

**All One One All- A D'Artagnan Regenerative
Farm**

**ENGINEER'S REPORT
FOR PUBLIC WATER SUPPLY IMPROVEMENT**

**Town of Goshen
Orange County, New York**

**PREPARED BY:
PIETRZAK & PFAU ENGINEERING & SURVEYING, PLLC
262 GREENWICH AVENUE
GOSHEN, NEW YORK 10924**

**P&P No. 19136.01
May 2020
August 2020**

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I. Introduction:

The purpose of this report is to describe the proposed Public Water Supply to serve the All One One All - A D'Artagnan Regenerative Farm project. Based on the size of the facility and type of use, it is assumed that the facility will serve at least twenty-five (25) individuals more than sixty (60) days out of the year making the system a public water system. The facility will operate year round serving the same people classifying the system as a non-transient non-community water supply requiring approval from the Orange County Department of Health (OCDOH).

The proposed project is located at the intersection of Craigville Road and Coleman Road in the Town of Goshen, Orange County, New York (See Location Map in Appendix 1). The project is currently identified as Section 8 Block 1 Lot 6 on the Town of Goshen Tax Map. The total site area is approximately 14.50± acres. The project is located in the Rural (RU) Zoning District and the use proposed use for the project is a restaurant.

The All One One All – A D'Artagnan Regenerative Farm Site Plan consists of the proposed conversion of an existing barn to a restaurant, farm shop, and farm stand along with parking and ancillary facilities. Additionally, the existing dwelling located on the southern end of the property is to remain.

The project is to be sewered by a proposed effluent pipe from the restaurant to a septic tank, then to a proposed septic system as shown on the site plan. The facility shall be owned and operated by the property owner.

II. Water Supply

A. Well Siting

The existing well is located behind the northwest corner of the farmhouse.

B. Water Use Data

The water use calculation is based on the *New York State D.E.C. Design Standards for Intermediate Sized Wastewater Treatment Systems*.

The well testing is based on the following water demand calculations:

Restaurant: 35 gal/day/seat x 100 seats = 3,500 gal/day

Reduce flows by 20% utilizing post 1994 water fixtures

$3,500 - (3,500 \times 20\%) = 2,800 \text{ gal/day or } 1.94 \text{ gal/min}$

House: 110 gal/day/bedroom x 6 bedrooms = 660 gal/day

Total water usage = 3,460 gal/day

C. Aquifer Testing

The existing well was quality tested in August 2019. The results of the tests can be found in the “Analytical Report” prepared for EnviroTest Laboratories Inc. The testing criteria was based on both local (Town of Goshen) and state (NYSDOH) testing requirements.

Water quality samples were collected and submitted to a NYSDOH approved laboratory for analysis. The water quality results were that the water was in compliance with the minimum standards as per Department of Health Chapter 1.

State Sanitary Code Part 5. Drinking Water Supplies Subpart 5-1. Public Water Systems.

III. Water Treatment

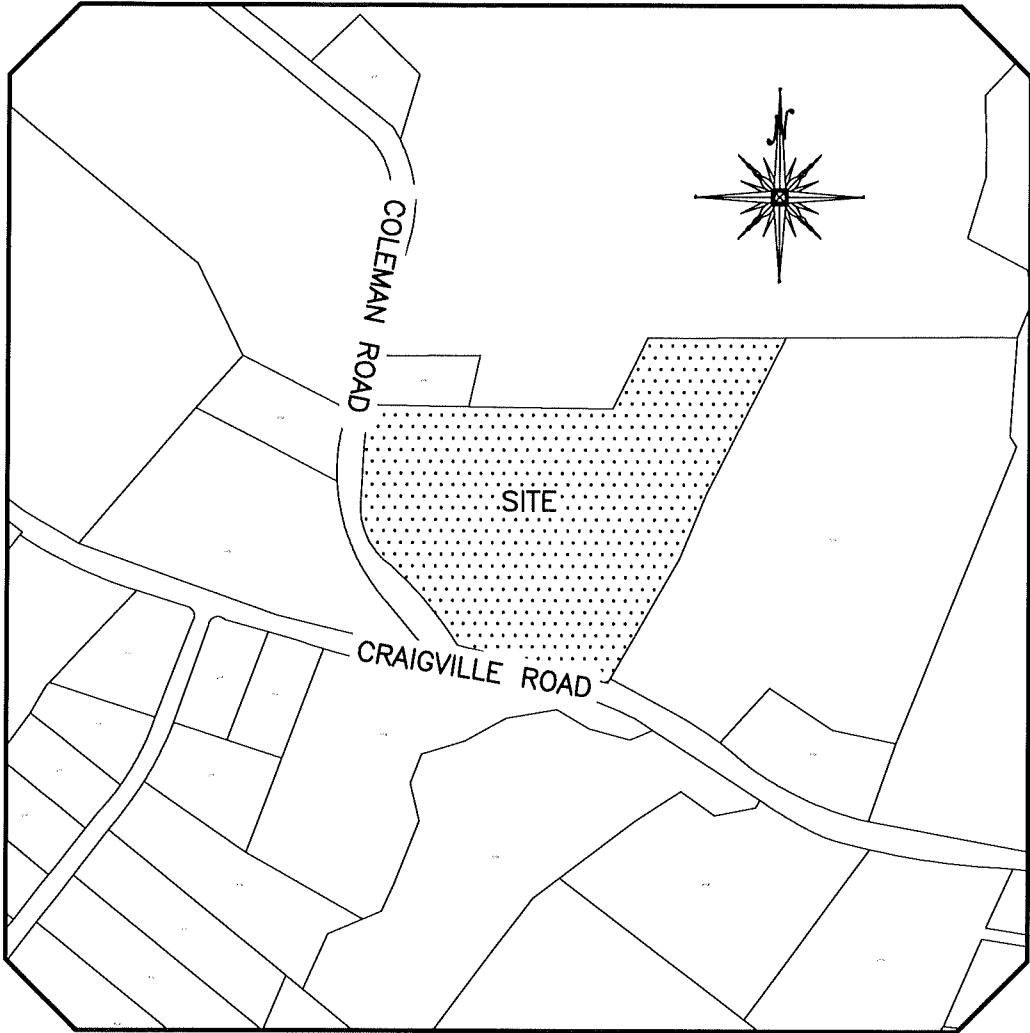
Water quality analysis (see EnviroTest Laboratories, Inc report) conducted on well water samples indicate good quality water in compliance with the minimum standards set forth in the State Sanitary Code. Therefore, no treatment will be needed.

The stabilized well yield for this project is 5 gpm (approximately 2.6 times the average daily rate).

19136.01 NYSDOH Engineers Report 2020-5-6

APPENDIX

LOCATION MAP



LOCATION MAP
SCALE: 1" = 500'

EnviroTest Laboratories Inc.

Analytical Report

ANALYTICAL REPORT

Job Number: 420-157480-1

SDG Number: 221 Craigsville Rd Goshen NY 10924

Job Description: Walkin Client

For:

Mount Joy Home Inspections

156 Mt Joy Rd

Middletown, NY 10941

Attention: Jason French

Laura L. Marciano

Laura L Marciano

Customer Service Manager

lmarciano@envirotestlaboratories.com

08/13/2019

cc: Ms. Renee Cusack

NYSDOH ELAP does not certify for all parameters. EnviroTest Laboratories does hold certification for all analytes where certification is offered by ELAP unless otherwise specified in the Certification Information section of this report Pursuant to NELAP, this report may not be reproduced, except in full, without written approval of the laboratory. EnviroTest Laboratories Inc. certifies that the analytical results contained herein apply only to the samples tested as received by our laboratory. All questions regarding this report should be directed to the EnviroTest Customer Service Representative.

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOH PH-0554

Job Narrative
420-J157480-1

Comments

No additional comments.

Receipt

All samples were received in good condition within temperature requirements.

GC/MS VOA

No analytical or quality issues were noted.

GC/MS Semi VOA

Method 525.2: The laboratory control standard (LCS) for this analytical batch did not meet the range of acceptable recoveries for the analytes indicated by an asterisk (*) on the results form. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported with confidence of no false negatives.

No other analytical or quality issues were noted.

General Chemistry

No analytical or quality issues were noted.

Biology

No analytical or quality issues were noted.

Organic Prep

No analytical or quality issues were noted.

METHOD SUMMARY

Client: Mount Joy Home Inspections

Job Number: 420-157480-1
SDG Number: 221 Craigsville Rd Goshen NY 10924

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds by GC/MS	EnvTest	SW846 8260C	
Closed System Purge & Trap Low Level	EnvTest		EPA 5035-L
Semivolatile Compounds by GC/MS	EnvTest	SW846 8270D	
Microwave Extraction	EnvTest		SW846 3546
Matrix: Water			
Anions by Ion Chromatography	EnvTest	EPA 300.0 Rev. 2.1	
EPA 505 Pesticide/PCB	Pace Mell	EPA 505	
Semivolatile Organic Compounds in Drinking Water by GCMS	EnvTest	EPA 525.2	
Determination of Semivolatile Organic Compounds in	EnvTest		EPA 525.2
Phosphorus, All Forms, Colorimetric, Two Reagent	EnvTest	EPA EPA 365.3 1978	
Sample Digestion for Total Phosphorous	EnvTest		MCAWW 365.2/365.3/365
Ammonia (Automated Phenate)	EnvTest	SM22 SM 4500 NH3 G	
Ammonia Distillation	EnvTest		SM22 SM4500 NH3B
Total Coliform and Escherichia coli by Collert - Presence/Absence	EnvTest	SMWW SM 9223	

Lab References:

EnvTest = EnviroTest

Pace Mell = Pace Mellville

Method References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM22 = "Standard Methods for the Examination of Water and Wastewater", 22nd Edition

SMWW = "Standard Methods for the Examination of Water and Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Jason French
 Mount Joy Home Inspections
 156 Mt Joy Rd
 Middletown, NY 10941

Job Number: 420-157480-1
 Sdg Number: 221 Craigsville Rd Goshen NY 10924

Client Sample ID: Before System
 Lab Sample ID: 420-157480-1

Date Sampled: 07/23/2019 1700
 Date Received: 07/24/2019 1355
 Client Matrix: Drinking Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 525.2			Date Analyzed:	08/05/2019 1351	
Prep Method: 525.2			Date Prepared:	08/02/2019 1100	
Atrazine	ND *	ug/L	0.057	0.095	1.0
Benzo[a]pyrene	ND	ug/L	0.019	0.019	1.0
Butachlor	ND *	ug/L	0.057	0.095	1.0
Bis(2-ethylhexyl) phthalate	ND	ug/L	0.57	0.57	1.0
Di(2-ethylhexyl)adipate	ND	ug/L	0.57	0.57	1.0
Metolachlor	ND	ug/L	0.067	0.095	1.0
Metribuzin	ND *	ug/L	0.086	0.19	1.0
Propachlor	ND *	ug/L	0.019	0.095	1.0
Simazine	ND *	ug/L	0.057	0.067	1.0
Surrogate				Acceptance Limits	
2-Nitro-m-xylene	95	%		70 - 130	
Perylene-d12	79	%		70 - 130	
Triphenylphosphate	116	%		70 - 130	
Method: 300.0 Rev. 2.1			Date Analyzed:	07/24/2019 1540	
Nitrate as N	ND	mg/L	0.010	0.25	1.0

Jason French
 Mount Joy Home Inspections
 156 Mt Joy Rd
 Middletown, NY 10941

Job Number: 420-157480-1
 Sdg Number: 221 Craigsville Rd Goshen NY 10924

Client Sample ID: Before System
 Lab Sample ID: 420-157480-1

Date Sampled: 07/23/2019 1700
 Date Received: 07/24/2019 1355
 Client Matrix: Drinking Water

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: EPA 365.3 1978			Date Analyzed:	07/25/2019 1428	
Prep Method: 365.2/365.3/365			Date Prepared:	07/25/2019 1007	
Phosphorus, Total	0.12	mg/L	0.10	0.10	1.0
Method: SM 4500 NH3 G			Date Analyzed:	07/30/2019 1359	
Prep Method: SM4500 NH3B			Date Prepared:	07/29/2019 1403	
Ammonia as N	ND	mg/L	0.50	0.50	1.0

Jason French
Mount Joy Home Inspections
156 Mt Joy Rd
Middletown, NY 10941

Job Number: 420-157480-1
Sdg Number: 221 Craigsville Rd Goshen NY 10924

Client Sample ID: Kitchen Sink
Lab Sample ID: 420-157480-2

Date Sampled: 07/23/2019 1705
Date Received: 07/24/2019 1355
Client Matrix: Drinking Water

Analyte	Result/Qualifier	Unit	NONE	NONE	Dilution
Method: SM 9223			Date Analyzed:	07/24/2019 1531	
Coliform, Total	Absent	NONE			1.0
Escherichia coli	Absent	NONE			1.0

Jason French
 Mount Joy Home Inspections
 156 Mt Joy Rd
 Middletown, NY 10941

Job Number: 420-157480-1
 Sdg Number: 221 Craigsville Rd Goshen NY 10924

Client Sample ID: Grab
 Lab Sample ID: 420-157480-3

Date Sampled: 07/23/2019 1700
 Date Received: 07/24/2019 1355
 Client Matrix: Solid
 Percent Solids: 79

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
Method: 8260C			Date Analyzed:	07/24/2019 1538	
Prep Method: 5035-L			Date Prepared:	07/24/2019 1538	
Benzene	ND	ug/Kg Dry	1.2	1.2	1.0
n-Butylbenzene	ND	ug/Kg Dry	1.2	1.2	1.0
sec-Butylbenzene	ND	ug/Kg Dry	1.2	1.2	1.0
tert-Butylbenzene	ND	ug/Kg Dry	1.2	1.2	1.0
Ethylbenzene	ND	ug/Kg Dry	1.2	1.2	1.0
Isopropylbenzene	ND	ug/Kg Dry	1.2	1.2	1.0
p-Isopropyltoluene	ND	ug/Kg Dry	1.2	1.2	1.0
Naphthalene	ND	ug/Kg Dry	1.2	1.2	1.0
n-Propylbenzene	ND	ug/Kg Dry	1.2	1.2	1.0
1,2,4-Trimethylbenzene	ND	ug/Kg Dry	1.2	1.2	1.0
1,3,5-Trimethylbenzene	ND	ug/Kg Dry	1.2	1.2	1.0
Toluene	ND	ug/Kg Dry	1.2	1.2	1.0
Methyl tert-butyl ether	ND	ug/Kg Dry	1.2	1.2	1.0
Xylenes, Total	ND	ug/Kg Dry	2.3	2.3	1.0
Surrogate				Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)	99	%		73 - 128	
4-Bromofluorobenzene	100	%		49 - 138	
Toluene-d8 (Surr)	97	%		72 - 143	

Jason French
 Mount Joy Home Inspections
 156 Mt Joy Rd
 Middletown, NY 10941

Job Number: 420-157480-1
 Sdg Number: 221 Craigsville Rd Goshen NY 10924

Client Sample ID: Lab Comp
 Lab Sample ID: 420-157480-4

Date Sampled: 07/24/2019 1445
 Date Received: 07/24/2019 1355
 Client Matrix: Solid
 Percent Solids: 72

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 8270D				Date Analyzed: 07/25/2019 1802	
Prep Method: 3546				Date Prepared: 07/25/2019 1030	
Acenaphthene	ND	ug/Kg Dry	110	440	1.0
Acenaphthylene	ND	ug/Kg Dry	99	440	1.0
Anthracene	ND	ug/Kg Dry	110	440	1.0
Benzo[a]anthracene	ND	ug/Kg Dry	80	440	1.0
Dibenz(a,h)anthracene	ND	ug/Kg Dry	85	440	1.0
Chrysene	ND	ug/Kg Dry	84	440	1.0
Fluoranthene	ND	ug/Kg Dry	85	440	1.0
Benzo[b]fluoranthene	ND	ug/Kg Dry	95	440	1.0
Benzo[k]fluoranthene	ND	ug/Kg Dry	76	440	1.0
Fluorene	ND	ug/Kg Dry	100	440	1.0
Naphthalene	ND	ug/Kg Dry	98	440	1.0
Benzo[g,h,i]perylene	ND	ug/Kg Dry	92	440	1.0
Phenanthrene	ND	ug/Kg Dry	120	440	1.0
Pyrene	130 J	ug/Kg Dry	94	440	1.0
Benzo[a]pyrene	ND	ug/Kg Dry	66	440	1.0
Indeno[1,2,3-cd]pyrene	ND	ug/Kg Dry	86	440	1.0
Surrogate				Acceptance Limits	
2-Fluorobiphenyl	67	%		10 - 120	
Nitrobenzene-d5	40	%		10 - 120	
Terphenyl-d14	49	%		10 - 120	

DATA REPORTING QUALIFIERS

Client: Mount Joy Home Inspections

Job Number:
Sdg Number: 221 Craigsville Rd Goshen NY 10924

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	*	LCS or LCSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Certification Information

Client: Mount Joy Home Inspections

Job Number:

Sdg Number: 221 Craigsville Rd Goshen NY 10924

The following analytes are Not Part of the ELAP scope of accreditation:

Sulfur, Tungsten, Bicarbonate Alkalinity, 7 Day BOD 5210C, 28 Day BOD, Soluble BOD, Carbon Dioxide, Carbonate Alkalinity, CBOD Soluble, Chlorine, Cyanide (WAD), Ferrous Iron, Ferric Iron, Total Nitrogen, Total Organic Nitrogen, Dissolved Oxygen, pH, Solids (Fixed), Solids (Percent), Solids (Percent Moisture), Solids (Percent Volatile), Solids (Volatile Suspended), Temperature, TKN (Soluble), COD (Soluble), Total Inorganic Carbon, 2-Aminopyridine, 3-Picoline, 1-Methyl-2-pyrrilidinone, Aziridine, Dimethyl sulfoxide, 1-Chlorohexane, 1,2,4,5-Tetramethylbenzene, 4-Ethyl toluene, p-Diethylbenzene, Iron Bacteria, Salmonella, Sulfur Reducing Bacteria, & UOD (Ultimate Oxygen Demand).

The following analytes are Not Part of ELAP Potable Water scope of accreditation:

Ammonia (SM 4500NH3G), TKN (351.2), Phosphorus (365.3), Nitrate-Nitrite (10-107-4-1C, 353.2), m-Xylene & p-Xylene (502.2, 524), o-Xylene (502.2, 524), Sulfide (SM4500SD), Acenaphthene (525.2), Acenaphthylene (525.2), Fluoranthene (525.2), Fluorene (525.2), Phenanthrene (525.2), Anthracene (525.2), Pyrene (525.2), Benzo[a]anthracene (525.2), Benzo[b]fluoranthene (525.2), Benzo[g,h,i]perylene (525.2), Benzo[k]fluoranthene (525.2), Indeno[1,2,3-cd]pyrene (525.2), & Dibenz(a,h)anthracene (525.2).

The following analytes are Not Part of ELAP Solid and Hazardous Waste scope of accreditation:

Ammonia (SM 4500NH3G), TKN (351.2), Phosphorus (365.3), 1,2-Dichloro-1,1,2-trifluoroethane (8260), & Chlorodifluoromethane (8260).

The following analytes are Not Part of ELAP Non Potable Water scope of accreditation:

Dissolved Organic Carbon (5310C), Mecoprop (8151A), MCPA (8151A), Propylene Glycol (8015D).

Definitions and Glossary

Client: Mount Joy Home Inspections

Job Number:

Sdg Number: 221 Craigsville Rd Goshen NY 10924

Abbreviation	These commonly used abbreviations may or may not be present in this report.
%R	Percent Recovery
DL, RA, RE	Indicates a Dilution, Reanalysis or Reextraction.
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit - an estimate of the minimum amount of a substance that an analytical process can reliably detect. A MDL is analyte- and matrix-specific and may be laboratory-dependent.
ND	Not detected at the reporting limit (or MDL if shown).
QC	Quality Control
RL	Reporting Limit - the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.
RPD	Relative Percent Difference - a measure of the relative difference between two points.

EnviroTest Laboratories Inc.

CHAIN OF CUSTODY

315 Fullerton Avenue
Newburgh, NY 12550
TEL (845) 562-0890
FAX (845) 562-0841

157480

CUSTOMER NAME: Mount Joy Home Inspection
 ADDRESS: 156 Mt Joy Rd
 CITY, STATE, ZIP: Middletown NY 10941
 NAME OF CONTACT: Jason Frenan PHONE NO.: 518 821-9059
 PROJECT LOCATION: 201 Craigville Rd Goshen NY 10924
 PROJECT NUMBER / PO NO.: Ariane Davin

REPORT TYPE: STANDARD ISRA ISRA
 NJ REG NYASP A B CLP
 OTHER: _____

TURNAROUND: NORMAL QUICK VERBAL

REPORT # (Lab Use Only): _____

SAMPLE TEMP: 0.3° C

SAMPLE REC'D ON ICE Y N

ph CHECK Y N

CHLORINE (RESIDUAL) Y N

REVIEWED BY: _____

NY PUBLIC WATER SUPPLIES

SOURCE ID: _____

ELAP TYPE: _____

FEDERAL ID: _____

Matrix
 DW = DRINKING WATER S = SOIL O = OIL
 WW = WASTE WATER SL = SLUDGE GW = GROUND WATER

NOTE: SAMPLE TEMPERATURE UPON RECEIPT MUST BE 4 ± 2°C.

ETL #	SAMPLING DATE	TIME	AM	PM	COMP	RAB	MATRIX	CLIENT I.D.	Total Number of Containers	40ml Glass	40ml Plastic	250ml Plastic	250ml Plastic	250ml Plastic	250ml Plastic	250ml Plastic	250ml Plastic	250ml Plastic	250ml Plastic	40ml Glass	40ml Glass	40ml Glass	DO	
7/23/19 1700							DW	Before System 6	6	2	1	1	1	1	1	1	1	1	1	1	1	1	2	802 S. 17m
7/23/19 1705							DW	Kitchen Sink 1	1															
7/24/19 1700							S	Grab 43	43															
7/24/19 1745							S	Lab Comp 42	42															
									RD															



Before System
 Date Sampled: 7/23/2019 420-1367595

SAMPLES SUBMITTED FOR ANALYSIS WILL BE SUBJECT TO THE ETL TERMS AND CONDITIONS OF SALE UNLESS ALTERNATE TERMS ARE AGREED IN WRITING.

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
		7/23/19	1700				
		7/24/19	1355				

COMMENTS: Jason c mount joy home inspection. page 1 of 13

08/13/2019

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Mount Joy Home Inspections

Job Number: 420-157480-1
SDG Number: 221 Craigsville Rd Goshen NY 10924

Login Number: 157480

Question	T/F/NA	Comment
Samples were collected by ETL employee as per SOP-SAM-1	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is recorded.	True	0.3 C
Cooler Temp. is within method specified range.(0-6 C PW, 0-8 C NPW, or BAC <10 C	True	
If false, was sample received on ice within 6 hours of collection.	NA	
Based on above criteria cooler temperature is acceptable.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	