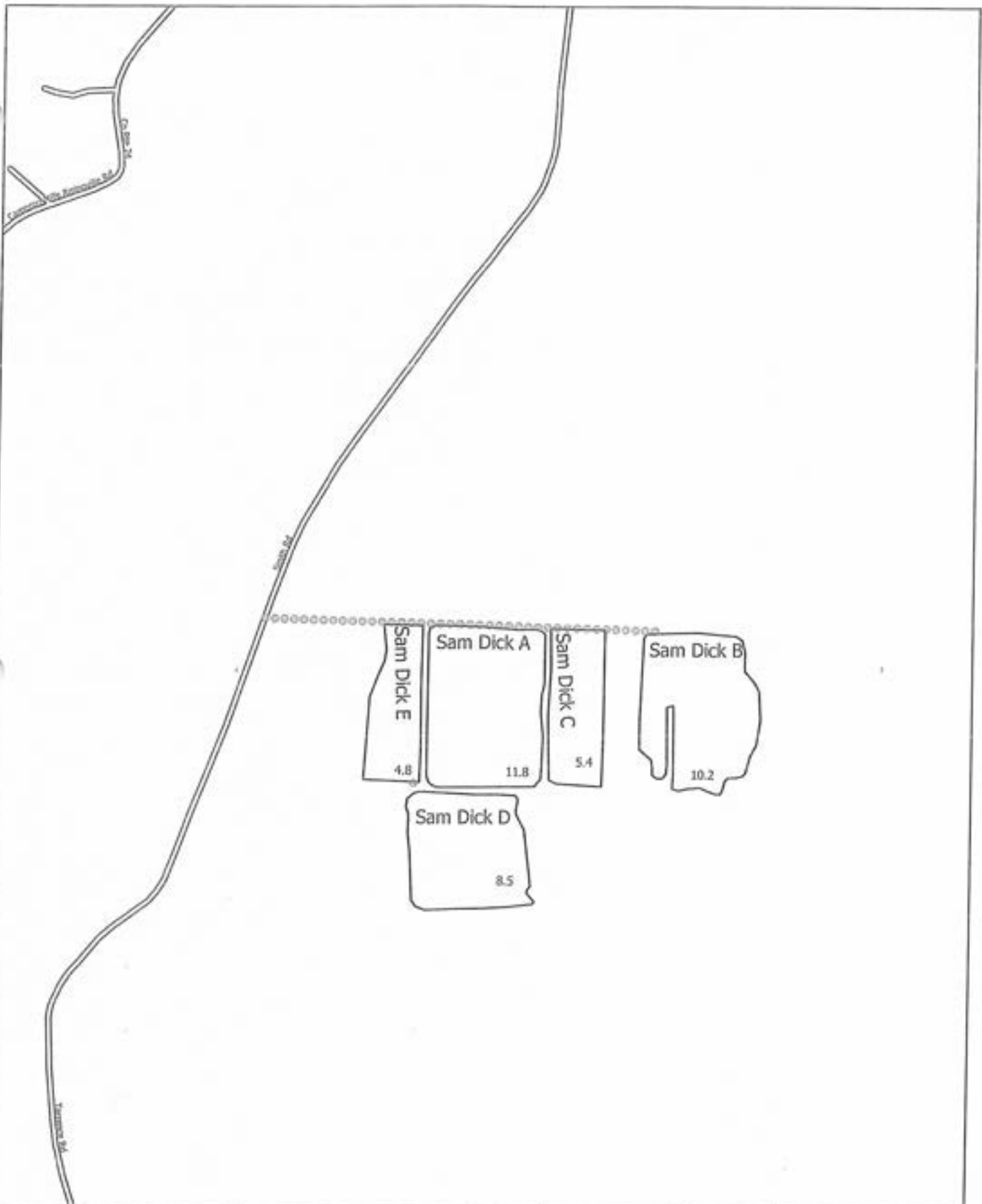
Western  
 New York  
**CROP MANAGEMENT**



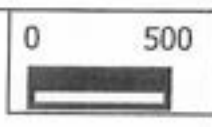


30 Dickson & Sons  
 Farm #953  
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 05-10-2018



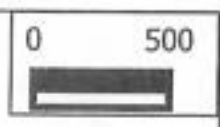


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 Farm #953  
 Map#: 13  
 05-10-2018





o Dickson & Sons  
Farm #953  
Map#: 14  
05-10-2018



# P1 Spreading

Land Application						
Date	Type	source	Amount / Gallons	Field	Acres	Machine
1/2/2019	P1	P1	136,000.00	H3	52.2	quad
1/3/2019	P1	P1	119,000.00	H3	52.2	quad
1/4/2019	P1	P1	144,500.00	ST6	25.3	quad
1/5/2019	P1	P1	127,500.00	ST6	25.3	quad
1/10/2019	p1	p1	16,800.00	L2	26	quad
1/14/2019	P1	P1	102,000.00	H3	52	quad
1/15/2019	p1	p1	56,000.00	H3	52.2	quad
1/16/2019	p1	p1	21,000.00	P1B	17.2	quad
	p1	p1	4,200.00	J2	19.3	quad
2/4/2019	P1	P1	85,500.00	St6	25.3	9105
	P1	P1	18,000.00	R 7	11.1	9105
2/5/2019	p1	p1	9,000.00	C7	6	9105
	P1	P1	27,000.00	R10	12.7	9105
	P1	P1	72,000.00	R11	28	9105
2/7/2019	P1	P1	27,000.00	R11	28	9105
	P1	P1	18,000.00	R4	16	9105
	P1	P1	4,500.00	R5A	21	9105
2/8/2019	P1	P1	25,500.00	R5A	21	Quad
2/11/2019	P1	P1	204,000.00	F2	28.1	Quad
2/14/2019	P1	P1	178,500.00	F2	28.1	Quad
2/15/2019	P1	P1	102,000.00	F2	28.1	Quad
2/15/2019	P1	P1	85,000.00	H1	20.5	Quad
2/16/2019	P1	P1	110,500.00	F2	28.1	Quad
2/16/2019	P1	P1	68,000.00	F1	11.9	Quad
2/18/2019	P1	P1	85,000.00	J4	18.2	Quad
2/18/2019	P1	P1	102,000.00	P1B	17.7	Quad
2/19/2019	P1	P1	42,500.00	V2 & V3		Quad
2/19/2019	P1	P1	34,000.00	V1 & V2		Quad
2/19/2019	P1	P1	34,000.00	M1	5.1	Quad
2/20/2019	P1	P1	102,000.00	F2	28.1	Quad

2/20/2019	P1	P1	68,000.00	V1-V2		Quad
2/22/2019	P1	P1	127,500.00	N1	22.5	Quad
2/22/2019	P1	P1	34,000.00	A3		Quad
2/23/2019	P1	P1	42,500.00	H1	20.5	Quad
2/23/2019	P1	P1	51,000.00	L2	26	Quad
2/23/2019	P1	P1	42,500.00	H3	52.2	Quad
2/26/2019	P1	P1	93,500.00	L2	26	Quad
3/6/2019	P1	P1	68,000.00	Andy P		Quad
3/6/2019	P1	P1	34,000.00	Andy P		Quad
3/9/2019	P1	P1	34,000.00	H3	52.2	Quad
3/11/2019	P1	P1	34,000.00	N1	22.5	Quad
	P1	P1	42,500.00	L2	26	Quad
	P1	P1	17,000.00	L1	15.9	Quad
	P1	P1	34,000.00	H1	20.5	Quad
3/12/2019	P1	P1	42,500.00	F1	11.9	Quad
	P1	P1	25,500.00	ST5	25.8	Quad
	P1	P1	34,000.00	L1	15.9	Quad
3/14/2019	P1	P1	25,500.00	R3	8.8	Quad
3/15/2019	P1	P1	51,000.00	ST5	25.8	Quad
3/16/2019	P1	P1	34,000.00	ST5	25.8	Quad
	P1	P1	42,500.00	ST15	4.2	Quad
3/18/2019	P1	P1	85,000.00	ST6	25.3	Quad
3/19/2019	P1	P1	68,000.00	ST6	25.3	Quad
3/20/2019	P1	P1	153,000.00	ST5	25.8	Quad
3/21/2019	P1	P1	51,000.00	ST8	13.8	Quad
3/23/2019	P1	P1	86,500.00	ST 5/6		Quad
3/24/2019	P1	P1	82,500.00	ST 5/6		Quad
3/25/2019	P1	P1	86,500.00	ST 5/6		Quad
3/26/2019	P1	P1	86,500.00	ST 5/6		Quad
3/27/2019	P1	P1	31,500.00	ST 5/6		Quad
3/27/2019	P1	P1	17,000.00	ST 5/6		Quad
3/28/2019	P1	P1	51,000.00	ST 5/6		Quad
3/27/2019	P1	P1	16,000.00	L1		Quad
4/1/2019	P1	P1	31,500.00	H1		Quad

4/2/2019	P1	P1	17,700.00	H1		Quad
4/2/2019	P1	P1	101,100.00	H3		Quad
4/3/2019	P1	P1	153,900.00	L1		Quad
4/4/2019	P1	P1	110,500.00	L1		Quad
4/5/2019	P1	P1	95,000.00	L1		Quad
4/6/2019	P1	P1	65,000.00	M1		Quad
4/8/2019	P1	P1	73,500.00	K1		Quad
4/9/2019	P1	P1	85,000.00	K1		Quad
4/10/2019	P1	P1	42,500.00	K1		Quad
4/11/2019	P1	P1	8,500.00	H3		Quad
4/12/2019	P1	P1	22,500.00	H3		Quad
4/16/2019	P1	P1	22,500.00	O1		9105
4/16/2019	P1	P1	34,000.00	K1		9105
4/16/2019	P1	P1	22,500.00	O2		9105
4/18/2019	P1	P1	13,000.00	H3		9105
4/18/2019	P1	P1	17,000.00	D1		9105
4/19/2019	P1	P1	127,500.00	D1		9105
4/22/2019	P1	P1	27,000.00	K1		9105
4/23/2019	P1	P1	34,000.00	H1		9105
4/23/2019	P1	P1	34,000.00	H3		9105
4/24/2019	P1	P1	42,000.00	H3		9105
4/25/2019	P1	P1	51,000.00	o1		9105
4/25/2019	p1	p1	51,000.00	o2		9105
4/26/2019	p1	p1	42,000.00	N1		9105
4/26/2019	P1	P1	42,000.00	K1		9105
4/26/2019	P1	P1	42,000.00	o1		9105
4/30/2019	P1	P1	36,000.00	St5		9105
5/1/2019	P1	P1	31,500.00	ST18		9105
5/2/2019	p1	p1	22,000.00	ST5		9105
5/3/2019	p1	p1	76,500.00	o1		9105
5/4/2019	p1	p1	25,000.00	o2		9105
06/19/19	P1	P1	102,000.00	Q3		9105
6/27/2019	P1	P1	68,800.00	R6W		Quad
7/16/2019	P1	P1	16,000.00	F12		Quad

7/16/2019	P1	P1	16,000.00	F13	9105
7/19/2019	P1	P1	24,000.00	E4	9105
7/25/2019	P1	P1	16,000.00	V2	9105
7/25/2019	P1	P1	8,000.00	E6	9105
7/25/2019	P1	P1	8,000.00	V2	9105
7/26/2019	P1	P1	8,000.00	V3	9105
7/27/2019	P1	P1	8,000.00	V1	9105
7/27/2019	P1	P1	8,000.00	V3	9105
7/29/2019	P1	P1	24,000.00	K1	9105
8/26/2019	P1	P1	24,000.00	R12	9105
8/26/2019	P1	P1	8,600.00	RW6	9105
8/26/2019	P1	P1	32,000.00	Q9	9105
8/27/2019	P1	P1	8,000.00	R12B	9105
8/27/2019	P1	P1	8,600.00	R12B	9105
8/30/2019	P1	P1	40,000.00	J1	9105
9/19/2019	P1	P1	144,000.00	R10	9105
9/20/2019	P1	P1	56,000.00	Q4	9105
9/20/2019	P1	P1	40,000.00	R10	9105
9/21/2019	P1	P1	72,000.00	Q4	9105
9/23/2019	P1	P1	42,000.00	Q4	9105
9/24/2019	P1	P1	120,000.00	U1	9105
9/25/2019	P1	P1	112,000.00	U1	9105
9/26/2019	P1	P1	88,000.00	U1	9105
9/27/2019	P1	P1	88,000.00	R3	9105
9/28/2019	P1	P1	16,000.00	R10	9105
10/1/2019	P1	P1	20,000.00	R10	9105
10/2/2019	P1	P1	16,000.00	R10	9105
10/3/2019	P1	P1	16,000.00	Q7	9105
10/4/2019	P1	P1	48,000.00	V2	9105
10/10/2019	P1	P1	44,000.00	V3	9105
11/20/2019	P1	P1	64,000.00	F19	9105
11/20/82019	P1	P1	24,000.00	L1	9105
11/21/2019	P1	P1	104,000.00	R11	9105
11/22/2019	P1	P1	24,000.00	U2	9105

11/22/2019	P1	P1	24,000.00	Spears 7		9105
11/26/2019	P1	P1	20,000.00	U2		9105
			7,162,200.00			



Land Application						
Date	Type	source	Amount / Gallons	Field	Acres	Machine
1/3/2019	P2	P2	25,500.00	H3	52.2	quad
5/8/2019	P2	P2	161,500.00	F19		9105
5/9/2019	P2	P2	153,000.00	K1		9105
5/21/2019	P2	P2	127,500.00	K1		9105
5/22/2019	P2	P2	127,500.00	G3		9105
5/23/2019	P2	P2	127,500.00	H1		9105
5/24/2019	P2	P2	86,000.00	L2		9105
5/30/2019	P2	P2	43,000.00	L2		9105
5/31/2019	P2	P2	68,600.00	L2		9105
6/3/2019	P2	p2	86,000.00	L2		9105
6/4/2019	p2	p2	86,000.00	G1		9105
6/5/2019	P2	P2	15,000.00	H2B		9105
6/5/2019	P2	P2	40,000.00	G3		9105
6/11/2019	P2	P2	43,000.00	V3		9105
6/11/2019	P2	P2	43,000.00	V2		9105
6/12/2019	P2	P2	17,800.00	V2		9105
6/12/2019	P2	P2	42,500.00	H2C		9105
6/13/2019	P2	P2	34,000.00	V3		9105
6/28/2019	P2	P2	43,000.00	R5A		Quad
6/28/2019	P2	P2	8,600.00	R12		Quad
6/30/2019	P2	P2	68,800.00	R5A		9105
6/30/2019	P2	P2	8,600.00	R12		9105
6/30/2019	P2	P2	68,800.00	R5A		9105
7/2/2019	P2	P2	17,200.00	R12		9105
7/2/2019	P2	P2	8,600.00	R5A		9105
7/2/2019	P2	P2	43,000.00	C10A		9105
7/2/2019	P2	P2	17,200.00	C13		9105
7/5/2019	P2	P2	40,000.00	C13		9105
7/8/2019	P2	P2	55,400.00	B9		9105
7/9/2019	P2	P2	17,200.00	R4		9105

7/10/2019	P2	P2	43,000.00	R4	9105
7/11/2019	P2	P2	81,000.00	B9	9105
7/15/2019	P2	P2	80,000.00	B9	9105
8/13/2019	P2	P2	80,000.00	E6	9105
8/14/2019	P2	P2	32,000.00	H2B	9105
8/15/2019	P2	P2	16,000.00	H2B	9105
8/21/2019	P2	P2	9,000.00	Q7	9105
8/22/2019	P2	P2	18,000.00	Q7	9105
8/23/2019	P2	P2	18,000.00	Q9	9105
8/24/2019	P2	P2	36,000.00	Q10	9105
8/26/2019	P2	P2	8,000.00	Q7	9105
9/13/2019	P2	P2	56,000.00	V1	9105
9/14/2019	P2	P2	48,000.00	U1	9105
9/16/2019	P2	P2	64,000.00	U1	9105
9/17/2019	P2	P2	16,000.00	Q9	9105
9/17/2019	P2	P2	80,000.00	Q7	9105
9/17/2019	P2	P2	24,000.00	U1	9105
10/11/2019	P2	P2	16,000.00	J 2	9105
10/11/2019	P2	P2	40,000.00	J 4	9105
10/11/2019	P2	P2	44,000.00	V2	9105
10/12/2019	P2	P2	8,000.00	J 4	9105
10/16/2019	P2	P2	48,000.00	J4	9105
10/18/2019	P2	P2	58000	H3	9105
10/21/2019	P2	P2	80,000.00	J1	9105
10/22/2019	P2	P2	48,000.00	J1	9105
10/30/2019	P2	P2	48,000.00	H3	9105
11/4/2019	P2	P2	50,000.00	H3	9105
11/5/2019	P2	P2	80,000.00	H3	9105
11/6/2019	P2	P2	40,000.00	H3	9105
11/7/2019	P2	P2	40,000.00	H3	9105
11/11/2019	P2	P2	60,000.00	O1	9105
11/12/2019	P2	P2	56,000.00	O1	9105
11/12/2019	P2	P2	48,000.00	N1	9105
11/14/2019	P2	P2	40,000.00	N1	9105

11/15/2019	p2	p2	16,000.00	N1		9105
11/18/2019	P2	P2	32,000.00	L2		9105
11/19/2019	P2	P2	4,300.00	L1		9105
11/19/2019	P2	P2	4,300.00	L2		9105
11/19/2019	P2	P2	72,000.00	L2		9105
12/27/2019	P2	P2	10,400.00	N1		9105
			3,375,800.00			

# Dairy manure

Land Application						
Date	Type	source	Amount / Gallons	Field	Acres	Machine
	Dairy	Dairy	68,000.00	P1B	17.7	quad
	Dairy	Dairy	51,000.00	J2	19.3	quad
1/17/2019	Dairy	Dairy	68,000.00	J2	19.3	quad
	Dairy	Dairy	102,000.00	P1B	17.7	quad
	Dairy	Dairy	9,000.00	C7	6	9105
3/5/2019	Dairy	Dairy	68,000.00	Andy P		Quad
3/5/2019	Dairy	Dairy	34,000.00	Andy P		Quad
3/7/2019	Dairy	Dairy	42,500.00	Andy P		Quad
3/13/2019	Dairy	Dairy	42,500.00	R3	8.8	Quad
	Dairy	Dairy	17,000.00	R3	8.8	Quad
3/27/2019	Dairy	Dairy	42,500.00	ST 5/6		Quad
4/17/2019	Dairy	Dairy	22,500.00	E3		9105
4/17/2019	Dairy	Dairy	8,500.00	C7		9105
5/2/2019	Dairy	Dairy	22,000.00	st16		9105
6/6/2019	Dairy	Dairy	20,000.00	S5		9105
6/6/2019	Dairy	Dairy	20,000.00	S1		9105
6/7/2019	Dairy	Dairy	35,000.00	S1		9105
6/7/2019	Dairy	Dairy	59,500.00	K2		9105
6/7/2019	Dairy	Dairy	43,000.00	Sugar 3		9105
6/8/2019	Dairy	Dairy	94,600.00	Sugar 1		9105
6/9/2019	Dairy	Dairy	59,500.00	Sugar 2		9105
6/10/2019	Dairy	Dairy	17,000.00	Sugar 1		9105
6/27/2019	Dairy	Dairy	25,800.00	R6W		Quad
6/28/2019	Dairy	Dairy	17,200.00	R5A		Quad
6/30/2019	Dairy	Dairy	17,200.00	R5A		9105
7/3/2019	Dairy	Dairy	24,000.00	C11		9105
7/10/2019	Dairy	Dairy	17,200.00	R4		9105
8/2/2019	Dairy	Dairy	8,000.00	K1		9105
8/7/2019	Dairy	Dairy	8,000.00	K1		9105
8/10/2019	Dairy	Dairy	30,000.00	K1		9105

8/15/2019	Dairy	Dairy	16,000.00	H2B		9105
8/21/2019	Dairy	Dairy	9,000.00	Q9		9105
8/21/2019	Dairy	Dairy	9,000.00	Q9		9105
8/22/2019	Dairy	Dairy	9,000.00	Q7		9105
8/23/2019	Dairy	Dairy	18,000.00	Q9		9105
8/24/2019	Dairy	Dairy	18,000.00	Q10		9105
8/26/2019	Dairy	Dairy	8,000.00	R6		9105
8/26/2019	Dairy	Dairy	24,000.00	R6E		9105
9/7/2019	Dairy	Dairy	45,000.00	Q5		9105
9/14/2019	Dairy	Dairy	24,000.00	U1		9105
9/16/2019	Dairy	Dairy	16,000.00	U1		9105
9/20/2019	Dairy	Dairy	16,000.00	R10		9105
9/21/2019	Dairy	Dairy	24,000.00	Q4		9105
10/23/2019	Dairy	Dairy	8,600.00	Spears 7		9105
10/24/2019	Dairy	Dairy	57,200.00	Spears 7		9105
10/25/2019	Dairy	Dairy	56,000.00	H3		9105
10/28/2019	Dairy	Dairy	56,000.00	H3		9105
11/15/2019	Dairy	Dairy	40,000.00	L2		9105
11/18/2019	Dairy	Dairy	16,000.00	L2		9105
11/22/2019	Dairy	Dairy	16,000.00	Spears 3		9105
11/25/2019	Dairy	Dairy	20,000.00	U2		9105
11/26/2019	Dairy	Dairy	20,000.00	c6		9105
11/27/2019	Dairy	Dairy	20,000.00	u2		9105
12/6/2019	Dairy	Dairy	20,000.00	Z1A		9105
12/7/2019	Dairy	Dairy	25,000.00	Z1A		9105
12/9/2019	Dairy	Dairy	32,000.00	Z1A		9105
12/10/2019	Dairy	Dairy	40,000.00	ST21		9105
12/10/2010	Dairy	Dairy	4,000.00	ST3		9105
12/10/2019	Dairy	Dairy	4,300.00	Z1A		9105
12/11/2019	Dairy	Dairy	20,000.00	Z1		9105
12/11/2019	Dairy	Dairy	4,000.00	ST4		9105
12/12/2019	Dairy	Dairy	20,000.00	ST 21		9105
12/12/2019	Dairy	Dairy	22,000.00	ST 4		9105
12/13/2019	Dairy	Dairy	54,000.00	ST 4		9105

12/16/2019	Dairy	Dairy	64,000.00	ST 4		9105
12/20/2019	Dairy	Dairy	80,000.00	ST4		9105
12/21/2019	Dairy	Dairy	40,000.00	ST4		9105
12/23/2019	Dairy	Dairy	96,000.00	ST4		9105
12/24/2019	Dairy	Dairy	24,000.00	ST4		9105
12/26/2019	Dairy	Dairy	16,000.00	St2		9105
12/26/2019	Dairy	Dairy	24,000.00	ST4		9105
			899,100.00			

# compost pile

Land Application						
Date	Type	source	Amount / Gallons	Field	Acres	Machine
10/21/2019	Pile by LWR	Sludge	62.00	W6		Dry spreader
10/23/2019	Pile by LWR	pile by LWR	20.00	J1		spreader
10/25/2019	Pile by LWR	pile by LWR	50.00	J1		Dry spreader
11/25/2019	Sludge Pile by LWR	Sludge Pile by Lwr	20.00	w8		top spreader
11/27/2019	compost pile by lwr	compost pile by lwr	50.00	w8		top spreader
			202.00			

# LWR outflow

Land Application						
Date	Type	source	Amount / Gallons	Field	Acres	Machine
6/12/2019	LWR Outflow	Lwr Out Flow	17,200.00	V3		9105
6/27/2019	LWR Outflow	Lwr Out Flow	8,600.00	R6W		Quad
6/28/2019	LWR Outflow	Lwr Out Flow	8,600.00	R5A		Quad
7/10/2019	LWR Outflow	LWR Out Flow	17,200.00	R4		9105
7/19/2019	LWR Outflow	Lwr Out Flow	17,000.00	E4		9105
8/2/2019	LWR Outflow	Lwr Out Flow	16,000.00	K1		9105
8/7/2019	LWR Outflow	Lwr Out Flow	8,000.00	K1		9105
8/21/2019	LWR Outflow	Lwr Out Flow	9,000.00	Q9		9105
8/22/2019	LWR Outflow	Lwr Out Flow	9,000.00	Q7		9105
8/27/2019	LWR Outflow	Lwr Out Flow	8,000.00	R12B		9105
8/29/2019	LWR Outflow	Lwr Out Flow	8,000.00	R12B		9105
8/30/2019	LWR Outflow	Lwr Out Flow	8,000.00	J1		9105
8/31/2019	LWR Outflow	Lwr Out Flow	16,000.00	J1		9105
			150,600.00			



# Biosolids

Land Application						
Date	Type	source	Amount / Gallons	Field	Acres	Machine
10/15/2019	Perry	sludge	53.48	P1B		Dry spreader
10/17/2019	Perry	sludge	52.17	P1B		Dry spreader
10/18/2019	Perry	sludge	51.56	W6		Dry spreader
10/18/2019	Cayuga Hgts	sludge	18.45	W6		Dry spreader
10/18/2019	Watkins Glen	Watkins glen	19.02	W6		Dry spreader
10/21/2019	Waverly	sludge	18.87	W6		Dry spreader
10/23/2019	Dryden	sludge	8.06			
10/30/2019	Cayuga Hgts	sludge	16.08	W6		Dry spreader
10/30/2019	Owego	sludge	15.88	W6		Dry spreader
11/12/2019	Dryden WWTP	Biosolids Sludge	17.81	W8		dry spreader
11/13/2019	Watkins Glen	Biosolids Sludge	18.81	W8		dry spreader
11/15/2019	Warsaw	Biosolids Sludge	16.06	W8		dry spreader
11/18/2019	Owego	sludge	28.8	w8		dry spreader
11/19/2019	Watkins Glen	sludge	17.65	w8		dry spreader
11/19/2019	Owego	sludge	46.17	w8		dry spreader
11/20/2019	Owego	sludge	29.97	w8		dry spreader
			428.84			

**SECTION 7 – NEXT YEAR'S PROPOSED QUANTITIES AND APPLICATION RATES**  
 (Complete one copy for each field that will be used)

*See attached 2020  
nutrient/crop plan*

Site Owner: Leo Dickson & Sons, Inc.

Field Address: \_\_\_\_\_ Town: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Field Number: \_\_\_\_\_ Field Size: \_\_\_\_\_ acres

Biosolids to be Applied: \_\_\_\_\_ dry tons

Proposed Application Rate: \_\_\_\_\_ dry tons/acre

Crop to be Grown: \_\_\_\_\_

Proposed Loading Rates		
Loading Parameters	Current Year (Permit Pre 2017 Regs)	Current Year (Permit Post 2017 Regs.)
Hydraulic (gals/acre)		
Available Nitrogen (lbs/acre)		
Phosphorus (lbs/acre)		
Potassium (lbs/acre)		

\*Attach calculations to support values in the table

# **2020 Nutrient and Crop Management Plan**



# Field Key

## Leo Dickson & Sons

Tuesday, January 28, 2020  
2020 CropYear

FieldName	FieldSplit	Acres	Yr	Name	Map	SampleDate	pH	P	Plevel	K	KLeve	OM
<b>Alfalfa/Grass</b>												
A 2	360	8.7	7		7	1/13/2017	6.7	182.4	VH	438	VH	3.4
A 3	360	7.6	7		7	1/13/2017	6.6	181	VH	485	VH	3.1
A 11	360	37.3	8		7	1/13/2017	6.1	146.7	VH	447.2	VH	3.1
A 12N	360	16.7	5		7	1/13/2017	6.6	248.3	VH	910	VH	4.4
B 8	360	4.9	5	Estes	10	11/18/2015	6.3	61.4	VH	344.2	VH	2.5
B 9	360	33.6	2	Estes	8	4/17/2019	6.4	48.8	VH	94.9	M	3.1
B 14	360	4.9	5	Estes	10	1/13/2017	7.2	270.9	VH	378.2	VH	2.6
B 15	360	8.1	5	Estes	10	1/13/2017	6.2	52.2	VH	151	H	1.8
B 16	360	5.3	5	Estes	10	11/29/2017	6.7	220	VH	183.2	VH	2.7
C 3	360	25.7	4		8	1/13/2017	6.8	144	VH	278.9	VH	2.6
C 9	360	30.1	5		8	1/13/2017	6.5	105.6	VH	282.6	VH	2.7
C 10A	360	6.6	1		8	1/13/2017	5.9	7.5	M	101.3	M	2.3
D 2	360	44.8	6		7	11/29/2017	6.6	105.1	VH	274.3	VH	2.5
E 1	360	13.7	5	Dudley	3	11/2/2016	6.5	46.3	VH	246.7	VH	2.3
E 4	360	11.5	4	Dudley	3	1/13/2017	6.3	50.8	VH	222	VH	2.4
F 3	360	12.3	5		3	4/17/2019	6.7	76.2	VH	74.6	LM	2.7
F 12	360	21	6		5	11/29/2017	6.5	116.9	VH	48.9	L	2.4
F 13	360	9.3	6		5	11/29/2017	6.5	116.9	VH	48.9	L	2.4
F 16	360	20.6	4		5	4/17/2019	6.4	70.5	VH	51.6	L	2.9
F 17	360	10.5	5		5	4/17/2019	6.1	61.9	VH	82.9	LM	3.1
F 21	360	43.7	8		5	4/17/2019	6.9	153.1	VH	121.6	MH	2.7
F 23	360	22.9	4	Smucker	5	4/17/2019	6	44.3	VH	96.7	M	2.8
G 1	360	11.3	2		2	11/29/2017	6.8	84.1	VH	126.2	MH	1.7
G 2	360	5.4	2		2	4/17/2019	6.3	82.9	VH	133.5	MH	3
H 1	360	20.5	2	Polmiteer	2	1/28/2019	6.4	50.6	VH	226.4	VH	3.3
H 2A	360	6.8	5	Polmiteer	2	1/28/2019	6.8	64.4	VH	144.6	H	2.7
I 1	360	17.4	5		3	11/29/2017	6.2	30.1	H	124.3	H	2.5
J 3	360	15.9	8		6	1/28/2019	6.5	48.3	VH	171.2	H	3.1
K 3			2	1 Andy's Yard	3							
M 4	360	20.7	2		6	1/13/2017	6.4	72.4	VH	242.1	VH	1.8
Q 1	360	12	6		8	11/29/2017	6.2	58.4	VH	104.1	M	2.7
Q 6	360	13.4	6		8	1/13/2017	6.8	158.9	VH	277	VH	1.8

FieldName	FieldSplit	Acres	Yr	Name	Map	SampleDate	pH	P	Plevel	K	KLeve	OM
R 4	360	15	1		9	4/17/2019	6	41.7	VH	42.4	VL	2
R 5A	360	23.9	1		9	1/13/2017	6	11.5	M	96.7	LM	1.8
R 7	360	10.8	4		9	4/17/2019	6.4	10.9	M	69.1	L	2
R 8	360	9.8	6		9	11/29/2017	6.5	56.2	VH	103.2	M	2.2
R 13	360	9	1		9	1/13/2017	6	47.9	VH	174	H	2
R 14	360	8.2	1		9	1/13/2017	6.2	59.9	VH	287	VH	2.9
Sam Dick A		11.8	6		13	11/29/2017	5.8	5.9	LM	65.4	L	2.3
Sam Dick B		10.2	6		13	11/29/2017	5.4	2	L	89.4	LM	2.2
ST 3	360	25.2	6	Stewart	12	11/29/2017	5.8	14.8	MH	110.5	M	2.1
ST 21N		17.3	4	Giles	12	1/28/2019	5.6	2	L	133.5	H	2.4
T 8		4.7	5	Haight	1	1/28/2019	6.4	4.6	L	79.2	LM	2.6
T 10		4.3	5	Haight	1	1/28/2019	6.5	6.3	M	82.9	LM	2.2
T 12		3	5	Haight	1	1/28/2019	6.4	7.4	M	110.5	M	2.5
T 13		3.5	5	Haight	1	1/28/2019	6.2	4	L	96.7	LM	2.7
U 2	360	14.3	5		8	1/28/2019	6	2.3	L	94	LM	2.5
W 1	360	26.4	5		7	4/17/2019	5.9	6.9	M	92.1	LM	3.1
W 4B	360	18.8	4		7	11/29/2017	7	440.3	VH	829	VH	3
W 9	360	40.3	6		7	11/29/2017	6.7	120.5	VH	263.2	VH	
X 22		31.6	4		9	4/17/2019	6.7	87.9	VH	113.3	MH	2.5

813.3

**Alfalfa/Grass Seeding**

C 11	360	4.8	1		8	1/13/2017	6.5	23.5	H	96.7	LM	2.8
C 13	360	6.8	1		8	1/13/2017	6.2	35.5	H	73.7	L	2.5
E 3	360	32.4	1	Dudley	3	4/17/2019	6.4	72.5	VH	324	VH	3.6
G 3	360	28	1		2	12/29/2017	6.6	46.4	VH	76.5	L	2.6
M 1	360	5.8	1		6	1/28/2019	6.6	63	VH	78.3	L	2.5
M 3	360	12.5	1		6	1/13/2017	6.5	118	VH	219.1	VH	2.8
Q 4	360	14.6	1		8	1/13/2017	6.6	92	VH	103	M	2.5
Q 5	360	19.3	1		8	1/13/2017	6.5	132.5	VH	282.6	VH	2.6
R 10	360	15.2	1		9	4/17/2019	6.3	73.4	VH	121.6	MH	3.3
ST 1	360	24.6	1	Stewart	12	1/28/2019	5.7	7	M	172.2	H	2.5

164

**Corn from Sod**

F 11	360	19.6	1		5	11/29/2017	6.6	264.5	VH	48.9	L	2.9
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FieldName	FieldSplit	Acres	Yr	Name	Map	SampleDate	pH	P	Plevel	K	KLeve	OM
H 4	360	12	1	Polmiteer	2	4/17/2019	6.8	100	VH	47	L	3.6
M 5	360	20.8	1		6	1/13/2017	6.8	93.3	VH	181.4	VH	2.4
M 6	360	10.8	1		6	1/13/2017	5.8	49.5	VH	190.6	H	2.2
P 1B	360	17.5	1		6	1/13/2017	6.4	60.7	VH	187.8	VH	2.2
Q 3	360	11.6	1		8	1/13/2017	6.6	37.8	H	90	LM	2.4
R 3	360	8.2	1		9	11/29/2017	6.2	20.7	H	76.5	L	1.6

100.5

### Corn Silage

A 12S	360	11.5	3		7	1/13/2017	6.1	79.3	VH	322.1	VH	2.5
B 1	360	6.7	1	Estes	8	4/17/2019	5.9	12.1	M	55.3	L	1.7
B 3	360	9.3	2	Estes	8	4/17/2019	5.5	2	L	36	VL	2.8
B 4	360	17.2	4	Estes	8	4/17/2019	6.2	18.9	MH	55.3	L	2.5
B 5	360	9.6	2	Estes	8	1/13/2017	5.4	4.9	L	101.3	M	1.8
B 10	360	25.8	2	Estes	8	1/13/2017	6.8	178	VH	219.1	VH	2.3
B 11	360	5.6	1	Estes	8	1/13/2017	6	97.6	VH	362	VH	3.1
B 12	360	7.6	1	Estes	10	1/13/2017	6.1	65	VH	171.2	H	2
Buckley		8	2		8	10/21/2015	5.4	2	L	141.8	H	2.9
C 2	360	2.8	2		8	1/13/2017	6.6	95.7	VH	107.8	M	2.9
C 4	360	6.6	2		8	1/13/2017	6.9	88.4	VH	117	M	2.5
EV 2		20.5	1	Eagle Valley Road	14	12/23/2016	6.1	19.5	MH	189.6	H	2.9
EV 3		30.2	1	Eagle Valley Road	14	12/23/2016	5.7	13	M	146.4	H	2.2
F 10B	360	15.6	3		5	11/2/2016	6.7	114.7	VH	56.2	L	2.9
F 14		6.8	4		5	11/2/2016	6.7	105.4	VH	56.2	L	2.4
F 15	360	18.9	4		5	11/2/2016	6.4	145.3	VH	48.9	L	2.9
F 19	360	12.1	4		5	11/2/2016	7	52.7	VH	60.8	L	3
F 20	360	21.4	3		5	11/2/2016	7	145.5	VH	50.7	L	2.9
Glosick 1		21.3	5	Glosick	7	4/17/2019	5.8	4	L	74.6	L	3
Glosick 2		6.9	5	Glosick	7	4/17/2019	5.8	2.7	L	78.3	L	2.7
Glosick 10A		8	4	Glosick	3	1/2/2017	5.6	2	L	103.2	M	3
Glosick 10B		15.7	4	Glosick	3	1/2/2017	5.6	2	L	73.7	L	3.1
Glosick 11		10.2	3	Glosick	3	1/2/2017	5.5	2	L	104.1	M	3.2
Glosick 12		3.7	3	Glosick	3	1/2/2017	5.4	2	L	56.2	L	3.8
Glosick 13		2.6	3	Glosick	3	1/2/2017	5.2	2	L	99.5	LM	3.6
L 1	360	16.2	2		3	4/17/2019	6.4	13.6	MH	87.5	LM	3.4
L 2	360	24.8	2		3	4/17/2019	6.3	6.6	M	47	L	3.6

FieldName	FieldSplit	Acres	Yr	Name	Map	SampleDate	pH	P	Plevel	K	KLeve	OM
Q 2	360	21.6	2		8	1/13/2017	6.8	99.3	VH	151	H	2.5
Q 7	360	8.5	1		8	4/17/2019	6.4	34.3	H	99.5	LM	2.9
Q 8	360	8.5	1		8	10/16/2015	6.5	60.6	VH	104.1	M	2.9
Q 12	360	8.8	2		9	11/29/2017	6.4	58.5	VH	53.5	L	2.9
Q 13	360	12.7	3		9	1/16/2019	6.8	136.8	VH	74.6	L	3.1
R 1	360	5.9	1		8	4/17/2019	7.1	435.2	VH	44.3	VL	2.9
R 2	360	6	1		9	4/17/2019	6	17.7	MH	82.9	LM	3.2
S 1		6.6	1		6	1/28/2019	6.1	9.1	M	151.9	H	3
S 2		8.4	1		6	1/28/2019	5.9	2	L	161.1	H	2.6
S 5		10.7	1		6	1/28/2019	5.3	2	L	210.8	VH	3.6
S 7		6.8	1		6	1/28/2019	5.8	8.9	M	82.9	LM	3.3
Sam Dick C		5.4	6		13	1/13/2017	5.1	2	L	104.1	M	2.1
Sam Dick D		11.2	6		13	1/13/2017	5.5	2	L	108.7	MH	2.2
Sam Dick E		8.7	5		13	1/13/2017	5	2	L	81.1	LM	1.8
Spears 1		11.3	1		8	1/16/2019	6.4	22.7	H	117	M	3.1
Spears 2		7.7	2		8	1/16/2019	6.3	3.6	L	87.5	LM	2.6
Spears 3		9.3	2		8	1/16/2019	5.9	11.3	M	121.6	MH	3.3
Spears 5		4.6	1		8	1/16/2019	5.5	3.4	L	117.9	M	2.5
Spears 6		18.4	2		8	1/16/2019	5.3	2	L	140	MH	2.5
Spears 7		13.3	2		8	4/17/2019	6.2	20.4	H	331.3	VH	3.2
ST 4	360	34.9	2	Stewart	12	4/17/2019	5.9	2	L	56.2	L	2.4
ST 5	360	27.5	2	Stewart	12	1/28/2019	5.9	35.1	H	383.8	VH	2.8
ST 6	360	21.4	2	Stewart	12	1/28/2019	5.8	8.6	M	146.4	H	2.1
ST 7	360	8.4	2	Stewart	12	1/28/2019	5.8	7.6	M	178.6	H	2.6
ST 8	360	13.9	2	Stewart	12	12/20/2017	5.8	12.1	M	224.6	VH	2.2
ST 11	360	25.5	1	Stewart	12	11/29/2017	5.7	15.3	MH	195.2	H	3.1
ST 13	360	3.4	2	Stewart	12	1/28/2019	5.7	2	L	117	M	2.5
ST 16	360	11.6	2	Stewart	12	11/29/2017	5.8	8.6	M	206.2	VH	2.3
ST 18	360	11.4	2	Stewart	12	1/28/2019	5.6	6.5	M	166.6	H	2.5
ST 20	360	5.5	2	Stewart	12	1/28/2019	5.7	3.4	L	92.1	LM	2.4
Sugar 1		6.1	3		3	9/12/2017	6.5	12.6	M	78.3	LM	3
Sugar 2		13.2	3		3	9/12/2017	5.6	2	L	53.5	L	2.5
Sugar 3		20.5	3		3	9/12/2017	5.5	2	L	48.9	L	2.5
T 1		16.9	4	Haight	1	1/16/2019	6.4	6.2	M	76.5	L	2.4
T 2		3.9	4	Haight	1	1/16/2019	6.7	5.9	LM	47	L	2.8

FieldName	FieldSplit	Acres	Yr	Name	Map	SampleDate	pH	P	Plevel	K	KLeve	OM
T 3		2.3	4	Haight	1	1/16/2019	6.4	4.5	L	89.4	LM	2.4
T 5		3.5	4	Haight	1	1/16/2019	6.4	2.8	L	64.5	L	3.1
T 7		5.4	4	Haight	1	1/28/2019	6.5	3.7	L	67.3	L	2.4
T 9		4.2	4	Haight	1	1/28/2019	6.5	4.7	L	85.7	LM	2.7
T 11		3.9	4	Haight	1	1/28/2019	6.6	5.1	LM	94.9	LM	2.9
T 15		6	4	Haight	1	1/28/2019	6.4	4.1	L	128.9	MH	3
T 16		2.3	4	Haight	1	1/16/2019	7	8	M	83.8	LM	2.4
Tucker 1		11.1	1	Tucker	11	12/29/2017	6.5	9.7	M	175.8	VH	3.1
Tucker 2		6.1	1	Tucker	11	12/29/2017	6.4	11.4	M	117	M	2.7
Tucker 3		9.8	1	Tucker	11	12/29/2017	6.2	3.9	L	69.1	L	1.8
Tucker 4		11.2	1	Tucker	11	12/29/2017	6	4.4	L	64.5	L	2
Tucker 5		10.1	1	Tucker	11	12/29/2017	6.1	4.9	L	79.2	LM	2.3
Tucker 6		5.7	1	Tucker	11	12/29/2017	6	6.1	M	74.6	L	2.8
U 4		21	2	Lee	8	10/21/2015	5.4	2	L	119.7	M	2.7
VA 1		7.1	1		4	12/29/2017	5.6	14.7	MH	141.8	H	1.2
VV 1		29.6	1	Kobza	2	11/18/2015	6	12.9	M	74.6	L	1.9
Y 1		6.4	1	Lehman	4	12/29/2017	5	2	L	53.5	L	1.8
Y 2		14.4	1	Lehman	4	12/29/2017	4.9	2	L	40.6	VL	1.5
Y 3		3.3	1	Lehman	4	12/29/2017	5.2	2	L	51.6	VL	2
Z 1A		50.3	1	Savona Hill	11	5/3/2016	6.1	2	L	128.9	H	2.5
Z 1B			1	Savona Hill	12	5/3/2016	6.2	3.1	L	190.6		2.5

977.8

**Grass**

C 12	360	3.7	12		8	1/13/2017	6.4	38.3	H	65.4	L	2.4
Q 14	360	14.9	12		8	10/16/2015	6.6	73.5	VH	104.1	M	3.1
R 12A	360	7.2			9	11/29/2017	5.8	2	L	94.9	LM	2
T 4		3.4	11	Haight	1	1/16/2019	6.5	3.3	L	55.3	L	2
T 6		4.8	11	Haight	1	1/28/2019	6.4	6.2	M	87.5	LM	2.8
T 14		4.4	11	Haight	1	1/28/2019	6.7	5.5	LM	104.1	M	2.5
T 17		2.6	11	Haight	1	1/28/2019	6.3	2	L	126.2	MH	3.6
U 3		9.5	9		8	1/28/2019	6	36.4	H	137.2	MH	2.5

50.5

**Idle**

B 13	360	4.4		Estes	10	4/10/2013	6.9	101.6	VH	765.6	VH	3.3
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FieldName	FieldSplit	Acres	Yr	Name	Map	SampleDate	pH	P	Plevel	K	KLeve	OM
Barrett		11.7	4		8	10/21/2015	6.4	2	L	35.1	VL	4
EV 1N		29.5	1	Eagle Valley Road	14	12/23/2016	6.6	29.7	H	340.5	VH	3.1
EV 1S			1	Eagle Valley Road	14	4/9/2014	6.3	18.5	MH	126.2	MH	3.5
ST 9	360	4.5		Stewart	12							
ST 12	360	4.3		Stewart	12	4/10/2013	6.1	8.5	M	199.8	H	3.6
ST 14	360	1.2		Stewart	12	4/10/2013	5.6	4.5	L	244.8	VH	3.5
ST 15	360	5.1		Stewart	12	4/10/2013	6	6.9	M	282.6	VH	4.5
ST 17	360	4		Stewart	12	11/29/2017	5.8	8.6	M	206.2	VH	2.3
ST 19	360	1.5		Stewart	12	4/10/2013	6.4	12.9	M	231	VH	3.7

66.2

### Rye

C 8	360	7.7	1		8	4/17/2019	6.6	44.6	VH	272.4	VH	2.5
E 5	360	5.4	1	Dudley	3	4/17/2019	6.4	29.8	H	130.8	MH	2.8
E 6	360	14.3	1	Dudley	3	11/29/2017	6.1	29.8	H	98.6	LM	2.7
F 5	360	1.6	1		5	11/29/2017	6.8	186.5	VH	161.1	H	1.4
F 6	360	5.4	1		5	11/29/2017	6.8	186.5	VH	161.1	H	1.4
F 7	360	8.3	1		5	11/29/2017	6.8	186.5	VH	161.1	H	1.4
F 8	360	8.7	1		5	11/29/2017	6.8	186.5	VH	161.1	H	1.4
F 9	360	6.7	1		5	11/29/2017	6.8	186.5	VH	161.1	H	1.4
F 10A	360	17.2	1		5	11/29/2017	7.2	#####	VH	103.2	M	3.3
K 2		14	1		3	4/17/2019	5.2	2	L	137.2	MH	2.4
Q 9	360	7.7	1		8	4/17/2019	6	54.8	VH	117.9	M	2.3
Q 10	360	9.6	1		9	4/17/2019	6.2	64.4	VH	183.2	H	2.2
R 6E	360	12.3	1		9	4/17/2019	6.5	19.2	MH	71.9	L	2.6
R 6W	360	15.8	1		9	4/17/2019	6.5	18.9	MH	73.7	L	2.9
R 12B	360	10.3	1		9	11/29/2017	5.9	10.8	M	85.7	LM	2.1

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### Soy Beans

A 1	360	28.7	1		7	11/2/2016	6.4	90	VH	407.7	VH	3.8
A 4	360	5.1	1		7	1/13/2017	6.7	66.7	VH	266.9	VH	3
A 5N	360	15.4	1		7	1/13/2017	6.5	102.4	VH	549.4	VH	2.9
A 5S	360	8.6	1		7	1/13/2017	6.1	77.1	VH	413.2	VH	
A 7	360	15.8	1		7	1/13/2017	6.7	106.7	VH	492.3	VH	3.5
A 8	360	2.6	1		7	4/17/2019	5.3	30.9	H	187.8	H	3.5

FieldName	FieldSplit	Acres	Yr	Name	Map	SampleDate	pH	P	Plevel	K	KLeve	OM
A 9	360	12.1	1		7	4/17/2019	5.7	26.4	H	353.4	VH	2.9
A 10		4.1	1		7	4/17/2019	5.7	26.7	H	305.6	VH	2.8
B 2	360	13.4	1	Estes	8	12/29/2017	6.9	105	VH	317.5	VH	2.3
B 6	360	25.4	1	Estes	10	1/13/2017	6.6	78.5	VH	326.7	VH	2.2
B 17	360	12.1	1	Estes	10	11/29/2017	6.9	179.7	VH	274.3	VH	2.4
C 1	360	12.2	1		8	4/17/2019	6.9	114	VH	89.4	LM	2.5
C 6	360	7.6	1		8	1/13/2017	6.4	53	VH	98.6	LM	2
C 7	360	5.5	1		8	1/13/2017	6.4	54.5	VH	128.9	MH	2.5
C 14		2.7	1		8							
D 1	360	29.2	1		7	11/29/2017	6.3	119.5	VH	565	VH	3.3
F 1	360	11.4	1		2	4/17/2019	6.2	35.7	H	78.3	L	3.5
F 2	360	27.5	1		3	4/17/2019	6.5	68.8	VH	132.6	MH	2.3
F 4	360	13	1		5	4/17/2019	7.1	171.8	VH	137.2	H	3.1
H 2B	360	6.1	1	Polmiteer	2	11/2/2016	6.8	70.6	VH	251.3	VH	2.9
H 2C	360	15.4	1	Polmiteer	2	11/2/2016	6.8	70.6	VH	251.3	VH	2.9
H 3	360	52.1	1	Polmiteer	2	4/17/2019	5.5	15.3	MH	81.1	LM	2.4
H 3S	360	8.9	1	Polmiteer	2	4/17/2019	5.8	24.2	H	50.7	L	2.8
J 1	360	19.5	1		6	1/28/2019	6.6	41.5	VH	208	VH	2.8
J 2	360	22.5	1		6	1/28/2019	6.4	44.1	VH	156.5	H	2.5
J 4	360	15.4	1		6	1/28/2019	5.9	8	M	117	M	2.6
K 1	360	41.4	1		3	4/17/2019	5.2	2	L	151	H	3
M 2	360	10.2	1		6	1/13/2017	6.5	64	VH	69.1	L	2.1
N 1	360	22.2	1	Makitra	6	1/28/2019	5.6	8.3	M	251.3	VH	3.1
O 1	360	17.6	1		6	4/17/2019	5	15	MH	396.6	VH	4.4
O 2	360	12	1		6	4/17/2019	5.2	22.4	H	335.9	VH	3.9
P 1A	360	25.8	1		6	1/13/2017	7.1	196.6	VH	257.7	VH	2.8
Q 11	360	15.6	1		8	1/16/2019	6.6	86	VH	135.4	MH	3.1
R 9	360	6.8	1		9	4/17/2019	7.2	398	VH	483.1	VH	2.8
R 11	360	32.9	1		9	4/17/2019	6.2	66.3	VH	122.5	MH	3.9
SH 1		27.4	1	Bowblis	12	4/17/2019	6.9	239.5	VH	442.6	VH	5
ST 21S		24	1	Giles	12	12/11/2015	6.2	11.7	M	138.1	H	2.2
U 1	360	16	1		8	1/28/2019	6.5	53.6	VH	105.9	M	2.3
V 1		5.3	1		6	1/28/2019	5.7	2	L	147.3	H	3
V 2	360	11.3	1		6	1/28/2019	5.8	6.7	M	166.6	H	3.1
V 3	360	8.3	1		6	1/28/2019	6	8	M	178.6	H	1.8

FieldName	FieldSpllt	Acres	Yr	Name	Map	SampleDate	pH	P	Plevel	K	KLeve	OM
W 4A	360	20.4	1		7	11/29/2017	6.6	229.1	VH	852	VH	3.2
W 6	360	25	1		7	4/17/2019	6.2	72.4	VH	328.6	VH	3.3
W 8	360	10.8	1		7	4/17/2019	6.1	2	L	51.6	L	4.1

725.3

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3043

## SECTION 8 – PATHOGEN REDUCTION/VECTOR ATTRACTION REDUCTION

Check one method for each:

### Pathogen Reduction (361-2.5(d)(2)(i))

- Aerobic Digestion  $\geq 40$  days at  $\geq 20$  °C or  $\geq 60$  days at  $\geq 15$  and  $< 20$  °C
- Air Drying
- Anaerobic Digestion  $\geq 15$  days at  $\geq 35$  °C or  $\geq 60$  days at  $\geq 20$  and  $< 35$  °C
- Composting 5 consecutive days at  $> 40$  °C, 4 consecutive hours  $> 55$  °C
- Lime stabilization pH raised to 12 for  $\geq 2$  hours
- Fecal Coliform  $< 2,000,000$  MPN
- Other: \_\_\_\_\_

*only if biosolids are not stabilized all sludge accepted at facility in 2019 was stabilized no need to add lime.*

### Vector Attraction Reduction (361-2.5(d)(2)(iii))

- $\geq 38$  % Volatile Solids Reduction
- Bench Scale Anaerobic Digestion
- Bench Scale Aerobic Digestion
- SOUR
- Aerobic Process 14 consecutive days,  $> 40$  °C, average  $> 45$  °C
- pH raised to  $\geq 12$  for 2 hours,  $\geq 11.5$  for 22 hours
- 75 % solids
- 90 % solids (untreated solids)
- Subsurface injection
- Incorporation within 6 hours
- Other: \_\_\_\_\_

**Attach operating and monitoring data to show compliance with methods chosen.**

### SECTION 9 – UNAUTHORIZED WASTE

Has unauthorized solid waste been received at the Processing Facility during the reporting period?

Yes  No

If yes, give information below for each incident (attach additional sheets if necessary):

Date Received	Type Received	Date Disposed	Disposal Method & Location
12/10/2019	stabalized Sludge-Avon	12/19/19	Disposed @ Steuben County landfill See attached documents

### SECTION 10 – PROBLEMS/COMPLAINTS

Describe any operational problems or complaints arising from the composting operation and include any methods used to remedy the situations. This should include odor complaints, marketing difficulties, major equipment failure, etc.

### Section 11 – QUESTIONS

Please identify any questions or concerns that you would like the Department to answer or consider:

WWT Plant Sludge #36/1800

Approval #: 190612

STEBEN COUNTY DEPARTMENT  
OF PUBLIC WORKS  
SOLID WASTE DIVISION  
3 EAST PULTENEY SQUARE  
BATH, NEW YORK 14810

APPLICATION FOR DISPOSAL OF AN  
INDUSTRIAL WASTE STREAM  
BATH LANDFILL - SITE NO. 51S21

FOR COUNTY USE	
<input checked="" type="checkbox"/> APPROVED	<input type="checkbox"/> DISAPPROVED
DATE	DATE SENT TO DEC
12 June 2019	12 June 2019

Please Note: A copy of the approved application must accompany each load.

SEND INVOICE TO DICKSON ENV. SVS. 5226 Benny Hill Road

Company Generating Waste <u>Village of Avon NY.</u>	Address of Generator <u>13 FARMERS Rd. AVON NY, 14414</u>	Telephone No. <u>JOHN BARNETT - 585-303-7058 TOM D'APRIE - 585-820-2140</u>	
Representative of Generator	Address of Generator	Telephone No.	
Description of Process Producing Waste (generator must notify County of any changes to process) <u>ANAEROBIC Sludge Digestion and to Sludge drying DEPS.</u>			
Expected Annual Waste Production <u>NA 100</u> Tons/Year	Waste Hauled In <input checked="" type="checkbox"/> Roll-Off <input type="checkbox"/> Dump Truck <input type="checkbox"/> Compactor Truck <input type="checkbox"/> Other		
Waste Composition Average Percent Solids <u>35.2</u> %	Physical State <input type="checkbox"/> Sewage Sludge <input checked="" type="checkbox"/> Stabilized <input type="checkbox"/> Un-stabilized <input type="checkbox"/> Industrial Sludge <input checked="" type="checkbox"/> Solid		
Description of Waste <u>ANAEROBIC Sludge</u> 1) 2) 3) 4)			
Is An Analysis of Waste Attached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Was EPA Toxicity Test Conducted on Waste? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Attach Results	Material is: <input type="checkbox"/> Hazardous <input checked="" type="checkbox"/> Non-Hazardous	
Detail All Hazardous and Nuisance Problems Associated with the Waste. List Necessary Safety, Handling, and Disposal Precautions.			
Name of Waste Transporter <u>DICKSON ENV. SVS.</u>	Address <u>5226 Benny Hill Road</u>	NYSDEC Permit No. <u>8A-195</u>	Telephone No. <u>607-476-7997</u>
<b>CERTIFICATION</b> I hereby affirm under penalty of perjury that information provided in this form and attached statements exhibits is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.			
Signature and Title of Representative of Waste Generator <u>John Barnett, Sup't of Public Works</u>		Date <u>6/12/19</u>	
Signature and Title of Representative of Steuben County <u>John Barnett, Ass't Commissioner</u>		Date <u>6/12/19</u>	

# Not approved waste

12/10/2019	Avon	dewatered	22.29		LWR Pad
------------	------	-----------	-------	--	---------

Exported to Steuben County landfill  
After was brought to DCS and not approved  
it was reloaded and taken to landfill.

2019 Kaperthng

EXPORT  
23.40 tons  
from OES to  
Lambhill.

Handwritten signature or initials.

STROBEN COUNTY D.P.W.  
BATH LANDFILL

Ticket #: 1038639

DATE IN: 12/19/19  
TIME IN: 07:53 PM  
DATE OUT: 12/19/19  
TIME OUT: 03:29 PM  
ID-IN: 31H  
ID-OUT: 31H

Vehicle#: 03647

WT= Commercial BY WEIGHT  
OTS Not Specified

HAND ACOR#: LEODICK  
Haul Company: DICKSONS ENVIRONMENTAL  
364

BILL ACOR #: LEODICK  
BILL Company: DICKSONS ENVIRONMENTAL  
364

Gross: 87660 lb 43 83 tn  
Tare: 40860 lb 20 43 tn  
Net: 46800 lb 23 40 tn

Material

Sewage Sludge  
300 - Disput Fee  
(1 EA @ \$25.00/EA)  
\$25.00

Subtotal: \$842.40  
Tax: \$0.00  
Total:

\$867.40  
Payment Method(s):  
1 - Charge  
\$867.40

Changes: \$0.00

Driver:



# **Certification Statement**

## SECTION 12 - CERTIFICATION

The Owner or Operator must sign, date and submit one completed form with an original signature to the appropriate Regional Office (See attachment for Regional Office addresses and Contacts.)

The Owner or Operator must also submit one copy by email, fax or mail to:

**New York State Department of Environmental Conservation  
Bureau of Waste Reduction and Recycling – Annual Report  
625 Broadway – 9<sup>th</sup> Floor  
Albany, New York 12233-7253**

**Phone: 518-402-8706**

**Fax 518-402-9024**

**Email address: organicrecycling@dec.ny.gov**

Permit prior to November 2017:

I hereby affirm under penalty of perjury that information provided on this form and attached statements and exhibits was prepared by me or under my supervision and direction and is true to the best of my knowledge and belief, and that I have the authority to sign this report form pursuant to 6 NYCRR Part 360. I am aware that any false statement made herein is punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

Permit post November 2017:

I certify, under penalty of law, that the information that will be used to determine compliance with the requirements in Subpart 361-2 of 6 NYCRR Part 361 has been prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that false statement made herein are punishable pursuant to section 210.45 of the penal law.

Philip M. Dickson  
Signature

2/26/2020  
Date

Philip Dickson  
Name (Print)

President  
Title (Print)

phildickson1@hotmail.com  
Email (Print)

5206 Bonny Hill Rd  
Address

Bath  
City

NY, 14810  
State and Zip

(001)776-7997  
Phone Number

ATTACHMENTS:  NO  YES (IF YES, LIST ATTACHMENTS)

- Biosolids Analyses
- Soil Analyses
- Field application rates
- 2020 nutrient/crop plan
- unauthorized waste - Avon WWTP sludge

**MANURE ANALYSIS REPORT**

Sample Number: 26251580  
 Date Sampled: 10/22/19  
 Date Received: 10/30/2019  
 Date Mailed: 11/1/2019  
 Statement ID: P1  
 Kind: Manure, Liquid (090)  
 Description: P1

Dicksons Environmental Serv Inc  
 5226 Bonny Hill Road  
 Bath, NY 14810

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.086 %	1.7	7.1
Ammonium Nitrogen	.059 %	1.2	4.9
Organic Nitrogen	.027 %	.5	2.2
Phosphorus (P)	.006 %	.1	.5
Phosphate Equivalent (P205)	.013 %	.3	1.0
Potassium (K)	.132 %	2.6	10.9
Potash Equivalent (K20)	.159 %	3.2	13.2
Total Solids	.96 %		
Density	1.00 kg/l	62.18 Lbs/CuFt	8.31 Lbs/Gal

Printed copies also sent to:

**MANURE ANALYSIS REPORT**

 Dicksons Environmental Serv Inc  
 5226 Bonny Hill Road  
 Bath, NY 14810

 Sample Number: 26251590  
 Date Sampled: 10/22/19  
 Date Received: 10/30/2019  
 Date Mailed: 11/1/2019  
 Statement ID: P2  
 Kind: Misc. - Liquid (076)  
 Description: P2

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.259 %	5.2	21.0
Ammonium Nitrogen	.018 %	.4	1.5
Organic Nitrogen	.241 %	4.8	19.5
Phosphorus (P)	.077 %	1.5	6.3
Phosphate Equivalent (P205)	.177 %	3.5	14.3
Potassium (K)	.044 %	.9	3.6
Potash Equivalent (K20)	.053 %	1.1	4.3
Total Solids	5.35 %		
Density	.97 kg/l	60.70 Lbs/CuFt	8.11 Lbs/Gal

Printed copies also sent to:

**MANURE ANALYSIS REPORT**

 Dicksons Environmental Serv Inc  
 5226 Bonny Hill Road  
 Bath, NY 14810

 Sample Number: 26251600  
 Date Sampled: 10/22/19  
 Date Received: 10/30/2019  
 Date Mailed: 11/1/2019  
 Statement ID: P3  
 Kind: Manure, Liquid (090)  
 Description: P3

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.220 %	4.4	18.4
Ammonium Nitrogen	.054 %	1.1	4.6
Organic Nitrogen	.165 %	3.3	13.9
Phosphorus (P)	.182 %	3.6	15.2
Phosphate Equivalent (P205)	.416 %	8.3	34.9
Potassium (K)	.149 %	3.0	12.5
Potash Equivalent (K20)	.179 %	3.6	15.0
Total Solids	5.23 %		
nsity	1.01 kg/l	62.80 Lbs/CuFt	8.39 Lbs/Gal

Printed copies also sent to:



730 Warren Rd. Ithaca, NY 14850  
 Telephone: 800.344.2697 Fax: 607.257.1350

**MANURE ANALYSIS REPORT**

Dicksons Environmental Serv Inc  
 5226 Bonny Hill Road  
 Bath, NY 14810

Sample Number: 24729880  
 Date Sampled: 05/01/18  
 Date Received: 5/3/2018  
 Date Mailed: 5/4/2018  
 Statement ID: P4  
 Kind: Cattle-Liquid <3 Mo (080)  
 Description: P4

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.056 %	1.1	4.6
Ammonium Nitrogen	.042 %	.8	3.5
Organic Nitrogen	.014 %	.3	1.1
Phosphorus (P)	.014 %	.3	1.2
Phosphate Equivalent (P205)	.033 %	.7	2.7
Potassium (K)	.059 %	1.2	4.9
Potash Equivalent (K20)	.071 %	1.4	5.9
Total Solids	.84 %		
Density	.99 kg/l	61.81 Lbs/CuFt	8.26 Lbs/Gal
pH	6.2		



730 Warren Rd. Ithaca, NY 14850  
Telephone: 607-257-1272 Ext. 2172 Fax: 607-257-1350

MANURE ANALYSIS REPORT

LEO DICKSON & SONS  
5226 BONNY MILL ROAD  
BATH, NY 14810

Sample Number: 22555610  
Date Sampled: 03/31/16  
Date Received: 4/5/2016  
Date Mailed: 4/6/2016  
Statement ID: #953 LEO DICKSON & SONS  
Kind: Cattle-Liquid 3-6 Mo (081)  
Description: *Cattle-Liquid 3-6 Mo (081)*

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.192 %	3.8	16.1
Ammonia Nitrogen	.091 %	1.8	7.7
Organic Nitrogen	.101 %	2.0	8.5
Phosphorus (P)	.061 %	1.2	5.2
Phosphate Equivalent (P2O5)	.141 %	2.8	11.8
Potassium (K)	.206 %	4.1	17.3
Potash Equivalent (K2O)	.248 %	5.0	20.9
Total Solids	2.68 %		
Density	1.01 kg/l	62.92 Lbs/CuFt	8.41 Lbs/Gal

**MANURE ANALYSIS REPORT**

 DICKSON ENVIROMENTAL  
 5226 BUNNY HILL ROAD  
 BATH, NY 14810

 Sample Number: 25721350  
 Date Sampled: 04/29/19  
 Date Received: 5/2/2019  
 Date Mailed: 5/13/2019  
 Statement ID: 953 DICKSON ENVIRONMENTAL  
 Kind: Cattle-Solid > 6 Mo (085)  
 Description: COMPOST

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.871 %	17.4	59.4
Ammonium Nitrogen	.000 %	.0	.0
Organic Nitrogen	.871 %	17.4	59.4
Phosphorus (P)	1.153 %	23.1	78.6
Phosphate Equivalent (P2O5)	2.643 %	52.9	180.0
Potassium (K)	.225 %	4.5	15.3
Potash Equivalent (K2O)	.271 %	5.4	18.5
Total Solids	41.97 %		
Density	.82 Kg/l	50.95 Lbs/CuFt	6.81 Lbs/Gal





**Agro-One**  
Agronomy Services

730 Warren Rd. Ithaca, NY 14850  
Telephone: 800.344.2697 Fax: 607.257.1350

**MANURE ANALYSIS REPORT**

DICKSON ENVIROMENTAL  
5226 BUNNY HILL ROAD  
BATH, NY 14810

Sample Number: 24618490  
Date Sampled: 03/09/18  
Date Received: 3/8/2018  
Date Mailed: 3/9/2018  
Statement ID: 953 DICKSON ENVIROMENTAL  
Kind: Manure, Semi-Solid (091)  
Description: BATH WWTP SLUDGE

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.773 %	15.5	59.9
Ammonia Nitrogen	.000 %	.0	.0
Organic Nitrogen	.773 %	15.5	59.9
Phosphorus (P)	.283 %	5.7	21.9
Phosphate Equivalent (P2O5)	.649 %	13.0	50.3
Potassium (K)	.060 %	1.2	4.7
Potash Equivalent (K2O)	.072 %	1.4	5.6
Total Solids	16.38 %		
Density	.93 kg/l	57.99 Lbs/CuFt	7.75 Lbs/Gal



Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J9A0872

<b>Client Sample ID:</b> Compost	<b>Collected By:</b> JH-Client
<b>Sample Matrix:</b> Solid	<b>Collection Date:</b> 01/03/2019
<b>Lab Sample ID:</b> J9A0872-04	

Analyses Subcontracted to: Microbac Laboratories, Inc. - Ohio Valley

Mercury	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 7470A</b>								
Mercury, TCLP	0.00445	0.00100	0.00200	mg/L		01/31/19 1037	02/01/19 1306	KEH

Metals by 6010	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 6010C TCLP</b>								
Arsenic, TCLP	<0.500	0.500	1.00	mg/L		01/31/19 1259	02/06/19 1450	KKB
Barium, TCLP	<0.0500	0.0500	0.100	mg/L		01/31/19 1259	02/06/19 1450	KKB
Cadmium, TCLP	<0.0500	0.0500	0.100	mg/L		01/31/19 1259	02/06/19 1450	KKB
Chromium, TCLP	<0.100	0.100	0.200	mg/L		01/31/19 1259	02/06/19 1450	KKB
Lead, TCLP	<0.500	0.500	1.00	mg/L	Q7	01/31/19 1259	02/06/19 1450	KKB
Selenium, TCLP	<0.400	0.400	0.800	mg/L		01/31/19 1259	02/06/19 1450	KKB
Silver, TCLP	<0.0500	0.0500	0.100	mg/L		01/31/19 1259	02/06/19 1450	KKB

	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 9045D</b>								
Corrosivity pH	6.84			UNITS			01/17/19 0934	AWE
Temperature At Determination (C)	17.2			UNITS			01/17/19 0934	AWE

Ignitability of Solids	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 1030</b>								
Burnrate - 1030	<2.20	2.20	2.20	mm/sec	FP1		01/18/19 0930	CSH

Mercury	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 7471B</b>								
Mercury, Total	0.0352	0.0275	0.688	mg/kg DRY	J	01/18/19 0905	01/22/19 1158	KEH

Metals by 6010	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 6010C</b>								
Arsenic, Total	1.23	1.02	2.03	mg/kg DRY	J	01/21/19 0741	01/21/19 1823	PDM
Cadmium, Total	0.265	0.102	0.203	mg/kg DRY		01/21/19 0741	01/21/19 1823	PDM
Chromium, Total	10.8	0.254	0.509	mg/kg DRY		01/21/19 0741	01/21/19 1823	PDM
Copper, Total	353	1.02	2.03	mg/kg DRY		01/21/19 0741	01/21/19 1823	PDM
Lead, Total	4.87	1.02	2.03	mg/kg DRY		01/21/19 0741	01/22/19 1847	PDM
Molybdenum, Total	4.21	3.05	6.10	mg/kg DRY	J	01/21/19 0741	01/21/19 1823	PDM
Nickel, Total	12.2	2.03	4.07	mg/kg DRY		01/21/19 0741	01/21/19 1823	PDM
Potassium, Total	3770	50.9	102	mg/kg DRY		01/21/19 0741	01/21/19 1823	PDM
Selenium, Total	3.63	1.02	2.03	mg/kg DRY		01/21/19 0741	01/21/19 1823	PDM
Zinc, Total	139	1.02	2.03	mg/kg DRY		01/21/19 0741	01/21/19 1823	PDM



Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J9A0872

<b>Client Sample ID:</b> Compost	<b>Collected By:</b> JH-Client
<b>Sample Matrix:</b> Solid	<b>Collection Date:</b> 01/03/2019
<b>Lab Sample ID:</b> J9A0872-04	

PCB SOLID	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 8082A</b>								
Aroclor-1016	<24.9	24.9	49.8	ug/kg DRY		01/17/19 1400	01/21/19 1553	ECL
Aroclor-1221	<24.9	24.9	49.8	ug/kg DRY		01/17/19 1400	01/21/19 1553	ECL
Aroclor-1232	<24.9	24.9	49.8	ug/kg DRY		01/17/19 1400	01/21/19 1553	ECL
Aroclor-1242	<24.9	24.9	49.8	ug/kg DRY		01/17/19 1400	01/21/19 1553	ECL
Aroclor-1248	<24.9	24.9	49.8	ug/kg DRY		01/17/19 1400	01/21/19 1553	ECL
Aroclor-1254	<24.9	24.9	49.8	ug/kg DRY		01/17/19 1400	01/21/19 1553	ECL
Aroclor-1260	<24.9	24.9	49.8	ug/kg DRY		01/17/19 1400	01/21/19 1553	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-Xylene	95.0			% Rec	Limit: 29-133	01/17/19 1400	01/21/19 1553	ECL
Surrogate: Decachlorobiphenyl	64.1			% Rec	Limit: 50-125	01/17/19 1400	01/21/19 1553	ECL

Percent Solids	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: ASTM D2216-10</b>								
Percent Solids	34.3	1.00	1.00	weight %			01/18/19 1235	KMG

Reactivity, Cyanide	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: SW7.33</b>								
Reactivity, Cyanide	<9.97	9.97	9.97	mg/kg			01/22/19 1648	APH

Sulfide (Reactivity)	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: SW7.34</b>								
Reactivity, Sulfide	<100	100	100	mg/kg			01/22/19 1410	TB

Definitions

- °: Surrogate or spike compound out of range
- FP1: Did not ignite.
- J: The analyte was positively identified, but the quantitation was below the RL
- MDL: Minimum Detection Limit
- Q7: The low level CCV exceeded acceptance limits. Sample was non-detect.
- RL: Reporting Limit

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 5.1°C



Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J9A0872

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc., New York Division  
 NY Lab ID No.: 10795  
 Microbac Laboratories, Inc. - Ohio Valley  
 VA ID: 460187  
 NJ DEP ID: OH004  
 NY Lab ID No.: 10861  
 PA DEP ID: 68-01670

New York State Department of Health  
 Commonwealth of Virginia (VELAP)  
 New Jersey Department of Environmental Protection  
 New York State Department of Health  
 Pennsylvania Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included.

Reviewed and Approved By:

Renee Lantz  
Customer Relationship Specialist  
Reported: 02/11/2019 11:18

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Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J9A0872

<b>Client Sample ID:</b> Upstate Rolloff	<b>Collected By:</b> JH-Client
<b>Sample Matrix:</b> Solid	<b>Collection Date:</b> 01/03/2019
<b>Lab Sample ID:</b> J9A0872-02	

Analyses Subcontracted to: Microbac Laboratories, Inc. - Ohio Valley

Mercury	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 7470A</b>								
Mercury, TCLP	<0.00100	0.00100	0.00200	mg/L		01/31/19 1037	02/01/19 1301	KEH

Metals by 6010	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 6010C TCLP</b>								
Arsenic, TCLP	<0.500	0.500	1.00	mg/L		01/31/19 1259	02/06/19 1442	KKB
Barium, TCLP	<0.0500	0.0500	0.100	mg/L		01/31/19 1259	02/06/19 1442	KKB
Cadmium, TCLP	<0.0500	0.0500	0.100	mg/L		01/31/19 1259	02/06/19 1442	KKB
Chromium, TCLP	<0.100	0.100	0.200	mg/L		01/31/19 1259	02/06/19 1442	KKB
Lead, TCLP	<0.500	0.500	1.00	mg/L	Q7	01/31/19 1259	02/06/19 1442	KKB
Selenium, TCLP	<0.400	0.400	0.800	mg/L		01/31/19 1259	02/06/19 1442	KKB
Silver, TCLP	<0.0500	0.0500	0.100	mg/L		01/31/19 1259	02/06/19 1442	KKB

	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 9045D</b>								
Corrosivity pH	7.92			UNITS			01/17/19 0931	AWE
Temperature At Determination (C)	20.2			UNITS			01/17/19 0931	AWE

Ignitability of Solids	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 1030</b>								
Burnrate - 1030	<2.20	2.20	2.20	mm/sec	FP1		01/18/19 0930	CSH

Mercury	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 7471B</b>								
Mercury, Total	<0.0561	0.0561	1.40	mg/kg DRY		01/18/19 0905	01/22/19 1153	PDM

Metals by 6010	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 6010C</b>								
Arsenic, Total	<2.30	2.30	4.60	mg/kg DRY		01/21/19 0738	01/21/19 1817	PDM
Cadmium, Total	<2.30	2.30	4.60	mg/kg DRY		01/21/19 0738	01/24/19 1345	PDM
Chromium, Total	99.0	0.575	1.15	mg/kg DRY		01/21/19 0738	01/21/19 1817	PDM
Copper, Total	74.7	2.30	4.60	mg/kg DRY		01/21/19 0738	01/21/19 1817	PDM
Lead, Total	6.78	2.30	4.60	mg/kg DRY		01/21/19 0738	01/22/19 1837	PDM
Molybdenum, Total	<6.90	6.90	13.8	mg/kg DRY		01/21/19 0738	01/21/19 1817	PDM
Nickel, Total	41.3	4.60	9.19	mg/kg DRY		01/21/19 0738	01/21/19 1817	PDM
Potassium, Total	7020	115	230	mg/kg DRY		01/21/19 0738	01/21/19 1817	PDM
Selenium, Total	5.67	2.30	4.60	mg/kg DRY		01/21/19 0738	01/21/19 1817	PDM
Zinc, Total	41.2	2.30	4.60	mg/kg DRY		01/21/19 0738	01/21/19 1817	PDM

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CERTIFICATE OF ANALYSIS

J9A0872

<b>Client Sample ID:</b> Upslate Rolloff	<b>Collected By:</b> JH-Client
<b>Sample Matrix:</b> Solid	<b>Collection Date:</b> 01/03/2019
<b>Lab Sample ID:</b> J9A0872-02	

PCB SOLID	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 8082A</b>								
Aroclor-1016	<47.2	47.2	94.4	ug/kg DRY		01/17/19 1400	01/21/19 1519	ECL
Aroclor-1221	<47.2	47.2	94.4	ug/kg DRY		01/17/19 1400	01/21/19 1519	ECL
Aroclor-1232	<47.2	47.2	94.4	ug/kg DRY		01/17/19 1400	01/21/19 1519	ECL
Aroclor-1242	<47.2	47.2	94.4	ug/kg DRY		01/17/19 1400	01/21/19 1519	ECL
Aroclor-1248	<47.2	47.2	94.4	ug/kg DRY		01/17/19 1400	01/21/19 1519	ECL
Aroclor-1254	<47.2	47.2	94.4	ug/kg DRY		01/17/19 1400	01/21/19 1519	ECL
Aroclor-1260	<47.2	47.2	94.4	ug/kg DRY		01/17/19 1400	01/21/19 1519	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-Xylene	60.3			Limit: 29-133 % Rec		01/17/19 1400	01/21/19 1519	ECL
Surrogate: Decachlorobiphenyl	25.3			Limit: 50-125 % Rec	*	01/17/19 1400	01/21/19 1519	ECL
<b>Percent Solids</b>	<b>Result</b>	<b>MDL</b>	<b>RL</b>	<b>Units</b>	<b>Note</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
<b>Method: ASTM D2216-10</b>								
Percent Solids	16.5	1.00	1.00	weight %			01/18/19 1235	KMG
<b>Reactivity, Cyanide</b>	<b>Result</b>	<b>MDL</b>	<b>RL</b>	<b>Units</b>	<b>Note</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
<b>Method: SW7.33</b>								
Reactivity, Cyanide	<9.98	9.98	9.98	mg/kg			01/22/19 1648	APH
<b>Sulfide (Reactivity)</b>	<b>Result</b>	<b>MDL</b>	<b>RL</b>	<b>Units</b>	<b>Note</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
<b>Method: SW7.34</b>								
Reactivity, Sulfide	<100	100	100	mg/kg			01/22/19 1410	TB

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Microbac Laboratories, Inc., New York Division  
**CERTIFICATE OF ANALYSIS**

J9A0872

Dickson Environmental Services, Inc.

Project Name: Group A-B Testing

Phil Dickson  
 5226 Bonny Hill Rd  
 Bath, NY 14810

Project / PO Number: N/A  
 Received: 01/15/2019  
 Reported: 02/11/2019

**Analytical Testing Parameters**

<b>Client Sample ID:</b>	Upstate Side Dump	<b>Collected By:</b>	JH-Client
<b>Sample Matrix:</b>	Solid	<b>Collection Date:</b>	01/03/2019
<b>Lab Sample ID:</b>	J9A0872-01		

Analyses Subcontracted to: Microbac Laboratories, Inc. - Ohio Valley

	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Mercury</b>								
<b>Method: 7470A</b>								
Mercury, TCLP	<0.00100	0.00100	0.00200	mg/L		01/31/19 1037	02/01/19 1259	KEH
<b>Metals by 6010</b>								
<b>Method: 6010C TCLP</b>								
Arsenic, TCLP	<0.500	0.500	1.00	mg/L		01/31/19 1259	02/06/19 1438	KKB
Barium, TCLP	0.0723	0.0500	0.100	mg/L		01/31/19 1259	02/06/19 1438	KKB
Cadmium, TCLP	<0.0500	0.0500	0.100	mg/L		01/31/19 1259	02/06/19 1438	KKB
Chromium, TCLP	<0.100	0.100	0.200	mg/L		01/31/19 1259	02/06/19 1438	KKB
Lead, TCLP	<0.500	0.500	1.00	mg/L	Q7	01/31/19 1259	02/06/19 1438	KKB
Selenium, TCLP	<0.400	0.400	0.800	mg/L		01/31/19 1259	02/06/19 1438	KKB
Silver, TCLP	<0.0500	0.0500	0.100	mg/L		01/31/19 1259	02/06/19 1438	KKB
	<b>Result</b>	<b>MDL</b>	<b>RL</b>	<b>Units</b>	<b>Note</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
<b>Method: 9045D</b>								
Corrosivity pH	8.24			UNITS			01/17/19 0930	AWE
Temperature At Determination (C)	20.0			UNITS			01/17/19 0930	AWE
<b>Ignitability of Solids</b>								
<b>Method: 1030</b>								
Burnrate - 1030	<2.20	2.20	2.20	mm/sec	FP1		01/18/19 0930	CSH
<b>Mercury</b>								
<b>Method: 7471B</b>								
Mercury, Total	<0.0451	0.0451	1.13	mg/kg DRY		01/18/19 0905	01/22/19 1122	KEH
<b>Metals by 6010</b>								
<b>Method: 6010C</b>								
Arsenic, Total	<1.72	1.72	3.43	mg/kg DRY		01/21/19 0736	01/21/19 1814	PDM
Cadmium, Total	<0.858	0.858	1.72	mg/kg DRY		01/21/19 0736	01/24/19 1334	PDM
Chromium, Total	49.1	0.429	0.858	mg/kg DRY		01/21/19 0736	01/21/19 1814	PDM
Copper, Total	80.5	1.72	3.43	mg/kg DRY		01/21/19 0736	01/21/19 1814	PDM
Lead, Total	3.70	1.72	3.43	mg/kg DRY		01/21/19 0736	01/22/19 1831	PDM
Molybdenum, Total	14.8	5.15	10.3	mg/kg DRY		01/21/19 0736	01/21/19 1814	PDM

Microbac Laboratories, Inc.



Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J9A0872

<b>Client Sample ID:</b> Upstate Side Dump	<b>Collected By:</b> JH-Client
<b>Sample Matrix:</b> Solid	<b>Collection Date:</b> 01/03/2019
<b>Lab Sample ID:</b> J9A0872-01	

Metals by 6010	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Nickel, Total	56.3	3.43	6.87	mg/kg DRY		01/21/19 0736	01/21/19 1814	PDM
Potassium, Total	6000	85.8	172	mg/kg DRY		01/21/19 0736	01/21/19 1814	PDM
Selenium, Total	6.80	1.72	3.43	mg/kg DRY		01/21/19 0736	01/21/19 1814	PDM
Zinc, Total	116	1.72	3.43	mg/kg DRY		01/21/19 0736	01/21/19 1814	PDM

PCB SOLID	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 8082A</b>								
Aroclor-1016	<38.8	38.8	77.7	ug/kg DRY		01/17/19 1400	01/21/19 1501	ECL
Aroclor-1221	<38.8	38.8	77.7	ug/kg DRY		01/17/19 1400	01/21/19 1501	ECL
Aroclor-1232	<38.8	38.8	77.7	ug/kg DRY		01/17/19 1400	01/21/19 1501	ECL
Aroclor-1242	<38.8	38.8	77.7	ug/kg DRY		01/17/19 1400	01/21/19 1501	ECL
Aroclor-1248	<38.8	38.8	77.7	ug/kg DRY		01/17/19 1400	01/21/19 1501	ECL
Aroclor-1254	<38.8	38.8	77.7	ug/kg DRY		01/17/19 1400	01/21/19 1501	ECL
Aroclor-1260	<38.8	38.8	77.7	ug/kg DRY		01/17/19 1400	01/21/19 1501	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-Xylene	59.8		Limit: 29-133	% Rec		01/17/19 1400	01/21/19 1501	ECL
Surrogate: Decachlorobiphenyl	59.0		Limit: 50-125	% Rec		01/17/19 1400	01/21/19 1501	ECL

Percent Solids	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: ASTM D2216-10</b>								
Percent Solids	21.5	1.00	1.00	weight %			01/18/19 1235	KMG

Reactivity, Cyanide	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: SW7.33</b>								
Reactivity, Cyanide	<10.0	10.0	10.0	mg/kg			01/22/19 1648	APH

Sulfide (Reactivity)	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: SW7.34</b>								
Reactivity, Sulfide	<100	100	100	mg/kg			01/22/19 1410	TB





Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J9E0729

Watkins Glen WWTP

Project Name: Sludge

Terry Wilcox  
303 North Franklin Street  
Watkins Glen, NY 14891

Project / PO Number: N/A  
Received: 05/09/2019  
Reported: 07/12/2019

Analytical Testing Parameters

Client Sample ID:	Sludge Sample	Collected By:	EB-Client
Sample Matrix:	Solid	Collection Date:	05/09/2019 8:00
Lab Sample ID:	J9E0729-01		

Analyses Subcontracted to: Microbac Laboratories Inc., - Marietta, OH

General Parameters	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
<b>EPA 1030</b>								
Ignitability of Solids	<2.2	2.2	mm/sec	1			05/13/19 0000	CSH
<b>Inorganics</b>								
<b>EPA 9045D</b>								
pH	6.2		pH Units	1	H4		05/22/19 1518	AWE
<b>NA</b>								
Temperature	24.6		°C	1			05/22/19 1518	AWE
<b>SM2540 G-1997</b>								
Total Solids	236000	10000	mg/kg	1	Y1	05/15/19 1009	05/17/19 0545	ADG
<b>SW-846 7.3.3.2</b>								
Reactive Cyanide	<10.0	10.0	mg/kg	1	Y1	05/23/19 0830	05/23/19 1613	JRH
<b>SW-846 7.3.4.1</b>								
Reactive Sulfide	<100	100	mg/kg	1	Y1		05/27/19 1215	TB
<b>Polychlorinated Biphenyls - GC/ECD</b>								
<b>EPA 8082A</b>								
Aroclor-1016 (PCB-1016)	<17.7	17.7	ug/kg wet	1		05/14/19 1215	05/15/19 1401	ECL
Aroclor-1221 (PCB-1221)	<17.7	17.7	ug/kg wet	1		05/14/19 1215	05/15/19 1401	ECL
Aroclor-1232 (PCB-1232)	<17.7	17.7	ug/kg wet	1		05/14/19 1215	05/15/19 1401	ECL
Aroclor-1242 (PCB-1242)	<17.7	17.7	ug/kg wet	1		05/14/19 1215	05/15/19 1401	ECL
Aroclor-1248 (PCB-1248)	<17.7	17.7	ug/kg wet	1		05/14/19 1215	05/15/19 1401	ECL
Aroclor-1254 (PCB-1254)	<17.7	17.7	ug/kg wet	1		05/14/19 1215	05/15/19 1401	ECL
Aroclor-1260 (PCB-1260)	<17.7	17.7	ug/kg wet	1		05/14/19 1215	05/15/19 1401	ECL
Sumogate: 2,4,5,6-Tetrachloro-m-xylene	73.2	Limit: 29-133	% Rec	1		05/14/19 1215	05/15/19 1401	ECL
Sumogate: Decachlorobiphenyl (BZ-209)	65.2	Limit: 50-125	% Rec	1		05/14/19 1215	05/15/19 1401	ECL
<b>TCLP Metals - AA</b>								
<b>EPA 7470A</b>								
TCLP Metals - AA	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst

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Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J9E0729

<b>Client Sample ID:</b> Sludge Sample	<b>Collected By:</b> EB-Client
<b>Sample Matrix:</b> Solid	<b>Collection Date:</b> 05/09/2019 8:00
<b>Lab Sample ID:</b> J9E0729-01	

TCLP Metals - AA	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
Mercury	<0.00200	0.00200	mg/L	1		05/14/19 0800	05/16/19 1608	KEH

TCLP Metals - ICP	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
<b>EPA 6010C</b>								
Arsenic	<0.200	0.200	mg/L	1		05/15/19 0721	05/20/19 1814	JYH
Barium	<0.100	0.100	mg/L	1		05/15/19 0721	05/20/19 1814	JYH
Cadmium	<0.0200	0.0200	mg/L	1		05/15/19 0721	05/20/19 1814	JYH
Chromium	<0.0500	0.0500	mg/L	1		05/15/19 0721	05/20/19 1814	JYH
Lead	<0.200	0.200	mg/L	1		05/15/19 0721	05/20/19 1814	JYH
Selenium	<0.350	0.350	mg/L	1		05/15/19 0721	05/20/19 1814	JYH
Silver	<0.100	0.100	mg/L	1		05/15/19 0721	05/20/19 1814	JYH

Definitions

- H4:** The test was performed outside of the EPA recommended holding time of 15 minutes.
- MDL:** Minimum Detection Limit
- RL:** Reporting Limit
- Y1:** Accreditation is not offered by the accrediting body for this analyte.

Project Requested Certification(s)

Microbac Laboratories Inc., - Marietta, OH 10861 New York State Department of Health  
 Microbac Laboratories, Inc., New York Division NY Lab ID No.: 10795 New York State Department of Health

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included.

Reviewed and Approved By:

Renee Lantz  
Customer Relationship Specialist  
Reported: 07/12/2019 12:19



3821 Buck Drive  
Cortland, NY 13045  
607.753.3403

2369 Elmira Street, Suite C  
Sayre, PA 18840  
670.888.0169

1620 North Main Avenue  
Scranton, PA 18608  
570.348.0775

4350 Linglestown Road  
Harrisburg, PA 17112  
717.651.9700

### CHAIN OF CUSTODY RECORD

Number  
Instructions on back  
TO BE COMPLETED BY MICROBAC

Lab Report Address  
Client Name: Village of Watkins Glen

Address: 303 N. Franklin St,  
City, State, Zip: Watkins Glen, NY, 14891

Contact: Terry Wilcox  
Telephone No.: (607) 535-9962

Send Report via:  Mail  Fax  e-mail (address)

Project: Wastewater  
Sampled by (PRINT): Ed Berry

Invoice Address  
Client Name:

Address:  
City, State, Zip:

Contact:  
Telephone No.: (607) 742-6871

Send Invoice via:  Mail  Fax  e-mail (address)

Location: Lake front  
Sampler Signature: [Signature]

Turnaround Time  
 Routine (5 to 7 business days)  
 RUSH\* (notify lab)

(needed by)  
Report Type

Results Only  Level 1  Level 2  Level 3  Level 4  EDD

Compliance Monitoring?  Yes  No  
( ) Agency/Program

Sampler Phone No.: (607) 742-6874

Temperature Upon Receipt (°C)  
Therm ID

Holding Time  
Samples Received on Ice  Yes  No N/A  
Custody Seals Intact? Yes  No N/A

\* Matrix Types: Sol/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)  
\*\* Preservative Types: (1) HNO3, (2) H2SO4, (3) HCL, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

#### REQUESTED ANALYSIS

Lab ID	Client Sample ID	Date Collected	Time Collected	No. of Containers	Matrix	Grab / Comp	Preservative Types **	Total Coliform	Fecal Coliform	TCLP PUA/B	TCLP Prep	pH	Reactive Cyanide	Aspiric Sulfide	Flashpoint	PCB	Additional Notes
	EFF	5-9-19	11:15am	1	WW	G	8	X									Free Cl2 0.05
	EFF	5-9-19	11:15am	1	WW	G	8										Total Cl2 0.57
	Sludge sample	5-9-19	8:00am	2	WW	G	U										

Possible Hazard Identification  Hazardous  Non-Hazardous  Radioactive  
Sample Disposition  Dispose as appropriate  Return  Archive

SAFETY: SAMPLES MUST BE RETURNED ON ICE

Relinquished By (signature) [Signature] Date/Time 5-9-19 11:18am  
Received By (signature) [Signature] Date/Time 11/18 5/9/19  
Relinquished By (signature) [Signature] Date/Time 5/9/19 15:45  
Received By (signature) [Signature] Date/Time 5/9/19 15:45

Watkins Glen WWTP





3821 Buck Drive  
Cortland, NY 13045  
607.763.3403

2389 Elmira Street, Suite C  
Sayre, PA 18840  
670.888.0169

1620 North Main Avenue  
Scranton, PA 18508  
670.348.0775

4359 Linglestown Road  
Harrisburg, PA 17112  
717.651.9700

**CHAIN OF CUSTODY RECORD**

Number

Instructions on back

TO BE COMPLETED BY MICROBAC

Lab Report Address

Client Name: Village of Watkins Glen

Address: 303 N. Franklin St,

City, State, Zip: Watkins Glen, NY, 14881

Contact: Terry Wilcox

Telephone No.: (607) 535-9962

Send Report via:  Mail  Fax  e-mail (address)

Project: Wastewater

Sampled by (PRINT): Ed Berry

Invoice Address

Client Name:

Address:

City, State, Zip:

Contact:

Telephone No.: (607) 742-6871

Location: Lake front

Sampler Signature: *[Signature]*

Turnaround Time

Routine (5 to 7 business days)  
 RUSH\* (notify lab)

(needed by)

Report Type

Results Only  Level 1  Level 2  Level 3  Level 4  EDD

Send Invoice via:  Mail  Fax  e-mail (address)

PO No.:

Compliance Monitoring?  Yes  No  
( ) Agency/Program

Sampler Phone No.: (607) 742-6874

\* Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)  
\*\* Preservative Types: (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

REQUESTED ANALYSIS

Lab ID	Client Sample ID	Date Collected	Time Collected	No. of Containers	Matrix	Grab / Comp	Preservative Types **	Total Coliform	Fecal Coliform	TCLP RWAFB	TCLP Prep	pH	Reactive Cyanide	Hexavalent Chromium	Sulfide	Flashpoint	PCB	Additional Notes	
EAP		5-9-19	11:15am	1	W	G	8	X										Free CL2 0.05	
EAP		5-9-19	11:15am	1	W	G	8											Total CL2 0.57	
	Sludge sample	5-9-19	8:00am	2	W	G	U												
																			add TS per client request site #

Possible Hazard Identification  Hazardous  Non-Hazardous  Radioactive

Sample Disposition  Dispose as appropriate  Return  Archive

Comments: **SAMPLES MUST BE RETURNED ONCE**

Relinquished By (signature)

Date/Time

*[Signature]*

5-9-19 11:15am

Relinquished By (signature)

Date/Time

*[Signature]*

5/9/19 15:45

Received By (signature)

Date/Time

*[Signature]*

11/18 3/2/19

Received By (signature)

Date/Time

*[Signature]*

5/9/19 1545

Received By (signature)

Date/Time

Watkins Glen WWTP



**MANURE ANALYSIS REPORT**

 Dicksons Environmental Serv Inc  
 5226 Bonny Hill Road  
 Bath, NY 14810

 Sample Number: 25889360  
 Date Sampled: 06/19/19  
 Date Received: 7/9/2019  
 Date Mailed: 7/12/2019  
 Statement ID: P1  
 Kind: Misc. - Liquid (076)  
 Description: P1

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.163 %	3.3	13.5
Ammonium Nitrogen	.117 %	2.3	9.7
Organic Nitrogen	.046 %	.9	3.8
Phosphorus (P)	.054 %	1.1	4.4
Phosphate Equivalent (P205)	.123 %	2.5	10.2
Potassium (K)	.210 %	4.2	17.4
Potash Equivalent (K20)	.253 %	5.1	21.0
Total Solids	3.15 %		
Density	.99 kg/l	62.06 Lbs/CuFt	8.30 Lbs/Gal
pH	7.7		

**MANURE ANALYSIS REPORT**

 Dicksons Environmental Serv Inc  
 5226 Bonny Hill Road  
 Bath, NY 14810

 Sample Number: 25889370  
 Date Sampled: 06/19/19  
 Date Received: 7/9/2019  
 Date Mailed: 7/12/2019  
 Statement ID: P3  
 Kind: Misc. - Liquid (076)  
 Description: P3

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.216 %	4.3	18.3
Ammonium Nitrogen	.072 %	1.4	6.1
Organic Nitrogen	.144 %	2.9	12.2
Phosphorus (P)	.137 %	2.7	11.6
Phosphate Equivalent (P205)	.315 %	6.3	26.6
Potassium (K)	.122 %	2.4	10.3
Potash Equivalent (K20)	.147 %	2.9	12.5
Total Solids	5.32 %		
Density	1.01 kg/l	63.29 Lbs/CuFt	8.46 Lbs/Gal
pH	7.7		



Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J9A0872

Dickson Environmental Services, Inc.

Project Name: Group A-B Testing

Phil Dickson
5226 Bonny Hill Rd
Bath, NY 14810

Project / PO Number: N/A
Received: 01/15/2019
Reported: 02/11/2019

Analytical Testing Parameters

Table with 4 columns: Client Sample ID, Sample Matrix, Lab Sample ID, Collected By, Collection Date. Values include Upstate Side Dump, Solid, J9A0872-01, JH-Client, 01/03/2019.

Analyses Subcontracted to: Microbac Laboratories, Inc. - Ohio Valley

Main data table with 9 columns: Analyte, Result, MDL, RL, Units, Note, Prepared, Analyzed, Analyst. Includes sections for Mercury, Metals by 6010, Corrosivity pH, Temperature, Ignitability of Solids, and another Mercury and Metals section.

Microbac Laboratories, Inc.



Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J9A0872

<b>Client Sample ID:</b> Upstate Side Dump	<b>Collected By:</b> JH-Client
<b>Sample Matrix:</b> Solid	<b>Collection Date:</b> 01/03/2019
<b>Lab Sample ID:</b> J9A0872-01	

Metals by 6010	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Nickel, Total	56.3	3.43	6.87	mg/kg DRY		01/21/19 0736	01/21/19 1814	PDM
Potassium, Total	6000	85.8	172	mg/kg DRY		01/21/19 0736	01/21/19 1814	PDM
Selenium, Total	6.80	1.72	3.43	mg/kg DRY		01/21/19 0736	01/21/19 1814	PDM
Zinc, Total	116	1.72	3.43	mg/kg DRY		01/21/19 0736	01/21/19 1814	PDM

PCB SOLID	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 8082A</b>								
Aroclor-1016	<38.8	38.8	77.7	ug/kg DRY		01/17/19 1400	01/21/19 1501	ECL
Aroclor-1221	<38.8	38.8	77.7	ug/kg DRY		01/17/19 1400	01/21/19 1501	ECL
Aroclor-1232	<38.8	38.8	77.7	ug/kg DRY		01/17/19 1400	01/21/19 1501	ECL
Aroclor-1242	<38.8	38.8	77.7	ug/kg DRY		01/17/19 1400	01/21/19 1501	ECL
Aroclor-1248	<38.8	38.8	77.7	ug/kg DRY		01/17/19 1400	01/21/19 1501	ECL
Aroclor-1254	<38.8	38.8	77.7	ug/kg DRY		01/17/19 1400	01/21/19 1501	ECL
Aroclor-1260	<38.8	38.8	77.7	ug/kg DRY		01/17/19 1400	01/21/19 1501	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-Xylene	59.8		Limit: 29-133	% Rec		01/17/19 1400	01/21/19 1501	ECL
Surrogate: Decachlorobiphenyl	59.0		Limit: 50-125	% Rec		01/17/19 1400	01/21/19 1501	ECL

Percent Solids	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: ASTM D2216-10</b>								
Percent Solids	21.5	1.00	1.00	weight %			01/18/19 1235	KMG

Reactivity, Cyanide	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: SW7.33</b>								
Reactivity, Cyanide	<10.0	10.0	10.0	mg/kg			01/22/19 1648	APH

Sulfide (Reactivity)	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: SW7.34</b>								
Reactivity, Sulfide	<100	100	100	mg/kg			01/22/19 1410	TB





Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J9A0872

<b>Client Sample ID:</b> Upstate Rolloff	<b>Collected By:</b> JH-Client
<b>Sample Matrix:</b> Solid	<b>Collection Date:</b> 01/03/2019
<b>Lab Sample ID:</b> J9A0872-02	

Analyses Subcontracted to: Microbac Laboratories, Inc. - Ohio Valley

Mercury	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 7470A</b>								
Mercury, TCLP	<0.00100	0.00100	0.00200	mg/L		01/31/19 1037	02/01/19 1301	KEH

Metals by 6010	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 6010C TCLP</b>								
Arsenic, TCLP	<0.500	0.500	1.00	mg/L		01/31/19 1259	02/06/19 1442	KKB
Barium, TCLP	<0.0500	0.0500	0.100	mg/L		01/31/19 1259	02/06/19 1442	KKB
Cadmium, TCLP	<0.0500	0.0500	0.100	mg/L		01/31/19 1259	02/06/19 1442	KKB
Chromium, TCLP	<0.100	0.100	0.200	mg/L		01/31/19 1259	02/06/19 1442	KKB
Lead, TCLP	<0.500	0.500	1.00	mg/L	Q7	01/31/19 1259	02/06/19 1442	KKB
Selenium, TCLP	<0.400	0.400	0.800	mg/L		01/31/19 1259	02/06/19 1442	KKB
Silver, TCLP	<0.0500	0.0500	0.100	mg/L		01/31/19 1259	02/06/19 1442	KKB

	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 9045D</b>								
Corrosivity pH	7.92			UNITS			01/17/19 0931	AWE
Temperature At Determination (C)	20.2			UNITS			01/17/19 0931	AWE

Ignitability of Solids	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 1030</b>								
Bumrate - 1030	<2.20	2.20	2.20	mm/sec	FP1		01/18/19 0930	CSH

Mercury	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 7471B</b>								
Mercury, Total	<0.0561	0.0561	1.40	mg/kg DRY		01/18/19 0905	01/22/19 1153	PDM

Metals by 6010	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 6010C</b>								
Arsenic, Total	<2.30	2.30	4.60	mg/kg DRY		01/21/19 0738	01/21/19 1817	PDM
Cadmium, Total	<2.30	2.30	4.60	mg/kg DRY		01/21/19 0738	01/24/19 1345	PDM
Chromium, Total	99.0	0.575	1.15	mg/kg DRY		01/21/19 0738	01/21/19 1817	PDM
Copper, Total	74.7	2.30	4.60	mg/kg DRY		01/21/19 0738	01/21/19 1817	PDM
Lead, Total	6.78	2.30	4.60	mg/kg DRY		01/21/19 0738	01/22/19 1837	PDM
Molybdenum, Total	<6.90	6.90	13.8	mg/kg DRY		01/21/19 0738	01/21/19 1817	PDM
Nickel, Total	41.3	4.60	9.19	mg/kg DRY		01/21/19 0738	01/21/19 1817	PDM
Potassium, Total	7020	115	230	mg/kg DRY		01/21/19 0738	01/21/19 1817	PDM
Selenium, Total	5.67	2.30	4.60	mg/kg DRY		01/21/19 0738	01/21/19 1817	PDM
Zinc, Total	41.2	2.30	4.60	mg/kg DRY		01/21/19 0738	01/21/19 1817	PDM

Microbac Laboratories, Inc.

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Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J9A0872

<b>Client Sample ID:</b> Upstate Rolloff	<b>Collected By:</b> JH-Client
<b>Sample Matrix:</b> Solid	<b>Collection Date:</b> 01/03/2019
<b>Lab Sample ID:</b> J9A0872-02	

PCB SOLID	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 8082A</b>								
Aroclor-1016	<47.2	47.2	94.4	ug/kg DRY		01/17/19 1400	01/21/19 1519	ECL
Aroclor-1221	<47.2	47.2	94.4	ug/kg DRY		01/17/19 1400	01/21/19 1519	ECL
Aroclor-1232	<47.2	47.2	94.4	ug/kg DRY		01/17/19 1400	01/21/19 1519	ECL
Aroclor-1242	<47.2	47.2	94.4	ug/kg DRY		01/17/19 1400	01/21/19 1519	ECL
Aroclor-1248	<47.2	47.2	94.4	ug/kg DRY		01/17/19 1400	01/21/19 1519	ECL
Aroclor-1254	<47.2	47.2	94.4	ug/kg DRY		01/17/19 1400	01/21/19 1519	ECL
Aroclor-1260	<47.2	47.2	94.4	ug/kg DRY		01/17/19 1400	01/21/19 1519	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-Xylene	60.3		Limit: 29-133	% Rec		01/17/19 1400	01/21/19 1519	ECL
Surrogate: Decachlorobiphenyl	25.3		Limit: 50-125	% Rec	*	01/17/19 1400	01/21/19 1519	ECL
<b>Percent Solids</b>								
<b>Method: ASTM D2216-10</b>								
Percent Solids	16.5	1.00	1.00	weight %			01/18/19 1235	KMG
<b>Reactivity, Cyanide</b>								
<b>Method: SW7.33</b>								
Reactivity, Cyanide	<9.98	9.98	9.98	mg/kg			01/22/19 1648	APH
<b>Sulfide (Reactivity)</b>								
<b>Method: SW7.34</b>								
Reactivity, Sulfide	<100	100	100	mg/kg			01/22/19 1410	TB



Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J9A0872

Client Sample ID: Compost	Collected By: JH-Client
Sample Matrix: Solid	Collection Date: 01/03/2019
Lab Sample ID: J9A0872-04	

Analyses Subcontracted to: Microbac Laboratories, Inc. - Ohio Valley

Mercury	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Method: 7470A								
Mercury, TCLP	0.00445	0.00100	0.00200	mg/L		01/31/19 1037	02/01/19 1306	KEH

Metals by 6010	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Method: 6010C TCLP								
Arsenic, TCLP	<0.500	0.500	1.00	mg/L		01/31/19 1259	02/06/19 1450	KKB
Barium, TCLP	<0.0500	0.0500	0.100	mg/L		01/31/19 1259	02/06/19 1450	KKB
Cadmium, TCLP	<0.0500	0.0500	0.100	mg/L		01/31/19 1259	02/06/19 1450	KKB
Chromium, TCLP	<0.100	0.100	0.200	mg/L		01/31/19 1259	02/06/19 1450	KKB
Lead, TCLP	<0.500	0.500	1.00	mg/L	Q7	01/31/19 1259	02/06/19 1450	KKB
Selenium, TCLP	<0.400	0.400	0.800	mg/L		01/31/19 1259	02/06/19 1450	KKB
Silver, TCLP	<0.0500	0.0500	0.100	mg/L		01/31/19 1259	02/06/19 1450	KKB

	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Method: 9045D								
Corrosivity pH	6.84			UNITS			01/17/19 0934	AWE
Temperature At Determination (C)	17.2			UNITS			01/17/19 0934	AWE

Ignitability of Solids	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Method: 1030								
Burnrate - 1030	<2.20	2.20	2.20	mm/sec	FP1		01/18/19 0930	CSH

Mercury	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Method: 7471B								
Mercury, Total	0.0352	0.0275	0.688	mg/kg DRY	J	01/18/19 0905	01/22/19 1158	KEH

Metals by 6010	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Method: 6010C								
Arsenic, Total	1.23	1.02	2.03	mg/kg DRY	J	01/21/19 0741	01/21/19 1823	PDM
Cadmium, Total	0.265	0.102	0.203	mg/kg DRY		01/21/19 0741	01/21/19 1823	PDM
Chromium, Total	10.8	0.254	0.509	mg/kg DRY		01/21/19 0741	01/21/19 1823	PDM
Copper, Total	353	1.02	2.03	mg/kg DRY		01/21/19 0741	01/21/19 1823	PDM
Lead, Total	4.87	1.02	2.03	mg/kg DRY		01/21/19 0741	01/22/19 1847	PDM
Molybdenum, Total	4.21	3.05	6.10	mg/kg DRY	J	01/21/19 0741	01/21/19 1823	PDM
Nickel, Total	12.2	2.03	4.07	mg/kg DRY		01/21/19 0741	01/21/19 1823	PDM
Potassium, Total	3770	50.9	102	mg/kg DRY		01/21/19 0741	01/21/19 1823	PDM
Selenium, Total	3.63	1.02	2.03	mg/kg DRY		01/21/19 0741	01/21/19 1823	PDM
Zinc, Total	139	1.02	2.03	mg/kg DRY		01/21/19 0741	01/21/19 1823	PDM

Microbac Laboratories, Inc.

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Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J9A0872

<b>Client Sample ID:</b> Compost	<b>Collected By:</b> JH-Client
<b>Sample Matrix:</b> Solid	<b>Collection Date:</b> 01/03/2019
<b>Lab Sample ID:</b> J9A0872-04	

PCB SOLID	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 8082A</b>								
Aroclor-1016	<24.9	24.9	49.8	ug/kg DRY		01/17/19 1400	01/21/19 1553	ECL
Aroclor-1221	<24.9	24.9	49.8	ug/kg DRY		01/17/19 1400	01/21/19 1553	ECL
Aroclor-1232	<24.9	24.9	49.8	ug/kg DRY		01/17/19 1400	01/21/19 1553	ECL
Aroclor-1242	<24.9	24.9	49.8	ug/kg DRY		01/17/19 1400	01/21/19 1553	ECL
Aroclor-1248	<24.9	24.9	49.8	ug/kg DRY		01/17/19 1400	01/21/19 1553	ECL
Aroclor-1254	<24.9	24.9	49.8	ug/kg DRY		01/17/19 1400	01/21/19 1553	ECL
Aroclor-1260	<24.9	24.9	49.8	ug/kg DRY		01/17/19 1400	01/21/19 1553	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-Xylene	95.0		Limit: 29-133	% Rec		01/17/19 1400	01/21/19 1553	ECL
Surrogate: Decachlorobiphenyl	64.1		Limit: 50-125	% Rec		01/17/19 1400	01/21/19 1553	ECL

Percent Solids	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: ASTM D2216-10</b>								
Percent Solids	34.3	1.00	1.00	weight %			01/18/19 1235	KMG

Reactivity, Cyanide	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: SW7.33</b>								
Reactivity, Cyanide	<9.97	9.97	9.97	mg/kg			01/22/19 1648	APH

Sulfide (Reactivity)	Result	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: SW7.34</b>								
Reactivity, Sulfide	<100	100	100	mg/kg			01/22/19 1410	TB

**Definitions**

- \*: Surrogate or spike compound out of range
- FP1: Did not ignite.
- J: The analyte was positively identified, but the quantitation was below the RL
- MDL: Minimum Detection Limit
- Q7: The low level CCV exceeded acceptance limits. Sample was non-detect.
- RL: Reporting Limit

**Cooler Receipt Log**

Cooler ID: Default Cooler      Temp: 5.1°C



Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J9A0872

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc., New York Division  
 NY Lab ID No.: 10795  
 Microbac Laboratories, Inc. - Ohio Valley  
 VA ID: 460187  
 NJ DEP ID: OH004  
 NY Lab ID No.: 10861  
 PA DEP ID: 68-01670

New York State Department of Health  
 Commonwealth of Virginia (VELAP)  
 New Jersey Department of Environmental Protection  
 New York State Department of Health  
 Pennsylvania Department of Environmental Protection

Report Comments

*Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.*

*The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included.*

Reviewed and Approved By:

Renee Lantz  
 Customer Relationship Specialist  
 Reported: 02/11/2019 11:18



Microbac Laboratories, Inc., Sayre Division

CERTIFICATE OF ANALYSIS

S6H0164

Dickson Environmental Services, Inc.

Project Name: Group A-B Testing

Phil Dickson
5226 Bonny Hill Rd
Bath, NY 14810

Project / PO Number: N/A
Received: 07/29/2016 12:03
Reported: 08/15/2016 17:12

Analytical Testing Parameters

Client Sample ID: Screened Compost
Lab Sample ID: S6H0164-01
Sample Type: Grab

Collected By: PD-Client
Collection Date: 07/29/16
Collection Time: 09:30

Table with columns: General Parameters, Result, Limit, PQL, Units, Note, Prepared, Analyzed, Lab. Rows include pH, Temperature, Inorganics (Ammonia, TKN, Phosphorus, Solids, Nitrate, Nitrite), and Microbiology (Fecal Coliform, Salmonella).



Microbac Laboratories, Inc., Sayre Division

CERTIFICATE OF ANALYSIS

S6H0164

Analytical Testing Parameters

Client Sample ID: Screened Compost
Lab Sample ID: S6H0164-01
Sample Type: Grab

Collected By: PD-Client
Collection Date: 07/29/16
Collection Time: 09:30

Analyses Subcontracted to: Microbac Laboratories, Inc. - Ohio Valley

Table with 7 columns: Mercury, Result, PQL, Units, Note, Prepared, Analyzed. Row 1: Mercury, Total, 0.480, 0.397, mg/kg DRY, 08/10/16 0654, 08/11/16 0923

Table with 7 columns: Metals by 6010, Result, PQL, Units, Note, Prepared, Analyzed. Rows include Arsenic, Cadmium, Chromium, Copper, Lead, Molybdenum, Nickel, Potassium, Selenium, Zinc.

Table with 7 columns: Percent Solids, Result, PQL, Units, Note, Prepared, Analyzed. Row 1: Percent Solids, 62.3, 1.00, weight %, 08/09/16 0726

Laboratory
NY: Microbac Laboratories, Inc., New York Division
SAY: Microbac Laboratories, Inc., Sayre Division

Definitions
H: Sample was analyzed past holding time.
H1: Sample was received past holding time.
MDL: Minimum Detection Limit
PQL: Practical Quantitation Limit
Y: This analyte is not on the laboratory's current scope of accreditation.

Cooler Receipt Log
Cooler ID: Default Cooler Temp: 32.2°C

Cooler Inspection Checklist table with 4 columns: Item, Yes/No, Item, Yes/No. Rows: Custody Seals Intact and/or No Evidence of Tampering, COC/Labels Agree, Received on Ice (or not required).



Microbac Laboratories, Inc., Sayre Division

CERTIFICATE OF ANALYSIS

S6H0164

**Project Requested Certification(s)**

Microbac Laboratories, Inc., Sayre Division

NY Lab ID No.: 11216

Microbac Laboratories, Inc. - Ohio Valley

VA ID: 460187

NY Lab ID No.: 10861

PA DEP ID: 68-01670

New York State Department of Health

Commonwealth of Virginia (VELAP)

New York State Department of Health

Pennsylvania Department of Environmental Protection

**Report Comments**

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

**Reviewed and Approved By:**

Andrew Canale

Project Manager

08/15/2016 17:12

Go Green: Contact Andrew Canale to set up email reporting and invoicing options.

*The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. For any feedback concerning our services, please contact Andrew Canale, Project Manager at [andrew.canale@microbac.com](mailto:andrew.canale@microbac.com). You may also contact Michael Fifield, Managing Director at [michael.fifield@microbac.com](mailto:michael.fifield@microbac.com) or Robert Crookston, President at [robert.crookston@microbac.com](mailto:robert.crookston@microbac.com).*





Active  
Environmental  
Services, Inc.

7280 Caswell Street  
North Syracuse, NY 13212  
Phone 315-478-2374  
Fax 315-478-2107

REPORT OF ANALYSES

Town of Owego  
1319 Main St.  
Apalachin, NY 13732-  
Attn: Tyson Stiles

PROJECT NAME: Sludge  
DATE: 07/02/2019

SAMPLE NUMBER- 789229 SAMPLE ID- Sludge  
DATE SAMPLED- 06/12/19  
DATE RECEIVED- 06/12/19 SAMPLER- Robert Nugent (Owego)  
TIME RECEIVED- 1324 DELIVERED BY- Pat Davis

SAMPLE MATRIX- SO  
TIME SAMPLED- 1130  
RECEIVED BY- SB  
TYPE SAMPLE- Grab

Page 1 of 2

ANALYSIS	METHOD	SAMPLE PREP DATE	ANALYSIS BY	DATE	TIME	BY	RESULT	UNITS
Sample Receipt Temperature				06/12/19		SB	3.3	Degrees C
Subcontracted Analysis				06/19/19		PAC	*	
TCLP Extraction	40CFR 1311			06/20/19		RS		
Initial Room Temperature	40CFR 1311			06/20/19		RS	23	Degrees C
Final Room Temperature	40CFR 1311			06/20/19		RS	25	Degrees C
Ignitability	EPA 1010A			06/25/19		DT	> 200	Degrees F
pH in Water (At 21 Degrees C)	EPA 9045D			06/14/19	0843	DLP	H 6.84	std units
#Percent Solids-97,-11	SM 2540B			06/13/19		LEW	23.2	%
TCLP Metals (Prep 3005A)	EPA 6010C	06/25/19	MPB	06/26/19		MPB	< 0.50	mg/L
Arsenic, TCLP	EPA 6010C	06/25/19	MPB	06/26/19		MPB	< 10.0	mg/L
Barium, TCLP	EPA 6010C	06/25/19	MPB	06/26/19		MPB	< 0.10	mg/L
Cadmium, TCLP	EPA 6010C	06/25/19	MPB	06/26/19		MPB	< 0.50	mg/L
Chromium, TCLP	EPA 6010C	06/25/19	MPB	06/26/19		MPB	< 0.50	mg/L
Lead, TCLP	EPA 6010C	06/25/19	MPB	06/26/19		MPB	< 0.50	mg/L
Selenium, TCLP	EPA 6010C	06/25/19	MPB	06/26/19		MPB	< 0.50	mg/L
Silver, TCLP	EPA 6010C	06/25/19	MPB	06/26/19		MPB	< 0.02	mg/L
Mercury, TCLP (Hg)	EPA 7471A			06/24/19		MPB	< 0.02	mg/L
PCB's in Solid 3540C/8082A	EPA 8082A	06/13/19	LEW	06/26/19		BLD	< 0.84	mg/Kg dry
Aroclor 1016	EPA 8082A	06/13/19	LEW	06/26/19		BLD	< 0.84	mg/Kg dry
Aroclor 1221	EPA 8082A	06/13/19	LEW	06/26/19		BLD	< 0.84	mg/Kg dry
Aroclor 1232	EPA 8082A	06/13/19	LEW	06/26/19		BLD	< 0.84	mg/Kg dry

The analytical results on this sample are representative of the sample received by the Laboratory.



Certified  
Environmental  
Services, Inc

7280 Caswell Street  
North Syracuse, NY 13212  
Phone 315-478-2374  
Fax 315-478-2107

Page 2 of 2

CONTINUATION OF DATA FOR SAMPLE NUMBER 789229

ANALYSIS	METHOD	SAMPLE DATE	PREP BY	ANALYSIS DATE	TIME	BY	RESULT	UNITS
Aroclor 1242	EPA 8082A	06/13/19	LEW	06/26/19		BLD	< 0.84	mg/Kg dry
Aroclor 1248	EPA 8082A	06/13/19	LEW	06/26/19		BLD	< 0.84	mg/Kg dry
Aroclor 1254	EPA 8082A	06/13/19	LEW	06/26/19		BLD	< 0.84	mg/Kg dry
Aroclor 1260	EPA 8082A	06/13/19	LEW	06/26/19		BLD	< 0.84	mg/Kg dry
Tetrachloro-m-xylene (30-130)	EPA 8082A	06/13/19	LEW	06/26/19		BLD	102	%
Decachlorobiphenyl (30-130)	EPA 8082A	06/13/19	LEW	06/26/19		BLD	116	%

\*See Attached Report

NYSDOH LAB ID NO. 11246

APPROVED BY:

(Terms and Conditions on Reverse Side)

Barbara L. DuChene  
Laboratory Manager

The analytical results on this sample are representative of the sample received by the Laboratory.



Face Analytical Services, LLC  
 575 Broad Hollow Road  
 Melville, NY 11747  
 (631)694-3040

**ANALYTICAL RESULTS**

Project: 37056  
 Face Project No.: 7093867

Sample: 789228 Lab ID: 7093867012 Collected: 06/12/19 00:00 Received: 08/15/19 10:00 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
Percent Moisture	Analytical Method: ASTM D2216-92M							
Percent Moisture	96.6	%	0.10	1		08/24/19 12:00		
7345 Reactive Sulfide	Analytical Method: SW-846 7.3.4.2 Preparation Method: Reactivity Prep							
Sulfide, Reactive	<89.9	mg/kg	89.9	1	06/19/19 07:54	08/19/19 16:01		N3
733C S Reactive Cyanide	Analytical Method: SW-846 7.3.3.2 Preparation Method: Reactivity Prep							
Cyanide, Reactive	<748	mg/kg	748	1	06/19/19 07:54	08/19/19 14:18		N3

Analysis performed by ELAP #10478

**REPORT OF LABORATORY ANALYSIS**

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Date: 08/29/2019 05:48 PM

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Microbac Laboratories, Inc., Sayre Division

CERTIFICATE OF ANALYSIS

S9E0327

Waverly WWTP

Doug Kinsley
424 Cayuta Avenue
Waverly, NY 14892

Project Name: Biosolids/Sludge 360 Series

Project / PO Number: N/A
Received: 05/15/2019
Reported: 06/25/2019

Analytical Testing Parameters

Table with client and lab sample information including Client Sample ID, Sample Matrix, Lab Sample ID, Collected By, and Collection Date.

Analyses Subcontracted to: Microbac Laboratories Inc., - Marietta, OH

Table for Anions by Ion Chromatography with columns: Result, Limit(s), MDL, RL, Units, Note, Prepared, Analyzed, Analyst. Includes Nitrile as N and Nitrate as N.

Table for General Parameters with columns: Result, Limit(s), MDL, RL, Units, Note, Prepared, Analyzed, Analyst. Includes Percent Solids.

Table for Inorganics with columns: Result, Limit(s), MDL, RL, Units, Note, Prepared, Analyzed, Analyst. Includes Ammonia as N.

Table for pH with columns: Result, Limit(s), MDL, RL, Units, Note, Prepared, Analyzed, Analyst. Includes pH value and Method Notes: H4.

Table for Total Volatile Solids - TVS with columns: Result, Limit(s), MDL, RL, Units, Note, Prepared, Analyzed, Analyst. Includes TVS value and Method Notes: AC.

Table for Pesticides - GC/ECD with columns: Result, Limit(s), MDL, RL, Units, Note, Prepared, Analyzed, Analyst. Lists various pesticides like 4,4'-DDD, Aldrin, Endosulfan, etc.

Microbac Laboratories, Inc.

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Microbac Laboratories, Inc., Sayre Division

CERTIFICATE OF ANALYSIS

S9E0327

<b>Client Sample ID:</b> Screw Press Sludge	<b>Collected By:</b> DK-Client
<b>Sample Matrix:</b> Solid	<b>Collection Date:</b> 05/15/2019 9:30
<b>Lab Sample ID:</b> S9E0327-01	

Pesticides - GC/ECD	Result	Limit(s)	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Endrin Ketone [2C]	<8.75			8.75	ug/kg dry		05/16/19 1405	05/20/19 1910	ECL
gamma Chlordane [2C]	<8.75			8.75	ug/kg dry		05/16/19 1405	05/20/19 1910	ECL
gamma-BHC (Lindane) [2C]	<8.75			8.75	ug/kg dry		05/16/19 1405	05/20/19 1910	ECL
Heptachlor [2C]	<8.75			8.75	ug/kg dry		05/16/19 1405	05/20/19 1910	ECL
Heptachlor epoxide [2C]	<8.75			8.75	ug/kg dry		05/16/19 1405	05/20/19 1910	ECL
Methoxychlor [2C]	<8.75			8.75	ug/kg dry		05/16/19 1405	05/20/19 1910	ECL
Toxaphene [2C]	<175			175	ug/kg dry		05/16/19 1405	05/20/19 1910	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene [2C]		78.8	Limit: 28-130		% Rec		05/16/19 1405	05/20/19 1910	ECL
Surrogate: Decachlorobiphenyl (BZ-209) [2C]		48.8	Limit: 24-131		% Rec		05/16/19 1405	05/20/19 1910	ECL

Polychlorinated Biphenyls - GC/ECD	Result	Limit(s)	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: EPA 8082A</b>									
Aroclor-1016 (PCB-1016)	<87.5			87.5	ug/kg dry		05/16/19 1410	05/20/19 1853	ECL
Aroclor-1221 (PCB-1221)	<87.5			87.5	ug/kg dry		05/16/19 1410	05/20/19 1853	ECL
Aroclor-1232 (PCB-1232)	<87.5			87.5	ug/kg dry		05/16/19 1410	05/20/19 1853	ECL
Aroclor-1242 (PCB-1242)	<87.5			87.5	ug/kg dry		05/16/19 1410	05/20/19 1853	ECL
Aroclor-1248 (PCB-1248)	<87.5			87.5	ug/kg dry		05/16/19 1410	05/20/19 1853	ECL
Aroclor-1254 (PCB-1254)	<87.5			87.5	ug/kg dry		05/16/19 1410	05/20/19 1853	ECL
Aroclor-1260 (PCB-1260)	<87.5			87.5	ug/kg dry		05/16/19 1410	05/20/19 1853	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene		62.8	Limit: 28-138		% Rec		05/16/19 1410	05/20/19 1853	ECL
Surrogate: Decachlorobiphenyl (BZ-209)		50.3	Limit: 20-125		% Rec		05/16/19 1410	05/20/19 1853	ECL

Semivolatile Organic Compounds - GC/MS	Result	Limit(s)	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: EPA 8270D</b>									
Phenol	18300			3840	ug/kg dry	LA	05/21/19 1330	05/22/19 2248	SCB
bis(2-Chloroethyl) ether	<3840			3840	ug/kg dry		05/21/19 1330	05/22/19 2248	SCB
2-Chlorophenol	<3840			3840	ug/kg dry		05/21/19 1330	05/22/19 2248	SCB
1,3-Dichlorobenzene	<3840			3840	ug/kg dry		05/21/19 1330	05/22/19 2248	SCB
1,4-Dichlorobenzene	<3840			3840	ug/kg dry		05/21/19 1330	05/22/19 2248	SCB
Benzyl alcohol	<3840			3840	ug/kg dry		05/21/19 1330	05/22/19 2248	SCB
1,2-Dichlorobenzene	<3840			3840	ug/kg dry		05/21/19 1330	05/22/19 2248	SCB
2-Methylphenol	<3840			3840	ug/kg dry		05/21/19 1330	05/22/19 2248	SCB
bis(2-Chloroisopropyl) ether	<3840			3840	ug/kg dry		05/21/19 1330	05/22/19 2248	SCB
3,4-Methylphenol	318000			38400	ug/kg dry	DS	05/21/19 1330	05/25/19 0040	SCB
n-Nitrosodipropylamine	<3840			3840	ug/kg dry		05/21/19 1330	05/22/19 2248	SCB
Hexachloroethane	<3840			3840	ug/kg dry		05/21/19 1330	05/22/19 2248	SCB
Nitrobenzene	<3840			3840	ug/kg dry		05/21/19 1330	05/22/19 2248	SCB
Isophorone	<3840			3840	ug/kg dry		05/21/19 1330	05/22/19 2248	SCB
2-Nitrophenol	<3840			3840	ug/kg dry		05/21/19 1330	05/22/19 2248	SCB
2,4-Dimethylphenol	<3840			3840	ug/kg dry		05/21/19 1330	05/22/19 2248	SCB

Microbac Laboratories, Inc.

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Microbac Laboratories, Inc., Sayre Division

CERTIFICATE OF ANALYSIS

S9E0327

Client Sample ID: Screw Press Sludge
Sample Matrix: Solid
Lab Sample ID: S9E0327-01

Collected By: DK-Client
Collection Date: 05/15/2019 9:30

Table with columns: Semivolatile Organic Compounds - GC/MS, Result, Limit(s), MDL, RL, Units, Note, Prepared, Analyzed, Analyst. Lists various chemical compounds and their corresponding analysis results.

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Microbac Laboratories, Inc., Sayre Division

CERTIFICATE OF ANALYSIS

S9E0327

Client Sample ID:	Screw Press Sludge	Collected By:	DK-Client
Sample Matrix:	Solid	Collection Date:	05/15/2019 9:30
Lab Sample ID:	S9E0327-01		

Semi-volatile Organic Compounds - GC/MS	Result	Limit(s)	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Benzo(k)fluoranthene	<3640			3640	ug/kg dry		05/21/19 1330	05/22/19 2248	SCB
Benzo(a)pyrene	<3640			3640	ug/kg dry		05/21/19 1330	05/22/19 2248	SCB
Indeno(1,2,3-cd) pyrene	<3640			3640	ug/kg dry		05/21/19 1330	05/22/19 2248	SCB
Dibenz(a,h) anthracene	<3640			3640	ug/kg dry		05/21/19 1330	05/22/19 2248	SCB
Benzo(g,h,i)perylene	<3640			3640	ug/kg dry		05/21/19 1330	05/22/19 2248	SCB
Surrogate: 2-Fluorophenol		75.5	Limit: 25-121		% Rec	S3	05/21/19 1330	05/25/19 0040	SCB
Surrogate: 2-Fluorophenol		70.4	Limit: 25-121		% Rec		05/21/19 1330	05/22/19 2248	SCB
Surrogate: Phenol-d5		80.5	Limit: 24-113		% Rec	S3	05/21/19 1330	05/25/19 0040	SCB
Surrogate: Phenol-d5		79.2	Limit: 24-113		% Rec		05/21/19 1330	05/22/19 2248	SCB
Surrogate: Nitrobenzene-d5		77.0	Limit: 23-120		% Rec	S3	05/21/19 1330	05/25/19 0040	SCB
Surrogate: Nitrobenzene-d5		75.6	Limit: 23-120		% Rec		05/21/19 1330	05/22/19 2248	SCB
Surrogate: 2-Fluorobiphenyl		88.0	Limit: 30-115		% Rec	S3	05/21/19 1330	05/25/19 0040	SCB
Surrogate: 2-Fluorobiphenyl		78.6	Limit: 30-115		% Rec		05/21/19 1330	05/22/19 2248	SCB
Surrogate: 2,4,6-Tribromophenol		189	Limit: 19-122		% Rec	S3	05/21/19 1330	05/25/19 0040	SCB
Surrogate: 2,4,6-Tribromophenol		105	Limit: 19-122		% Rec		05/21/19 1330	05/22/19 2248	SCB
Surrogate: p-Terphenyl-d14		92.0	Limit: 18-137		% Rec	S3	05/21/19 1330	05/25/19 0040	SCB
Surrogate: p-Terphenyl-d14		99.6	Limit: 18-137		% Rec		05/21/19 1330	05/22/19 2248	SCB

Total Metals - AA	Result	Limit(s)	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 7471A									
Mercury	2.03			1.13	mg/kg dry		05/23/19 0726	05/24/19 1402	KEH

Total Metals - ICP	Result	Limit(s)	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 6010C									
Arsenic	<3.55			3.55	mg/kg dry		05/24/19 1125	05/29/19 2009	PDM
Cadmium	0.437			0.355	mg/kg dry		05/24/19 1125	05/28/19 1716	PDM
Chromium	15.5			0.888	mg/kg dry		05/24/19 1125	05/28/19 1716	PDM
Copper	216			3.55	mg/kg dry		05/24/19 1125	05/28/19 1716	PDM
Lead	14.9			3.55	mg/kg dry		05/24/19 1125	05/28/19 1716	PDM
Molybdenum	<10.7			10.7	mg/kg dry		05/24/19 1125	05/28/19 1716	PDM
Nickel	10.2			7.11	mg/kg dry		05/24/19 1125	05/28/19 1716	PDM
Potassium	3120			176	mg/kg dry		05/24/19 1125	05/28/19 1716	PDM
Selenium	4.15			3.55	mg/kg dry		05/24/19 1125	05/28/19 1716	PDM
Zinc	404			3.55	mg/kg dry		05/24/19 1125	05/28/19 1716	PDM

Volatile Organic Compounds - GC/MS	Result	Limit(s)	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 8260C									
Benzene	<6530			6530	ug/kg dry		05/23/19 1849	05/24/19 2002	JDS
Bromobenzene	<6530			6530	ug/kg dry		05/23/19 1849	05/24/19 2002	JDS

Microbac Laboratories, Inc.

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Microbac Laboratories, Inc., Sayre Division

CERTIFICATE OF ANALYSIS

S9E0327

Client Sample ID:	Screw Press Sludge	Collected By:	DK-Client
Sample Matrix:	Solid	Collection Date:	05/15/2019 9:30
Lab Sample ID:	S9E0327-01		

Volatle Organic Compounds - GC/MS	Result	Limit(s)	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Bromochloromethane	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
Bromodichloromethane	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
Bromoforn	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
Bromomethane	<13100			13100	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
n-Butylbenzene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
sec-Butylbenzene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
tert-Butylbenzene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
Carbon tetrachloride	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
Chlorobenzene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
Chlorodibromomethane	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
Chloroethane (Ethyl chloride)	<13100			13100	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
Chloroform	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
Chloromethane	<13100			13100	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
2-Chlorotoluene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
4-Chlorotoluene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
1,2-Dibromo-3-chloropropane	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
1,2-Dibromoethane	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
Dibromomethane	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
1,3-Dichlorobenzene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
1,2-Dichlorobenzene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
1,4-Dichlorobenzene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
Dichlorodifluoromethane	<13100			13100	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
1,1-Dichloroethane	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
1,2-Dichloroethane	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
cis-1,2-Dichloroethene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
trans-1,2-Dichloroethene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
1,1-Dichloroethene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
1,2-Dichloropropane	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
2,2-Dichloropropane	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
1,3-Dichloropropane	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
trans-1,3-Dichloropropene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
1,3-Dichloropropene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
1,1-Dichloropropene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
cis-1,3-Dichloropropene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
Ethylbenzene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
Hexachlorobutadiene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
Isopropylbenzene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
p-Isopropyltoluene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
Methylene chloride	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
Methyl t-butyl ether (MTBE)	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
Naphthalene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
n-Propylbenzene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
Styrene	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
1,1,1,2-Tetrachloroethane	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS
1,1,2,2-Tetrachloroethane	<8530			8530	ug/kg dry		05/23/19 1649	05/24/19 2002	JDS

Microbac Laboratories, Inc.

2369 Elmira Street | Sayre, PA 16840 | 570-868-0169 p | www.microbac.com





Microbac Laboratories, Inc., Sayre Division

CERTIFICATE OF ANALYSIS

S9E0327

<b>Client Sample ID:</b> Screw Press Sludge	<b>Collected By:</b> DK-Client
<b>Sample Matrix:</b> Solid	<b>Collection Date:</b> 05/15/2019 9:30
<b>Lab Sample ID:</b> S9E0327-01	

Volatile Organic Compounds - GC/MS	Result	Limit(s)	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Tetrachloroethene	<8530			8530	ug/kg dry		05/23/19 1849	05/24/19 2002	JDS
Toluene	<8530			8530	ug/kg dry		05/23/19 1849	05/24/19 2002	JDS
1,2,3-Trichlorobenzene	<8530			8530	ug/kg dry		05/23/19 1849	05/24/19 2002	JDS
1,1,1-Trichloroethane	<8530			8530	ug/kg dry		05/23/19 1849	05/24/19 2002	JDS
1,1,2-Trichloroethane	<8530			8530	ug/kg dry		05/23/19 1849	05/24/19 2002	JDS
Trichloroethene	<8530			8530	ug/kg dry		05/23/19 1849	05/24/19 2002	JDS
Trichlorofluoromethane	<13100			13100	ug/kg dry		05/23/19 1849	05/24/19 2002	JDS
1,2,3-Trichloropropane	<8530			8530	ug/kg dry		05/23/19 1849	05/24/19 2002	JDS
1,3,5-Trimethylbenzene	<8530			8530	ug/kg dry		05/23/19 1849	05/24/19 2002	JDS
1,2,4-Trimethylbenzene	<8530			8530	ug/kg dry		05/23/19 1849	05/24/19 2002	JDS
Vinyl chloride	<13100			13100	ug/kg dry		05/23/19 1849	05/24/19 2002	JDS
o-Xylene	<8530			8530	ug/kg dry		05/23/19 1849	05/24/19 2002	JDS
m-,p-Xylene	<8530			8530	ug/kg dry		05/23/19 1849	05/24/19 2002	JDS
Xylenes	<8530			8530	ug/kg dry		05/23/19 1849	05/24/19 2002	JDS
Surrogate: 4-Bromofluorobenzene		99.0	Limit: 74-121		% Rec		05/23/19 1849	05/24/19 2002	JDS
Surrogate: Dibromofluoromethane		96.1	Limit: 80-120		% Rec		05/23/19 1849	05/24/19 2002	JDS
Surrogate: 1,2-Dichloroethane-d4		98.4	Limit: 80-120		% Rec		05/23/19 1849	05/24/19 2002	JDS
Surrogate: Toluene-d8		100	Limit: 81-117		% Rec		05/23/19 1849	05/24/19 2002	JDS

Analyses Subcontracted to: Test America - Nashville

351.2 Nitrogen, Total Kjeldahl	Result	Limit(s)	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: 351.2</b>									
Kjeldahl Nitrogen as N	56000			2200	mg/Kg dry	Y2	05/21/19 1033	05/22/19 1836	DRR
<b>365.4 Phosphorus, Total</b>									
<b>Method: 365.4</b>									
Phosphorus, Total	16000			2200	mg/Kg dry	Y2	05/21/19 1033	05/22/19 2001	MSP

Results in bold have exceeded a limit defined for this project. Limits are provided for reference but as regulatory limits change frequently, Microbac Laboratories, Inc. advises the recipient of this report to confirm such limits and units of concentration with the appropriate Federal, state or local authorities before acting on the data.



Microbac Laboratories, Inc., Sayre Division

CERTIFICATE OF ANALYSIS

S9E0327

Definitions

- AC: TS was in hold
D1: Dilution was performed due to matrix interference.
D3: Dilution was performed due to high target analyte concentration.
H4: The test was performed outside of the EPA recommended holding time of 15 minutes.
Q3: LCS recovery is below acceptance limits. The reported value is estimated.
RL: Reporting Limit
S3: Surrogate was diluted out.
Y1: Accreditation is not offered by the accrediting body for this analyte.
Y2: Accreditation is not offered by the accrediting body for this analyte.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 14.5°C

Cooler Inspection Checklist

Table with 4 columns: Question, Yes, No, and Answer. Rows include: Ice Present or not required?, Custody seals intact or not required?, COC includes customer information?, Sample collector identified on COC?, Correct type of Containers Received, Containers intact?, Enough sample volume for indicated tests received?, Samples arrived within hold time?, Chemical preservations checked or not required?, VOA vials have zero headspace, or not recd.?, Shipping containers sealed or not required?, Chain of Custody (COC) Present?, Relinquished and received signature on COC?, Sample type identified on COC?, Correct number of containers listed on COC?, COC includes requested analyses?, Sample labels match COC (Name, Date & Time?), Correct preservatives on COC or not required?, Preservation checks meet method requirements?

Project Requested Certification(s)

Microbac Laboratories Inc., - Marietta, OH 10861
Test America - Nashville NY Lab ID No:11342 PA DEP ID: 68-00540
New York State Department of Health
New York State Department of Health
Pennsylvania Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included.

Reviewed and Approved By:

Signature of Renee Lantz

Renee Lantz
Customer Relationship Specialist
Reported: 06/25/2019 12:09

Microbac Laboratories, Inc.

2369 Elmira Street | Sayre, PA 16840 | 570-888-0169 p | www.microbac.com



Pace Analytical Services, LLC  
1638 Roseytown Road - Suites 2,3,4  
Greensburg, PA 15601  
(724)850-5600

June 14, 2019

Ms. Cindy Cameron  
Camden Group Inc.  
9008 State Route 13  
Camden, NY 13316

RE: Project: DRYDEN WWTP-5/22  
Pace Project No.: 30296840

Dear Ms. Cameron:

Enclosed are the analytical results for sample(s) received by the laboratory on May 30, 2019. 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,

Rachel Christner  
rachel.christner@pacelabs.com  
724-850-5611  
Project Manager

Enclosures

cc: Mr. David Coish, Camden Group Inc.



#### REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: DRYDEN WWTP-5/22  
Pace Project No.: 30296840

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### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
ANAB DOD-ELAP Rad Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification #: PA01547  
Connecticut Certification #: PH-0694  
Delaware Certification  
EPA Region 4 DW Rad  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Florida: Cert E871149 SEKS WET  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: KY90133  
KY WW Permit #: KY0098221  
KY WW Permit #: KY0000221  
Louisiana DHH/TNI Certification #: LA180012  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: 2017020  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235  
Montana Certification #: Cert0082  
Nebraska Certification #: NE-OS-29-14  
Nevada Certification #: PA014572018-1  
New Hampshire/TNI Certification #: 297617  
New Jersey/TNI Certification #: PA051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Ohio EPA Rad Approval: #41249  
Oregon/TNI Certification #: PA200002-010  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: 02867  
Texas/TNI Certification #: T104704188-17-3  
Utah/TNI Certification #: PA014572017-9  
USDA Soil Permit #: P330-17-00091  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 9526  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Approve List for Rad  
Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: DRYDEN WWTP-5/22  
Pace Project No.: 30286840

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30286840001	SLUDGE-Dryden	Solid	05/22/19 10:00	05/30/19 09:25

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: DRYDEN WWTP-5/22  
Pace Project No.: 30296840

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30296840001	SLUDGE- Dryden	EPA 8082A	CWB	10	PASI-PA
		EPA 6010C	CTS	7	PASI-PA
		EPA 7470A	KAS	1	PASI-PA
		ASTM D2974-87	VAK	1	PASI-PA
		EPA 1010	CMR	1	PASI-PA
		EPA 9045D	ZMH	1	PASI-PA
		EPA 9014	PAS	1	PASI-PA
		SM 4500S2F-00	PAS	1	PASI-PA

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### ANALYTICAL RESULTS

Project: DRYDEN WWTP-5/22  
 Pace Project No.: 30296840

Sample: SLUDGE- Dryden Lab ID: 30296840001 Collected: 05/22/19 10:00 Received: 05/30/19 09:25 Matrix: Solid

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

Comments: Sample received past holding time for pH and Reactive Sulfide. The client gave approval to proceed with the analysis.

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8082A GCS PCB</b>									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
PCB-1016 (Aroclor 1016)	ND	ug/kg	300	185	1	05/31/19 18:40	06/05/19 00:43	12674-11-2	P1
PCB-1221 (Aroclor 1221)	ND	ug/kg	300	266	1	05/31/19 18:40	06/05/19 00:43	11104-28-2	P1
PCB-1232 (Aroclor 1232)	ND	ug/kg	300	273	1	05/31/19 18:40	08/05/19 00:43	11141-16-5	P1
PCB-1242 (Aroclor 1242)	ND	ug/kg	300	219	1	05/31/19 18:40	06/05/19 00:43	53469-21-9	P1
PCB-1248 (Aroclor 1248)	ND	ug/kg	300	173	1	05/31/19 18:40	06/05/19 00:43	12672-29-6	P1
PCB-1254 (Aroclor 1254)	ND	ug/kg	300	160	1	05/31/19 18:40	06/05/19 00:43	11097-69-1	P1
PCB-1260 (Aroclor 1260)	ND	ug/kg	300	171	1	05/31/19 18:40	06/05/19 00:43	11096-82-5	P1
PCB, Total	ND	ug/kg	2700	1700	1	05/31/19 18:40	06/05/19 00:43	1336-36-3	
<b>Surrogates</b>									
Tetrachloro-m-xylene (S)	73	%	34-114		1	05/31/19 18:40	06/05/19 00:43	877-09-8	
Decachlorobiphenyl (S)	90	%	38-139		1	05/31/19 18:40	06/05/19 00:43	2051-24-3	
<b>6010C MET ICP, TCLP</b>									
Analytical Method: EPA 6010C Preparation Method: EPA 3005A									
Leachate Method/Date: EPA 1311; 06/12/19 12:31 Initial pH: 7.49; Final pH: 4.95									
Arsenic	0.031	mg/L	0.025	0.010	1	06/13/19 15:04	06/14/19 10:29	7440-38-2	1c
Barium	0.070	mg/L	0.050	0.0034	1	06/13/19 15:04	06/14/19 10:29	7440-39-3	1c
Cadmium	ND	mg/L	0.015	0.0017	1	06/13/19 15:04	06/14/19 10:29	7440-43-9	1c
Chromium	ND	mg/L	0.025	0.0017	1	06/13/19 15:04	06/14/19 10:29	7440-47-3	1c
Lead	ND	mg/L	0.12	0.12	5	06/13/19 15:04	06/14/19 11:54	7439-92-1	1c
Selenium	ND	mg/L	0.040	0.027	1	06/13/19 15:04	06/14/19 10:29	7782-49-2	1c
Silver	ND	mg/L	0.030	0.0072	1	06/13/19 15:04	06/14/19 10:29	7440-22-4	1c
<b>7470 Mercury, TCLP</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Leachate Method/Date: EPA 1311; 06/12/19 12:31 Initial pH: 7.49; Final pH: 4.95									
Mercury	ND	ug/L	1.0	0.030	1	06/13/19 18:23	06/14/19 13:45	7439-97-6	1c
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974-87									
Percent Moisture	84.7	%	0.10	0.10	1		06/11/19 15:33		
<b>1010 Flashpoint, Closed Cup</b>									
Analytical Method: EPA 1010									
Flashpoint	>200	deg F	60.0		1		06/12/19 18:18		
<b>9045D pH Soil</b>									
Analytical Method: EPA 9045D									
pH in water at 25 degrees C	6.5	Std. Units	2.0	2.0	1		05/30/19 21:10		H3
<b>733C S Reactive Cyanide</b>									
Analytical Method: EPA 9014 Preparation Method: SW-846 7.3.3.2									
Cyanide, Reactive	ND	mg/kg	6.5	2.6	1	06/03/19 20:26	06/04/19 20:49		
<b>734S Reactive Sulfide</b>									
Analytical Method: SM 4500S2F-00 Preparation Method: SW-846 7.3.4.2									
Sulfide, Reactive	ND	mg/kg	65.1	65.1	1	06/03/19 20:26	06/03/19 20:30		H3

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: DRYDEN WWTP-5/22  
 Pace Project No.: 30296840

QC Batch: 347267 Analysis Method: EPA 7470A  
 QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury TCLP  
 Associated Lab Samples: 30296840001

METHOD BLANK: 1688944 Matrix: Water  
 Associated Lab Samples: 30296840001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	1.0	0.030	06/14/19 13:35	

METHOD BLANK: 1687051 Matrix: Water  
 Associated Lab Samples: 30296840001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	1.0	0.030	06/14/19 13:38	

LABORATORY CONTROL SAMPLE: 1688945

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	1	.88J	88	80-120	

MATRIX SPIKE SAMPLE: 1688947

Parameter	Units	30296843001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	2.5	2.6	104	75-125	

SAMPLE DUPLICATE: 1688946

Parameter	Units	30296843001 Result	Dup Result	RPD	Max RPD	Qualifiers
Mercury	ug/L	ND	ND		20	

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**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

Project: DRYDEN WWTP-5/22  
 Pace Project No.: 30296840

QC Batch: 347184 Analysis Method: EPA 6010C  
 QC Batch Method: EPA 3005A Analysis Description: 6010C MET TCLP  
 Associated Lab Samples: 30296840001

METHOD BLANK: 1688567 Matrix: Water  
 Associated Lab Samples: 30296840001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.025	0.010	06/14/19 10:14	
Barium	mg/L	ND	0.050	0.0034	06/14/19 10:14	
Cadmium	mg/L	ND	0.015	0.0017	06/14/19 10:14	
Chromium	mg/L	ND	0.025	0.0017	06/14/19 10:14	
Lead	mg/L	ND	0.025	0.025	06/14/19 11:39	
Selenium	mg/L	ND	0.040	0.027	06/14/19 10:14	
Silver	mg/L	ND	0.030	0.0072	06/14/19 10:14	

METHOD BLANK: 1687051 Matrix: Water  
 Associated Lab Samples: 30296840001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.025	0.010	06/14/19 10:18	
Barium	mg/L	ND	0.050	0.0034	06/14/19 10:18	
Cadmium	mg/L	ND	0.015	0.0017	06/14/19 10:18	
Chromium	mg/L	ND	0.025	0.0017	06/14/19 10:18	
Lead	mg/L	ND	0.050	0.049	06/14/19 11:43	
Selenium	mg/L	ND	0.040	0.027	06/14/19 10:18	
Silver	mg/L	ND	0.030	0.0072	06/14/19 10:18	

LABORATORY CONTROL SAMPLE: 1688568

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	0.5	0.48	96	80-120	
Barium	mg/L	0.5	0.52	103	80-120	
Cadmium	mg/L	0.5	0.51	103	80-120	
Chromium	mg/L	0.5	0.50	101	80-120	
Lead	mg/L	0.5	0.51	101	80-120	
Selenium	mg/L	0.5	0.51	101	80-120	
Silver	mg/L	0.25	0.25	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1688570 1688571

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		30296843001 Result	Spike Conc.	MSD Spike Conc.	MS Result					
Arsenic	mg/L	ND	0.5	0.5	0.54	0.57	106	113	75-125	6 20

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**QUALITY CONTROL DATA**

Project: DRYDEN WWTP-5/22  
Pace Project No.: 30296840

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1688570 1688571													
Parameter	Units	30296843001		MSD		MSD		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Barium	mg/L	0.22	0.5	0.5	0.73	0.76	101	107	75-125	4	20		
Cadmium	mg/L	ND	0.5	0.5	0.54	0.57	108	114	75-125	5	20		
Chromium	mg/L	ND	0.5	0.5	0.49	0.51	97	103	75-125	6	20		
Lead	mg/L	ND	0.5	0.5	0.54	0.57	106	112	75-125	6	20		
Selenium	mg/L	ND	0.5	0.5	0.57	0.61	113	120	75-125	6	20		
Silver	mg/L	ND	0.25	0.25	0.28	0.28	113	113	75-125	0	20		

SAMPLE DUPLICATE: 1688569

Parameter	Units	30296843001 Result	Dup Result	RPD	Max RPD	Qualifiers
Arsenic	mg/L		ND	ND	20	
Barium	mg/L	0.22	0.22	1	20	
Cadmium	mg/L		ND	ND	20	
Chromium	mg/L		ND	ND	20	
Lead	mg/L		ND	ND	20	
Selenium	mg/L		ND	ND	20	
Silver	mg/L		ND	ND	20	

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**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

Project: DRYDEN WWTP-5/22  
Pace Project No.: 30296840

QC Batch: 345112 Analysis Method: EPA 8082A  
QC Batch Method: EPA 3546 Analysis Description: 8082A GCS PCB  
Associated Lab Samples: 30296840001

METHOD BLANK: 1679081 Matrix: Solid  
Associated Lab Samples: 30296840001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	ND	16.7	10.3	06/03/19 12:45	
PCB-1221 (Aroclor 1221)	ug/kg	ND	16.7	14.8	06/03/19 12:45	
PCB-1232 (Aroclor 1232)	ug/kg	ND	16.7	15.2	06/03/19 12:45	
PCB-1242 (Aroclor 1242)	ug/kg	ND	16.7	12.2	06/03/19 12:45	
PCB-1248 (Aroclor 1248)	ug/kg	ND	16.7	9.6	06/03/19 12:45	
PCB-1254 (Aroclor 1254)	ug/kg	ND	16.7	8.9	06/03/19 12:45	
PCB-1260 (Aroclor 1260)	ug/kg	ND	16.7	9.5	06/03/19 12:45	
Decachlorobiphenyl (S)	%	79	38-139		06/03/19 12:45	
Tetrachloro-m-xylene (S)	%	77	34-114		06/03/19 12:45	

LABORATORY CONTROL SAMPLE: 1679082

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	166	124	75	61-105	
PCB-1260 (Aroclor 1260)	ug/kg	166	129	78	70-100	
Decachlorobiphenyl (S)	%			77	38-139	
Tetrachloro-m-xylene (S)	%			73	34-114	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1679083 1679085

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		30297102004 Result	Spike Conc.	Spike Conc.	Conc.							
PCB-1016 (Aroclor 1016)	ug/kg	ND	377	377	794	659J	210	175	24-137	25	M6	
PCB-1260 (Aroclor 1260)	ug/kg	ND	377	377	4700	4320	1240	1140	19-156	9	25 M6	
Decachlorobiphenyl (S)	%						83	68	38-139			
Tetrachloro-m-xylene (S)	%						86	62	34-114			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

Project: DRYDEN WWTP-5/22  
Pace Project No.: 30296840

QC Batch: 345280 Analysis Method: EPA 9014  
QC Batch Method: SW-846 7.3.3.2 Analysis Description: 733C Reactive Cyanide  
Associated Lab Samples: 30296840001

METHOD BLANK: 1680119 Matrix: Solid  
Associated Lab Samples: 30296840001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cyanide, Reactive	mg/kg	ND	1.0	0.40	06/04/19 20:43	

LABORATORY CONTROL SAMPLE: 1680120

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide, Reactive	mg/kg	99.2	ND	0	0-8	

SAMPLE DUPLICATE: 1680121

Parameter	Units	30297175001 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyanide, Reactive	mg/kg	ND	ND		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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**QUALITY CONTROL DATA**

Project: DRYDEN WWTP-5/22  
 Pace Project No.: 30296840

QC Batch: 345279 Analysis Method: SM 4500S2F-00  
 QC Batch Method: SW-846 7.3.4.2 Analysis Description: 734S Reactive Sulfide  
 Associated Lab Samples: 30296840001

METHOD BLANK: 1680116 Matrix: Solid  
 Associated Lab Samples: 30296840001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Reactive	mg/kg	ND	10	10	06/03/19 20:30	

LABORATORY CONTROL SAMPLE: 1680117

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Reactive	mg/kg	200	44.0	22	0-52	

SAMPLE DUPLICATE: 1680118

Parameter	Units	30297175001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Reactive	mg/kg	ND	ND		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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## QUALIFIERS

Project: DRYDEN WWTP-5/22  
Pace Project No.: 30296840

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.  
ND - Not Detected at or above adjusted reporting limit.  
TNTC - Too Numerous To Count  
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.  
MDL - Adjusted Method Detection Limit.  
PQL - Practical Quantitation Limit.  
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.  
S - Surrogate  
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.  
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.  
LCS(D) - Laboratory Control Sample (Duplicate)  
MS(D) - Matrix Spike (Duplicate)  
DUP - Sample Duplicate  
RPD - Relative Percent Difference  
NC - Not Calculable.  
SG - Silica Gel - Clean-Up  
U - Indicates the compound was analyzed for, but not detected.  
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.  
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.  
TNI - The NELAC Institute.

### LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

### ANALYTE QUALIFIERS

1c Insufficient sample received from client to perform the TCLP extraction per EPA method requirements. The data was reported with client approval.  
H3 Sample was received or analysis requested beyond the recognized method holding time.  
M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.  
P1 Routine initial sample volume or weight was not used for extraction, resulting in elevated reporting limits.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: DRYDEN WWTP-5/22  
Pace Project No.: 30296840

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30296840001	SLUDGE- Dryden	EPA 3546	345112	EPA 8082A	345165
30296840001	SLUDGE- Dryden	EPA 3005A	347184	EPA 6010C	347302
30296840001	SLUDGE- Dryden	EPA 7470A	347267	EPA 7470A	347299
30296840001	SLUDGE- Dryden	ASTM D2974-87	346703		
30296840001	SLUDGE- Dryden	EPA 1010	346846		
30296840001	SLUDGE- Dryden	EPA 9045D	344974		
30296840001	SLUDGE- Dryden	SW-846 7.3.3.2	345280	EPA 9014	345381
30296840001	SLUDGE- Dryden	SW-846 7.3.4.2	345279	SM 4500S2F-00	345380

**REPORT OF LABORATORY ANALYSIS**

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# Life Science Laboratories, Inc.

Chris Bertram  
Village of Canisteo WWTP  
WWTP Office & Lab  
8 Green St.  
Canisteo, NY 14823

Phone: (607) 698-2886  
FAX: (607) 698-2243

## Laboratory Analysis Report Prepared For Village of Canisteo WWTP

LSL Project ID: 1905900  
Receive Date/Time: 04/29/19 11:10

Life Science Laboratories, Inc. warrants, to the best of its knowledge and belief, the accuracy of the analytical test results contained in this report, but makes no other warranty, expressed or implied, especially no warranties of merchantability or fitness for a particular purpose. By the Client's acceptance and/or use of this report, the Client agrees that LSL is hereby released from any and all liabilities, claims, damages or causes of action affecting or which may affect the Client as regards to the results contained in this report. The Client further agrees that the only remedy available to the Client in the event of proven non-conformity with the above warranty shall be for LSL to re-perform the analytical test(s) at no charge to the Client. The data contained in this report are for the exclusive use of the Client to whom it is addressed, and the release of these data to any other party, or the use of the name, trademark or service mark of Life Science Laboratories, Inc. especially for the use of advertising to the general public, is strictly prohibited without express prior written consent of Life Science Laboratories, Inc. This report may only be reproduced in its entirety. No partial duplication is allowed. The Chain of Custody and the Sample Receipt documents submitted with these samples are considered by LSL to be an appendix of this report and may contain data qualifiers and specific information that pertains to the samples included in this report. The analytical result(s) in this report are only representative of the sample(s) submitted for analysis. LSL makes no claim of a sample's representativeness, or integrity, if sampling was not performed by LSL personnel.

LSL Central Lab  
5854 Butternut Drive  
East Syracuse, NY 13057  
Tel. (315) 445-1900  
Fax (315) 445-1104  
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LSL North Lab  
131 St. Lawrence Avenue  
Waddington, NY 13694  
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Fax (315) 388-4061  
NYS DOH ELAP #10900

LSL Finger Lakes Lab  
16 N. Main St., PO Box 424  
Wayland, NY 14572  
Tel. (585) 728-3320  
Fax (585) 728-2711  
NYS DOH ELAP #11667

LSL Southern Tier Office  
Cuba, NY  
Tel. (585) 209-4032

LSL MidLakes Office  
Canandaigua, NY  
Tel. (585) 728-3320

Reviewed by:

Date:

5/16/19

David J. Prichard, Director of Tech. Services

A copy of this report was sent to:

**-- LABORATORY ANALYSIS REPORT --**

*Village of Canisteo WWTP Canisteo, NY*

Sample ID: **Sludge** LSL Sample ID: **1905900-001**

Location:

Sampled: **04/29/19 10:15** Sampled By: **CB**

Sample Matrix: **SHW Dry Wt, Sludge**

Analytical Method Analyte	Result	Units	Prep Method	Prep Date	Analysis Date & Time	Analyst Initials
(1) EPA 1311 TCLP Extraction TCLP Non-Volatile Extraction					5/9/19	EP
(1) EPA 6010C TCLP Metals Please refer to the next page			EPA 3010A			MT
(1) EPA 7470A TCLP Mercury Please refer to the next page			EPA 7470A			EP
(1) EPA 9012B Reactive Cyanide Reactive Cyanide <i>This analyte is not certifiable by the NYS DOH ELAP.</i>	< 50	mg/kg	SW846 Ch.7, Sec. 7.3		5/1/19	JJC
(1) EPA 9034 Reactive Sulfide Reactive Sulfide <i>As per NELAC regulation disclosure of the following condition is required: The result of the laboratory control sample was less than the established limit. This analyte is not certifiable by the NYS DOH ELAP.</i>	<50	mg/kg	SW846 Ch.7, Sec. 7.3		4/30/19	HKB
(1) Modified SM 2540 B-97,-11 Total Solids Total Solids @ 103-105 C <i>The NYS DOH ELAP does not offer certification for this method in this matrix.</i>	24	%			4/30/19	MM2
(1) SW846 Ch.7, Sec. 7.3 Reactivity Distillation Reactivity Distillation				4/30/19	4/30/19	HKB

Analysis performed at: (1) LSL Central Lab, (2) LSL North Lab, (3) LSL Finger Lakes Lab



**Life Science Laboratories, Inc.**

5854 Butternut Drive  
East Syracuse, NY 13057 (315) 445-1900

**Analytical Results**

StateCertNo: 10248

**CLIENT:** Life Science Labs-LIMS  
**Project:** Village of Canisteo WWTP  
**W Order:** 1905900  
**Matrix:** SLUDGE

**Lab ID:** 1905900-001A  
**Client Sample ID:** Sludge  
**Collection Date:** 04/29/19 10:15  
**Date Received:** 04/29/19 11:10

Analyte	Result	Qual	PQL Units	DF	Date Analyzed
<b>TCLP MERCURY</b>			<b>SW7470A</b>		<b>(SW7470A)</b>
Mercury	ND		0.00040 mg/L	1	05/13/19 15:06
<b>NOTES:</b> The associated matrix spike / matrix spike duplicate recovery was outside the method specified control limits.					
<b>TCLP METALS BY ICP</b>			<b>SW8010C</b>		<b>(SW3010A)</b>
Arsenic	ND		0.50 mg/L	1	05/14/19 15:56
Barium	ND		0.50 mg/L	1	05/14/19 15:56
Cadmium	ND		0.10 mg/L	1	05/14/19 15:56
Chromium	ND		0.50 mg/L	1	05/14/19 15:56
Lead	ND		0.50 mg/L	1	05/14/19 15:56
Selenium	ND		0.20 mg/L	1	05/14/19 15:56
Silver	ND		0.50 mg/L	1	05/14/19 15:56

**Qualifiers:**

- \* Value may exceed the Acceptable Level
- E Value exceeds the instrument calibration range
- J Analyte detected below the PQL
- P Prim./Conf. column %D or RPD exceeds limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Practical Quantitation Limit (PQL)
- S Spike Recovery outside accepted recovery limits





**Analysis Report for Use of Biosolids on Cropland**

<p>Matt Slater Dairy Farmers of America 72 Milk Plant Rd Middlebury Center PA 16935</p>	<p><b>Lab Sample ID:</b> E19844 <b>Date Received:</b> 11/14/2019 <b>Date Sampled:</b> 11/13/2019 <b>Report Date:</b> 12/9/2019 <b>Sample type:</b> Grab <b>County:</b> Tioga <b>Customer Sample ID:</b> Pressed Sludge</p>
---	--

**RESULTS**

pH	Solids	Volatile	Tot-N	Org-N	NH <sub>4</sub> N	P	K	Mg	Ca	Na	Fe	Al
@ 21.1 C	— % —					% (dry weight basis)						
7.2	11.22	76.24	9.48	9.00	0.49	3.10	0.46	0.37	4.43	0.53	0.23	2.31
Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB <sup>1</sup>	
mg/kg (dry weight basis)												
114.1	4.49	< 0.96	11.0	14.4	< 4.8	0.34	< 2.9	3.9	< 4.8	85.8	< .36	

NR-Not Requested      One dry ton of this material is equivalent to    2137 gallons of wet material or    8.9 tons of wet material

**PRIMARY NUTRIENT CONTENT**

% (dry wt basis)		
Total N	9.48	0.53 dry tons of this biosolid will supply 100 lbs of total N.
P <sub>2</sub> O <sub>5</sub>	7.10	1.61 dry tons of this biosolid will supply 100 lbs of P
K <sub>2</sub> O	0.55	

**ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS**

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni, Zn	3050B + 6010	MG/PS	11/21/2019	9:43:28
As	3050B + 6010	MG/PS	11/21/2019	9:43:28
Se	3050B + 6010	MG/PS	11/21/2019	9:43:28
Hg	7473	MG	11/19/2019	11:43:04
PCB <sup>1</sup>	8082			

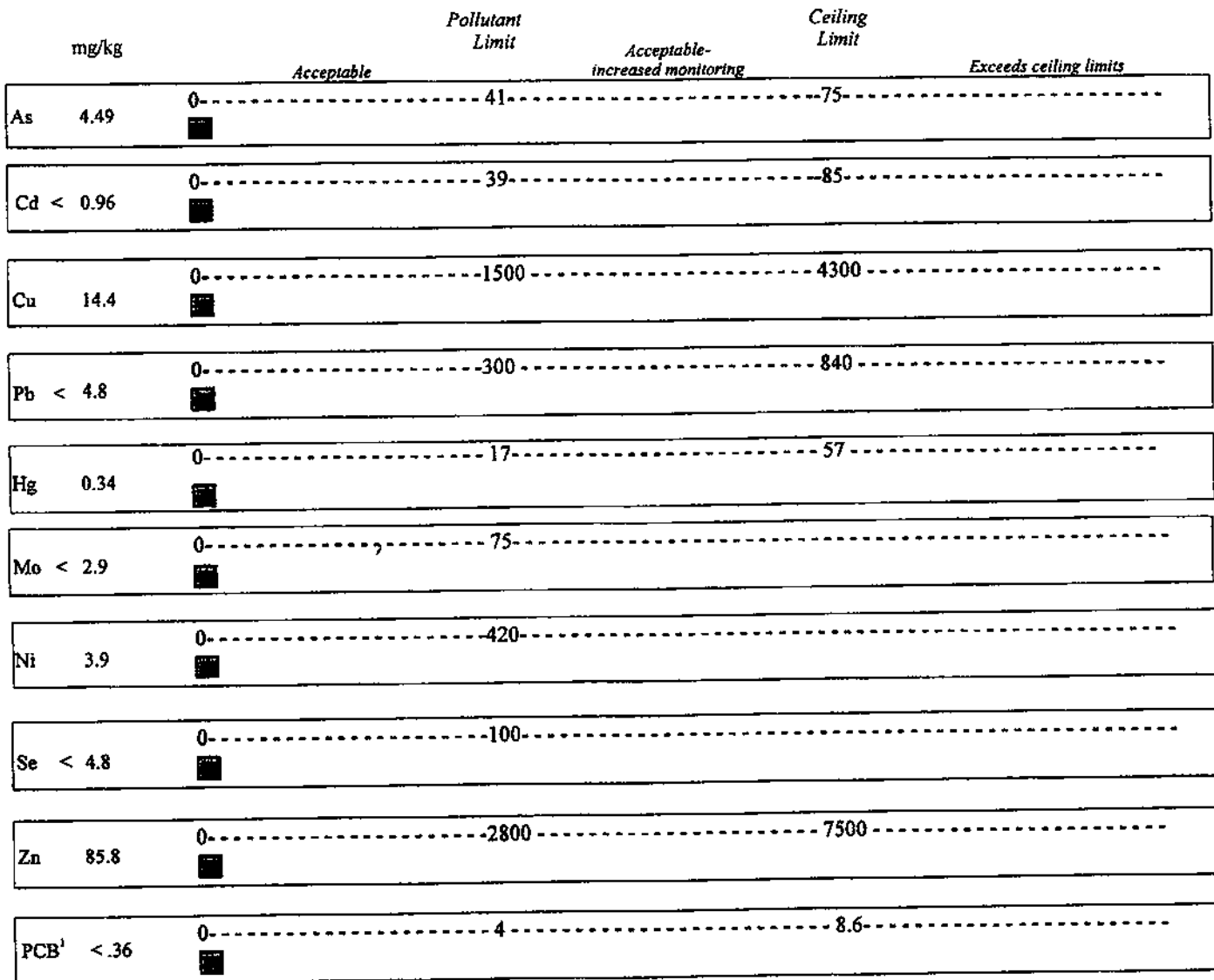
<sup>1</sup>Subcontracted to Fairway Laboratories, Inc. (ID 7-00062)

**RAW LABORATORY BENCH DATA FOR EPA 503 POLLUTANTS**

	As	Cd	Cu	Hg	Mo	Ni	Pb	Se	Zn
Wet Wt. aliquot (g)	2.323	2.323	2.323	0.476	2.323	2.323	2.323	2.323	2.323
Analyte conc. in sample/digest (mg/L except Hg)	0.023	0.000	0.075	0.018 ug	0.013	0.020	-0.013	0.010	0.447
Method limit (mg/L except Hg)	0.015	0.005	0.015	0.0010 ug	0.015	0.010	0.025	0.025	0.050

Optional Analyses: Results (except soluble salts) on dry weight basis					Sample Receipt
Nitrate-N (mg/kg)	Total Carbon (%)	CCE Calcium Carbonate Equivalent (%)	Soluble Salts (mmhos/cm)	Other:	

**EPA REGULATIONS FOR LAND APPLICATION OF BIOSOLIDS (40 CFR Part 593) and  
DEP GUIDELINES FOR USE OF BIOSOLIDS FOR AGRICULTURAL UTILIZATION**





**SECTION 5 – SOIL ANALYSIS**  
 (Complete one copy for each field used)

Please attach sampling analyses and laboratory reports as required under Part 360 or your permit. A minimum of one analysis is required for every 50 acres, or fraction thereof. Copies of original laboratory results must be attached. All results, except pH and Total Solids, must be on a dry weight basis.

**Summarize data in table below or attached document.**  
**Print additional pages as needed.**

Site Owner: Leo Dickson & Sons Field Number: see attached

See attached Soil Analysis

Analysis Date ==>				
Arsenic (mg/kg)				
Cadmium (mg/kg)				
Chromium (mg/kg)				
Copper (mg/kg)				
Lead (mg/kg)				
Mercury (mg/kg)				
Molybdenum (mg/kg)				
Nickel (mg/kg)				
Selenium (mg/kg)				
Zinc (mg/kg)				
pH (s.u.)				
Other _____				

Soil Analysis Report

Western  
New York

**CROP MANAGEMENT**



**WNY CROP MANAGEMENT ASSOCIATION**  
5242 CURTIS RD  
WARSAW, NY 14569

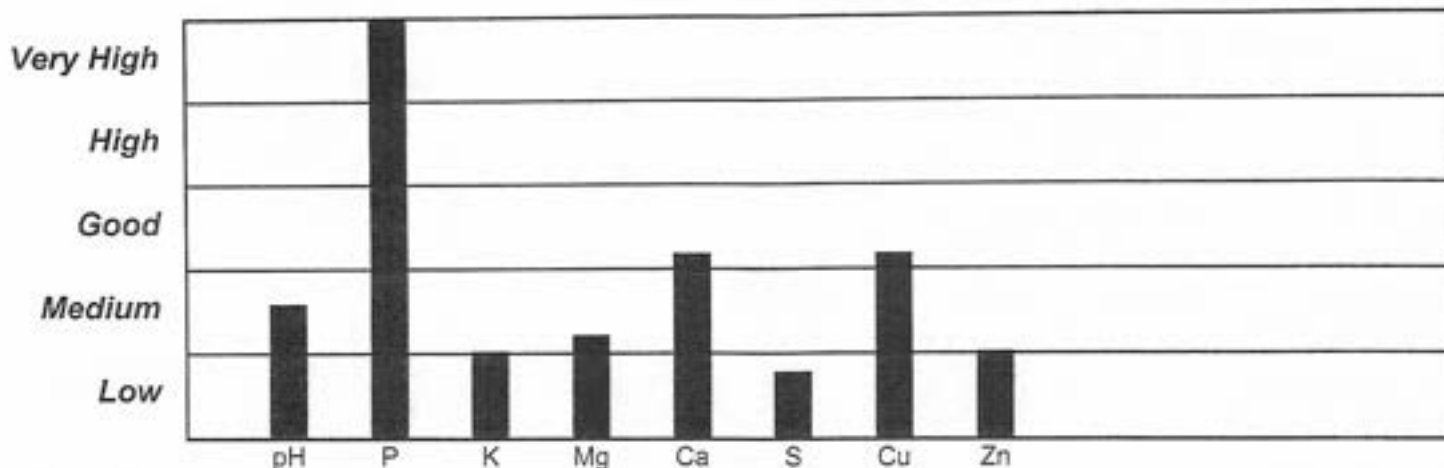
Prepared For

LEO DICKSON & SONS  
5226 BONNY HILL RD.  
BATH, NY 14610

Sample Information

Sample	1175136-R 5A360	Sampled	01-30-2020
Lab Number	G37868	Tested	02-04-2020
Acres	23.9		

Analysis	Result	Optimal	Analysis	Result	Optimal
Soil pH	5.8	6.2-7.0	Sulfur	m3-ppm 8	20-40
Buffer pH	6.7		Copper	m3-ppm 1.5	Varies
Organic Matter %	2.0		Zinc	m3-ppm 1.8	3.9-10.9
CEC	8.5		Selenium	mg/Kg < 3.0	
K Saturation %	1.8	2.0-4.0	Arsenic	mg/Kg < 3.0	
Mg Saturation %	7.8	10-20	Cadmium	mg/Kg < 3.0	
Ca Saturation %	48.1	50-70	Chromium-Total	mg/Kg 12.73	
K/Mg Ratio	0.8		Lead	mg/Kg 11.18	
Ca/Mg Ratio	12.0		Mercury	mg/Kg < 0.2	
Phosphorus m3-ppm	243	50-80	Molybdenum	mg/Kg < 3.0	
Potassium m3-ppm	71	140-230	Nickel	mg/Kg 14.59	
Magnesium m3-ppm	91	150-290	Copper	mg/Kg 19.46	
Calcium m3-ppm	1093	1000-1600	Zinc	mg/Kg 67.13	
			Aluminum	m3-ppm 762	



Recommendations

Yr	Crop	CaCO3	N	P2O5	K2O	Mg	S	B	Cu	Fe	Mn	Zn

Soil Analysis Report

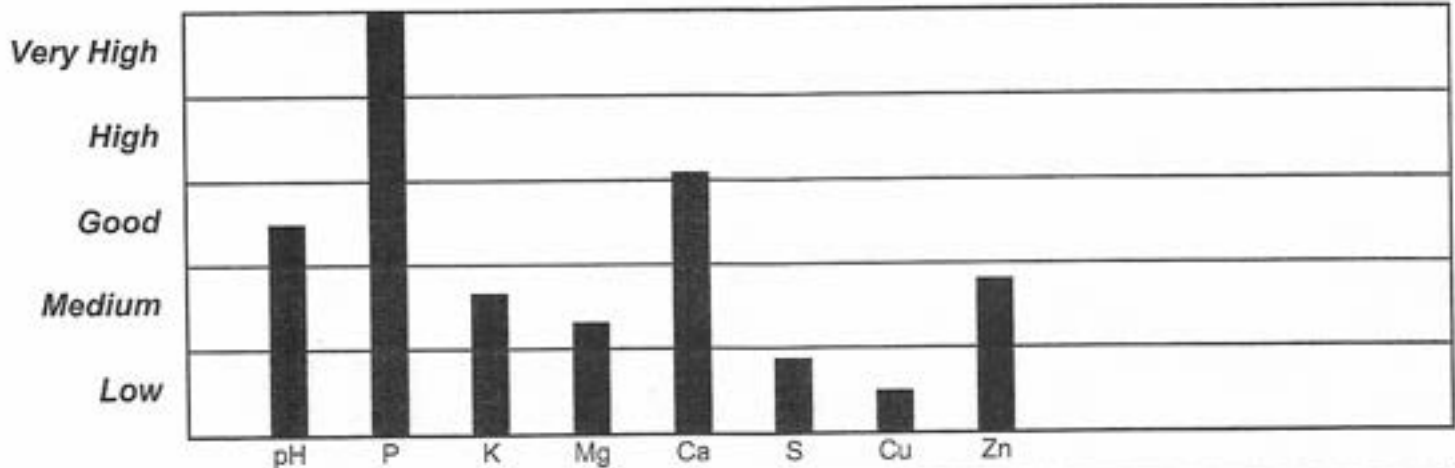


**WNY CROP MANAGEMENT ASSOCIATION**  
**5242 CURTIS RD**  
**WARSAW, NY 14569**

*Prepared For*  
**LEO DICKSON & SONS**  
**5226 BONNY HILL RD.**  
**BATH, NY 14010**

*Sample Information*  
 Sample 1175133-Q 6360      Sampled 01-30-2020  
 Lab Number G37865      Tested 02-04-2020  
 Acres 13.4

Analysis	Result	Optimal	Analysis	Result	Optimal
Soil pH	6.7	6.2-7.0	Sulfur	m3-ppm 9	20-40
Buffer pH	7.2		Copper	m3-ppm 3.6	Varies
Organic Matter %	2.5		Zinc	m3-ppm 3.5	3.9-10.9
CEC	9.9		Selenium	mg/Kg < 3.0	
K Saturation %	2.6	2.0-4.0	Arsenic	mg/Kg < 3.0	
Mg Saturation %	7.4	10-20	Cadmium	mg/Kg < 3.0	
Ca Saturation %	71.9	50-70	Chromium-Total	mg/Kg 11.29	
K/Mg Ratio	1.2		Lead	mg/Kg 12.96	
Ca/Mg Ratio	18.9		Mercury	mg/Kg < 0.2	
Phosphorus m3-ppm	370	50-80	Molybdenum	mg/Kg < 3.0	
Potassium m3-ppm	120	140-240	Nickel	mg/Kg 13.45	
Magnesium m3-ppm	101	160-300	Copper	mg/Kg 23.44	
Calcium m3-ppm	1908	1300-1900	Zinc	mg/Kg 78.92	
			Aluminum	m3-ppm 654	



Recommendations													
Yr	Crop	CaCO3	N	P2O5	K2O	Mg	S	B	Cu	Fe	Mn	Zn	

Soil Analysis Report

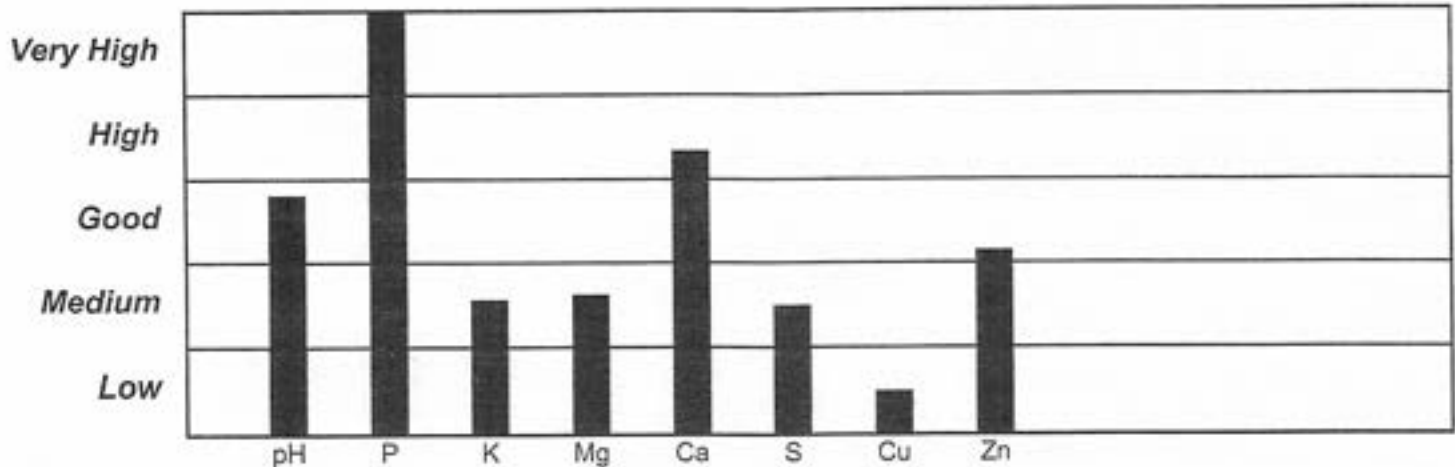


**WNY CROP MANAGEMENT ASSOCIATION**  
**5242 CURTIS RD**  
**WARSAW, NY 14569**

*Prepared For*  
**LEO DICKSON & SONS**  
**5226 BONNY HILL RD.**  
**BATH, NY 14810**

*Sample Information*  
 Sample 1175131-Q 4360      Sampled 01-30-2020  
 Lab Number G37863      Tested 02-04-2020  
 Acres 14.6

Analysis	Result	Optimal	Analysis	Result	Optimal
Soil pH	6.9	6.2-7.0	Sulfur	m3-ppm 15	20-40
Buffer pH	7.2		Copper	m3-ppm 4.6	Varies
Organic Matter %	2.6		Zinc	m3-ppm 5.0	3.9-10.9
CEC	11.9		Selenium	mg/Kg < 3.0	
K Saturation %	2.2	2.0-4.0	Arsenic	mg/Kg < 3.0	
Mg Saturation %	9.0	10-20	Cadmium	mg/Kg < 3.0	
Ca Saturation %	74.3	50-70	Chromium-Total	mg/Kg 10.99	
K/Mg Ratio	0.8		Lead	mg/Kg 13.95	
Ca/Mg Ratio	16.2		Mercury	mg/Kg < 0.2	
Phosphorus m3-ppm	551	50-80	Molybdenum	mg/Kg < 3.0	
Potassium m3-ppm	122	160-250	Nickel	mg/Kg 12.38	
Magnesium m3-ppm	146	190-340	Copper	mg/Kg 36.64	
Calcium m3-ppm	2367	1600-2200	Zinc	mg/Kg 83.12	
			Aluminum	m3-ppm 629	



Recommendations													
Yr	Crop	CaCO3	N	P2O5	K2O	Mg	S	B	Cu	Fe	Mn	Zn	

Soil Analysis Report

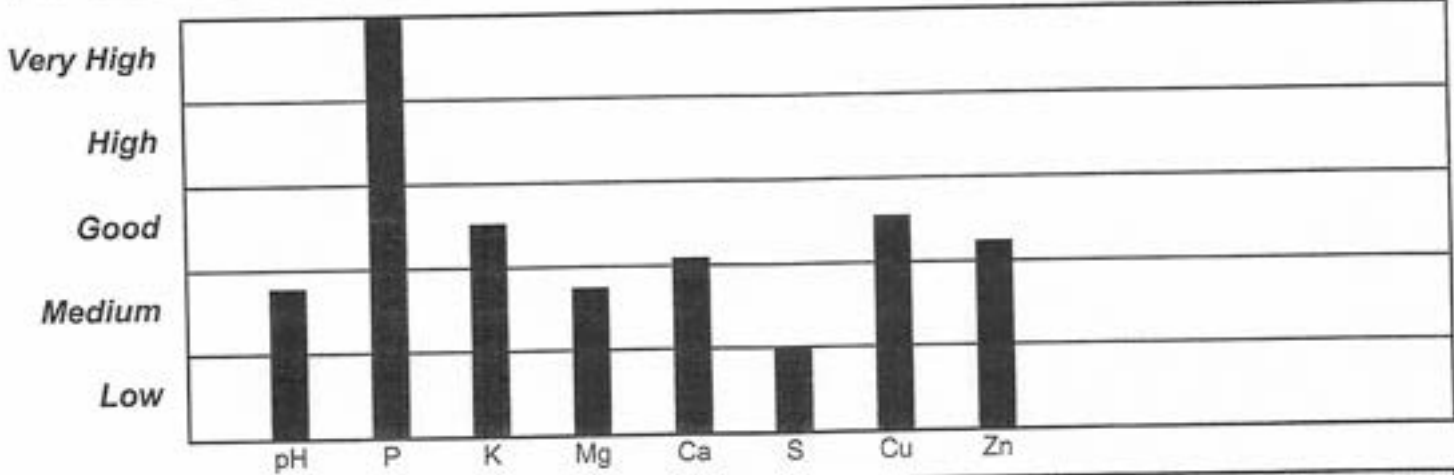


**WNY CROP MANAGEMENT ASSOCIATION**  
**5242 CURTIS RD**  
**WARSAW, NY 14569**

*Prepared For*  
**LEO DICKSON & SONS**  
**5226 BONNY HILL RD.**  
**BATH, NY 14810**

*Sample Information*  
 Sample 1175127-P 1A360      Sampled 01-30-2020  
 Lab Number G37859              Tested 02-04-2020  
 Acres 25.8

Analysis	Result	Optimal	Analysis	Result	Optimal
Soil pH	6.0	6.2-7.0	Sulfur	m3-ppm 10	20-40
Buffer pH	6.7		Copper	m3-ppm 14.6	Varies
Organic Matter %	3.9		Zinc	m3-ppm 5.8	3.9-10.9
CEC	10.4		Selenium	mg/Kg < 3.0	
K Saturation %	4.1	2.0-4.0	Arsenic	mg/Kg < 3.0	
Mg Saturation %	10.0	10-20	Cadmium	mg/Kg < 3.0	
Ca Saturation %	51.3	50-70	Chromium-Total	mg/Kg 11.63	
K/Mg Ratio	1.4		Lead	mg/Kg 13.19	
Ca/Mg Ratio	10.1		Mercury	mg/Kg < 0.2	
Phosphorus m3-ppm	462	50-80	Molybdenum	mg/Kg < 3.0	
Potassium m3-ppm	199	150-240	Nickel	mg/Kg 12.19	
Magnesium m3-ppm	141	160-310	Copper	mg/Kg 49.67	
Calcium m3-ppm	1421	1400-1900	Zinc	mg/Kg 85.44	
			Aluminum	m3-ppm 959	



Recommendations												
Yr	Crop	CaCO3	N	P2O5	K2O	Mg	S	B	Cu	Fe	Mn	Zn

Soil Analysis Report

Western  
New York

**CROP MANAGEMENT**



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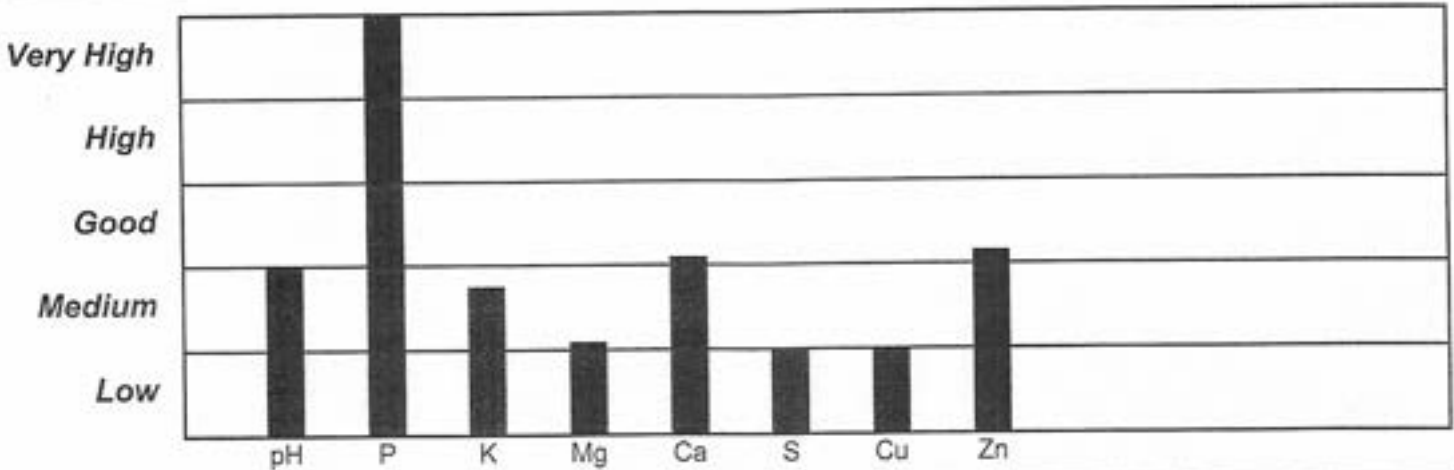
Prepared For

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5226 BONNY HILL RD.  
BATH, NY 14810

Sample Information

Sample	1175124-M 4360	Sampled	01-30-2020
Lab Number	G37856	Tested	02-04-2020
Acres	20.7		

Analysis	Result	Optimal	Analysis	Result	Optimal
Soil pH	6.2	6.2-7.0	Sulfur	m3-ppm 10	20-40
Buffer pH	6.6		Copper	m3-ppm 9.2	Varies
Organic Matter %	2.2		Zinc	m3-ppm 5.0	3.9-10.9
CEC	11.4		Selenium	mg/Kg < 3.0	
K Saturation %	2.5	2.0-4.0	Arsenic	mg/Kg < 3.0	
Mg Saturation %	5.8	10-20	Cadmium	mg/Kg < 3.0	
Ca Saturation %	49.7	50-70	Chromium-Total	mg/Kg 10.59	
K/Mg Ratio	1.5		Lead	mg/Kg 9.82	
Ca/Mg Ratio	16.9		Mercury	mg/Kg < 0.2	
Phosphorus m3-ppm	596	50-80	Molybdenum	mg/Kg < 3.0	
Potassium m3-ppm	133	150-250	Nickel	mg/Kg 12.45	
Magnesium m3-ppm	90	180-330	Copper	mg/Kg 36.16	
Calcium m3-ppm	1517	1500-2100	Zinc	mg/Kg 76.67	
			Aluminum	m3-ppm 1089	



Recommendations

Yr	Crop	CaCO3	N	P2O5	K2O	Mg	S	B	Cu	Fe	Mn	Zn

Soil Analysis Report

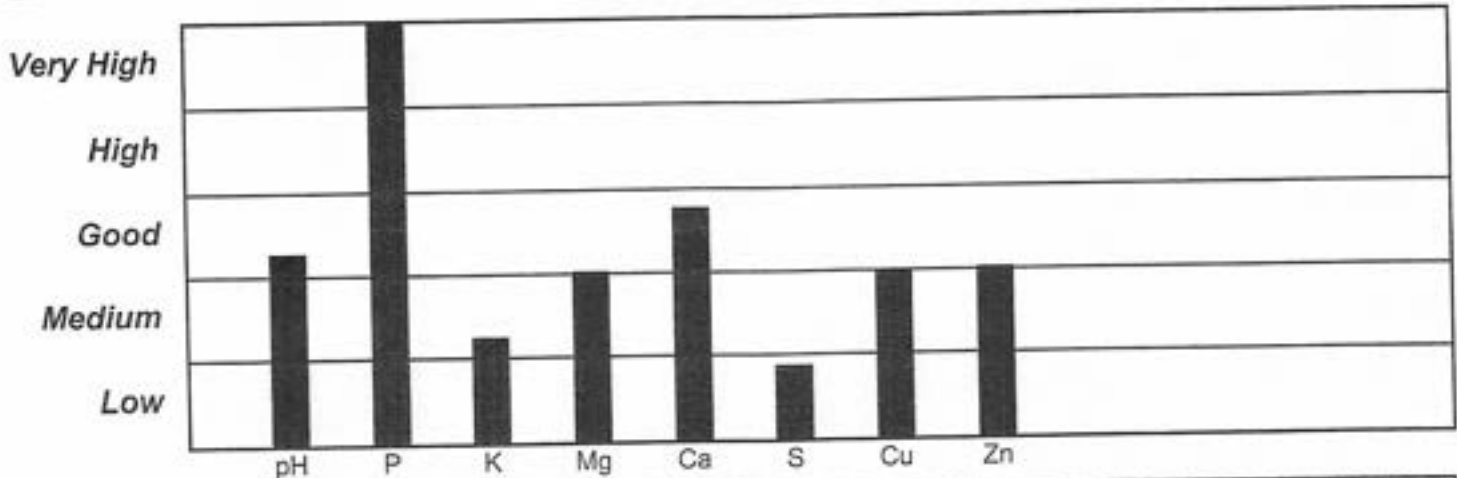


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**BATH, NY 14810**

*Sample Information*  
 Sample 1175113-F 15360      Sampled 01-30-2020  
 Lab Number G37845      Tested 02-04-2020  
 Acres 18.9

Analysis	Result	Optimal	Analysis	Result	Optimal
Soil pH	6.5	6.2-7.0	Sulfur	m3-ppm 9	20-40
Buffer pH	7.0		Copper	m3-ppm 8.9	Varies
Organic Matter %	3.2		Zinc	m3-ppm 4.3	3.9-10.9
CEC	10.8		Selenium	mg/Kg < 3.0	
K Saturation %	1.8	2.0-4.0	Arsenic	mg/Kg < 3.0	
Mg Saturation %	12.1	10-20	Cadmium	mg/Kg < 3.0	
Ca Saturation %	64.2	50-70	Chromium-Total	mg/Kg 7.46	
K/Mg Ratio	0.5		Lead	mg/Kg 10.05	
Ca/Mg Ratio	10.4		Mercury	mg/Kg < 0.2	
Phosphorus m3-ppm	477	50-80	Molybdenum	mg/Kg < 3.0	
Potassium m3-ppm	92	150-240	Nickel	mg/Kg 8.67	
Magnesium m3-ppm	178	170-320	Copper	mg/Kg 35.25	
Calcium m3-ppm	1846	1400-2000	Zinc	mg/Kg 61.11	
			Aluminum	m3-ppm 691	



Recommendations												
Yr	Crop	CaCO3	N	P2O5	K2O	Mg	S	B	Cu	Fe	Mn	Zn



Soil Analysis Report



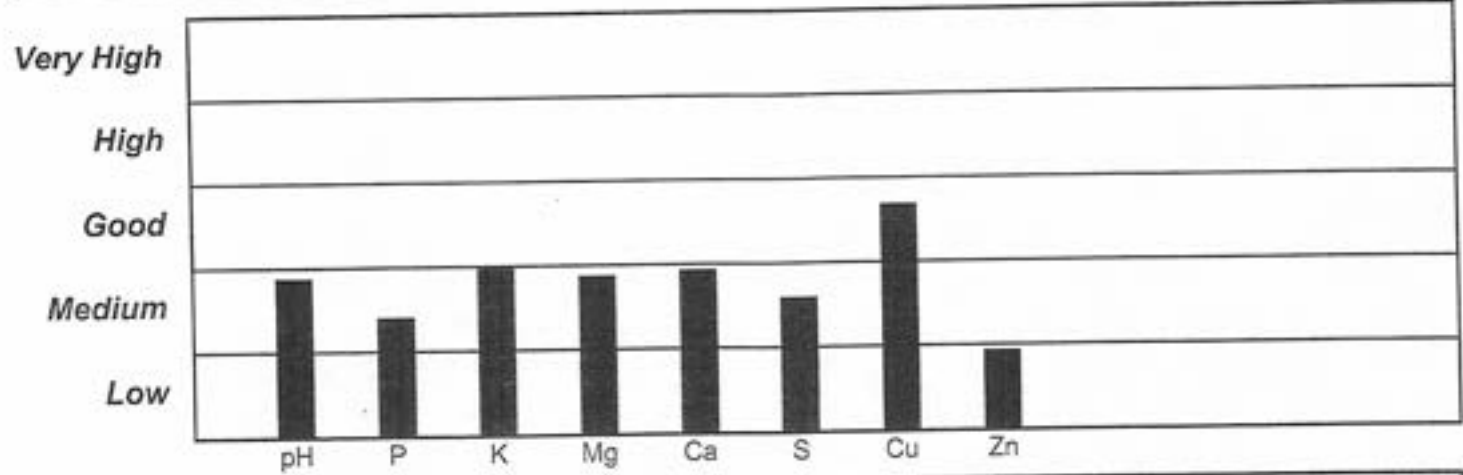
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**BATH, NY 14810**

*Sample Information*

Sample	1175109-E 1360	Sampled	01-30-2020
Lab Number	G37840	Tested	02-04-2020
Acres	13.7		

Analysis	Result	Optimal	Analysis	Result	Optimal
Soil pH	6.1	6.2-7.0	Sulfur	m3-ppm	16
Buffer pH	6.7		Copper	m3-ppm	5.5
Organic Matter %	2.9		Zinc	m3-ppm	1.6
CEC	8.4		Selenium	mg/Kg	< 3.0
K Saturation %	3.5	2.0-4.0	Arsenic	mg/Kg	< 3.0
Mg Saturation %	12.2	10-20	Cadmium	mg/Kg	< 3.0
Ca Saturation %	41.7	50-70	Chromium-Total	mg/Kg	8.88
K/Mg Ratio	1.0		Lead	mg/Kg	14.31
Ca/Mg Ratio	6.7		Mercury	mg/Kg	< 0.2
Phosphorus m3-ppm	36	50-80	Molybdenum	mg/Kg	< 3.0
Potassium m3-ppm	136	140-230	Nickel	mg/Kg	20.52
Magnesium m3-ppm	140	150-290	Copper	mg/Kg	52.81
Calcium m3-ppm	939	1000-1600	Zinc	mg/Kg	62.99
			Aluminum	m3-ppm	890



Recommendations												
Yr	Crop	CaCO3	N	P2O5	K2O	Mg	S	B	Cu	Fe	Mn	Zn



Soil Analysis Report

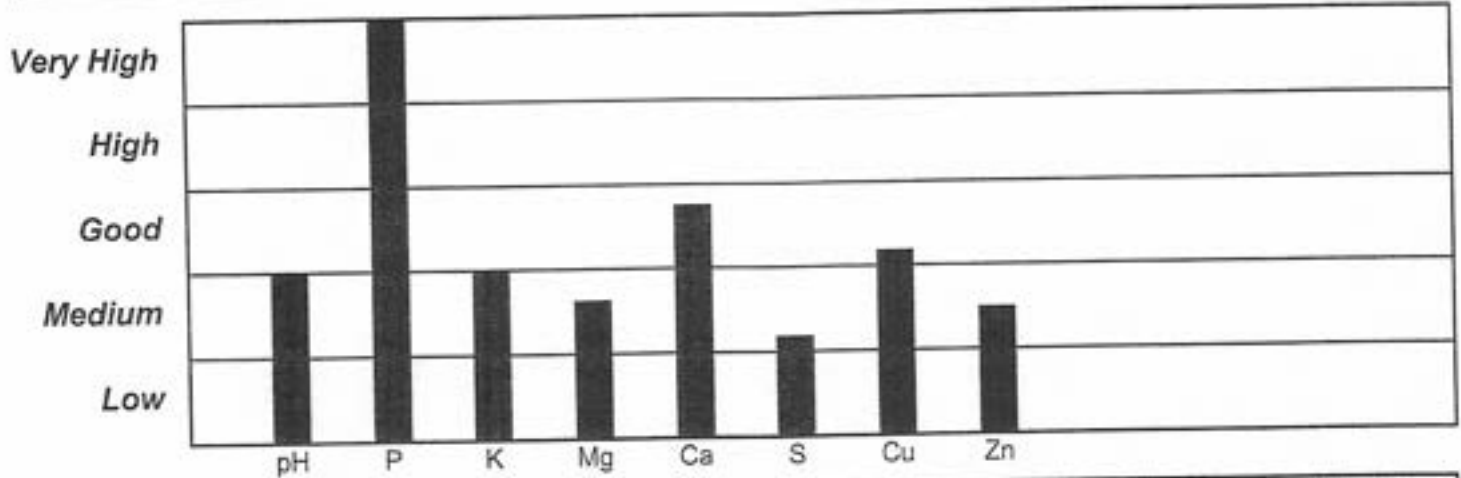


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*Sample Information*  
 Sample 1175103-C 9360      Sampled 01-30-2020  
 Lab Number G37834      Tested 02-04-2020  
 Acres 30.1

Analysis	Result	Optimal	Analysis	Result	Optimal
Soil pH	6.2	6.2-7.0	Sulfur	m3-ppm 12	20-40
Buffer pH	6.9		Copper	m3-ppm 4.0	Varies
Organic Matter %	2.3		Zinc	m3-ppm 2.8	3.9-10.9
CEC	7.1		Selenium	mg/Kg < 3.0	
K Saturation %	3.9	2.0-4.0	Arsenic	mg/Kg < 3.0	
Mg Saturation %	11.9	10-20	Cadmium	mg/Kg < 3.0	
Ca Saturation %	67.2	50-70	Chromium-Total	mg/Kg 9.06	
K/Mg Ratio	1.1		Lead	mg/Kg 9.66	
Ca/Mg Ratio	11.1		Mercury	mg/Kg < 0.2	
Phosphorus m3-ppm	257	50-80	Molybdenum	mg/Kg < 3.0	
Potassium m3-ppm	130	130-220	Nickel	mg/Kg 11.06	
Magnesium m3-ppm	115	140-280	Copper	mg/Kg 21.71	
Calcium m3-ppm	1271	900-1400	Zinc	mg/Kg 65.54	
			Aluminum	m3-ppm 772	



Recommendations												
Yr	Crop	CaCO3	N	P2O5	K2O	Mg	S	B	Cu	Fe	Mn	Zn

Soil Analysis Report



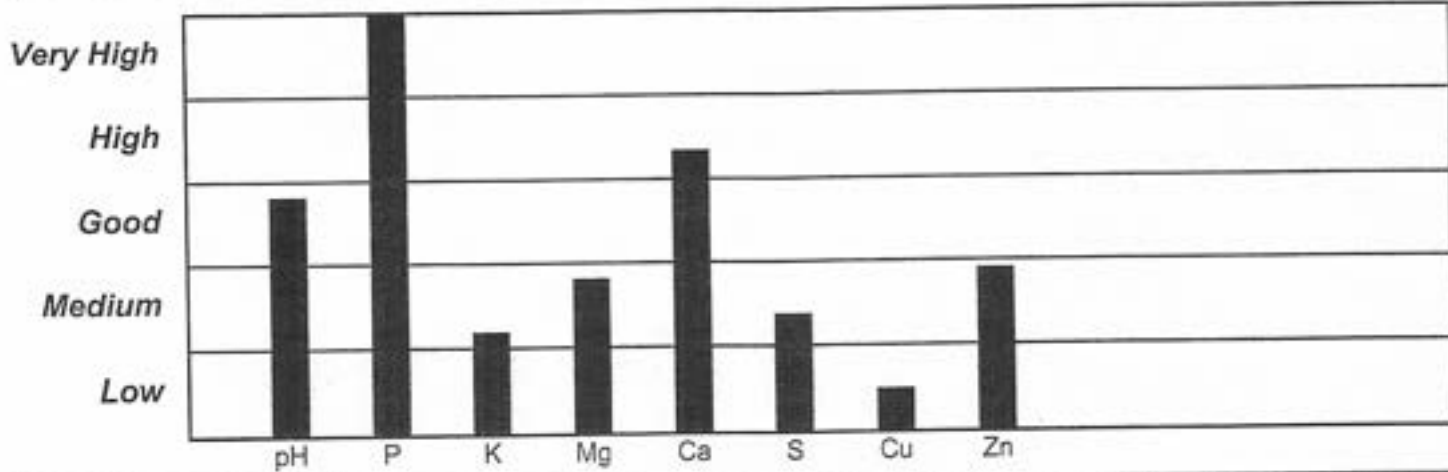
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*Sample Information*

Sample	1175099-C 3360	Sampled	01-30-2020
Lab Number	G37830	Tested	02-04-2020
Acres	25.7		

Analysis	Result	Optimal	Analysis	Result	Optimal
Soil pH	6.9	6.2-7.0	Sulfur	m3-ppm 14	20-40
Buffer pH	7.2		Copper	m3-ppm 3.7	Varies
Organic Matter %	2.8		Zinc	m3-ppm 3.7	3.9-10.9
CEC	12.4		Selenium	mg/Kg < 3.0	
K Saturation %	1.7	2.0-4.0	Arsenic	mg/Kg < 3.0	
Mg Saturation %	10.2	10-20	Cadmium	mg/Kg < 3.0	
Ca Saturation %	73.6	50-70	Chromium-Total	mg/Kg 11.81	
K/Mg Ratio	0.6		Lead	mg/Kg 13.77	
Ca/Mg Ratio	14.1		Mercury	mg/Kg < 0.2	
Phosphorus m3-ppm	466	50-70	Molybdenum	mg/Kg < 3.0	
Potassium m3-ppm	96	160-260	Nickel	mg/Kg 14.37	
Magnesium m3-ppm	173	200-350	Copper	mg/Kg 24.14	
Calcium m3-ppm	2440	1700-2300	Zinc	mg/Kg 80.30	
			Aluminum	m3-ppm 633	



Recommendations												
Yr	Crop	CaCO3	N	P2O5	K2O	Mg	S	B	Cu	Fe	Mn	Zn

Soil Analysis Report

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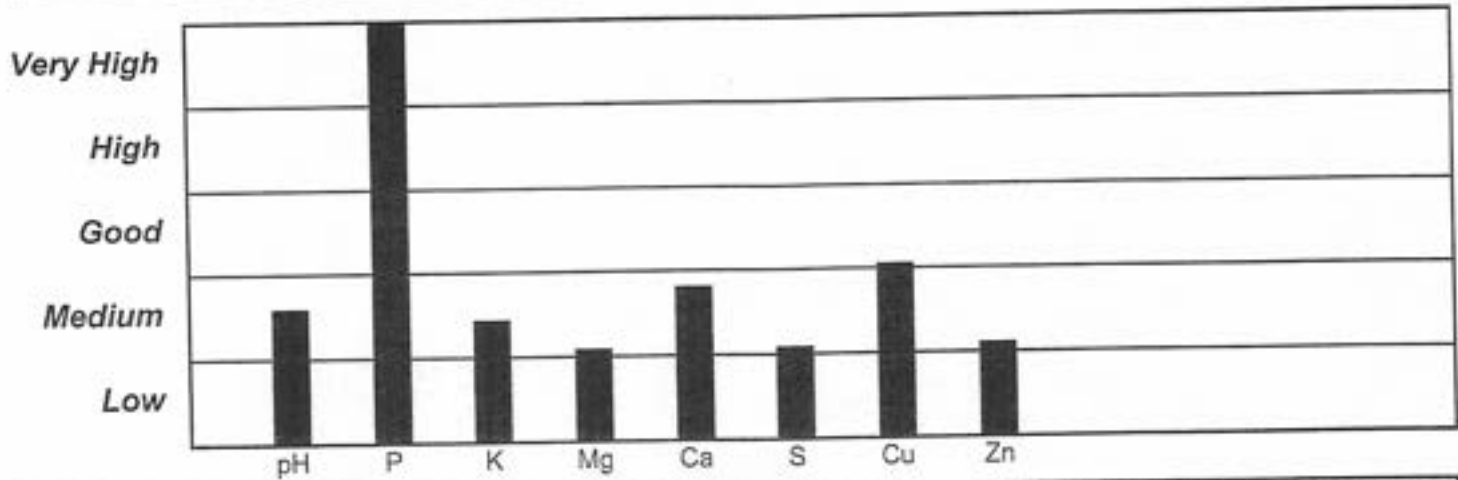
Prepared For

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BATH, NY 14810

Sample Information

Sample	1175092-B 10360	Sampled	01-30-2020
Lab Number	G37823	Tested	02-04-2020
Acres	25.8		

Analysis	Result	Optimal	Analysis	Result	Optimal
Soil pH	5.8	6.2-7.0	Sulfur	m3-ppm 11	20-40
Buffer pH	6.6		Copper	m3-ppm 0.6	Varies
Organic Matter %	3.1		Zinc	m3-ppm 2.0	3.9-10.9
CEC	10.4		Selenium	mg/Kg < 3.0	
K Saturation %	2.2	2.0-4.0	Arsenic	mg/Kg < 3.0	
Mg Saturation %	6.1	10-20	Cadmium	mg/Kg < 3.0	
Ca Saturation %	45.4	50-70	Chromium-Total	mg/Kg 11.08	
K/Mg Ratio	1.2		Lead	mg/Kg 12.22	
Ca/Mg Ratio	14.4		Mercury	mg/Kg < 0.2	
Phosphorus m3-ppm	280	50-80	Molybdenum	mg/Kg < 3.0	
Potassium m3-ppm	105	150-240	Nickel	mg/Kg 13.87	
Magnesium m3-ppm	87	160-310	Copper	mg/Kg 26.72	
Calcium m3-ppm	1257	1400-1900	Zinc	mg/Kg 68.09	
			Aluminum	m3-ppm 848	



Recommendations

Yr	Crop	CaCO3	N	P2O5	K2O	Mg	S	B	Cu	Fe	Mn	Zn

Soil Analysis Report

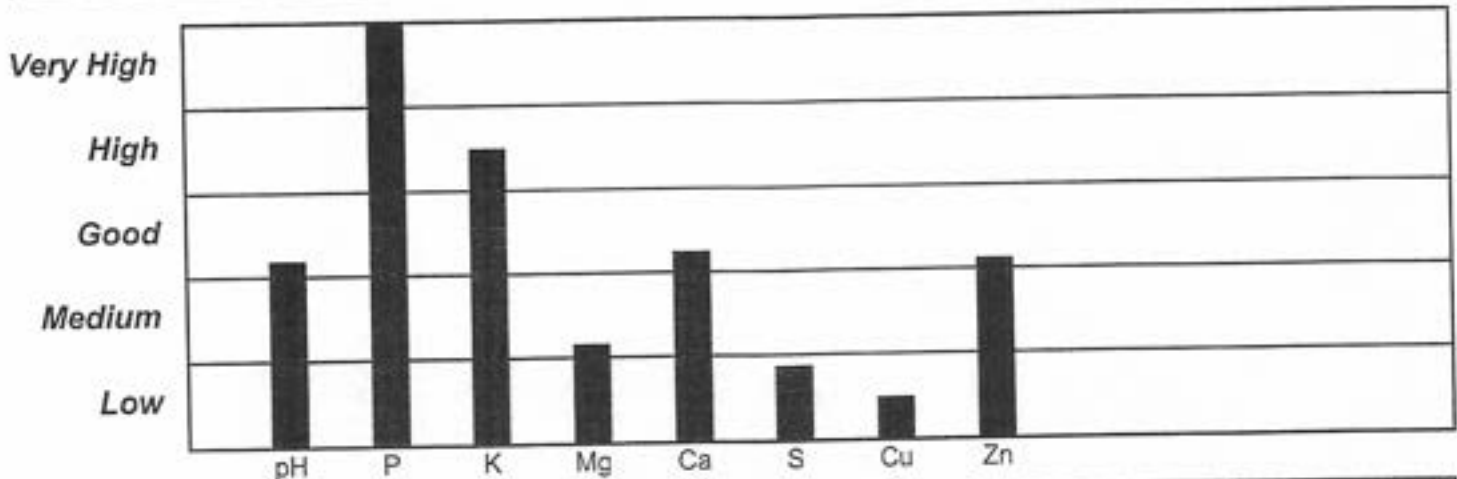


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**BATH, NY 14810**

*Sample Information*  
 Sample 1175090-B 6360      Sampled 01-30-2020  
 Lab Number G37821      Tested 02-04-2020  
 Acres 25.4

Analysis	Result	Optimal	Analysis	Result	Optimal
Soil pH	6.4	6.2-7.0	Sulfur	m3-ppm 9	20-40
Buffer pH	6.6		Copper	m3-ppm 3.8	Varies
Organic Matter %	4.1		Zinc	m3-ppm 4.9	3.9-10.9
CEC	13.4		Selenium	mg/Kg < 3.0	
K Saturation %	5.1	2.0-4.0	Arsenic	mg/Kg < 3.0	
Mg Saturation %	6.0	10-20	Cadmium	mg/Kg < 3.0	
Ca Saturation %	53.1	50-70	Chromium-Total	mg/Kg 8.90	
K/Mg Ratio	2.9		Lead	mg/Kg 15.19	
Ca/Mg Ratio	17.3		Mercury	mg/Kg < 0.2	
Phosphorus m3-ppm	669	50-70	Molybdenum	mg/Kg < 3.0	
Potassium m3-ppm	319	170-260	Nickel	mg/Kg 9.29	
Magnesium m3-ppm	110	210-360	Copper	mg/Kg 29.06	
Calcium m3-ppm	1903	1800-2500	Zinc	mg/Kg 85.91	
			Aluminum	m3-ppm 1013	



Recommendations												
Yr	Crop	CaCO3	N	P2O5	K2O	Mg	S	B	Cu	Fe	Mn	Zn

Soil Analysis Report



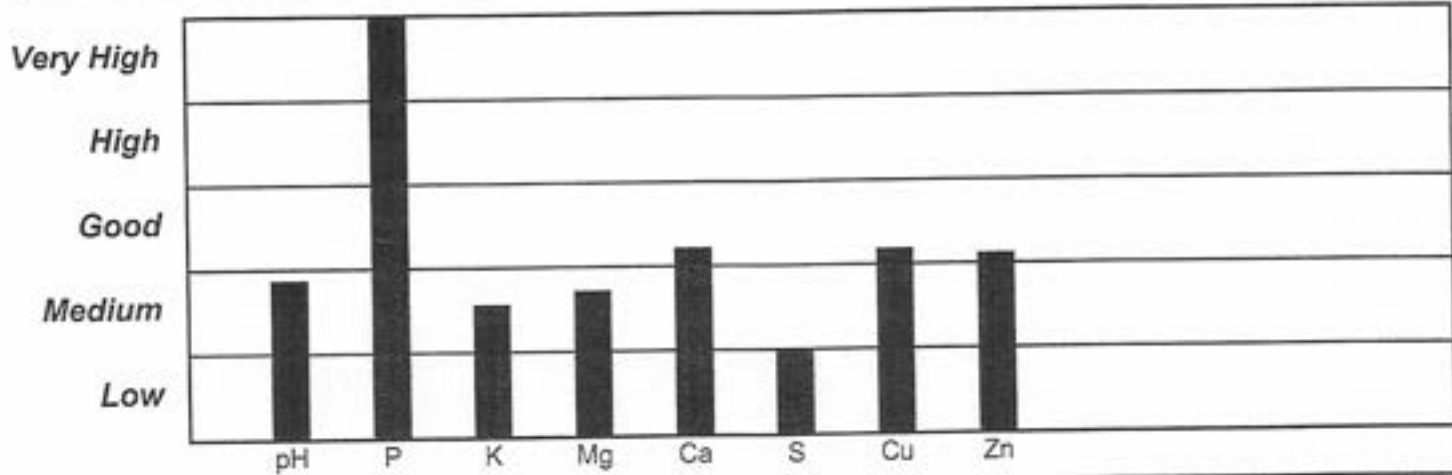
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*Prepared For*  
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**5226 BONNY HILL RD.**  
**BATH, NY 14810**

*Sample Information*

Sample	1175088-A 12S360	Sampled	01-30-2020
Lab Number	G37819	Tested	02-04-2020
Acres	11.5		

Analysis	Result	Optimal	Analysis	Result	Optimal
Soil pH	6.1	6.2-7.0	Sulfur	m3-ppm 10	20-40
Buffer pH	6.7		Copper	m3-ppm 10.6	Varies
Organic Matter %	2.8		Zinc	m3-ppm 4.9	3.9-10.9
CEC	10.4		Selenium	mg/Kg < 3.0	
K Saturation %	2.4	2.0-4.0	Arsenic	mg/Kg < 3.0	
Mg Saturation %	9.7	10-20	Cadmium	mg/Kg < 3.0	
Ca Saturation %	53.5	50-70	Chromium-Total	mg/Kg 10.07	
K/Mg Ratio	0.8		Lead	mg/Kg 13.09	
Ca/Mg Ratio	10.8		Mercury	mg/Kg < 0.2	
Phosphorus m3-ppm	486	50-80	Molybdenum	mg/Kg < 3.0	
Potassium m3-ppm	115	150-240	Nickel	mg/Kg 12.03	
Magnesium m3-ppm	138	160-310	Copper	mg/Kg 41.89	
Calcium m3-ppm	1490	1400-2000	Zinc	mg/Kg 84.50	
			Aluminum	m3-ppm 1025	



Recommendations													
Yr	Crop	CaCO3	N	P2O5	K2O	Mg	S	B	Cu	Fe	Mn	Zn	

Soil Analysis Report

Western  
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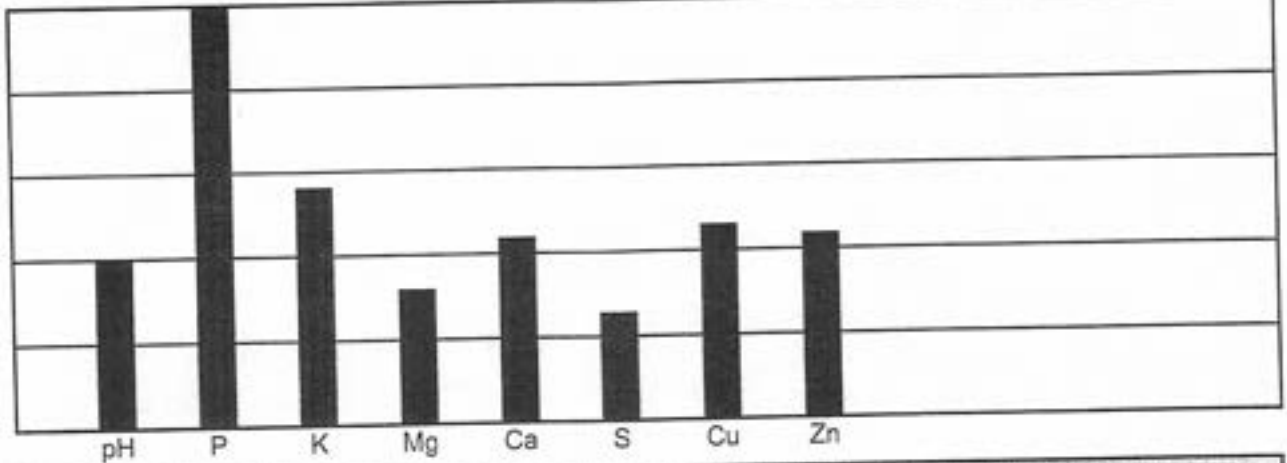
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BATH, NY 14810

Sample Information

Sample	1175085-A 7360	Sampled	01-30-2020
Lab Number	G37816	Tested	02-04-2020
Acres	15.8		

Analysis	Result	Optimal	Analysis	Result	Optimal
Soil pH	6.2	6.2-7.0	Sulfur	m3-ppm 13	20-40
Buffer pH	6.7		Copper	m3-ppm 11.8	Varies
Organic Matter %	3.1		Zinc	m3-ppm 5.4	3.9-10.9
CEC	10.6		Selenium	mg/Kg < 3.0	
K Saturation %	4.6	2.0-4.0	Arsenic	mg/Kg < 3.0	
Mg Saturation %	9.0	10-20	Cadmium	mg/Kg < 3.0	
Ca Saturation %	52.5	50-70	Chromium-Total	mg/Kg 11.01	
K/Mg Ratio	1.7		Lead	mg/Kg 11.51	
Ca/Mg Ratio	11.4		Mercury	mg/Kg < 0.2	
Phosphorus m3-ppm	464	50-80	Molybdenum	mg/Kg < 3.0	
Potassium m3-ppm	225	150-240	Nickel	mg/Kg 13.44	
Magnesium m3-ppm	131	170-310	Copper	mg/Kg 54.13	
Calcium m3-ppm	1487	1400-2000	Zinc	mg/Kg 85.55	
			Aluminum	m3-ppm 929	

Very High  
High  
Good  
Medium  
Low



Recommendations

Yr	Crop	CaCO3	N	P2O5	K2O	Mg	S	B	Cu	Fe	Mn	Zn



Soil Analysis Report

Western  
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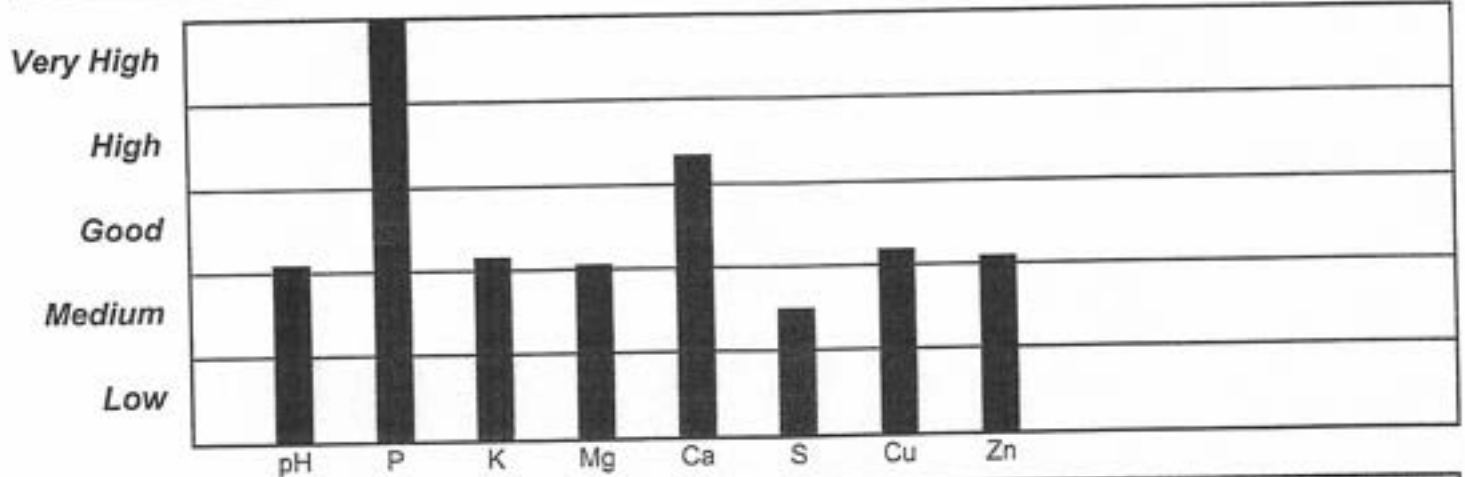
Prepared For

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BATH, NY 14810

Sample Information

Sample	1175079-A 1360	Sampled	01-30-2020
Lab Number	G37810	Tested	02-04-2020
Acres	28.7		

Analysis	Result	Optimal	Analysis	Result	Optimal
Soil pH	6.3	6.2-7.0	Sulfur	m3-ppm 15	20-40
Buffer pH	7.1		Copper	m3-ppm 10.2	Varies
Organic Matter %	3.3		Zinc	m3-ppm 4.7	3.9-10.9
CEC	7.1		Selenium	mg/Kg < 3.0	
K Saturation %	4.5	2.0-4.0	Arsenic	mg/Kg < 3.0	
Mg Saturation %	15.7	10-20	Cadmium	mg/Kg < 3.0	
Ca Saturation %	79.9	50-70	Chromium-Total	mg/Kg 20.44	
K/Mg Ratio	1.0		Lead	mg/Kg 16.90	
Ca/Mg Ratio	10.0		Mercury	mg/Kg < 0.2	
Phosphorus m3-ppm	441	50-80	Molybdenum	mg/Kg < 3.0	
Potassium m3-ppm	146	130-220	Nickel	mg/Kg 20.62	
Magnesium m3-ppm	151	140-280	Copper	mg/Kg 91.27	
Calcium m3-ppm	1505	900-1400	Zinc	mg/Kg 90.76	
			Aluminum	m3-ppm 921	



Recommendations												
Yr	Crop	CaCO3	N	P2O5	K2O	Mg	S	B	Cu	Fe	Mn	Zn



# Soil Test Report

Leo Dickson & Sons

Tuesday, February 4, 2020

FieldName	Split	Map	SampleDate	pH	B OH	OM	P	P Level	K	K Level	Ca:	Mg	CaMg	CEC	KSat	CaSat	MgSat	S	S Lev	Zn	Zn Level	Cu
A 1	360	7	2/4/2020	6.3	7.1	3.3	71.3	VH	215.4	VH	2589	262	9.9	7.1	4.5	79.9	15.7	15	MH	4.7	MH	10.2
A 2	360	7	2/4/2020	6.2	6.8	3.2	69.4	VH	328.6	VH	2430	234	10.4	9.3	5.1	58.2	10.8	12	M	5.5	MH	10.7
A 3	360	7	2/4/2020	6.5	7.1	2.6	77.3	VH	237.5	VH	2738	279	9.8	9.5	3.6	62.1	12.4	11	M	4.1	MH	10.1
A 4	360	7	2/4/2020	6.2	6.8	2.9	78.5	VH	344.2	VH	2391	231	10.4	9.2	5.4	57.8	10.7	12	M	5.2	MH	11.2
A 5N	360	7	2/4/2020	6.4	7	2.9	73	VH	260.5	VH	2426	251	9.7	6.8	5.5	78.9	15.6	11	M	3.9	M	9
A 5S	360	7	2/4/2020	6.4	7	2.3	71.7	VH	277	VH	2629	246	10.7	7.2	5.6	79.8	14.6	10	M	4	MH	9.6
A 7	360	7	2/4/2020	6.2	6.7	3.1	72.3	VH	337.8	VH	2548	226	11.3	10.6	4.6	52.5	9	13	MH	5.4	MH	11.8
A 11	360	7	2/4/2020	6.3	6.6	2.7	75.6	VH	324	VH	2403	234	10.3	11.6	4	46	8.6	12	M	5.4	MH	11.6
A 12N	360	7	2/4/2020	6	6.7	3.6	64.5	VH	331.3	VH	2577	264	9.8	10.8	4.4	52	10.3	11	M	6.2	MH	15.1
A 12S	360	7	2/4/2020	6.1	6.7	2.8	59.7	VH	167.6	H	2554	238	10.7	10.4	2.4	53.5	9.7	10	M	4.9	MH	10.6
B 5	360	8	2/4/2020	6	6.7	2.1	16.6	MH	117.9	M	1850	158	11.7	8.9	2	49.7	7.8	10	M	1.3	L	3.2
B 6	360	10	2/4/2020	6.4	6.6	4.1	#####	VH	483.1	VH	3490	188	18.6	13.4	5.1	53.1	6	9	M	4.9	MH	3.8
B 8	360	10	2/4/2020	6.2	6.8	2.7	46.6	VH	232.9	VH	2318	126	18.4	8.5	4	61.2	6.6	9	M	2	M	2.8
B 10	360	8	2/4/2020	5.8	6.6	3.1	45.3	VH	151.9	H	2027	146	13.9	10.4	2.2	45.4	6.1	11	M	2	M	0.6
B 11	360	8	2/4/2020	5.8	6.6	2.8	42	VH	158.4	H	2059	157	13.1	10.5	2.2	45.5	6.5	12	M	2	M	1.8
B 12	360	10	2/4/2020	6.2	6.8	2.5	50.8	VH	265.1	VH	2101	143	14.7	8.2	4.7	58.7	7.6	9	M	2.1	M	2.7
B 14	360	10	2/4/2020	6.1	6.7	2.8	45.4	VH	277	VH	2339	151	15.5	9.9	4	52.9	6.7	9	M	2.2	M	3.5
B 15	360	10	2/4/2020	6.2	6.5	2.3	48.4	VH	289.9	VH	2187	189	11.6	12.2	3.4	40.8	6.7	9	M	2.1	M	3.5
Buckley		8	2/4/2020	5.7	6.6	2.9	8.9	M	246.7	VH	1420	269	5.3	10	3.6	37.1	11.4	12	M	2.5	M	2
C 2	360	8	2/4/2020	7	0	3.3	#####	VH	128.9	MH	4529	301	15.0	11.9	1.6	74.6	10.7	12	M	3.5	M	3.4
C 3	360	8	2/4/2020	6.9	7.2	2.8	#####	VH	138.1	MH	4706	301	15.6	12.4	1.7	73.6	10.2	14	MH	3.7	M	3.7
C 4	360	8	2/4/2020	6.9	7.1	3	#####	VH	128.9	MH	4325	307	14.1	11.7	1.7	72.8	11	13	MH	3.5	M	3.2
C 6	360	8	2/4/2020	6.4	7	2.8	62.6	VH	117	M	3723	195	19.1	8.5	2.1	88.1	9.8	18	MH	2.9	M	4.1





# Soil Test Report

Leo Dickson & Sons

Tuesday, February 4, 2020

FieldName	Split	Map	SampleDate	pH	B nH	OM	P	P Leve	K	K Level	Ca:	Mg	CaMg	CEC	KSat	CaSat	MgSat	S	S Lev	Zn	Zn Level	Cu
C 7	360	8	2/4/2020	6.2	6.8	2.6	51.7	VH	197	H	2104	181	11.6	8.3	3.5	58.3	9.4	11	M	2.9	M	4
C 9	360	8	2/4/2020	6.2	6.9	2.3	54	VH	190.6	H	2059	196	10.5	7.1	3.9	67.2	11.9	12	M	2.8	M	4
C 10A	360	8	2/4/2020	6.6	7.1	3.1	29.2	H	110.5	M	3001	243	12.3	9.4	1.8	67.2	11	14	MH	2	M	3.7
C 11	360	8	2/4/2020	6.2	6.8	2.3	16.8	MH	96.7	LM	2226	249	8.9	8.6	1.7	58.3	12.2	11	M	1.5	L	2.8
C 12	360	8	2/4/2020	6.2	6.8	3.6	7	M	78.3	L	2530	414	6.1	9.8	1.3	56.6	17.6	12	M	1.4	L	2.4
C 13	360	8	2/4/2020	6.2	6.9	2.4	23.1	H	147.3	H	2426	258	9.4	7.9	2.8	68.1	13.9	10	M	1.5	L	2.2
C 14		8	2/4/2020	6.2	6.9	2.8	21.8	H	137.2	MH	2427	249	9.7	7.8	2.6	68.6	13.5	12	M	1.6	L	2.3
E 1	360	3	2/4/2020	6.1	6.7	2.9	4.3	L	199.8	H	1307	241	5.4	8.4	3.5	41.7	12.2	16	MH	1.6	L	5.5
E 4	360	3	2/4/2020	6	6.8	3.6	2.8	L	194.2	H	1112	215	5.2	6.8	4.2	47	13.5	13	MH	2.4	M	5.5
EV 2		14	2/4/2020	6.2	6.8	5.6	18.1	MH	283.5	VH	1230	327	3.8	7.6	5.4	44.8	18.1	12	M	3.3	M	8.4
EV 3		14	2/4/2020	6	6.6	1.8	19.3	MH	282.6	VH	627	217	2.9	8.5	4.8	28.1	10.8	11	M	3.8	M	7.3
F 10B	360	5	2/4/2020	6.7	7.1	3	#####	VH	36	VL	4660	182	25.6	12.1	0.5	75	6.5	14	MH	2.9	M	4
F 14		5	2/4/2020	6.4	7	2.5	#####	VH	122.5	MH	3727	301	12.4	9	2.1	83.8	14.1	11	M	4.7	MH	8.9
F 15	360	5	2/4/2020	6.5	7	3.2	#####	VH	132.6	MH	3360	310	10.8	10.8	1.8	64.2	12.1	9	M	4.3	MH	8.9
F 19	360	5	2/4/2020	6.9	7.1	2.8	#####	VH	37.8	VL	4392	182	24.1	11.1	0.6	77.8	7.1	12	M	3.2	M	5.3
F 20	360	5	2/4/2020	7	0	3.4	#####	VH	40.6	VL	4867	198	24.6	11.9	0.6	79.2	7.2	11	M	3.5	M	4.7
Glosick 10A		3	2/4/2020	5.3	6.4	3.3	2	L	55.3	L	1393	217	6.4	11.9	0.8	30.8	7.8	13	MH	1.6	L	3.1
Glosick 10B		3	2/4/2020	5.2	6.4	3.1	2	L	64.5	L	1388	186	7.5	11.8	0.9	31.1	6.8	13	MH	1.7	L	3.6
Glosick 11		3	2/4/2020	5.7	6.7	3.1	2	L	98.6	LM	724	215	3.4	7.2	2.1	35.4	12.7	12	M	1.2	L	3.7
H 2B	360	2	2/4/2020	6.6	7.1	2.3	79.1	VH	108.7	M	2839	189	15.0	8.8	1.9	68.9	9.3	10	M	2	M	5.7
H 2C	360	2	2/4/2020	6.5	7.1	2	81.2	VH	65.4	L	3046	173	17.6	9.3	1.1	68.9	8.1	9	M	1.7	L	4.5
K 3		3	2/4/2020	6.6	7	2.4	82.5	VH	103.2	M	3073	179	17.2	9.2	1.7	69.9	8.4	10	M	2	M	6
M 2	360	6	2/4/2020	6.2	6.6	2.4	68.5	VH	181.4	VH	2794	188	14.9	11.9	2.3	50.5	6.8	10	M	5.5	MH	9.2
M 3	360	6	2/4/2020	6.7	7.1	2.2	43.9	VH	142.7	H	2219	229	9.7	7.6	2.8	66.3	12.9	14	MH	3.9	M	4.6



# Soil Test Report

Leo Dickson & Sons

Tuesday, February 4, 2020

FieldName	Split	Map	SampleDate	pH	B oH	OM	P	P Leve	K	K Level	Ca:	Mg	CaMg	CEC	KSat	CaSat	MgSat	S	S Lev	Zn	Zn Level	Cu
M 4	360	6	2/4/2020	6.2	6.6	2.2	67.2	VH	195.2	VH	2616	151	17.3	11.4	2.5	49.7	5.8	10	M	5	MH	9.2
M 5	360	6	2/4/2020	5.5	6.3	2.4	16.8	MH	105.9	MH	552	143	3.9	11.5	1.4	19.8	5.4	11	M	3.5	M	6.2
M 6	360	6	2/4/2020	6.2	6.7	2.3	66.8	VH	185	H	2607	151	17.3	10.2	2.7	55.6	6.5	9	M	5.6	MH	9.3
P 1A	360	6	2/4/2020	6	6.7	3.9	62.9	VH	297.3	VH	2398	243	9.9	10.4	4.1	51.3	10	10	M	5.8	MH	14.6
P 1B	360	6	2/4/2020	7.1	0	2.1	50.2	VH	260.5	VH	3395	563	6.0	10.6	3.5	65.5	21.8	11	M	4.6	MH	5
Q 2	360	8	2/4/2020	6.6	6.9	2.5	95.8	VH	78.3	LM	3061	188	16.3	9.2	1.3	69.9	8.8	10	M	3.4	M	5.4
Q 3	360	8	2/4/2020	6.5	7	2.1	72.3	VH	59.9	L	3229	140	23.1	9.5	1	70.6	6.5	9	M	3	M	4.6
Q 4	360	8	2/4/2020	6.9	7.2	2.6	#####	VH	178.6	H	4541	253	17.9	11.9	2.2	74.3	9	15	MH	5	MH	4.6
Q 5	360	8	2/4/2020	7.1	0	2.3	#####	VH	166.6	H	5625	267	21.1	13.3	1.9	80.5	8.5	15	MH	8.7	MH	8
Q 6	360	8	2/4/2020	6.7	7.2	2.5	#####	VH	175.8	H	3501	171	20.5	9.9	2.6	71.9	7.4	9	M	3.5	M	3.6
Q 8	360	8	2/4/2020	6.4	6.9	3.3	49.4	VH	85.7	LM	2629	213	12.3	8	1.7	71.8	11.4	11	M	2	M	3.5
Q 14	360	8	2/4/2020	6.4	6.8	2.5	23.7	H	101.3	M	3419	286	12.0	10.8	1.4	65.1	11.2	11	M	3.2	M	4.1
R 5A	360	9	2/4/2020	5.8	6.7	2	46.2	VH	99.5	LM	1655	153	10.8	8.5	1.8	48.1	7.8	8	M	1.8	M	1.5
R 13	360	9	2/4/2020	6.2	6.7	3.8	#####	VH	405.8	VH	3037	188	16.2	11.4	5.1	56.2	7.1	8	M	4.7	MH	3.6
R 14	360	9	2/4/2020	6.2	6.8	3.1	#####	VH	413.2	VH	3211	189	17.0	10.5	5.6	63.7	7.8	9	M	5.2	MH	4.3
U 4		8	2/4/2020	6.3	6.9	2	55.2	VH	197	H	2131	229	9.3	7.4	3.9	66.5	13.3	10	M	3	M	3.9
VV 1		2	2/4/2020	5.5	6.4	3.1	2.3	L	71.9	L	1479	207	7.1	12	1	31.7	7.4	12	M	1.6	L	3.8
Z 1A		11	2/4/2020	6.4	6.9	2.3	5.7	LM	156.5	H	1107	274	4.0	5.8	4	55.2	20	15	MH	1	L	4.7
Z 1B		12	2/4/2020	6.6	6.9	1.7	8	M	141.8		1216	287	4.2	6	3.5	56.3	20.2	14	MH	1.2	L	6.9



# Soil Test Report

Leo Dickson & Sons

Tuesday, February 18, 2020

FieldName	Split	Map	SampleDate	pH	B oH	OM	P	P Leve	K	K Level	Ca:	Mg	CaMg	CEC	KSat	CaSat	MgSat	S	S Lev	Zn	Zn Level	Cu
C 3	360	8	2/18/2020	6.6	7.1	2.4	121	VH	163	H	3404	249	13.7	10.4	2.3	67.5	10.2	9	M	4.9	MH	4.2
C 4	360	8	2/18/2020	6.6	7.2	2.5	96	VH	163	H	4008	249	16.1	11.6	2.1	68.8	9.1	13	MH	3	M	3.6
F 10B	360	5	2/18/2020	7.2	0	3.8	#####	VH	92.1	M	9447	213	44.4	16.9	0.8	89	5.4	20	MH	8	MH	7.5
F 14		5	2/18/2020	6.2	6.9	2.9	59.6	VH	40.6	VL	2862	100	28.6	7.8	0.9	77.9	5.8	13	MH	1.8	M	2.3
Q 4	360	8	2/18/2020	6.4	7	2.5	87.7	VH	67.3	L	3560	174	20.5	8.1	1.3	89.4	9.3	11	M	2.3	M	2.8
SH 1		12	2/18/2020	6.6	7	3.6	98.5	VH	321.2	VH	3510	379	9.3	11.5	4	62.2	13.8	19	MH	6.8	MH	5.7

**SECTION 6 – FIELD APPLICATION RATES**

(Complete one copy for each field used)

Site Owner: Leo Dickson & Sons, Inc. - see attached reports

Field Address: \_\_\_\_\_ Town: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Field Number: \_\_\_\_\_ Field Size: \_\_\_\_\_ acres

Biosolids Applied: \_\_\_\_\_ dry tons Acreage Applied To: \_\_\_\_\_ acres

Application Rate: \_\_\_\_\_ dry tons/acre

Crop Grown: \_\_\_\_\_ Remaining Site Life: \_\_\_\_\_ years

Dates Applied (List All Applications)	Biosolids Applied (dry tons)	Acreage Applied To (acres)	Application Rate (dry tons/acre)

**Loading Rates**

Loading Parameters	Loading Rates		
	Current Year (Permit Pre 2017 Regs)	Cumulative (Permit Pre 2017 Regs)	Current Year (Permit Post 2017 Regs)
Hydraulic (gals/acre)			
Available Nitrogen (lbs/acre)			
Phosphorus (lbs/acre)			
Potassium (lbs/acre)			
Cadmium (lbs/acre)			
Chromium (lbs/acre)			
Copper (lbs/acre)			
Lead (lbs/acre)			
Nickel (lbs/acre)			
Zinc (lbs/acre)			

\*Attach calculations to support values in the table

# Permit



**PERMIT**  
**Under the Environmental Conservation Law (ECL)**

**Permittee and Facility Information**

**Permit Issued To:**  
LEO DICKSON & SONS, INC.  
  
5226 BONNY HILL RD  
  
BATH, NY 14810-8145

**Facility:**  
LEO DICKSON & SONS LANDSPREADING  
SITES AND FARM  
5226 BONNY HILL RD|AND MULTIPLE  
TOWNSHIPS  
BATH/CAMERON/THURSTON, NY

**Facility Location:** In MULTIPLE TOWNS in STEUBEN COUNTY

**Facility Principal Reference Point:** NYTM-E: 307.91 NYTM-N: 4680.809  
Latitude: 42°15'21.1" Longitude: 77°19'43.4"

**Authorized Activity:** Storage of liquid biosolids and food processing waste, and land application of food processing waste and stabilized biosolids on agricultural fields, in accordance with the conditions of this permit. Approved waste sources, application sites and storage facilities are listed in Attachment A, Attachment B (B-1, B-2, and B-3), and Attachment C of this permit.

**Permit Authorizations**

**Solid Waste Management - Under Article 27, Title 7**

Permit ID 8-4699-00012/00001

(Solid Waste ID 51L05)

Renewal

Effective Date: 10/1/2019

Expiration Date: 9/30/2024

**NYSDEC Approval**

**By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, and all conditions included as part of this permit.**

**Permit Administrator:** KIMBERLY A MERCHANT, Deputy Regional Permit Administrator  
**Address:** NYSDEC Region 8 Headquarters  
6274 E Avon-Lima Rd  
Avon, NY 14414

**Authorized Signature:**

*Kimberly A. Merchant*

Date 10/1/2019



## Permit Components

SOLID WASTE MANAGEMENT PERMIT CONDITIONS

GENERAL CONDITIONS, APPLY TO ALL AUTHORIZED PERMITS

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

## SOLID WASTE MANAGEMENT PERMIT CONDITIONS

**1) Conformance With Plans** All activities authorized by this permit must be in strict conformance with the permit application, plans and materials prepared by LaBella Associates P.C. and Agricultural Engineering Services, PLLC (AES), Western New York Crop Management, and Dickson Environmental on various dates (see conditions #26 for detailed list and descriptions of these documents).

### D) GENERAL APPLICABILITY

**2) Authorization** - This permit authorizes the storage, staging, and land application, of stabilized biosolids and food processing wastes. Specifically, waste from the sources listed in Attachment A of this permit, may be land applied only to those fields list in Attachment B, pursuant to engineering plans referenced in condition #1 above; and stabilized biosolids and food processing wastes may be stored in the facilities listed in Attachment C; and temporary staging of dewatered solids is allowed and must be done in such a manner as to conform with the requirements listed in condition #20 of this permit.

The Permittee must comply with all conditions of this permit, and 6NYCRR Parts 360 and 361 (excerpts included as Attachment F). Note this facility is a concentrated animal feeding operation (CAFO); as such, the land application, or manure derived waste is regulated by the current SPDES (State Pollutant Discharge Elimination System) CAFO regulations and permits. Waste that is a combination of manure, agricultural process wastewater as defined by the CAFO Permit, food processing waste and/or biosolids is regulated by the most stringent regulation, ie., any Permit Condition of this permit, 6NYCRR Parts 360 and 361, or SPDES CAFO requirement. A summary of the waste streams and the applicable conditions appear in Attachment E.

**3) Compliance with Other Requirements** - This approval does not relieve the Permittee from complying with all other applicable Federal, State, or local ordinances and laws.



4) **Adverse Impact** - The Permittee shall take all steps to minimize or correct any adverse impact on human health or the environment resulting from facility operations. The Permittee shall report any such activity which may endanger human health or the environment to the DEC Region 8 Spill Engineer. Such activities include, but are not limited to uncontrolled releases of waste, leachate, or petroleum products from storage tanks, pipes, containers, vehicles and portable tanks to the soil, groundwater, or surface water. Any such information shall be reported, verbally within two (2) hours from the time the Permittee becomes aware of the circumstances and followed up in writing within seven days. Telephone numbers available for reporting such activities are as follows:

REGULAR BUSINESS HOURS - 585-226-5436

TOLL FREE HOTLINE (24 hours/day) - 1-800-457-7362

5) **Operation Controls** - This permitted facility shall be operated to control vectors and odors. (The facility Odor Control Plans appears in section one of the Dickson Environmental Services, Inc. Operations and Maintenance narrative dated February 2018).

6) **Non-compliance** - In the event a Department representative makes a determination that the Permittee is in non-compliance with any provision of the Environmental Conservation Law, or with any regulation promulgated thereunder or any provision of this permit or of any judicial or administrative order applicable to the facility and enforceable under the Environmental Conservation Law, the Permittee must, upon receipt of written or oral Notice of Noncompliance from the Department, promptly take such steps as are necessary to correct, abate, or remediate the non-complying condition. To the extent feasible, the Permittee must consult the Department regarding the selection and implementation of such measures. Any instance of non-compliance, together with the responsive measures and results of such measures, must be recorded in writing by the Permittee, and submitted to the Department within 48 hours of the non-compliance.

7) **Endangered Species** - Land application must not adversely affect a threatened or endangered species or its designated critical habitat.

8) **Complaint Handling** - All complaints received/at the facility, or forwarded to the facility by Department staff, must be responded to by the end of the working day on the day the complaint is received by the facility. All actions taken by the Permittee to remedy the issue must be documented and provided in writing to regional DEC staff within 48 hours. Correspondence should be addressed to the attention of Greg MacLean, 585-226-2909 (fax) or by email to [greg.maclea@dec.ny.gov](mailto:greg.maclea@dec.ny.gov).

9) **Amendments/Modifications** - Amendments or modifications to the engineering report, plans, specifications, or correspondence listed in Condition #1 and Condition #26, must be approved in writing by the Department prior to their implementation.

10) **DEC Addresses** - All submissions required by this permit shall be submitted in a timely manner to the Regional Materials Management Engineer, NYSDEC, 6274 East Avon-Lima Road, Avon, NY 14414 and Bureau of Waste Reduction and Recycling, NYSDEC, 625 Broadway, NY 12233.





**11) Notification of Conditions Subject to Change** - These permit conditions shall be subject to change in the event that they become inconsistent with future modifications of the rules and regulations of the New York State Department of Environmental Conservation.

## **II) LAND APPLICATION OPERATIONAL REQUIREMENTS**

### **12) Weather Restrictions**

a) Land application is prohibited on water saturated ground or during heavy rainfall. Storage and/or disposal facilities must be available for periods during the year when waste cannot be applied.

### **b) LAND APPLICATION OF WASTE ON SNOW COVERED OR FROZEN GROUND**

#### **(i) Liquid Biosolids**

Land application of liquid biosolids is prohibited on snow-covered or frozen ground, except by direct injection on those fields listed in Attachment B-3. Sufficient storage and/or disposal alternatives must be available for those periods when direct injection cannot be accomplished. See attachment D for direct injection performance criteria.

#### **(ii) Dewatered Biosolids**

Land application of dewatered biosolids is prohibited on snow-covered or frozen ground. For those periods when the waste cannot be incorporated sufficient reserve composting capacity and/or disposal alternatives must be available.

#### **(iii) Non-Recognizable Dewatered Food Processing Waste**

Land application of non-recognizable dewatered food processing waste on frozen or snow-covered ground is limited to the fields listed in Attachment B-3. The surface of the field on which waste has been applied must be perforated using a tractor pulled aerator attachment by the end of the working day on which the waste is applied. Perforation of the soil is not required if the field was plowed prior to the ground freezing and the surface is furrowed at the time the waste is applied.

(iv) Liquid Food Processing Waste, and Liquid from Storage Ponds #2, #3, and #4. Land application is prohibited on snow-covered or frozen ground, except by direct injection on those fields listed in Attachment B-3. Sufficient storage and/or disposal alternatives must be available for those periods when direct injection cannot be accomplished. See attachment D for direct injection performance criteria.

(v) Land application containing manure and/or other agricultural process wastewater must be done in accordance with the 2015 Cornell Guide "Revised Winter and Wet Weather Manure Spreading Guidelines To Reduce Water Contamination Risk", as well as NRCS NY590.



**13) Waste Incorporation**

- a) Recognizable vegetative food waste, and non-recognizable dewatered food processing waste, or any combination of the two that is land applied must be incorporated into the soil within 24 hours of land application. See Condition 12 for restrictions when spreading on frozen or snow covered ground.
- b) All Liquid waste including biosolids, nonrecognizable food processing waste, and manure containing biosolids or food processing waste, must be land applied by direct injection, except that this requirement does not apply to liquid from the irrigation pond applied using the hard piped irrigation system. See Attachment D for direct injection performance criteria.
- c) Dewatered Biosolids must be incorporated into the soil within 6 hours after land application.

**14) Nutrient Uptake** - A crop must be grown each calendar year on all waste amended fields to promote nutrient uptake. The application rate of the waste and all other fertilizers and /or manure must be tracked to ensure the total nutrient loading limits are not exceeded.

**15) Soil Conservation/Agricultural Management** - Proper soil conservation practices and agricultural management practices must be used to minimize runoff and soil loss through erosion. No runoff may occur to surface water bodies or wetlands. The vegetative filter strips, referenced on page 1 of "Leo Dickson and Son's Field Spreading Maps" date January 2012. These strips must be maintained as grassy areas throughout the life of the permit.

**16) Dikes/Berms** - The Department may require the use of dikes, berms, or other pollution protection devices or techniques on a case specific basis.

**17) Flood Plain** - Land application in a 100-year flood plain must not result in washout of the solid waste applied. Land application is prohibited in flood plain areas designated as a floodway pursuant to 6NYCRR Part 502.

**18) Water Contravention** - Land application rates and practices must not cause contravention of groundwater and surface water standards provided in 6NYCRR Parts 700-705.



### III) WASTE STORAGE

#### 19) Liquid Storage

- a) Biological and physical treatment methods must be utilized in uncovered liquid storage ponds to control odors.
- b) Liquid storage facilities that contain only manure are regulated by the SPDES CAFO requirements.
- c) The concrete storage tank located at the heifer barn on Helmer Creek Road shall be completely emptied, cleaned, and inspected by a NYS licensed professional engineer annually. Region 8 DMM staff shall be notified a minimum of two weeks prior to the inspection. Any damage or deterioration revealed during the inspection shall be repaired before the tank receives any additional waste. Any repair work shall be noted in the annual report. Note, this tank is regulated by 6NYCRR Part 361-2.7.
- d) All waste storage facilities that are permitted to contain 6NYCRR Part 360 and CAFO regulated waste must have an accurately installed certified depth marker. If the marker is displaced, the facility must notify the Department in writing within seven (7) days. The depth markers must be corrected and recertified within ninety (90) days.

#### 20) Solids Storage

- a) Overnight storage and treatment of waste solids shall occur only in areas covered by a roof or tarp.
- b) Temporary staging of dewatered food processing waste solids at satellite staging locations, such as the Windfall Road reload station, may not exceed 24 hours.
- c) De-watered biosolids shall not be stored overnight at the temporary satellite staging locations referenced in condition #20b above ("satellite staging locations" or "staging areas"). Biosolids must be removed from satellite staging locations, such as the Windfall Road bunker, at the end of each working day.
- d) Lime or other acceptable additives must be used as needed to reduce odors.
- e) Efforts must be taken to reduce the entry of stormwater into waste at staging locations including the grading of adjacent land to direct stormwater away from the waste. No leachate generated by water entering the waste shall be released from the staging area. Any leachate generated must be collected and land applied or disposed in a manner acceptable to the Department.



#### **IV) SAMPLING REQUIREMENTS**

##### **21) Waste Sampling**

- a.) Liquids in storage ponds #2, #3, and #4 (the irrigation pond) must be sampled and analyzed per 6NYCRR Parts 360 and 361.
- b.) Liquid and dewatered non-recognizable food processing waste streams from those sources listed in Attachment A must be sampled and tested annually for the 6NYCRR 361-3.9 Table 1 parameters.

##### **22) Soil Sampling**

- a.) Soil monitoring shall be conducted as prescribed in 6NYCRR Parts 360 and 361. The sampling locations shall be recorded and shall be submitted with the results of the soil analyses in the Annual Report described below. Sampling must be coordinated to ensure that each permitted field listed in attachment B, that has received regulated waste, is sampled no less than once every three years. Fields that have not received regulated waste for three years or more do not require sampling. Note that the CAFO permit has additional sampling requirements for any field accepting manure and/or other agricultural process wastewater.
- b.) Within six (6) months of the effective date of this permit, the permittee must complete baseline soil samples and submit a final report to the Department. The final report must include a summary of the data, maps with sampling locations, and original laboratory results. One sample for every fifty (50) acres of 6NYCRR Part 360 permitted fields must be collected. Every sample must consist of a composite of a minimum of ten (10) randomly selected sample locations at a sampling depth consistent with the depth of biosolids incorporation. Samples shall be analyzed for arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, and pH. Failure to submit a final report that is acceptable to the Department shall be a violation of this permit. This condition does not alter or eliminate the permittee's obligations under any other applicable statute, regulation, or permit condition.



## V) REPORTING AND RECORDKEEPING

23) **Recordkeeping** All monitoring, recordkeeping, and reporting shall be in conformance with the requirements of 6NYCRR Part 361-2.5.

In addition, each week, a report documenting the previous week's land application activities must be prepared and sent electronically via e-mail to the NYSDEC Region 8 Division of Materials Management Engineer and designated Region 8 DMM staff at [greg.macleon@dec.ny.gov](mailto:greg.macleon@dec.ny.gov), or at any future email addresses provided for the permittee's use by the Department. The report must be received by 4:45 pm on Monday of the following week of the activities described. If Monday is a legal holiday, the report must be received by 4:45 pm on Tuesday. Copies of the reports must be maintained at the facility office and must be available for review by Department staff upon request during normal business hours. The report must contain the following information for each day of the week.

- a) Weather conditions for all seven (7) days for the week being reported including, high and low temperature, precipitation type and amount, and wind direction and speed.
- b) The free board of all liquid waste storage structures containing the following material or any mixture of the following materials: manure, food processing waste, biosolids.
- c) A list of all biosolids, or food processing waste received, including waste type, source, amount, and the immediate destination for the material (for example, was it immediately land applied, taken to the compost building, or was it placed in a storage lagoon?)
- d) A list of all waste land-applied. The waste type, source, amount and field to which the waste was applied must be identified. The list must indicate how the waste was applied, and when it was incorporated into the soil.
- e) A list of any manure imported or exported, including the source, volume and destination of the manure.
- f) A copy of any analytical data received for biosolids or food processing waste received during the week.

24) **Annual Report** - The Permittee must submit an Annual Report each year shall be in conformance with the requirements of 6NYCRR Parts 360 and 361. The Annual Report should include list of the fields on which the vegetative filter strips, referenced in, condition #15, have been established.

25) **CAFO** - The facility's valid State Pollutant Discharge Elimination System (SPDES) Permit for Concentrated Animal Feeding Operations states the following: "The retention and disposal of food processing wastewater is authorized only if it is specified in the Comprehensive Nutrient Management Plan." Please be advised that your Certified Nutrient Management Planner must incorporate "worst case" sampling results for subsequent calculations of field application. This information shall be available upon Department request. Note that any fields receiving manure and other waste streams must fully comply with both 6 NYCRR Parts 360 & 361 and CAFO permit conditions. The facility planner must include cumulative nutrient loadings from all waste streams when calculating annual application recommendations. If you have questions regarding the CAFO component of this activity, please contact Nancy Rice at 585-226-5453.



**26) Approved Documents.** The following is a list of the documents referenced in Condition #1. All activities authorized by this permit must be conducted in strict conformance with these documents, the conditions of this Permit, and the applicable 6NYCRR Parts 360 and 361 Regulations. The Permit Conditions shall be subject to change in the event that they become inconsistent with future modifications of the rules and regulations of the New York State Department of Environmental Conservation. In the event inconsistencies appear in the submitted documents the most recent document, as determined by date of authorship, shall be considered controlling.

- a) "Operation and Maintenance Narrative" Prepared by Dickson's Environmental Services, Inc. Dated February 2018.
- b) "Leo Dickson and Son's Manure System Evaluation" Operation and Maintenance Procedures Earthen storage and Concrete storage sections. Prepared by Agricultural Engineering Services (AES) PLLC. Auburn, NY, dated January 2012, except that the minimum freeboard requirement for the uncovered earthen storage lagoon containing only manure (Pond # 1) is 1.0 foot plus a 25-yr, 24-hr storm event minimum freeboard (total freeboard required is approximately 16 in.). See condition # 19b.
- c) "Leo Dickson and Son's Heifer Facility's In-Ground Concrete Manure Storage Evaluation " Operation and Maintenance Procedures Section. Prepared by Agricultural Engineering Services (AES) PLLC. Auburn, NY. Dated January 2012.
- d) "Part 360 Permit Renewal Application, Prepared for Leo Dickson & Sons, Inc. Bath, New York"; Prepared by Labella Associates, P. C. Dated July 2008.
- e) "Part 360 Permit Modification Variance Request, Leo Dickson and Sons, Inc., Permit #LS105". Dated November 26, 2012, and reauthorized by NYSDEC Materials Management staff in April 2018.
- f) "Part 360 Permit Renewal Application, Leo Dickson & Sons, Inc. Bath, New York" Dated November 24, 2017. Including related documents once approved by the Department.
- g) "Solid Waste Management Renewal Application 2018" prepared by Leo Dickson and Sons, Inc. and Dickson Environmental Services, Inc. Dated January 2018. Including related documents attached to the application.
- h) "Leo Dickson & Sons Land Spreading Sites and Farm" prepared by Dickson Environmental and Western New York Crop Management dated August 27, 2019.



## **VI) ENVIRONMENTAL MONITOR**

### **27) On-site Environmental Monitor**

a) Leo Dickson & Sons, Inc. shall fund on-site environmental monitoring services to be performed by the Department. These monitoring services will include, but not be limited to, the following:

- i) Compliance monitoring;
- ii) Inspections and complaint response;
- iii) Pollution prevention assurance.

b) Funds necessary to support the monitoring services and requirements for the coming year shall be provided to the Department by Leo Dickson & Sons, Inc. on an annual basis. The sum to be provided is based on annual on-site environmental monitoring service costs of the Department for up to one quarter of a person-year of service, and is subject to annual revision. Subsequent annual payments shall be made for the duration of this Permit or until the monitoring requirements no longer exist, whichever comes first.

c) Leo Dickson & Sons, Inc. shall be billed annually for each fiscal year beginning on April 1. If this Permit is to first become effective subsequent to April 1, the initial payment may be for an amount sufficient to meet the anticipated cost of the monitoring services through the end of the current fiscal year.

d) The Department may revise the required payment on annual basis to include all of the Department's costs associated with the monitoring services. The annual revision may take into account such factors as inflation, salary increases, changes in operating hours and procedures, increase or decrease in the amount of monitoring necessary, and increase or decrease in the number of on-site environmental monitors and on-site environmental monitor supervision necessary. Upon written request by Leo Dickson & Sons, Inc. the Department shall provide Leo Dickson & Sons, Inc. with a written explanation of the basis for any revision or modification. If such a revision is required, the Department will notify Leo Dickson & Sons, Inc. of such a revision no later than 60 days in advance of such revision.

e) Prior to making its annual payment, Leo Dickson & Sons, Inc. will receive, and have an opportunity to review, an annual work plan that the Department will undertake during the year.

f) Payments are to be made in advance of the period in which they will be expended and shall be made in full within 30 days of receiving a bill from the Department. Payments shall be addressed to the address and contact person identified in the bill received from the Department.

g) Failure to make the required payments shall be a violation of this Permit. The State reserves all rights to take appropriate action to enforce the above payment provisions.



**GENERAL CONDITIONS - Apply to ALL Authorized Permits:**

**1. Facility Inspection by The Department** The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71- 0301 and SAPA 401(3).

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

**2. Relationship of this Permit to Other Department Orders and Determinations** Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

**3. Applications For Permit Renewals, Modifications or Transfers** The permittee must submit a separate written application to the Department for permit renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing. Submission of applications for permit renewal, modification or transfer are to be submitted to:

Regional Permit Administrator  
NYSDEC Region 8 Headquarters  
6274 E Avon-Lima Rd  
Avon, NY14414

**4. Submission of Renewal Application** The permittee must submit a renewal application at least 180 days before permit expiration for the following permit authorizations: Solid Waste Management.





**5. Permit Modifications, Suspensions and Revocations by the Department** The Department reserves the right to exercise all available authority to modify, suspend or revoke this permit. The grounds for modification, suspension or revocation include:

- a. materially false or inaccurate statements in the permit application or supporting papers;
- b. failure by the permittee to comply with any terms or conditions of the permit;
- c. exceeding the scope of the project as described in the permit application;
- d. newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit;
- e. noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

**6. Permit Transfer** Permits are transferrable unless specifically prohibited by statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.



**NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS**

**Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification**

The permittee, excepting state or federal agencies, expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees, and agents ("DEC") for all claims, suits, actions, and damages, to the extent attributable to the permittee's acts or omissions in connection with the permittee's undertaking of activities in connection with, or operation and maintenance of, the facility or facilities authorized by the permit whether in compliance or not in compliance with the terms and conditions of the permit. This indemnification does not extend to any claims, suits, actions, or damages to the extent attributable to DEC's own negligent or intentional acts or omissions, or to any claims, suits, or actions naming the DEC and arising under Article 78 of the New York Civil Practice Laws and Rules or any citizen suit or civil rights provision under federal or state laws.

**Item B: Permittee's Contractors to Comply with Permit**

The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

**Item C: Permittee Responsible for Obtaining Other Required Permits**

The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required to carry out the activities that are authorized by this permit.

**Item D: No Right to Trespass or Interfere with Riparian Rights**

This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.

**ATTACHMENT B**

**PART 360 Permitted Fields - See spreadsheets**

Reference the most recent annual report for an updated list of High P fields.

**Attachment B-2  
Part 360 Permitted Fields**

**The Following Permitted Fields Are Classified As Having A Very High P Index. No Manure or Other Phosphorous Containing Waste May Be Spread On These Fields. Note: The Very High P Index Designation May Be Removed From Or Applied To Individual Fields In The Future Dependent On Soil Analysis and NYSDEC Review and Approval**

<b>Field Identification Number</b>	<b>Total Field Area</b>	<b>Spreadable Acres, For permitted Wastes That Do Not Contain Manure and/ or Phosphorous</b>	<b>Spreadable Acres for Manure and Phosphorous Containing Wastes</b>
A1	29.1	26	0
A2	8.3	7.3	0
A3	6.9	6	0
A5N	16.1	13.9	0
A7	14.7	13	0
A11	38.6	28.4	0
A12 N	18.4	16.1	0
B2	14.3	14.3	0
B10	29	25.6	0
B14	5.1	5.1	0
B16	4.5	4.5	0
B17	12.4	12.4	0
C1	13.8	12.2	0
C3	25.6	20.2	0
C4	6.4	0.7	0
D1	29.2	26	0
D2	45.5	40.9	0
E3	19.5	16.9	0
F4	13.2	10.8	0
F5	2	2	0
F6	6.3	6.3	0
F7	8.6	8.6	0
F9	9.1	9.1	0
F10A	17.7	17.7	0
F10B	15.6	15.6	0
F11	21.2	18.8	0
F15	18.9	16	0
F20	22.2	19.3	0
F21	42.2	40.4	0
G2	5.2	3.2	0

**Attachment B-3  
Part 360 Permitted Fields**

<b>Waste Listed in Condition 12b, May Be Land Applied On These Fields When The Soil Of The Fields Is Snow Covered And/Or Frozen Contingent On The Restrictions Outlined In Special Condition 12b.</b>				
<b>Field Identification Number</b>	<b>Total Field Area</b>	<b>Spreadable Acres, For permitted Wastes That Do Not Contain Manure and/ or Phosphorous</b>	<b>Spreadable Acres for Manure and Phosphorous Containing Wastes</b>	<b>Area of the Field with a Slope Less Than 4% on Which Land Application Is Allowed On Frozen and or Snow Covered Ground (per condition 12)</b>
A1 *	29.1	26	0	All
B6	25.6	21.9	21.9	South
B8	5.1	5.1	5.1	East
B9	34.6	33.9	33.9	East
B10 *	29	25.6	0	All
B17 *	12.4	12.4	0	North
D2 *	45.5	40.9	0	Center
F20 *	22.2	19.3	0	All
F21 *	42.2	40.4	0	All
I1	17.3	12.1	12.1	All
M2	10	7.5	7.5	All
M5 *	21.4	21.4	0	All
N1	21.9	19.1	19.1	South
P1A *	25.7	24.5	0	All
R11	34.5	34.5	34.5	Center
ST4	20.2	16.4	16.4	North
V2	11.2	7.3	7.3	Part
<b>Total</b>	<b>407.9</b>	<b>309.59</b>	<b>157.80</b>	

\*This Fields Is Classified As Having A Very High P Index, No Manure or Other Phosphorous Containing Waste May Be Spread on This Field At Any Time. The Very High P Index Designation May Be Removed From This Field In The Future Dependent On Soil Analysis and NYSDEC Review And Approval.

**ATTACHMENT F**  
**APPLICABLE OPERATIONS REQUIREMENTS AND TABLES**

(5) include a written statement from the applicant that the land on which the project is proposed to be located is under the ownership or control of the applicant; and

(6) demonstrate that the quantity and types of waste proposed for use in the project are no more than those needed to satisfy the project's objectives.

(c) Prohibited projects. The department will not issue an RD&D permit under this section that would authorize:

(1) disposal of waste at a facility that would require a permit for a disposal facility regulated under Part 363 of this Title; or

(2) an activity whose primary purpose is to process commercial quantities of waste.

(d) Design and operating requirements.

(1) RD&D projects which include construction of buildings or structures must be performed under the direction of a professional engineer. All other RD&D projects must be performed under the direction of a professional engineer or a research scientist affiliated with an accredited university or research institution.

(2) Compliance with the 40 CFR Part 258 Criteria for Municipal Solid Waste Landfills, as incorporated by reference in section 360.3 of this Title, must be maintained for landfills subject to those requirements.

(3) The quantity and types of waste subject to the RD&D permit must not exceed those needed to effectively address the research objectives. After completion of the RD&D project, all waste must be removed from the project site unless the department authorizes the waste to remain on the project site.

(4) The department may require the permittee to comply with one or more of the design and

operating requirements under this Part and Parts 361, 362, 363, and 365 of this Title.

(5) Within 90 days after the expiration date of the RD&D permit, the permittee must submit to the department a project summary report that includes, at a minimum, the following information:

(i) a summary of the project objectives, information gathered, analyses conducted, and project results, including all monitoring and testing results; and

(ii) a description of any operating problems and the status of their resolution, any other limitations encountered, and areas of further study to be considered.

(iii) Permit duration and renewal. RD&D permits issued under this section will have a specified permit term not to exceed one year. Permits issued under this section will not be renewed more than three times.

#### Section 360.19 Operating requirements

(a) Applicability. Except as otherwise provided in this Part or in Parts 361, 362, 363, or 365, or Subpart 374-2 of this Title, the owner or operator of a facility that requires a permit or registration must comply with the requirements of this section.

(b) Water protection.

(1) The owner or operator of a facility must prevent waste from being deposited in or entering surface waters or groundwater.

(2) The owner or operator of a facility must operate the facility in a manner that minimizes the generation of leachate and that does not allow any leachate to enter surface waters or groundwater except under authority of a State Pollutant Discharge Elimination System permit.

**(c) Waste acceptance and control.**

(1) The owner or operator of a facility must institute, maintain, and enforce a waste control plan. Components of this plan must include, but not be limited to, the following measures to ensure that only authorized waste is accepted at the facility:

(i) posting clearly legible signs at all public access points indicating hours of operation and the types of waste accepted and not accepted;

(ii) inspecting incoming loads of waste; and

(iii) specifying which types of waste are authorized to be accepted in contracts with waste suppliers.

(iv) identifying materials intended for beneficial use, a marketing plan for those materials, and a plan for disposal or alternative use of materials that fail to meet the criteria for the intended beneficial use.

(v) in addition, landfills, combustion facilities, thermal treatment facilities, municipal solid waste processing facilities and transfer facilities must:

(a) educate users of their facilities on the proper methods for the management of electronic waste, including:

(1) providing written information annually to all potential users of the facility on the proper methods of recycling electronic waste;

(2) maintaining written information on-site and upon request, providing the information to users of the facility; and

(3) posting, in conspicuous locations at the facility, signs stating that electronic waste cannot be disposed of at the facility; and

(b) post a sign, in a conspicuous

location, stating that mercury-added thermostats are not accepted at the facility.

(2) Except for facilities regulated under section 360.17 and section 360.18 of this Part or Part 361, Part 365, or Subpart 362-4 of this Title, a facility must not accept waste from New York State that is generated within a municipality that is not included in a department-approved comprehensive recycling analysis (CRA) or a department-approved local solid waste management plan (LSWMP).

(3) The owner or operator of a facility must develop and implement a program to train facility staff to implement the waste control plan.

(4) If unauthorized waste is delivered to the facility it must be adequately segregated, secured, and contained in order to prevent leakage or contamination of the environment and must be removed within seven days after receipt, unless a different period is authorized by the department in the waste control plan. Transportation must be performed by a person authorized to transport the waste, and disposition must be to a facility or location authorized to receive the waste for management.

(i) If the owner or operator accepts unauthorized waste, the owner or operator must maintain at the facility a record of each incident identifying the type of waste and its final disposition. The owner or operator must include this information in the facility annual report. For each incident, the owner or operator must record:

(a) the date and time;

(b) a description of the incident;

(c) contact and vehicle information for the waste transporter that delivered the unauthorized waste;

(d) contact information for the generator of the unauthorized waste; and

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(e) a description of the response to the incident and the disposition of the waste.

(5) The owner or operator of a facility must not accept waste unless the vehicle transporting the waste is adequately covered or the waste is containerized. When leaving the facility, all vehicles containing waste must utilize a cover which prevents waste and leachate from escaping the vehicle, or the waste must be containerized.

(6) The owner or operator of a facility which is authorized to manage mercury-containing devices or mercury-added consumer products must not place any of those materials in a combustor or landfill, or direct the material to a combustor or landfill.

(7) If a facility provides a residential drop-off area for non-commercial vehicles to unload waste and recyclables, the owner or operator must provide a separate, designated area for that activity and must provide for collection of source-separated recyclables, if other collection is not provided to residents.

(8) The owner or operator of a facility must ensure that all waste leaving the facility is destined to be managed at a facility authorized by the department if located in this state, or authorized by the appropriate governmental agency or agencies if located in another state, territory, or nation.

(9) The owner or operator of a facility must ensure that all unloading and loading areas are adequate in size and designed to facilitate efficient movement of waste to and from the collection vehicles and to facilitate the unobstructed movement of vehicles.

(10) The owner or operator of a facility must ensure that all areas containing waste are strictly and continuously secured to prevent unauthorized access by use of fencing, gates, signs, natural barriers, or other suitable means as determined by the department. Waste must not

be used as a barrier.

(11) The owner or operator of a facility must ensure that storage volumes and throughput limits established by the requirements of this Part 360, 361, 362, 363, or 365 of this Title or by the volumes and throughput declared on the registration form for the facility are not exceeded.

(12) An attendant must be on duty at a facility which has permanent operating mechanical equipment whenever the facility is open.

(d) Operation and maintenance. The owner or operator of a facility must ensure that the following criteria are satisfied:

(1) All maintenance and operating activities at the facility are performed in accordance with the facility manual required by 360.16(c)(4) of this Part, if applicable.

(2) The facility accommodates expected traffic flow in a safe and efficient manner. Facility roadways are passable in all weather conditions.

(3) Tracking of soil, waste, leachate and other materials from the facility onto off-site roadways is prevented.

(4) All equipment, storage containers, and storage areas are sufficient for the quantity and type of waste managed at the facility. Adequate numbers, types, and sizes of properly maintained equipment are available during all hours of operation.

(5) All floors and working areas are adequately drained, properly maintained, and standing water is minimized. All drainage and wash waters are collected and handled in a manner acceptable to the department.

(6) The facility is properly graded to prevent soil erosion and to minimize ponding.

(7) Equipment and systems required to

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manage waste at the facility are properly operated, calibrated, and maintained at all times.

(8) Prior to leaving the facility, any vehicle containing waste must be covered with, at a minimum, a mesh or fabric cover acceptable to the department.

(9) If an unscheduled total facility shutdown exceeds 24 hours, the facility will immediately notify the department describing the incident and the proposed waste management activities.

(e) Routine inspection. The owner or operator of a facility must monitor and inspect the facility for malfunctions, deteriorations, operator errors, and incidents no less frequently than on a daily basis when the facility is open. The owner or operator of a facility must immediately undertake any and all measures needed to eliminate any violation of an operational, closure, or post-closure care requirement of this Part and of Part 361, 362, 363, and 365 of this Title. Measures taken do not preclude the department from exercising its enforcement powers.

(f) Confinement of waste. The owner or operator of a facility must ensure that waste at the facility is confined to an area that can be effectively maintained, operated, and controlled; and that blowing litter is confined to waste holding and

operating areas by fencing or other suitable means. Any litter outside the waste holding area must be controlled.

(g) Dust control. The owner or operator of a facility must ensure that dust is effectively controlled so that it does not constitute a nuisance as determined by the department; and must undertake any and all measures as required by the department to maintain and control dust at and emanating from the facility.

(h) Vector control. The owner or operator of a facility must effectively control on-site populations of vectors.

(i) Odor control. The owner or operator of a facility must ensure that odors are effectively controlled so that they do not constitute a nuisance as determined by the department.

(j) Noise. The owner or operator of a facility must ensure that noise (other than that occurring during construction of the facility) resulting from equipment or operations at the facility does not exceed the following energy equivalent sound levels beyond the property line owned or controlled by the owner or operator of the facility at locations authorized for residential purposes:

Character of Community within a one-mile radius of facility	Leq Energy Equivalent Sound Levels	
	7 a.m. to 10 p.m.	10 p.m. to 7 a.m.
Rural	57 decibels (A)	47 decibels (A)
Suburban	62 decibels (A)	52 decibels (A)
Urban	67 decibels (A)	57 decibels (A)

The Leq is the equivalent steady-state sound level which contains the same acoustic energy as the time varying sound level during a one-hour period. It is not necessary that the measurements be taken over a full one-hour time interval, but sufficient measurements must be available to allow a valid extrapolation to a one-hour time interval.

(1) If the background sound level exceeds the referenced Leq sound level limit, the Leq sound levels from facility sources and background sources when combined must not exceed the Leq sound level of the background sources alone by more than 3 decibels (A).

(2) The background sound level, measured as  $L_{eq}$ , is the existing ambient sound level during a period of peak acoustical energy measured in the absence of sound produced by equipment or operations at the facility. A background sound level monitoring protocol must be submitted to the Department for approval prior to conducting background measurements.

(3) Sound levels must be measured using the slow time constant and A-weighting. During the measurement period, no precipitation must occur and wind speeds must not exceed 12 miles per hour.

(4) Measuring instruments must be Type 1 or Class 1 precision sound level meters, Type 2 or Class 2 general purpose sound level meters, or corresponding special sound level meters Type S1A or S2A.

(5) Noise assessments must include details of the attenuation factors and calculations utilized. Noise assessment calculations are allowed to utilize average annual conditions when calculating atmospheric attenuation.

(6) Mufflers are required on all internal combustion-powered equipment used at the facility.

(k) Recordkeeping and reporting.

(1) Application documents. The owner or operator of a facility must maintain at the facility or other approved location, and make readily available for inspection throughout the life of the facility including the post-closure care period and the custodial care period, a copy of all information and data required as part of the application for the permit or submittal for registration, as well as construction certification and closure construction certification documents.

(2) Operating records. The owner or operator of a facility must maintain at the facility or other approved location, and make readily available for inspection for a period of no less than seven years

from the date a particular record was created, the following operating records:

(i) A daily log of wastes received that identifies the waste type, quantity, date received, and planning unit where the waste was generated, and the quantity and destination of any waste, products or recyclables that are removed from the facility.

(ii) Routine inspection logs that must include, at a minimum, the following information: the date and time of the inspection, the name of the inspector, a description of the inspection including the identity of specific equipment and structures inspected, the observations recorded, and the date and nature of any remedial actions implemented or repairs made as a result of the inspection.

(iii) All monitoring information necessary for compliance with the requirements of this Part and the requirements applicable to permitted facilities in Parts 361, 362, 363, and 365 of this Title.

(iv) Records documenting training programs, schedules, and certifications as required.

(v) Any other information required in a permit or registration under this Part or that the department may require be created and maintained as part of the daily operating records.

(3) Annual report.

(i) The owner or operator of a facility must submit a completed annual report in a format acceptable to the department no later than March 1 of each year for the previous calendar year, on forms prescribed by the department.

(ii) The owner or operator of a facility required to report to the department related to the facility's compliance under this Part or Parts 361, 362, 363, or 365 of this Title, or under the terms of any permit issued under this Part, must make,

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sign, and submit with the report the following certification:

I certify, under penalty of law, that the data and other information identified in this report have been prepared under my direction and supervision in compliance with the system designed to ensure that qualified personnel properly and accurately gather and evaluate this information. I am aware that any false statement I make in such report is punishable pursuant to section 71-2703(2) of the Environmental Conservation Law and section 210.45 of the Penal Law.

(l) Personnel training. The owner or operator of a facility must ensure sufficient and appropriately trained staff are available to manage the quantity and type of waste that will be handled at the facility.

(m) Emergency Response. The owner or operator of a facility must adequately respond to emergencies such as fires, explosions, natural disasters, and spills that occur at the facility.

(n) Tank Requirements. The owner or operator of a facility that includes tanks for waste storage must comply with the following requirements:

(1) All tanks must:

(i) be chemically compatible with the waste being stored;

(ii) be equipped with an overfill prevention system in good working order; and

(iii) have double-walled construction with leak detection, if deemed necessary by the department.

(2) If required by the department, above ground tanks must:

(i) have and maintain a secondary containment system that is compatible with the waste being stored;

(ii) have a secondary containment system designed and built to contain 110 percent of the volume of either the largest tank within the containment system or the total volume of all interconnected tanks, whichever is greater;

(iii) be located on a stable surface which prevents movement, rolling, or settling;

(iv) have a system to remove stormwater from the secondary containment area. Precipitation removal (rain, snow, or ice) must be initiated before ten percent of the storage capacity is reached; and

(v) have a minimum of two feet of freeboard if open on the top.

(3) Self inspection requirements for tanks and related equipment:

(i) tanks must be inspected on no less than a monthly basis when waste is present in the tank, and the interior inspected whenever emptied;

(ii) if the inspection reveals a leak or any other deficiency that would result in failure of the tank, remedial measures must be taken immediately to eliminate the leak or correct the deficiency; and

(iii) the overfill protection system must be inspected monthly when waste is present in the tank.

#### Section 360.20 Environmental monitoring services

(a) The department may require environmental monitoring services at any facility anytime during the construction, operation, closure, and post-closure of the facility to be paid for by the facility where:

(1) environmental monitoring services are required by law;

(3) In addition to the analyses required in paragraph 361-2.4(e)(1) of this section, the following analyses, in whole or part, may be required, as determined by the department:

(i) fecal coliform, Salmonella sp., enteric viruses, viable helminth ova, other applicable pathogens; and

(ii) any or all of the pollutants identified in Part 375 of this Title or by the department.

(4) An outline of the proposed application rates and justification for the values chosen.

(5) For waste containing any domestic sewage or septage, a detailed description of the processes to reduce pathogenic organisms and vector attraction or sufficient data to demonstrate that human pathogenic organisms are not present in the waste.

(6) A waste monitoring, sampling, and analysis plan that outlines:

(i) the location, purpose, frequency and method for waste sampling;

(ii) the analytical parameters;

(iii) the protocol used to obtain representative samples and for the preparation and preservation of samples; and

(iv) and the laboratory that will be used for analyses.

**Section 361-2.5 Design and operating requirements for land application facilities**

A land application facility required to obtain a permit must, in addition to the requirements identified in Part 360 of this Title, design, construct, maintain, and operate the facility in compliance with the following criteria. For facilities under this section, a closure

plan and financial assurance are not required.

(a) Pollutant limits.

(1) Each waste destined for land application must not exceed the pollutant concentrations found in Table 6 in section 361-3.9 of this Part.

(2) If the waste contains pollutants at concentrations greater than those set forth in this subdivision, a permit for a land application facility will not be issued unless the generator has implemented an identification and abatement program and has remained in compliance with the requirements of this subdivision for a period of at least six continuous months. At least six analyses for total solids and the parameter(s) of concern must be provided to the department to demonstrate compliance.

(3) Wastewater and partially treated biosolids that are generated at one treatment plant and treated at another wastewater treatment facility before land application are not considered separate waste sources.

(b) Land application criteria.

(1) The minimum horizontal distance from the perimeter of the land application area must comply with the values found in the following table with respect to listed features that exist at the time the initial permit application is submitted to the department.

Feature	Minimum horizontal separation distance (in feet)
Property line.....	50
Residence, place of business, or public contact area when waste is not injected* .....	500
Residence, place of business, or public contact area when waste is injected* .....	200
Potable water well.....	200
Surface water and State regulated wetland when waste is not injected** .....	200

Surface water and State regulated wetland when waste is injected.....	100
Drainage swale.....	25

- \* Excludes owner's or operator's residence  
 \*\* For food processing waste: 100 feet

(2) Land application is prohibited in areas where groundwater is within 24 inches of the ground surface at the time of application. Verification of depth to groundwater prior to application can be required by the department. If the field is tiled, the top of the tile must be at least 24 inches below the ground surface and the discharge of the tile must be at least 200 feet from a potable well, surface water, and state-regulated wetland.

(3) Land application is prohibited in areas where bedrock lies less than 24 inches below the ground surface.

(4) The hydraulic loading must not exceed 16,000 gallons per acre in any 24-hour period.

(5) Land application is prohibited on land with a slope exceeding 15 percent. Land application of waste with a total solids content of less than 15 percent is prohibited on land with a slope greater than eight percent, unless incorporated within one hour of application along paths parallel to contour lines for the land.

(6) Land application is prohibited in special flood hazard areas unless approved by the department.

(7) The land application rate must not exceed the lower of the agronomic rate or, for waste with neutralizing value, the application rate needed to achieve a soil pH value in an acceptable range for the crop grown. The department can restrict the application rate based on a nutrient other than nitrogen, such as phosphorus. The application rate must be sufficiently reduced to ensure appropriate application rates are not exceeded if supplemental fertilizer (including manure) will be applied to the site.

(8) In all cases, the waste must be incorporated into the soil within 24 hours after application, unless a cover crop would be damaged by incorporation and concerns regarding odor and run-off can be mitigated by other means approved by the department. If incorporation is used for vector attraction reduction, the period before incorporation is limited to six hours or less.

(9) Land application is prohibited on water-saturated ground or during heavy rainfall. Land application is prohibited on snow-covered or frozen ground, except by direct injection below the land surface. Adequate storage or disposal facilities must be available for periods during the year when waste cannot be applied.

(10) Land application is permitted on all soil types that are capable of supporting the robust growth of the crop grown. The use of active farmland is sufficient to demonstrate compliance with this requirement. Otherwise, sufficient information must be provided to demonstrate compliance.

(11) Proper soil conservation practices and agricultural management practices must be used to minimize run-off and soil loss through erosion.

(12) The temporary field stacking of biosolids prior to land application is allowed, provided the following criteria are met:

(i) the storage period is a maximum of 30 days;

(ii) the residuals are stored on the field where they will be applied and the amount stored does not exceed the amount that will be land applied on the site;

(iii) the storage area complies with the site criteria outlined in paragraphs 360-2.5(b)(1), (2), (3), (6), and (10) of this Subpart;

(iv) the storage area must not be located on

areas with a slope greater than three percent;

(v) the residuals must have sufficient solids content that they will retain their shape if stacked three feet high and must be formed so that precipitation is shed from the pile;

(vi) any run-off from the stockpile must be contained within the land application site; and

(vii) after removal of the residuals, the storage area must be reseeded.

**(b) Monitoring, recordkeeping, and reporting.**

(1) Sufficient monitoring data and other information needed to demonstrate compliance with the requirements of this Subpart must be obtained. The frequency and type of monitoring necessary for pathogen and vector attraction reduction will be determined by the department on a case-specific basis and will depend on the monitoring methods employed.

(2) The annual report required by paragraph 360.19(k)(3) of this Title must include:

(i) the location of each field used for land application and the acreage used for land application on the field;

(ii) the crop(s) grown on each field;

(iii) the total quantity of waste applied on each field;

(iv) calculations showing the hydraulic loading and nutrient loading for the fields used for land application;

(v) all analytical results required by this Subpart, including copies of all laboratory reports;

(vi) monitoring data and information to demonstrate compliance with the pathogen and vector attraction reduction requirements of this

Subpart, if required;

(vii) for biosolids land application, the following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with Subpart 361-2 of 6 NYCRR Part 361 has been prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that false statements made herein are punishable pursuant to section 210.45 of the penal law."

This statement must be signed by the permit holder or an authorized agent and indicate the name and title of the individual signing;

(viii) a description of any difficulties encountered during land application; any complaints arising as a result of the land application operation and the corrective measures taken; and

(ix) a revised management plan for land application for the next year based on previous application rates and crop planting patterns for the next year. The plan must include an identification of the crops to be grown, fields to be used, and revised nutrient and hydraulic loading rates. All calculations must be included.

(c) Biosolids application. In addition to the requirements identified in subdivisions 361-2.5(a) through (c) of this Subpart, a land application facility including biosolids must comply with the following criteria.

**(1) Land application criteria.**

(i) Soil pH must be adjusted to 6.0 standard units or higher before land application unless lime-stabilized biosolids is used. If lime-stabilized biosolids is used, the soil pH must be 6.0 standard units or higher after waste application.

(ii) Land application must not adversely affect a threatened or endangered species or its designated critical habitat.

(iii) The annual cadmium application rate must not exceed 0.45 pounds per acre.

(2) Pathogen and vector attraction reduction.

(i) One of the following Class B pathogen reduction alternatives must be satisfied.

(a) Class B - Alternative 1. The biosolids must be treated by one of the following processes:

(1) Aerobic digestion. Biosolids is agitated with air or oxygen to maintain aerobic conditions for a mean cell residence time of at least 40 days at 20 degrees Celsius or greater or at least 60 days if the temperature is less than 20 degrees Celsius but greater than or equal to 15 degrees Celsius.

(2) Air drying. Biosolids is dried on sand beds or on paved or unpaved basins, at a maximum depth of nine inches. The biosolids must dry for a minimum of three months. During at least two of the three months, the ambient average daily temperature must be above zero degrees Celsius.

(3) Anaerobic digestion. Biosolids is treated in the absence of air for a mean cell residence time of at least 15 days at 35 degrees Celsius or greater or at least 60 days at less than 35 degrees Celsius but greater than or equal to 20 degrees Celsius.

(4) Composting. Using the within-vessel, aerated static pile or windrow composting methods, the temperature of the biosolids is raised to 40 degrees Celsius or higher and remains at 40 degrees Celsius or higher for five consecutive days. For at least 4 consecutive hours during the five days, the temperature in the compost pile must exceed 55 degrees Celsius.

(5) Lime stabilization. Sufficient lime must be added to the biosolids to raise the pH of the biosolids to 12 standard units and maintain this pH for a period of at least two hours.

(6) Other methods. Other methods or operating conditions may be acceptable if pathogens are reduced to an extent equivalent to the reduction achieved by any of the above methods and must be approved by the department; or

(b) Class B - Alternative 2. The geometric mean of the density of fecal coliform of seven analyses representative of the biosolids to be land-applied must be less than either 2,000,000 Most Probable Number per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

(ii) One of the following vector attraction reduction requirements must be satisfied:

(a) the mass of volatile solids in the biosolids is reduced by a minimum of 38 percent;

(b) if the volatile solids reduction requirement cannot be met for anaerobically digested biosolids, vector attraction reduction can be demonstrated by anaerobically digesting a portion of the previously digested waste in a laboratory bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. Vector attraction reduction is achieved if the bench-scale digestion produces less than a 17 percent reduction in volatile solids content;

(c) if the volatile solids reduction requirement cannot be met for aerobically digested biosolids, vector attraction reduction can be demonstrated by aerobically digesting a portion of the previously digested waste that has a percent solids of two percent or less in a laboratory bench-scale unit for an additional 30 days at 20 degrees Celsius. Vector attraction reduction is achieved if the bench scale digestion produces less than a 15 percent



reduction in volatile solids content;

(d) the specific oxygen uptake rate (SOUR) for biosolids treated in an aerobic process must be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius;

(e) biosolids is treated by an aerobic process for a minimum of 14 consecutive days. Throughout that treatment time, the temperature of the waste must remain higher than 40 degrees Celsius and the average temperature of the waste must be higher than 45 degrees Celsius;

(f) the pH of the biosolids must be raised to 12 standard units or higher by alkali addition and, without the addition of more alkali, must remain at 12 standard units or higher for two hours and then remain at 11.5 standard units or higher for an additional 22 hours;

(g) for biosolids that does not contain untreated solids generated in a primary wastewater treatment process, the percent solids of the waste must be equal to or greater than 75 percent, before mixing with other materials, until land application;

(h) for biosolids that contains untreated solids generated in a primary wastewater treatment process, the percent solids of the waste must be equal to or greater than 90 percent, before mixing with other materials, until land application;

(i) biosolids must be injected below the surface of the land. No significant amount of waste can be present on the land surface within one hour after the waste is applied; or

(j) biosolids must be incorporated into the soil within six hours after application on the land.

(iii) Access and crop restrictions:

(a) public access to land must be restricted during land application and for at least one

year after land application. Access must be controlled during that period by the use of posted signs, the use of fences and gates or other appropriate means;

(b) food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface must not be grown for at least 14 months after land application. Food crops with harvested parts below the surface of the land must not be grown for at least 38 months after land application;

(c) food crops grown above the soil with harvested parts that do not touch the biosolids/soil mixture, feed crops and fiber crops must not be grown for at least 30 days after land application;

(d) animals must not be grazed on the land for at least 30 days after land application; and

(e) turf grown on land where biosolids has been applied must not be grown for one year after land application when the harvested turf will be placed on either land with a high potential for public exposure or a lawn.

(3) Monitoring, recordkeeping and reporting.

(i) Each biosolids source must be analyzed annually in accordance with the following:

(a) the parameters for analysis are found in Table 1 in section 361-3.9 of this Part;

(b) the minimum number of analyses, for each biosolids source, is dependent upon the amount of waste that was land applied, as indicated in Table 3 in section 361-3.9 of this Part;

(c) with the exception of pH and total solids, all results must be reported on a dry weight basis. The analyses must comply with the criteria found in clauses 361-2.4(e)(1)(ii)(f), (g); and (j) of this Subpart. After the waste has been monitored for two years at the frequency outlined in this paragraph,

the department can reduce the annual number of analyses required if the quality is consistently significantly below the quality standards; and

(d) wastewater and partially treated biosolids that are generated at one facility and treated at another wastewater treatment facility before land application are not considered separate sources subject to the criteria in this paragraph. The resultant biosolids generated for land application are subject to this paragraph.

(ii) Sufficient monitoring data and other information must be obtained and retained to demonstrate compliance with the requirements of this Subpart. The frequency and type of monitoring necessary to demonstrate compliance with pathogen and vector attraction reduction criteria will depend on the methods used, and will be determined by the department.

(iii) Annual soil sampling is required. Criteria applicable to annual soil sampling are found in paragraph 361-2.4(e)(5) of this Subpart.

(e) Land application of other waste. In addition to the requirements identified in subdivisions 361-2.5(a) through (c) of this Subpart, a facility for waste other than biosolids or septage must comply with the following criteria:

(1) Domestic sewage or septage content. If there is any domestic sewage or septage contribution to the treatment facility generating the waste, the waste treatment process must satisfy the pathogen and vector attraction reduction requirements of this Subpart unless it can be demonstrated that the sanitary waste is a minor portion of the waste stream and that *Salmonella* sp. bacteria, enteric viruses, and viable helminth ova are below detectable levels.

(2) Nutrient or lime content. The waste must contain at least one percent total Kjeldahl nitrogen or at least 50 percent calcium carbonate equivalence, or provide sufficient documentation to demonstrate that the material is a benefit to the soil or plant grown.

(3) Monitoring, recordkeeping, and reporting. Annual waste monitoring can be required, depending on the characteristics of the waste. The parameters for analysis and the frequency will be determined by the department depending on the quantity and quality of the waste.

#### **Section 361-2.6 Permit application requirements for storage facilities**

A storage facility for waste destined for land application, that is not an exempt facility or subject to the registration provisions of section 361-2.3 of this Subpart, must obtain a permit and must submit an application that includes the requirements identified in this section and section 360.16. The application must include:

(a) For surface impoundments, a construction plan for the facility including a construction quality assurance/construction quality control plan.

(b) For surface impoundments, a hydrogeologic report that is consistent with the applicable provisions of Part 363 and that identifies or characterizes the depth to groundwater and bedrock, the critical stratigraphic section and the direction of groundwater flow. The report must also discuss the monitorability of the facility, location of any recharge areas for primary or principal aquifers and the location of any unstable areas.

(c) A description of how the facility will comply with the operating requirements in Part 360 of this Title and section 361-2.7 of this Subpart.

#### **Section 361-2.7 Design and operating requirements for storage facilities**

A storage facility required to obtain a permit must, in addition to the requirements identified in Part 360 of this Title, design, construct, maintain, and operate the facility in compliance with the following criteria.

(a) The minimum horizontal separation distances from the perimeter of the storage facility must be, at a minimum, 50 feet to the property line, 100 feet to a surface water body or potable water well, and 500 feet (1,500 feet for a surface impoundment or open tank) to a residence, place of business, or public contact area. The separation requirement does not apply to the landowner's or operator's residence.

(b) All samples obtained from the storage facility must be representative of the waste stored. The number of samples necessary will be determined by the department based on the waste type and quantity of waste stored.

(c) All storage facilities must be completely emptied, cleaned, and inspected at least once every 12 months. The department must be notified at least five business days before the cleaning operation is begun. Any damage or deterioration revealed by the inspection must be repaired before the storage facility again receives waste.

(d) Surface impoundments must be constructed above the special flood hazard area and must be constructed with a liner system to minimize percolation. The liner system must consist of either a minimum of two feet of compacted soil having a maximum remolded hydraulic conductivity of  $1 \times 10^{-7}$  centimeters per second or a geomembrane material approved by the department. The soil material particles must be able to pass through a one-inch screen.

(e) For surface impoundments, the facility must be monitorable and must not be located within the recharge area of a primary or principal aquifer or in an unstable area.

(f) If soil is used for a liner, the construction criteria in subparagraphs 363-6.7(b)(2)(ii) and (iii) of this Title apply.

(g) Surface impoundments must maintain a minimum of two feet of freeboard. The bottom of

the impoundment liner system must be a minimum of five feet above both seasonal high groundwater and bedrock.

(h) A minimum of one upgradient and two downgradient monitoring wells, or more as determined by the department, must be installed at a surface impoundment facility. If multiple surface impoundments are used and are not in close proximity to each other, then each impoundment must have separate monitoring well arrays.

(i) Existing water quality must be established before placement of any waste in a surface impoundment.

(j) Storage facilities other than surface impoundments can be constructed of concrete, steel, or other material approved by the department. The storage facility must be designed to maintain a minimum of two feet of freeboard.

(k) Quarterly sampling of the wells at surface impoundments must be conducted for the following parameters: chloride, nitrate, ammonia, sulfate, specific conductivity, total hardness, alkalinity, total organic carbon and chemical oxygen demand. In addition, for biosolids storage facilities, annual sampling is required for the following parameters: arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, boron, barium, beryllium, cyanide, turbidity and volatile organic compounds. All samples must be representative of the material sampled. All analyses must be performed by a laboratory certified by the Department of Health, using methods acceptable to the department, unless use of an alternate laboratory or method is authorized by the department.

(1) The department can require sampling for additional parameters based on the type of waste stored and past monitoring results.

(2) Sampling results reported to the department must include a copy of the laboratory results, sampling methods, sampling personnel, dates and times samples were taken, purge volumes, field

parameters and other relevant information.

(3) The department must be notified at least five business days before each sampling event.

## Section 361-3.9 Tables

Table 1  
Parameters for Analysis

Total Kjeldahl Nitrogen	Arsenic (As)	Products must also analyze for:
Ammonia	Cadmium (Cd)	
Nitrate	Chromium (total) (Cr)	Fecal coliform or Salmonella sp. bacteria
Total Phosphorous	Copper (Cu)	
Total Potassium	Lead (Pb)	
pH	Mercury (Hg)	
Total Solids	Molybdenum (Mo)	
Total Volatile Solids	Nickel (Ni)	
	Selenium (Se)	
	Zinc (Zn)	

**Table 2**  
**Analyses Required with Permit Application**

Biosolids/Sludge Used (dry tons/year)	Minimum Number of Analyses
>15,000	12
>2,500 to 15,000	6
200 to 2,500	3
25 to 199	2
<25	1

**Table 3**  
**Analyses Required During Operation - Biosolids**

Biosolids Used (dry tons/year)	Minimum Number of Analyses	Reduced Frequency for Low Pollutants*
>15,000	24	12
>2,500 to 15,000	12	6
200 to 2,500	6	4
25 to 199	4	2
<25	2	1

\*Applies to facilities where two consecutive years of biosolids pollutant levels are all at or below one-half of the limits found in Table 6 if approved by the department.

**Table 4**  
**Annual Product Testing Frequency - Biosolids/Sludge/MSW**

Average Product Generated (cubic yards per day)	Number of Analyses
>50	52
5-50	12
<5	6

**Table 5**  
**Annual Product Testing Frequency - SSO**

Average Product Generated (cubic yards per day)	Number of Analyses
>50	12
5-50	4
<5	2

Table 6  
Pollutant Limits

Parameter	Maximum Concentration mg/kg, dry weight
Arsenic (As)	41
Cadmium (Cd)	10
Chromium (Cr-total)	1,000
Copper (Cu)	1,500
Lead (Pb)	300
Mercury (Hg)	10
Molybdenum (Mo)	40
Nickel (Ni)	200
Selenium (Se)	100
Zinc (Zn)	2,500



## ATTACHMENT A

### Approved Waste Sources

1) Stabilized biosolids generated from the following sources may be accepted for land application contingent on meeting the requirements of this permit.

- Addison, NY Village of: WWTP
- Bath, NY Village of: WWTP
- Canisteo, NY Village of: WWTP
- Castile NY Village of: WWTP
- Cayuga Heights NY Village of: WWTP
- Conesus Lake County Sewer District, NY WWTP
- Dryden, NY Village of: WWTP
- Knoxville, PA Borough of: WWTP
- Montour Falls, NY Village of: WWTP
- Nelson Township, PA: WWTP
- Alfred, NY Village of: WWTP
- Dansville, NY Village of: WWTP
- Dundee, NY Village of: WWTP
- Elkland Borough, PA: WWTP
- Lawrence Borough Authority, PA: WWTP
- Perry, NY Village of: WWTP
- Sabinsville, PA Village of: WWTP
- Trumansburg, NY Village of: WWTP
- Owego, NY Town of: WWTP
- Warsaw, NY Village of: WWTP
- Watkins Glen, NY Village of: WWTP
- Waverly, NY Village of: WWTP
- Wayland, NY Village of: WWTP
- Westfield, PA Borough of: WWTP
- Whitney Point, NY Town of WWTP
- Nunda, NY Village of: WWTP
- Portville, NY Village of: WWTP
- Hornell, NY City of: WWTP Backwash  
Collection Lagoon Sludge

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2) Food Processing Waste Generated at:

- LePrino Foods - Waverly, PA
- Dietrichs Foods (Dairy Farmers of America) - Middlebury Center, PA
- Upstate (formally Kraft Foods) - Campbell, NY
- Kraft Foods - Lowville, NY
- Kraft Foods - Avon, NY
- Quest - Kerry Bio Science in Norwich NY
- Rejected raw milk load - independent haulers loads rejected by Kraft in Campbell

**Attachment B-1  
Part 360 Permitted Fields**

<b>Field Identification Number</b>	<b>Total Field Area</b>	<b>Spreadable Acres</b>
A1	29.1	26
A2	8.3	7.3
A3	6.9	6
A4	5.2	0.2
A5N	16.1	13.9
A5S	10.1	7.7
A7	14.7	13
A8	3.6	3.6
A9	13.3	10.1
A11	38.6	28.4
A12 N	18.4	16.1
A12 S	11.8	9.3
B1	7.2	4.4
B2	14.3	14.3
B3	9.5	3.6
B4	17.6	11.4
B5	10.4	6.8
B6	25.6	21.9
B8	5.1	5.1
B9	34.6	33.9
B10	29	25.6
B11	5.7	5.7
B12	7.8	7.8
B13	4.4	4.4
B14	5.1	5.1
B15	8.7	8.7
B16	4.5	4.5
B17	12.4	12.4
C1	13.8	12.2
C2	2.8	1.9
C3	25.6	20.2
C4	6.4	0.7
C6	7.2	5.8
C7	6	5
C8	7.9	1.4
C9	28.9	26.8
C10A	5.6	5.6

**Attachment B-1  
Part 360 Permitted Fields**

<b>Field Identification Number</b>	<b>Total Field Area</b>	<b>Spreadable Acres</b>
C11	5.3	5.3
C12	3.7	3.7
C13	7	7
D1	29.2	26
D2	45.5	40.9
E1	27	10.1
E3	19.5	16.9
E4	13.2	11.5
E5	6.1	5.4
E6	13	11.3
F1	11	5.7
F2	27.7	17.3
F3	12.6	10.6
F4	13.2	10.8
F5	2	2
F6	6.3	6.3
F7	8.6	8.6
F8	9.2	9.2
F9	9.1	9.1
F10A	17.7	17.7
F10B	15.6	15.6
F11	21.2	18.8
F12	21.4	21.4
F13	7.5	7.5
F15	18.9	16
F16	20.8	17.7
F17	10.5	8.7
F19	12.5	12.5
F20	22.2	19.3
F21	42.2	40.4
F23	23.5	20.9
G1	11.5	9.3
G2	5.2	3.2
G3	27.2	27.2
H1	20.6	20.6
H2A	6.7	4.5
H2B	6.7	6.7

Attachment B-1  
Part 360 Permitted Fields

Field Identification Number	Total Field Area	Spreadable Acres
H2C	15.3	15.3
H3	53.8	40.2
H4	12.2	12.2
I1	17.3	12.1
I1	19.4	13
I2	22.4	22.4
I3	15.6	15.6
I4	14.8	12.8
K1	40.2	33.3
L1	17.1	4.7
L2	25.1	15.2
M1	5.5	5.5
M2	10	7.5
M3	10.3	10.3
M4	12.7	12.7
M5	21.4	21.4
N1	21.9	19.1
O1	17.6	16.8
O2	12	10
P1A	25.7	24.5
P1B	18.8	11.8
Q1	11.7	11.7
Q2	21.5	21.5
Q3	11.7	11.7
Q4	18.3	3.3
Q5	18.6	3.4
Q6	13.9	8.1
Q7	7.6	2.1
Q8	7.9	0
Q9	8.2	8.2
Q10	9.3	8
Q11	14.6	4.3
Q12	10.2	5.9
Q13	13.3	13.3
Q14	15.5	13.5
R1	5.8	2.6
R2	6	0.04

**Attachment B-1  
Part 360 Permitted Fields**

<b>Field Identification Number</b>	<b>Total Field Area</b>	<b>Spreadable Acres</b>
R3	8.3	4
R4	15.6	7.2
R5-A	21.1	19.2
R6	29.4	14.2
R7	11.4	1.3
R8	8.9	1.2
R9	6.8	6.8
R10	14.7	14.7
R11	34.5	34.5
R12 A	11.4	10.3
R12 B	10.8	9.7
R13	9	6.9
R14	8.2	3.5
ST1	24.3	24.3
ST2	5.5	5.5
ST3	35.9	32.7
ST4	20.2	16.4
ST5	27.6	27.6
ST6	22.5	22.5
ST7	8.4	8.4
ST8	13.8	11
ST9	4.5	4.5
ST11	26.8	26.8
ST12	4.3	4.3
ST13	3.7	3.7
ST14	1.6	1.6
ST15	5.3	1.9
ST16	11.8	11.8
ST17	4	4
ST18	9.1	9.1
ST19	5.1	5.1
ST20	5.6	5.6
U1	16.4	16.4
U2	14.6	14.6
V1	5.5	3.7
V2	11.2	7.3
V3	8.5	6.9
W1	28.2	19.3
W4A	20.3	17.3

**Attachment B-1  
Part 360 Permitted Fields**

<b>Field Identification Number</b>	<b>Total Field Area</b>	<b>Spreadable Acres</b>
W4B	20.8	20.5
W6	25.1	21.4
W8	11.7	9
W9	41.8	38.8
<b>Totals</b>	<b>2300.7</b>	<b>1892.04</b>

**ATTACHMENT C**  
**ON-SITE LIQUID WASTE STORAGE FACILITIES**

**1. Covered Lagoon**

Manure Only

CAFO Regulations apply

**2. Pond #1**

Manure Only

CAFO Regulations apply, and  
must have certified depth markers.

**3. Pond #2 (Spread Pond)**

Food Waste Only

666,400 gallons capacity, 2.0 feet minimum freeboard, and  
must have certified depth markers.

**4. Pond #3 (Recirculation Pond)**

Food Waste/Manure mixture

2,206,000 gallon capacity, 2.0 feet minimum freeboard, and  
must have certified depth markers.

**5. Pond #4 (Irrigation Pond)**

Food Waste/Manure mixture

3,640,000 gallon capacity, 2.0 feet minimum freeboard, and  
must have certified depth markers.

**6. Receiving Mix Tank (concrete storage tank)**

Food Waste Only

71,800 gallon capacity, 2.0 feet minimum freeboard, and  
must have certified depth markers.

**7. Helfer Barn concrete storage tank**

Permitted Storage Tank:

Part 361-2.7 Regulations apply

Liquid Biosolids, Manure, Liquid Food Processing Waste, or mixture of the three.

53,100 gallon storage capacity, 2.0 feet minimum, and  
must have certified depth markers.

**ATTACHMENT D**

**VARIANCES and BIOSOLIDS ANALYTICAL TESTING REQUIREMENTS**

**Justification for the following variances must be submitted to the Department by March 1, 2018.**

The surface impoundments located immediately south and east of the compost building exempted from the requirements of 361-2.7 (c), (d), (f), (i), and (k), as per the variance request dated 3/30/2018 from Phillip Dickson and received by the Department on 4/6/2018. This variance was reviewed and reauthorized by Division of Materials Management staff, as previously authorized by a letter dated 12/18/2012 from Salvatore Ervolina, NYSDEC Director of the Division of Materials Management.

**BIOSOLIDS ANALYTICAL TESTING REQUIREMENTS**

Biosolids from these sources are authorized to be land applied at the Dickson facility.

Village of Watkins Glen

Sampling events required reduced from four to two events per year.

Village of Montour Falls

Sampling events required reduced from four to two events per year.

Borough of Westfield

Sampling events required reduced from four to two events per year.

Village of Bath

Sampling event required reduced from six to four events per year

Village of Warsaw

Sampling events required reduced from six to four events per year.

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**Attachment E**

**Waste Streams, Incorporation, Setback and Sampling Requirements Summary**

Waste Stream	Sources	Subsequent Destinations	Incorporation Requirements	Setback Requirements	Waste Stream Sampling	Loading and Other
1) Manure Only	Main Barn Pond	Direct to cropland or Manure Reception Separation Storage, then Covered Lagoon	None	Potable well: 100' Surface Water (SW) or Wetland : 200'  (Also refer to CAFP Permit and NRCS standards)	Annually from all sources including covered lagoon and Pond No. 1	None to be spread on fields with very high P-index (red shaded on maps).
	Heifer Barn In-ground Storage	Direct to cropland or Manure Reception Separation Storage, then Covered Lagoon				
	Covered Lagoon	Pond No. 1 or cropland				
	Pond No 1	Pond No. 3 or cropland				
	Bedded Pack in Hoppers	Windrow Compost				
2) Liquid Food Waste	Receiving Mix Tank	Pond No. 2	Direct Injection or the equivalent	Drainage Swale: 25' Property Line: 50' Potable Well: 200' SW or Wetland: 200' Residence: 500'	One sample annually for each waste stream at source. One sample Quarterly from Pond No. 2. Group A parameters. See condition #21 for details.	No Phosphorous containing waste to be spread on fields with high P-index.
	Pond No 2	To Cropland (or Pond No. 3)				
	Direct tanker to cropland					
3) Solid Food Processing Waste Only	Windfall Road Reload Station & Other Satellite Temporary Storage Locations	To Cropland	Incorporated within 24 hours	Same as 2) above	One sample annually for each waste stream. Group A parameters. See condition #21 for details.	No Phosphorous containing waste to be spread on fields with high P-index.
4) Food Waste and Manure Blend	Pond No. 3	To Cropland or the Irrigation Pond	Direct Injection or the equivalent	Same as in 2) above	One sample quarterly @ Pond No. 3. Group A parameters. See condition #21 for details.	None to be spread on fields with very high P-index (shaded red).
5) Food Waste and Manure and Bunk Leachate	Irrigation Pond	Direct to cropland by Irrigation Reel or Indirectly to cropland via pond #3	No incorporation requirements if on hay fields.	Same as in 2) above	One sample quarterly @ Irrigation Pond. Group A parameters. See condition #21 for details.	None to be spread on fields with very high P-index (shaded red).
6) WWTP Solids (aka Bio-Solid Sludges)	Windfall Road Reload Station & Other Satellite Temporary Storage Locations	To Cropland	Incorporation into soil within 6 HOURS after application.	Same as in 2) above	Number of samples required for an individual POTW annually. Dependent on the number of dry tons the POTW sends to the Dickson Facility per year. >1000 Ton: 12 200 to 100 Ton: 6 25 to 199 Ton: 4 < 25 Ton: 2  Samples must be analyzed for both Groups A & Group B parameters.	Some WWTP Solids are put into the Compost Facility.  No Phosphorous containing waste to be spread on fields with high P-index.
7) Liquid Food Processing Wastes	Heifer Barn Concrete In-ground Storage	To Cropland	Direct Injection or the equivalent	Same as in 2) above	Data required for each POTW is the same as item 6 above.	WWTP Liquids get mixed with manure and liquid food waste in the heifer barn storage tank