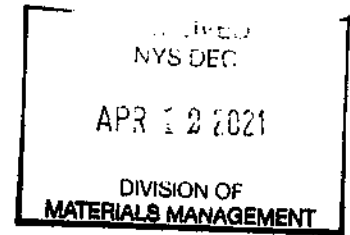


2020



Permitted Facility

Annual Report

Leo Dickson & Sons, Inc.

8-4699-00012/00001

5226 Bonny Hill Road

Bath, NY 14810

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Materials Management, Region 8
6274 East Avon-Lima Road, Avon, NY 14414-9516
P: (585) 226-5411 | F: (585) 226-2909
www.dec.ny.gov

By Certified Mail, Return Receipt Requested

August 25, 2020

Mr. Phil Dickson
Leo Dickson and Sons, Inc.
5226 Bonny Hill Road
Bath, New York 14810

Dear Mr. Dickson:

Re: Annual Report- Additional Information
Leo Dickson & Sons Land Spreading Sites and Farm
DEC ID#8-4699-00012/00001
Bath (T), Steuben (C)

New York State Department of Environmental Conservation ("the Department") has reviewed the 2019 annual report for Leo Dickson & Sons, Inc., land application facility under Permit # 8-4699-00012/00001. The information provided in the annual report submittal, received by the Department on March 16, 2020, is inadequate and does not meet the requirements in the facility's permit and 6 NYCRR Part 360 Series. The Department recognizes that the facility only had a Solid Waste Permit for part of the year, but the facility operated and/or had 6 NYCRR Part 360 Series regulated materials onsite for the entire year, thus the report should include operational information and sampling data for the entire year. The following comments need to be addressed as revisions to the annual report in order to be deemed acceptable to the Department:

1. Include a table of all the wastes listed in Attachment A of the permit listing how much waste was accepted (even if it was zero) and how it was handled or disposed. Examples could include, directly land applied, put in storage facility (with the storage facility name), or hauled to landfill for disposal.
2. POTW stands for publicly owned treatment works. Please update the report and list all the POTW source names, mailing address, operator's name, phone number and email address. Leo Dickson & Sons, Inc. should be not listed as a POTW.
3. For each field submit a table reporting the total amount of waste applied from each source and indicate what crops were grown on the field.

4. Include calculations for nutrients availability for each waste source.
5. The Soil Testing Report columns need to be widened; data is currently illegible.
6. Storage ponds P2, P3, and P4 must be sampled quarterly. Provide all analytical reports and a summary table of the results.
7. Provide data demonstrating that each source of biosolids has met the pathogen reduction criteria.
8. Sources must be sampled according to Permit # 8-4699-00012/00001 Attachment D and 361-2.5(d)(3)(i). All laboratories utilized must be ELAP approved. Metals are to be sampled as totals and not TCLP when the material is being land applied. Include the required number of analytical reports and a summary table of the data for each source. The following sources did not have an adequate number of samples submitted or were missing required analysis from the sampling reports:
 - a. Watkins Glen WWTP
 - b. Owego WWTP
 - c. Waverly WWTP
 - d. Dryden WWTP
 - e. Canisteo WWTP
 - f. Dietrichs Foods
 - g. Kerry Bio Science
 - h. Cayuga heights WWTP
 - i. Warsaw WWTP
9. Include information on the 2019 field application rate including:
 - a. Crops grown on each field
 - b. Remaining site life for each field
 - c. 2019 field loading rates for hydraulics (gals/acre), available nitrogen (lbs/acre), phosphorus (lbs/acre), and potassium (lbs/acre) with supporting calculations
10. Include next years proposed spreading plan including:
 - a. Proposed application rate per field
 - b. Proposed loading rates for hydraulics (gals/acre), available nitrogen (lbs/acre), phosphorus (lbs/acre), Potassium (lbs/acre) with supporting calculations

Within sixty (60) days of this letter's date, you must submit all the missing information to the Department with a new signed certification page included. Failure to comply with 6 NYCRR Parts 360 and 361 is a violation of 6 NYCRR Part 360 Series and can result in a penalty of up to \$7,500 per violation and an additional penalty of up to \$1,500 per day that the violation continues, as specified in ECL §71-2703.

If you have questions regarding the requirements please email me at Mackenzie.osypian@dec.ny.gov.

Sincerely,

Mackenzie Osypian

Mackenzie Osypian
Assistant Engineer

cc: G. MacLean, R8 RMME
J. Boliver, R8 DMM
N. Rice, R8 DOW
S. Rowland, CO DMM

2020

Whitney Point

Canisteo

Watkins

Waverly

Cayuga Heights

Owego

Dryden

Groton

Perry

Livingston Co.

~~2020~~

Dickson

① Should summarize bivalves (quantity per WWTP)

Analyses

1	Whitney Point	18.7 18.7 (18.7)	
	Canisteo	12.14 + 14.21 + 30.9 + 17.04 = (74.29)	
1	Watkins	16.13 + 16.18 = (32.31)	(159.93) 152
11	Waverly	21.5 + 14.07 + 18.2 + 21.88 + 14.48 + 19.51 + 18.39 + 16.39 =	
1	Cayuga Heights	(202.02) 14.01 + 16.1 + 12.92 + 13.54 + 14.82 + 16.14 + 16.13 + 14.61 + 14.72	
	Oneida	(469.86) 19.09 + 18.82 + 15.12 + 17.2 + 27.65 + 48.41 + 50.1 + 34.23 + 25.93 + 14.48 +	
1	Dryden	18.75 + 17.25 + 18.94 + 14.22 = (69.16)	
-	Groton	(17.87)	
111	Perry	17.72 + 19.65 + 30.32 + 33.28 = (100.97)	
1	- Livingston Co. (Laksville)	(15.59)	
	Warsaw	(17.85)	

0.143

1094.76

400 DT

CA 14.68 + 14.48 + 13.54 + 13.19 + 12.54

O 27.11 + 28.5 + 28.18 + 27.11 +

28.5 + 28.18 + 29.22

② Tons I assume are wet tons

③ Groton is not listed on permit - different name?

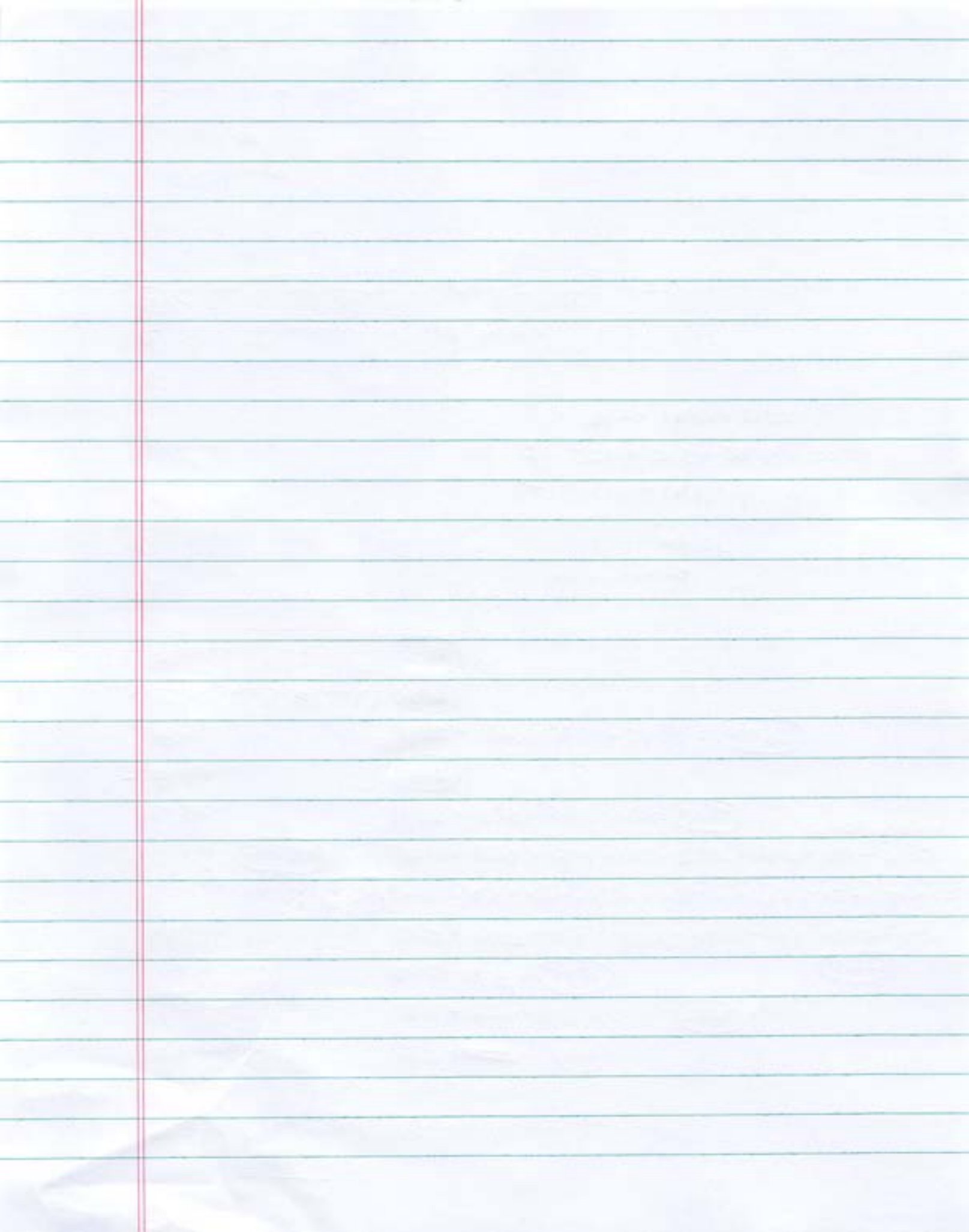
Liv Co

998.4 ams

400 DT

Incorp ~ 6 hrs.

Signed



Biosolids Import

Date	Source	Type	Tons	Gallons	Detination
1/13/2020	Whitney Point	dewatered	18.7 ✓		Upper Pad
1/13/2020	Canisteo	dewatered	12.14 ✓		Upper Pad
1/13/2020	Watkins	dewatered	16.13 ✓		Upper Pad
1/20/2020	Watkins	dewatered	16.18 ✓		Upper LWR Pad
1/20/2020	Waverly	dewatered	21.5 ✓		Upper LWR Pad
1/20/2020	Cayuga Hgts	dewatered	14.01 ✓		Upper LWR Pad
2/1/2020	Dryden	dewatered	18.75 ✓		Upper LWR Pad
2/3/2020	Canisteo	dewatered	14.21 ✓		Upper LWR Pad
4/1/2020	Cayuga Hgts	sludge	14.37 ✓		Upper Pad
4/22/2020	Cayuga Hgts	sludge	18.2 ✓		cement pad
4/23/2020	Canisteo	sludge	30.9 ✓		cement pad
5/4/2020	Owego	sludge	19.09 ✓		cement pad
5/5/2020	Owego	sludge	18.82 ✓		cement pad
5/7/2020	Waverly	sludge	21.88 ✓		cement pad
5/13/2020	Cayuga Hgts	sludge	16.1 ✓		cement pad
6/2/2020	Dryden	sludge	17.25 ✓		cement pad
6/5/2020	Cayuga Hgts	sludge	12.92 ✓		cement pad
6/10/2020	Cayuga Hgts	sludge	13.54 ✓		cement pad
6/24/2020	Cayuga Hgts	sludge	14.82 ✓		cement pad
6/25/2020	Owego	sludge	15.12 ✓		cement pad
6/26/2020	Groton	sludge	17.87 ✓		cement pad
7/2/2020	cayuga Hgts	sludge	16.14 ✓		cement pad
7/8/2020	Owego	sludge	17.2 ✓		cement pad
7/10/2020	Owego	sludge	27.68 ✓		cement pad
7/16/2020	Cayuga Heights	Sludge	16.13 ✓		cement pad
7/20/2020	Perry	sludge	17.72 ✓		cement pad
7/20/2020	Cayuga Hgts	sludge	14.61 ✓		cement pad
7/21/2020	owego	sludge	48.41 ✓		cement pad
7/21/2020	Perry	sludge	19.65 ✓		cement pad
7/22/2020	owego	sludge	50.1 ✓		cement pad
7/23/2020	Cayuga Hgts	sludge	14.72 ✓		cement pad
7/23/2020	Waverly	sludge	14.48 ✓		cement pad
7/23/2020	Owego	sludge	34.23 ✓		cement oad
8/3/2020	Owego	sludge	28.93 ✓		cement pad
8/4/2020	Owego	sludge	14.48 ✓		cement pad
8/4/2020	Cayuga Hgts	sludge	14.68 ✓		cement pad
8/19/2020	Waverly	sludge	19.51 ✓		cement pad
8/19/2020	Cayuga Hgts	sludge	14.48 ✓		cement pad
8/21/2020	Warsaw	sludge	17.85 ✓		cement pad
8/21/2020	Cayuga Hgts	sludge	13.84 ✓		cement pad
8/21/2020	Canisteo	sludge	17.04 ✓		cement pad
9/2/2020	Cayuga Hgts	sludge	13.19 ✓		cement pad
9/2/2020	Waverly	sludge	18.39 ✓		cement pad
9/2/2020	Dryden	sludge	18.94 ✓		cement pad
9/8/2020	Owego	sludge	27.11 ✓		Cement Pad
9/9/2020	Owego	sludge	28.5 ✓		Cement Pad
9/10/2020	Owego	sludge	28.18 ✓		Cement Pad
9/14/2020	Waverly	sludge	16.39 ✓		cement pad
9/14/2020	Owego	sludge	28.22 ✓		cement pad
9/14/2020	Perry	sludge	30.32 ✓		cement pad
9/15/2020	Dryden	sludge	14.22 ✓		cement pad
9/19/2020	Livingston Co	sludge	15.59 ✓		cement pad
10/9/2020	Perry	sludge	33.28 ✓		cement pad
11/17/2020	Waverly	sludge	15.21 ✓		cement pad
12/13/2020	Cayuga Hgts	sludge		12.84 ✓	Sludge pile

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

2) Food Processing Waste Generated at:

- LePrino Foods - Waverly, PA
- Dietrichs Foods (Dalry 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 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), (l), and (k), as per the variance request dated 3/30/2018 from Philip 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.

Jan 01,20 – Dec 31, 2020

**Biosolids Land
Application**

Annual Report Form

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

RECEIVED
NYS DEC
APR 12 2021
DIVISION OF
MATERIALS MANAGEMENT

2020
PERMITTED FACILITY ANNUAL REPORT
BIOSOLIDS LAND APPLICATION
6 NYCRR Part 361-2

This annual report is for the year of operation from January 01, 2020 to December 31, 2020

Annual Report Form Due: No Later than March 1, 2021

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.

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: 8-4699-00012/00001

SW FACILITY ACTIVITY NUMBER: (Ex. 35AP0099 or 59L04) 51L05

COUNTY WHERE LAND APPLICATION OCCURS: Steuben County

DEC USE ONLY

Region: SWIMS:
MATRIX:

Date Reviewed:
Reviewed By:
Data Entered:

PERMITTED BIOSOLIDS LAND APPLICATION ANNUAL REPORT

SECTION 1 – FACILITY INFORMATION

FACILITY INFORMATION			
FACILITY NAME: Leo Dickson & Sons, Inc. Dickson's Environmental Services, 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: 6077767997	
NYSDEC REGION #: 8			
FACILITY CONTACT			
FACILITY CONTACT: Mary Rayeski		CONTACT PHONE NUMBER: 607-776-7997	
CONTACT EMAIL ADDRESS: maryrayeski@gmail.com			
OWNER INFORMATION			
OWNER NAME: Phil, Jay, Larry Dickson		OWNER PHONE NUMBER: 607-776-7997	
OWNER ADDRESS: 5226 Bonny Hill Road	OWNER CITY: Bath	STATE: NY	ZIP CODE: 14810
OWNER CONTACT: 607-776-7997		OWNER CONTACT EMAIL ADDRESS: lds farms1@gmail.com	
OPERATOR INFORMATION			
OPERATOR NAME: <input checked="" type="checkbox"/> Same as owner			
PREFERENCES			
Preferred address to receive correspondence: <input checked="" type="radio"/> Facility location address <input type="radio"/> Owner address <input type="radio"/> Other (provide):			
Preferred email address: <input checked="" type="radio"/> Facility Contact <input type="radio"/> Owner Contact <input type="radio"/> Other (provide):			
Preferred individual to receive correspondence: <input checked="" type="radio"/> Facility Contact <input type="radio"/> Owner <input type="radio"/> Owner Contact <input type="radio"/> Other (provide):			
<p>Did you operate in 2020? <input checked="" type="radio"/> Yes; Complete this form.</p> <p><input type="radio"/> 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.</p>			

SECTION 1 (continued) – FACILITY INFORMATION

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

SECTION 2 – TRANSPORTER INFORMATION

NAME OF TRANSPORTER COMPANY: Dickson's Environmental Services, Inc.	
PART 364 NUMBER: 8A-195	TRANSPORTER PHONE NUMBER: 607-776-7997

SECTION 3 – SUMMARY OF APPLICATION INFORMATION

Total Acres Land Applied: 998.4 acres

Total Biosolids Land Applied During Reporting Period: 400 dry tons

Total Biosolids Landfilled During Reporting Period: 409.04 dry tons

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 =====>	see attached	see attached	see attached	see attached	Permit Pre 2017 Regs. Monthly Conc. (mg/kg)	Permit Post 2017 Regs. Max. Conc. (mg/kg)
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 (%)						

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 Field Number: See Attached Soil Samples

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 _____				

SECTION 6 – FIELD APPLICATION RATES

(Complete one copy for each field used)

Site Owner: Leo Dickson & Sons, Inc

Field Address: See Attached spread logs 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	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

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

Site Owner: Leo Dickson & Sons, Inc.

Field Address: See Attached 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

SECTION 8 – PATHOGEN REDUCTION/VECTOR ATTRACTION REDUCTION

Check one method for each:

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

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

Vector Attraction Reduction (361-2.5(d)(2)(ii))

- ≥ 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 ≥ 12 for 2 hours, ≥ 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

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.

No problems or complaints for 2020.

Section 11 – QUESTIONS

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

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 – 9th 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.



Signature

03/31/2021
Date

Philip Dickson
Name (Print)

President
Title (Print)

maryrayeski@gmail.com
Email (Print)

5226 Bonny Hill Road
Address

Bath
City

NY 14810
State and Zip

(607) 776-7997
Phone Number

ATTACHMENTS: NO YES (IF YES, LIST ATTACHMENTS)

- POTW Information, Land Application Data
- Imports, Exports, Soil Data
- Analytical data, 2021 Projections

2020

**Land Application
By Source**

P2 Spreading						
2020						
1/2/2020	P2	P2	16,000.00	O1	9105	MV
1/3/2020	P2	P2	58,000.00	O1	9105	MV
1/7/2020	P2	P2	15,000.00	O1	9105	MV
1/8/2019	P2	P2	15,000.00	O1	9105	MV
1/9/2020	P2	P2	15,000.00	O1	9105	MV
1/10/2020	P2	P2	15,000.00	O1	9105	MV
1/13/2020	P2	P2	44,000.00	O2	9105	MV
1/14/2020	P2	P2	56,000.00	H3	9105	KS
1/14/2020	P2	P2	40,000.00	ST 6	9105	KS
1/15/2020	P2	P2	88,000.00	ST 6	9105	MV
	P2	P2	80,000.00	O1	9105	MV / DB
1/28/2020	P2	P2	40,000.00	O1	9105	MV / DB
	P2	P2	56,000.00	ST6	9105	MV / DB
1/30/2020	P2	P2	56,000.00	ST6	9105	MV / DB
2/3/2020	P2	P2	24,000.00	ST6	9105	DB
3/1/2020	P2	P2	64,000.00	O1	9105	DB
3/2/2020	P2	P2	56,000.00	ST6	9105	DB
3/3/2020	P2	P2	56,000.00	ST6	9105	DB
3/4/2020	P2	P2	32,000.00	ST6	9105	DB
3/10/2020	P2	P2	64,000.00	ST6	9105	KS
3/11/2020	P2	P2	24,000.00	ST 18	9105	KS
3/11/2020	P2	P2	40,000.00	ST 16	9105	KS
3/12/2020	P2	P2	45,000.00	ST 5	9105	KS
3/16/2020	P2	P2	48,000.00	ST5	9105	KS
3/17/2020	P2	P2	72,000.00	ST6	9105	DB
3/19/2020	P2	P2	56,000.00	ST 6	9105	KS
3/20/2020	P2	P2	48,000.00	ST6	9105	DB
3/22/2020	P2	P2	72,000.00	ST 16	9105	DB
3/23/2020	P2	P2	40,000.00	N1	9105	DB
3/24/2020	P2	P2	40,000.00	N1	9105	DB
4/2/2020	P2	P2	32,000.00	H3	Quad	KS
4/3/2020	P2	P2	64,000.00	o1	Quad	KS

P2 cont.

4/23/2020	P2	P2	26,000.00	ST4	Quad	Ks
4/24/2020	P2	P2	36,000.00	ST4	Quad	KS
4/25/2020	P2	P2	24,000.00	ST4	Quad	KS
4/27/2020	P2	P2	40,000.00	ST5	quad	KS
4/28/2020	P2	P2	36,000.00	ST6	quad	KS
6/19/2020	P2	P2	36,000.00	F2	9105	KS
6/20/2020	P2	P2	20,000.00	F2	9105	KS
6/22/2020	P2	P2	52,000.00	F2	9105	KS
6/22/2020	P2	P2	4,000.00	F1	9105	KS
6/23/2020	P2	P2	36,000.00	F1	9105	KS
6/23/2020	P2	P2	12,000.00	F2	9105	KS
6/25/2020	P2	P2	32,000.00	F1	9105	KS
6/26/2020	P2	P2	56,000.00	F2	9105	KS
6/26/2020	P2	P2	20,000.00	F1	9105	KS
6/29/2020	P2	P2	60,000.00	F2	9105	KS
6/30/2020	P2	P2	28,000.00	F2	9105	KS
7/1/2020	p2	p2	44,000.00	F2	9105	KS
7/2/2020	P2	P2	8,000.00	ST14	9105	KS
7/3/2020	p2	P2	67,500.00	ST14	9105	KS
7/6/2020	P2	P2	40,000.00	ST11	9105	KS
7/7/2020	P2	P2	26,000.00	ST11	9105	KS
7/8/2020	P2	P2	40,000.00	ST11	9105	KS
7/28/2020	P2	P2	20,000.00	ST18	9105	KS
7/28/2020	P2	P2	20,000.00	St18	9105	KS
7/29/2020	P2	P2	20,000.00	ST17	9105	KS
7/29/2020	P2	P2	40,000.00	ST17	9105	KS
8/5/2020	P2	P2	16,000.00	ST 11	9105	KS
8/7/2020	P2	P2	8,000.00	ST 11	9105	KS
8/12/2020	P2	P2	15,000.00	E6	9105	KS
8/13/2020	P2	P2	12,000.00	E6	9105	KS
8/17/2020	P2	P2	80,000.00	E6	9105	KS
8/18/2020	P2	P2	32,000.00	E6	9105	KS
9/9/2020	P2	P2	40,000.00	M3	9105	KS
9/10/2020	P2	P2	40,000.00	H3	9105	KS

Dairy Manure Spreading 2020						
1/8/2020	Dairy	Dairy	8,000.00	O1	9105	MV
1/15/2020	Dairy	Dairy	24,000.00	ST 6	9105	MV
	Dairy	Dairy	16,000.00	O1	9105	MV / DB
2/4/2020	Heifer Barn	Heifer Barn	16,000.00	U1	9105	MV
2/4/2020	Heifer Barn	Heifer Barn	16,000.00	U1	9105	DB
2/5/2020	Heifer Barn	Heifer Barn	24,000.00	U1	9105	DB
3/16/2020	Dairy	Dairy	24,000.00	ST6	9105	KS
3/18/2020	Dairy	Dairy	18,000.00	ST 16	9105	DB
3/18/2020	Dairy	Dairy	8,000.00	ST 6	9105	KS
4/14/2020	Dairy	Dairy	12,000.00	K1	Quad	KS
4/15/2020	Dairy	Dairy	16,000.00	F2	Quad	KS
4/16/2020	Dairy	Dairy	8,000.00	F2	Quad	KS
4/17/2020	Dairy	Dairy	22,000.00	F2	Quad	KS
4/17/2020	Dairy	Dairy	8,000.00	R11	Quad	KS
4/17/2020	Heifer	Heifer	28,000.00	R11	Quad	KS
4/20/2020	Dairy	Dairy	16,000.00	R11	Quad	KS
4/21/2020	Dairy	Dairy	24,000.00	R11	Quad	KS
4/22/2020	Dairy	Dairy	16,000.00	R11	Quad	KS
4/24/2020	Dairy	Dairy	24,000.00	ST4	Quad	KS
	Heifer barn	Heifer barn	40,000.00	ST6	quad	KS
	Dairy	Dairy	8,000.00	ST 6	quad	KS
	Dairy	Dairy	16,000.00	ST 6	quad	KS
4/29/2020	Dairy	Dairy	48,000.00	P 1B	quad	KS
	Dairy	Dairy	104,000.00	E3	quad	KS
	Dairy	Dairy	128,000.00	J 2	quad	KS
4/30/2020	Dairy	Dairy	168,000.00	E3	quad	KS
5/4/2020	Dairy	Dairy	96,000.00	sugars 3	quad	KS
5/4/2020	Dairy	Dairy	48,000.00	Sugars 1	quad	KS
5/5/2020	Dairy	Dairy	8,000.00	Sugars 1	quad	KS
5/5/2020	Dairy	Dairy	200,000.00	Z1 A	quad	KS
5/6/2020	Dairy	Dairy	192,000.00	ZA 1	quad	KS
5/7/2020	Dairy	Dairy	192,000.00	ZA 1	quad	KS

DD y cont.

5/8/2020	Dairy	Dairy	144,000.00	Tucker	quad	KS
5/11/2020	Dairy Pond	Dairy	136,000.00	Tucker	quad	KS
5/12/2020	Dairy Pond	Dairy	96,000.00	Sam Dicks	quad	KS
5/13/2020	Dairy Pond	Dairy	72,000.00	Sam Dicks	quad	KS
5/14/2020	Dairy Pond	Dairy	32,000.00	John H	quad	KS
6/11/2020	Heifer Barn	Heifer barn	32,000.00	ST 21	9105	KS
7/2/2020	heifer barn manure	Heifer barn	8,000.00	ST14	9105	KS
7/2/2020	dairy and heifer barn	Dairy & Heifer	54,000.00	ST14	9105	KS
7/16/2020	heifer barn	Heifer barn	15,000.00	St13	9105	KS
7/17/2020	heifer barn	Heifer barn	10,000.00	St 21	9105	KS
7/30/2020	heifer barn manure	heifer barn manure	20,000.00	ST21	9105	KS
7/30/2020	heifer barn manure	heifer barn manure	20,000.00	ST 21	9105	KS
8/11/2020	Heifer barn	Heifer barn	20,000.00	Spears 1	9105	KS
8/20/2020	Dairy	Dairy	32,000.00	E5	Quad	KS
8/20/2020	Dairy	Dairy	56,000.00	E6	Quad	KS
8/21/2020	Dairy	Dairy	40,000.00	E5	Quad	KS
8/21/2020	Dairy	Dairy	8,000.00	E6	Quad	KS
8/21/2020	Dairy	Dairy	48,000.00	I 1	Quad	KS
8/22/2020	Dairy	Dairy	48,000.00	I 1	Quad	Ks
8/24/2020	Dairy	Dairy	56,000.00	E1	Quad	KS
8/25/2020	Dairy	Dairy	50,000.00	F12	Quad	JH
8/26/2020	Dairy	Dairy	50,000.00	F12	quad	JH
8/27/2020	Dairy	Dairy	50,000.00	F12	quad	JH
8/28/2020	Dairy	Dairy	20,000.00	F23	quad	JH
8/31/2020	Dairy	Dairy	88,000.00	F23	Quad	KS
9/1/2020	Dairy	Dairy	96,000.00	F23	Quad	KS
9/2/2020	Dairy	Dairy	80,000.00	F 17	Quad	KS
9/2/2020	Dairy	Dairy	16,000.00	F 23	Quad	KS
9/3/2020	Dairy	Dairy	48,000.00	M 6	Quad	KS
9/4/2020	Dairy	Dairy	16,000.00	M 6	Quad	KS
9/4/2020	Dairy	Dairy	80,000.00	J 3	Quad	KS
9/8/2020	Dairy	Dairy	40,000.00	J3	quad	KS
9/19/2020	Heifer barn	Heifer barn	36,000.00	Spears 1	9105	KS
9/21/2020	Heifer barn	Heifer barn	22,500.00	Spears 1	9105	KS

Imports

- 1. All Imports**
- 2. Food waste**
- 3. Biosolids**

All Imports

Date	Source	Type	Tons	Gallons	Destination
1/2/2020	DFA	waste water		26822.00	P2
1/10/2020	DFA	waste water		6,233.00	P2
1/11/2020	DFA	waste water		13,432.00	P2
1/13/2020	DFA	waste water		13,916.00	P2
1/13/2020	Whitney Point	dewatered	18.7		Upper Pad
1/13/2020	Canisteo	dewatered	12.14		Upper Pad
1/13/2020	Watkins	dewatered	16.13		Upper Pad
1/15/2020	DFA	wastewater		13,862.00	P2
1/16/2020	DFA	waste water		6,914.00	P2
1/16/2020	DFA	waste water		6,043.00	P2
1/17/2020	DFA	waste water		6,866.00	P2
1/17/2020	DFA	waste water		6,754.00	P2
1/17/2020	Kerry Bio Science	waste water		6,300.00	P2
1/19/2020	Kerry Bio Science	waste water		6,300.00	P2
1/20/2020	Kan Pak	animal feed whay		8,300.00	P2
1/20/2020	Watkins	dewatered	16.18		Upper LWR Pad
1/20/2020	Waverly	dewatered	21.5		Upper LWR Pad
1/20/2020	Cayuga Hgts	dewatered	14.01		Upper LWR Pad
1/20/2020	DFA	waste water		20,752.00	P2
1/21/2020	DFA	waste water		13,860.00	P2
1/22/2020	Kerry Bio Science	waste water		6,000.00	P2
1/22/2020	DFA	waste water		6,996.00	P2
1/23/2020	Kerry Bio Science	waste water		6,300.00	P2
1/23/2020	Kerry Bio Science	waste water		7,100.00	P2
1/24/2020	DFA	dewatered	10.63		P2
1/27/2020	Kerry Bio Science	waste water		7,000.00	P2
1/29/2020	DFA	dewatered	13.63		p2
1/29/2020	Kerry Bio Science	waste water		21,000.00	p2
2/1/2020	Dryden	dewatered	18.75		Upper LWR Pad
2/3/2020	Canisteo	dewatered	14.21		Upper LWR Pad
2/3/2020	DFA	dewatered	10.67		P2
2/10/2020	DFA	dewatered	14.56		p2
2/11/2020	Kerry Bio Science	Waste Water		7,055.00	P2
2/11/2020	Kerry Bio Science	waste water		5,250.00	P2
2/12/2020	Kerry Bio Science	waste water		7,000.00	P2
2/13/2020	Kerry Bio Science	waste water		7,000.00	P2
2/13/2020	DFA	dewatered	13.39		P2
2/16/2020	Kerry	waste water		7,000.00	P2
2/18/2020	Kerry	waste water		7,000.00	P2
2/20/2020	DFA	dewatered	14.78		P2
2/24/2020	DFA	dewatered	15.03		p2
2/25/2020	Kerry	waste water		6,300.00	P2
2/26/2020	Kerry	waste water		7,000.00	P2
2/27/2020	Kerry	waste water		7,000.00	P2
2/28/2020	DFA	dewatered	13.08		p2
3/4/2020	Kerry Bio Science	waste water		13,300.00	P2
3/4/2020	DFA	sludge	6.71		p2
3/5/2020	Kerry Bio Science	waste water		12,300.00	P2
3/6/2020	Kerry Bio Science	waste water		13,300.00	p2
3/7/2020	Kerry Bio Science	waste water		20,300.00	p2
3/8/2020	Kerry Bio Science	waste water		13,300.00	p2
3/9/2020	Kerry Bio Science	waste water		7,000.00	p2
3/9/2020	DFA	sludge	11.38		P2
3/10/2020	Kerry Bio Science	waste water		7,000.00	P2
3/13/2020	Kerry Bio Science	waste water		7,000.00	P2
3/17/2020	Kerry Bio Science	Waste Water		7000.00	P2
3/19/2020	Kerry Bio Science	Waste Water		7000.00	P2
3/26/2020	DFA	sludge	16.74		P2
3/30/2020	Kerry bio Science	waste water		13,209.00	P2
3/31/2020	DFA	sludge	13.61		P2
4/1/2020	Cayuga Hgts	sludge	14.37		Upper Pad
4/6/2020	DFA	sludge	14.69		P2
4/8/2020	DFA	sludge	13.93		P2
4/13/2020	DFA	sludge	14.34		P2
4/13/2020	Kerry	waste water		7,014.00	P2
4/14/2020	Kerry	waste water		8,514.00	P2
4/20/2020	DFA	sludge	14.31		P2
4/22/2020	Kerry	waste water		13,304.00	P2
4/22/2020	DFA	sludge	14.2		P2
4/22/2020	Cayuga Hgts	sludge	18.2		cement pad
4/23/2020	Canisteo	sludge	30.9		cement pad
4/27/2020	Kerry Bio Science	waste water		8,794.00	P2

4/27/2020	DFA	sludge	11.39		P2
5/4/2020	Owego	sludge	19.09		cement pad
5/5/2020	Owego	sludge	18.82		cement pad
5/7/2020	Waverly	sludge	21.88		cement pad
5/7/2020	Kerry Bio Science	waste water		1,400.00	P2
5/7/2020	DFA	sludge	14.31		P2
5/7/2020	DFA	sludge	13.49		P2
5/13/2020	Kerry Bio Science	waste water		3,500.00	p2
5/13/2020	Cayuga Hgts	sludge	16.1		cement pad
5/14/2020	DFA	sludge	11.58		p2
5/19/2020	DFA	sludge	12.85		P2
5/20/2020	Kerry Bio Science	Waste Water		5000.00	P2
5/22/2020	Kerry Bio Science	Waste Water		5000.00	P2
5/26/2020	Kerry Bio Science	Waste Water		3500.00	P2
6/2/2020	Dryden	sludge	17.25		cement pad
6/4/2020	DFA	sludge	14.66		P2
6/5/2020	Cayuga Hgts	sludge	12.92		cement pad
6/10/2020	Cayuga Hgts	sludge	13.54		cement pad
6/11/2020	Leprino	waste water		6,300.00	p2
6/13/2020	DFA	Sludge (Powdered Milk)	15.65		p2
6/17/2020	Kerry Bio Science	waste water		3,000.00	p2
6/24/2020	Cayuga Hgts	sludge	14.82		cement pad
6/25/2020	DFA	sludge	13.54		P2
6/25/2020	Owego	sludge	15.12		cement pad
6/26/2020	Groton	sludge	17.87		cement pad
6/29/2020	Kerry Bio Science	waste water		4,600.00	P2
7/2/2020	cayuga Hgts	sludge	16.14		cement pad
7/6/2020	DFA	sludge	15.21		p2
7/8/2020	Kerry Bio Science	waste water		2,200.00	p2
7/8/2020	Owego	sludge	17.2		cement pad
7/9/2020	DFA	sludge	13.55		P2
7/10/2020	Owego	sludge	27.68		cement pad
7/15/2020	DFA	Sludge		14.23	P2
7/16/2020	Cayuga Heights	Sludge	16.13		cement pad
7/17/2020	DFA	Sludge	17.51		P2
7/20/2020	DFA	sludge	10.72		p2
7/20/2020	Kerry Bio Science	waste water		8,000.00	p2
7/20/2020	Perry	sludge	17.72		cement pad
7/20/2020	Cayuga Hgts	sludge	14.61		cement pad
7/21/2020	owego	sludge	48.41		cement pad
7/21/2020	Perry	sludge	19.65		cement pad
7/21/2020	kerry bio science	waste water		8,200.00	p2
7/22/2020	kerry bioscience	waste water		16,250.00	p2
7/22/2020	owego	sludge	50.1		cement pad
7/22/2020	DFA	sludge	10.72		p2
7/23/2020	Cayuga Hgts	sludge	14.72		cement pad
7/23/2020	Waverly	sludge	14.48		cement pad
7/23/2020	Owego	sludge	34.23		cement pad
7/24/2020	DFA	waste water		51,980.00	p2
7/24/2020	DFA	sludge	14.32		p2
7/26/2020	DFA	waste water		36000.00	p2
7/27/2020	DFA	waste water		46,318.00	P2
7/29/2020	DFA	Sludge		13.21	P2
8/3/2020	Owego	sludge	28.93		cement pad
8/3/2020	DFA	sludge	14.87		P2
8/4/2020	Owego	sludge	14.48		cement pad
8/4/2020	DFA	waste water		12,347.00	P2
8/4/2020	DFA	waste water		12,427.00	P2
8/4/2020	Cayuga Hgts	sludge	14.68		cement pad
8/5/2020	DFA	waste water		8,523.00	p2
8/11/2020	DFA	waste water		39,225.00	p2
8/14/2020	DFA	waste water		33,436.00	p2
8/17/2020	DFA	sludge	11.71		P2
8/19/2020	Waverly	sludge	19.51		cement pad
8/19/2020	Cayuga Hgts	sludge	14.48		cement pad
8/20/2020	DFA	sludge	12.97		P2
8/23/2020	Warsaw	sludge	17.85		cement pad
8/21/2020	Cayuga Hgts	sludge	13.84		cement pad
8/21/2020	Canisteo	sludge	17.04		cement pad
8/22/2020	Quest	waste water		8,000.00	P2
8/24/2020	DFA	sludge	12.67		p2
9/2/2020	DFA	sludge	9.42		p2
9/2/2020	Cayuga Hgts	sludge	13.19		cement pad
9/2/2020	Waverly	sludge	18.39		cement pad

9/2/2020	Dryden	sludge	18.94		cement pad
9/8/2020	Owego	sludge	27.11		Cement Pad
9/9/2020	Owego	sludge	28.5		Cement Pad
9/10/2020	Owego	sludge	28.18		Cement Pad
9/14/2020	DFA	waste water		26,788.00	p2
9/14/2020	Waverly	sludge	16.39		cement pad
9/14/2020	Owego	sludge	28.22		cement pad
9/14/2020	Perry	sludge	30.32		cement pad
9/15/2020	DFA	waste water		6,880.00	p2
9/15/2020	Dryden	sludge	14.22		cement pad
9/17/2020	DFA	waste water		32,710.00	p2
9/19/2020	Kerry	waste water		3,200.00	p2
9/19/2020	Livingston Co	sludge	15.59		cement pad
9/21/2020	DFA	waste water		13,718.00	P2
9/22/2020	DFA	waste water		13,849.00	P2
9/23/2020	DFA	waste water		20,272.00	P2
9/24/2020	DFA	waste water		26,807.00	P2
9/29/2020	DFA	Sludge	8.41		P2
10/7/2020	Kerry Bio Science	waste water		6,000.00	P2
10/9/2020	Perry	sludge	33.28		cement pad
10/14/2020	Kerry Bio Science	Waste Water		6000.00	P2
10/16/2020	DFA	Sludge	9.82		P2
10/20/2020	DFA	Sludge	10.2		P2
10/22/2020	Kerry	Waste Water		6000.00	P2
10/26/2020	DFA	sludge	16.99		P2
11/2/2020	DFA	sludge	18.27		P2
11/4/2020	DFA	waste water		6,000.00	P2
11/4/2020	DFA	waste water		16,500.00	P2
11/4/2020	DFA	milk powder sludge	15		P2
11/5/2020	DFA	waste water		16,100.00	P2
11/10/2020	DFA	waste water		8,000.00	P2
11/12/2020	DFA	waste water		16000.00	P2
11/13/2020	Quest	wastewater		8000.00	p2
11/16/2020	DFA	sludge	14.33		P2
11/17/2020	Waverly	sludge	15.21		cement pad
11/23/2020	Leprino	waste water		16,300	P2
11/24/2020	Quest	waste water		23,100	P2
11/30/2020	DFA	sludge	13.85		P2
12/3/2020	Quest	waste		8000.00	P2
12/7/2020	DFA	waste water		16,200	P2
12/8/2020	DFA	waste water		30,600	P2
12/8/2020	DFA	waste water		6000	P2
12/9/2020	DFA	waste water		6000	P2
12/9/2020	DFA	waste water		29,200	P2
12/9/2020	DFA	sludge	12.67		P2
12/10/2020	DFA	waste water		16300	P2
12/11/2020	DFA	waste water		6000	P2
12/11/2020	DFA	sludge	15.58		P2
12/12/2020	DFA	waste water		8100	P2
12/13/2020	Cayuga Hgts	sludge	12.84		Sludge pile
12/31/2020	DFA	sludge	16.21		p2
1/2/2021	DFA	sludge	9		p2
1/4/2021	DFA	sludge	6.29		p2

1765.64

1143520.00

Food Waste Imports

Date	Source	Type	Tons	Gallons	Detination
1/2/2020	DFA	waste water		26822.00	P2
1/10/2020	DFA	waste water		6,233.00	P2
1/11/2020	DFA	waste water		13,432.00	P2
1/13/2020	DFA	waste water		13,916.00	P2
1/15/2020	DFA	wastewater		13,862.00	P2
1/16/2020	DFA	waste water		6,914.00	P2
1/16/2020	DFA	waste water		6,043.00	P2
1/17/2020	DFA	waste water		6,866.00	P2
1/17/2020	DFA	waste water		6,754.00	P2
1/17/2020	Kerry Bio Science	waste water		6,300.00	P2
1/19/2020	Kerry Bio Science	waste water		6,300.00	P2
1/20/2020	Kan Pak	animal feed whey		8,300.00	P2
1/20/2020	DFA	waste water		20,752.00	P2
1/21/2020	DFA	waste water		13,860.00	P2
1/22/2020	Kerry Bio Science	waste water		6,000.00	P2
1/22/2020	DFA	waste water		6,996.00	P2
1/23/2020	Kerry Bio Science	waste water		6,300.00	P2
1/23/2020	Kerry Bio Science	waste water		7,100.00	P2
1/24/2020	DFA	dewatered	10.63		P2
1/27/2020	Kerry Bio Science	waste water		7,000.00	P2
1/29/2020	DFA	dewatered	13.63		p2
1/29/2020	Kerry Bio Science	waste water		21,000.00	p2
2/3/2020	DFA	dewatered	10.67		P2
2/10/2020	DFA	dewatered	14.56		p2
2/11/2020	Kerry Bio Science	Waste Water		7,055.00	P2
2/11/2020	Kerry Bio Science	waste water		5,250.00	P2
2/12/2020	Kerry Bio Science	waste water		7,000.00	P2
2/13/2020	Kerry Bio Science	waste water		7,000.00	P2
2/13/2020	DFA	dewatered	13.39		P2
2/16/2020	Kerry	waste water		7,000.00	P2
2/18/2020	Kerry	waste water		7,000.00	P2
2/20/2020	DFA	dewatered	14.78		P2
2/24/2020	DFA	dewatered	15.03		p2
2/25/2020	Kerry	waste water		6,300.00	P2
2/26/2020	Kerry	waste water		7,000.00	P2
2/27/2020	Kerry	waste water		7,000.00	P2
2/28/2020	DFA	dewatered	13.08		p2
3/4/2020	Kerry Bio Science	waste water		13,300.00	P2
3/4/2020	DFA	sludge	6.71		p2
3/5/2020	Kerry Bio Science	waste water		12,300.00	P2
3/6/2020	Kerry Bio Science	waste water		13,300.00	p2
3/7/2020	Kerry Bio Science	waste water		20,300.00	p2
3/8/2020	Kerry Bio Science	waste water		13,300.00	p2
3/9/2020	Kerry Bio Science	waste water		7,000.00	p2
3/9/2020	DFA	sludge	11.38		P2
3/10/2020	Kerry Bio Science	waste water		7,000.00	P2
3/13/2020	Kerry Bio Science	waste water		7,000.00	P2
3/17/2020	Kerry Bio Science	Waste Water		7000.00	P2
3/19/2020	Kerry Bio Science	Waste Water		7000.00	P2
3/26/2020	DFA	sludge	16.74		P2
3/30/2020	Kerry bio Science	waste water		13,209.00	P2
3/31/2020	DFA	sludge	13.61		P2
4/6/2020	DFA	sludge	14.69		P2
4/8/2020	DFA	sludge	13.93		P2
4/13/2020	DFA	sludge	14.34		P2
4/13/2020	Kerry	waste water		7,014.00	P2
4/14/2020	Kerry	waste water		8,514.00	P2
4/20/2020	DFA	sludge	14.31		P2
4/22/2020	Kerry	waste water		13,304.00	P2
4/22/2020	DFA	sludge	14.2		P2
4/27/2020	Kerry Bio Science	waste water		8,794.00	P2
4/27/2020	DFA	sludge	11.39		P2
5/7/2020	Kerry Bio Science	waste water		1,400.00	P2
5/7/2020	DFA	sludge	14.31		P2
5/7/2020	DFA	sludge	13.49		P2
5/13/2020	Kerry Bio Science	waste water		3,500.00	p2
5/14/2020	DFA	sludge	11.58		p2
5/19/2020	DFA	sludge	12.85		P2
5/20/2020	Kerry Bio Science	Waste Water		5000.00	P2
5/22/2020	Kerry Bio Science	Waste Water		5000.00	P2
5/26/2020	Kerry Bio Science	Waste Water		3500.00	P2
6/4/2020	DFA	sludge	14.66		P2

6/13/2020	DFA	Sludge (Powdered Milk)	15.65		p2
6/17/2020	Kerry Bio Science	waste water		3,000.00	p2
6/25/2020	DFA	sludge	13.54		P2
6/29/2020	Kerry Bio Science	waste water		4,600.00	P2
7/6/2020	DFA	sludge	15.21		p2
7/8/2020	Kerry Bio Science	waste water		2,200.00	p2
7/9/2020	DFA	sludge	13.55		P2
7/15/2020	DFA	Sludge		14.23	P2
7/17/2020	DFA	Sludge	17.51		P2
7/20/2020	DFA	sludge	10.72		p2
7/20/2020	Kerry Bio Science	waste water		8,000.00	p2
7/21/2020	kerry blo science	waste water		8,200.00	p2
7/22/2020	kerry bioscience	waste water		16,250.00	p2
7/22/2020	DFA	sludge	10.72		p2
7/24/2020	DFA	waste water		51,960.00	p2
7/24/2020	DFA	sludge	14.32		p2
7/26/2020	DFA	waste water		36000.00	p2
7/27/2020	DFA	waste water		46,318.00	P2
7/29/2020	DFA	Sludge		13.21	P2
8/3/2020	DFA	sludge	14.87		P2
8/4/2020	DFA	waste water		12,347.00	P2
8/4/2020	DFA	waste water		12,427.00	P2
8/5/2020	DFA	waste water		8,523.00	p2
8/11/2020	DFA	waste water		39,225.00	p2
8/14/2020	DFA	waste water		33,436.00	p2
8/17/2020	DFA	sludge	11.71		P2
8/20/2020	DFA	sludge	12.97		P2
8/24/2020	DFA	sludge	12.67		p2
9/2/2020	DFA	sludge	9.42		p2
9/14/2020	DFA	waste water		26,788.00	p2
9/15/2020	DFA	waste water		6,880.00	p2
9/17/2020	DFA	waste water		32,710.00	p2
9/19/2020	Kerry	waste water		3,200.00	p2
9/21/2020	DFA	waste water		13,718.00	P2
9/22/2020	DFA	waste water		13,849.00	P2
9/23/2020	DFA	waste water		20,272.00	P2
9/24/2020	DFA	waste water		26,807.00	P2
9/29/2020	DFA	Sludge	8.41		P2
10/7/2020	Kerry Bio Science	waste water		6,000.00	P2
10/14/2020	Kerry Bio Science	Waste Water		6000.00	P2
10/16/2020	DFA	Sludge	9.82		P2
10/20/2020	DFA	Sludge	10.2		P2
10/22/2020	Kerry	Waste Water		6000.00	P2
10/26/2020	DFA	sludge	16.99		P2
11/2/2020	DFA	sludge	18.27		P2
11/4/2020	DFA	waste water		6,000.00	P2
11/4/2020	DFA	waste water		16,500.00	P2
11/4/2020	DFA	milk powder sludge	15		P2
11/5/2020	DFA	waste water		16,100.00	P2
11/10/2020	DFA	waste water		8,000.00	P2
11/12/2020	DFA	waste water		16000.00	P2
11/16/2020	DFA	sludge	14.33		P2
11/30/2020	DFA	sludge	13.85		P2
12/7/2020	DFA	waste water		16,200	P2
12/8/2020	DFA	waste water		30,600	P2
12/8/2020	DFA	waste water		6000	P2
12/9/2020	DFA	waste water		6000	P2
12/9/2020	DFA	waste water		29,200	P2
12/9/2020	DFA	sludge	12.67		P2
12/10/2020	DFA	waste water		16300	P2
12/11/2020	DFA	waste water		6000	P2
12/11/2020	DFA	sludge	15.58		P2
12/12/2020	DFA	waste water		8100	P2
12/31/2020	DFA	sludge	16.21		p2
1/2/2021	DFA	sludge	9		p2
1/4/2021	DFA	sludge	6.29		p2

FW

Biosolids Import

Date	Source	Type	Tons	Gallons	Destination
1/2/2020	DFA	waste water		26822.00	P2
1/10/2020	DFA	waste water		6,233.00	P2
1/11/2020	DFA	waste water		13,432.00	P2
1/13/2020	DFA	waste water		13,916.00	P2
1/15/2020	DFA	wastewater		13,862.00	P2
1/16/2020	DFA	waste water		6,914.00	P2
1/16/2020	DFA	waste water		6,043.00	P2
1/17/2020	DFA	waste water		6,866.00	P2
1/17/2020	DFA	waste water		6,754.00	P2
1/17/2020	Kerry Bio Science	waste water		6,300.00	P2
1/19/2020	Kerry Bio Science	waste water		6,300.00	P2
1/20/2020	Kan Pak	animal feed whey		8,300.00	P2
1/20/2020	DFA	waste water		20,752.00	P2
1/21/2020	DFA	waste water		13,860.00	P2
1/22/2020	Kerry Bio Science	waste water		6,000.00	P2
1/22/2020	DFA	waste water		6,996.00	P2
1/23/2020	Kerry Bio Science	waste water		6,300.00	P2
1/23/2020	Kerry Bio Science	waste water		7,100.00	P2
1/24/2020	DFA	dewatered	10.63		P2
1/27/2020	Kerry Bio Science	waste water		7,000.00	P2
1/29/2020	DFA	dewatered	13.63		p2
1/29/2020	Kerry Bio Science	waste water		21,000.00	p2
2/3/2020	DFA	dewatered	10.67		P2
2/10/2020	DFA	dewatered	14.56		p2
2/11/2020	Kerry Bio Science	Waste Water		7,055.00	P2
2/11/2020	Kerry Bio Science	waste water		5,250.00	P2
2/12/2020	Kerry Bio Science	waste water		7,000.00	P2
2/13/2020	Kerry Bio Science	waste water		7,000.00	P2
2/13/2020	DFA	dewatered	13.39		P2
2/16/2020	Kerry	waste water		7,000.00	P2
2/18/2020	Kerry	waste water		7,000.00	P2
2/20/2020	DFA	dewatered	14.78		P2
2/24/2020	DFA	dewatered	15.03		p2
2/25/2020	Kerry	waste water		6,300.00	P2
2/26/2020	Kerry	waste water		7,000.00	P2
2/27/2020	Kerry	waste water		7,000.00	P2
2/28/2020	DFA	dewatered	13.08		p2
3/4/2020	Kerry Bio Science	waste water		13,300.00	P2
3/4/2020	DFA	sludge	6.71		p2
3/5/2020	Kerry Bio Science	waste water		12,300.00	P2
3/6/2020	Kerry Bio Science	waste water		13,300.00	p2
3/7/2020	Kerry Bio Science	waste water		20,300.00	p2
3/8/2020	Kerry Bio Science	waste water		13,300.00	p2
3/9/2020	Kerry Bio Science	waste water		7,000.00	p2
3/9/2020	DFA	sludge	11.38		P2
3/10/2020	Kerry Bio Science	waste water		7,000.00	P2
3/13/2020	Kerry Bio Science	waste water		7,000.00	P2
3/17/2020	Kerry Bio Science	Waste Water		7000.00	P2
3/19/2020	Kerry Bio Science	Waste Water		7000.00	P2
3/26/2020	DFA	sludge	16.74		P2
3/30/2020	Kerry Bio Science	waste water		13,209.00	P2
3/31/2020	DFA	sludge	13.61		P2
4/6/2020	DFA	sludge	14.69		P2
4/8/2020	DFA	sludge	13.93		P2
4/13/2020	DFA	sludge	14.34		P2
4/13/2020	Kerry	waste water		7,014.00	P2
4/14/2020	Kerry	waste water		8,514.00	P2
4/20/2020	DFA	sludge	14.31		P2
4/22/2020	Kerry	waste water		13,304.00	P2
4/22/2020	DFA	sludge	14.2		P2
4/27/2020	Kerry Bio Science	waste water		8,794.00	P2
4/27/2020	DFA	sludge	11.39		P2
5/7/2020	Kerry Bio Science	waste water		1,400.00	P2
5/7/2020	DFA	sludge	14.31		P2
5/7/2020	DFA	sludge	13.49		P2
5/13/2020	Kerry Bio Science	waste water		3,500.00	p2
5/14/2020	DFA	sludge	11.58		p2
5/19/2020	DFA	sludge	12.85		P2
5/20/2020	Kerry Bio Science	Waste Water		5000.00	P2
5/22/2020	Kerry Bio Science	Waste Water		5000.00	P2
5/26/2020	Kerry Bio Science	Waste Water		3500.00	P2
6/4/2020	DFA	sludge	14.66		P2

Exports

EXPORT

2020

DATE	Source	Export	Quantity
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Monday, March 9, 2020	Biosolids, compost	Gary Thompson	180
Tuesday, March 10, 2020	Biosolids, compost	Gary Thompson	210
Wednesday, March 11,2020	Biosolids, compost	Gary Thompson	150
Thursday, March 12,2020	Biosolids, compost	Gary Thompson	150
Friday, March 13/2020	Biosolids, compost	Gary Thompson	15

Tons

705

tons

Land Application

Per Field

Total Acres Spread

998.40Acres

							Acres
8/24/2020	Dairy	Dairy	56,000.00	E1	Quad	KS	
			56,000.00			Total	13.7

								Acres
4/30/2020	Dairy	Dairy	104,000.00	E3	quad	KS		32.4
4/30/2020	Dairy	Dairy	168,000.00	E3	quad	KS		32.4
12/31/2020	P 2	P 2	48,000.00	E 3	9105	KS		32.4
			320,000.00			Total		32.4

							Acres
8/20/2020	Dairy	Dairy	32,000.00	E5	Quad	KS	
8/21/2020	Dairy	Dairy	40,000.00	E5	Quad	KS	
			72,000.00			Total	5.4

							Acres
8/12/2020	P2	P2	15,000.00	E6	9105	KS	
8/13/2020	P2	P2	12,000.00	E6	9105	KS	
8/17/2020	P2	P2	80,000.00	E6	9105	KS	
8/18/2020	P2	P2	32,000.00	E6	9105	KS	
8/20/2020	Dairy	Dairy	56,000.00	E6	Quad	KS	
8/21/2020	Dairy	Dairy	8,000.00	E6	Quad	KS	
			203,000.00			Total	14.3

							Acres
4/15/2020	P1	P1	16,000.00	F1	Quad	KS	
4/15/2020	LWR	LWR	8,000.00	F1	Quad	KS	
4/17/2020	P1	P1	8,000.00	F1	Quad	KS	
6/22/2020	P2	P2	4,000.00	F1	9105	KS	
6/23/2020	P2	P2	36,000.00	F1	9105	KS	
6/25/2020	P2	P2	32,000.00	F1	9105	KS	
6/26/2020	P2	P2	20,000.00	F1	9105	KS	
11/23/2020	Dairy	Dairy	27,000.00	F 1	9105	KS	
11/24/2020	Dairy	Dairy	9,000.00	F 1	9105	KS	
12/4/2020	Dairy	Dairy	36,250.00	F1	Quad	KS	
			196,250.00			Total	11.4

							Acres
9/2/2020	Dairy	Dairy	80,000.00	F 17	Quad	KS	
			80,000.00			Total	10.5

							Acres
4/14/2020	P1	P1	8,000.00	F2	Quad	KS	
4/15/2020	P1	P1	12,000.00	F2	Quad	KS	
4/15/2020	Dairy	Dairy	16,000.00	F2	Quad	KS	
4/16/2020	P1	P1	16,000.00	F2	Quad	KS	
4/16/2020	Dairy	Dairy	8,000.00	F2	Quad	KS	
4/17/2020	P1	P1	20,000.00	F2	Quad	KS	
4/17/2020	LWR	LWR	8,000.00	F2	Quad	KS	
4/17/2020	Dairy	Dairy	22,000.00	F2	Quad	KS	
6/17/2020	p1	p1	12,000.00	F2	9105	KS	
6/18/2020	p1	p1	40,000.00	F2	9105	KS	
6/19/2020	P2	P2	36,000.00	F2	9105	KS	
6/20/2020	P2	P2	20,000.00	F2	9105	KS	
6/22/2020	P2	P2	52,000.00	F2	9105	KS	
6/23/2020	P2	P2	12,000.00	F2	9105	KS	
6/26/2020	P2	P2	56,000.00	F2	9105	KS	
6/29/2020	P2	P2	60,000.00	F2	9105	KS	
6/30/2020	P2	P2	28,000.00	F2	9105	KS	
7/1/2020	p2	p2	44,000.00	F2	9105	KS	
11/24/2020	Dairy	Dairy	108,000.00	F 2	9105	KS	
12/4/2020	Dairy	Dairy	52,500.00	F2	Quad	KS	
			630,500.00			Total	27.5

							Acres
12/7/2020	Dairy	Dairy	160,000.00	F 8	Quad	KS	
12/8/2020	Dairy	Dairy	80,000.00	F 8	Quad	KS	
			240,000.00			Total	8.7

							Acres
8/25/2020	Dairy	Dairy	50,000.00	F12	Quad	JH	
8/26/2020	Dairy	Dairy	50,000.00	F12	quad	JH	
8/27/2020	Dairy	Dairy	50,000.00	F12	quad	JH	
			150,000.00			Total	21

							Acres
12/11/2020	Dairy	Dairy	72,000.00	Glosick 10B	9105	KS	
			72,000.00			Total	15.7

							Acres
1/14/2020	LWR	LWR	8,000.00	H3	9105	KS	
1/14/2020	P2	P2	56,000.00	H3	9105	KS	
4/2/2020	P2	P2	32,000.00	H3	Quad	KS	
4/2/2020	LWR	LWR	16,000.00	H3	Quad	KS	
9/10/2020	P2	P2	40,000.00	H3	9105	KS	
9/15/2020	P2	P2	76,500.00	H3	9105	KS	
9/16/2020	P2	P2	94,500.00	H3	9105	KS	
9/17/2020	P2	P2	76,500.00	H3	9105	KS	
9/18/2020	P2	P2	27,000.00	H3	9105	KS	
9/22/2020	P2	P2	108,000.00	H3	9105	KS	
9/23/2020	P2	P2	117,000.00	H3	9105	KS	
9/24/2020	P2	P2	117,000.00	H3	9105	KS	
			768,500.00			Total	52.1

							Acres
9/28/2020	P2	P2	36,000.00	H2 B	9105	KS	
			36,000.00			Total	6.1

							Acres
8/21/2020	Dairy	Dairy	48,000.00	11	Quad	KS	
8/22/2020	Dairy	Dairy	48,000.00	11	Quad	Ks	
12/8/2020	Dairy	Dairy	56,000.00	11	Quad	KS	
			152,000.00			Total	17.4

							Acres
	Dairy	Dairy	128,000.00	J 2	quad	KS	
			128,000.00			Total	22.5

							Acres
4/14/2020	P1	P1	160,000.00	K1	Quad	KS	
4/14/2020	Dairy	Dairy	12,000.00	K1	Quad	KS	
4/14/2020	LWR	LWR	8,000.00	K1	Quad	KS	
11/25/2020	Dairy	Dairy	120,000.00	K 1	Quad	KS	
11/27/2020	Dairy	Dairy	72,000.00	K1	Quad	KS	
12/3/2020	Dairy	Dairy	68,000.00	K1	Quad	KS	
12/4/2020	Dairy	Dairy	24,000.00	K1	Quad	KS	
			464,000.00			Total	41.4

							Acres
11/18/2020	p2	p2	50,000.00	L1	9105	KS	
11/19/2020	p2	p2	50,000.00	L1	9105	KS	
12/7/2020	Dairy	Dairy	32,000.00	L 1	Quad	KS	
			132,000.00			Total	16.2

							Acres
11/5/2020	P2	P2	54,000.00	L2	9105	KS	
11/6/2020	P2	P2	76,500.00	L2	9105	KS	
11/9/2020	P2	P2	63,000.00	L2	9105	KS	
11/10/2020	P2	P2	36,000.00	L2	9105	KS	
11/12/2020	P2	P2	99,000.00	L2	9105	KS	
11/13/2020	P2	P2	40,500.00	L2	9105	KS	
11/13/2020	P2	P2	9,000.00	L2	9105	KS	
			378,000.00			Total	24.8

							Acres
9/3/2020	Dairy	Dairy	48,000.00	M 6	Quad	KS	
9/4/2020	Dairy	Dairy	16,000.00	M 6	Quad	KS	
			64,000.00			Total	10.8

							Acres
9/9/2020	P2	P2	40,000.00	M3	9105	KS	
			40,000.00			Total	12.5

								Acres
3/23/2020	P2	P2	40,000.00	N1	9105	DB		
3/24/2020	P2	P2	40,000.00	N1	9105	DB		
			80,000.00			Total		22.2

							Acres
1/2/2020	P2	P2	16,000.00	O1	9105	MV	
1/3/2020	P2	P2	58,000.00	O1	9105	MV	
1/7/2020	LWR	LWR	15,000.00	O1	9105	MV	
1/7/2020	P2	P2	15,000.00	O1	9105	MV	
1/8/2020	Dairy	Dairy	8,000.00	O1	9105	MV	
1/8/2019	P2	P2	15,000.00	O1	9105	MV	
1/8/2020	LWR	LWR	8,000.00	O1	9105	M V	
1/9/2020	LWR	LWR	16,000.00	O1	9105	MV	
1/9/2020	P2	P2	15,000.00	O1	9105	MV	
1/10/2020	LWR	LWR	16,000.00	O1	9105	MV	
1/10/2020	P2	P2	15,000.00	O1	9105	MV	
1/27/2020	LWR	LWR	8,000.00	O1	9105	MV / DB	
	P2	P2	80,000.00	O1	9105	MV / DB	
1/28/2020	P2	P2	40,000.00	O1	9105	MV / DB	
	LWR	LWR	9,000.00	O1	9105	MV / DB	
	Dairy	Dairy	16,000.00	O1	9105	MV / DB	
3/1/2020	P2	P2	64,000.00	O1	9105	DB	
4/3/2020	P2	P2	64,000.00	o1	Quad	KS	
9/30/2020	P2	P2	40,000.00	o1	9105	KS	
10/1/2020	P2	P2	25,000.00	o1	9105	KS	
10/2/2020	P1	P1	15,000.00	o1	9105	KS	
10/27/2020	P 2	P 2	45,000.00	O1	9105	KS	
10/28/2020	P 2	P 2	9,000.00	O1	9105	KS	
10/31/2020	P 2	P 2	85,500.00	O1	9105	KS	
11/2/2020	P2	P2	99,000.00	O1	9105	KS	
			692,500.00			Total	17.6

							Acres
1/13/2020	P2	P2	44,000.00	O2	9105	MV	
1/13/2020	LWR	LWR	24,000.00	O2	9105	MV	
4/3/2020	LWR	LWR	8,000.00	o2	Quad	KS	
11/4/2020	P2	P2	121,500.00	O2	9105	KS	
			197,500.00			Total	12

							Acres
4/29/2020	Dairy	Dairy	48,000.00	P 1B	quad	KS	
12/14/2020	sludge pile by LWR	sludge pile by LWR	150	P1B	Dry Spreader	LD	
12/15/2020	sludge pile by LWR	sludge pile by LWR	150	P1B	Dry Spreader	Ld	
			48,300.00			Total	17.5

12/5/2020	Dairy	Dairy	52,000.00	Q 13	9105	KS	Acres
			52,000.00			Total	12.7

							Acres
1/14/2020	P2	P2	40,000.00	ST 6	9105	KS	
1/15/2020	P2	P2	88,000.00	ST 6	9105	MV	
1/15/2020	Dairy	Dairy	24,000.00	ST 6	9105	MV	
1/15/2020	LWR	LWR	8,000.00	ST 6	9105	MV	
1/29/2020	LWR	LWR	16,000.00	ST6	9105	MV / DB	
	P2	P2	56,000.00	ST6	9105	MV / DB	
1/30/2020	P2	P2	56,000.00	ST6	9105	MV / DB	
	LWR	LWR	8,000.00	ST6	9105	MV / DB	
2/3/2020	P2	P2	24,000.00	ST6	9105	DB	
3/2/2020	P2	P2	56,000.00	ST6	9105	DB	
3/2/2020	LWR	LWR	16,000.00	ST6	9105	DB	
3/3/2020	LWR	LWR	8,000.00	ST6	9105	DB	
3/3/2020	P2	P2	56,000.00	ST6	9105	DB	
3/4/2020	LWR	LWR	8,000.00	ST6	9105	DB	
3/4/2020	P2	P2	32,000.00	ST6	9105	DB	
3/10/2020	P2	P2	64,000.00	ST6	9105	KS	
3/10/82020	LWR	LWR	8,000.00	ST6	9105	KS	
3/16/2020	Dairy	Dairy	24,000.00	ST6	9105	KS	
3/17/2020	P2	P2	72,000.00	ST6	9105	DB	
3/18/2020	Dairy	Dairy	8,000.00	ST 6	9105	KS	
3/19/2020	P2	P2	56,000.00	ST 6	9105	KS	
3/20/2020	P2	P2	48,000.00	ST6	9105	DB	
	Heifer barn	Heifer barn	40,000.00	ST6	quad	KS	
	Dairy	Dairy	8,000.00	ST 6	quad	KS	
4/28/2020	P2	P2	36,000.00	S T6	quad	KS	
	Dairy	Dairy	16,000.00	ST 6	quad	KS	
			876,000.00			Total	21.4

							Acres
5/12/2020	Dairy Pond	Dairy	96,000.00	Sam Dicks A	quad	KS	11.8
5/13/2020	Dairy Pond	Dairy	72,000.00	Sam Dicks B	quad	KS	10.2
			168,000.00			Total	

							Acres
8/11/82020	Heifer barn	Heifer barn	20,000.00	Spears 1	9105	KS	
9/19/2020	Heifer barn	Heifer barn	36,000.00	Spears 1	9105	KS	
9/21/2020	Heifer barn	Heifer barn	22,500.00	Spears 1	9105	KS	
10/9/2020	Heifer Barn	Heifer Barn	15,000.00	Spears 1	9105	Ks	
			93,500.00			Total	11.3

							Acres
6/11/2020	P1	P1	4,000.00	ST 21	9105	KS	
6/11/2020	Heifer Barn	Heifer barn	32,000.00	ST 21	9105	KS	
6/12/2020	P1	P1	36,000.00	ST21	9105	KS	
6/15/2020	P1	P1	32,000.00	ST 21	9105	KS	
6/16/2020	p1	p1	24,000.00	ST 21	9105	KS	
7/13/2020	P1	P1	21,000.00	ST 21	9105	KS	
7/14/2020	P1	P1	12,000.00	ST21	9105	KS	
7/15/2020	P1	P1	10,000.00	ST21	9105	KS	
7/17/2020	heifer barn	Heifer barn	10,000.00	St 21	9105	KS	
7/20/2020	P1	P1	32,000.00	ST 21	9105	KS	
7/21/2020	P1	P1	44,000.00	ST 21	9105	KS	
7/24/2020	P1	P1	20,000.00	ST 21	9105	KS	
7/27/2020	P1	P1	20,000.00	ST 21	9105	KS	
7/30/2020	heifer barn manure	heifer barn manure	20,000.00	ST21	9105	KS	
7/30/2020	heifer barn manure	heifer barn manure	20,000.00	ST 21	9105	KS	
			337,000.00				
						Total	41.3

							Acres
1/14/2020	P2	P2	40,000.00	ST 6	9105	KS	
1/15/2020	P2	P2	88,000.00	ST 6	9105	MV	
1/15/2020	Dairy	Dairy	24,000.00	ST 6	9105	MV	
1/15/2020	LWR	LWR	8,000.00	ST 6	9105	MV	
1/29/2020	LWR	LWR	16,000.00	ST6	9105	MV / DB	
	P2	P2	56,000.00	ST6	9105	MV / DB	
1/30/2020	P2	P2	56,000.00	ST6	9105	MV / DB	
	LWR	LWR	8,000.00	ST6	9105	MV / DB	
2/3/2020	P2	P2	24,000.00	ST6	9105	DB	
3/2/2020	P2	P2	56,000.00	ST6	9105	DB	
3/2/2020	LWR	LWR	16,000.00	ST6	9105	DB	
3/3/2020	LWR	LWR	8,000.00	ST6	9105	DB	
3/3/2020	P2	P2	56,000.00	ST6	9105	DB	
3/4/2020	LWR	LWR	8,000.00	ST6	9105	DB	
3/4/2020	P2	P2	32,000.00	ST6	9105	DB	
3/10/2020	P2	P2	64,000.00	ST6	9105	KS	
3/10/2020	LWR	LWR	8,000.00	ST6	9105	KS	
3/16/2020	Dairy	Dairy	24,000.00	ST6	9105	KS	
3/17/2020	P2	P2	72,000.00	ST6	9105	DB	
3/18/2020	Dairy	Dairy	8,000.00	ST 6	9105	KS	
3/19/2020	P2	P2	56,000.00	ST 6	9105	KS	
3/20/2020	P2	P2	48,000.00	ST6	9105	DB	
	Heifer barn	Heifer barn	40,000.00	ST6	quad	KS	
	Dairy	Dairy	8,000.00	ST 6	quad	KS	
	Dairy	Dairy	16,000.00	ST 6	quad	KS	
			840,000.00			Total	21.4

								Acres
6/4/2020	P1	P1	20,000.00	ST1	9105	KS		
6/5/2020	P1	P1	12,000.00	ST1	9105	KS		
6/6/2020	P1	P1	12,000.00	St1	9105	KS		
6/10/2020	p1	p1	28,000.00	ST 1	9105	KS		
			72,000.00				Total	24.6

							Acres
7/6/2020	P2	P2	40,000.00	ST11	9105	KS	
7/7/2020	P2	P2	26,000.00	ST11	9105	KS	
7/8/220	P2	P2	40,000.00	ST11	9105	KS	
7/10/2020	P1	P1	40,000.00	ST11	9105	KS	
7/14/2020	P1	P1	36,000.00	ST11	9105	KS	
7/15/2020	P1	P1	20,000.00	ST11	9105	KS	
7/20/2020	P1	P1	20,000.00	ST 11	9105	KS	
7/21/2020	P1	P1	12,000.00	ST 11	9105	KS	
7/23/2020	P1	P1	9,000.00	ST 11	9105	KS	
7/24/2020	P1	P1	20,000.00	ST 11	9105	KS	
7/27/2020	P1	P1	20,000.00	ST 11	9105	KS	
8/5/2020	P2	P2	16,000.00	ST 11	9105	KS	
8/7/2020	P2	P2	8,000.00	ST 11	9105	KS	
			307,000.00			Total	25.5

							Acres
3/11/2020	P2	P2	40,000.00	ST 16	9105	KS	
3/18/2020	Dairy	Dairy	18,000.00	ST 16	9105	DB	
3/22/2020	P2	P2	72,000.00	ST 16	9105	DB	
			130,000.00			Total	11.6

							Acres
3/11/2020	P2	P2	24,000.00	ST 18	9105	KS	
7/28/2020	P2	P2	20,000.00	ST18	9105	KS	
7/28/2020	P2	P2	20,000.00	St18	9105	KS	
			64,000.00			Total	11.4

							Acres
3/12/2020	P2	P2	45,000.00	ST 5	9105	KS	
3/16/2020	P2	P2	48,000.00	ST5	9105	KS	
4/27/2020	P2	P2	40,000.00	ST5	quad	KS	
			133,000.00			Total	27.5

							Acres
1/14/2020	P2	P2	40,000.00	ST 6	9105	KS	
1/15/2020	P2	P2	88,000.00	ST 6	9105	MV	
1/15/2020	Dairy	Dairy	24,000.00	ST 6	9105	MV	
1/15/2020	LWR	LWR	8,000.00	ST 6	9105	MV	
1/29/2020	LWR	LWR	16,000.00	ST6	9105	MV / DB	
	P2	P2	56,000.00	ST6	9105	MV / DB	
1/30/2020	P2	P2	56,000.00	ST6	9105	MV / DB	
	LWR	LWR	8,000.00	ST6	9105	MV / DB	
2/3/2020	P2	P2	24,000.00	ST6	9105	DB	
3/2/2020	P2	P2	56,000.00	ST6	9105	DB	
3/2/2020	LWR	LWR	16,000.00	ST6	9105	DB	
3/3/2020	LWR	LWR	8,000.00	ST6	9105	DB	
3/3/2020	P2	P2	56,000.00	ST6	9105	DB	
3/4/2020	LWR	LWR	8,000.00	ST6	9105	DB	
3/4/2020	P2	P2	32,000.00	ST6	9105	DB	
3/10/2020	P2	P2	64,000.00	ST6	9105	KS	
3/10/82020	LWR	LWR	8,000.00	ST6	9105	KS	
3/16/2020	Dairy	Dairy	24,000.00	ST6	9105	KS	
3/17/2020	P2	P2	72,000.00	ST6	9105	DB	
3/18/2020	Dairy	Dairy	8,000.00	ST 6	9105	KS	
3/19/2020	P2	P2	56,000.00	ST 6	9105	KS	
3/20/2020	P2	P2	48,000.00	ST6	9105	DB	
	Heifer barn	Heifer barn	40,000.00	ST6	quad	KS	
	Dairy	Dairy	8,000.00	ST 6	quad	KS	
	Dairy	Dairy	16,000.00	ST 6	quad	KS	
			840,000.00			Total	21.4

							Acres
3/11/2020	P2	P2	40,000.00	ST 16	9105	KS	
3/18/2020	Dairy	Dairy	18,000.00	ST 16	9105	DB	
3/22/2020	P2	P2	72,000.00	ST 16	9105	DB	
			130,000.00			Total	11.6

							Acres
3/11/2020	P2	P2	24,000.00	ST 18	9105	KS	
7/28/2020	P2	P2	20,000.00	ST18	9105	KS	
7/28/2020	P2	P2	20,000.00	St18	9105	KS	
			64,000.00			Total	11.4

							Acres
5/4/2020	Dairy	Dairy	96,000.00	sugars 3	quad	KS	20.5
5/4/2020	Dairy	Dairy	48,000.00	Sugars 1	quad	KS	6.1
5/5/2020	Dairy	Dairy	8,000.00	Sugars 1	quad	KS	
12/16/2020	Dairy	Dairy	24,000.00	Sugar 3	9105	KS	
12/29/2020	Dairy Barn	Dairy Barn	56,000.00	Sugar 3	9105	KS	
12/29/2020	Dairy Barn	Dairy Barn	24,000.00	sugar 2	9105	KS	13.2
12/30/2020	Dairy Barn	Dairy Barn	80,000.00	Sugar 3	9105	KS	
			336,000.00			Total	39.8

							Acres
5/14/2020	Dairy Pond	Dairy	32,000.00	T1	quad	KS	16.9
12/10/2020	Dairy	Dairy	40,000.00	T 2 & 3	Quad	KS	6
12/10/2020	Dairy	Dairy	80,000.00	T 1	Quad	KS	
12/14/2020	Dairy	Dairy	64,000.00	T1	9105	KS	
12/15/2020	Dairy	Dairy	56,000.00	T15	9105	KS	6
			272,000.00			Total	28.9

							Acres
5/8/2020	Dairy	Dairy	144,000.00	Tucker 4	quad	KS	11.2
5/11/2020	Dairy Pond	Dairy	136,000.00	Tucker 1	quad	KS	10.2
			280,000.00			Total	21.4

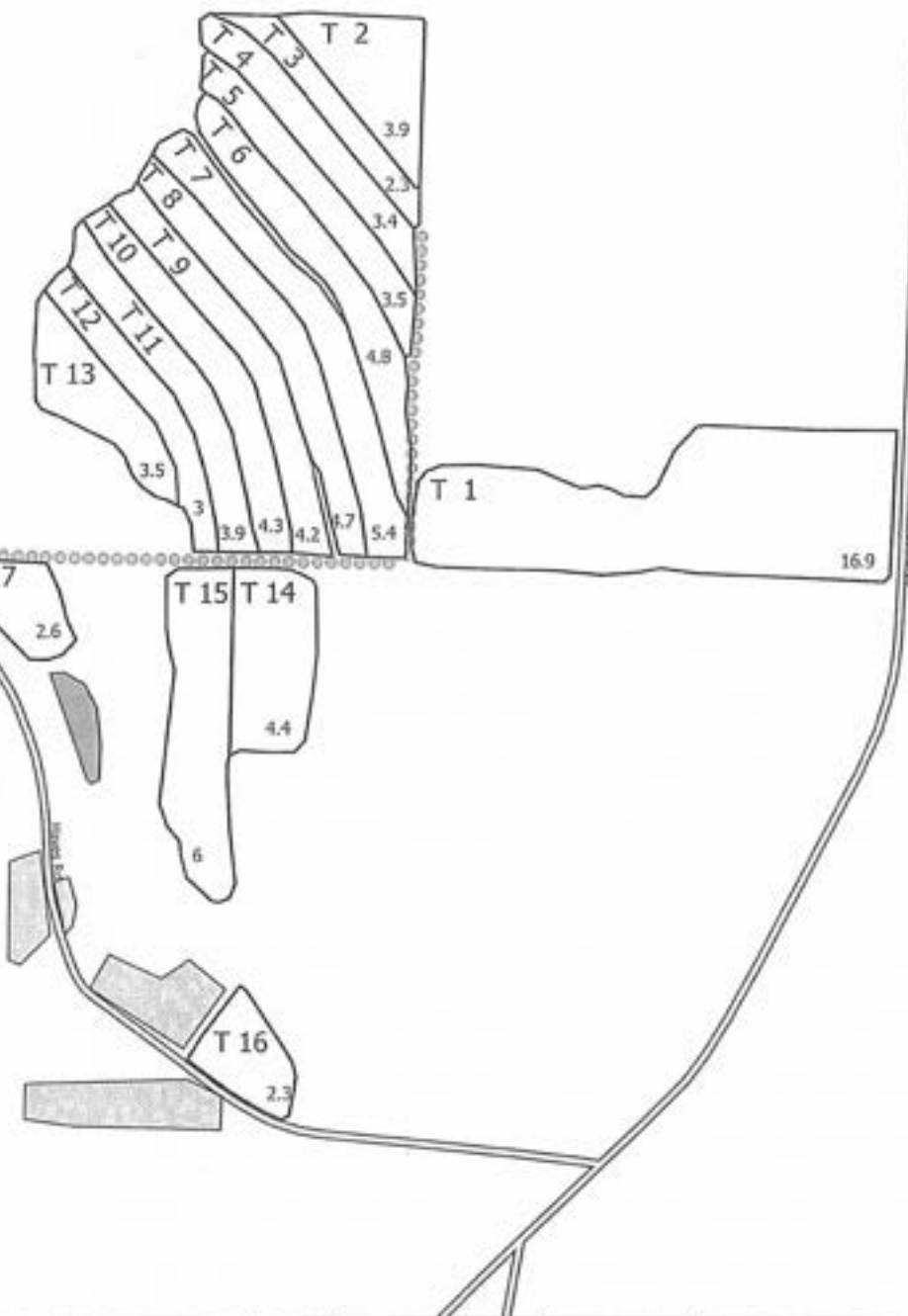
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2/4/2020	Heifer Barn	Heifer Barn	16,000.00	U1	9105	MV	
2/4/2020	Heifer Barn	Heifer Barn	16,000.00	U1	9105	DB	
2/5/2020	Heifer Barn	Heifer Barn	24,000.00	U1	9105	DB	
			56,000.00			Total	16

							Acres
10/28/2020	P 2	P 2	13,500.00	W 6	9105	KS	
10/30/2020	sludge from wash bay	sludge from wash bay	20 ton	w6	Dry spreader	Luke	
11/5/2020	sludge pile	sludge pile	50 ton	w6	Dry spreader	Luke	
	sludge pile by LWR	sludge pile by LWR	100	W6	Dry Spreader	LD	
			13,600.00			Total	25

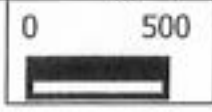
							Acres
20-Nov	sludge pile by LWR	sludge pile by LWR	260 ton	W1	Dry Spreader	LD	
12/21/2020	Dairy	Dairy	40,000.00	W1	9105	KS	
12/22/2020	Dairy	Dairy	40,000.00	W1	9105	Ks	
			80,000.00			Total	26.4

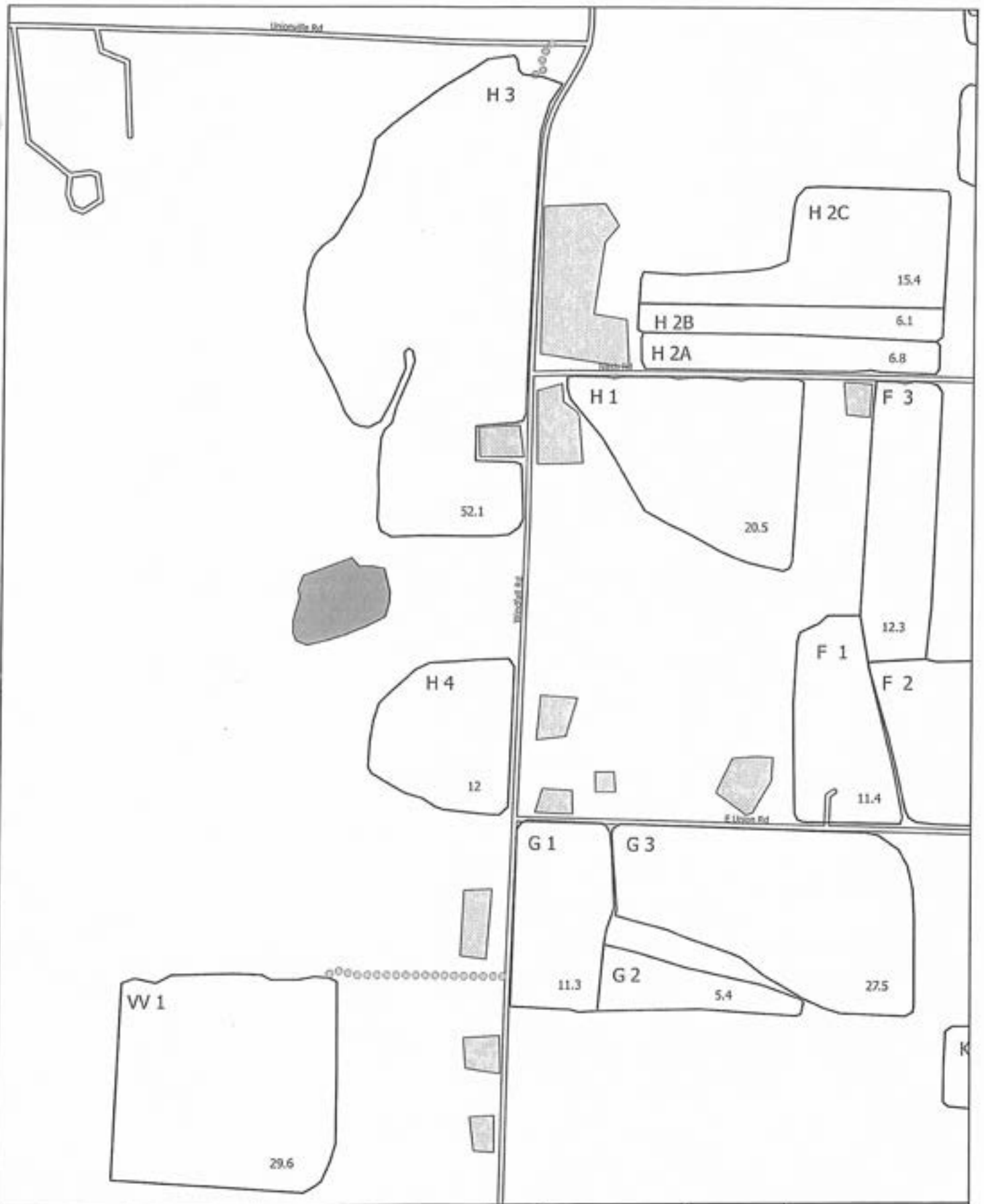
Field Maps

Field maps

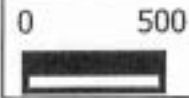


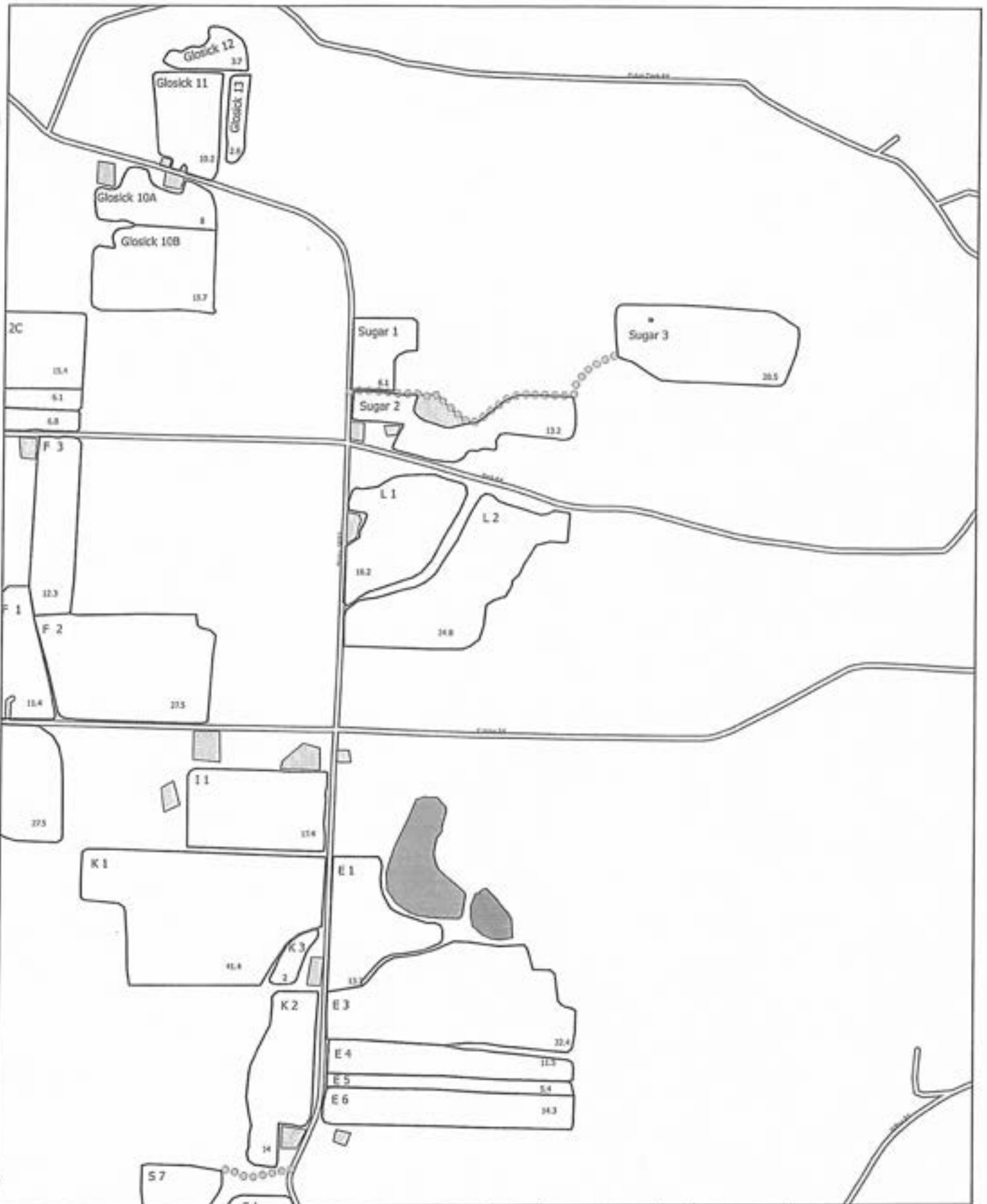
Leo Dickson & Sons
Farm #953
Map#: 1
05-10-2018





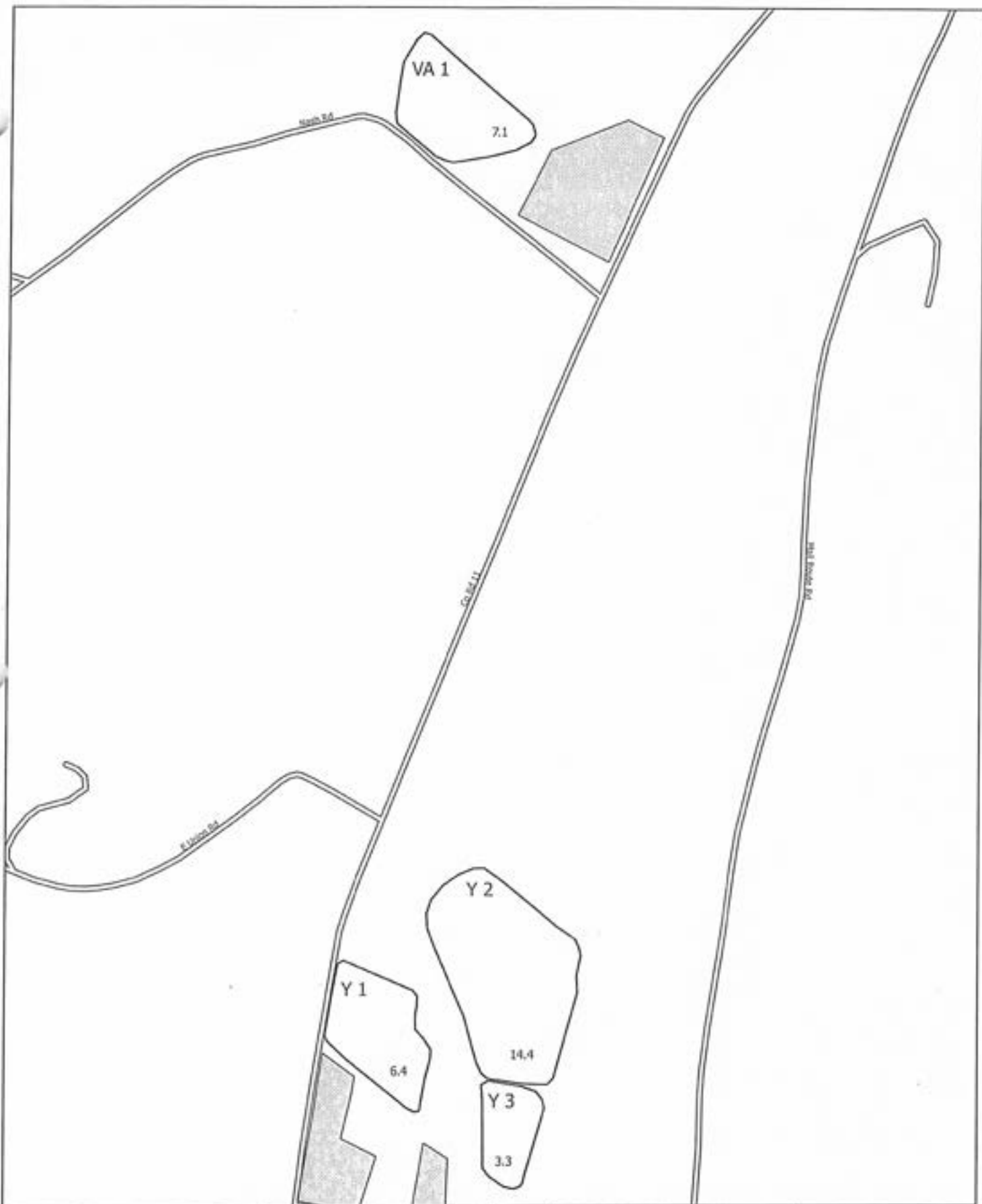
Leo Dickson & Sons
 Farm #953
 Map#: 2
 05-10-2018



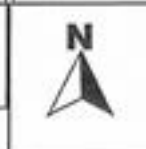
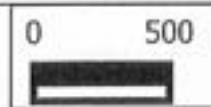
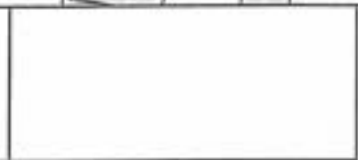


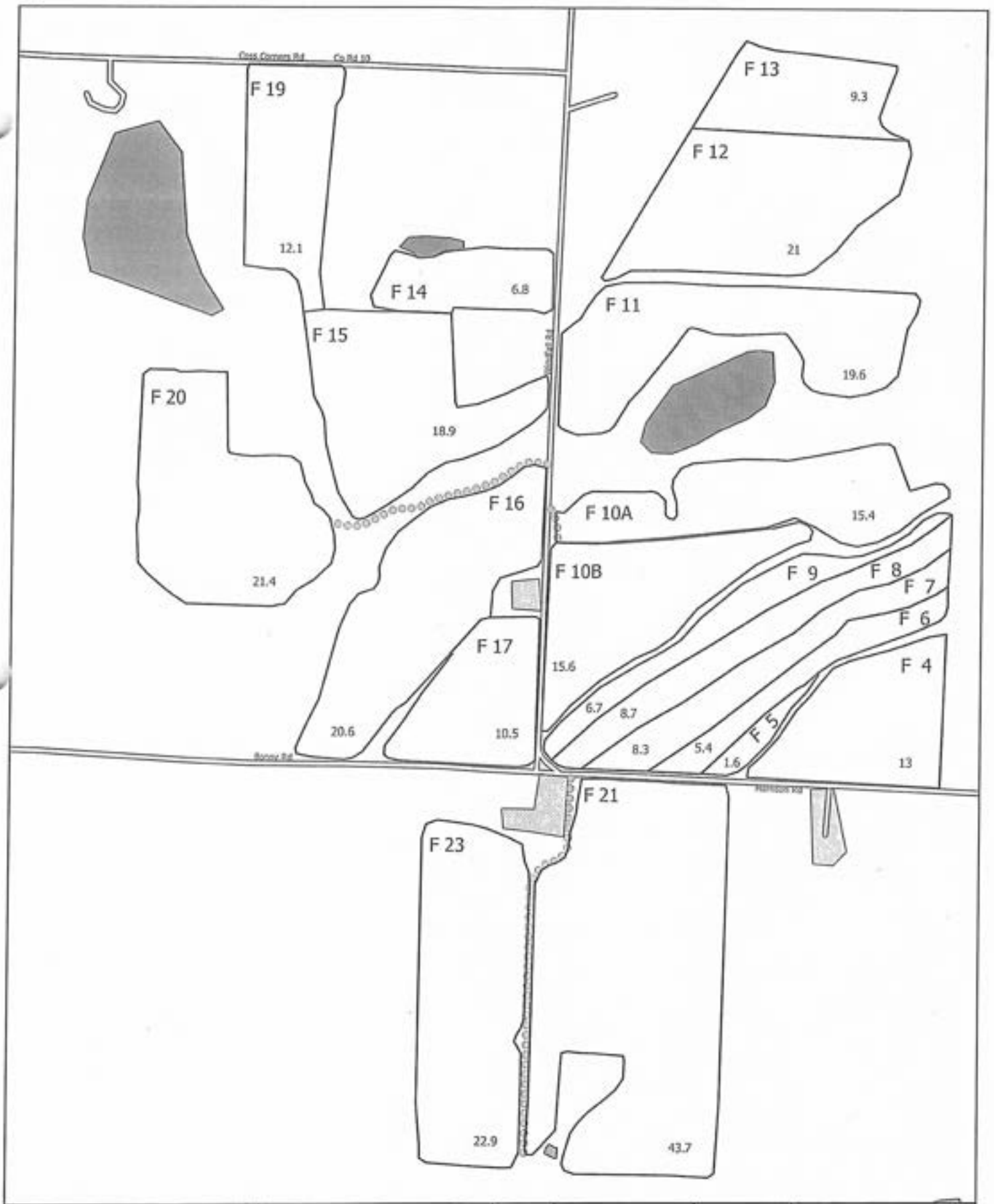
Leo Dickson & Sons
 Farm #953
 Map#: 3
 05-10-2018



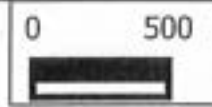


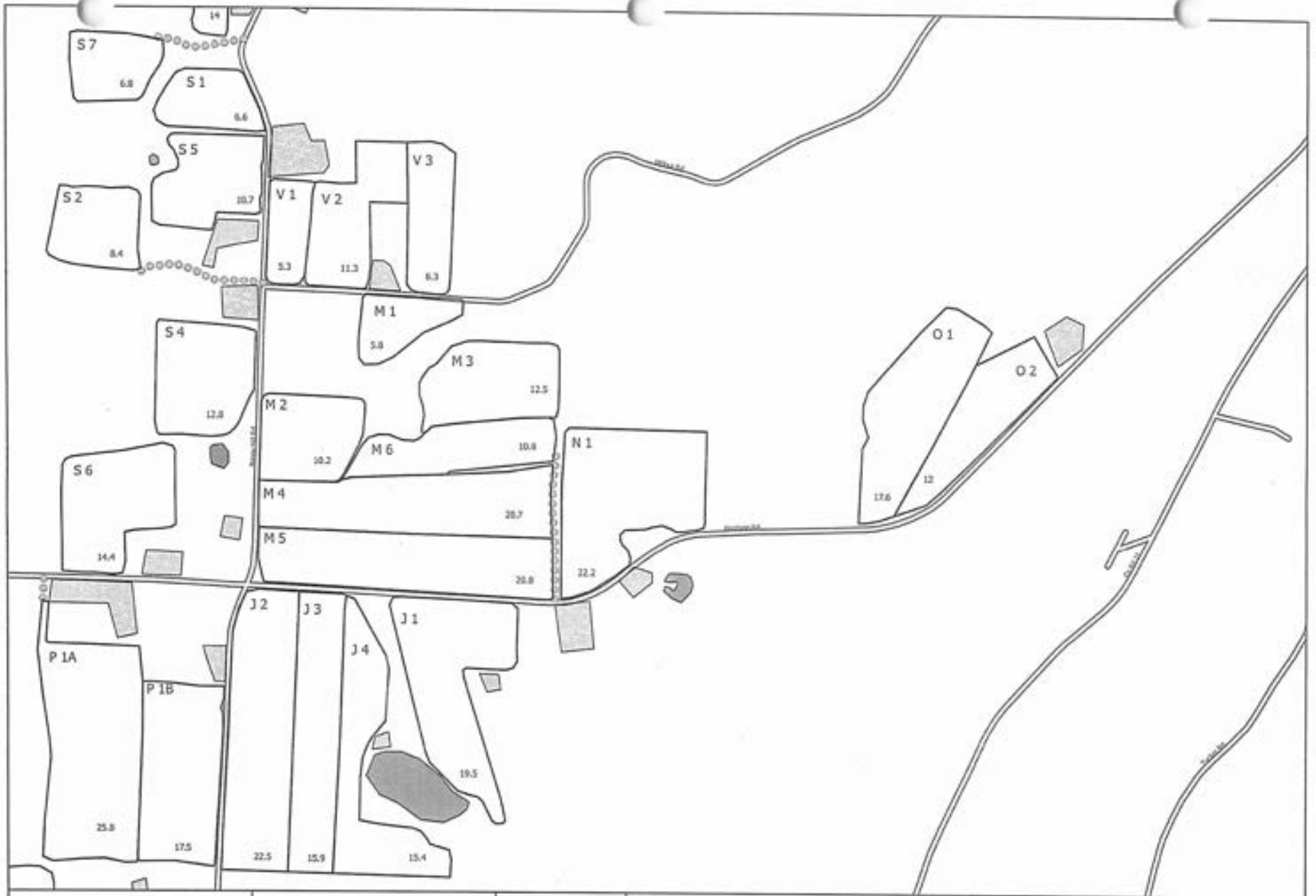
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Farm #953
Map#: 4
05-10-2018





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 Map#: 5
 05-10-2018





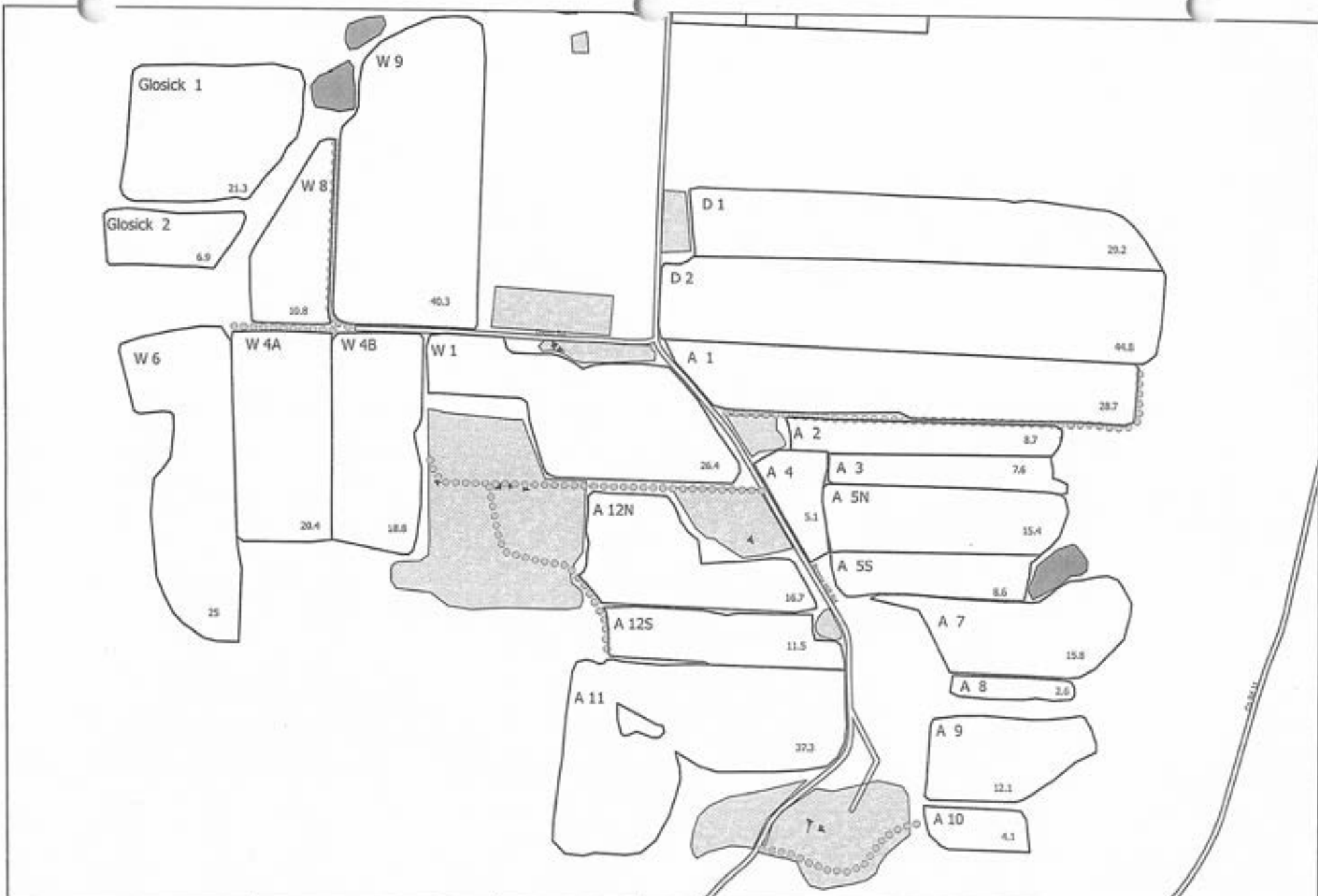
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 Farm #953
 Map #6
 05-10-2018



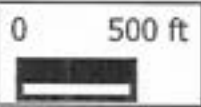
Western
 New York

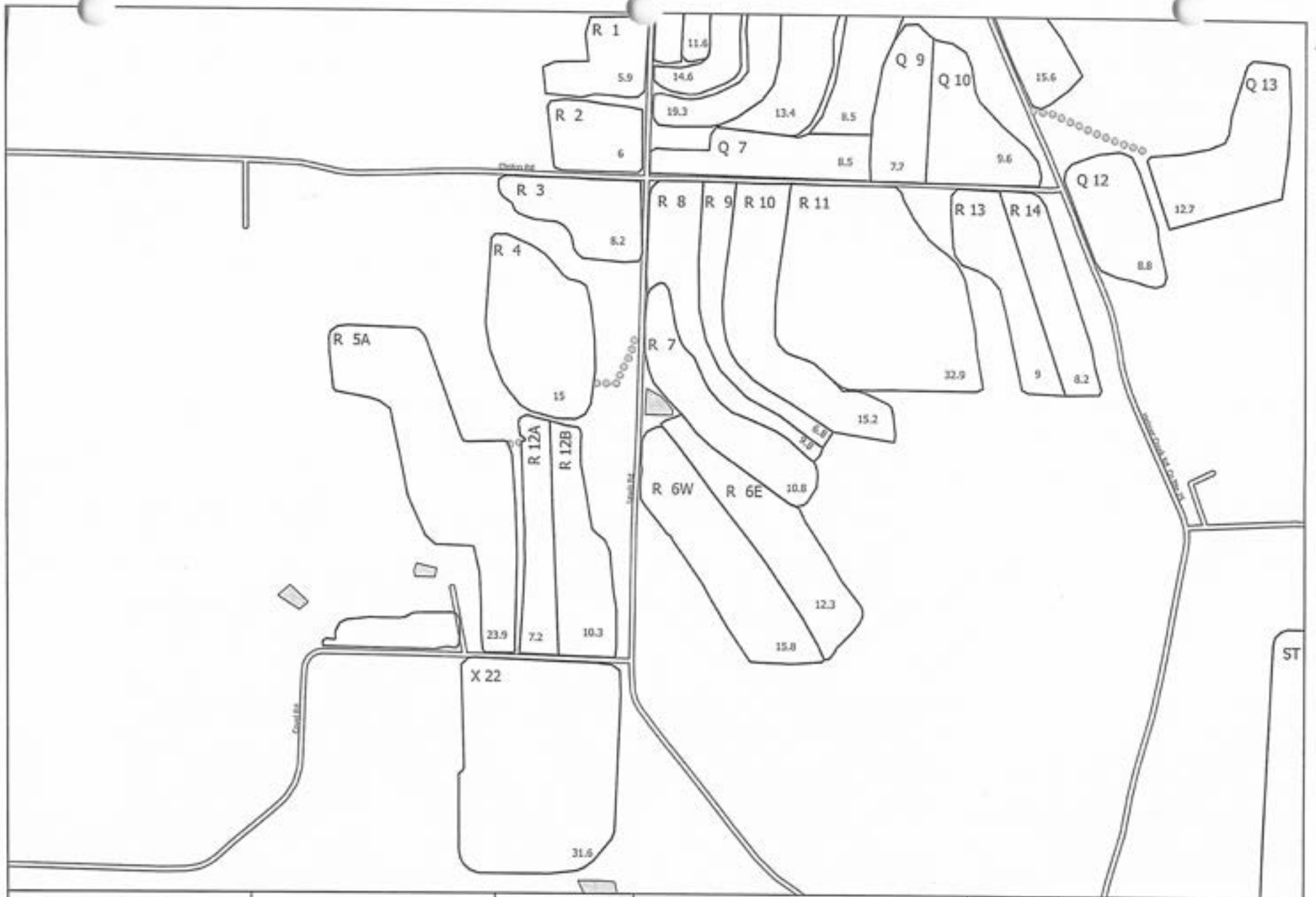
CROP MANAGEMENT



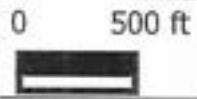


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 Farm #953
 Map #7
 05-10-2018



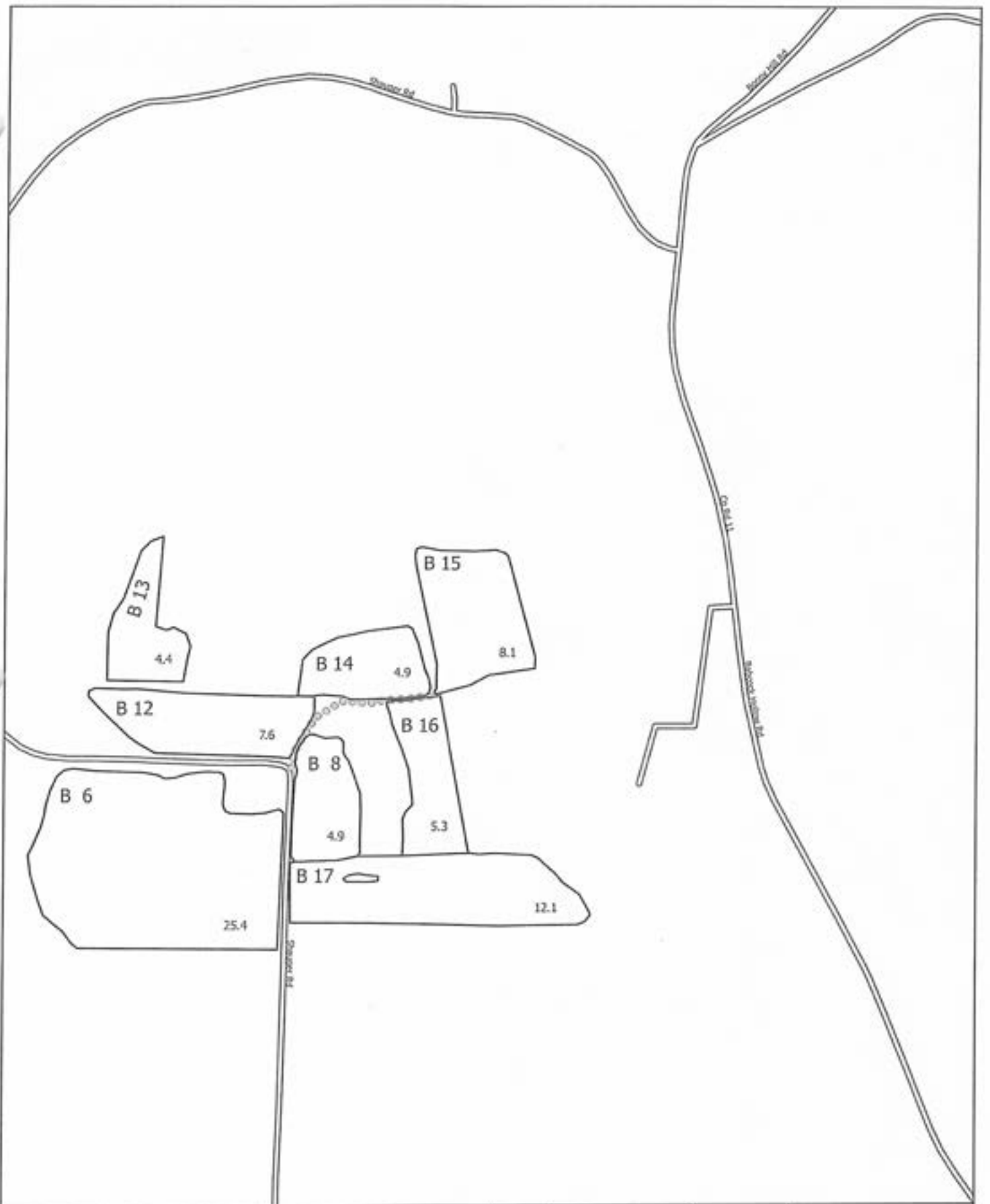


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 Farm #953
 Map #9
 05-10-2018



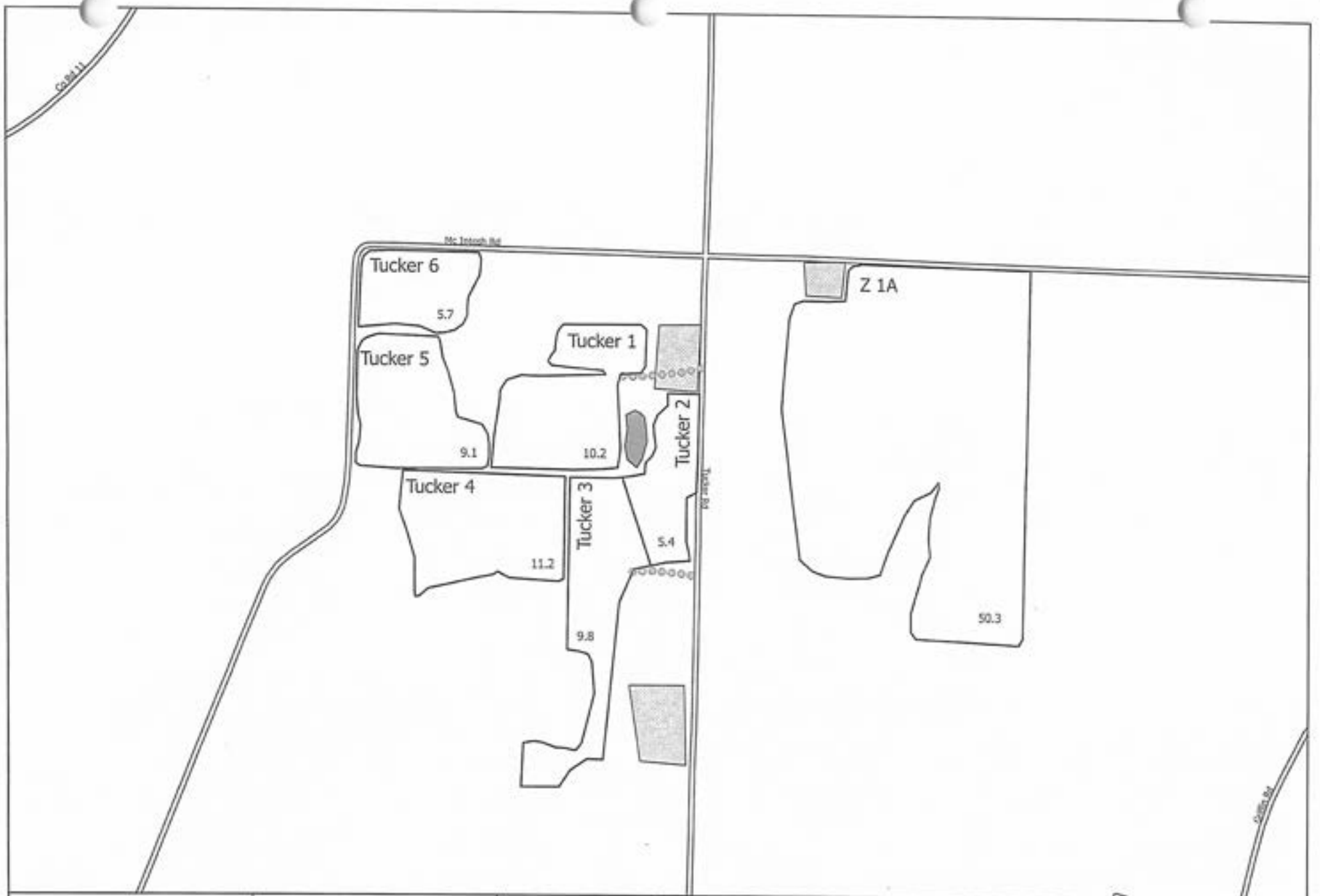
Western
 New York
CROP MANAGEMENT





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





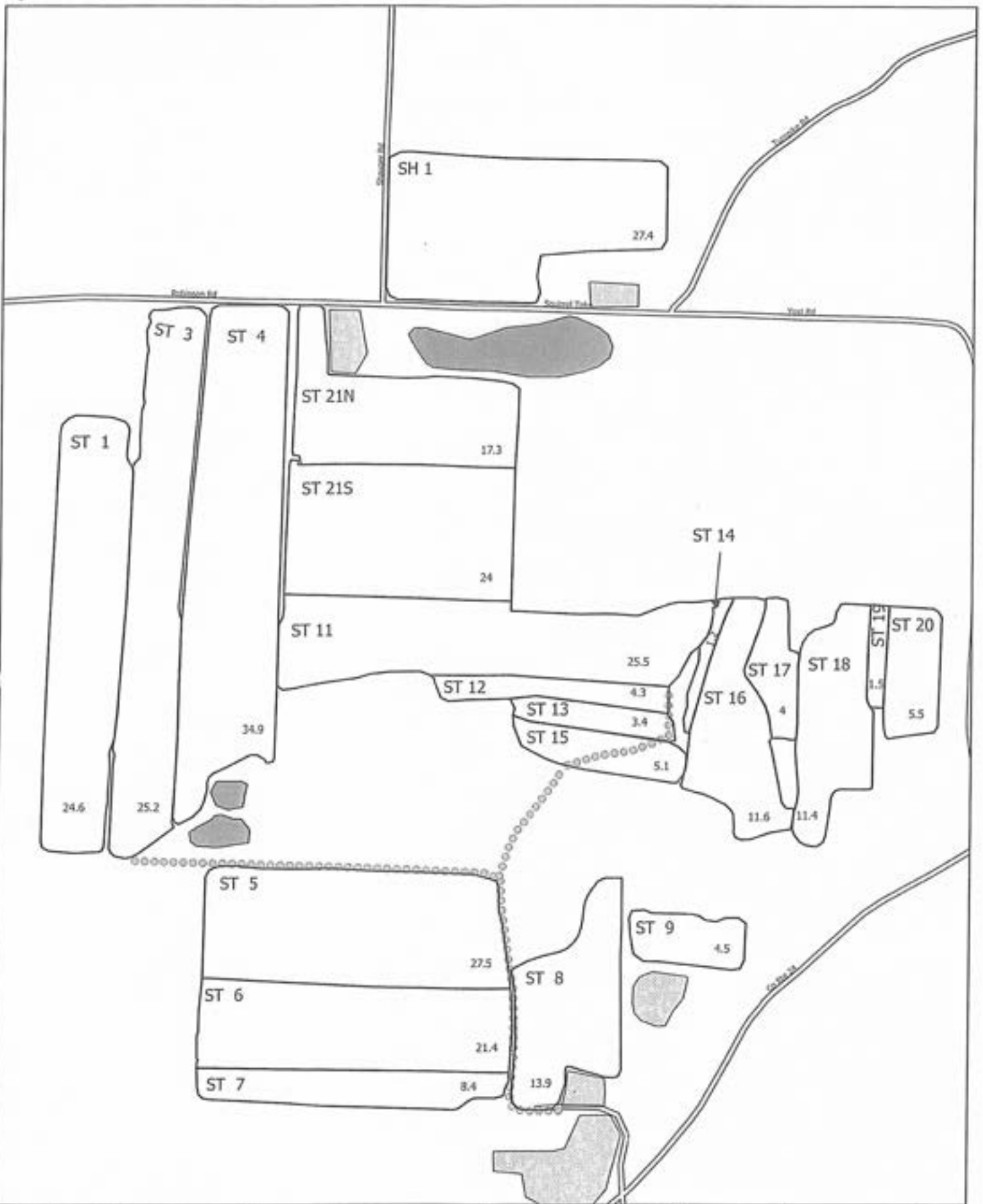
Leo Dickson & Sons
 Farm #953
 Map #11
 05-10-2018



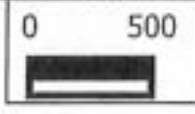
Western
 New York

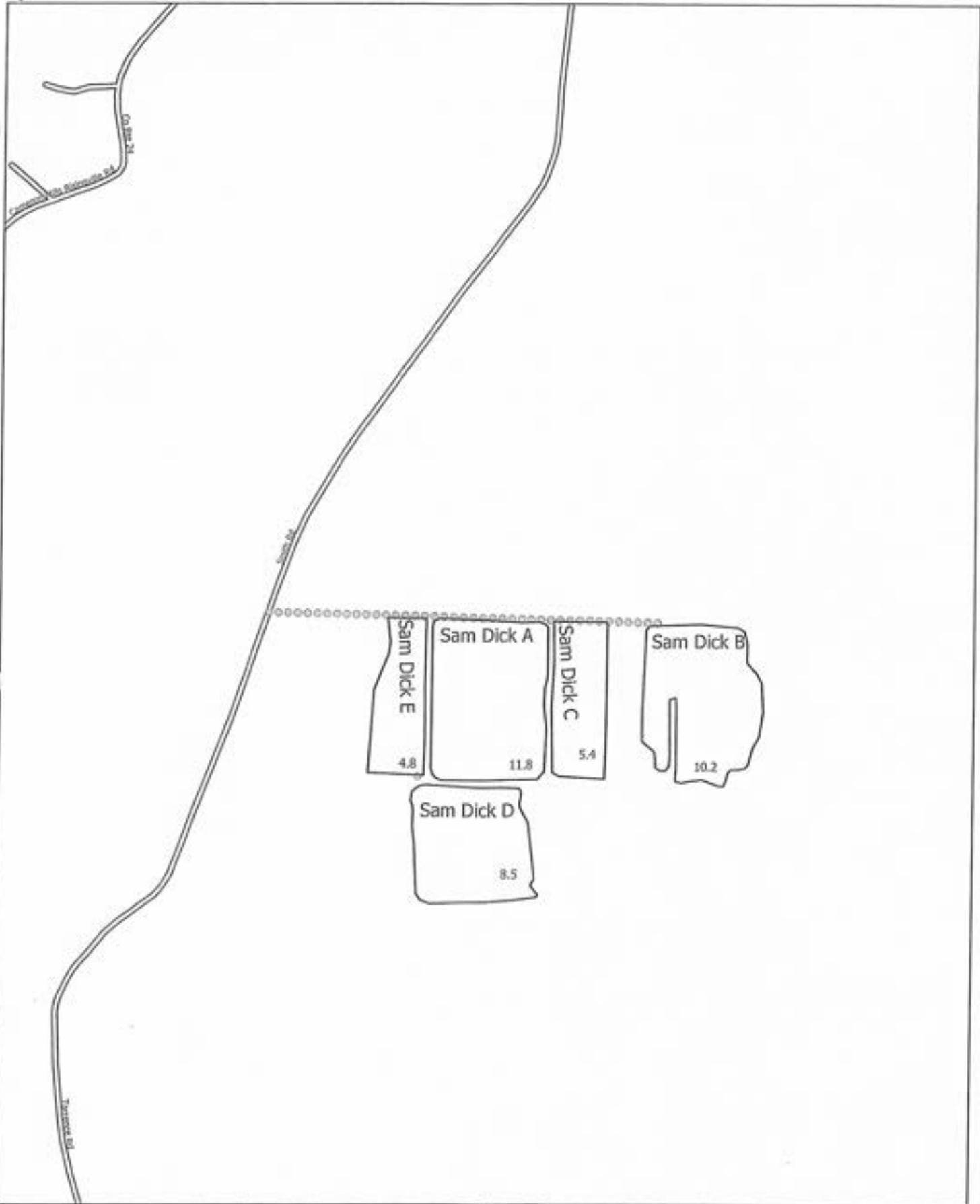
CROP MANAGEMENT



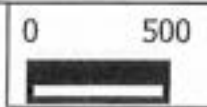


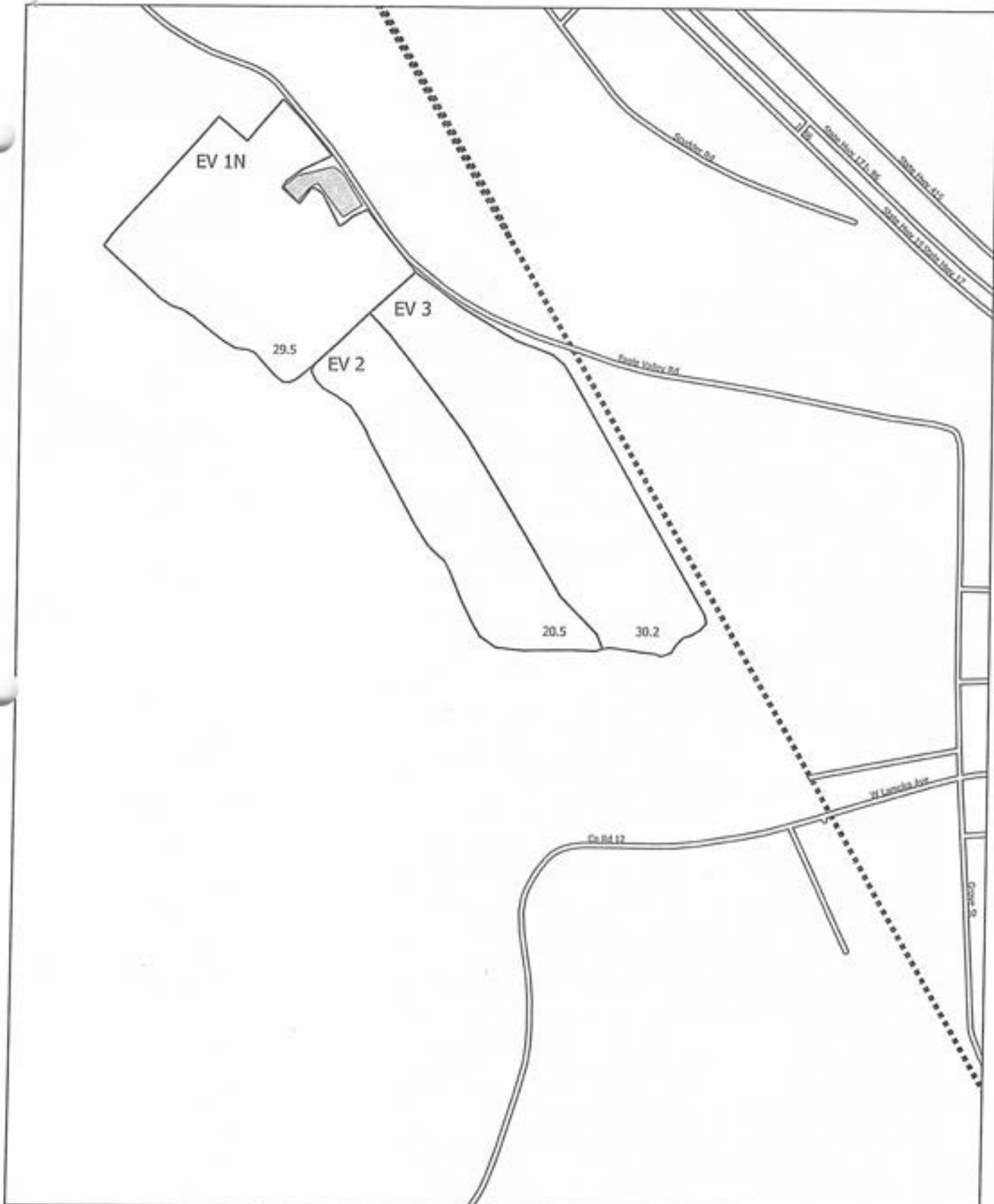
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 Farm #953
 Map#: 12
 05-10-2018



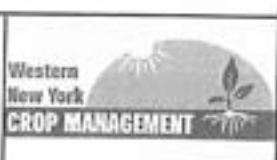
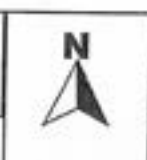
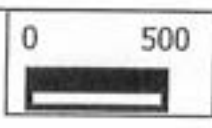


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 Farm #953
 Map#: 13
 05-10-2018





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Farm #953
Map#: 14
05-10-2018



2021

Crop

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Nutrient Management Plan

FieldName	FieldSplit	Acres	Yr	Name	Map	SampleDate	pH	P	Plevel	K	KLevel	OM
Alfalfa/Grass												
A 2	360M	8.7	8		7	6/3/2020	6.5	137	VH	232.9	VH	3.8
A 3	360	7.6	8		7	2/4/2020	6.5	77.3	VH	237.5	VH	2.6
A 11	360	37.3	9		7	2/4/2020	6.3	75.6	VH	324	VH	2.7
A 12N	360	16.7	6		7	2/4/2020	6	64.5	VH	331.3	VH	3.6
B 8	360	4.9	6	Estes	10	2/4/2020	6.2	46.6	VH	232.9	VH	2.7
B 9	360M	33.6	3	Estes	8	6/3/2020	6.9	264.5	VH	344.2	VH	2.1
B 14	360	4.9	6	Estes	10	2/4/2020	6.1	45.4	VH	277	VH	2.8
B 15	360	8.1	6	Estes	10	2/4/2020	6.2	48.4	VH	289.9	VH	2.3
B 16	360	5.3	6	Estes	10	11/29/2017	6.7	220	VH	183.2	VH	2.7
C 3	360M	25.7	5		8	2/18/2020	6.6	121	VH	163	H	2.4
C 9	360M	30.1	6		8	2/4/2020	6.2	54	VH	190.6	H	2.3
C 10A	360	6.6	2		8	2/4/2020	6.6	29.2	H	110.5	M	3.1
D 2	360M	44.8	7		7	6/3/2020	6.5	92.1	VH	208	VH	3.1
E 1	360M	13.7	6	Dudley	3	2/4/2020	6.1	4.3	L	199.8	H	2.9
E 4	360	11.5	5	Dudley	3	2/4/2020	6	2.8	L	194.2	H	3.6
F 3	360M	12.3	6		3	6/3/2020	6.9	116.9	VH	85.7	LM	2.5
F 12	360M	21	7		5	6/3/2020	6.6	135.9	VH	30.5	VL	3
F 13	360	9.3	7		5	11/29/2017	6.5	116.9	VH	48.9	L	2.4
F 16	360M	20.6	5		5	6/3/2020	6.4	81.6	VH	42.4	VL	3.1
F 17	360	10.5	6		5	4/17/2019	6.1	61.9	VH	82.9	LM	3.1
F 21	360	43.7	9		5	4/17/2019	6.9	153.1	VH	121.6	MH	2.7
F 23	360M	22.9	5	Smucker	5	6/3/2020	6	45.7	VH	94	M	3
G 1	360M	11.3	3		2	12/2/2020	7	97.1	VH	121.6	MH	2.5
G 2	360	5.4	3		2	12/2/2020	6.8	86.2	VH	98.6	LM	2.5
H 1	360M	20.5	3	Polmiteer	2	6/3/2020	6.4	72.1	VH	190.6	H	2.8
H 2A	360	6.8	6	Polmiteer	2	1/28/2019	6.8	64.4	VH	144.6	H	2.7
I 1	360M	17.4	6		3	6/3/2020	6.2	23.1	H	71.9	LM	2.2
J 3	360M	15.9	9		6	6/3/2020	6.7	79.2	VH	103.2	M	2.6
K 3		2	2	Andy's Yard	3	2/4/2020	6.6	82.5	VH	103.2	M	2.4
M 4	360M	20.7	3		6	2/4/2020	6.2	67.2	VH	195.2	VH	2.2
Q 1	360	12	7		8	11/29/2017	6.2	58.4	VH	104.1	M	2.7

FieldName	FieldSplit	Acres	Yr	Name	Map	SampleDate	pH	P	Plevel	K	KLevel	OM
Q 6	360M	13.4	7		8	2/4/2020	6.7	130.1	VH	175.8	H	2.5
R 4	360	15	2		9	4/17/2019	6	41.7	VH	42.4	VL	2.5
R 5A	360M	23.9	2		9	2/4/2020	5.8	46.2	VH	99.5	LM	2.5
R 7	360	10.8	5		9	4/17/2019	6.4	10.9	M	69.1	L	2.7
R 8	360	9.8	7		9	11/29/2017	6.5	56.2	VH	103.2	M	2.2
R 13	360	9	2		9	2/4/2020	6.2	103.4	VH	405.8	VH	3.8
R 14	360	8.2	2		9	2/4/2020	6.2	105.6	VH	413.2	VH	3.1
Sam Dick A		11.8	7		13	11/29/2017	5.8	5.9	LM	65.4	L	2.3
Sam Dick B		10.2	7		13	11/29/2017	5.4	2	L	89.4	LM	2.2
ST 3	360M	25.2	7	Stewart	12	6/3/2020	5.8	12.8	M	76.5	L	2.9
ST 21N		17.3	5	Giles	12	1/28/2019	5.6	2	L	133.5	H	2.4
T 8		4.7	6	Haight	1	12/2/2020	6.1	2.5	L	62.7	L	3
T 10		4.3	6	Haight	1	12/2/2020	6.3	3.4	L	64.5	L	3.1
T 12		3	6	Haight	1	12/2/2020	6.2	4.6	L	69.1	L	3.1
T 13		3.5	6	Haight	1	12/2/2020	6.6	6.8	M	71.9	L	2.8
U 2	360	14.3	6		8	1/28/2019	6	2.3	L	94	LM	2.5
W 1	360M	26.4	6		7	6/3/2020	6.1	158.2	VH	351.6	VH	4
W 4B	360	18.8	5		7	12/2/2020	7.2	282.3	VH	600.9	VH	3.5
W 9	360M	40.3	7		7	6/3/2020	6.5	84.3	VH	149.2	H	2.7
X 22		31.6	5		9	4/17/2019	6.7	87.9	VH	113.3	MH	2.5

813.3

Alfalfa/Grass Seeding

C 8	360	7.7	1		8	4/17/2019	6.6	44.6	VH	272.4	VH	2.5
C 11	360	4.8	1		8	2/4/2020	6.2	16.8	MH	96.7	LM	2.3
C 13	360	6.8	1		8	2/4/2020	6.2	23.1	H	147.3	H	2.4
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	12/2/2020	6.6	61.2	VH	64.5	L	2.8
M 1	360	5.8	1		6	1/28/2019	6.6	63	VH	78.3	L	2.5
Q 4	360M	14.6	1		8	2/18/2020	6.4	87.7	VH	67.3	L	2.5
Q 5	360	19.3	1		8	2/4/2020	7.1	282.3	VH	166.6	H	2.3
R 10	360	15.2	1		9	4/17/2019	6.3	73.4	VH	121.6	MH	3.3
ST 1	360M	24.6	1	Stewart	12	6/3/2020	5.6	15	MH	108.7	M	2.5

159.2

FieldName	FieldSplit	Acres	Yr	Name	Map	SampleDate	pH	P	Plevel	K	KLevel	OM
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Corn from Sod

H 4	360M	12	1	Polmiter	2	6/3/2020	6.5	79.5	VH	31.4	VL	2.9
M 6	360M	10.8	1		6	6/3/2020	5.8	55	VH	138.1	MH	3
Q 3	360	11.6	1		8	2/4/2020	6.5	72.3	VH	59.9	L	2.1

34.4

Corn Silage

A 12S	360M	11.5	4		7	2/4/2020	6.1	59.7	VH	167.6	H	2.8
B 1	360	6.7	1	Estes	8	4/17/2019	5.9	12.1	M	55.3	L	1.7
B 2	360	13.4	1	Estes	8	12/29/2017	6.9	105	VH	317.5	VH	2.3
B 3	360	9.3	1	Estes	8	4/17/2019	5.5	2	L	36	VL	2.8
B 4	360M	17.2	1	Estes	8	6/3/2020	6.2	67.9	VH	122.5	MH	3.1
B 5	360	9.6	1	Estes	8	2/4/2020	6	16.6	MH	117.9	M	2.1
B 6	360M	25.4	1	Estes	10	2/4/2020	6.4	109.9	VH	483.1	VH	4.1
B 10	360M	25.8	1	Estes	8	2/4/2020	5.8	45.3	VH	151.9	H	3.1
B 11	360	5.6	1	Estes	8	2/4/2020	5.8	42	VH	158.4	H	2.8
B 12	360	7.6	1	Estes	10	2/4/2020	6.2	50.8	VH	265.1	VH	2.5
B 17	360	12.1	1	Estes	10	11/29/2017	6.9	179.7	VH	274.3	VH	2.4
C 1	360M	12.2	1		8	6/3/2020	7	141.9	VH	71.9	L	2.8
C 6	360	7.6	1		8	2/4/2020	6.4	62.6	VH	117	M	2.8
C 7	360	5.5	1		8	2/4/2020	6.2	51.7	VH	197	H	2.6
C 14		2.7	1		8	2/4/2020	6.2	21.8	H	137.2	MH	2.8
E 5	360	5.4	1	Dudley	3	4/17/2019	6.4	29.8	H	130.8	MH	2.8
E 6	360M	14.3	1	Dudley	3	6/3/2020	6.3	13.1	MH	76.5	L	2.8
EV 2		20.5	2	Eagle Valley Road	14	2/4/2020	6.2	18.1	MH	283.5	VH	5.6
EV 3		30.2	2	Eagle Valley Road	14	2/4/2020	6	19.3	MH	282.6	VH	1.8
F 5	360	1.6	1		5	12/2/2020	6.5	34.3	H	126.2	H	2
F 6	360	5.4	1		5	12/2/2020	7	129.9	VH	117	MH	8.3
F 7	360	8.3	1		5	12/2/2020	7.2	216.8	VH	107.8	MH	3
F 8	360	8.7	1		5	12/2/2020	7.1	105.1	VH	128	MH	2.8
F 9	360	6.7	1		5	12/2/2020	6.8	106.5	VH	107.8	M	2.5
F 10A	360	17.2	1		5	12/2/2020	7.3	312.4	VH	69.1	L	3.8
F 11	360M	19.6	1		5	6/3/2020	6.3	177.3	VH	31.4	VL	3.4
Glosick 1		21.3	6	Glosick	7	4/17/2019	5.8	4	L	74.6	L	3
Glosick 2		6.9	6	Glosick	7	4/17/2019	5.8	2.7	L	78.3	L	2.7

FieldName	FieldSplit	Acres	Yr	Name	Map	SampleDate	pH	P	Plevel	K	KLevel	OM
K 2		14	2		3	4/17/2019	5.2	2	L	137.2	MH	2.4
M 5	360	20.8	2		6	2/4/2020	5.5	16.8	MH	105.9	MH	2.4
P 1B	360	17.5	2		6	2/4/2020	7.1	50.2	VH	260.5	VH	2.2
Q 2	360	21.6	1		8	2/4/2020	6.6	95.8	VH	78.3	LM	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	2/4/2020	6.4	49.4	VH	85.7	LM	3.3
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
Q 11	360M	15.6	1		8	6/3/2020	6.3	62.5	VH	217.2	VH	2.8
Q 12	360	8.8	3		9	11/29/2017	6.4	58.5	VH	53.5	L	2.9
Q 13	360	12.7	4		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
R 3	360	8.2	1		9	11/29/2017	6.2	20.7	H	76.5	L	1.6
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 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	3.1
R 12B	360	10.3	1		9	11/29/2017	5.9	10.8	M	85.7	LM	2.1
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
SH 1		27.4	1	Bowblis	12	2/18/2020	6.6	98.5	VH	321.2	VH	3.6
Spears 1		11.3	1		8	1/16/2019	6.4	22.7	H	117	M	3.1
Spears 2		7.7	1		8	1/16/2019	6.3	3.6	L	87.5	LM	2.6
Spears 3		9.3	1		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	3.3
Spears 6		18.4	1		8	1/16/2019	5.3	2	L	140	MH	2.5
Spears 7		13.3	1		8	4/17/2019	6.2	20.4	H	331.3	VH	3.2
ST 4	360M	34.9	1	Stewart	12	6/3/2020	5.9	28.9	H	199.8	VH	3.3
ST 5	360	27.5	3	Stewart	12	1/28/2019	5.9	35.1	H	383.8	VH	2.8
ST 6	360	21.4	3	Stewart	12	1/28/2019	5.8	8.6	M	146.4	H	2.1
ST 7	360	8.4	3	Stewart	12	1/28/2019	5.8	7.6	M	178.6	H	2.6
ST 8	360	13.9	3	Stewart	12	12/20/2017	5.8	12.1	M	224.6	VH	2.1
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	1	Stewart	12	1/28/2019	5.7	2	L	117	M	2.5

FieldName	FieldSplit	Acres	Yr	Name	Map	SampleDate	pH	P	Plevel	K	KLevel	OM
ST 16	360	11.6	1	Stewart	12	11/29/2017	5.8	8.6	M	206.2	VH	2.3
ST 18	360	11.4	1	Stewart	12	1/28/2019	5.6	6.5	M	166.6	H	2.5
ST 20	360	5.5	1	Stewart	12	1/28/2019	5.7	3.4	L	92.1	LM	2.4
ST 21S		24	1	Giles	12	12/11/2015	6.2	11.7	M	138.1	H	2.2
Sugar 1		6.1	4		3	9/12/2017	6.5	12.6	M	78.3	LM	3
Sugar 2		13.2	4		3	9/12/2017	5.6	2	L	53.5	L	2.5
Sugar 3		20.5	4		3	9/12/2017	5.5	2	L	48.9	L	2.5
Tucker 1		11.1	2	Tucker	11	12/29/2017	6.5	9.7	M	175.8	VH	3.1
Tucker 2		6.1	2	Tucker	11	12/29/2017	6.4	11.4	M	117	M	2.7
Tucker 3		9.8	2	Tucker	11	12/29/2017	6.2	3.9	L	69.1	L	1.8
Tucker 4		11.2	2	Tucker	11	12/29/2017	6	4.4	L	64.5	L	2
Tucker 5		10.1	2	Tucker	11	12/29/2017	6.1	4.9	L	79.2	LM	2.3
Tucker 6		5.7	2	Tucker	11	12/29/2017	6	6.1	M	74.6	L	2.8
U 1	360	16	1		8	1/28/2019	6.5	53.6	VH	105.9	M	2.3
VA 1		7.1	2		4	12/2/2020	5.3	9.2	M	128.9	MH	2.9
VV 1		29.6	1	Kobza	2	2/4/2020	5.5	2.3	L	71.9	L	3.1
Y 1		6.4	2	Lehman	4	12/2/2020	4.9	2	L	56.2	L	2.2
Y 2		14.4	2	Lehman	4	12/2/2020	4.9	2	L	37.8	VL	2.8
Y 3		3.3	2	Lehman	4	12/2/2020	5.1	2	L	48.9	VL	2.1
Z 1A		50.3	2	Savona Hill	11	2/4/2020	6.4	5.7	LM	156.5	H	2.3
Z 1B			2	Savona Hill	12	2/4/2020	6.6	8	M	141.8		1.7

1100

Grass

C 12	360	3.7	13		8	2/4/2020	6.2	7	M	78.3	L	3.6
Q 14	360	14.9	13		8	2/4/2020	6.4	23.7	H	101.3	M	2.5
R 12A	360	7.2			9	11/29/2017	5.8	2	L	94.9	LM	2
T 4		3.4	12	Haight	1	12/2/2020	6.2	2	L	42.4	VL	2.3
T 6		4.8	12	Haight	1	12/2/2020	6.3	6.2	M	64.5	L	3
T 14		4.4	12	Haight	1	12/2/2020	6.6	5.4	LM	76.5	L	2.5
T 17		2.6	12	Haight	1	12/2/2020	6.4	2.6	L	117.9	M	3.3
U 3		9.5	10		8	1/28/2019	6	36.4	H	137.2	MH	2.5

50.5

FieldName	FieldSplit	Acres	Yr	Name	Map	SampleDate	pH	P	Plevel	K	KLevel	OM
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Idle

B 13	360	4.4		Estes	10	4/10/2013	6.9	101.6	VH	765.6	VH	?
Barrett		11.7	5		8	10/21/2015	6.4	2	L	35.1	VL	4
EV 1N		29.5	2	Eagle Valley Road	14	12/23/2016	6.6	29.7	H	340.5	VH	3.1
EV 1S			2	Eagle Valley Road	14	4/9/2014	6.3	18.5	MH	126.2	MH	3.3
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

A 1	360M	28.7	1		7	2/4/2020	6.3	71.3	VH	215.4	VH	3.3
Buckley		8	1		8	2/4/2020	5.7	8.9	M	246.7	VH	2.9
D 1	360	29.2	1		7	12/2/2020	6.4	79.6	VH	407.7	VH	6.2
F 4	360	13	1		5	4/17/2019	7.1	171.8	VH	137.2	H	3
F 10B	360	15.6	1		5	2/18/2020	7.2	477.1	VH	92.1	M	3.8
F 15	360M	18.9	1		5	2/4/2020	6.5	152.5	VH	132.6	MH	3.2
F 20	360	21.4	1		5	2/4/2020	7	162.9	VH	40.6	VL	3.4
Glosick 10A		8	1	Glosick	3	2/4/2020	5.3	2	L	55.3	L	3.3
Glosick 10B		15.7	1	Glosick	3	2/4/2020	5.2	2	L	64.5	L	3.1
Glosick 11		10.2	1	Glosick	3	2/4/2020	5.7	2	L	98.6	LM	3.1
Glosick 12		3.7	1	Glosick	3	1/2/2017	5.4	2	L	56.2	L	3.8
Glosick 13		2.6	1	Glosick	3	1/2/2017	5.2	2	L	99.5	LM	3.6
J 1	360	19.5	1		6	1/28/2019	6.6	41.5	VH	208	VH	2.8
M 2	360	10.2	1		6	2/4/2020	6.2	68.5	VH	181.4	VH	2.4
M 3	360	12.5	1		6	2/4/2020	6.7	43.9	VH	142.7	H	2.2
P 1A	360M	25.8	1		6	2/4/2020	6	62.9	VH	297.3	VH	3.9
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
Sam Dick C		5.4	1		13	1/13/2017	5.1	2	L	104.1	M	2
Sam Dick D		11.2	1		13	1/13/2017	5.5	2	L	108.7	MH	2.2
Sam Dick E		8.7	1		13	1/13/2017	5	2	L	81.1	LM	1.8

FieldName	FieldSplit	Acres	Yr	Name	Map	SampleDate	pH	P	Plevel	K	KLevel	OM
U 4		21	1	Lee	8	2/4/2020	6.3	55.2	VH	197	H	2
W 4A	360	20.4	1		7	12/2/2020	6.8	146.7	VH	519	VH	3.3

324.7

Soy Beans

A 4	360	5.1	1		7	2/4/2020	6.2	78.5	VH	344.2	VH	2.9
A 5N	360	15.4	1		7	2/4/2020	6.4	73	VH	260.5	VH	2.9
A 5S	360	8.6	1		7	2/4/2020	6.4	71.7	VH	277	VH	2.3
A 7	360M	15.8	1		7	2/4/2020	6.2	72.3	VH	337.8	VH	3.1
A 8	360	2.6	1		7	4/17/2019	5.3	30.9	H	187.8	H	3.5
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
C 2	360	2.8	1		8	2/4/2020	7	192.7	VH	128.9	MH	3.3
C 4	360	6.6	1		8	2/18/2020	6.6	96	VH	163	H	2.5
F 1	360M	11.4	1		2	6/3/2020	5.9	27.4	H	94	LM	2.6
F 2	360	27.5	1		3	4/17/2019	6.5	68.8	VH	132.6	MH	2.3
F 14		6.8	1		5	2/18/2020	6.2	59.6	VH	40.6	VL	2.9
F 19	360	12.1	1		5	2/4/2020	6.9	136.7	VH	37.8	VL	2.8
H 2B	360	6.1	1	Polmiteer	2	2/4/2020	6.6	79.1	VH	108.7	M	2.3
H 2C	360	15.4	1	Polmiteer	2	2/4/2020	6.5	81.2	VH	65.4	L	2
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 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
L 1	360	16.2	1		3	4/17/2019	6.4	13.6	MH	87.5	LM	3.4
L 2	360	24.8	1		3	4/17/2019	6.3	6.6	M	47	L	3.6
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
T 1		16.9	1	Haight	1	12/2/2020	6.2	4.1	L	92.1	LM	2.5
T 2		3.9	1	Haight	1	12/2/2020	5.8	2	L	73.7	L	2.7
T 3		2.3	1	Haight	1	12/2/2020	6.2	2.9	L	70	L	2.7
T 5		3.5	1	Haight	1	12/2/2020	6.2	3.5	L	53.5	L	2.6
T 7		5.4	1	Haight	1	12/2/2020	6.4	3.5	L	89.4	LM	2.5

FieldName	FieldSplit	Acres	Yr	Name	Map	SampleDate	pH	P	Plevel	K	KLevel	OM
T 9		4.2	1	Haight	1	12/2/2020	6.3	2.9	L	47	L	2.5
T 11		3.9	1	Haight	1	12/2/2020	6.5	3.7	L	55.3	L	2.7
T 15		6	1	Haight	1	12/2/2020	6.3	4.5	L	92.1	LM	
T 16		2.3	1	Haight	1	12/2/2020	7	7.4	M	94.9	LM	2.8
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
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	2.3

494.6

3043

FieldName	Acres	Map	Crop	Yr	LI	P Index	D Index	Winter Spreading	Emergency Spreading	Allowable Gallons Per Acre	Allowable Tons Per Acre	Season: If Field Conditions Allow	SpreadingComments
C 10A	6.6	8	Alfalfa/Grass	2	M	L	L						
G 1	11.3	2	Alfalfa/Grass	3	M	L	L						
H 1	20.5	2	Alfalfa/Grass	3	M	L	L						
K 3	2	3	Alfalfa/Grass	2	M	L	M						
M 4	20.7	6	Alfalfa/Grass	3	M	H	H						
R 4	15	9	Alfalfa/Grass	2	M	M	M						
R 5A	23.9	9	Alfalfa/Grass	2	M	L	L	Yes	Yes				
100										0	0		

1. No Manure (P Index)

A 1	28.7	7	Rye	1	M	H	H						No manure recommended
A 2	8.7	7	Alfalfa/Grass	8	M	VH	VH						No manure recommended
A 3	7.6	7	Alfalfa/Grass	8	M	H	H						No manure recommended
A 4	5.1	7	Soy Beans	1	M	H	H						No manure recommended
A 3N	15.4	7	Soy Beans	1	M	H	H						No manure recommended
A 3S	8.6	7	Soy Beans	1	M	H	H	Yes	Yes				No manure recommended
A 7	15.8	7	Soy Beans	1	M	H	H						No manure recommended
A 11	37.3	7	Alfalfa/Grass	9	M	H	H						No manure recommended
A 12N	16.7	7	Alfalfa/Grass	6	M	H	H						No manure recommended
B 2	13.4	8	Corn Silage	1	M	VH	VH						No manure recommended
B 3	25.4	10	Corn Silage	1	M	VH	VH						No manure recommended
B 9	33.6	8	Alfalfa/Grass	3	M	L	VH						No manure recommended

FieldName	Acres	Map	Crop	Yr	LI	P P Index	D D Index	Winter Spreading	Frequency Spreading	Allowable Gallons Per Acre	Allowable Tons Per Acre	Season: If Field Conditions Allow	SpreadingComment
B16	5.3	10	Alfalfa/Grass	6	M	M	VH						No manure recommended
B17	12.1	10	Corn Silage	1	M	VH	VH						No manure recommended
B18	12.2	8	Corn Silage	1	M	VH	VH						No manure recommended
B19	2.8	8	Soy Beans	1	M	L	VH						No manure recommended
B20	25.7	8	Alfalfa/Grass	5	M	VH	VH						No manure recommended
B21	6.6	8	Soy Beans	1	M	VH	VH						No manure recommended
B22	29.2	7	Rye	1	M	H	H						No manure recommended
B23	44.8	7	Alfalfa/Grass	7	M	VH	VH						No manure recommended
B24	12.3	3	Alfalfa/Grass	6	M	L	VH						No manure recommended
B25	13	5	Rye	1	M	VH	VH						No manure recommended
B26	1.6	5	Corn Silage	1	M	L	L						No manure recommended
B27	5.4	5	Corn Silage	1	M	L	VH						No manure recommended
B28	8.3	5	Corn Silage	1	M	M	VH						No manure recommended
B29	6.7	5	Corn Silage	1	M	VH	VH						No manure recommended
B10A	17.2	5	Corn Silage	1	M	VH	VH						No manure recommended
B10B	15.6	5	Rye	1	M	VH	VH						No manure recommended
B11	19.6	5	Corn Silage	1	M	VH	VH						No manure recommended
B12	18.9	5	Rye	1	M	VH	VH						No manure recommended
B13	20.6	5	Alfalfa/Grass	5	M	H	VH						No manure recommended
B20	21.4	5	Rye	1	M	VH	VH						No manure recommended
B23	43.7	5	Alfalfa/Grass	9	M	L	VH						No manure recommended
B24	5.4	2	Alfalfa/Grass	3	M	VH	VH						No manure recommended
B25	15.9	6	Alfalfa/Grass	9	M	H	H						No manure recommended

FieldName	.cres	Map	Crop	Yr	LI	P Pindex	D Pindex	Winter Spreading	genc y Spreading	Allowable Gallons Per Acre	Allowable Tons Per Acre	Season: If Field Conditions Allow	SpreadingComment
Q14	14.6	8	Alfalfa/Grass Seeding	1	M	VH	VH						No manure recommended
Q15	19.3	8	Alfalfa/Grass Seeding	1	M	VH	VH						No manure recommended
Q16	13.4	8	Alfalfa/Grass	7	M	VH	VH						No manure recommended
Q18	12.7	9	Corn Silage	4	M	VH	VH						No manure recommended
R11	5.9	8	Corn Silage	1	M	VH	VH						No manure recommended
R19	6.8	9	Corn Silage	1	M	VH	VH						No manure recommended
R28	9	9	Alfalfa/Grass	2	M	VH	VH						No manure recommended
R29	8.2	9	Alfalfa/Grass	2	M	VH	VH						No manure recommended
S11	27.4	12	Corn Silage	1	M	VH	VH						No manure recommended
W11	26.4	7	Alfalfa/Grass	6	M	VH	VH						No manure recommended
W4A	20.4	7	Rye	1	M	VH	VH						No manure recommended
W4B	18.8	7	Alfalfa/Grass	5	M	VH	VH						No manure recommended
W5	40.3	7	Alfalfa/Grass	7	M	VH	VH						No manure recommended
X2	31.6	9	Alfalfa/Grass	5	M	VH	VH						No manure recommended
888A										0	0		

Alfalfa/Grass

B 8	4.9	10	Alfalfa/Grass	6	M	L	H			12000		Any Season	Split apply after a cutting
B 14	4.9	10	Alfalfa/Grass	6	M	L	M			12000		Any Season	Split apply after a cutting
B 15	8.1	10	Alfalfa/Grass	6	M	L	L			12000		Any Season	Split apply after a cutting
C 9	30.1	8	Alfalfa/Grass	6	M	L	H			12000		Any Season	Split apply after a cutting
E 1	13.7	3	Alfalfa/Grass	6	M	M	M			15000		Any Season	Split apply after a cutting
E 4	11.5	3	Alfalfa/Grass	5	M	M	M			15000		Any Season	Split apply after a cutting

FieldName	Acres	Map	Crop	Yr	LI	P Pindex	D Pindex	Winter Spreading	Chemical Spreading	Allowable Gallons Per Acre	Allowable Tons Per Acre	Season: If Field Conditions Allow	SpreadingComments
F 12	21	5	Alfalfa/Grass	7	M	L	M			15000		Any Season	Split apply after a cutting
F 13	9.3	5	Alfalfa/Grass	7	M	L	M			15000		Any Season	Split apply after a cutting
F 17	10.5	5	Alfalfa/Grass	6	M	L	L			15000		Any Season	Split apply after a cutting
F 23	22.9	5	Alfalfa/Grass	5	M	L	M			12000		Any Season	Split apply after a cutting
H 2A	6.8	2	Alfalfa/Grass	6	M	L	L			15000		Any Season	Split apply after a cutting
I 1	17.4	3	Alfalfa/Grass	6	M	H	H			14000		Any Season	Split apply after a cutting
Q 1	12	8	Alfalfa/Grass	7	M	H	H			15000		Any Season	Split apply after a cutting
R 7	10.8	9	Alfalfa/Grass	5	M	M	M			12000		Any Season	Split apply after a cutting
R 8	9.8	9	Alfalfa/Grass	7	M	H	H			15000		Any Season	Split apply after a cutting
Sam Dick A	11.8	13	Alfalfa/Grass	7	M	L	L			15000		Any Season	Split apply after a cutting
Sam Dick B	10.2	13	Alfalfa/Grass	7	M	M	M			15000		Any Season	Split apply after a cutting
ST 3	25.2	12	Alfalfa/Grass	7	M	H	H			15000		Any Season	Split apply after a cutting
ST 21N	17.3	12	Alfalfa/Grass	5	L	M	M			12000		Any Season	Split apply after a cutting
T 8	4.7	1	Alfalfa/Grass	6	M	M	M			15000		Any Season	Split apply after a cutting
T 10	4.3	1	Alfalfa/Grass	6	M	M	M			15000		Any Season	Split apply after a cutting
T 12	3	1	Alfalfa/Grass	6	M	M	M			15000		Any Season	Split apply after a cutting
T 13	3.5	1	Alfalfa/Grass	6	M	L	L			15000		Any Season	Split apply after a cutting
U 2	14.3	8	Alfalfa/Grass	6	M	L	L			15000		Any Season	Split apply after a cutting
288										3897600	0		

Alfalfa/Grass Seeding

C 8	7.7	8	Alfalfa/Grass Seeding	1	M	H	H			15000		Any Season	Injected food waste
C 11	4.8	8	Alfalfa/Grass Seeding	1	M	L	L	Yes	Yes	15000		Any Season	Injected food waste

FieldName	Acres	Map	Crop	Yr	LI	P Pindex	D Pindex	Winter Spreading	Emergency Spreading	Allowable Gallons Per Acre	Allowable Tons Per Acre	Season: If Field Conditions Allow	SpreadingComment
C 13	6.8	8	Alfalfa/Grass Seeding	1	M	L	L	Yes	Yes	15000		Any Season	Injected food waste
E 3	32.4	3	Alfalfa/Grass Seeding	1	M	H	H			15000		Any Season	Injected food waste
G 3	28	2	Alfalfa/Grass Seeding	1	M	VH	VH			15000		Any Season	Injected food waste
M 1	5.8	6	Alfalfa/Grass Seeding	1	M	H	H	Yes	Yes	15000		Any Season	Injected food waste
R 10	15.2	9	Alfalfa/Grass Seeding	1	M	L	L			15000		Any Season	Injected food waste
ST 1	24.6	12	Alfalfa/Grass Seeding	1	M	M	H			13000		Any Season	Injected Hornell Sludge
										125.3	1444900	0	

Corn from Sod

H 4	12	2	Corn from Sod	1	M	L	L			10000		Any Season	Injected food waste
M 6	10.8	6	Corn from Sod	1	M	H	H			10000		Any Season	Injected food waste
Q 3	11.6	8	Corn from Sod	1	M	L	L			10000		Any Season	Injected food waste
										34.4	298400	0	

Corn Silage

A 12S	11.5	7	Corn Silage	4	M	H	H			12000		Any Season	Injected food waste
B 1	6.7	8	Corn Silage	1	M	L	L			15000		Any Season	Injected food waste
B 3	9.3	8	Corn Silage	1	M	L	L			15000		Any Season	Injected food waste
B 4	17.2	8	Corn Silage	1	M	H	H			15000		Any Season	Injected food waste
B 5	9.6	8	Corn Silage	1	M	L	L			15000		Any Season	Injected food waste

FieldName	Acres	Map	Crop	Yr	LI	P ₁ Pindex	D Pindex	Winter Spreading	Emergency Spreading	Allowable Gallons Per Acre	Allowable Tons Per Acre	Season: If Field Conditions Allow	SpreadingComments
B 10	25.8	8	Corn Silage	1	M	H	H			15000		Any Season	Injected food waste
B 11	5.6	8	Corn Silage	1	M	L	M			15000		Any Season	Injected food waste
B 12	7.6	10	Corn Silage	1	M	M	H			15000		Any Season	Injected food waste
C 6	7.6	8	Corn Silage	1	M	H	H			15000		Fall/ LateS	Injected food waste
C 7	5.5	8	Corn Silage	1	M	H	H			15000		Any Season	Injected food waste
C 14	2.7	8	Corn Silage	1	M	H	H			15000		Any Season	Surface Apply
E 5	5.4	3	Corn Silage	1	M	M	M			15000		Any Season	Injected food waste
E 6	14.3	3	Corn Silage	1	M	L	L			15000		Any Season	Injected food waste
EV 2	20.5	14	Corn Silage	2	M	H	H			18000		Any Season	Surface Apply
EV 3	30.2	14	Corn Silage	2	M	H	H			18000		Any Season	Surface Apply
F 8	8.7	5	Corn Silage	1	M	L	L			15000		Any Season	Injected food waste
Glosick 1	21.3	7	Corn Silage	6	M	M	M			15000		Any Season	Surface Apply
Glosick 2	6.9	7	Corn Silage	6	M	M	M			15000		Any Season	Surface Apply
K 2	14	3	Corn Silage	2	M	M	M			15000		Any Season	Surface Apply
M 5	20.8	6	Corn Silage	2	M	M	M			15000		Any Season	Injected food waste
P 1B	17.5	6	Corn Silage	2	M	H	H			15000		Any Season	Injected food waste
Q 2	21.6	8	Corn Silage	1	L	M	H			15000		Any Season	Injected food waste
Q 7	8.5	8	Corn Silage	1	M	M	M			15000		Any Season	Injected food waste
Q 8	8.5	8	Corn Silage	1	M	H	H			15000		Any Season	Injected food waste
Q 9	7.7	8	Corn Silage	1	M	L	M			15000		Any Season	Injected food waste
Q 10	9.6	9	Corn Silage	1	M	H	H			15000		Any Season	Injected food waste
Q 11	15.6	8	Corn Silage	1	M	H	H			15000		Any Season	Injected food waste
Q 12	8.8	9	Corn Silage	3	M	H	H			13000		Any Season	Injected food waste
R 2	6	9	Corn Silage	1	M	M	M			15000		Any Season	Injected food waste

FieldName	Acres	Map	Crop	Yr	LI	P Pindex	D Pindex	Winter Spreading	Emergency Spreading	Allowable Gallons Per Acre	Allowable Tons Per Acre	Season: if Field Conditions Allow	SpreadingComments
R 3	8.2	9	Corn Silage	1	M	M	M			15000		Any Season	Injected food waste
R 6E	12.3	9	Corn Silage	1	M	L	L			15000		Any Season	Injected food waste
R 6W	15.8	9	Corn Silage	1	M	M	M			15000		Any Season	Injected food waste
R 11	32.9	9	Corn Silage	1	M	H	H			15000		Any Season	Injected food waste
R 12B	10.3	9	Corn Silage	1	M	L	L			15000		Any Season	Injected food waste
S 5	10.7	6	Corn Silage	1	M	M	M			15000		Any Season	Surface Apply
S 7	6.8	6	Corn Silage	1	M	M	M			15000		Any Season	Surface Apply
Spears 1	11.3	8	Corn Silage	1	M	H	H			15000		Any Season	Surface Apply
Spears 2	7.7	8	Corn Silage	1	M	M	M			15000		Any Season	Surface Apply
Spears 3	9.3	8	Corn Silage	1	M	H	H			15000		Any Season	Surface Apply
Spears 5	4.6	8	Corn Silage	1	M	M	M			15000		Any Season	Surface Apply
Spears 6	18.4	8	Corn Silage	1	M	L	L			15000		Any Season	Surface Apply
Spears 7	13.3	8	Corn Silage	1	M	H	H			15000		Any Season	Surface Apply
ST 4	34.9	12	Corn Silage	1	L	H	H			15000		Any Season	Injected Hornell Sludge
ST 5	27.5	12	Corn Silage	3	M	H	H			15000		Any Season	Injected Hornell Sludge
ST 6	21.4	12	Corn Silage	3	M	L	H			14000		Any Season	Injected Hornell Sludge
ST 7	8.4	12	Corn Silage	3	M	L	H			14000		Any Season	Injected Hornell Sludge
ST 8	13.9	12	Corn Silage	3	M	L	L	Yes	Yes	15000		Any Season	Injected Hornell Sludge
ST 11	25.5	12	Corn Silage	1	M	L	H			13000		Any Season	Injected Hornell Sludge
ST 13	3.4	12	Corn Silage	1	M	L	H			15000		Any Season	Injected Hornell Sludge
ST 16	11.6	12	Corn Silage	1	M	M	L			15000		Any Season	Injected Hornell Sludge
ST 18	11.4	12	Corn Silage	1	M	L	H			15000		Any Season	Injected Hornell Sludge
ST 20	5.5	12	Corn Silage	1	M	L	H	Yes	Yes	15000		Any Season	Injected Hornell Sludge
ST 21S	24	12	Corn Silage	1	L	L	M			15000		Any Season	Surface Apply

FieldName	Acres	Map	Crop	Yr	LI	P Pindex	D Pindex	Winter Spreading	Urgenc y Spreading	Allowable Gallons Per Acre	Allowable Tons Per Acre	Season: If Field Conditions Allow	SpreadingComment
Sugar 1	6.1	3	Corn Silage	4	M	L	M			15000		Any Season	Surface Apply
Sugar 2	13.2	3	Corn Silage	4	M	L	L			15000		Any Season	Surface Apply
Sugar 3	20.5	3	Corn Silage	4	M	L	M			15000		Any Season	Surface Apply
Tucker 1	11.1	11	Corn Silage	2	M	H	H			15000		Any Season	Surface Apply
Tucker 2	6.1	11	Corn Silage	2	M	L	M			15000		Any Season	Surface Apply
Tucker 3	9.8	11	Corn Silage	2	M	L	M			15000		Any Season	Surface Apply
Tucker 4	11.2	11	Corn Silage	2	M	L	M			15000		Any Season	Surface Apply
Tucker 5	10.1	11	Corn Silage	2	M	L	M			15000		Any Season	Surface Apply
Tucker 6	5.7	11	Corn Silage	2	M	H	H			15000		Any Season	Surface Apply
U 1	16	8	Corn Silage	1	M	H	H			15000		Any Season	Injected food waste
VA 1	7.1	4	Corn Silage	2	M	M	M	Yes	Yes	15000		Any Season	Surface Apply
VV 1	29.6	2	Corn Silage	1	M	L	L			15000		Any Season	Surface Apply
Y 1	6.4	4	Corn Silage	2	M	H	H	Yes	Yes	20000		Any Season	Surface Apply
Y 2	14.4	4	Corn Silage	2	M	L	L	Yes	Yes	20000		Any Season	Surface Apply
Y 3	3.3	4	Corn Silage	2	M	L	H			20000		Any Season	Surface Apply
Z 1A	50.3	11	Corn Silage	2	M	H	H			15000		Any Season	Surface Apply
Z 1B		12	Corn Silage	2	-	L	L			15000		Any Season	Surface Apply
925										13048200	0		

Grass

C 12	3.7	8	Grass	13	M	L	L			15000		Any Season	Split apply after a cutting
Q 14	14.9	8	Grass	13	M	H	H			15000		Any Season	Split apply after a cutting
R 12A	7.2	9	Grass		M	M	M			15000		Any Season	Split apply after a cutting
T 4	3.4	1	Grass	12	M	L	L			15000		Any Season	Split apply after a cutting

FieldName	Acres	Map	Crop	Yr	LI	P Pindex	D Pindex	Winter Spreading	Agency Spreading	Allowable Gallons Per Acre	Allowable Tons Per Acre	Season: If Field Conditions Allow	SpreadingComment
T 6	4.8	1	Grass	12	M	M	M			15000		Any Season	Split apply after a cutting
T 14	4.4	1	Grass	12	M	M	M			15000		Any Season	Split apply after a cutting
T 17	2.6	1	Grass	12	M	M	M			15000		Any Season	Split apply after a cutting
U 3	9.5	8	Grass	10	M	H	H			13000		Any Season	Split apply after a cutting
50.5										738500	0		

Rye

Buckley	8	8	Rye	1	M	H	H			30000		Fall/ Summ	Split apply before and after rye
Glosick 10A	8	3	Rye	1	M	M	L			30000		Any Season	Surface apply (split apply before and after rye)
Glosick 10B	15.7	3	Rye	1	M	L	L			30000		Any Season	Surface apply (split apply before and after rye)
Glosick 11	10.2	3	Rye	1	M	M	L			30000		Any Season	Surface apply (split apply before and after rye)
Glosick 12	3.7	3	Rye	1	M	M	L			30000		Any Season	Surface apply (split apply before and after rye)
Glosick 13	2.6	3	Rye	1	M	M	L			30000		Any Season	Surface apply (split apply before and after rye)
J 1	19.5	6	Rye	1	M	H	H			30000		Any Season	Surface apply (split apply before and after rye)
M 2	10.2	6	Rye	1	M	H	H			30000		Any Season	Injected food waste (split apply before and after rye)
M 3	12.5	6	Rye	1	M	L	M			30000		Any Season	Injected food waste (split apply before and after rye)
P 1A	25.8	6	Rye	1	M	H	H			30000		Any Season	Injected food waste (split apply before and after rye)
S 1	6.6	6	Rye	1	M	H	H			30000		Fall/ Summer	Surface apply (split apply before and after rye)

FieldName	Acres	Map	Crop	Yr	LI	P Pindex	D Pindex	Winter Spreading	Agency Spreading	Allowable Gallons Per Acre	Allowable Tons Per Acre	Season: If Field Conditions Allow	SpreadingComment
S 2	8.4	6	Rye	1	M	H	H			30000		Fall/ Summer	Surface apply (split apply before and after rye)
Sam Dick C	5.4	13	Rye	1	M	L	L			30000		Any Season	Surface apply (split apply before and after rye)
Sam Dick D	11.2	13	Rye	1	M	H	H			30000		Any Season	Surface apply (split apply before and after rye)
Sam Dick E	8.7	13	Rye	1	M	M	L			30000		Any Season	Surface apply (split apply before and after rye)
U 4	21	8	Rye	1	M	M	H			25000		Fall/ Summer	Surface apply (split apply before and after rye)
177.5										4213400	0		

Soybeans

A 8	2.6	7	Soy Beans	1	M	M	M			15000		Any Season	Injected food waste
A 9	12.1	7	Soy Beans	1	M	M	M			15000		Any Season	Injected food waste
A 10	4.1	7	Soy Beans	1	M	H	H	Yes	Yes	15000		Any Season	Surface Apply
F 1	11.4	2	Soy Beans	1	M	M	M			15000		Any Season	Injected food waste
F 2	27.5	3	Soy Beans	1	M	H	H			15000		Any Season	Injected food waste
F 14	6.8	5	Soy Beans	1	L	H	H			15000		Any Season	Surface Apply
F 19	12.1	5	Soy Beans	1	M	L	M	Yes	Yes	15000		Any Season	Injected food waste
H 2B	6.1	2	Soy Beans	1	M	L	L			15000		Any Season	Injected food waste
H 2C	15.4	2	Soy Beans	1	M	L	L			15000		Any Season	Injected food waste
H 3	52.1	2	Soy Beans	1	M	L	L			15000		Any Season	Injected food waste
H 3S	8.9	2	Soy Beans	1	M	L	L			15000		Any Season	Injected food waste
J 2	22.5	6	Soy Beans	1	M	H	H			15000		Any Season	Injected food waste
J 4	15.4	6	Soy Beans	1	M	L	L	Yes	Yes	15000		Any Season	Injected food waste
K 1	41.4	3	Soy Beans	1	M	L	L			15000		Any Season	Injected food waste

FieldName	Acres	Map	Crop	Yr	LI	P Pindex	D Pindex	Winter Spreading	Emergency Spreading	Allowable Gallons Per Acre	Allowable Tons Per Acre	Season: If Field Conditions Allow	SpreadingComment
L 1	16.2	3	Soy Beans	1	M	L	L			15000		Any Season	Injected food waste
L 2	24.8	3	Soy Beans	1	M	L	L			15000		Any Season	Injected food waste
N 1	22.2	6	Soy Beans	1	M	L	L			15000		Any Season	Injected food waste
O 1	17.6	6	Soy Beans	1	M	L	L	Yes	Yes	15000		Any Season	Injected food waste
O 2	12	6	Soy Beans	1	M	M	M			15000		Any Season	Injected food waste
T 1	16.9	1	Soy Beans	1	M	M	M			15000		Any Season	Surface Apply
T 2	3.9	1	Soy Beans	1	M	L	L	Yes	Yes	15000		Any Season	Surface Apply
T 3	2.3	1	Soy Beans	1	M	L	L			15000		Any Season	Surface Apply
T 5	3.5	1	Soy Beans	1	M	L	L			15000		Any Season	Surface Apply
T 7	5.4	1	Soy Beans	1	M	M	M			15000		Any Season	Surface Apply
T 9	4.2	1	Soy Beans	1	M	M	M			15000		Any Season	Surface Apply
T 11	3.9	1	Soy Beans	1	M	M	M			15000		Any Season	Surface Apply
T 15	6	1	Soy Beans	1	M	M	M			15000		Any Season	Surface Apply
T 16	2.3	1	Soy Beans	1	M	M	M			15000		Any Season	Surface Apply
V 1	5.3	6	Soy Beans	1	M	L	M	Yes	Yes	15000		Any Season	Surface Apply
V 2	11.3	6	Soy Beans	1	M	L	L	Yes	Yes	15000		Any Season	Injected food waste
V 3	8.3	6	Soy Beans	1	M	L	L	Yes	Yes	15000		Any Season	Injected food waste
W 6	25	7	Soy Beans	1	M	H	H			15000		Any Season	Injected food waste
W 8	10.8	7	Soy Beans	1	M	L	L			15000		Any Season	Injected food waste
										440.3	6020800	0	
										<u>2976</u>	<u>29,661,800</u>	0.0	



Winter And Emergency Spreading Report

Monday, December 7, 2020

Leo Dickson & Sons

Field	Acres	Soil	Drainage Quality	Hydro-logic Group	Leaching Index	HEL	Concentrated Flow	Flooding	% Slope	Slope Length	Row Gradient	Winter Access	Distance To Intermittent Stream	Distance To Perennial Stream	Emergency Spreading Field?	Bedrock Risk:	Winter Spreading
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A 8	8.6	Lordstown	Well Drained	C	M	Y	<input type="checkbox"/>	Rare	3	200	2	Unlimited	10	300	Yes		Yes
A 10	4.1	Howard	Well Drained	A	M	Y	<input type="checkbox"/>	Rare	2	300	1	Unlimited	10	10	Yes		Yes
C 11	4.8	Mardin	Moderately Well Drained	C	M	Y	<input type="checkbox"/>	Rare	2	150	1	Unlimited	200	300	Yes		Yes
C 13	6.8	Arnot	Moderately Well Drained	C	M	N	<input type="checkbox"/>	Rare	2	180	1	Unlimited	200	300	Yes		Yes
F 19	12.1	Mardin	Moderately Well Drained	C	M	N	<input type="checkbox"/>	Rare	5	220	4	Unlimited	200	300	Yes		Yes
J 4	15.4	Mardin	Moderately Well Drained	C	M	Y	<input type="checkbox"/>	Rare	2	300	1	Unlimited	10	50	Yes		Yes
M 1	5.8	Volusia	Somewhat Poorly Drained	C	M	Y	<input type="checkbox"/>	Rare	2	200	1	Unlimited	200	50	Yes		Yes
O 1	17.6	Fremont	Somewhat Poorly Drained	C	M	Y	<input type="checkbox"/>	Rare	1	300	1	Unlimited	10	300	Yes		Yes
R 5A	23.9	Arnot	Moderately Well Drained	C	M	Y	<input type="checkbox"/>	Rare	3	220	2	Unlimited	200	160	Yes		Yes
ST 8	13.9	Howard	Well Drained	A	M	Y	<input type="checkbox"/>	Rare	5	200	3	Unlimited	200	300	Yes		Yes
ST 20	5.5	Volusia	Somewhat Poorly Drained	C	M	Y	<input type="checkbox"/>	Rare	3	160	2	Limited	200	300	Yes		Yes

Field A Soil Drainage Quality Hydro-logic Group Leaching Index HEL Concentrated Flow Flooding Slope Slope Length Row Gradient Winter Access Distance To Intermittent Stream Distance To Perennial Stream Emergency Spreading Field? Bed Risk Winter Spreading

T 2	3.9	Mardin	Moderately Well Drained	C	M	Y	<input type="checkbox"/>	Rare	5	100	2	Limited	200	300	Yes		Yes
V 1	5.3	Fremont	Somewhat Poorly Drained	C	M	N	<input type="checkbox"/>	Rare	1	300	1	Unlimited	200	150	Yes		Yes
V 2	11.3	Fremont	Somewhat Poorly Drained	C	M	N	<input type="checkbox"/>	Rare	4	200	1	Unlimited	200	150	Yes		Yes
V 3	8.3	Volusia	Somewhat Poorly Drained	C	M	Y	<input type="checkbox"/>	Rare	1	300	1	Unlimited	200	300	Yes		Yes
VA 1	7.1	Chenango	Well Drained	A	M	N	<input type="checkbox"/>	Never	2	200	1	Unlimited	10	10	Yes		Yes
Y 1	6.4	Chenango	Well Drained	A	M	N	<input type="checkbox"/>	Never	1	300	1	Unlimited	10	10	Yes		Yes
Y 2	14.4	Braceville	Moderately Well Drained	C	M	N	<input type="checkbox"/>	Rare	1	300	1	Limited			Yes		Yes

175.2

**Analysis Used
For
Nutrient Management
Plan
Provided by WNY Crop
for 2021**

MANURE ANALYSIS REPORT

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

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

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

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

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

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 (K2O)	.179 %	3.6	15.0
Total Solids	5.23 %		
Density	1.01 kg/l	62.80 Lbs/CuFt	8.39 Lbs/Gal

Printed copies also sent to:

MANURE ANALYSIS REPORT

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

Sample Number: 26251610
 Date Sampled: 10/22/19
 Date Received: 10/30/2019
 Date Mailed: 11/1/2019
 Statement ID: P4
 Kind: Manure, Liquid (090)
 Description: P4

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.018 %	.4	1.5
Ammonium Nitrogen	.009 %	.2	.7
Organic Nitrogen	.009 %	.2	.7
Phosphorus (P)	.002 %	.0	.2
Phosphate Equivalent (P205)	.005 %	.1	.4
Potassium (K)	.053 %	1.1	4.4
Potash Equivalent (K2O)	.064 %	1.3	5.3
Total Solids	.46 %		
Density	.98 kg/l	61.07 Lbs/CuFt	8.16 Lbs/Gal

Printed copies also sent to:

MANURE ANALYSIS REPORT

 LEE DICKSON & SONS
 5226 BENNY HILL RD
 BATH, NY 14810

 Sample Number: 26673160
 Date Sampled: 05/13/20
 Date Received: 5/18/2020
 Date Mailed: 5/19/2020
 Statement ID: 953 LEE DICKSON & SONS
 Kind: Cattle-Liquid 3-6 Mo (081)
 Description: DAIRY STORAGE

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.264 %	5.28	21.70
Ammonium Nitrogen	.090 %	1.80	7.40
Organic Nitrogen	.174 %	3.48	14.30
Phosphorus (P)	.042 %	.85	3.49
Phosphate Equivalent (P205)	.097 %	1.95	7.99
Potassium (K)	.200 %	3.99	16.39
Potash Equivalent (K20)	.240 %	4.81	19.74
Total Solids	11.45 %		
Density	.98 kg/l	61.44 Lbs/CuFt	8.21 Lbs/Gal

MANURE ANALYSIS REPORT

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

 Sample Number: 26505470
 Date Sampled: 02/07/20
 Date Received: 2/13/2020
 Date Mailed: 2/17/2020
 Statement ID: 953 LEO DICKSON & SONS
 Kind: Cattle-Solid < 6 Mo (084)
 Description: HEIFER PACK

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.647 %	12.9	49.8
Ammonium Nitrogen	.071 %	1.4	5.5
Organic Nitrogen	.576 %	11.5	44.4
Phosphorus (P)	.123 %	2.5	9.5
Phosphate Equivalent (P205)	.282 %	5.6	21.7
Potassium (K)	.607 %	12.1	46.8
Potash Equivalent (K2O)	.731 %	14.6	56.3
Total Solids	22.53 %		
Density	.92 kg/l	57.62 Lbs/CuFt	7.70 Lbs/Gal

MANURE ANALYSIS REPORT

Sample Number: 26673140
 Date Sampled: 05/13/20
 Date Received: 5/18/2020
 Date Mailed: 5/20/2020
 Statement ID: 953 LEE DICKSON & SONS
 Kind: Cattle Solid Daily (083)
 Description: COMPOSITE BIOSOLIDS

LEE DICKSON & SONS
 5226 BENNY HILL RD
 BATH, NY 14810

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	3.872% <u>.640 %</u>	12.80	51.92
Ammonium Nitrogen	.030 %	.59	2.41
Organic Nitrogen	.610 %	12.20	49.50
Phosphorus (P)	.483 %	9.66	39.21
Phosphate Equivalent (P205)	1.107 %	22.15	89.84
Potassium (K)	.043 %	.85	3.46
Potash Equivalent (K2O)	.051 %	1.03	4.17
Total Solids	<u>16.53 %</u>		
Density	.97 kg/l	60.70 Lbs/CuFt	8.11 Lbs/Gal

MANURE ANALYSIS REPORT

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

Sample Number: 25982530
 Date Sampled:
 Date Received: 8/8/2019
 Date Mailed: 8/12/2019
 Statement ID: LWR OUT FLOW 8/1/19
 Kind: Misc. - Liquid (076)
 Description: LWR OUT FLOW 8/1/19

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.024 %	.5	2.0
Ammonium Nitrogen	.021 %	.4	1.8
Organic Nitrogen	.003 %	.1	.2
Phosphorus (P)	.005 %	.1	.4
Phosphate Equivalent (P205)	.012 %	.2	1.0
Potassium (K)	.061 %	1.2	5.1
Potash Equivalent (K20)	.074 %	1.5	6.1
Total Solids	.43 %		
Density	1.00 kg/l	62.18 Lbs/CuFt	8.31 Lbs/Gal
pH	7.3		

MANURE ANALYSIS REPORT

Sample Number: 25889380
 Date Sampled: 06/19/19
 Date Received: 7/9/2019
 Date Mailed: 7/12/2019
 Statement ID: LWR
 Kind: Misc. - Solid (077)
 Description: LWR

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

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	1.062 %	21.2	88.1
Ammonium Nitrogen	.160 %	3.2	13.3
Organic Nitrogen	.902 %	18.0	74.8
Phosphorus (P)	.389 %	7.8	32.3
Phosphate Equivalent (P2O5)	.892 %	17.8	74.0
Potassium (K)	.125 %	2.5	10.4
Potash Equivalent (K2O)	.151 %	3.0	12.5
Total Solids	22.63 %		
Density	.99 kg/l	62.06 Lbs/CuFt	8.30 Lbs/Gal
pH	8.4		

MANURE ANALYSIS REPORT

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

Sample Number: 25889400
 Date Sampled: 06/19/19
 Date Received: 7/9/2019
 Date Mailed: 7/12/2019
 Statement ID: WHITE BAG
 Kind: Misc. - Solid (077)
 Description: WHITE BAG

Sludge Pile

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	1.098 %	22.0	72.8
Ammonium Nitrogen	.002 %	.0	.1
Organic Nitrogen	1.097 %	21.9	72.7
Phosphorus (P)	1.042 %	20.8	69.1
Phosphate Equivalent (P205)	2.389 %	47.8	158.4
Potassium (K)	.406 %	8.2	27.0
Potash Equivalent (K20)	.491 %	9.8	32.6
Total Solids	57.67 %		
Density	.79 kg/l	49.60 Lbs/CuFt	6.63 Lbs/Gal
pH	6.4		

MANURE ANALYSIS REPORT

Sample Number: 25889390
Date Sampled: 06/19/19
Date Received: 7/9/2019
Date Mailed: 7/12/2019
Statement ID: YELLOW BAG
Kind: Misc. - Solid (077)
Description: YELLOW BAG
Compost Pile

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

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.896 %	17.7	57.7
Ammonium Nitrogen	.003 %	.1	.2
Organic Nitrogen	.883 %	17.7	57.5
Phosphorus (P)	.762 %	15.2	49.6
Phosphate Equivalent (P205)	1.745 %	34.9	113.7
Potassium (K)	.380 %	7.6	24.8
Potash Equivalent (K2O)	.458 %	9.2	29.8
Total Solids	47.99 %		
Density	.78 kg/l	48.73 Lbs/CuFt	6.51 Lbs/Gal
pH	7.4		

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

Soil Analysis



Soil Test Report

Leo Dillon & Sons

Saturday, 27, 2019

FieldName	Split	Map	SampleDate	pH	BPH	OM	P	Plev	K	Klev	Ca	Mg	CEC	KSat	CaSat	MgSat	BCaMg	S	SLe	Zn	ZnLe	Cu
A 1	360	7	11/2/2016	6.4	6.9	3.8	90	VH	407.7	VH	3061	282	9.4	6.2	68.4	12.6	5.4	18	MH	6.8	MH	8
A 2	360	7	1/13/2017	6.7	7	3.4	182.4	VH	438	VH	4228	307	12.5	5	66.7	10.3	6.5	12	M	7.6	MH	10.5
A 3	360	7	1/13/2017	6.6	7	3.1	181	VH	485	VH	4008	315	12.5	5.5	63.9	10.6	6.0	16	MH	7.6	MH	12.2
A 4	360	7	1/13/2017	6.7	7	3	66.7	VH	266.9	VH	2869	331	9.6	4	63.5	14.4	4.4	11	M	3.9	M	6.3
A 5N	360	7	1/13/2017	6.5	6.7	2.9	102.4	VH	549.4	VH	3224	296	11.2	7	60	11.2	5.4	14	MH	6.1	MH	8.4
A 5S	360	7	1/13/2017	6.1	6.6	3.2	77.1	VH	413.2	VH	2567	260	12.1	4.9	46.4	9.1	5.1	13	MH	6.1	MH	5.1
A 7	360	7	1/13/2017	6.7	6.9	3.5	106.7	VH	492.3	VH	3718	339	11.8	6	63.9	12.1	5.3	11	M	9.1	MH	18.2
A 8	360	7	4/17/2019	5.3	6.2	3.5	30.9	H	187.8	H	1954	171	15.2	1.8	30.2	4.9	6.2	26	MH	4.7	MH	2.3
A 9	360	7	4/17/2019	5.7	6.4	2.9	26.4	H	353.4	VH	1347	174	12.1	4.2	29.8	6.3	4.7	14	MH	2.5	M	4.2
A 10		7	4/17/2019	5.7	6.3	2.8	26.7	H	305.6	VH	1646	191	13.7	3.2	29.7	6	5.0	15	MH	2.4	M	4.4
A 11	360	7	1/13/2017	6.1	6.9	3.1	146.7	VH	447.2	VH	4142	300	11.3	5.6	72.6	11.1	6.5	18	MH	9.7	MH	18.8
A 12N	360	7	1/13/2017	6.6	7	4.4	248.3	VH	910	VH	5788	489	17.8	7.2	61.4	11.4	5.4	23	MH	19.4	VH	13.7
A 12S	360	7	1/13/2017	6.1	6.8	2.5	79.3	VH	322.1	VH	2960	294	10.4	4.5	60.4	12	5.0	15	MH	5.5	MH	16.8
B 1	360	8	4/17/2019	5.9	6.7	1.7	12.1	M	55.3	L	1719	153	8.6	1.1	49.1	7.8	6.3	13	MH	1.6	L	1.6
B 2	360	8	12/29/2017	6.9	7.1	2.3	105	VH	317.5	VH	4194	234	11.4	4	72.7	8.7	8.4	12	M	3.4	M	3.9
B 3	360	8	4/17/2019	5.5	6.4	2.8	2	L	36	VL	765	100	10.3	0.6	25.4	4.4	5.8	18	MH	1.5	L	1.2
B 4	360	8	4/17/2019	6.2	6.8	2.5	18.9	MH	55.3	L	1678	146	7.3	1.2	56.9	8.8	6.5	14	MH	2.1	M	3
B 5	360	8	1/13/2017	5.4	6.6	1.8	4.9	L	101.3	M	1245	233	9.4	1.7	36.5	10.6	3.4	14	MH	1.8	M	3
B 6	360	10	1/13/2017	6.6	7	2.2	78.5	VH	326.7	VH	2943	258	9.7	4.8	64	11.2	5.7	18	MH	2.8	M	2.6
B 8	360	10	11/18/2015	6.3	6.8	2.5	61.4	VH	344.2	VH	2477	174	9.1	5.4	59.9	8.3	7.2	10	M	2.1	M	3
B 9	360	8	4/17/2019	6.4	6.8	3.1	48.8	VH	94.9	M	1959	203	8	1.8	57.4	10.9	5.3	11	M	1.7	L	2.9

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FieldName	Split	Map	SampleDate	pH	BPH	OM	P	Plev	K	KLev	Ca	Mg	CEC	KSat	CaSat	MgSat	BCaMg	S	SLe	Zn	ZnLe	Cu
B 10	360	8	1/13/2017	6.8	7	2.3	178	VH	219.1	VH	4321	249	11.9	2.7	71.7	8.9	8.1	17	MH	5	MH	4.2
B 11	360	8	1/13/2017	6	6.7	3.1	97.6	VH	362	VH	3460	196	12	4.3	58.8	7	8.4	28	MH	11.4	H	6.2
B 12	360	10	1/13/2017	6.1	6.8	2	65	VH	171.2	H	2640	196	9.2	2.7	62.1	9.1	6.8	13	MH	3.2	M	3.1
B 13	360	10	4/10/2013	6.9	7	3.3	101.6	VH	765.6	VH	3359	272	10.7	10.1	64.6	10.8	6.0	27	MH	4	MH	3.5
B 14	360	10	1/13/2017	7.2	0	2.6	270.9	VH	378.2	VH	6321	282	14.2	3.8	83.1	8.3	10.0	22	MH	8.6	MH	7.2
B 15	360	10	1/13/2017	6.2	6.9	1.8	52.2	VH	151	H	2798	191	8.2	2.7	72.7	10	7.3	16	MH	2.6	M	2
B 16	360	10	11/29/2017	6.7	7	2.7	220	VH	183.2	VH	5252	246	13.9	1.9	72.5	7.5	9.7	17	MH	5.8	MH	4.3
B 17	360	10	11/29/2017	6.9	7	2.4	179.7	VH	274.3	VH	4559	287	12.3	3.2	72.4	9.8	7.4	17	MH	4.7	MH	4.9
Barrett		8	10/21/2015	6.4	6.7	4	2	L	35.1	VL	2194	325	10	0.6	49.8	13.6	3.7	8	M	1	L	0.7
Buckley		8	10/21/2015	5.4	6	2.9	2	L	141.8	H	996	140	15.8	1.3	19	3.9	4.9	13	MH	1.8	M	0.9
Bunk Filter			6/27/2016	7.4	0	2.6	52	VH	812.5		3934	355	10.5	10.9	75	14.1	5.3	12	M	2	M	1.4
C 1	360	8	4/17/2019	6.9	7.1	2.5	114	VH	89.4	LM	3535	271	9.9	1.4	72.6	11.5	6.3	13	MH	2.8	M	2.5
C 2	360	8	1/13/2017	6.6	7	2.9	95.7	VH	107.8	M	3105	256	9.7	1.7	67.1	11.2	6.0	13	MH	3.2	M	2.4
C 3	360	8	1/13/2017	6.8	7.1	2.6	144	VH	278.9	VH	3612	298	10.8	3.7	68	11.6	5.9	14	MH	4.9	MH	3.8
C 4	360	8	1/13/2017	6.9	7	2.5	88.4	VH	117	M	3720	273	10.4	1.7	72.6	11.1	6.5	24	MH	5.6	MH	5
C 6	360	8	1/13/2017	6.4	6.8	2	53	VH	98.6	LM	2711	167	9.1	1.7	64.1	8	8.0	11	M	1.7	L	2.2
C 7	360	8	1/13/2017	6.4	6.9	2.5	54.5	VH	128.9	MH	2801	210	8.3	2.3	72.3	10.9	6.6	13	MH	2	M	2.1
C 8	360	8	4/17/2019	6.6	6.8	2.5	44.6	VH	272.4	VH	2412	269	8.6	4.6	62.2	13.2	4.7	14	MH	3.6	M	14.6
C 9	360	8	1/13/2017	6.5	6.9	2.7	105.6	VH	282.6	VH	3617	231	11.2	3.6	65.7	8.8	7.5	15	MH	3.6	M	3.5
C 10A	360	8	1/13/2017	5.9	6.5	2.3	7.5	M	101.3	M	1865	234	11.6	1.3	38.3	8.6	4.5	14	MH	1.2	L	1.8
C 11	360	8	1/13/2017	6.5	6.8	2.8	23.5	H	96.7	LM	2554	241	8.7	1.7	64.5	11.9	5.4	11	M	1.5	L	1.9
C 12	360	8	1/13/2017	6.4	6.7	2.4	38.3	H	65.4	L	2561	271	10.4	1	53.6	10.9	4.9	10	M	1.5	L	1.5

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FieldName	Split	Map	SampleDate	pH	BPH	OM	P	Plev	K	KLev	Ca	Mg	CEC	KSat	CaSat	MgSat	BCaMg	S	SLe	Zn	ZnLe	Cu
C 13	360	8	1/13/2017	6.2	6.6	2.5	35.5	H	73.7	L	2213	184	10.7	1.1	46.8	7.4	6.3	12	M	1.7	L	1.6
C 14		8																				
D 1	360	7	11/29/2017	6.3	6.7	3.3	119.5	VH	565	VH	4147	387	14.2	5.6	57.8	11.3	5.1	34	H	11.6	H	11.6
D 2	360	7	11/29/2017	6.6	6.8	2.5	105.1	VH	274.3	VH	3159	265	10.1	3.9	65	11.1	5.9	17	MH	8.1	MH	8.1
E 1	360	3	11/2/2016	6.5	7	2.3	46.3	VH	246.7	VH	2625	255	9.1	3.9	62.4	11.8	5.3	15	MH	3.6	M	5.9
E 3	360	3	4/17/2019	6.4	6.7	3.6	72.5	VH	324	VH	2450	220	10.4	4.5	52	9	5.8	18	MH	3.9	M	7.2
E 4	360	3	1/13/2017	6.3	6.8	2.4	50.8	VH	222	VH	1831	193	7.9	4.1	55.3	10.4	5.3	26	MH	7.4	MH	5.4
E 5	360	3	4/17/2019	6.4	6.7	2.8	29.8	H	130.8	MH	1606	198	8.7	2.3	46.4	9.8	4.7	14	MH	1.5	L	2
E 6	360	3	11/29/2017	6.1	6.9	2.7	29.8	H	98.6	LM	2164	265	7.4	2	66.7	15.1	4.4	17	MH	2.5	M	4.8
EV 1N		14	12/23/2016	6.6	6.8	3.1	29.7	H	340.5	VH	2679	403	10	4.9	58.2	16.9	3.4	19	MH	4.3	MH	8.3
EV 1S		14	4/9/2014	6.3	6.9	3.3	18.5	MH	126.2	MH	2910	420	9.3	2	66.3	18.7	3.5	14	MH	3.6	M	1.4
EV 2		14	12/23/2016	6.1	6.7	2.9	19.5	MH	189.6	H	1453	372	9.2	3	40.9	16.9	2.4	17	MH	3.7	M	6.3
EV 3		14	12/23/2016	5.7	6.6	2.2	13	M	146.4	H	819	251	8.8	2.5	30.9	12.1	2.6	18	MH	3.6	M	3.8
F 1	360	2	4/17/2019	6.2	6.8	3.5	35.7	H	78.3	L	2083	215	8.2	1.5	58.3	11.1	5.3	11	M	1.8	M	2
F 2	360	3	4/17/2019	6.5	7	2.3	68.8	VH	132.6	MH	2394	189	8.1	2.4	65.6	10	6.6	13	MH	1.6	L	5.1
F 3	360	3	4/17/2019	6.7	7	2.7	76.2	VH	74.6	LM	2652	240	8.4	1.4	68.4	12.1	5.7	12	M	2.4	M	3.3
F 4	360	5	4/17/2019	7.1	0	3.1	171.8	VH	137.2	H	4491	136	10.6	1.9	83.3	5.7	14.6	13	MH	2.7	M	3
F 5	360	5	11/29/2017	6.8	7.1	1.4	186.5	VH	161.1	H	4867	240	12.8	1.9	73.5	8	9.2	20	MH	4.7	MH	4.5
F 6	360	5	11/29/2017	6.8	7.1	1.4	186.5	VH	161.1	H	4867	240	12.8	1.9	73.5	8	9.2	20	MH	4.7	MH	4.5
F 7	360	5	11/29/2017	6.8	7.1	1.4	186.5	VH	161.1	H	4867	240	12.8	1.9	73.5	8	9.2	20	MH	4.7	MH	4.5
F 8	360	5	11/29/2017	6.8	7.1	1.4	186.5	VH	161.1	H	4867	240	12.8	1.9	73.5	8	9.2	20	MH	4.7	MH	4.5
F 9	360	5	11/29/2017	6.8	7.1	1.4	186.5	VH	161.1	H	4867	240	12.8	1.9	73.5	8	9.2	20	MH	4.7	MH	4.5

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FieldName	Split	Map	SampleDate	pH	BPH	OM	P	Plev	K	KLev	Ca	Mg	CEC	KSat	CaSat	MgSat	BCaMg	S	SLe	Zn	ZnLe	Cu
F 10A	360	5	11/29/2017	7.2	0	3.3	1043.9	VH	103.2	M	12713	346	17.4	0.9	86	8.3	10.4	34	H	13.7	H	10.3
F 10B	360	5	11/2/2016	6.7	7	2.9	114.7	VH	56.2	L	4928	220	12.9	0.7	74	7.3	10.1	12	M	3.4	M	4.9
F 11	360	5	11/29/2017	6.6	7.1	2.9	264.5	VH	48.9	L	6509	258	16.6	0.5	72.9	6.6	11.0	19	MH	6.9	MH	5.5
F 12	360	5	11/29/2017	6.5	6.7	2.4	116.9	VH	48.9	L	3967	205	11.4	0.7	69.7	7.7	9.1	15	MH	4	MH	3.4
F 13	360	5	11/29/2017	6.5	6.7	2.4	116.9	VH	48.9	L	3967	205	11.4	0.7	69.7	7.7	9.1	15	MH	4	MH	3.4
F 14		5	11/2/2016	6.7	6.9	2.4	105.4	VH	56.2	L	3881	158	10.5	0.9	74.5	6.6	11.3	11	M	1.6	L	1.5
F 15	360	5	11/2/2016	6.4	6.9	2.9	145.3	VH	48.9	L	4117	202	10.3	0.8	79.2	8.4	9.4	14	MH	3.6	M	3.9
F 16	360	5	4/17/2019	6.4	6.9	2.9	70.5	VH	51.6	L	3544	200	9.4	0.9	77.1	9.2	8.4	13	MH	2.7	M	2.7
F 17	360	5	4/17/2019	6.1	6.7	3.1	61.9	VH	82.9	LM	2448	282	10.3	1.3	52.4	11.5	4.6	10	M	2.7	M	3.3
F 19	360	5	11/2/2016	7	0	3	52.7	VH	60.8	L	2512	278	7.8	1.3	70.7	15	4.7	16	MH	1.8	M	2.9
F 20	360	5	11/2/2016	7	0	2.9	145.5	VH	50.7	L	4881	229	12.1	0.7	78.2	8.1	9.7	14	MH	3.2	M	4.1
F 21	360	5	4/17/2019	6.9	7.2	2.7	153.1	VH	121.6	MH	3410	179	9.3	2	75.2	8.3	9.1	13	MH	3.3	M	5.6
F 23	360	5	4/17/2019	6	6.7	2.8	44.3	VH	96.7	M	1837	188	9	1.7	49.1	9	5.5	14	MH	2.1	M	5.5
G 1	360	2	11/29/2017	6.8	7.2	1.7	84.1	VH	126.2	MH	3277	195	9.4	2	72.4	8.9	8.1	15	MH	2.3	M	4.1
G 2	360	2	4/17/2019	6.3	6.7	3	82.9	VH	133.5	MH	2815	193	10.6	1.9	56.5	7.8	7.2	11	M	7.4	MH	6.7
G 3	360	2	12/29/2017	6.6	7	2.6	46.4	VH	76.5	L	3155	260	9.8	1.2	67.5	11.3	6.0	16	MH	1.8	M	4.3
Glosick 1		7	4/17/2019	5.8	6.4	3	4	L	74.6	L	1018	205	11.2	1.1	27.1	7.8	3.5	15	MH	1.3	L	5.1
Glosick 2		7	4/17/2019	5.8	6.5	2.7	2.7	L	78.3	L	964	210	10	1.2	29.6	9	3.3	15	MH	1.3	L	5.3
Glosick 10A		3	1/2/2017	5.6	6.5	3	2	L	103.2	M	1453	243	11	1.4	34.4	9.4	3.7	13	MH	1.5	L	0.9
Glosick 10B		3	1/2/2017	5.6	6.5	3.1	2	L	73.7	L	1298	200	10.5	1.1	33.5	8.2	4.1	11	M	1.1	L	0.7
Glosick 11		3	1/2/2017	5.5	6.3	3.2	2	L	104.1	M	891	157	12.1	1.3	23.5	5.6	4.2	12	M	1.5	L	0.8
Glosick 12		3	1/2/2017	5.4	6.3	3.8	2	L	56.2	L	1204	195	12.7	0.7	26.4	6.6	4.0	11	M	0.9	L	0.4

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Glosick 13		3	1/2/2017	5.2	6	3.6	2	L	99.5	LM	538	196	15.2	1	14.8	5.5	2.7	15	MH	1.4	L	0.6
H 1	360	2	1/28/2019	6.4	6.9	3.3	50.6	VH	226.4	VH	1766	220	6.8	4.9	63.4	13.9	4.6	23	MH	2.5	M	1.5
H 2A	360	2	1/28/2019	6.8	7.2	2.7	64.4	VH	144.6	H	3211	269	9.6	2.2	69.3	11.8	5.9	19	MH	2.3	M	3.8
H 2B	360	2	11/2/2016	6.8	7.1	2.9	70.6	VH	251.3	VH	3182	300	9.9	3.7	66.9	12.7	5.3	17	MH	2	M	4.6
H 2C	360	2	11/2/2016	6.8	7.1	2.9	70.6	VH	251.3	VH	3182	300	9.9	3.7	66.9	12.7	5.3	17	MH	2	M	4.6
H 3	360	2	4/17/2019	5.5	6.5	2.4	15.3	MH	81.1	LM	964	148	9.7	1.3	30.4	6.6	4.6	14	MH	1.9	M	3.4
H 3S	360	2	4/17/2019	5.8	6.6	2.8	24.2	H	50.7		1293	146	9	0.9	38.8	7.1	5.5	14	MH	2.2	M	2.9
H 4	360	2	4/17/2019	6.8	7	3.6	100	VH	47	L	4171	260	11.3	0.7	72.9	9.7	7.5	12	M	2	M	2.6
I 1	360	3	11/29/2017	6.2	6.5	2.5	30.1	H	124.3	H	1882	262	11.8	1.6	38	9.4	4.0	12	M	2.9	M	6
J 1	360	6	1/28/2019	6.6	7.2	2.8	41.5	VH	208	VH	2835	303	9.5	3.2	63.4	13.4	4.7	19	MH	3.9	M	8.3
J 2	360	6	1/28/2019	6.4	7	2.5	44.1	VH	156.5	H	2974	293	7.7	3	81.1	15.9	5.1	25	MH	2.7	M	7.6
J 3	360	6	1/28/2019	6.5	6.8	3.1	48.3	VH	171.2	H	3288	287	10.6	2.4	64.3	11.4	5.6	22	MH	3.1	M	4.1
J 4	360	6	1/28/2019	5.9	6.7	2.6	8	M	117	M	1281	157	7.9	2.2	43.8	8.6	5.1	21	MH	1.7	L	1.5
K 1	360	3	4/17/2019	5.2	5.9	3	2	L	151	H	61	97	15.3	1.5	9.5	2.9	3.3	17	MH	1	L	0.9
K 2		3	4/17/2019	5.2	6.3	2.4	2	L	137.2	MH	151	102	10.7	1.9	15.1	4.3	3.5	20	MH	1.1	L	0.9
K 3		3																				
L 1	360	3	4/17/2019	6.4	6.5	3.4	13.6	MH	87.5	LM	1664	276	11.4	1.2	36	10.2	3.5	14	MH	1.6	L	5.9
L 2	360	3	4/17/2019	6.3	6.4	3.6	6.6	M	47	L	2042	384	13.6	0.6	34.8	11.7	3.0	16	MH	1.3	L	5.8
M 1	360	6	1/28/2019	6.6	6.8	2.5	63	VH	78.3	L	3342	202	9.9	1.2	70	8.8	8.0	20	MH	3.5	M	5.5
M 2	360	6	1/13/2017	6.5	6.9	2.1	64	VH	69.1	L	3010	236	9.5	1.2	66.4	10.5	6.3	10	M	3.8	M	3.2
M 3	360	6	1/13/2017	6.5	6.8	2.8	118	VH	219.1	VH	3653	269	11.3	2.8	65.3	10	6.5	18	MH	9.9	MH	7.5
M 4	360	6	1/13/2017	6.4	7	1.8	72.4	VH	242.1	VH	2965	287	7.8	4.5	80.1	15.5	5.2	20	MH	5.2	MH	4.5

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M 5	360	6	1/13/2017	6.8	7	2.4	93.3	VH	181.4	VH	3147	318	9.8	2.7	67	13.6	4.9	14	MH	4.9	MH	5.2
M 6	360	6	1/13/2017	5.8	6.6	2.2	49.5	VH	190.6	H	2235	195	11	2.6	46.1	7.6	6.1	17	MH	5.9	MH	5.6
N 1	360	6	1/28/2019	5.6	6.5	3.1	8.3	M	251.3	VH	1429	203	11	3.3	34	8	4.3	24	MH	2	M	3.2
O 1	360	6	4/17/2019	5	6.3	4.4	15	MH	396.6	VH	1186	198	13.1	4.3	25.3	6.5	3.9	38	H	8.5	MH	8.9
O 2	360	6	4/17/2019	5.2	6.3	3.9	22.4	H	335.9	VH	1181	191	13	3.7	25.5	6.3	4.0	34	H	5.4	MH	6.9
P 1A	360	6	1/13/2017	7.1	0	2.8	196.6	VH	257.7	VH	5202	271	12.6	2.9	78.9	9.1	8.7	19	MH	9.6	MH	11
P 1B	360	6	1/13/2017	6.4	6.8	2.2	60.7	VH	187.8	VH	3304	310	10.8	2.6	63.2	12.1	5.2	19	MH	6	MH	5.1
Q 1	360	8	11/29/2017	6.2	6.9	2.7	58.4	VH	104.1	M	2984	291	8.9	1.8	70.9	13.8	5.1	13	MH	2.2	M	3.5
Q 2	360	8	1/13/2017	6.8	6.9	2.5	99.3	VH	151	H	3451	207	9.8	2.3	72	9	8.0	28	MH	4	MH	5.2
Q 3	360	8	1/13/2017	6.6	6.7	2.4	37.8	H	90	LM	2515	233	8.3	1.7	66.4	11.9	5.6	18	MH	2.2	M	3.2
Q 4	360	8	1/13/2017	6.6	6.9	2.5	92	VH	103	M	3390	224	10.1	1.6	69	9.4	7.3	22	MH	4.6	MH	5.6
Q 5	360	8	1/13/2017	6.5	6.9	2.6	132.5	VH	282.6	VH	4450	300	13.3	3.1	65.6	9.5	6.9	34	H	4.5	MH	2.6
Q 6	360	8	1/13/2017	6.8	6.9	1.8	158.9	VH	277	VH	4851	265	13.1	3.1	71.7	8.6	8.3	16	MH	4.2	MH	2.3
Q 7	360	8	4/17/2019	6.4	7.2	2.9	34.3	H	99.5	LM	2847	205	7.1	2.2	85.5	12.4	6.9	10	M	5.2	MH	3.8
Q 8	360	8	10/16/2015	6.5	6.9	3	60.6	VH	104.1	M	3594	179	10.5	1.5	69.3	7.3	9.5	13	MH	3.3	M	3.5
Q 9	360	8	4/17/2019	6	6.8	2.3	54.8	VH	117.9	M	2090	151	8.1	2.2	59.8	8.2	7.3	11	M	3.1	M	1.7
Q 10	360	9	4/17/2019	6.2	6.9	2.2	64.4	VH	183.2	H	2133	186	7.2	3.8	68.3	11.2	6.1	9	M	2.1	M	1.2
Q 11	360	8	1/16/2019	6.6	6.9	3.1	86	VH	135.4	MH	2318	165	7.6	2.6	68	9.4	7.2	17	MH	2.9	M	1.4
Q 12	360	9	11/29/2017	6.4	6.8	2.9	58.5	VH	53.5	L	3193	276	10.3	0.9	64.5	11.3	5.7	15	MH	2.1	M	1.6
Q 13	360	9	1/16/2019	6.8	7	3.1	136.8	VH	74.6	L	4011	188	10.7	1.1	74.7	7.5	10.0	17	MH	2.8	M	2.2
Q 14	360	8	10/16/2015	6.6	7	3.1	73.5	VH	104.1	M	4514	293	12.8	1.2	69.1	9.6	7.2	18	MH	3.4	M	2.3
R 1	360	8	4/17/2019	7.1	0	2.9	435.2	VH	44.3	VL	6214	164	13.7	0.6	85.2	5.2	16.4	14	MH	4.9	MH	3.4

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FieldName	Split	Map	SampleDate	pH	BPH	OM	P	Plev	K	KLev	Ca	Mg	CEC	KSat	CaSat	MgSat	BCaMg	S	SLe	Zn	ZnLe	Cu
R 2	360	9	4/17/2019	6	6.8	3.2	17.7	MH	82.9	LM	1639	138	7.2	1.8	56.5	8.4	6.7	10	M	1.2	L	1.2
R 3	360	9	11/29/2017	6.2	6.9	1.6	20.7	H	76.5	L	1900	198	6.7	1.8	67.5	12.7	5.3	10	M	1.4	L	2.1
R 4	360	9	4/17/2019	6	6.7	2	41.7	VH	42.4	VL	2341	196	9.8	0.8	53.7	8.6	6.2	11	M	1.7	L	0.9
R 5A	360	9	1/13/2017	6	6.7	1.8	11.5	M	96.7	LM	1843	303	9.4	1.6	46.7	13.5	3.5	14	MH	1.5	L	2.2
R 6E	360	9	4/17/2019	6.5	7	2.6	19.2	MH	71.9	L	2336	255	8.2	1.4	63.6	13.1	4.9	15	MH	2.2	M	2.5
R 6W	360	9	4/17/2019	6.5	7.1	2.9	18.9	MH	73.7	L	1991	238	7.4	1.6	62.9	13.7	4.6	13	MH	1.7	L	2.3
R 7	360	9	4/17/2019	6.4	6.9	2.7	10.9	M	69.1	L	1764	220	6.5	1.7	65.6	14.4	4.6	10	M	0.8	L	1.2
R 8	360	9	11/29/2017	6.5	7	2.2	56.2	VH	103.2	M	2776	219	9	1.7	66.1	10.3	6.4	13	MH	2.1	M	2.6
R 9	360	9	4/17/2019	7.2	0	2.8	398	VH	483.1	VH	5307	284	12.6	5.4	80.3	9.5	8.5	16	MH	12.8	H	6.6
R 10	360	9	4/17/2019	6.3	6.9	3.3	73.4	VH	121.6	MH	2577	215	7.9	2.3	71	11.6	6.1	20	MH	7.6	MH	7.1
R 11	360	9	4/17/2019	6.2	6.6	3.9	66.3	VH	122.5	MH	2380	193	11.1	1.7	47.7	7.5	6.4	15	MH	7.8	MH	7.2
R 12A	360	9	11/29/2017	5.8	6.8	2	2	L	94.9	LM	1628	251	7.7	1.9	52.9	13.9	3.8	12	M	1.4	L	1.7
R 12B	360	9	11/29/2017	5.9	6.8	2.1	10.8	M	85.7	LM	1991	289	8.4	1.6	55.4	14.5	3.8	16	MH	1.8	M	2.1
R 13	360	9	1/13/2017	6	6.8	2	47.9	VH	174	H	2203	245	8.7	2.9	57.5	12	4.8	18	MH	7.2	MH	4.2
R 14	360	9	1/13/2017	6.2	6.9	2.9	59.9	VH	287	VH	3254	280	9.5	4.3	70.7	12.4	5.7	30	H	4.6	MH	4.4
S 1		6	1/28/2019	6.1	6.6	3	9.1	M	151.9	H	1571	253	10.1	2.2	39.4	10.6	3.7	20	MH	1.2	L	3.1
S 2		6	1/28/2019	5.9	6.6	2.6	2	L	161.1	H	869	191	8.7	2.8	32.3	9.5	3.4	23	MH	1.3	L	3.9
S 4		6	4/10/2013	6.1	6.7	3	3.5	L	251.3	VH	1118	162	7.9	4.6	40.7	8.9	4.6	15	MH	0.8	L	0.8
S 5		6	1/28/2019	5.3	6.1	3.6	2	L	210.8	VH	124	128	13.2	2.3	11.8	4.3	2.7	32	H	1.1	L	3
S 6		6	4/10/2013	6.2	6.7	3.3	7.7	M	178.6	VH	2418	327	10.6	2.5	50.6	12.9	3.9	16	MH	0.5	L	3.6
S 7		6	1/28/2019	5.8	6.6	3.3	8.9	M	82.9	LM	2273	119	10.6	1.2	48.4	5	9.7	23	MH	1.7	L	1.2
Sam A			11/29/2017	5.8	6.8	2.3	5.9	LM	65.4		1184	289	7	1.5	47.1	17.3	2.7	14	MH	1.5	L	3.7

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FieldName	Split	Map	SampleDate	pH	BPH	OM	P	Plev	K	KLev	Ca	Mg	CEC	KSat	CaSat	MgSat	BCaMg	S	SLe	Zn	ZnLe	Cu
Sam B	A		11/29/2017	5.4	6.9	2.2	2	L	89.4		999	217	5.3	2.6	57.1	17.5	3.3	14	MH	1.4	L	2.5
Sam B	B		11/29/2017	5.4	6.7	2	2	L	98.6		1030	195	7.7	2	40	10.9	3.7	13	MH	1.7	L	2.1
Sam Dick A		13	11/29/2017	5.8	6.8	2.3	5.9	LM	65.4	L	1184	289	7	1.5	47.1	17.3	2.7	14	MH	1.5	L	3.7
Sam Dick B		13	11/29/2017	5.4	6.9	2.2	2	L	89.4	LM	999	217	5.3	2.6	57.1	17.5	3.3	14	MH	1.4	L	2.5
Sam Dick C		13	1/13/2017	5.1	6.6	2.1	2	L	104.1	M	620	167	8.1	2	29.6	9	3.3	16	MH	1.5	L	3.1
Sam Dick D		13	1/13/2017	5.5	6.3	2.2	2	L	108.7	MH	976	251	12.6	1.3	23.6	8.4	2.8	20	MH	1.5	L	2.7
Sam Dick E		13	1/13/2017	5	6.4	1.8	2	L	81.1	LM	683	165	10.5	1.2	23.6	6.8	3.5	15	MH	1.2	L	1.2
SH 1		12	4/17/2019	6.9	7	5	239.5	VH	442.6	VH	4153	513	12.9	4.9	64	16.5	3.9	21	MH	11	H	3.8
Spears 1		8	1/16/2019	6.4	6.8	3.1	22.7	H	117	M	2631	381	9.9	1.8	57.8	16.1	3.6	18	MH	2.6	M	3.5
Spears 2		8	1/16/2019	6.3	6.8	2.6	3.6	L	87.5	LM	2027	332	8.6	1.6	54.5	16.1	3.4	17	MH	1.4	L	1.1
Spears 3		8	1/16/2019	5.9	6.6	3.3	11.3	M	121.6	MH	1506	279	10	1.8	38.5	11.8	3.3	23	MH	15.8	H	3.4
Spears 5		8	1/16/2019	5.5	6.6	3.3	3.4	L	117.9	M	994	188	8.8	2	34.2	9.2	3.7	21	MH	2.2	M	2
Spears 6		8	1/16/2019	5.3	6.4	2.5	2	L	140	MH	401	182	10.2	2	19.8	7.7	2.6	20	MH	1.7	L	0.8
Spears 7		8	4/17/2019	6.2	6.9	3.2	20.4	H	331.3	VH	1852	301	7.4	6.5	60	17.2	3.5	32	H	3.5	M	6.4
ST 1	360	12	1/28/2019	5.7	6.6	2.5	7	M	172.2	H	1553	233	10	2.5	39.4	9.9	4.0	29	MH	1.2	L	2.4
ST 2	360	9	1/28/2019	6.1	6.8	2.3	10.7	M	119.7	M	1983	202	8.1	2.2	57.4	10.7	5.4	21	MH	1.4	L	2.5
ST 3	360	12	11/29/2017	5.8	6.7	2.1	14.8	MH	110.5	M	1764	196	8.9	1.9	48.1	9.5	5.1	15	MH	1.6	L	3.2
ST 4	360	12	4/17/2019	5.9	6.7	2.4	2	L	56.2	L	1207	164	7.8	1.2	43.2	9.2	4.7	10	M	0.7	L	0.9
ST 5	360	12	1/28/2019	5.9	6.7	2.8	35.1	H	383.8	VH	2173	207	10	5.5	49.6	8.9	5.6	22	MH	3.9	M	5.1
ST 6	360	12	1/28/2019	5.8	6.5	2.1	8.6	M	146.4	H	1295	143	10.3	2.1	33.9	6	5.7	21	MH	1.6	L	3.9
ST 7	360	12	1/28/2019	5.8	6.6	2.6	7.6	M	178.6	H	1195	146	9	2.9	36.9	7.1	5.2	21	MH	1.5	L	3.9
ST 8	360	12	12/20/2017	5.8	6.4	2.2	12.1	M	224.6	VH	1859	179	12.7	2.6	34.8	6	5.8	16	MH	2.3	M	5.7

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FieldName	Split	Map	SampleDate	pH	BPH	OM	P	Plev	K	KLev	Ca	Mg	CEC	KSat	CaSat	MgSat	BCaMg	S	SLe	Zn	ZnLe	Cu
ST 9	360	12																				
ST 11	360	12	11/29/2017	5.7	6.7	3.1	15.3	MH	195.2	H	1666	249	9.1	3.2	45.4	11.7	3.9	22	MH	3	M	5.2
ST 12	360	12	4/10/2013	6.1	6.8	3.6	8.5	M	199.8	H	1982	279	8.5	3.4	54.5	13.9	3.9	20	MH	1.5	L	2.3
ST 13	360	12	1/28/2019	5.7	6.6	2.5	2	L	117	M	1245	258	9.5	1.9	36	11.5	3.1	20	MH	1.3	L	1.3
ST 14	360	12	4/10/2013	5.6	6.6	3.5	4.5	L	244.8	VH	867	293	9.2	3.9	30.4	13.4	2.3	19	MH	4	MH	0.3
ST 15	360	12	4/10/2013	6	6.7	4.5	6.9	M	282.6	VH	1791	336	9.7	4.2	44.4	14.5	3.1	17	MH	2.6	M	0.3
ST 16	360	12	11/29/2017	5.8	6.6	2.3	8.6	M	206.2	VH	991	189	8.9	3.4	33.6	9.1	3.7	20	MH	2.5	M	3.8
ST 17	360	12	11/29/2017	5.8	6.6	2.3	8.6	M	206.2	VH	991	189	8.9	3.4	33.6	9.1	3.7	20	MH	2.5	M	3.8
ST 18	360	12	1/28/2019	5.6	6.7	2.5	6.5	M	166.6	H	1285	162	8	3.1	43.4	8.8	4.9	22	MH	2.1	M	4.6
ST 19	360	12	4/10/2013	6.4	7	3.7	12.9	M	231	VH	2897	282	7.7	4.4	80.2	15.5	5.2	23	MH	2.2	M	3.1
ST 20	360	12	1/28/2019	5.7	7	2.4	3.4	L	92.1	LM	2054	188	5.7	2.5	83.4	14.1	5.9	18	MH	1.9	M	2.5
ST 21N		12	1/28/2019	5.6	6.8	2.4	2	L	133.5	H	687	184	5.9	3.4	42.4	13.4	3.2	23	MH	1.3	L	3.9
ST 21S		12	12/11/2015	6.2	6.6	2.2	11.7	M	138.1	H	1207	198	9.2	2.2	36.4	9.2	4.0	15	MH	1.7	L	4.8
Sugar 1		3	9/12/2017	6.5	6.8	3	12.6	M	78.3	LM	2462	310	8.8	1.4	61.9	14.9	4.2	7	M	2.7	M	1.6
Sugar 2		3	9/12/2017	5.6	6.5	2.5	2	L	53.5	L	903	176	9.7	0.9	29.4	7.9	3.7	8	M	1	L	0.7
Sugar 3		3	9/12/2017	5.5	6.7	2.5	2	L	48.9	L	1	98	5.5	1.5	24.3	8.2	3.0	12	M	1	L	0.6
T 1		1	1/16/2019	6.4	7	2.4	6.2	M	76.5	L	1365	349	5.2	2.3	69.6	28.1	2.5	17	MH	1.2	L	5.7
T 2		1	1/16/2019	6.7	6.7	2.8	5.9	LM	47	L	1379	439	6.8	1.2	53.8	27	2.0	16	MH	0.9	L	0.7
T 3		1	1/16/2019	6.4	6.8	2.4	4.5	L	89.4	LM	1385	367	7.7	1.8	47.3	19.8	2.4	18	MH	1.5	L	3.4
T 4		1	1/16/2019	6.5	6.8	2	3.3	L	55.3	L	1266	362	6.5	1.4	53.4	23.3	2.3	17	MH	0.9	L	0.6
T 5		1	1/16/2019	6.4	6.9	3.1	2.8	L	64.5	L	1542	367	6.7	1.5	58	22.7	2.6	15	MH	1.4	L	3.7
T 6		1	1/28/2019	6.4	7.2	2.8	6.2	M	87.5	LM	2182	379	6.7	2	74.3	23.7	3.1	20	MH	1.1	L	1

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FieldName	Split	Map	SampleDate	pH	BPH	OM	P	Plev	K	KLev	Ca	Mg	CEC	KSat	CaSat	MgSat	BCaMg	S	SLe	Zn	ZnLe	Cu
T 7		1	1/28/2019	6.5	7.1	2.4	3.7	L	67.3	L	2010	467	8.6	1.2	54.4	22.5	2.4	19	MH	1	L	2
T 8		1	1/28/2019	6.4	6.9	2.6	4.6	L	79.2	LM	1453	358	6.6	1.9	57.2	22.7	2.5	17	MH	0.9	L	4.9
T 9		1	1/28/2019	6.5	6.9	2.7	4.7	L	85.7	LM	2246	465	9.1	1.5	55.6	21.1	2.6	18	MH	1.2	L	2.9
T 10		1	1/28/2019	6.5	6.8	2.2	6.3	M	82.9	LM	2223	407	8.8	1.5	57.4	19.3	3.0	18	MH	1.1	L	4.3
T 11		1	1/28/2019	6.6	7	2.9	5.1	LM	94.9	LM	2484	448	9.4	1.6	58.5	19.9	2.9	21	MH	1.1	L	3.5
T 12		1	1/28/2019	6.4	6.7	2.5	7.4	M	110.5	M	1764	381	9.6	1.7	44.4	16.5	2.7	17	MH	1.1	L	3.3
T 13		1	1/28/2019	6.2	6.9	2.7	4	L	96.7	LM	2069	432	7.9	1.9	60.3	22.7	2.7	18	MH	1.2	L	4.3
T 14		1	1/28/2019	6.7	7.1	2.5	5.5	LM	104.1	M	2117	492	8.6	1.8	56.5	23.7	2.4	15	MH	1	L	0.7
T 15		1	1/28/2019	6.4	6.9	3	4.1	L	128.9	MH	2246	503	8.6	2.3	59.4	24.3	2.4	22	MH	1.1	L	7
T 16		1	1/16/2019	7	0	2.4	8	M	83.8	LM	2377	475	8.5	1.5	62.2	23.2	2.7	17	MH	1.2	L	3.3
T 17		1	1/28/2019	6.3	7.1	3.6	2	L	126.2	MH	3759	558	10.1	1.9	75.3	22.9	3.3	19	MH	1.9	M	2.5
Tucker 1		11	12/29/2017	6.5	6.9	3.1	9.7	M	175.8	VH	2068	432	8.8	3	54.6	20.5	2.7	19	MH	1.9	M	3.1
Tucker 2		11	12/29/2017	6.4	7	2.7	11.4	M	117	M	1112	329	4.8	3.7	67.3	29	2.3	14	MH	1.3	L	1.4
Tucker 3		11	12/29/2017	6.2	6.9	1.8	3.9	L	69.1	L	1356	305	6.2	1.8	58.2	20.7	2.8	15	MH	1	L	2.3
Tucker 4		11	12/29/2017	6	6.8	2	4.4	L	64.5	L	678	233	6	1.7	41.5	16.6	2.5	11	M	0.9	L	2.8
Tucker 5		11	12/29/2017	6.1	6.9	2.3	4.9	L	79.2	LM	1243	315	6.1	2.1	56.4	21.8	2.6	16	MH	1.6	L	5.3
Tucker 6		11	12/29/2017	6	6.9	2.8	6.1	M	74.6	L	1113	291	5.7	2.1	55.7	21.3	2.6	13	MH	1.3	L	1.7
U 1	360	8	1/28/2019	6.5	7.2	2.3	53.6	VH	105.9	M	3069	274	9.9	1.6	64.8	11.7	5.5	17	MH	2.8	M	2.2
U 2	360	8	1/28/2019	6	6.7	2.5	2.3	L	94	LM	2031	267	9.6	1.5	49.2	11.8	4.2	20	MH	1.2	L	1
U 3		8	1/28/2019	6	6.8	2.5	36.4	H	137.2	MH	2273	289	8.9	2.3	57.3	13.6	4.2	19	MH	2.2	M	1.6
U 4		8	10/21/2015	5.4	6.3	2.7	2	L	119.7	M	885	143	12	1.5	23.5	5.2	4.5	13	MH	1.6	L	1
V 1		6	1/28/2019	5.7	6.2	3	2	L	147.3	H	1239	205	14.1	1.6	24.2	6.2	3.9	30	H	1.3	L	3.6

Soil tests are performed by Spectrum Analytic using Mehllc III chemistry and converted to Morgan equivalent. All relevant tests are reported in lbs/acre.

Key: OM = Organic Matter CEC = Cation Exchange Capacity P = Phosphorus K = Potassium MG = Magnesium Ca = Calcium S = Sulphur B = Boron Zn = Zinc Cu = Copper Ca_MG = Calcium_Magnesium Ratio

FieldName	Split	Map	SampleDate	pH	BPH	OM	P	Plev	K	KLev	Ca	Mg	CEC	KSat	CaSat	MgSat	BCaMg	S	SLe	Zn	ZnLe	Cu
V 2	360	6	1/28/2019	5.8	6.5	3.1	6.7	M	166.6	H	1639	176	11.1	2.2	36.8	6.9	5.3	24	MH	1.4	L	4.8
V 3	360	6	1/28/2019	6	6.4	1.8	8	M	178.6	H	1615	182	12.3	2.1	32.8	6.4	5.1	22	MH	1.4	L	4.7
VA 1		4	12/29/2017	5.6	6.8	1.2	14.7	MH	141.8	H	1243	188	6.8	3.1	50	11.8	4.2	11	M	3	M	4
VV 1		2	11/18/2015	6	6.7	1.9	12.9	M	74.6	L	1719	140	8.5	1.4	49.2	7.2	6.8	11	M	1	L	4.8
W 1	360	7	4/17/2019	5.9	6.7	3.1	6.9	M	92.1	LM	882	169	7.3	1.9	38.7	10.1	3.8	14	MH	1	L	4.6
W 4A	360	7	11/29/2017	6.6	7	3.2	229.1	VH	852	VH	5752	422	17.3	6.9	62.9	10.1	6.2	36	H	9.4	MH	13
W 4B	360	7	11/29/2017	7	0	3	440.3	VH	829	VH	7297	515	19.3	6.1	69.8	11.1	6.3	47	VH	15.3	H	19
W 6	360	7	4/17/2019	6.2	6.7	3.3	72.4	VH	328.6	VH	2430	236	10.5	4.5	51.5	9.6	5.4	16	MH	4.8	MH	6.8
W 8	360	7	4/17/2019	6.1	6.8	2.3	2	L	51.6	L	1408	226	7.1	1.2	51.7	13.5	3.8	11	M	0.6	L	0.6
W 9	360	7	11/29/2017	6.7	7	2.7	120.5	VH	263.2	VH	4396	289	12.5	3.1	69.2	9.7	7.1	18	MH	5.9	MH	10.1
X 21		8	4/10/2013	5.9	6.7	3.5	2	L	128		1791	370	9.7	2	44.7	16	2.8	15	MH	0.9	L	0.1
X 22		9	4/17/2019	6.7	6.9	2.5	87.9	VH	113.3	MH	2743	207	8.5	2	69.5	10.5	6.6	10	M	2.1	M	2.3
Y 1		4	12/29/2017	5	6.6	1.8	2	L	53.5	L	559	104	7.6	1.2	29.9	6.1	4.9	15	MH	1.4	L	1.3
Y 2		4	12/29/2017	4.9	6.5	1.5	2	L	40.6	VL	511	97	8.7	0.8	25.3	5	5.1	16	MH	1.4	L	0.5
Y 3		4	12/29/2017	5.2	6.8	2	2	L	51.6	VL	1018	119	6.1	1.4	50.3	8.7	5.8	17	MH	2.1	M	0.5
Z 1A		11	5/3/2016	6.1	6.7	2.5	2	L	128.9	H	1279	274	8.4	2.3	41.2	13.7	3.0	15	MH	0.9	L	3.4
Z 1B		12	5/3/2016	6.2	6.8	2.5	3.1	L	190.6		1593	358	8.2	3.4	48.9	18.3	2.7	15	MH	1.3	L	7.9

Soil tests are performed by Spectrum Analytic using Mehlich III chemistry and converted to Morgan equivalent. All relevant tests are reported in lbs/acre.

Key: OM = Organic Matter CEC = Catlon Exchange Capacity P = Phosphorus K = Potassium MG = Magnesium Ca = Calcium S = Sulphur B = Boron Zn = Zinc Cu = Copper Ca_MG = Calcium_Magnesium Ratio

Heavy Metal Soil Analyses for 2019/2020

NOTE: All units are mg/kg

Field	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Molybdeunm	Nickel	Selenium	Zinc
A 1	<3.0	<3.0	20.44	91.27	16.9	<0.2	<3.0	20.62	<3.0	90.76 1st batch
A 2	0.76	0.17	2.91	7.28	1.62	<0.2	0.22	2.51	<0.01	31.72
A 7	<3.0	<3.0	11.01	54.13	11.51	<0.2	<3.0	13.44	<3.0	85.55 1st batch
A 12S	<3.0	<3.0	10.07	41.89	13.09	<0.2	<3.0	12.03	<3.0	84.5 1st batch
B 4	0.84	0.1	2.75	3.29	1.74	<0.2	0.15	2.42	<0.01	25.44
B 6	<3.0	<3.0	8.9	29.06	15.19	<0.2	<3.0	9.29	<3.0	85.91 1st batch
B 9	0.71	0.11	2.81	4.49	1.7	<0.2	0.16	2.14	<0.01	31.76
B 10	<3.0	<3.0	11.08	26.72	12.22	<0.2	<3.0	13.87	<3.0	68.09 1st batch
C 1	0.65	0.04	2.47	2.54	1.4	<0.2	0.04	1.92	<0.01	23.51
C 3	<3.0	<3.0	11.81	24.14	13.77	<0.2	<3.0	14.37	<3.0	80.3 1st batch
C 9	<3.0	<3.0	9.06	21.71	9.66	<0.2	<3.0	11.06	<3.0	65.54 1st batch
D 2	0.68	0.05	2.51	5.76	1.44	<0.2	0.05	1.99	<0.01	27.89
E 1	<3.0	<3.0	8.88	52.61	14.31	<0.2	<3.0	20.52	<3.0	62.99 1st batch
E 6	0.58	0.03	2.43	2.46	1.31	<0.2	0.01	2.07	<0.01	21
F 1	0.67	0.03	2.38	2.12	1.36	<0.2	0.05	1.91	<0.01	20.34
F 3	0.78	0.02	2.46	3.53	1.55	<0.2	0.04	1.87	<0.01	21.26
F 11	0.59	0.04	2.22	4.36	1.52	<0.2	0.08	1.66	<0.01	23
F 12	0.67	0.02	2.01	2.53	1.26	<0.2	0.05	1.61	<0.01	18.53
F 15	<3.0	<3.0	7.46	35.25	10.05	<0.2	<3.0	8.67	<3.0	61.11 1st batch
F 16	0.58	0.03	2	2.12	1.4	<0.2	0.03	1.69	<0.01	19.87
F 23	0.89	0.02	2.54	4.04	1.6	<0.2	0.04	2.05	<0.01	23.21
G 1	0.62	0.03	2.26	2.92	1.35	<0.2	0.03	1.74	<0.01	21.23
H 1	0.57	0.02	2.34	3.29	1.28	<0.2	0.06	1.81	<0.01	21.65
H 4	0.67	0.04	2.37	2.06	1.48	<0.2	0.01	1.93	<0.01	22.37
I 1	0.55	0.02	2.16	2.87	0.99	<0.2	<0.01	1.66	<0.01	18.62
J 3	0.63	0.02	2.55	3.03	1.63	<0.2	0.02	2.06	<0.01	25.41
M 4	<3.0	<3.0	10.59	36.16	9.82	<0.2	<3.0	12.45	<3.0	76.67 1st batch
M 6	0.66	0.03	2.52	4.29	1.25	<0.2	0.06	1.93	<0.01	26.31
P 1A	<3.0	<3.0	11.63	49.67	13.19	<0.2	<3.0	12.19	<3.0	85.44 1st batch
Q 4	<3.0	<3.0	10.99	36.64	13.95	<0.2	<3.0	12.38	<3.0	83.12 1st batch
Q 6	<3.0	<3.0	11.29	23.44	12.96	<0.2	<3.0	13.45	<3.0	78.92 1st batch
Q 11	0.62	0.02	2.52	1.79	1.53	<0.2	0.03	1.96	<0.01	22.18
R 5A	<3.0	<3.0	12.73	19.46	11.18	<0.2	<3.0	14.59	<3.0	67.13 1st batch
ST 1	0.83	0.03	2.71	2.65	1.7	<0.2	0.05	1.91	<0.01	27.9
ST 3	0.91	0.02	2.71	3.55	1.69	<0.2	0.03	5.11	<0.01	23.84
ST 4	0.66	0.01	2.73	2.9	1.46	<0.2	0.03	2.09	<0.01	24.09
W 1	0.46	0.04	2.58	9.24	1.48	<0.2	0.15	1.83	<0.01	30.68
W 9	0.65	0.03	2.55	5.04	1.37	<0.2	0.07	1.8	<0.01	23.19



Soil Analysis Report

Report To
 WNY CROP MANAGEMENT
 ASSOCIATION
 5242 CURTIS RD
 WARSAW, NY 14569

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

Sampled 05-29-2020
Tested 06-03-2020

Sample Number	Lab Number	pH		Organic Matter %	Analysis Result* and Rating				CEC	Base Saturation			Sulfur S	Boron B	Mehlich-3 PPM and Rating				
		Soil pH	Buffer pH		Phosphorus P	Potassium K	Magnesium Mg	Calcium Ca		K %	Mg %	Ca %			Zinc Zn	Iron Fe	Copper Cu	Mang. Mn	Alum. Al
1177674-A 2360	A06447	6.5	6.9	3.8	560 V	157 G	137 M	1804 G	10.4	3.3	9.7	65.2	10 M		6.3 G		9.0 L		806
1177675-B 4360	A06448	6.2	7.0	3.1	287 V	86 M	92 M	1226 H	5.5	3.4	12.4	84.2	12 M		3.8 M		4.1 G		723
1177676-B 9360	A06449	6.9	7.1	2.1	662 V	229 G	98 M	2285 H	11.4	4.3	6.3	74.9	14 M		8.8 G		6.2 L		645
1177677-C 1360	A06450	7.0		2.8	350 V	53 L	147 M	2039 H	10.2	1.1	10.6	75.2	12 M		3.8 M		3.3 L		605
1177678-D 2360	A06451	6.5	7.0	3.1	483 V	141 G	149 M	1587 G	9.4	3.2	11.6	63.3	11 M		5.9 G		9.9 G		877
1177679-E 6360	A06452	6.3	7.0	2.8	68 G	56 L	134 G	998 G	4.8	2.5	20.3	77.2	11 M		1.5 L		4.4 G		669
1177680-F 1360	A06453	5.9	6.8	2.6	179 V	67 M	93 M	934 G	6.7	2.1	10.1	52.1	10 M		1.4 L		2.2 G		807
1177681-F 3360	A06454	6.9	7.1	2.5	349 V	62 L	128 M	1709 H	8.8	1.5	10.7	73.2	10 M		2.3 M		4.3 L		662
1177682-F 11360	A06455	6.3	6.8	3.4	596 V	27 L	114 M	2186 H	11.5	0.5	7.3	71.3	12 M		5.4 G		5.6 L		765
1177683-F 12360	A06456	6.6	6.9	3.0	482 V	26 L	97 M	1871 H	9.7	0.6	7.3	72.1	10 M		2.7 M		4.1 L		754
1177684-F 16360	A06457	6.4	6.8	3.1	355 V	34 L	98 M	1819 G	10.0	0.7	7.2	68.1	11 M		3.0 M		3.1 M		829

* Results: P, K, Mg and Ca are extracted by Mehlich-3 (ICP) and are reported in ppm
 Ratings: L=Low M=Medium G=Good H=High V=Very High

Sample Number	Lab Number	As mg/Kg	Cd mg/Kg	Cr-total mg/Kg	Cu mg/Kg	Pb mg/Kg	Hg mg/Kg	Mo mg/Kg	Ni mg/Kg	Se mg/Kg	Zn mg/Kg
1177674-A 2360	A06447	.76	.17	2.91	7.28	1.62	< 0.2	.22	2.51	< 0.01	31.72
1177675-B 4360	A06448	.84	.1	2.75	3.29	1.74	< 0.2	.15	2.42	< 0.01	25.44
1177676-B 9360	A06449	.71	.11	2.81	4.49	1.7	< 0.2	.16	2.14	< 0.01	31.76
1177677-C 1360	A06450	.65	.04	2.47	2.54	1.4	< 0.2	.04	1.92	< 0.01	23.51
1177678-D 2360	A06451	.68	.05	2.51	5.76	1.44	< 0.2	.05	1.99	< 0.01	27.89
1177679-E 6360	A06452	.58	.03	2.43	2.46	1.31	< 0.2	.01	2.07	< 0.01	21
1177680-F 1360	A06453	.67	.03	2.38	2.12	1.36	< 0.2	.05	1.91	< 0.01	20.34
1177681-F 3360	A06454	.78	.02	2.46	3.53	1.55	< 0.2	.04	1.87	< 0.01	21.26
1177682-F 11360	A06455	.59	.04	2.22	4.36	1.52	< 0.2	.08	1.66	< 0.01	23
1177683-F 12360	A06456	.67	.02	2.01	2.53	1.26	< 0.2	.05	1.61	< 0.01	18.53
1177684-F 16360	A06457	.58	.03	2	2.12	1.4	< 0.2	.03	1.69	< 0.01	19.87



Soil Analysis Report

Report To
 WNY CROP MANAGEMENT ASSOCIATION
 5242 CURTIS RD
 WARSAW, NY 14569

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

Sampled 05-29-2020
Tested 06-03-2020

Sample Number	Lab Number	pH		Organic Matter %	Analysis Result* and Rating				CEC	Base Saturation			Mehlich-3 PPM and Rating						
		Soil pH	Buffer pH		Phosphorus P	Potassium K	Magnesium Mg	Calcium Ca		K %	Mg %	Ca %	Sulfur S	Boron B	Zinc Zn	Iron Fe	Copper Cu	Mang. Mn	Alum. Al
1177685-F 23360	A06458	6.0	6.7	3.0	210 V	67 L	128 M	1143 G	9.0	1.6	10.5	47.8	10 M		2.3 M		7.1 G		723
1177686-G 1360	A06459	6.8	7.0	2.7	324 V	88 M	106 M	1656 H	8.6	2.2	9.0	72.1	11 M		2.2 M		4.9 M		726
1177687-H 1360	A06460	6.4	6.9	2.8	294 V	130 G	123 M	1150 G	6.7	4.2	13.5	64.4	17 M		2.9 M		4.2 G		709
1177688-H 4360	A06461	6.5	6.8	2.9	280 V	27 L	108 M	1752 G	9.5	0.6	8.3	69.2	9 L		1.5 L		2.7 M		723
1177689-I 1360	A06462	6.2	7.0	2.2	123 H	53 L	111 M	920 G	4.4	2.6	18.6	78.8	8 L		1.4 L		5.1 G		740
1177690-J 3360	A06463	6.7	7.0	2.6	325 V	73 M	134 M	1454 G	8.0	2.0	12.2	67.8	9 L		2.6 M		3.7 L		764
1177691-M 6360	A06464	5.8	6.5	3.0	407 V	96 M	80 M	894 M	10.1	2.0	5.8	33.0	9 L		4.2 G		5.2 G		853
1177692-Q 11360	A06465	6.3	6.8	2.8	260 V	147 G	97 M	1454 G	8.9	3.6	8.0	61.4	13 M		2.2 M		2.3 G		747
1177693-ST 3360	A06466	5.8	6.6	2.9	101 H	56 L	95 M	875 M	8.9	1.4	7.8	36.9	9 L		1.3 L		3.3 G		813

* Results: P, K, Mg and Ca are extracted by Mehlich-3 (ICP) and are reported in ppm
 Ratings: L=Low M=Medium G=Good H=High V=Very High

Sample Number	Lab Number	As mg/Kg	Cd mg/Kg	Cr-total mg/Kg	Cu mg/Kg	Pb mg/Kg	Hg mg/Kg	Mo mg/Kg	Ni mg/Kg	Se mg/Kg	Zn mg/Kg
1177685-F 23360	A06458	.89	.02	2.54	4.04	1.6	< 0.2	.04	2.05	< 0.01	23.21
1177686-G 1360	A06459	.62	.03	2.26	2.92	1.35	< 0.2	.03	1.74	< 0.01	21.23
1177687-H 1360	A06460	.57	.02	2.34	3.29	1.28	< 0.2	.06	1.81	< 0.01	21.65
1177688-H 4360	A06461	.67	.04	2.37	2.06	1.48	< 0.2	.01	1.93	< 0.01	22.37
1177689-I 1360	A06462	.55	.02	2.16	2.87	.99	< 0.2	< 0.01	1.66	< 0.01	18.62
1177690-J 3360	A06463	.63	.02	2.55	3.03	1.63	< 0.2	.02	2.06	< 0.01	25.41
1177691-M 6360	A06464	.66	.03	2.52	4.29	1.25	< 0.2	.06	1.93	< 0.01	26.31
1177692-Q 11360	A06465	.62	.02	2.52	1.79	1.53	< 0.2	.03	1.96	< 0.01	22.18
1177693-ST 3360	A06466	.91	.02	2.71	3.55	1.69	< 0.2	.03	5.11	< 0.01	23.84



Soil Analysis Report

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Prepared For
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 5226 BONNY HILL RD.
 BATH, NY 14810

Sampled 05-29-2020
 Tested 06-03-2020

Sample Number	Lab Number	pH		Organic Matter %	Analysis Result* and Rating				CEC	Base Saturation				Mehlich-3 PPM and Rating					
		Soil pH	Buffer pH		Phosphorus P	Potassium K	Magnesium Mg	Calcium Ca		K %	Mg %	Ca %	Sulfur S	Boron B	Zinc Zn	Iron Fe	Copper Cu	Mang. Mn	Alum. Al
1177694-ST 4360	A06467	5.9	6.5	3.3	186 V	136 M	87 M	846 M	10.1	2.9	6.3	31.4	17 M		1.8 M		3.4 G		790
1177695-W 1360	A06468	6.1	6.7	4.0	710 V	234 G	114 M	1878 G	12.0	4.2	7.0	58.8	11 M		1.6 H		11.3 M		851
1177696-W 9360	A06469	6.5	6.8	2.7	381 V	103 M	137 M	1431 G	8.4	2.6	11.9	63.6	13 M		3.8 M		7.6 G		792
1177697-ST 1360	A06470	5.6	6.6	3.0	109 H	77 M	90 M	873 M	8.9	1.9	7.4	36.8	11 M		1.8 M		3.4 G		765

* Results: P, K, Mg and Ca are extracted by Mehlich-3 (ICP) and are reported in ppm
 Ratings: L=Low M=Medium G=Good H=High V=Very High

Sample Number	Lab Number	As mg/Kg	Cd mg/Kg	Cr-total mg/Kg	Cu mg/Kg	Pb mg/Kg	Hg mg/Kg	Mo mg/Kg	Ni mg/Kg	Se mg/Kg	Zn mg/Kg
1177694-ST 4360	A06467	.66	.01	2.73	2.9	1.46	< 0.2	.03	2.09	< 0.01	24.09
1177695-W 1360	A06468	.46	.04	2.58	9.24	1.48	< 0.2	.15	1.83	< 0.01	30.68
1177696-W 9360	A06469	.65	.03	2.55	5.04	1.37	< 0.2	.07	1.8	< 0.01	23.19
1177697-ST 1360	A06470	.83	.03	2.71	2.65	1.7	< 0.2	.05	1.91	< 0.01	27.9

Soil Analysis Report

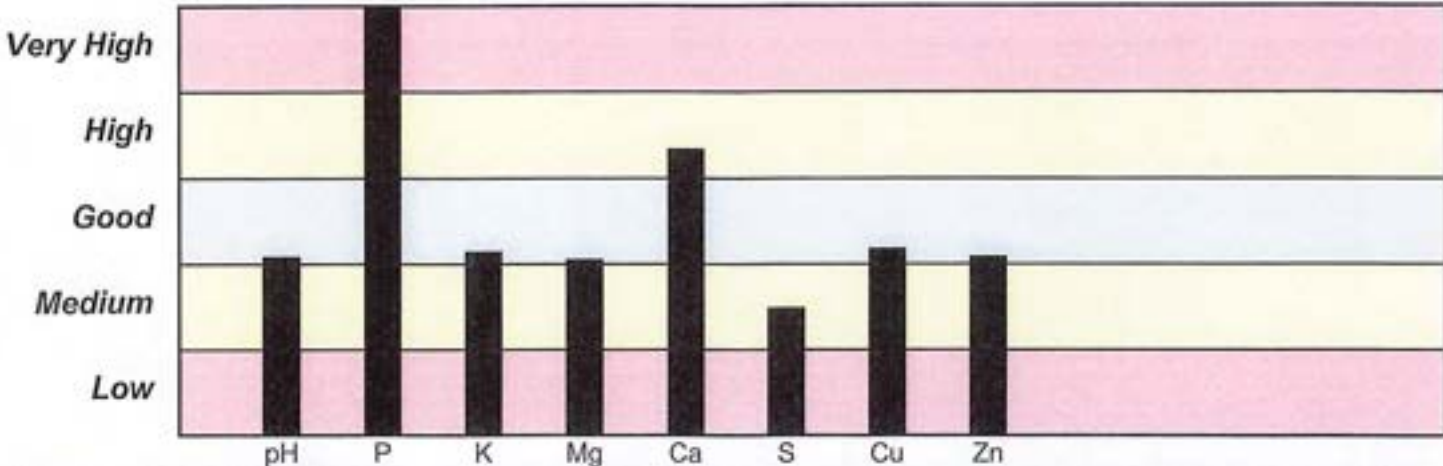


WNY CROP MANAGEMENT ASSOCIATION
5242 CURTIS RD
WARSAW, NY 14569

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

Sample Information
 Sample 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 Analysis Report

Western
New York

CROP MANAGEMENT



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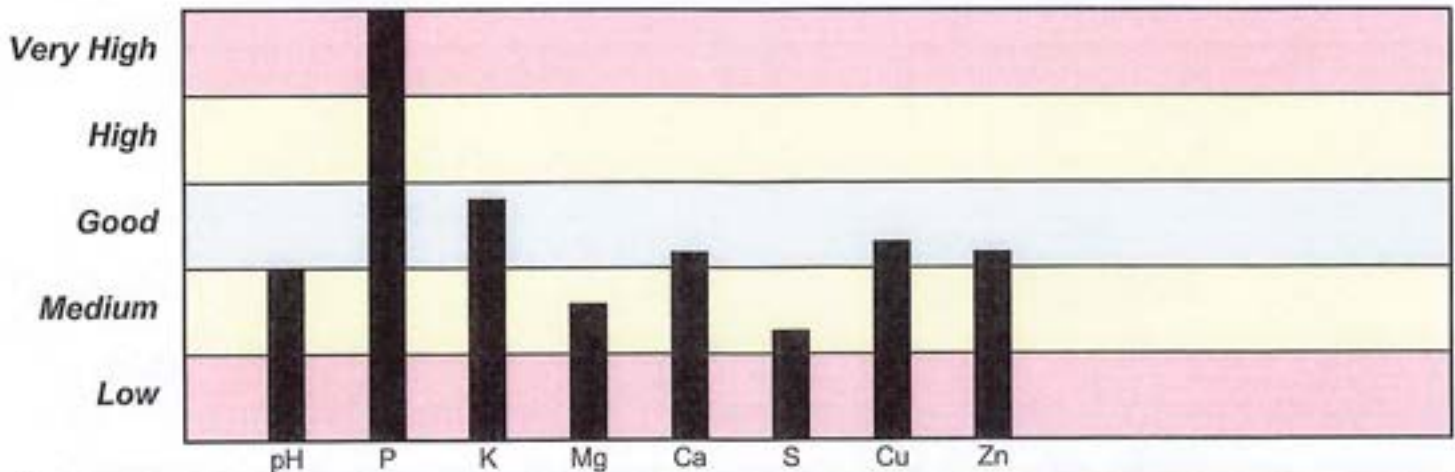
Prepared For

LEO DICKSON & SONS
5226 BONNY HILL RD.
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	%		Zinc	m3-ppm	5.4	3.9-10.9
CEC	10.6		Selenium	mg/Kg	< 3.0	
K Saturation	%	2.0-4.0	Arsenic	mg/Kg	< 3.0	
Mg Saturation	%	10-20	Cadmium	mg/Kg	< 3.0	
Ca Saturation	%	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	50-80	Molybdenum	mg/Kg	< 3.0	
Potassium	m3-ppm	150-240	Nickel	mg/Kg	13.44	
Magnesium	m3-ppm	170-310	Copper	mg/Kg	54.13	
Calcium	m3-ppm	1400-2000	Zinc	mg/Kg	85.55	
			Aluminum	m3-ppm	929	



Recommendations

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

Soil Analysis Report

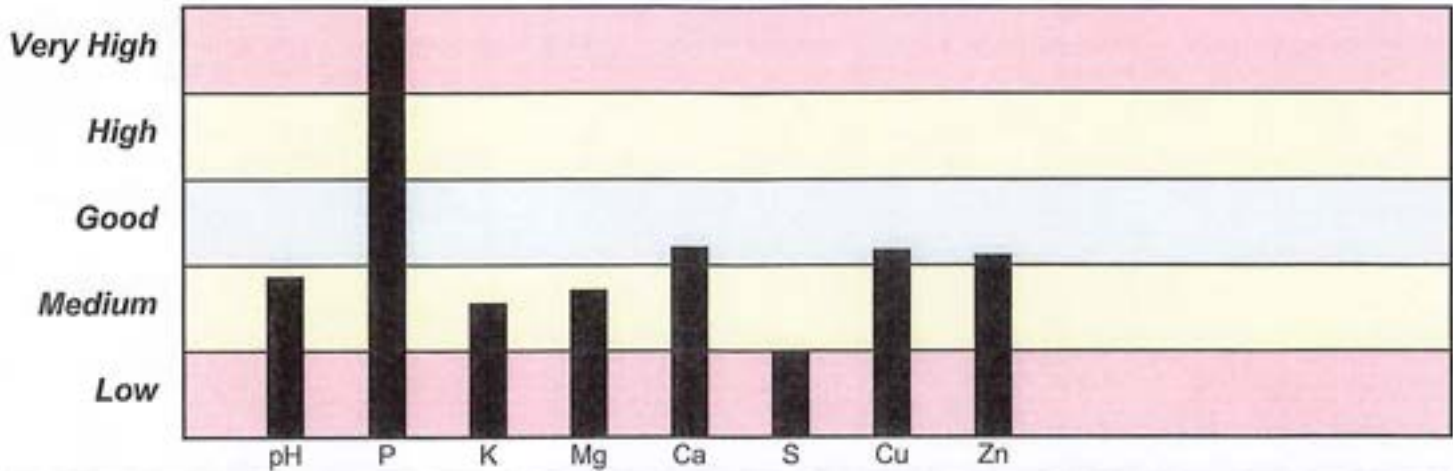


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BATH, NY 14810

Sample Information
 Sample 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

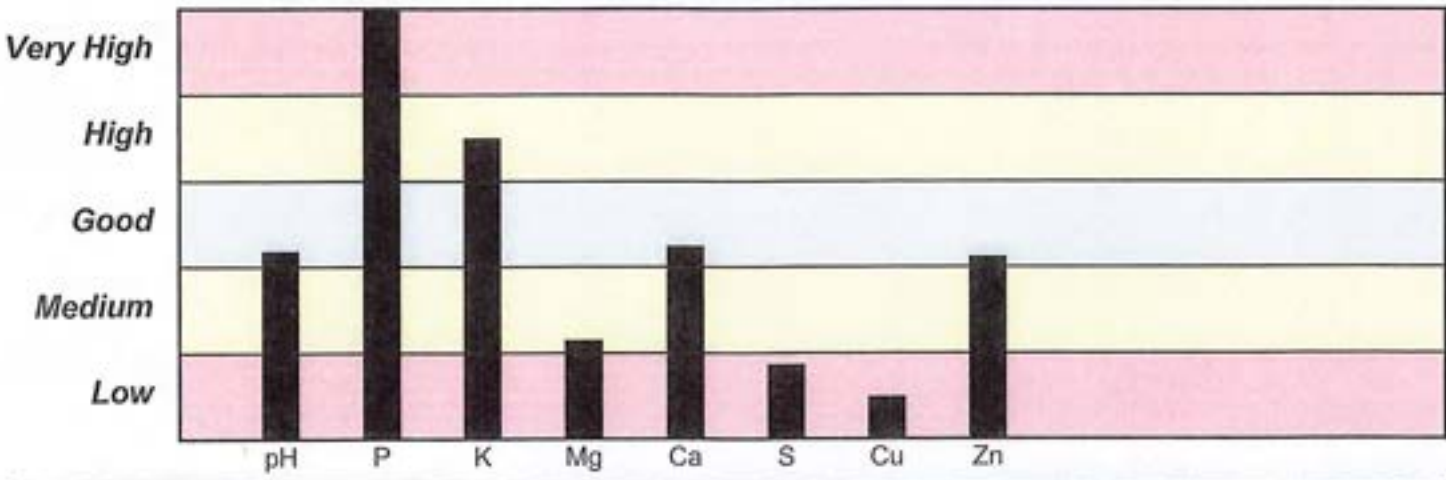


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Prepared For
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BATH, NY 14810

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

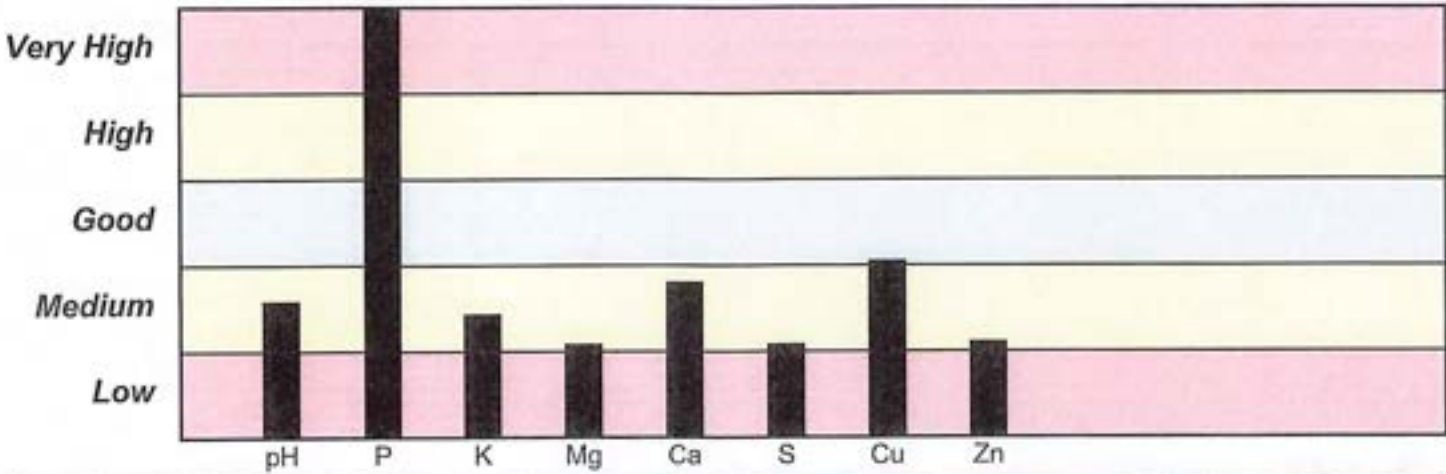


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Prepared For
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BATH, NY 14810

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

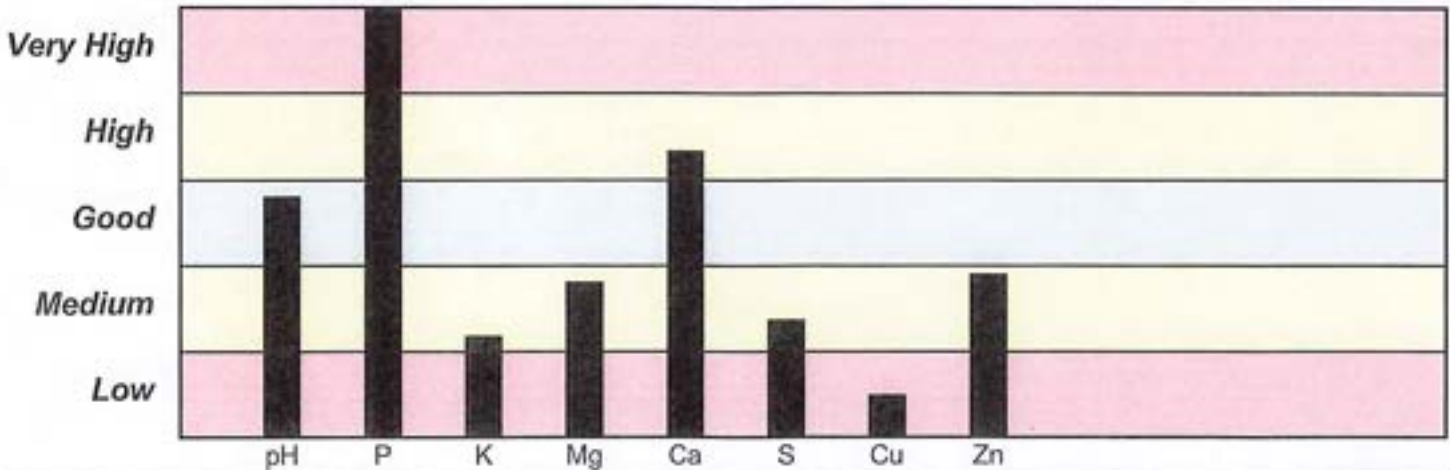


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Prepared For
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BATH, NY 14810

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

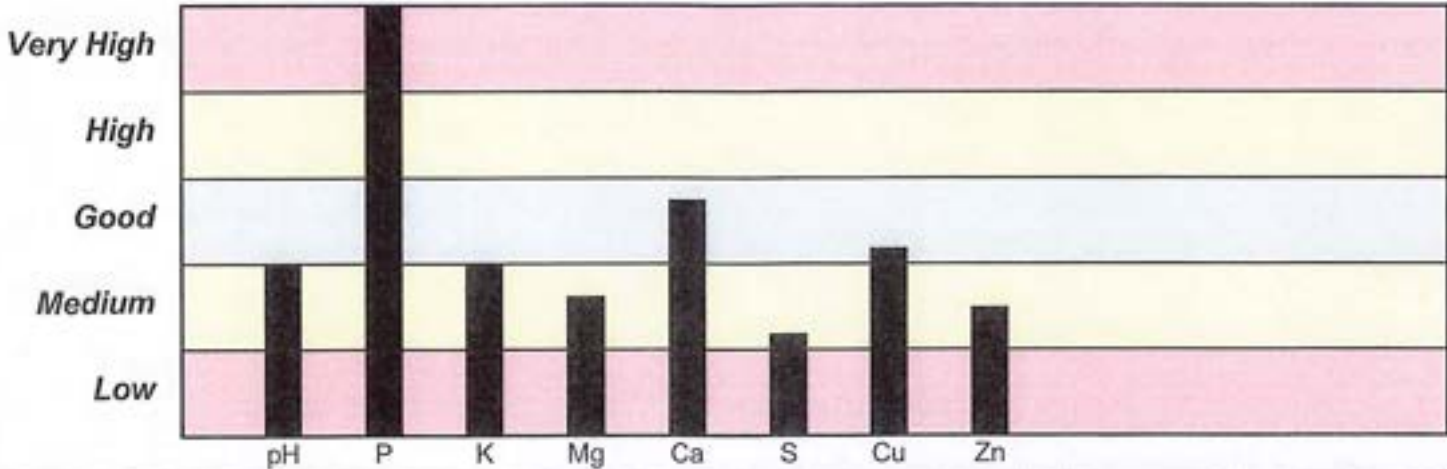


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BATH, NY 14810

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

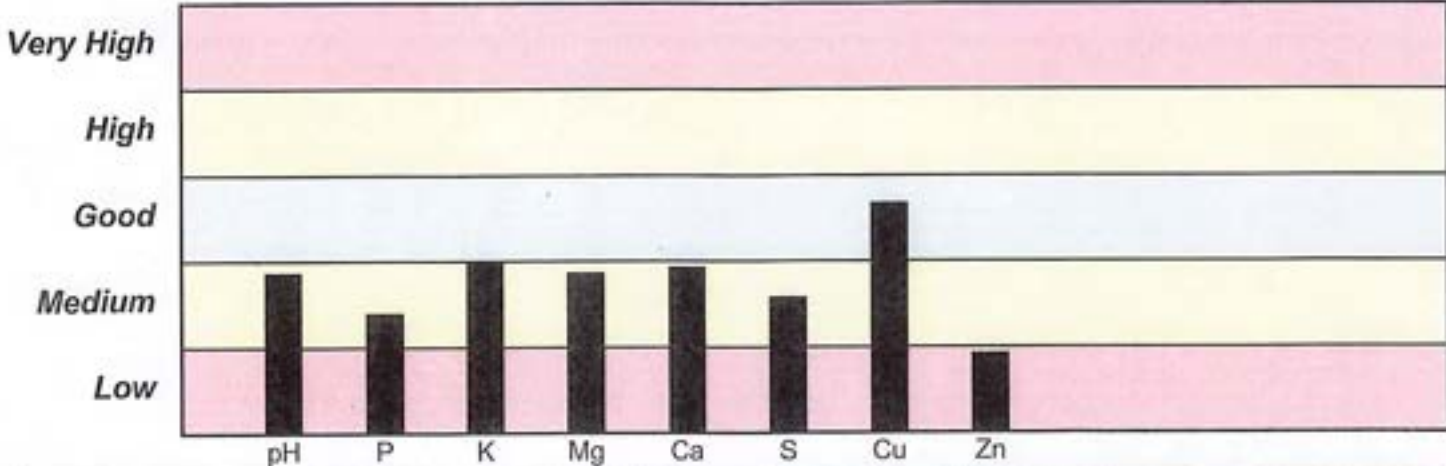


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 BATH, NY 14810

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	20-40
Buffer pH	6.7		Copper	m3-ppm 5.5	Varies
Organic Matter	% 2.9		Zinc	m3-ppm 1.6	3.9-10.9
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

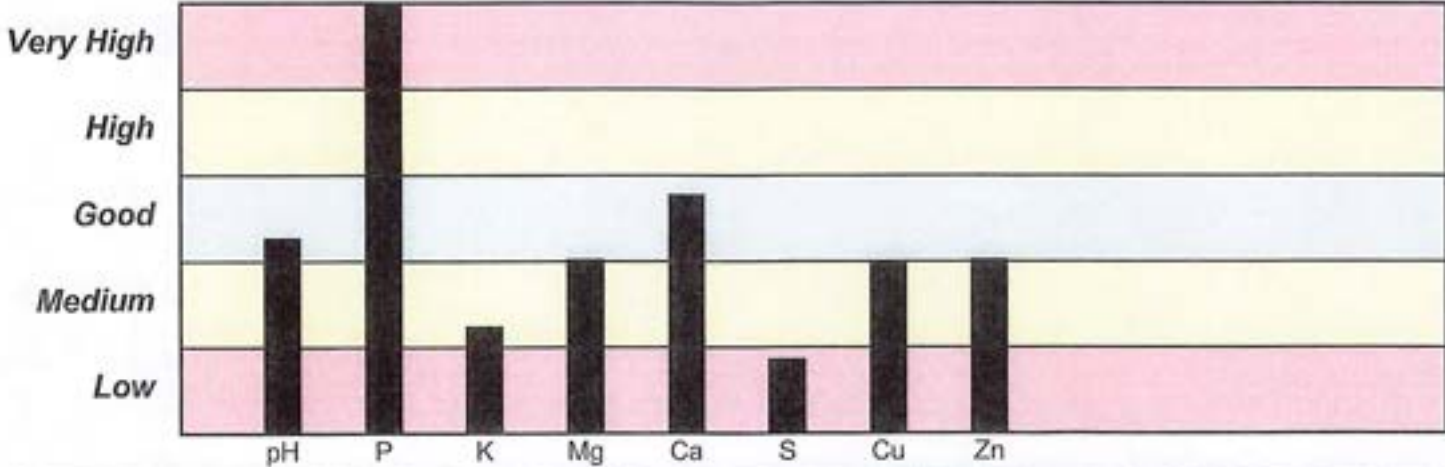


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Prepared For
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BATH, NY 14810

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

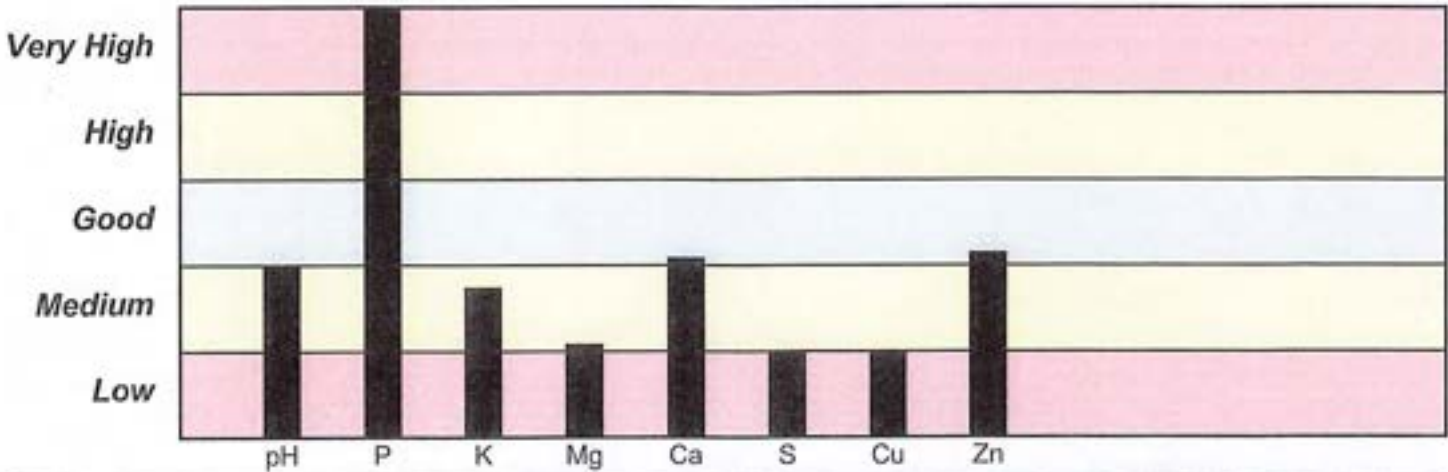


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Prepared For
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BATH, NY 14810

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

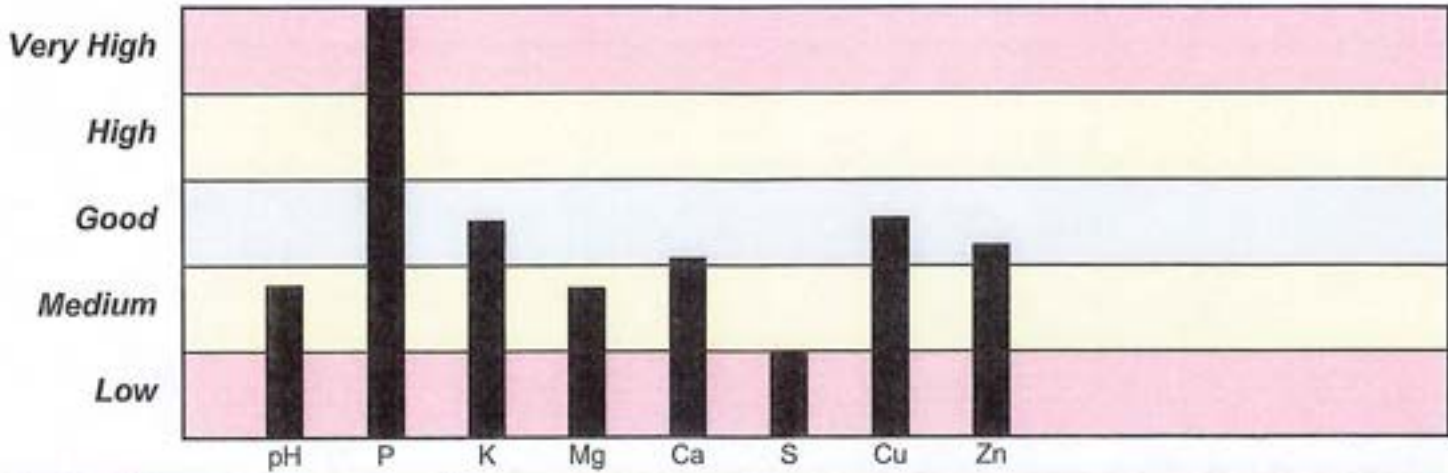


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Prepared For
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BATH, NY 14810

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

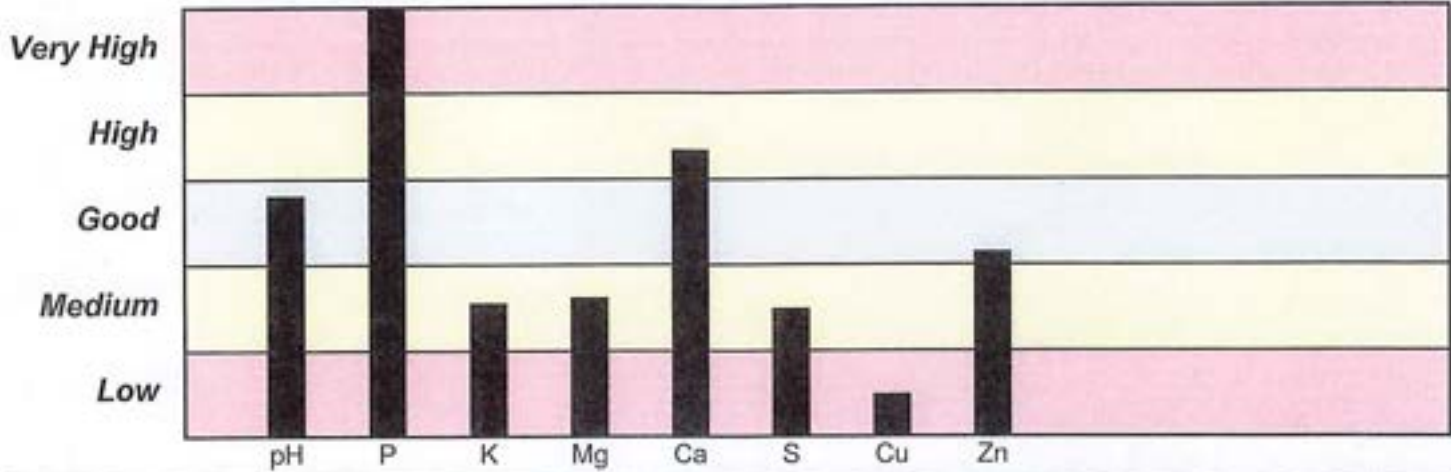


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Sample Information
 Sample 1175131-Q 4360 Sampled 01-30-2020
 Lab Number G37863 Tested 02-04-2020
 Acres 14.6

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

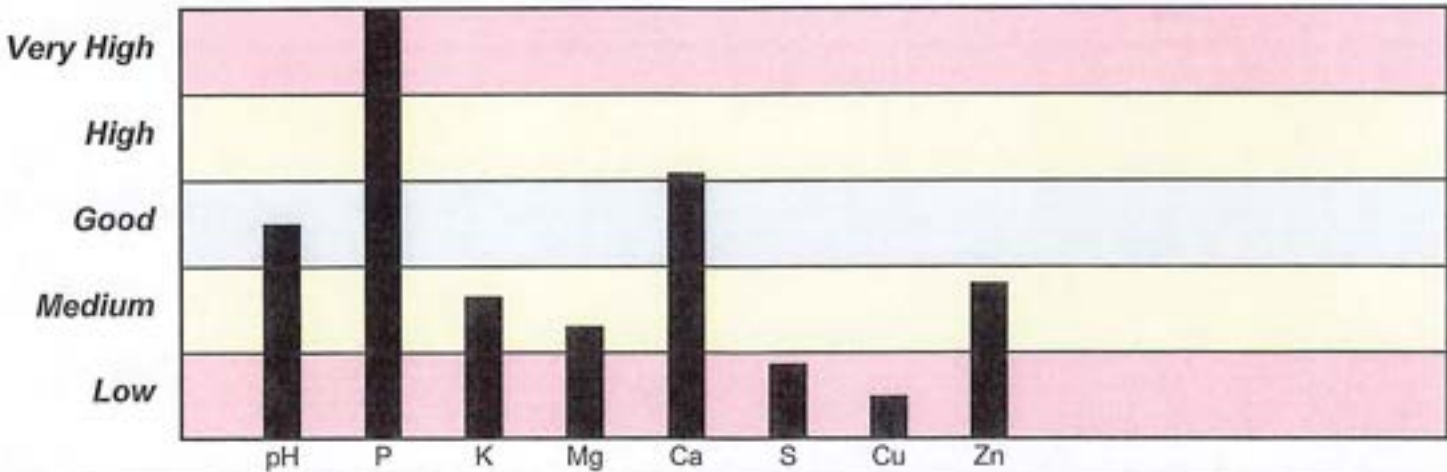


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Prepared For
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BATH, NY 14810

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

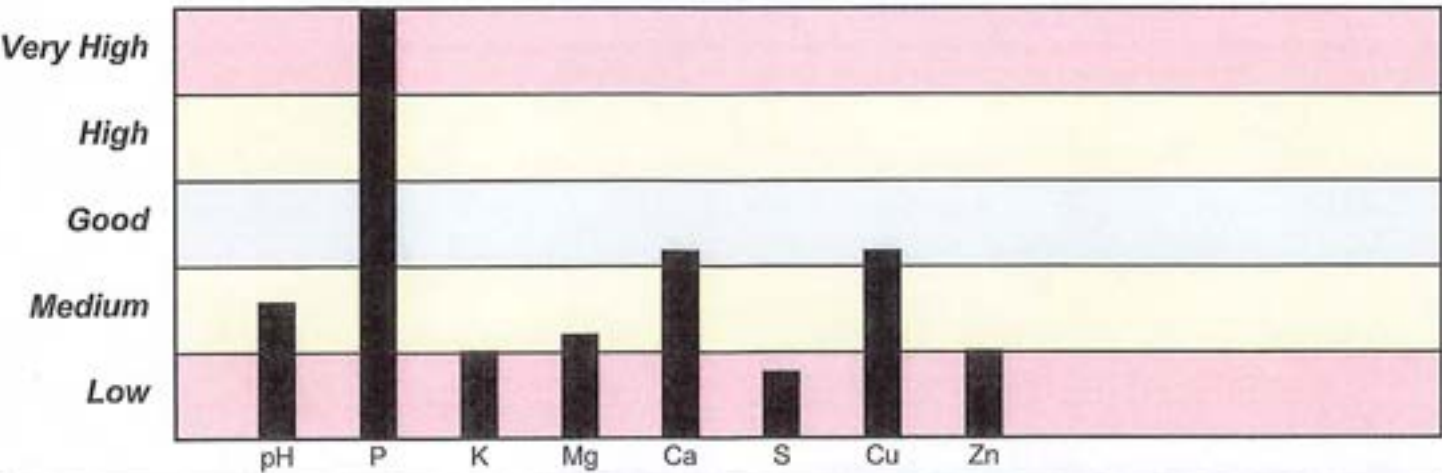


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Prepared For
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5226 BONNY HILL RD.
BATH, NY 14810

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

Analytical Data

MANURE ANALYSIS REPORT

Sample Number: 27341420
Date Sampled: 12/28/20
Date Received: 1/4/2021
Date Mailed: 1/8/2021
Statement ID: P1
Kind: Misc. - Liquid (076)
Description: P1

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.028 %	.56	2.30
Ammonium Nitrogen	.025 %	.49	2.04
Organic Nitrogen	.003 %	.07	.26
Phosphorus (P)	.004 %	.07	.30
Phosphate Equivalent (P205)	.008 %	.17	.69
Potassium (K)	.071 %	1.41	5.84
Potash Equivalent (K2O)	.085 %	1.70	7.03
Total Solids	.37 %		
Density	.99 kg/l	61.94 Lbs/CuFt	8.28 Lbs/Gal
pH	7.9		

MANURE ANALYSIS REPORT

Sample Number: 27341430
 Date Sampled: 12/28/20
 Date Received: 1/4/2021
 Date Mailed: 1/8/2021
 Statement ID: P2
 Kind: Misc. - Liquid (076)
 Description: P2

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.031 %	.61	2.56
Ammonium Nitrogen	.015 %	.29	1.22
Organic Nitrogen	.016 %	.32	1.34
Phosphorus (P)	.014 %	.29	1.19
Phosphate Equivalent (P205)	.033 %	.65	2.73
Potassium (K)	.023 %	.46	1.94
Potash Equivalent (K20)	.028 %	.56	2.34
Total Solids	1.20 %		
Density	1.00 kg/l	62.55 Lbs/CuFt	8.36 Lbs/Gal
pH	4.0		

MANURE ANALYSIS REPORT

Sample Number: 27341440
Date Sampled: 12/28/20
Date Received: 1/4/2021
Date Mailed: 1/8/2021
Statement ID: P3
Kind: Misc. - Liquid (076)
Description: P3

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.016 %	.31	1.29
Ammonium Nitrogen	.009 %	.17	.72
Organic Nitrogen	.007 %	.14	.57
Phosphorus (P)	.006 %	.13	.52
Phosphate Equivalent (P205)	.014 %	.29	1.20
Potassium (K)	.042 %	.83	3.46
Potash Equivalent (K2O)	.050 %	1.00	4.17
Total Solids	.49 %		
Density	1.00 kg/l	62.31 Lbs/CuFt	8.33 Lbs/Gal
pH	7.6		

MANURE ANALYSIS REPORT

Sample Number: 27341450
Date Sampled: 12/28/20
Date Received: 1/4/2021
Date Mailed: 1/8/2021
Statement ID: P4
Kind: Misc. - Liquid (076)
Description: P4

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.009 %	.18	.75
Ammonium Nitrogen	.009 %	.18	.74
Organic Nitrogen	.000 %	.00	.01
Phosphorus (P)	.002 %	.04	.15
Phosphate Equivalent (P205)	.004 %	.08	.35
Potassium (K)	.084 %	1.67	6.97
Potash Equivalent (K2O)	.101 %	2.01	8.39
Total Solids	.40 %		
Density	1.00 kg/l	62.43 Lbs/CuFt	8.35 Lbs/Gal

MANURE ANALYSIS REPORT

Sample Number: 26942080
 Date Sampled: 08/10/20
 Date Received: 8/13/2020
 Date Mailed: 8/18/2020
 Statement ID: MANURE P1
 Kind: Cattle-Liquid <3 Mo (080)
 Description: MANURE P1

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.105 %	2.09	8.66
Ammonium Nitrogen	.018 %	.36	1.47
Organic Nitrogen	.087 %	1.74	7.19
Phosphorus (P)	.008 %	.15	.63
Phosphate Equivalent (P205)	.017 %	.35	1.44
Potassium (K)	.098 %	1.96	8.10
Potash Equivalent (K2O)	.118 %	2.38	9.75
Total Solids	.68 %		
Density	.99 kg/l	61.94 Lbs/CuFt	8.28 Lbs/Gal
pH	7.8		

MANURE ANALYSIS REPORT

Sample Number: 26942090
Date Sampled: 08/10/20
Date Received: 8/13/2020
Date Mailed: 8/19/2020
Statement ID: MANURE P2
Kind: Cattle-Liquid <3 Mo (080)
Description: MANURE P2

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.126 %	2.53	10.40
Ammonium Nitrogen	.019 %	.38	1.55
Organic Nitrogen	.108 %	2.15	8.86
Phosphorus (P)	.006 %	.13	.52
Phosphate Equivalent (P205)	.014 %	.29	1.18
Potassium (K)	.049 %	.98	4.01
Potash Equivalent (K20)	.059 %	1.17	4.83
Total Solids	.78 %		
Density	.99 kg/l	61.57 Lbs/CuFt	8.23 Lbs/Gal
pH	5.1		

MANURE ANALYSIS REPORT

Sample Number: 26942100
Date Sampled: 08/10/20
Date Received: 8/13/2020
Date Mailed: 8/18/2020
Statement ID: MANURE P3
Kind: Cattle-Liquid <3 Mo (080)
Description: MANURE P3

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.241 %	4.83	20.09
Ammonium Nitrogen	.037 %	.74	3.08
Organic Nitrogen	.204 %	4.09	17.01
Phosphorus (P)	.178 %	3.55	14.80
Phosphate Equivalent (P205)	.407 %	8.14	33.91
Potassium (K)	.127 %	2.54	10.56
Potash Equivalent (K2O)	.153 %	3.05	12.72
Total Solids	4.49 %		
Density	1.00 kg/l	62.31 Lbs/CuFt	8.33 Lbs/Gal
pH	7.6		

MANURE ANALYSIS REPORT

Sample Number: 26942110
Date Sampled: 08/10/20
Date Received: 8/13/2020
Date Mailed: 8/18/2020
Statement ID: MANURE P4
Kind: Cattle-Liquid <3 Mo (080)
Description: MANURE P4

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.063 %	1.26	5.17
Ammonium Nitrogen	.013 %	.26	1.09
Organic Nitrogen	.050 %	.99	4.09
Phosphorus (P)	.003 %	.06	.24
Phosphate Equivalent (P205)	.007 %	.13	.55
Potassium (K)	.078 %	1.56	6.41
Potash Equivalent (K2O)	.094 %	1.88	7.72
Total Solids	.52 %		
Density	.99 kg/l	61.57 Lbs/CuFt	8.23 Lbs/Gal
pH	7.9		

MANURE ANALYSIS REPORT

Sample Number: 26942120
Date Sampled: 08/10/20
Date Received: 8/13/2020
Date Mailed: 8/18/2020
Statement ID: MAIN DAIRY LAGOON
Kind: Cattle-Liquid <3 Mo (080)
Description: MAIN DAIRY LAGOON

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.282 %	5.64	23.83
Ammonium Nitrogen	.122 %	2.44	10.30
Organic Nitrogen	.160 %	3.21	13.54
Phosphorus (P)	.056 %	1.12	4.75
Phosphate Equivalent (P205)	.129 %	2.58	10.88
Potassium (K)	.256 %	5.11	21.57
Potash Equivalent (K2O)	.308 %	6.15	25.99
Total Solids	6.10 %		
Density	1.01 kg/l	63.17 Lbs/CuFt	8.44 Lbs/Gal
pH	7.7		

MANURE ANALYSIS REPORT

Sample Number: 27246600
Date Sampled: 11/06/20
Date Received: 11/16/2020
Date Mailed: 11/17/2020
Statement ID: P1
Kind: Manure, Liquid (090)
Description: P1

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.050 %	1.00	4.11
Ammonium Nitrogen	.028 %	.56	2.33
Organic Nitrogen	.022 %	.44	1.78
Phosphorus (P)	.009 %	.18	.74
Phosphate Equivalent (P205)	.021 %	.41	1.69
Potassium (K)	.086 %	1.72	7.10
Potash Equivalent (K20)	.104 %	2.07	8.56
Total Solids	.34 %		
Density	.99 kg/l	61.81 Lbs/CuFt	8.26 Lbs/Gal
pH	8.1		

MANURE ANALYSIS REPORT

Sample Number: 27246610
Date Sampled: 11/06/20
Date Received: 11/16/2020
Date Mailed: 11/18/2020
Statement ID: P2
Kind: Manure, Liquid (090)
Description: P2

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.295 %	5.89	24.64
Ammonium Nitrogen	.042 %	.84	3.49
Organic Nitrogen	.253 %	5.05	21.15
Phosphorus (P)	.098 %	1.95	8.15
Phosphate Equivalent (P205)	.223 %	4.47	18.68
Potassium (K)	.031 %	.63	2.63
Potash Equivalent (K20)	.038 %	.76	3.17
Total Solids	5.35 %		
Density	1.00 kg/l	62.55 Lbs/CuFt	8.36 Lbs/Gal
pH	4.4		

MANURE ANALYSIS REPORT

Sample Number: 27246620
Date Sampled: 11/06/20
Date Received: 11/16/2020
Date Mailed: 11/17/2020
Statement ID: P3
Kind: Manure, Liquid (090)
Description: P3

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.048 %	.95	3.92
Ammonium Nitrogen	.018 %	.36	1.49
Organic Nitrogen	.030 %	.59	2.43
Phosphorus (P)	.016 %	.32	1.32
Phosphate Equivalent (P2O5)	.037 %	.74	3.03
Potassium (K)	.098 %	1.97	8.07
Potash Equivalent (K2O)	.118 %	2.37	9.72
Total Solids	1.21 %		
Density	.98 kg/l	61.44 Lbs/CuFt	8.21 Lbs/Gal
pH	8.0		

MANURE ANALYSIS REPORT

Sample Number: 27246630
Date Sampled: 11/06/20
Date Received: 11/16/2020
Date Mailed: 11/17/2020
Statement ID: P4
Kind: Manure, Liquid (090)
Description: P4

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.014 %	.29	1.20
Ammonium Nitrogen	.006 %	.12	.50
Organic Nitrogen	.008 %	.17	.70
Phosphorus (P)	.002 %	.04	.15
Phosphate Equivalent (P205)	.004 %	.08	.34
Potassium (K)	.066 %	1.31	5.49
Potash Equivalent (K20)	.079 %	1.58	6.62
Total Solids	.54 %		
Density	1.00 kg/l	62.55 Lbs/CuFt	8.36 Lbs/Gal
pH	8.2		

MANURE ANALYSIS REPORT

Sample Number: 27246640
 Date Sampled: 11/06/20
 Date Received: 11/16/2020
 Date Mailed: 11/18/2020
 Statement ID: MAIN STORAGE DAIRY MANURE
 Kind: Manure, Liquid (090)
 Description: MAIN STORAGE DAIRY MANURE

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.445 %	8.90	36.41
Ammonium Nitrogen	.014 %	.28	1.15
Organic Nitrogen	.431 %	8.62	35.25
Phosphorus (P)	.091 %	1.82	7.44
Phosphate Equivalent (P2O5)	.208 %	4.17	17.04
Potassium (K)	.172 %	3.43	14.03
Potash Equivalent (K2O)	.207 %	4.13	16.90
Total Solids	1.87 %		
Density	.98 kg/l	61.20 Lbs/CuFt	8.18 Lbs/Gal
pH	7.8		



Microbac Laboratories, Inc., Sayre Division
CERTIFICATE OF ANALYSIS

S0J0266

Dickson Environmental Services, Inc.

Project Name: Group A Testing

Phil Dickson
 5226 Bonny Hill Rd
 Bath, NY 14810

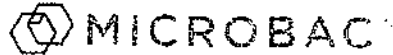
Project / PO Number: N/A
 Received: 10/06/2020
 Reported: 10/31/2020

Analytical Testing Parameters

Client Sample ID:	P1	Collected By:	Client
Sample Matrix:	Wastewater	Collection Date:	10/05/2020 15:00
Lab Sample ID:	S0J0266-01		

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

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 160.4 Total Volatile Solids - TVS	7060		100	mg/L			10/12/20 1656	ADG
Method: EPA 350.1, Rv. 2 (1993) Ammonia as N	263		16.0	mg/L		10/12/20 0608	10/13/20 1248	TB
Method: EPA 351.2, Rv. 2 (1993) Total Kjeldahl Nitrogen (TKN) as N	722		40.0	mg/L		10/14/20 1116	10/15/20 1239	ADG
Method: EPA 365.4 Phosphorus - Total as P	244		50.0	mg/L		10/14/20 1123	10/16/20 1646	ADG
Method: NA Temperature	17.8			°C	H4	10/15/20 1624	10/15/20 1721	APH
Method: SM 4500-H+ B-2011 pH	8.4			S.U.	H4, Y1	10/15/20 1624	10/15/20 1721	APH



Microbac Laboratories, Inc., Sayre Division

CERTIFICATE OF ANALYSIS

S0J0266

Client Sample ID: P2	Collected By: Client
Sample Matrix: Wastewater	Collection Date: 10/05/2020 15:00
Lab Sample ID: S0J0266-02	

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

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 160.4								
Total Volatile Solids - TVS	47800		200	mg/L			10/12/20 1656	ADG
Method: EPA 350.1, Rv. 2 (1993)								
Ammonia as N	970		40.0	mg/L		10/12/20 0608	10/13/20 1250	TB
Method: EPA 351.2, Rv. 2 (1993)								
Total Kjeldahl Nitrogen (TKN) as N	2150		100	mg/L		10/14/20 1116	10/15/20 1241	ADG
Method: EPA 365.4								
Phosphorus - Total as P	1110		125	mg/L		10/14/20 1123	10/16/20 1646	ADG
Method: NA								
Temperature	17.6			°C	H4	10/15/20 1624	10/15/20 1721	APH
Method: SM 4500-H+ B-2011								
	5.0			S.U.	H4, Y1	10/15/20 1624	10/15/20 1721	APH

Client Sample ID: P3	Collected By: Client
Sample Matrix: Wastewater	Collection Date: 10/05/2020 15:00
Lab Sample ID: S0J0266-03	

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

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 160.4								
Total Volatile Solids - TVS	61900		1000	mg/L			10/12/20 1656	ADG
Method: EPA 350.1, Rv. 2 (1993)								
Ammonia as N	673		40.0	mg/L		10/12/20 0608	10/13/20 1251	TB
Method: EPA 351.2, Rv. 2 (1993)								
Total Kjeldahl Nitrogen (TKN) as N	2240		100	mg/L		10/14/20 1116	10/15/20 1242	ADG
Method: EPA 365.4								
Phosphorus - Total as P	12000		1250	mg/L		10/14/20 1123	10/16/20 1658	ADG
Method: NA								
Temperature	17.6			°C	H4	10/15/20 1624	10/15/20 1721	APH
Method: SM 4500-H+ B-2011								
	7.9			S.U.	H4, Y1	10/15/20 1624	10/15/20 1721	APH



Microbac Laboratories, Inc., Sayre Division

CERTIFICATE OF ANALYSIS

S0J0266

Client Sample ID: P4	Collected By: Client
Sample Matrix: Wastewater	Collection Date: 10/05/2020 15:00
Lab Sample ID: S0J0266-04	

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

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 160.4								
Total Volatile Solids - TVS	650		100	mg/L			10/12/20 1656	ADG
Method: EPA 350.1, Rv. 2 (1993)								
Ammonia as N	101		10.0	mg/L		10/12/20 0508	10/13/20 1253	TB
Method: EPA 351.2, Rv. 2 (1993)								
Total Kjeldahl Nitrogen (TKN) as N	122		10.0	mg/L		10/14/20 1116	10/15/20 1244	ADG
Method: EPA 365.4								
Phosphorus - Total as P	23.1		5.00	mg/L		10/14/20 1123	10/16/20 1647	ADG
Method: NA								
Temperature	17.8			°C	H4	10/15/20 1624	10/15/20 1721	APH
Method: SM 4500-H+ B-2011								
	8.5			S.U.	H4, Y1	10/15/20 1624	10/15/20 1721	APH

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.

Definitions

- °C: Degrees Celsius
- H4: The test was performed outside of the EPA recommended holding time of 15 minutes.
- MCL: US EPA Maximum Contaminant Level
- MDL: Minimum Detection Limit
- mg/L: Milligrams per Liter
- RL: Reporting Limit
- S.U.: Standard Units
- Y1: Accreditation is not offered by the accrediting body for this analyte.

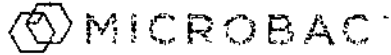
Project Requested Certification(s)

Microbac Laboratories Inc., - Marietta, OH
10861

New York State Department of Health

Microbac Laboratories, Inc., Sayre Division
NY Lab ID No.: 11216

New York State Department of Health



Microbac Laboratories, Inc., Sayre Division

CERTIFICATE OF ANALYSIS

S0J0266

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. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <<https://www.microbac.com/standard-terms-conditions>>.

Reviewed and Approved By:

A handwritten signature in black ink that reads "Shannon Weeks".

Shannon Weeks

Customer Relationship Coordinator

Reported: 10/31/2020 09:47

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

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

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

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

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

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

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 %		
Density	1.01 kg/l	62.80 Lbs/CuFt	8.39 Lbs/Gal

Printed copies also sent to:



Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J012254

Client Sample ID: Kerry Washwater	Collected By: Client
Sample Matrix: Wastewater	Collection Date: 09/22/2020 16:00
Lab Sample ID: J012254-07	

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 353.2, Rv. 2 (1993)								
Nitrate as N (Calc)	<0.0500		0.0500	mg/L		10/07/20 0730	10/07/20 1041	FJF
Nitrate-Nitrite as N	<0.0500		0.0500	mg/L	A21, H1, PH	10/07/20 0730	10/07/20 1041	FJF
Nitrite as N	<0.0250		0.0250	mg/L	A21, H1	10/07/20 0730	10/07/20 0849	FJF

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

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 180.4								
Total Volatile Solids - TVS	4370		50.0	mg/L	H1	10/05/20 1537	10/07/20 1100	ADG
Method: EPA 350.1, Rv. 2 (1993)								
Ammonia as N	62.1		4.00	mg/L		10/08/20 0604	10/09/20 1128	TB
Method: EPA 351.2, Rv. 2 (1993)								
Total Kjeldahl Nitrogen (TKN) as N	62.0		4.00	mg/L		10/07/20 0803	10/07/20 1259	ADG
Method: EPA 385.4								
Phosphorus - Total as P	107		15.0	mg/L		10/07/20 1155	10/07/20 1838	MIC
Method: NA								
Temperature	19.1			°C		10/01/20 1725	10/01/20 2125	APH
Method: SM 2540 B-2011								
Total Solids	5690		50.0	mg/L	H1	10/05/20 1537	10/06/20 0730	ADG
Method: SM 4500-H+ B-2011								
pH	7.4			S.U.	H4, Y1	10/01/20 1725	10/01/20 2125	APH

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., New York Division

CERTIFICATE OF ANALYSIS

J012254

Definitions

- %: Percent
- % (by wt.): Percent by Weight
- °C: Degrees Celsius
- A21: Sample was filtered in the laboratory before analysis.
- AC: Due to a result over the reporting limit, Hg was analyzed by the method of standard additions.
- D3: Dilution was performed due to high target analyte concentration.
- H1: Sample was received past holding time.
- H1: Sample was received past holding time.
- H4: The test was performed outside of the EPA recommended holding time of 15 minutes.
- M8: Due to the sample matrix, the method defined ratio could not be achieved and the reported results may be biased.
- MCL: US EPA Maximum Contaminant Level
- MDL: Minimum Detection Limit
- mg/L: Milligrams per Liter
- PH: Sample pH was >2.
- RL: Reporting Limit
- S: Spike recovery outside of acceptance limits.
- S.U.: Standard Units
- Y1: Accreditation is not offered by the accrediting body for this analyte.
- 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. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <<https://www.microbac.com/standard-terms-conditions>>.

Reviewed and Approved By:

Renee Lantz
Customer Relationship Specialist
Reported: 11/09/2020 13:27

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Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J012254

Client Sample ID: Dryden	Collected By: Client
Sample Matrix: Solid	Collection Date: 09/22/2020 16:00
Lab Sample ID: J012254-06	

Analyses Subcontracted to: Microbac - CGL

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 351.2, Rv. 2 (1993) Total Kjeldahl Nitrogen (TKN)	50000		3600	mg/kg dry	Y1	09/22/20 1600	10/08/20 1100	CGL
Method: EPA 365.3, Rv 1978 Phosphorus - Total as P	32800		1420	mg/kg dry	Y1	09/22/20 1600	10/09/20 1047	CGL
Method: SM 2540 G-1997 Percent Solids	13		0.1	% (by wt.)	Y1, H1	09/22/20 1600	10/05/20 1722	CGL

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

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 350.1, Rv. 2 (1993) Ammonia as N	223		36.4	mg/kg dry	Y1	10/02/20 1700	10/05/20 1339	TB
Method: EPA 9045D pH	6.2			S.U.	H4	10/06/20 1534	10/06/20 1659	APH
Method: NA Temperature	18.7			°C	H4	10/06/20 1534	10/06/20 1659	APH
Method: SM 2540 G-2011 Total Volatile Solids - TVS	69.4			%	H1, Y1		10/05/20 1542	ADG

General Parameters	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: ASTM D2216-10 Percent Solids	12.4		1.00	% (by wt.)	Y1	10/02/20 0722	10/05/20 0625	ERP

Metals Total by AA	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 7471A Mercury	<1.88		1.88	mg/kg dry		10/08/20 0705	10/08/20 1114	TMM

Metals Total by ICP	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 6010C Arsenic	8.99		5.93	mg/kg dry		10/02/20 0636	10/02/20 1334	JYH
Cadmium	0.878		0.593	mg/kg dry		10/02/20 0636	10/02/20 1334	JYH
Chromium	19.4		1.48	mg/kg dry		10/02/20 0636	10/02/20 1334	JYH
Copper	901		5.93	mg/kg dry		10/02/20 0636	10/02/20 1334	JYH
Lead	12.1		5.93	mg/kg dry		10/02/20 0636	10/02/20 1334	JYH
Molybdenum	<17.8		17.8	mg/kg dry		10/02/20 0636	10/02/20 1334	JYH

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CERTIFICATE OF ANALYSIS

J012254

Client Sample ID: Dryden	Collected By: Client
Sample Matrix: Solid	Collection Date: 09/22/2020 16:00
Lab Sample ID: J012254-06	

Metals Total by ICP	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Nickel	17.9		11.9	mg/kg dry		10/02/20 0636	10/02/20 1334	JYH
Potassium	3150		296	mg/kg dry		10/02/20 0636	10/02/20 1334	JYH
Selenium	8.72		5.93	mg/kg dry		10/02/20 0636	10/02/20 1334	JYH
Zinc	647		5.93	mg/kg dry		10/02/20 0636	10/02/20 1334	JYH

Anions by IC	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 9056A								
Nitrite as N	<32.3		32.3	mg/kg dry	H1		10/03/20 0637	CAS
Nitrate as N	547		48.4	mg/kg dry	H1		10/03/20 0637	CAS



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CERTIFICATE OF ANALYSIS

J012254

Client Sample ID: Wavorly	Collected By: Client
Sample Matrix: Solid	Collection Date: 09/21/2020 13:00
Lab Sample ID: J012254-05	

Analyses Subcontracted to: Microbac - CGL

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 351.2, Rv. 2 (1993) Total Kjeldahl Nitrogen (TKN)	55000		2200	mg/kg dry	Y1	09/21/20 1300	10/08/20 1058	CGL
Method: EPA 365.3, Rv 1978 Phosphorus - Total as P	30500		829	mg/kg dry	Y1	09/21/20 1300	10/09/20 1045	CGL
Method: SM 2540 G-1997 Percent Solids	22		0.1	% (by wt.)	Y1, H1	09/21/20 1300	10/05/20 1722	CGL

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

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 350.1, Rv. 2 (1993) Ammonia as N	1500		180	mg/kg dry	Y1	10/02/20 1700	10/05/20 1411	TB
Method: EPA 9045D pH	5.9			S.U.	H4	10/06/20 1534	10/06/20 1659	APH
Method: NA Temperature	19.0			°C	H4	10/06/20 1534	10/06/20 1659	APH
Method: SM 2540 G-2011 Total Volatile Solids - TVS	70.5			%	H1, Y1		10/05/20 1542	ADG

General Parameters	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: ASTM D2216-10 Percent Solids	22.0		1.00	% (by wt.)	Y1	10/02/20 0722	10/05/20 0625	ERP

Metals Total by AA	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 7471A Mercury	<1.13		1.13	mg/kg dry		10/08/20 0705	10/08/20 1210	TMM

Metals Total by ICP	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 6010C Arsenic	<3.29		3.29	mg/kg dry		10/02/20 0636	10/02/20 1331	JYH
Cadmium	0.458		0.329	mg/kg dry		10/02/20 0636	10/02/20 1331	JYH
Chromium	19.9		0.823	mg/kg dry		10/02/20 0636	10/02/20 1331	JYH
Copper	396		3.29	mg/kg dry		10/02/20 0636	10/02/20 1331	JYH
Lead	15.2		3.29	mg/kg dry		10/02/20 0636	10/02/20 1331	JYH
Molybdenum	<9.88		9.88	mg/kg dry		10/02/20 0636	10/02/20 1331	JYH

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CERTIFICATE OF ANALYSIS

J012254

Client Sample ID: Waverly	Collected By: Client
Sample Matrix: Solid	Collection Date: 09/21/2020 13:00
Lab Sample ID: J012254-05	

Metals Total by ICP	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Nickel	13.4		6.59	mg/kg dry		10/02/20 0636	10/02/20 1331	JYH
Potassium	1490		165	mg/kg dry		10/02/20 0636	10/02/20 1331	JYH
Selenium	10.0		3.29	mg/kg dry		10/02/20 0636	10/02/20 1331	JYH
Zinc	667		3.29	mg/kg dry		10/02/20 0636	10/02/20 1331	JYH

Anions by IC	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 9056A								
Nitrite as N	<18.2		18.2	mg/kg dry	H1		10/03/20 0618	CAS
Nitrate as N	995		273	mg/kg dry	D3, H1		10/03/20 1544	CAS



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CERTIFICATE OF ANALYSIS

J012254

Client Sample ID:	Watkins Glen	Collected By:	Client
Sample Matrix:	Solid	Collection Date:	09/18/2020 15:00
Lab Sample ID:	J012254-04		

Analyses Subcontracted to: Microbac - CGL

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 351.2, Rv. 2 (1993) Total Kjeldahl Nitrogen (TKN)	48000		2400	mg/kg dry	Y1	09/18/20 1500	10/08/20 1037	CGL
Method: EPA 365.3, Rv 1978 Phosphorus - Total as P	22000		891	mg/kg dry	Y1	09/18/20 1500	10/09/20 1044	CGL
Method: SM 2540 G-1997 Percent Solids	21		0.1	% (by wt.)	Y1, H1	09/18/20 1500	10/05/20 1722	CGL

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

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 350.1, Rv. 2 (1993) Ammonia as N	4090		213	mg/kg dry	Y1	10/02/20 1700	10/05/20 1409	TB
Method: EPA 9045D pH	8.1			S.U.	H4	10/06/20 1534	10/06/20 1659	APH
Method: NA Temperature	18.6			°C	H4	10/06/20 1534	10/06/20 1659	APH
Method: SM 2540 G-2011 Total Volatile Solids - TVS	75.0			%	H1, Y1		10/05/20 1542	ADG
General Parameters	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: ASTM D2216-10 Percent Solids	20.8		1.00	% (by wt.)	Y1	10/02/20 0722	10/05/20 0625	ERP
Metals Total by AA	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 7471A Mercury	<1.13		1.13	mg/kg dry		10/08/20 0705	10/08/20 1208	TMM
Metals Total by ICP	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 6010C Arsenic	6.72		3.58	mg/kg dry		10/02/20 0636	10/02/20 1327	JYH
Cadmium	0.632		0.358	mg/kg dry		10/02/20 0636	10/02/20 1327	JYH
Chromium	19.8		0.895	mg/kg dry		10/02/20 0636	10/02/20 1327	JYH
Copper	303		3.58	mg/kg dry		10/02/20 0636	10/02/20 1327	JYH
Lead	18.7		3.58	mg/kg dry		10/02/20 0636	10/02/20 1327	JYH
Molybdenum	<10.8		10.8	mg/kg dry		10/02/20 0636	10/02/20 1327	JYH

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CERTIFICATE OF ANALYSIS

J012254

Client Sample ID: Watkins Glen	Collected By: Client
Sample Matrix: Solid	Collection Date: 09/18/2020 15:00
Lab Sample ID: J012254-04	

Metals Total by ICP	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Nickel	9.47		7.17	mg/kg dry		10/02/20 0636	10/02/20 1327	JYH
Potassium	640		179	mg/kg dry		10/02/20 0636	10/02/20 1327	JYH
Selenium	3.86		3.58	mg/kg dry		10/02/20 0636	10/02/20 1327	JYH
Zinc	592		3.58	mg/kg dry		10/02/20 0636	10/02/20 1327	JYH

Anions by IC	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 9056A								
Nitrite as N	<19.1		19.1	mg/kg dry	H1		10/03/20 0559	CAS
Nitrate as N	<28.6		28.6	mg/kg dry	H1		10/03/20 0559	CAS



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CERTIFICATE OF ANALYSIS

J012254

Client Sample ID: Whitney Point	Collected By: Client
Sample Matrix: Solid	Collection Date: 09/17/2020 14:00
Lab Sample ID: J012254-03	

Analyses Subcontracted to: Microbac - CGL

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 351.2, Rv. 2 (1993) Total Kjeldahl Nitrogen (TKN)	130000		3900	mg/kg dry	Y1	09/17/20 1400	10/08/20 1035	CGL
Method: EPA 365.3, Rv 1978 Phosphorus - Total as P	16600		1460	mg/kg dry	Y1	09/17/20 1400	10/09/20 1043	CGL
Method: SM 2540 G-1997 Percent Solids	13		0.1	% (by wt.)	Y1, H1	09/17/20 1400	10/05/20 1722	CGL

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

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 350.1, Rv. 2 (1993) Ammonia as N	12600		880	mg/kg dry	Y1	10/02/20 1700	10/05/20 1429	TB
Method: EPA 9045D pH	8.6			S.U.	H4	10/06/20 1534	10/06/20 1659	APH
Method: NA Temperature	18.6			°C	H4	10/06/20 1534	10/06/20 1659	APH
Method: SM 2540 G-2011 Total Volatile Solids - TVS	83.2			%	H1, Y1		10/05/20 1542	ADG

General Parameters	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: ASTM D2216-10 Percent Solids	12.9		1.00	% (by wt.)	Y1	10/02/20 0722	10/05/20 0625	ERP

Metals Total by AA	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 7471A Mercury	<1.83		1.83	mg/kg dry		10/08/20 0705	10/08/20 1205	TMM

Metals Total by ICP	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 6010C Arsenic	<5.78		5.78	mg/kg dry		10/02/20 0636	10/02/20 1324	JYH
Cadmium	0.618		0.578	mg/kg dry		10/02/20 0636	10/02/20 1324	JYH
Chromium	16.7		1.44	mg/kg dry		10/02/20 0636	10/02/20 1324	JYH
Copper	921		5.78	mg/kg dry		10/02/20 0636	10/02/20 1324	JYH
Lead	27.6		5.78	mg/kg dry		10/02/20 0636	10/02/20 1324	JYH
Molybdenum	<17.3		17.3	mg/kg dry		10/02/20 0636	10/02/20 1324	JYH

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CERTIFICATE OF ANALYSIS

J012254

Client Sample ID: Whitney Point	Collected By: Client
Sample Matrix: Solid	Collection Date: 09/17/2020 14:00
Lab Sample ID: J012254-03	

Metals Total by ICP	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Nickel	16.2		11.6	mg/kg dry		10/02/20 0636	10/02/20 1324	JYH
Potassium	3260		289	mg/kg dry		10/02/20 0636	10/02/20 1324	JYH
Selenium	<5.78		5.78	mg/kg dry		10/02/20 0636	10/02/20 1324	JYH
Zinc	589		5.78	mg/kg dry		10/02/20 0636	10/02/20 1324	JYH

Anions by IC	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 9056A								
Nitrite as N	<31.0		31.0	mg/kg dry	H1		10/03/20 0540	CAS
Nitrate as N	<46.4		46.4	mg/kg dry	H1		10/03/20 0540	CAS



Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J012254

Client Sample ID: Lakeville Livingston County	Collected By: Client
Sample Matrix: Solid	Collection Date: 09/14/2020 10:00
Lab Sample ID: J012254-02	

Analyses Subcontracted to: Microbac - CGL

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 351.2, Rv. 2 (1993) Total Kjeldahl Nitrogen (TKN)	26000		5600	mg/kg dry	Y1	09/14/20 1000	10/08/20 1134	CGL
Method: EPA 365.3, Rv 1978 Phosphorus - Total as P	28800		2040	mg/kg dry	Y1	09/14/20 1000	10/09/20 1054	CGL
Method: SM 2540 G-1997 Percent Solids	89		0.1	% (by wt.)	Y1, H1	09/14/20 1000	10/05/20 1722	CGL

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

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 350.1, Rv. 2 (1993) Ammonia as N	4060		269	mg/kg dry	Y1	10/02/20 1700	10/05/20 1427	TB
Method: EPA 9045D pH	6.4			S.U.	H4, M8	10/06/20 1534	10/06/20 1659	APH
Method: NA Temperature	20.3			°C	H4, M8	10/06/20 1534	10/05/20 1659	APH
Method: SM 2540 G-2011 Total Volatile Solids - TVS	54.7			%	Y1, H1		10/05/20 1542	ADG

General Parameters	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: ASTM D2216-10 Percent Solids	88.5		1.00	% (by wt.)	Y1	10/02/20 0722	10/05/20 0625	ERP

Metals Total by AA	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 7471A Mercury	<1.37		1.37	mg/kg dry	AC	10/08/20 0705	10/08/20 1412	TMM

Metals Total by ICP	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 6010C Arsenic	9.34		0.865	mg/kg dry		10/02/20 0636	10/02/20 1321	JYH
Cadmium	2.46		0.0865	mg/kg dry		10/02/20 0636	10/02/20 1321	JYH
Chromium	41.4		0.216	mg/kg dry		10/02/20 0636	10/02/20 1321	JYH
Copper	768		0.865	mg/kg dry		10/02/20 0636	10/02/20 1321	JYH
Lead	38.5		0.865	mg/kg dry		10/02/20 0636	10/02/20 1321	JYH
Molybdenum	11.3		2.59	mg/kg dry		10/02/20 0636	10/02/20 1321	JYH

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CERTIFICATE OF ANALYSIS

J012254

Client Sample ID:	Lakeville Livingston County	Collected By:	Client
Sample Matrix:	Solid	Collection Date:	09/14/2020 10:00
Lab Sample ID:	J012254-02		

Metals Total by ICP	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Nickel	20.2		1.73	mg/kg dry		10/02/20 0636	10/02/20 1321	JYH
Potassium	1140		43.2	mg/kg dry		10/02/20 0636	10/02/20 1321	JYH
Selenium	11.2		0.865	mg/kg dry		10/02/20 0636	10/02/20 1321	JYH
Zinc	1330		86.5	mg/kg dry	D3	10/02/20 0636	10/02/20 1421	JYH

Anions by IC	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 9056A								
Nitrite as N	86.9		4.6	mg/kg dry	H1		10/03/20 0521	CAS
Nitrate as N	<683		683	mg/kg dry	D3, H1		10/03/20 1525	CAS



Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J012254

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: 09/30/2020
Reported: 11/09/2020

Analytical Testing Parameters

Client Sample ID:	Cayuga Heights	Collected By:	Client
Sample Matrix:	Solid	Collection Date:	09/14/2020 9:00
Lab Sample ID:	J012254-01		

Analyses Subcontracted to: Microbac - CGL

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 351.2, Rv. 2 (1993) Total Kjeldahl Nitrogen (TKN)	40000		2100	mg/kg dry	Y1	09/14/20 0900	10/08/20 1032	CGL
Method: EPA 365.3, Rv 1978 Phosphorus - Total as P	26800		868	mg/kg dry	Y1, S	09/14/20 0900	10/09/20 1029	CGL
Method: SM 2540 G-1997 Percent Solids	21		0.1	% (by wt.)	Y1, H1	09/14/20 0900	10/05/20 1536	CGL

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

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 350.1, Rv. 2 (1993) Ammonia as N	2020		117	mg/kg dry	Y1	10/02/20 1700	10/05/20 1404	TB
Method: EPA 9045D pH	7.0			S.U.	H4	10/06/20 1534	10/06/20 1659	APH
Method: NA Temperature	19.4			°C	H4	10/06/20 1534	10/06/20 1659	APH
Method: SM 2540 G-2011 Total Volatile Solids - TVS	57.7			%	Y1, H1		10/05/20 1542	ADG

General Parameters	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: ASTM D2216-10 Percent Solids	21.6		1.00	% (by wt.)	Y1	10/02/20 0722	10/05/20 0625	ERP
Metals Total by AA	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 7471A Mercury	<1.08		1.08	mg/kg dry		10/08/20 0705	10/08/20 1200	TMM

Metals Total by ICP	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 6010C								

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CERTIFICATE OF ANALYSIS

J012254

Client Sample ID: Cayuga Heights	Collected By: Client
Sample Matrix: Solid	Collection Date: 09/14/2020 9:00
Lab Sample ID: J012254-01	

Metals Total by ICP	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Arsenic	4.06		3.46	mg/kg dry		10/02/20 0636	10/02/20 1317	JYH
Cadmium	0.831		0.346	mg/kg dry		10/02/20 0636	10/02/20 1317	JYH
Chromium	129		0.864	mg/kg dry		10/02/20 0636	10/02/20 1317	JYH
Copper	509		3.46	mg/kg dry		10/02/20 0636	10/02/20 1317	JYH
Lead	4.46		3.46	mg/kg dry		10/02/20 0636	10/02/20 1317	JYH
Molybdenum	22.9		10.4	mg/kg dry		10/02/20 0636	10/02/20 1317	JYH
Nickel	30.8		6.91	mg/kg dry		10/02/20 0636	10/02/20 1317	JYH
Potassium	682		173	mg/kg dry		10/02/20 0636	10/02/20 1317	JYH
Selenium	7.52		3.46	mg/kg dry		10/02/20 0636	10/02/20 1317	JYH
Zinc	701		3.46	mg/kg dry		10/02/20 0636	10/02/20 1317	JYH

Anions by IC	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 9056A								
Nitrite as N	270		18.7	mg/kg dry	H1		10/03/20 0502	CAS
Nitrate as N	119		28.0	mg/kg dry	H1		10/03/20 0502	CAS



Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J0H0774

Project Description

Cayuga Heights WWTP

For:

John McGrath

Yaws Environmental

951 East Shore Drive

Ithaca, NY 14850

Customer Relationship Coordinator

Shannon Weeks

Friday, August 21, 2020

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc., New York Division. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J0H0774

Yaws Environmental

Project Name: Cayuga Heights WWTP

John McGrath
951 East Shore Drive
Ithaca, NY 14850

Project / PO Number: N/A
Received: 08/10/2020
Reported: 08/21/2020

Sample Summary Report

<u>Sample Name</u>	<u>Laboratory ID</u>	<u>Client Matrix</u>	<u>Sample Type</u>	<u>Sample Begin</u>	<u>Sample Taken</u>	<u>Lab Received</u>
Cayuga Heights WWTP - Sludge	J0H0774-01	Solid	Grab		08/10/20 11:00	08/10/20 15:30



Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J0H0774

Analytical Testing Parameters

Client Sample ID:	Cayuga Heights WWTP - Sludge	Collected By:	JM-Client
Sample Matrix:	Solid	Collection Date:	08/10/2020 11:00
Lab Sample ID:	J0H0774-01		

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

Inorganics Total	Result	MDL	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
Method: EPA 7.3.3.2									
Reactive Cyanide	<10.0	10.0	10.0	mg/kg	1	Y1	08/14/20 0921	08/14/20 1115	TB
Method: EPA 7.3.4.2									
Reactive Sulfide	<100	100	100	mg/kg	1	Y1	08/14/20 0918	08/14/20 1030	TB
Method: EPA 9045D									
pH	6.7			S.U.	1	H4	08/17/20 1513	08/17/20 1648	APH
Method: NA									
Temperature	23.2			°C	1	H4	08/17/20 1513	08/17/20 1648	APH
General Parameters	Result	MDL	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
Method: ASTM D2216-10									
Percent Solids	19.8		1.00	% (by wt.)	1	Y1	08/13/20 0951	08/14/20 0735	ERP
Method: EPA 1030									
Ignitability of Solids	<2.2		2.2	mm/sec	1			08/14/20 1100	JDH
Metals TCLP by AA	Result	MDL	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
Method: EPA 7470A									
Mercury	<0.00100	0.00100	0.00200	mg/L	1		08/14/20 0632	08/17/20 1104	TMM
Metals TCLP by ICP	Result	MDL	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
Method: EPA 6010C									
Arsenic	<0.100	0.100	0.200	mg/L	1		08/17/20 0623	08/18/20 1308	KHL
Barium	0.288	0.0500	0.100	mg/L	1		08/17/20 0623	08/18/20 1308	KHL
Cadmium	<0.0200		0.0200	mg/L	1		08/17/20 0623	08/18/20 1308	KHL
Chromium	<0.0250	0.0250	0.0500	mg/L	1		08/17/20 0623	08/18/20 1308	KHL
Lead	<0.100	0.100	0.200	mg/L	1		08/17/20 0623	08/18/20 1308	KHL
Selenium	<0.175	0.175	0.350	mg/L	1		08/17/20 0623	08/18/20 1308	KHL
Silver	<0.0500	0.0500	0.100	mg/L	1		08/17/20 0623	08/18/20 1308	KHL
Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	MDL	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
Method: EPA 8082A									
Aroclor-1016 (PCB-1016)	<45.5	45.5	91.1	ug/kg dry	1		08/18/20 0901	08/19/20 1713	ECL
Aroclor-1221 (PCB-1221)	<45.5	45.5	91.1	ug/kg dry	1		08/18/20 0901	08/19/20 1713	ECL
Aroclor-1232 (PCB-1232)	<45.5	45.5	91.1	ug/kg dry	1		08/18/20 0901	08/19/20 1713	ECL

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Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J0H0774

Client Sample ID: Cayuga Heights WWTP - Sludge	Collected By: JM-Client
Sample Matrix: Solid	Collection Date: 08/10/2020 11:00
Lab Sample ID: J0H0774-01	

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	MDL	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
Aroclor-1242 (PCB-1242)	<45.5	45.5	91.1	ug/kg dry	1		08/18/20 0901	08/19/20 1713	ECL
Aroclor-1248 (PCB-1248)	<45.5	45.5	91.1	ug/kg dry	1		08/18/20 0901	08/19/20 1713	ECL
Aroclor-1254 (PCB-1254)	<45.5	45.5	91.1	ug/kg dry	1		08/18/20 0901	08/19/20 1713	ECL
Aroclor-1260 (PCB-1260)	<45.5	45.5	91.1	ug/kg dry	1		08/18/20 0901	08/19/20 1713	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	66.5	Limit: 26-138		% Rec	1		08/18/20 0901	08/19/20 1713	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	32.8	Limit: 20-125		% Rec	1		08/18/20 0901	08/19/20 1713	ECL

Definitions

- % (by wt.):** Percent by Weight
- °C:** Degrees Celsius
- H4:** The test was performed outside of the EPA recommended holding time of 15 minutes.
- MDL:** Minimum Detection Limit
- mg/kg:** Milligrams per Kilogram
- mg/L:** Milligrams per Liter
- mm/sec:** Millimeter per Second
- RL:** Reporting Limit
- S.U.:** Standard Units
- Y1:** Accreditation is not offered by the accrediting body for this analyte.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 14.8°C

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., - 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



Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J0H0774

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. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Reviewed and Approved By:

A handwritten signature in black ink that reads "Shannon Weeks".

Shannon Weeks
Customer Relationship Coordinator
Reported: 08/21/2020 13:27



July 28, 2020

David Nudd
Westfield Borough
429 East Main St.
Westfield, PA 16950

RE: Project: Sludge
Pace Project No.: 30372886

Dear David Nudd:

Enclosed are the analytical results for sample(s) received by the laboratory on July 16, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Long Island
- Pace Analytical Services - Greensburg

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

Sincerely,

Samantha Merrill
samantha.merrill@pacelabs.com
(570)326-4001
Project Manager

Enclosures

cc: Donald Wescott, Westfield Borough



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Sludge
Pace Project No.: 30372886

Pace Analytical Services Pennsylvania

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 #: 10688
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-0262
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

Pace Analytical Services Long Island

575 Broad Hollow Rd, Melville, NY 11747
New York Certification #: 10478 Primary Accrediting Body
New Jersey Certification #: NY158
Pennsylvania Certification #: 68-00350
Connecticut Certification #: PH-0435

Maryland Certification #: 208
Rhode Island Certification #: LAO00340
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Sludge
Pace Project No.: 30372886

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30372886001	Storage Area A Dry Sludge	Solid	07/16/20 09:25	07/16/20 14:55
30372886002	Storage Area B Dry Sludge	Solid	07/16/20 09:45	07/16/20 14:55

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Sludge
Pace Project No.: 30372886

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30372886001	Storage Area A Dry Sludge	EPA 8082A	CWB	10	PASI-PA
		EPA 6010B	CTS	7	PASI-PA
		EPA 7470A	CTS	1	PASI-PA
		ASTM D2974-87	TJW	1	PASI-PA
		1030	HMB	1	PASI-MV
		EPA 9045D	AJM	1	PASI-PA
		EPA 9014	EKM	1	PASI-PA
		SM 4500S2F-2011	PAS	1	PASI-PA
30372886002	Storage Area B Dry Sludge	EPA 8082A	CWB	10	PASI-PA
		EPA 6010B	CTS	7	PASI-PA
		EPA 7470A	CTS	1	PASI-PA
		ASTM D2974-87	TJW	1	PASI-PA
		1030	HMB	1	PASI-MV
		EPA 9045D	AJM	1	PASI-PA
		EPA 9014	EKM	1	PASI-PA
		SM 4500S2F-2011	PAS	1	PASI-PA

PASI-MV = Pace Analytical Services - Long Island
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Sludge
 Pace Project No.: 30372886

Sample: Storage Area A Dry Sludge Lab ID: 30372886001 Collected: 07/16/20 09:25 Received: 07/16/20 14:55 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
8082A GCS PCB								
Analytical Method: EPA 8082A Preparation Method: EPA 3546								
Pace Analytical Services - Greensburg								
PCB-1016 (Aroclor 1016)	ND	ug/kg	806	5	07/21/20 09:03	07/23/20 13:01	12674-11-2	ED,P1
PCB-1221 (Aroclor 1221)	ND	ug/kg	806	5	07/21/20 09:03	07/23/20 13:01	11104-28-2	ED,P1
PCB-1232 (Aroclor 1232)	ND	ug/kg	806	5	07/21/20 09:03	07/23/20 13:01	11141-16-5	ED,P1
PCB-1242 (Aroclor 1242)	ND	ug/kg	806	5	07/21/20 09:03	07/23/20 13:01	53469-21-9	ED,P1
PCB-1248 (Aroclor 1248)	ND	ug/kg	806	5	07/21/20 09:03	07/23/20 13:01	12672-29-6	ED,P1
PCB-1254 (Aroclor 1254)	ND	ug/kg	806	5	07/21/20 09:03	07/23/20 13:01	11097-69-1	ED,P1
PCB-1260 (Aroclor 1260)	ND	ug/kg	806	5	07/21/20 09:03	07/23/20 13:01	11096-82-5	ED,P1
PCB, Total	ND	ug/kg	806	5	07/21/20 09:03	07/23/20 13:01	1336-36-3	P1
Surrogates								
Tetrachloro-m-xylene (S)	68	%	46-120	5	07/21/20 09:03	07/23/20 13:01	877-09-8	
Decachlorobiphenyl (S)	105	%	41-148	5	07/21/20 09:03	07/23/20 13:01	2051-24-3	
6010 MET ICP, TCLP								
Analytical Method: EPA 6010B Preparation Method: EPA 3005A								
Leachate Method/Date: EPA 1311; 07/19/20 10:22 Initial pH: 5.85; Final pH: 4.91								
Pace Analytical Services - Greensburg								
Arsenic	ND	mg/L	0.025	1	07/20/20 11:36	07/21/20 14:19	7440-38-2	
Barium	0.37	mg/L	0.050	1	07/20/20 11:36	07/21/20 14:19	7440-39-3	
Cadmium	ND	mg/L	0.015	1	07/20/20 11:36	07/21/20 14:19	7440-43-9	
Chromium	ND	mg/L	0.025	1	07/20/20 11:36	07/21/20 14:19	7440-47-3	
Lead	ND	mg/L	0.025	1	07/20/20 11:36	07/21/20 14:19	7439-92-1	
Selenium	ND	mg/L	0.040	1	07/20/20 11:36	07/21/20 14:19	7782-49-2	
Silver	ND	mg/L	0.030	1	07/20/20 11:36	07/21/20 14:19	7440-22-4	
7470 Mercury, TCLP								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Leachate Method/Date: EPA 1311; 07/19/20 10:22 Initial pH: 5.85; Final pH: 4.91								
Pace Analytical Services - Greensburg								
Mercury	ND	ug/L	1.0	1	07/20/20 12:51	07/21/20 09:30	7439-97-6	
Percent Moisture								
Analytical Method: ASTM D2974-87								
Pace Analytical Services - Greensburg								
Percent Moisture	70.6	%	0.10	1		07/20/20 08:45		
1030 Ignitability of Solids								
Analytical Method: 1030								
Pace Analytical Services - Long Island								
Ignitability	<2.2	mm/sec		1		07/27/20 23:55		1c
9045D pH Soil								
Analytical Method: EPA 9045D								
Pace Analytical Services - Greensburg								
pH in water at 25 degrees C	4.6	Std. Units	2.0	1		07/21/20 19:07		H3
733C S Reactive Cyanide								
Analytical Method: EPA 9014 Preparation Method: SW-846 7.3.3.2								
Pace Analytical Services - Greensburg								
Cyanide, Reactive	ND	mg/kg	3.4	1	07/21/20 17:56	07/22/20 13:03		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Sludge
 Pace Project No.: 30372886

Sample: Storage Area A Dry Sludge Lab ID: 30372886001 Collected: 07/16/20 09:25 Received: 07/16/20 14:55 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
734S Reactive Sulfide Analytical Method: SM 4500S2F-2011 Preparation Method: SW-846 7.3.4.2 Pace Analytical Services - Greensburg								
Sulfide, Reactive	ND	mg/kg	33.8	1	07/21/20 17:56	07/21/20 17:58		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Sludge
 Pace Project No.: 30372886

Sample: Storage Area B Dry Sludge Lab ID: 30372886002 Collected: 07/16/20 09:45 Received: 07/16/20 14:55 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
8082A GCS PCB								
Analytical Method: EPA 8082A Preparation Method: EPA 3546								
Pace Analytical Services - Greensburg								
PCB-1016 (Aroclor 1016)	ND	ug/kg	877	5	07/21/20 09:03	07/23/20 13:18	12674-11-2	ED,P1
PCB-1221 (Aroclor 1221)	ND	ug/kg	877	5	07/21/20 09:03	07/23/20 13:18	11104-28-2	ED,P1
PCB-1232 (Aroclor 1232)	ND	ug/kg	877	5	07/21/20 09:03	07/23/20 13:18	11141-16-5	ED,P1
PCB-1242 (Aroclor 1242)	ND	ug/kg	877	5	07/21/20 09:03	07/23/20 13:18	53469-21-9	ED,P1
PCB-1248 (Aroclor 1248)	ND	ug/kg	877	5	07/21/20 09:03	07/23/20 13:18	12672-29-6	ED,P1
PCB-1254 (Aroclor 1254)	ND	ug/kg	877	5	07/21/20 09:03	07/23/20 13:18	11097-69-1	ED,P1
PCB-1260 (Aroclor 1260)	ND	ug/kg	877	5	07/21/20 09:03	07/23/20 13:18	11096-82-5	ED,P1
PCB, Total	ND	ug/kg	877	5	07/21/20 09:03	07/23/20 13:18	1336-36-3	P1
Surrogates								
Tetrachloro-m-xylene (S)	75	%	46-120	5	07/21/20 09:03	07/23/20 13:18	877-09-8	
Decachlorobiphenyl (S)	108	%	41-148	5	07/21/20 09:03	07/23/20 13:18	2051-24-3	
6010 MET ICP, TCLP								
Analytical Method: EPA 6010B Preparation Method: EPA 3005A								
Leachate Method/Date: EPA 1311; 07/19/20 10:22 Initial pH: 5.98; Final pH: 4.95								
Pace Analytical Services - Greensburg								
Arsenic	ND	mg/L	0.025	1	07/20/20 11:36	07/21/20 14:21	7440-38-2	
Barium	0.27	mg/L	0.050	1	07/20/20 11:36	07/21/20 14:21	7440-39-3	
Cadmium	ND	mg/L	0.015	1	07/20/20 11:36	07/21/20 14:21	7440-43-9	
Chromium	ND	mg/L	0.025	1	07/20/20 11:36	07/21/20 14:21	7440-47-3	
Lead	ND	mg/L	0.025	1	07/20/20 11:36	07/21/20 14:21	7439-92-1	
Selenium	ND	mg/L	0.040	1	07/20/20 11:36	07/21/20 14:21	7782-49-2	
Silver	ND	mg/L	0.030	1	07/20/20 11:36	07/21/20 14:21	7440-22-4	
7470 Mercury, TCLP								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Leachate Method/Date: EPA 1311; 07/19/20 10:22 Initial pH: 5.98; Final pH: 4.95								
Pace Analytical Services - Greensburg								
Mercury	ND	ug/L	1.0	1	07/20/20 12:51	07/21/20 09:31	7439-97-6	
Percent Moisture								
Analytical Method: ASTM D2974-87								
Pace Analytical Services - Greensburg								
Percent Moisture	73.1	%	0.10	1		07/20/20 08:45		
1030 Ignitability of Solids								
Analytical Method: 1030								
Pace Analytical Services - Long Island								
Ignitability	<2.2	mm/sec		1		07/28/20 00:04		1c
9045D pH Soil								
Analytical Method: EPA 9045D								
Pace Analytical Services - Greensburg								
pH in water at 25 degrees C	5.7	Std. Units	2.0	1		07/21/20 19:09		H3
733C S Reactive Cyanide								
Analytical Method: EPA 9014 Preparation Method: SW-846 7.3.3.2								
Pace Analytical Services - Greensburg								
Cyanide, Reactive	ND	mg/kg	3.7	1	07/21/20 17:56	07/22/20 13:04		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Sludge
Pace Project No.: 30372886

Sample: Storage Area B Dry Sludge Lab ID: 30372886002 Collected: 07/16/20 09:45 Received: 07/16/20 14:55 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
734S Reactive Sulfide	Analytical Method: SM 4500S2F-2011 Preparation Method: SW-846 7.3.4.2 Pace Analytical Services - Greensburg							
Sulfide, Reactive	ND	mg/kg	36.9	1	07/21/20 17:56	07/21/20 17:58		

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QUALITY CONTROL DATA

Project: Sludge
 Pace Project No.: 30372886

QC Batch: 405829 Analysis Method: EPA 7470A
 QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury TCLP
 Laboratory: Pace Analytical Services - Greensburg
 Associated Lab Samples: 30372886001, 30372886002

METHOD BLANK: 1964014 Matrix: Water
 Associated Lab Samples: 30372886001, 30372886002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	1.0	07/21/20 08:54	

METHOD BLANK: 1960852 Matrix: Water
 Associated Lab Samples: 30372886001, 30372886002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	1.0	07/21/20 08:58	

METHOD BLANK: 1961701 Matrix: Water
 Associated Lab Samples: 30372886001, 30372886002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	1.0	07/21/20 08:59	

METHOD BLANK: 1961702 Matrix: Water
 Associated Lab Samples: 30372886001, 30372886002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	1.0	07/21/20 09:01	

METHOD BLANK: 1961849 Matrix: Water
 Associated Lab Samples: 30372886001, 30372886002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	1.0	07/21/20 09:03	

METHOD BLANK: 1962947 Matrix: Water
 Associated Lab Samples: 30372886001, 30372886002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	1.0	07/21/20 09:04	

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QUALITY CONTROL DATA

Project: Sludge
Pace Project No.: 30372886

METHOD BLANK: 1963760 Matrix: Water

Associated Lab Samples: 30372886001, 30372886002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	1.0	07/21/20 09:06	

LABORATORY CONTROL SAMPLE: 1964015

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	1	1.2	117	80-120	

MATRIX SPIKE SAMPLE: 1964017

Parameter	Units	30372746002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	1.0 U	2.5	2.6	104	75-125	

MATRIX SPIKE SAMPLE: 1964019

Parameter	Units	30372946001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	0.000030U mg/L	2.5	2.7	109	75-125	

SAMPLE DUPLICATE: 1964016

Parameter	Units	30372746002 Result	Dup Result	RPD	Max RPD	Qualifiers
Mercury	ug/L	1.0 U	ND		20	

SAMPLE DUPLICATE: 1964018

Parameter	Units	30372946001 Result	Dup Result	RPD	Max RPD	Qualifiers
Mercury	ug/L	0.000030U mg/L	ND		20	

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QUALITY CONTROL DATA

Project: Sludge
 Pace Project No.: 30372886

QC Batch: 405808 Analysis Method: EPA 6010B
 QC Batch Method: EPA 3005A Analysis Description: 6010 MET TCLP
 Laboratory: Pace Analytical Services - Greensburg
 Associated Lab Samples: 30372886001, 30372886002

METHOD BLANK: 1963951 Matrix: Water
 Associated Lab Samples: 30372886001, 30372886002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.025	07/21/20 13:40	
Barium	mg/L	ND	0.050	07/21/20 13:40	
Cadmium	mg/L	ND	0.015	07/21/20 13:40	
Chromium	mg/L	ND	0.025	07/21/20 13:40	
Lead	mg/L	ND	0.025	07/21/20 13:40	
Selenium	mg/L	ND	0.040	07/21/20 13:40	
Silver	mg/L	ND	0.030	07/21/20 13:40	

METHOD BLANK: 1961701 Matrix: Water
 Associated Lab Samples: 30372886001, 30372886002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.025	07/21/20 13:44	
Barium	mg/L	ND	0.050	07/21/20 13:44	
Cadmium	mg/L	ND	0.015	07/21/20 13:44	
Chromium	mg/L	ND	0.025	07/21/20 13:44	
Lead	mg/L	ND	0.025	07/21/20 13:44	
Selenium	mg/L	ND	0.040	07/21/20 13:44	
Silver	mg/L	ND	0.030	07/21/20 13:44	

METHOD BLANK: 1961702 Matrix: Water
 Associated Lab Samples: 30372886001, 30372886002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.025	07/21/20 13:46	
Barium	mg/L	ND	0.050	07/21/20 13:46	
Cadmium	mg/L	ND	0.015	07/21/20 13:46	
Chromium	mg/L	ND	0.025	07/21/20 13:46	
Lead	mg/L	ND	0.025	07/21/20 13:46	
Selenium	mg/L	ND	0.040	07/21/20 13:46	
Silver	mg/L	ND	0.030	07/21/20 13:46	

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QUALITY CONTROL DATA

Project: Sludge
Pace Project No.: 30372886

METHOD BLANK: 1961849 Matrix: Water
Associated Lab Samples: 30372886001, 30372886002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.025	07/21/20 13:48	
Barium	mg/L	ND	0.050	07/21/20 13:48	
Cadmium	mg/L	ND	0.015	07/21/20 13:48	
Chromium	mg/L	ND	0.025	07/21/20 13:48	
Lead	mg/L	ND	0.025	07/21/20 13:48	
Selenium	mg/L	ND	0.040	07/21/20 13:48	
Silver	mg/L	ND	0.030	07/21/20 13:48	

METHOD BLANK: 1962947 Matrix: Water
Associated Lab Samples: 30372886001, 30372886002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.025	07/21/20 13:51	
Barium	mg/L	ND	0.050	07/21/20 13:51	
Cadmium	mg/L	ND	0.015	07/21/20 13:51	
Chromium	mg/L	ND	0.025	07/21/20 13:51	
Lead	mg/L	ND	0.025	07/21/20 13:51	
Selenium	mg/L	ND	0.040	07/21/20 13:51	
Silver	mg/L	ND	0.030	07/21/20 13:51	

METHOD BLANK: 1963760 Matrix: Water
Associated Lab Samples: 30372886001, 30372886002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.025	07/21/20 13:53	
Barium	mg/L	ND	0.050	07/21/20 13:53	
Cadmium	mg/L	ND	0.015	07/21/20 13:53	
Chromium	mg/L	ND	0.025	07/21/20 13:53	
Lead	mg/L	ND	0.025	07/21/20 13:53	
Selenium	mg/L	ND	0.040	07/21/20 13:53	
Silver	mg/L	ND	0.030	07/21/20 13:53	

LABORATORY CONTROL SAMPLE: 1963952

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	0.48	96	80-120	
Cadmium	mg/L	0.5	0.48	96	80-120	
Chromium	mg/L	0.5	0.48	96	80-120	
Lead	mg/L	0.5	0.46	93	80-120	

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QUALITY CONTROL DATA

Project: Sludge
 Pace Project No.: 30372886

LABORATORY CONTROL SAMPLE: 1963952

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Selenium	mg/L	0.5	0.48	96	80-120	
Silver	mg/L	0.25	0.24	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1963954 1963955

Parameter	Units	30372746002		30372946001		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec					
Arsenic	mg/L	0.025 U	0.5	0.5	0.52	0.51	104	102	75-125	2	20		
Barium	mg/L	0.081	0.5	0.5	0.57	0.56	98	96	75-125	2	20		
Cadmium	mg/L	0.015 U	0.5	0.5	0.51	0.50	102	100	75-125	2	20		
Chromium	mg/L	0.025 U	0.5	0.5	0.45	0.45	91	89	75-125	1	20		
Lead	mg/L	0.025 U	0.5	0.5	0.48	0.47	96	93	75-125	3	20		
Selenium	mg/L	0.040 U	0.5	0.5	0.53	0.52	105	103	75-125	2	20		
Silver	mg/L	0.030 U	0.25	0.25	0.26	0.26	104	102	75-125	2	20		

MATRIX SPIKE SAMPLE: 1963957

Parameter	Units	30372946001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	0.010U	0.5	0.51	101	75-125	
Barium	mg/L	1.5	0.5	2.0	107	75-125	
Cadmium	mg/L	0.0017U	0.5	0.50	99	75-125	
Chromium	mg/L	0.0017U	0.5	0.45	89	75-125	
Lead	mg/L	0.025U	0.5	0.46	93	75-125	
Selenium	mg/L	0.027U	0.5	0.51	101	75-125	
Silver	mg/L	0.0072U	0.25	0.26	104	75-125	

SAMPLE DUPLICATE: 1963953

Parameter	Units	30372746002 Result	Dup Result	RPD	Max RPD	Qualifiers
Arsenic	mg/L	0.025 U	ND		20	
Barium	mg/L	0.081	0.083	2	20	
Cadmium	mg/L	0.015 U	ND		20	
Chromium	mg/L	0.025 U	ND		20	
Lead	mg/L	0.025 U	ND		20	
Selenium	mg/L	0.040 U	ND		20	
Silver	mg/L	0.030 U	ND		20	

SAMPLE DUPLICATE: 1963956

Parameter	Units	30372946001 Result	Dup Result	RPD	Max RPD	Qualifiers
Arsenic	mg/L	0.010U	ND		20	

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QUALITY CONTROL DATA

Project: Sludge
 Pace Project No.: 30372886

SAMPLE DUPLICATE: 1963956

Parameter	Units	30372946001 Result	Dup Result	RPD	Max RPD	Qualifiers
Barium	mg/L	1.5	1.5	2	20	
Cadmium	mg/L	0.0017U	ND		20	
Chromium	mg/L	0.0017U	.0018J		20	
Lead	mg/L	0.025U	ND		20	
Selenium	mg/L	0.027U	ND		20	
Silver	mg/L	0.0072U	ND		20	

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QUALITY CONTROL DATA

Project: Sludge
 Pace Project No.: 30372886

QC Batch: 405832 Analysis Method: EPA 8082A
 QC Batch Method: EPA 3546 Analysis Description: 8082A GCS PCB
 Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30372886001, 30372886002

METHOD BLANK: 1964027 Matrix: Solid
 Associated Lab Samples: 30372886001, 30372886002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	ND	16.6	07/22/20 14:12	
PCB-1221 (Aroclor 1221)	ug/kg	ND	16.6	07/22/20 14:12	
PCB-1232 (Aroclor 1232)	ug/kg	ND	16.6	07/22/20 14:12	
PCB-1242 (Aroclor 1242)	ug/kg	ND	16.6	07/22/20 14:12	
PCB-1248 (Aroclor 1248)	ug/kg	ND	16.6	07/22/20 14:12	
PCB-1254 (Aroclor 1254)	ug/kg	ND	16.6	07/22/20 14:12	
PCB-1260 (Aroclor 1260)	ug/kg	ND	16.6	07/22/20 14:12	
Decachlorobiphenyl (S)	%	71	41-148	07/22/20 14:12	
Tetrachloro-m-xylene (S)	%	74	46-120	07/22/20 14:12	

LABORATORY CONTROL SAMPLE: 1964028

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	166	117	71	49-120	
PCB-1260 (Aroclor 1260)	ug/kg	166	115	70	57-120	
Decachlorobiphenyl (S)	%			67	41-148	
Tetrachloro-m-xylene (S)	%			66	46-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1964029 1964030

Parameter	Units	30372099004		1964030		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
PCB-1016 (Aroclor 1016)	ug/kg	ND	194	209	447	107	230	24-137	72	25	ED, M6, R1
PCB-1260 (Aroclor 1260)	ug/kg	ND	194	850	344	436	177	19-156	85	25	ED, M6, R1
Decachlorobiphenyl (S)	%					93	87	41-148			
Tetrachloro-m-xylene (S)	%					93	85	46-120			

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QUALITY CONTROL DATA

Project: Sludge
 Pace Project No.: 30372886

QC Batch: 405751 Analysis Method: ASTM D2974-87
 QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
 Laboratory: Pace Analytical Services - Greensburg
 Associated Lab Samples: 30372886001, 30372886002

SAMPLE DUPLICATE: 1963771

Parameter	Units	30372136006 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	4.9	5.0	2	20	

SAMPLE DUPLICATE: 1963772

Parameter	Units	30372448001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	0.43	0.23	61	20	D6

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QUALITY CONTROL DATA

Project: Sludge
Pace Project No.: 30372886

QC Batch: 406048 Analysis Method: EPA 9045D
QC Batch Method: EPA 9045D Analysis Description: 9045D pH
Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30372886001, 30372886002

SAMPLE DUPLICATE: 1964934

Parameter	Units	30372886001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH in water at 25 degrees C	Std. Units	4.6	4.6	0	10	H3

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QUALITY CONTROL DATA

Project: Sludge
 Pace Project No.: 30372886

QC Batch: 405592 Analysis Method: EPA 9014
 QC Batch Method: SW-846 7.3.3.2 Analysis Description: 733C Reactive Cyanide
 Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30372886001, 30372886002

METHOD BLANK: 1962852 Matrix: Solid

Associated Lab Samples: 30372886001, 30372886002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide, Reactive	mg/kg	ND	0.99	07/22/20 12:51	

LABORATORY CONTROL SAMPLE: 1962853

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide, Reactive	mg/kg	99.6	ND	0	0-6	

SAMPLE DUPLICATE: 1964234

Parameter	Units	30373300001 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyanide, Reactive	mg/kg	0.64U	ND		20	

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QUALITY CONTROL DATA

Project: Sludge
 Pace Project No.: 30372886

QC Batch: 405591 Analysis Method: SM 4500S2F-2011
 QC Batch Method: SW-846 7.3.4.2 Analysis Description: 734S Reactive Sulfide
 Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30372886001, 30372886002

METHOD BLANK: 1962850 Matrix: Solid
 Associated Lab Samples: 30372886001, 30372886002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide, Reactive	mg/kg	ND	9.9	07/21/20 17:58	

LABORATORY CONTROL SAMPLE: 1962851

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Reactive	mg/kg	199	39.9	20	0-52	

SAMPLE DUPLICATE: 1964232

Parameter	Units	30373300001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Reactive	mg/kg	16.0U	ND		20	

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QUALIFIERS

Project: Sludge
Pace Project No.: 30372886

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.

ANALYTE QUALIFIERS

- 1c Waste was found to be nonflammable under conditions of the test.
- D6 The precision between the sample and sample duplicate exceeded laboratory control limits.
- ED Due to the extract's physical characteristics, the analysis was performed at dilution.
- 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.
- R1 RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Sludge
 Pace Project No.: 30372886

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30372886001	Storage Area A Dry Sludge	EPA 3546	405832	EPA 8082A	406029
30372886002	Storage Area B Dry Sludge	EPA 3546	405832	EPA 8082A	406029
30372886001	Storage Area A Dry Sludge	EPA 3005A	405808	EPA 6010B	405904
30372886002	Storage Area B Dry Sludge	EPA 3005A	405808	EPA 6010B	405904
30372886001	Storage Area A Dry Sludge	EPA 7470A	405829	EPA 7470A	405872
30372886002	Storage Area B Dry Sludge	EPA 7470A	405829	EPA 7470A	405872
30372886001	Storage Area A Dry Sludge	ASTM D2974-87	405751		
30372886002	Storage Area B Dry Sludge	ASTM D2974-87	405751		
30372886001	Storage Area A Dry Sludge	1030	170736		
30372886002	Storage Area B Dry Sludge	1030	170736		
30372886001	Storage Area A Dry Sludge	EPA 9045D	406048		
30372886002	Storage Area B Dry Sludge	EPA 9045D	406048		
30372886001	Storage Area A Dry Sludge	SW-846 7.3.3.2	405592	EPA 9014	406087
30372886002	Storage Area B Dry Sludge	SW-846 7.3.3.2	405592	EPA 9014	406087
30372886001	Storage Area A Dry Sludge	SW-846 7.3.4.2	405591	SM 4500S2F-2011	406085
30372886002	Storage Area B Dry Sludge	SW-846 7.3.4.2	405591	SM 4500S2F-2011	406085

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CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: Westfield Borough

Billing Information:

Address: 429 East Main Street, Westfield, PA 16950

Report To: David Nudd

Email To: wborowwtp@hotmail.com

Copy To:

Site Collection Info/Address: N 41.92125

Customer Project Name/Number:

State: County/City: Time Zone Collected:

Phone: 814-367-2632

Site/Facility ID #: Wastewater

Compliance Monitoring?

Email: See above

Purchase Order #:

DW PWS ID #:

Collected By (print): Donald W. Scott

Quote #:

DW Location Code:

Collected By (signature): Donald W. Scott

Turnaround Date Required:

Immediately Packed on Ice:

Sample Disposal:

Rush:

Field Filtered (if applicable):

[] Dispose as appropriate [] Return

[] Same Day [] Next Day

[] Yes [] No

[] Archive:

[] 2 Day [] 3 Day [] 4 Day [] 5 Day

[] Yes [] No

[] Hold:

(Expedite Charges Apply)

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctrs
			Date	Time	Date	Time		
Effluent	WW	Comp	7/15/20	07:00	7/15/20	1500		1
Storage Area A Dry Sludge	WW	Grab	7/16/20	09:25				2
Storage Area B Dry Sludge	WW	Grab	7/16/20	09:45				2

Ammonia, TKN, Phosphorus, Nitrate, Nitrite, Nitrogen, Metals, PCBs, Pesticides, Cyanide, Sulfides, Volatiles, etc.

Analyses	Lab Profile/Line
	Lab Sample Receipt Checklist
	Custody Seals Present/Intact <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	Custody Signatures Present <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	Collector Signature Present <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	Bottles Intact <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	Correct Bottles <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	Sufficient Volume <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	Samples Received on Ice <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	VOL - Headspace Acceptable <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	USDA Regulated Soils <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	Samples in Molding Time <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	Residual Chlorine Present <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	Cl- Strips: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	Sample pH Acceptable <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	pH Strips: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	Sulfide Present <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
	Lead Acetate Strips: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA

WO#: 30372886



30372886

LAB USE ONLY - Affix Wo

ALL SHAL

Container Preservative Type **

Lab Project Manager: SLM

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other - Ammonium Chloride

Customer Remarks / Special Conditions / Possible Hazards:
Storage A + B Area Dry Sludge Analysis: TCLP RCRA (6) metals, pH, Reactive Cyanide + Sulfides, nitrate, nitrite, and PCB's

Type of Ice Used: Wet Blue Dry None

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Packing Material Used: Ice

Lab Tracking #:

Radiation sample(s) screened (<500 cpm): Y N NA

Samples received via:

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: 203
Cooler 1 Temp Upon Receipt: 203
Cooler 2 Therm Corr. Factor: 0.0
Cooler 3 Corrected Temp: 0.0 °C
Comments:

Relinquished by/Company: (Signature)

Date/Time: 7/16/20 1100

Received by/Company: (Signature)

Date/Time: 7/16/20 1400

MAIL LAB USE ONLY

Relinquished by/Company: (Signature)

Date/Time: 7/16/20 1455

Received by/Company: (Signature)

Date/Time: 7/16/20 1455

Table #:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Relinquished by/Company: (Signature)

Date/Time: 7/16/20 2130

Received by/Company: (Signature)

Date/Time: 7/16/20 2130

Accrual: Template: Prelogin: PM: PB:

Non Conformance(s): YES / NO Page: 1 of: 1



Williamsport Sample Receiving - Miss

WO# : 30372886

Date: 1/6/20	Evaluated By: KEF
Client: Westfield Borough	

PM: SLM	Due Date: 07/28/20
CLIENT: NP-WESTFIELD	

1. If Chain-of-Custody (COC) is not received: contact client and if necessary, fill out a COC and dictate that it was filled out by lab personnel. Note issues on this form

2. If COC is incomplete, circle applicable issues below and add details where appropriate:

Collection date/time missing or incorrect	Analyses or analytes missing or clarification needed
Samples listed on COC do not match samples received	Sample IDs on COC do not match sample labels
Required trip blanks were not received	Required signatures are missing

Comments/Details/Other Issues not listed above:
 preservative type not listed on sludge line.

3. Sample Integrity Issues: circle applicable issues below and add details where appropriate

Samples: Past holding time	Containers: incorrect
Samples: Not field filtered	Containers: vials received with headspace
Samples: Insufficient volume	Custody Seals: Missing or compromised (samples/TB/cooler)
Samples: Cooler damaged or compromised	Packing Material: Insufficient/Improper
Samples: contain chlorine or sulfides	Preservation: Improper
Samples: Condition needs to be brought to lab's attention	Temperature: not within acceptance criteria
Containers: broken or compromised	Temperature: samples received frozen
Other:	

Comments/Details/Other Issues not listed above:

4. If Samples not preserved properly and the lab is adjusting the pH, add details below:

Sample ID:	Person in the lab contacted for preserving:	
Container Type:	Date/Time contacted:	PM Notified (Y/N):
Sample ID:	Person in the lab contacted for preserving:	
Container Type:	Date/Time contacted:	PM Notified (Y/N):
Sample ID:	Person in the lab contacted for preserving:	
Container Type:	Date/Time contacted:	PM Notified (Y/N):

5. Client Contacted: If client is contact for any issue(s) listed above, fill in details below:

Client:	Contact:	Left message (Y/N):
PM Initials:	Date/Time:	If message left, did they call back (Y/N):

Details of conversation/client's comments or instructions:



Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

JOL1103

Yaws Environmental

Project Name: Village of Cayuga Heights

John McGrath
951 East Shore Drive
Ithaca, NY 14850

Project / PO Number: N/A
Received: 12/14/2020
Reported: 12/28/2020

Analytical Testing Parameters

Table with 4 columns: Client Sample ID, Sample Matrix, Lab Sample ID, Collected By, Collection Date. Values include Village Heights, Soil, JOL1103, Client, 12/14/2020 12:00.

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

General Parameters

Table with 9 columns: Method, Parameter, Result, Limit(s), RL, Units, Note, Prepared, Analyzed, Analyst. Row: Method: ASTM D2216-10, Percent Solids, 45.8, 1.00, % (by wt.), Y1, 12/21/20 0856, 12/22/20 0700, JMH.

Polychlorinated Biphenyls (PCBs) by GC/ECD

Table with 9 columns: Method, Analyte, Result, Limit(s), RL, Units, Note, Prepared, Analyzed, Analyst. Rows include Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, and two Surrogate entries.

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.

Definitions

- % (by wt.): Percent by Weight
MDL: Minimum Detection Limit
RL: Reporting Limit
Y1: Accreditation is not offered by the accrediting body for this analyte.

Project Requested Certification(s)

Table with 2 columns: Certification Body, Address. Rows: Microbac Laboratories Inc., - Marietta, OH; New York State Department of Health; Microbac Laboratories, Inc., New York Division; New York State Department of Health.



Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

JOL1103

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. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Reviewed and Approved By:

A handwritten signature in black ink that reads "Shannon Weeks".

Shannon Weeks

Customer Relationship Coordinator

Reported: 12/28/2020 19:31



Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J0K0296

Client Sample ID: Waverly	Collected By: Client
Sample Matrix: Solid	Collection Date: 10/21/2020 15:00
Lab Sample ID: J0K0296-02	

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

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 350.1, Rv. 2 (1993)								
Ammonia as N	12800		696	mg/kg dry	Y1	11/13/20 1211	11/13/20 1330	TB
Method: EPA 9045D								
pH	8.8			S.U.	H4	11/10/20 1137	11/10/20 1600	APH
Method: NA								
Temperature	20.9			°C	H4	11/10/20 1137	11/10/20 1600	APH
Method: SM 2540 G-2011								
Total Volatile Solids - TVS	68.1			%	Y1	11/09/20 1300	11/11/20 1219	RLD

General Parameters	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: ASTM D2216-10								
Percent Solids	17.8		1.00	% (by wt.)	Y1	11/10/20 0609	11/11/20 0807	JMH

Metals Total by AA	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 7471A								
Mercury	<1.40		1.40	mg/kg dry	M5	11/11/20 0714	11/12/20 1129	TMM

Metals Total by ICP	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 6010C								
Arsenic	<3.77		3.77	mg/kg dry		11/11/20 0722	11/11/20 1139	JYH
Cadmium	0.560		0.377	mg/kg dry		11/11/20 0722	11/11/20 1139	JYH
Chromium	21.0		0.942	mg/kg dry		11/11/20 0722	11/11/20 1139	JYH
Copper	464		3.77	mg/kg dry		11/11/20 0722	11/11/20 1139	JYH
Lead	27.9		3.77	mg/kg dry		11/11/20 0722	11/11/20 1139	JYH
Molybdenum	<11.3		11.3	mg/kg dry		11/11/20 0722	11/11/20 1139	JYH
Nickel	14.3		7.54	mg/kg dry		11/11/20 0722	11/11/20 1139	JYH
Potassium	1650		168	mg/kg dry		11/11/20 0722	11/11/20 1139	JYH
Selenium	5.85		3.77	mg/kg dry		11/11/20 0722	11/11/20 1139	JYH
Zinc	792		3.77	mg/kg dry		11/11/20 0722	11/11/20 1139	JYH

Anions by IC	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 9056A								
Nitrite as N	<22.5		22.5	mg/kg dry	H1		11/11/20 0917	ART
Nitrate as N	<33.8		33.8	mg/kg dry	H1		11/11/20 0917	ART

Analyses Subcontracted to: Microbac Laboratories, Inc. - Chicagoland

Microbac Laboratories, Inc.

3821 Buck Dr. | Cortland, NY 13045 | 607-753-3403 p | www.microbac.com



Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J0K0296

Client Sample ID: Waverly	Collected By: Client
Sample Matrix: Solid	Collection Date: 10/21/2020 15:00
Lab Sample ID: J0K0296-02	

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 351.2, Rv. 2 (1993) Nitrogen, Kjeldahl, Total	47000		2400	mg/Kg dry	M2, M5, Y1	11/12/20 1517	11/17/20 1203	ABG
Method: EPA 365.1, Rv. 2 (1993) Phosphorus, Total (As P)	31800		1010	mg/Kg dry	M2, Y1	11/12/20 1640	11/18/20 1640	ABG
Method: SM 2540 G-2011 Percent Solids	19		0.10	% (by wt.)	H1, Y1	11/12/20 1809	11/13/20 1331	DAT

Analytical Report

Client: Village of Perry
 Project: Cake / Sludge
 Sample Matrix: Sludge, Solid
 Sample Name: Cake/Sludge
 Lab Code: R2011085-001

Service Request: R2011085
 Date Collected: 11/17/20 10:00
 Date Received: 11/19/20 14:50

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	9.5	mg/Kg	6.6	1	11/25/20 04:08	11/23/20	
Cadmium, Total	6010C	3.3 U	mg/Kg	3.3	1	11/25/20 04:08	11/23/20	
Chromium, Total	6010C	25.4	mg/Kg	6.6	1	11/25/20 04:08	11/23/20	
Copper, Total	6010C	434	mg/Kg	13	1	11/25/20 04:08	11/23/20	
Lead, Total	6010C	44	mg/Kg	33	1	11/25/20 04:08	11/23/20	
Mercury, Total	7471B	0.47	mg/Kg	0.21	1	11/25/20 13:47	11/24/20	
Molybdenum, Total	6010C	17 U	mg/Kg	17	1	11/25/20 04:08	11/23/20	
Nickel, Total	6010C	26 U	mg/Kg	26	1	11/25/20 04:08	11/23/20	
Potassium, Total	6010C	1300 U	mg/Kg	1300	1	11/25/20 04:08	11/23/20	
Selenium, Total	6010C	6.6 U	mg/Kg	6.6	1	11/25/20 04:08	11/23/20	
Zinc, Total	6010C	1020	mg/Kg	13	1	11/25/20 04:08	11/23/20	

Analytical Report

Client: Village of Perry
Project: Cake / Sludge
Sample Matrix: Sludge, Solid
Sample Name: Cake/Sludge
Lab Code: R2011085-001

Service Request: R2011085
Date Collected: 11/17/20 10:00
Date Received: 11/19/20 14:50

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil	Date		Q
						Date Analyzed	Extracted	
Ammonia as Nitrogen, undistilled	350.1M	3010	mg/Kg	330	10	11/25/20 21:16	11/25/20	
Nitrate as Nitrogen	9056A	66 U	mg/Kg	66	1	11/25/20 12:30	11/24/20	
Nitrite as Nitrogen	9056A	66 U	mg/Kg	66	1	11/25/20 12:30	11/24/20	
Nitrogen, Total Kjeldahl (TKN)	351.2 Modified	45700	mg/Kg	4000	20	11/24/20 12:48	11/23/20	
Phosphorus, Total	365.1 Modified	20200	mg/Kg	590	10	11/23/20 20:30	11/23/20	

Analytical Report

Client: Village of Perry
Project: Cake / Sludge
Sample Matrix: Sludge, Solid
Sample Name: Cake/Sludge
Lab Code: R2011085-001

Service Request: R2011085
Date Collected: 11/17/20 10:00
Date Received: 11/19/20 14:50

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil	Date Analyzed	Date Extracted	Q
pH	9045D	6.77	pH Units	-	1	11/24/20 11:00	NA	H
Solids, Total Volatile	SM20 2540 G	62.7	Percent	1.0	1	11/23/20 14:40	NA	
Total Solids	ALS SOP	15.1	Percent	-	1	11/23/20 14:40	NA	

QA/QC Report

Client: Village of Perry
Project: Cake / Sludge
Sample Matrix: Sludge, Solid

Service Request: R2011085

Date Analyzed: 11/25/20

Lab Control Sample Summary
Inorganic Parameters

Units: mg/Kg
Basis: Dry

Lab Control Sample
R2011085-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic, Total	6010C	4.0	4.0	99	80-120
Cadmium, Total	6010C	5.28	5.00	106	80-120
Chromium, Total	6010C	20.4	20.0	102	80-120
Copper, Total	6010C	26.1	25.0	104	80-120
Lead, Total	6010C	52.9	50.0	106	80-120
Mercury, Total	7471B	0.167	0.167	100	80-120
Molybdenum, Total	6010C	52.1	50.0	104	80-120
Nickel, Total	6010C	51.5	50.0	103	80-120
Potassium, Total	6010C	2020	2000	101	80-120
Selenium, Total	6010C	89.9	101	89	80-120
Zinc, Total	6010C	50.3	50.0	101	80-120

QA/QC Report

Client: Village of Perry
Project: Cake / Sludge
Sample Matrix: Sludge, Solid

Service Request: R2011085
Date Collected: 11/17/20
Date Received: 11/19/20
Date Analyzed: 11/23/20
Date Extracted: 11/23/20

Duplicate Matrix Spike Summary
Phosphorus, Total

Sample Name: Cake/Sludge
Lab Code: R2011085-001
Analysis Method: 365.1 Modified
Prep Method: ALS SOP

Units: mg/Kg
Basis: Dry

Analyte Name	Sample Result	Result	Matrix Spike R2011085-001MS		Duplicate Matrix Spike R2011085-001DMS		% Rec Limits	RPD	RPD Limit	
			Spike Amount	% Rec	Result	Spike Amount				% Rec
Phosphorus, Total	20200	21300	5300	21	20800	5300	12	10-113	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. These data may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Client: Village of Perry
 Project: Cake / Sludge
 Sample Matrix: Sludge, Solid

Service Request: R2011085
 Date Collected: 11/17/20
 Date Received: 11/19/20
 Date Analyzed: 11/23/20

Replicate Sample Summary
 General Chemistry Parameters

Sample Name: Cake/Sludge
 Lab Code: R2011085-001

Units: Percent
 Basis: As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample R2011085-001 DUP Result	Average	RPD	RPD Limit
Solids, Total Volatile	SM20 2540 G	1.0	62.7	62.4	62.5	<1	30
Total Solids	ALS SOP	-	15.1	15.0	15.0	1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Village of Perry
Project: Cake / Sludge
Sample Matrix: Sludge, Solid

Service Request: R2011085
Date Analyzed: 11/23/20 - 11/25/20

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/Kg
Basis: Dry

Lab Control Sample
R2011085-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Ammonia as Nitrogen, undistilled	350.1M	25.1	25.0	100	69-142
Nitrate as Nitrogen	9056A	97.2	100	97	80-120
Nitrite as Nitrogen	9056A	101	100	101	80-120
Nitrogen, Total Kjeldahl (TKN)	351.2 Modified	250	250	100	64-126
Phosphorus, Total	365.1 Modified	76	80	96	83-111



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

September 30, 2020

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

RE: Project: DRYDEN WWTP-09/15
Pace Project No.: 30383067

Dear Ms. Cameron:

Enclosed are the analytical results for sample(s) received by the laboratory on September 17, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

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

Sincerely,

Megan J. Smetanka
megan.smetanka@pacelabs.com
(724)850-5600



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

CERTIFICATIONS

Project: DRYDEN WWTP-09/15
 Pace Project No.: 30383067

Pace Analytical Services Pennsylvania

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
 Guam Certification
 Florida: Cert E871149 SEKS WET
 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



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

SAMPLE SUMMARY

Project: DRYDEN WWTP-09/15
Pace Project No.: 30383067

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30383067001	Village of Dryden/Sludge	Solid	09/15/20 15:00	09/17/20 17:00



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

SAMPLE ANALYTE COUNT

Project: DRYDEN WWTP-09/15
 Pace Project No.: 30383067

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30383067001	Village of Dryden/Sludge	EPA 8082A	CWB	10	PASI-PA
		EPA 6010C	KAS	7	PASI-PA
		EPA 7470A	KAS	1	PASI-PA
		ASTM D2974-87	NLD	1	PASI-PA
		EPA 1010	DRK	1	PASI-PA
		EPA 9045D	JJS	1	PASI-PA
		EPA 9014	PAS	1	PASI-PA
		SM 4500S2F-2011	PAS	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg



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

ANALYTICAL RESULTS

Project: DRYDEN WWTP-09/15
 Pace Project No.: 30383067

Sample: Village of Dryden/Sludge Lab ID: 30383067001 Collected: 09/15/20 15:00 Received: 09/17/20 17:00 Matrix: Solid

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

Comments: • Chain of custody lists matrix as water; determined to be solid by laboratory

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Greensburg									
PCB-1016 (Aroclor 1016)	ND	ug/kg	3100	1910	10	09/21/20 09:43	09/23/20 03:53	12674-11-2	ED,P1
PCB-1221 (Aroclor 1221)	ND	ug/kg	3100	2750	10	09/21/20 09:43	09/23/20 03:53	11104-28-2	ED,P1
PCB-1232 (Aroclor 1232)	ND	ug/kg	3100	2820	10	09/21/20 09:43	09/23/20 03:53	11141-16-5	ED,P1
PCB-1242 (Aroclor 1242)	ND	ug/kg	3100	2260	10	09/21/20 09:43	09/23/20 03:53	53469-21-9	ED,P1
PCB-1248 (Aroclor 1248)	ND	ug/kg	3100	1780	10	09/21/20 09:43	09/23/20 03:53	12672-29-6	ED,P1
PCB-1254 (Aroclor 1254)	ND	ug/kg	3100	1850	10	09/21/20 09:43	09/23/20 03:53	11097-69-1	ED,P1
PCB-1260 (Aroclor 1260)	ND	ug/kg	3100	1760	10	09/21/20 09:43	09/23/20 03:53	11096-82-5	ED,P1
PCB, Total	ND	ug/kg	3100	1170	10	09/21/20 09:43	09/23/20 03:53	1336-36-3	P1
Surrogates									
Tetrachloro-m-xylene (S)	65	%	46-120		10	09/21/20 09:43	09/23/20 03:53	877-09-8	
Decachlorobiphenyl (S)	85	%	41-148		10	09/21/20 09:43	09/23/20 03:53	2051-24-3	

6010C MET ICP, TCLP

Analytical Method: EPA 6010C Preparation Method: EPA 3005A

Leachate Method/Date: EPA 1311; 09/28/20 09:15 Initial pH: 5.99; Final pH: 5.07

Pace Analytical Services - Greensburg

Arsenic	ND	mg/L	0.025	0.010	1	09/29/20 14:40	09/30/20 06:45	7440-38-2	
Barium	0.12	mg/L	0.050	0.0034	1	09/29/20 14:40	09/30/20 06:45	7440-39-3	
Cadmium	ND	mg/L	0.015	0.0017	1	09/29/20 14:40	09/30/20 06:45	7440-43-9	
Chromium	ND	mg/L	0.025	0.0017	1	09/29/20 14:40	09/30/20 06:45	7440-47-3	
Lead	ND	mg/L	0.025	0.025	1	09/29/20 14:40	09/30/20 10:31	7439-92-1	
Selenium	ND	mg/L	0.040	0.027	1	09/29/20 14:40	09/30/20 06:45	7782-49-2	
Silver	ND	mg/L	0.030	0.0072	1	09/29/20 14:40	09/30/20 06:45	7440-22-4	

7470 Mercury, TCLP

Analytical Method: EPA 7470A Preparation Method: EPA 7470A

Leachate Method/Date: EPA 1311; 09/28/20 09:15 Initial pH: 5.99; Final pH: 5.07

Pace Analytical Services - Greensburg



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 Greensburg, PA 15601
 (724)850-5600

ANALYTICAL RESULTS

Project: DRYDEN WWTP-09/15
 Pace Project No.: 30383067

Sample: Village of Dryden/Sludge Lab ID: 30383067001 Collected: 09/15/20 15:00 Received: 09/17/20 17:00 Matrix: Solid

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

Comments: • Chain of custody lists matrix as water; determined to be solid by laboratory

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
733C S Reactive Cyanide									
Analytical Method: EPA 9014 Preparation Method: SW-846 7.3.3.2									
Pace Analytical Services - Greensburg									
Cyanide, Reactive	ND	mg/kg	6.5	2.6	1	09/18/20 15:52	09/18/20 16:56		
734S Reactive Sulfide									
Analytical Method: SM 4500S2F-2011 Preparation Method: SW-846 7.3.4.2									
Pace Analytical Services - Greensburg									
Sulfide, Reactive	ND	mg/kg	64.6	64.6	1	09/18/20 15:52	09/18/20 15:54		



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QUALITY CONTROL DATA

Project: DRYDEN WWTP-09/15
 Pace Project No.: 30383067

QC Batch: 416099 Analysis Method: EPA 7470A
 QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury TCLP
 Laboratory: Pace Analytical Services - Greensburg
 Associated Lab Samples: 30383067001

METHOD BLANK: 2011869 Matrix: Water
 Associated Lab Samples: 30383067001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	1.0	0.030	09/30/20 06:19	

METHOD BLANK: 2010830 Matrix: Water
 Associated Lab Samples: 30383067001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	1.0	0.030	09/30/20 06:22	

METHOD BLANK: 2010831 Matrix: Water
 Associated Lab Samples: 30383067001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	1.0	0.030	09/30/20 06:24	

LABORATORY CONTROL SAMPLE: 2011870

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	1	.99I	99	80-120	



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QUALITY CONTROL DATA

Project: DRYDEN WWTP-09/15
 Pace Project No.: 30383067

QC Batch: 416098 Analysis Method: EPA 6010C
 QC Batch Method: EPA 3005A Analysis Description: 6010C MET TCLP
 Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30383067001

METHOD BLANK: 2011864 Matrix: Water

Associated Lab Samples: 30383067001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.025	0.010	09/30/20 06:30	
Barium	mg/L	ND	0.050	0.0034	09/30/20 06:30	
Cadmium	mg/L	ND	0.015	0.0017	09/30/20 06:30	
Chromium	mg/L	ND	0.025	0.0017	09/30/20 06:30	
Lead	mg/L	ND	0.025	0.025	09/30/20 10:16	
Selenium	mg/L	ND	0.040	0.027	09/30/20 06:30	
Silver	mg/L	ND	0.030	0.0072	09/30/20 06:30	

METHOD BLANK: 2010831 Matrix: Water

Associated Lab Samples: 30383067001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.025	0.010	09/30/20 06:34	
Barium	mg/L	ND	0.050	0.0034	09/30/20 06:34	
Cadmium	mg/L	ND	0.015	0.0017	09/30/20 06:34	
Chromium	mg/L	ND	0.025	0.0017	09/30/20 06:34	
Lead	mg/L	ND	0.025	0.025	09/30/20 10:20	
Selenium	mg/L	ND	0.040	0.027	09/30/20 06:34	
Silver	mg/L	ND	0.030	0.0072	09/30/20 06:34	

LABORATORY CONTROL SAMPLE: 2011865

Spike LCS LCS % Rec



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QUALITY CONTROL DATA

Project: DRYDEN WWTP-09/15
 Pace Project No.: 30383067

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2011867												2011868	
Parameter	Units	30383070001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	% Rec	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD		
Arsenic	mg/L	ND	0.5	0.5	0.52	0.55	102	109	75-125	6	20		
Barium	mg/L	0.11	0.5	0.5	0.62	0.69	103	116	75-125	10	20		
Cadmium	mg/L	ND	0.5	0.5	0.50	0.53	101	107	75-125	6	20		
Chromium	mg/L	ND	0.5	0.5	0.47	0.51	94	101	75-125	7	20		
Lead	mg/L	ND	0.5	0.5	0.51	0.51	102	103	75-125	1	20		
Selenium	mg/L	ND	0.5	0.5	0.52	0.55	103	110	75-125	7	20		
Silver	mg/L	ND	0.25	0.25	0.25	0.26	101	105	75-125	3	20		

SAMPLE DUPLICATE: 2011866						
Parameter	Units	30383070001 Result	Dup Result	RPD	Max RPD	Qualifiers
Arsenic	mg/L	ND	ND		20	
Barium	mg/L	0.11	0.10	3	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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QUALITY CONTROL DATA

Project: DRYDEN WWTP-09/15
 Pace Project No.: 30383067

QC Batch: 414742 Analysis Method: EPA 8082A
 QC Batch Method: EPA 3546 Analysis Description: 8082A GCS PCB
 Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30383067001

METHOD BLANK: 2006044 Matrix: Solid
 Associated Lab Samples: 30383067001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	ND	16.3	10.0	09/23/20 00:36	
PCB-1221 (Aroclor 1221)	ug/kg	ND	16.3	14.4	09/23/20 00:36	
PCB-1232 (Aroclor 1232)	ug/kg	ND	16.3	14.8	09/23/20 00:36	
PCB-1242 (Aroclor 1242)	ug/kg	ND	16.3	11.9	09/23/20 00:36	
PCB-1248 (Aroclor 1248)	ug/kg	ND	16.3	9.3	09/23/20 00:36	
PCB-1254 (Aroclor 1254)	ug/kg	ND	16.3	8.7	09/23/20 00:36	
PCB-1260 (Aroclor 1260)	ug/kg	ND	16.3	9.2	09/23/20 00:36	
Decachlorobiphenyl (S)	%	84	41-148		09/23/20 00:36	
Tetrachloro-m-xylene (S)	%	80	46-120		09/23/20 00:36	

LABORATORY CONTROL SAMPLE: 2006045

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	161	147	91	49-120	
PCB-1260 (Aroclor 1260)	ug/kg	161	142	88	57-120	
Decachlorobiphenyl (S)	%			96	41-148	
Tetrachloro-m-xylene (S)	%			83	46-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2006046 2006047

Parameter	Units	30382901001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
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QUALITY CONTROL DATA

Project: DRYDEN WWTP-09/15
 Pace Project No.: 30383067

QC Batch: 415876 Analysis Method: ASTM D2974-87
 QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
 Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30383067001

SAMPLE DUPLICATE: 2010965

Parameter	Units	30383066003 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	6.1	6.3	4	20	

SAMPLE DUPLICATE: 2010966

Parameter	Units	30383066005 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	12.9	12.3	5	20	



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QUALITY CONTROL DATA

Project: DRYDEN WWTP-09/15
 Pace Project No.: 30383067

QC Batch: 415916 Analysis Method: EPA 1010
 QC Batch Method: EPA 1010 Analysis Description: 1010 Flash Point, Closed Cup
 Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30383067001

METHOD BLANK: 2011077 Matrix: Water
 Associated Lab Samples: 30383067001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Flashpoint	deg F	>200	60.0		09/28/20 15:18	

SAMPLE DUPLICATE: 2011078

Parameter	Units	30382637001 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	>200	>200			



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QUALITY CONTROL DATA

Project: DRYDEN WWTP-09/15
Pace Project No.: 30383067

QC Batch: 414490	Analysis Method: EPA 9045D
QC Batch Method: EPA 9045D	Analysis Description: 9045D pH
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30383067001

SAMPLE DUPLICATE: 2004559

Parameter	Units	30383067001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH in water at 25 degrees C	Std. Units	6.8	6.9	0	10	H3



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QUALITY CONTROL DATA

Project: DRYDEN WWTP-09/15
 Pace Project No.: 30383067

QC Batch: 414493 Analysis Method: EPA 9014
 QC Batch Method: SW-846 7.3.3.2 Analysis Description: 733C Reactive Cyanide
 Laboratory: Pace Analytical Services - Greensburg
 Associated Lab Samples: 30383067001

METHOD BLANK: 2004600 Matrix: Solid
 Associated Lab Samples: 30383067001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cyanide, Reactive	mg/kg	ND	0.99	0.40	09/18/20 16:52	

LABORATORY CONTROL SAMPLE: 2004601

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide, Reactive	mg/kg	99.3	1.0	1	0-8	

SAMPLE DUPLICATE: 2004602

Parameter	Units	92495418001 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyanide, Reactive	mg/kg	ND	ND		20	



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QUALITY CONTROL DATA

Project: DRYDEN WWTP-09/15
 Pace Project No.: 30383067

QC Batch: 414492	Analysis Method: SM 4500S2F-2011
QC Batch Method: SW-846 7.3.4.2	Analysis Description: 734S Reactive Sulfide
Associated Lab Samples: 30383067001	Laboratory: Pace Analytical Services - Greensburg

METHOD BLANK: 2004597 Matrix: Solid
 Associated Lab Samples: 30383067001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Reactive	mg/kg	ND	9.9	9.9	09/18/20 15:54	

LABORATORY CONTROL SAMPLE: 2004598

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Reactive	mg/kg	198	43.7	22	0-52	

SAMPLE DUPLICATE: 2004599

Parameter	Units	92495418001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Reactive	mg/kg	ND	ND		20	



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QUALIFIERS

Project: DRYDEN WWTP-09/15
Pace Project No.: 30383067

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.

ANALYTE QUALIFIERS

- ED Due to the extract's physical characteristics, the analysis was performed at dilution.
- H3 Sample was received or analysis requested beyond the recognized method holding time.
- P1 Routine initial sample volume or weight was not used for extraction, resulting in elevated reporting limits.



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 Greensburg, PA 15601
 (724)850-5600

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: DRYDEN WWTP-09/15

Pace Project No.: 30383067

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30383067001	Village of Dryden/Sludge	EPA 3546	414742	EPA 8082A	414837
30383067001	Village of Dryden/Sludge	EPA 3005A	416098	EPA 6010C	416163
30383067001	Village of Dryden/Sludge	EPA 7470A	416099	EPA 7470A	416143
30383067001	Village of Dryden/Sludge	ASTM D2974-87	415876		
30383067001	Village of Dryden/Sludge	EPA 1010	415916		
30383067001	Village of Dryden/Sludge	EPA 9045D	414490		
30383067001	Village of Dryden/Sludge	SW-846 7.3.3.2	414493	EPA 9014	414657
30383067001	Village of Dryden/Sludge	SW-846 7.3.4.2	414492	SM 4500S2F-2011	414656

CHAIN-OF-CUSTODY / An
The Chain-of-Custody is a LEGAL DOCUMENT.

WO#: 30383067



30383067

Section C

Invoice Information:

<i>Jen Group</i>	Alberta: <i>Camden Group</i>	REGULATORY AGENCY	
<i>13 E. Gmeall</i>	Company Name:	<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER
<i>Dryden Sampling</i>	Address:	<input type="checkbox"/> UST	<input type="checkbox"/> RCRA
	Page Quote Reference:	<input type="checkbox"/> DRINKING WATER	<input type="checkbox"/> OTHER
	Page Project Manager:	Site Location:	
	Page Profile #:	STATE:	

COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Requested Analysis Filtered (Y/N)					Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
DATE	TIME			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅	Methanol	Other	Analysis Test	Y	N	Y	N	Y	N		
<i>9-16-2020</i>			<i>2</i>																<i>001</i>	

Y / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
<i>SB</i>	<i>9-16-2020</i>	<i>12:45</i>	<i>[Signature]</i>	<i>9/17/20</i>	<i>1700</i>	<i>4.5</i>	<i>Y</i>	<i>N</i>	<i>Y</i>

SAMPLER NAME AND SIGNATURE				Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: <i>J. Gmeall</i>		DATE Signed (MM/DD/YY): <i>9-15-2020</i>					
SIGNATURE of SAMPLER: <i>[Signature]</i>							

is agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.08, 12-Oct-2007

Pittsburgh Lab Sample Condition Upon Receipt



Client Name: Camden

Project # #-30383067

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Label	<u>JSM</u>
LIMS Login	<u>JSM</u>

Tracking #: _____

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Thermometer Used 10 Type of Ice: Wet Blue None

Cooler Temperature Observed Temp 5.0 °C Correction Factor: -.5 °C Final Temp: 4.5 °C

Temp should be above freezing to 6°C

Comments:	Yes	No	N/A	pH paper Lot#	Date and Initials of person examining contents:
				<u>N/A</u>	<u>JSM 9-17-20</u>
Chain of Custody Present:	/				
Chain of Custody Filled Out:	/				
Chain of Custody Relinquished:	/				
Sampler Name & Signature on COC:	/				
Sample Labels match COC: -Includes date/time/ID Matrix: <u>SL</u>	/				<u>Solid is a solid</u>
Samples Arrived within Hold Time:	/				
Short Hold Time Analyzels (<72hr remaining):		/			
Rush Turn Around Time Requested:		/			
Sufficient Volume:	/				
Correct Containers Used: -Pace Containers Used:	/				
Containers Intact:	/				
Orthophosphate field filtered			/		
Hex Cr Aqueous sample field filtered			/		
Organic Samples checked for dechlorination:			/		
Filtered volume received for Dissolved tastes			/		
All containers have been checked for preservation.			/		
Exceptions: VOA, cellform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix					
All containers meet method preservation requirements.	/			Initial when completed <u>JSM</u>	Date/time of preservation
				Lot # of added preservative	

Village of Perry Wastewater Treatment Plant
7572 Water Street Road
Perry, New York 14530
Phone: (585) 237-3100
Fax: (585) 237-2591

Fax

To: MARY RAYESKI From: MARK R. KINGSLEY
Company: LEO DIXON Pages: 28 w/ COVER
Phone: 1-607-776-7997 Date: 10-13-2020
Fax: 1-607-348-1670 Re: LAB RESULTS FOR CAKE

Urgent

For Review

Please Comment

Please Reply

- COMMENTS :

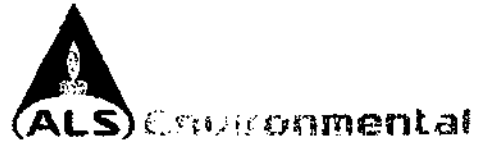
E MAIL -

MARY RAYESKI@
GMAIL.COM

2 of 4 For

2020

per 13



SAMPLE DETECTION SUMMARY

CLIENT ID: Press Cake Lab ID: R2008640-001

Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen, undistilled	3320			350	mg/Kg	350.1M
Nitrogen, Total Kjeldahl (TKN)	41600			3800	mg/Kg	351.2 Modified
pH	7.25				pH Units	9045D
Phosphorus, Total	18200			1200	mg/Kg	365.1 Modified
Solids, Total Volatile	65.5			1.0	Percent	SM20 2540 G
Total Solids	14.3				Percent	ALS SOP
Arsenic, Total	8.7			6.7	mg/Kg	6010C
Chromium, Total	25.7			6.7	-mg/Kg	6010C
Copper, Total	457			13	mg/Kg	6010C
Lead, Total	35			34	mg/Kg	6010C
Mercury, Total	0.39			0.22	mg/Kg	7471B
Potassium, Total	1700			1300	mg/Kg	6010C
Zinc, Total	1070			13	mg/Kg	6010C

Miss'd
Hg
cd
Se

Analytical Report

Client: Village of Perry
 Project: Cake / Sludge
 Sample Matrix: Sludge, Solid
 Sample Name: Press Cake
 Lab Code: R2008640-001

Service Request: R2008640
 Date Collected: 09/17/20 08:00
 Date Received: 09/17/20 15:20

Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	D.L.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	8.7	mg/Kg	6.7	1	09/24/20 23:55	09/21/20	
Cadmium, Total	6010C	3.4 U	mg/Kg	3.4	1	09/23/20 13:57	09/21/20	
Chromium, Total	6010C	25.7	mg/Kg	6.7	1	09/23/20 13:57	09/21/20	
Copper, Total	6010C	457	mg/Kg	13	1	09/23/20 13:57	09/21/20	
Lead, Total	6010C	35	mg/Kg	34	1	09/23/20 13:57	09/21/20	
Mercury, Total	7471B	0.39	mg/Kg	0.22	1	09/23/20 14:16	09/21/20	
Molybdenum, Total	6010C	17 U	mg/Kg	17	1	09/23/20 13:57	09/21/20	
Nickel, Total	6010C	27 U	mg/Kg	27	1	09/23/20 13:57	09/21/20	
Potassium, Total	6010C	1700	mg/Kg	1300	1	09/23/20 13:57	09/21/20	
Selenium, Total	6010C	6.7 U	mg/Kg	6.7	1	09/23/20 13:57	09/21/20	
Zinc, Total	6010C	1070	mg/Kg	13	1	09/23/20 13:57	09/21/20	

Analytical Report

Client: Village of Perry
Project: Cake / Sludge
Sample Matrix: Sludge, Solid
Sample Name: Press Cake
Lab Code: R2008640-001

Service Request: R2008640
Date Collected: 09/17/20 08:00
Date Received: 09/17/20 15:20
Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Unit	MRL	Dil	Date Analyzed	Date Extracted	Q
Ammonia as Nitrogen, undistilled	350.1M	3320	mg/Kg	350	10	09/23/20 22:41	09/23/20	
Nitrate as Nitrogen	9056A	70 U	mg/Kg	70	1	09/27/20 15:00	09/27/20	
Nitrite as Nitrogen	9056A	70 U	mg/Kg	70	1	09/27/20 15:00	09/27/20	
Nitrogen, Total Kjeldahl (TKN)	351.2 Modified	41600	mg/Kg	3800	20	09/28/20 09:58	09/24/20	
Phosphorus, Total	365.1 Modified	18200	mg/Kg	1200	20	09/24/20 16:39	09/23/20	

Analytical Report

Client: Village of Perry
Project: Cake / Sludge
Sample Matrix: Sludge, Solid
Sample Name: Press Cake
Lab Code: R2008640-001

Service Request: R2008640
Date Collected: 09/17/20 08:00
Date Received: 09/17/20 15:20

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil	Date Analyzed	Date Extracted	Q
pH	9045D	7.25	pH Units	-	1	09/21/20 13:00	NA	H
Solids, Total Volatile	SM20 2540 G	65.5	Percent	1.0	1	09/24/20 06:55	NA	
Total Solids	ALS SOP	14.3	Percent	-	1	09/24/20 06:55	NA	

QA/QC Report

Client: Village of Perry
Project: Cake / Sludge
Sample Matrix: Sludge, Solid

Service Request: R2008640

Date Analyzed: 09/23/20

Lab Control Sample Summary
Inorganic Parameters

Units: mg/Kg
Basis: Dry

Lab Control Sample
R2008640-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic, Total	6010C	3.6	4.0	89	80-120
Cadmium, Total	6010C	5.04	5.00	101	80-120
Chromium, Total	6010C	20.4	20.0	102	80-120
Copper, Total	6010C	24.9	25.0	100	80-120
Lead, Total	6010C	48.7	50.0	97	80-120
Mercury, Total	7471B	0.168	0.167	101	80-120
Molybdenum, Total	6010C	49.4	50.0	99	80-120
Nickel, Total	6010C	50.2	50.0	100	80-120
Potassium, Total	6010C	1830	2000	91	80-120
Selenium, Total	6010C	85.1	101	84	80-120
Zinc, Total	6010C	48.3	50.0	97	80-120

Analytical Report

Client: Village of Perry
 Project: Cake / Sludge
 Sample Matrix: Sludge, Solid
 Sample Name: Method Blank
 Lab Code: R2008640-MB

Service Request: R2008640
 Date Collected: NA
 Date Received: NA
 Basis: Dry

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil	Date Analyzed	Date	
							Extracted	Q
Ammonia as Nitrogen, undistilled	350.1M	5.0 U	mg/Kg	5.0	1	09/23/20 22:25	09/23/20	
Nitrate as Nitrogen	9056A	10 U	mg/Kg	10	1	09/27/20 12:21	09/27/20	
Nitrite as Nitrogen	9056A	10 U	mg/Kg	10	1	09/27/20 12:21	09/27/20	
Nitrogen, Total Kjeldahl (TKN)	351.2 Modified	30 U	mg/Kg	30	1	09/28/20 09:54	09/24/20	
Phosphorus, Total	365.1 Modified	10 U	mg/Kg	10	1	09/24/20 16:33	09/23/20	

QA/QC Report

Client: Village of Perry
Project: Cake / Sludge
Sample Matrix: Sludge, Solid

Service Request: R2008640
Date Collected: 09/17/20
Date Received: 09/17/20
Date Analyzed: 09/24/20 - 09/28/20

Duplicate Matrix Spike Summary
General Chemistry Parameters

Sample Name: Press Cake
Lab Code: R2008640-001

Units: mg/Kg
Basis: Dry

Matrix Spike
R2008640-001MS

Duplicate Matrix Spike
R2008640-001DMS

Analyte Name	Method	Sample Result	Matrix Spike			Duplicate Matrix Spike			% Rec	RPD	Limit
			Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Nitrogen, Total Kjeldahl (TKN)	351.2 Modified	41600	44400	1300	204 #	40700	1400	-64 #	10-200	9	30
Phosphorus, Total	365.1 Modified	18200	19400	11200	10	20100	10400	18	10-113	3	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
 dba ALS Environmental

QA/QC Report

Client: Village of Perry
 Project: Cake / Sludge
 Sample Matrix: Sludge, Solid

Service Request: R2008640
 Date Collected: 09/17/20
 Date Received: 09/17/20
 Date Analyzed: 09/21/20

Replicate Sample Summary
 General Chemistry Parameters

Sample Name: Press Cake
 Lab Code: R2008640-001

Units: pH Units
 Basis: As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample R2008640-001 DUP Result	Average	RPD	RPD Limit
pH	9045D	-	7.25	7.25	7.25	<1	0.10

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.
 Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Village of Perry
 Project: Cake / Sludge
 Sample Matrix: Sludge, Solid

Service Request: R2008640
 Date Collected: 09/17/20
 Date Received: 09/17/20
 Date Analyzed: 09/24/20

Replicate Sample Summary
 General Chemistry Parameters

Sample Name: Press Cake
 Lab Code: R2008640-001

Units: Percent
 Basis: As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
				R2008640-001DUP Result			
Solids, Total Volatile	SM20 2540 G	1.0	65.5	65.2	65.4	<1	30
Total Solids	ALS SOP	-	14.3	14.1	14.2	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Village of Perry
Project: Cake / Sludge
Sample Matrix: Sludge, Solid

Service Request: R2008640
Date Analyzed: 09/23/20 - 09/28/20

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/Kg
Basis: Dry

Lab Control Sample
R2008640-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Ammonia as Nitrogen, undistilled	350.1M	24.4	25.0	97	69-142
Nitrate as Nitrogen	9056A	89	100	89	80-120
Nitrite as Nitrogen	9056A	97	100	97	80-120
Nitrogen, Total Kjeldahl (TKN)	351.2 Modified	224	250	89	64-126
Phosphorus, Total	365.1 Modified	75	80	94	83-111



Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J0K0296

Client Sample ID: DFA Sludge	Collected By: Client
Sample Matrix: Solid	Collection Date: 10/26/2020 15:00
Lab Sample ID: J0K0296-03	

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

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 350.1, Rv. 2 (1993) Ammonia as N	11100		929	mg/kg dry	Y1	11/13/20 1211	11/13/20 1331	TB
Method: EPA 9045D pH	7.0			S.U.	H4	11/10/20 1137	11/10/20 1600	APH
Method: NA Temperature	20.6			°C	H4	11/10/20 1137	11/10/20 1600	APH
Method: SM 2540 G-2011 Total Volatile Solids - TVS	79.3			%	Y1	11/09/20 1300	11/11/20 1219	RLD

General Parameters	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: ASTM D2216-10 Percent Solids	12.1		1.00	% (by wt.)	Y1	11/10/20 0609	11/11/20 0807	JMH
Anions by IC								
Method: EPA 9056A Nitrite as N	<32.9		32.9	mg/kg dry	H1		11/11/20 1030	ART
Nitrate as N	<49.4		49.4	mg/kg dry	H1		11/11/20 1030	ART

Analyses Subcontracted to: Microbac Laboratories, Inc. - Chicagoland

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 351.2, Rv. 2 (1993) Nitrogen, Kjeldahl, Total	88000		3700	mg/Kg dry	Y1, Y1	11/12/20 1517	11/17/20 1208	ABG
Method: EPA 365.1, Rv. 2 (1993) Phosphorus, Total (As P)	24200		1500	mg/Kg dry	Y1, Y1	11/12/20 1640	11/18/20 1644	ABG
Method: SM 2540 G-2011 Percent Solids	13		0.10	% (by wt.)	H1, Y1	11/12/20 1809	11/13/20 1331	DAT

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Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

J0K0296

Client Sample ID: DFA Sludge	Collected By: Client
Sample Matrix: Solid	Collection Date: 10/26/2020 15:00
Lab Sample ID: J0K0296-04	

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

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 350.1, Rv. 2 (1993)								
Ammonia as N	12700		984	mg/kg dry	Y1	11/13/20 1211	11/13/20 1331	TB
Method: EPA 9045D								
pH	6.9			S.U.	H4	11/10/20 1137	11/10/20 1600	APH
Method: NA								
Temperature	21.5			°C	H4	11/10/20 1137	11/10/20 1600	APH
Method: SM 2540 G-2011								
Total Volatile Solids - TVS	79.0			%	Y1	11/09/20 1300	11/11/20 1219	RLD
General Parameters	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: ASTM D2216-10								
Percent Solids	13.2		1.00	% (by wt.)	Y1	11/10/20 0609	11/11/20 0807	JMH
Metals Total by AA	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 7471A								
Mercury	<1.77		1.77	mg/kg dry	M5	11/11/20 0714	11/12/20 1102	TMM
Metals Total by ICP	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 6010C								
Arsenic	<5.55		5.55	mg/kg dry		11/11/20 0722	11/11/20 1142	JYH
Cadmium	<0.555		0.555	mg/kg dry		11/11/20 0722	11/11/20 1142	JYH
Chromium	11.6		1.39	mg/kg dry		11/11/20 0722	11/11/20 1142	JYH
Copper	14.6		5.55	mg/kg dry		11/11/20 0722	11/11/20 1142	JYH
Lead	<5.55		5.55	mg/kg dry		11/11/20 0722	11/11/20 1142	JYH
Molybdenum	<16.7		16.7	mg/kg dry		11/11/20 0722	11/11/20 1142	JYH
Nickel	<11.1		11.1	mg/kg dry		11/11/20 0722	11/11/20 1142	JYH
Potassium	5360		278	mg/kg dry		11/11/20 0722	11/11/20 1142	JYH
Selenium	<5.55		5.55	mg/kg dry		11/11/20 0722	11/11/20 1142	JYH
Zinc	69.2		5.55	mg/kg dry		11/11/20 0722	11/11/20 1142	JYH
Anions by IC	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 9056A								
Nitrite as N	<30.0		30.0	mg/kg dry	H1		11/11/20 1125	ART
Nitrate as N	<45.0		45.0	mg/kg dry	H1		11/11/20 1125	ART

Analyses Subcontracted to: Microbac Laboratories, Inc. - Chicagoland

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Microbac Laboratories, Inc., New York Division

CERTIFICATE OF ANALYSIS

JOK0296

Client Sample ID: DFA Sludge	Collected By: Client
Sample Matrix: Solid	Collection Date: 10/26/2020 15:00
Lab Sample ID: JOK0296-04	

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 351.2, Rv. 2 (1993) Nitrogen, Kjeldahl, Total	94000		3800	mg/Kg dry	Y1, Y1	11/12/20 1517	11/17/20 1210	ABG
Method: EPA 365.1, Rv. 2 (1993) Phosphorus, Total (As P)	25800		1470	mg/Kg dry	Y1, Y1	11/12/20 1640	11/18/20 1645	ABG
Method: SM 2540 G-2011 Percent Solids	13		0.10	% (by wt.)	H1, Y1	11/12/20 1809	11/13/20 1331	DAT

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.

Definitions

- %: Percent
- % (by wt.): Percent by Weight
- °C: Degrees Celsius
- H1: Sample was received past holding time.
- H4: The test was performed outside of the EPA recommended holding time of 15 minutes.
- M2: Matrix spike recovery is outside of acceptance limits, biased low.
- M5: Post digestion spike is outside of acceptance limits.
- MDL: Minimum Detection Limit
- mg/L: Milligrams per Liter
- RL: Reporting Limit
- S.U.: Standard Units
- 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. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <<https://www.microbac.com/standard-terms-conditions>>.

Reviewed and Approved By:

Renee Lantz
Customer Relationship Specialist
Reported: 11/24/2020 11:49

Microbac Laboratories, Inc.

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

J0K0296

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: 11/03/2020
 Reported: 11/24/2020

Case Narrative

Microbac Laboratories, Inc. - Chicagoland

The revised report of November 19, 2020 was issued to add the Y1 qualifier to the report.

Analytical Testing Parameters

Client Sample ID: DFA Wastewater	Collected By: Client
Sample Matrix: Wastewater	Collection Date: 10/19/2020 14:00
Lab Sample ID: J0K0296-01	

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

Inorganics Total	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 160.4								
Total Volatile Solids - TVS	1540		40.0	mg/L	H1	11/09/20 1303	11/10/20 1258	RLD
Method: EPA 350.1, Rv. 2 (1993)								
Ammonia as N	9.88		0.600	mg/L		11/12/20 0609	11/12/20 1155	TB
Method: EPA 351.2, Rv. 2 (1993)								
Total Kjeldahl Nitrogen (TKN) as N	69.9		4.00	mg/L		11/13/20 0000	11/13/20 1828	TB
Method: EPA 365.4								
Phosphorus - Total as P	18.2		2.00	mg/L		11/12/20 1415	11/13/20 1103	TB
Method: NA								
Temperature	22.4			°C	H4	11/10/20 1135	11/10/20 1600	APH
Method: SM 2540 B-2011								
Total Solids	2080		40.0	mg/L	H1	11/09/20 1303	11/09/20 1557	RLD
Method: SM 4500-H+ B-2011								
pH	7.0			S.U.	H4, Y1	11/10/20 1135	11/10/20 1600	APH
Anions by IC	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 300.0, Rv. 2.1 (1993)								
Nitrite as N	<0.400		0.400	mg/L	H1		11/10/20 0821	ART
Nitrate as N	<0.600		0.600	mg/L	H1		11/10/20 0821	ART

Permit

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits, Region 8
6274 East Avon-Llma Road, Avon, NY 14414-9516
P: (585) 226-5400 | F: (585) 226-2830
www.dec.ny.gov

October 1, 2019

Leo Dickson and Sons
Attn: Phil Dickson
5226 Bonny Hill Rd
Bath, NY 14810-8145

Re: Permit Renewal
DEC ID# 8-4699-00012/00001
Leo Dickson & Sons Landspreading Sites and Farm
Permit to Operate a Solid Waste Management Facility

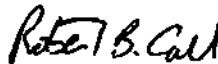
Dear Mr. Dickson:

The permit renewal you requested is enclosed. Please read it carefully and note the conditions that are included in it. The permit is valid for only those activities expressly authorized therein, which involves the storage of liquid biosolids and food processing waste, and land application of food processing waste and stabilized biosolids on agricultural fields. Work beyond the scope of the permit and the approved project plans may be considered a violation of the law and be subject to appropriate enforcement action. Granting of this permit does not relieve the permittee of the responsibility of obtaining any other permission, consent, or approval from any other Federal, State or local government which may be required.

Be advised, the Uniform Procedures Regulations (6 NYCRR Part 621) provide that an applicant may request a public hearing if a permit is denied or contains conditions which are unacceptable to them. Any such request must be made in writing within 30 calendar days of the date of permit issuance and must be addressed to the Regional Permit Administrator at the letterhead address. A copy should also be sent to the Chief Administrative Law Judge at NYSDEC, 625 Broadway, 1st Floor, Albany, NY 12233-1550.

No authority is granted by this Permit to operate, construct, or maintain any installation in violation of any law, statute, code, ordinance, rule, or regulation of the State of New York or any of its political subdivisions. If you have any questions on the extent of the work authorized or your obligations under the permit, please feel free to contact me at 585-226-5396.

Sincerely,



Robert B. Call
Environmental Analyst

ec: M. Osypian, NYSDEC DMM R8
G. Maclean, NYSDEC DMM R8
T. Haley, NYSDEC DEP R8
D. Loew, NYSDEC OGC R8
Town of Thurston



Department of
Environmental
Conservation



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.

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.maclean@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-1
Part 360 Permitted Fields**

Field Identification Number	Total Field Area	Spreadable Acres
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**

Field Identification Number	Total Field Area	Spreadable Acres
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
J1	19.4	13
J2	22.4	22.4
J3	15.6	15.6
J4	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**

Field Identification Number	Total Field Area	Spreadable Acres
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
R12A	11.4	10.3
R12B	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**

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

**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

Field Identification Number	Total Field Area	Spreadable Acres, For permitted Wastes That Do Not Contain Manure and/ or Phosphorous	Spreadable Acres for Manure and Phosphorous Containing Wastes
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**

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.				
Field Identification Number	Total Field Area	Spreadable Acres, For permitted Wastes That Do Not Contain Manure and/ or Phosphorous	Spreadable Acres for Manure and Phosphorous Containing Wastes	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)
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
Total	407.9	309.59	157.80	

*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 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. Heifer 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 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 CAFR 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

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 Leq, 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,

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:**

(l) 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 1×10^{-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

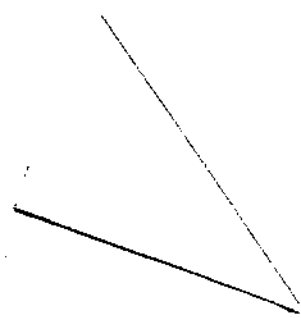
Average Product Generated (cubic yards per day)	Number of Analyses
>50	52
5-50	12
<5	6

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



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