Wastewater Treatment Division

Biosolids Annual Report Form

Facility Information:

DEQ File Number:	111142	**Permit Number:**	102497
Name:	City of Newport Oregon Wastewater Treatment Plant	**Permit Type:**	**NPDES**
Location Address:	5525 SE 50 TH Place		WPCF
	Newport, Oregon 97366		
Mailing Address:	169 N Coast Highway		
	Newport Oregon 97365		
Contact name:	Andrew Grant	Telephone:	(541) 574 – 3371
	Wastewater Treatment Plant Supervisor		
E-mail:	a.grant@newportoregon.gov	Fax:	(541) 265 - 3301

Biosolids Treatment Process:

Lime Stabilization/Pasteurization/Envessel pasteurization/ are used to produce Class "A" Biosolids due to the pathogen destruction obtained by heating the sludge to 70^0C for 30 minutes. In addition, the pH is raised above 11.5 for over 24 hours. The envessel pasteurization creates an exothermic reaction of lime and water to achieve a process temperature of 70^0 C or higher. The combination of lime plus heat achieves both pathogen and the vector attraction reduction requirements.

EPA 40 CFR Parts 503.32(5)(i) **Pathogen Certification Statement**

Class A—Alternative 5. Process to Further Reduce Pathogens (PFRP), Option 7 Pasteurization

Biosolids are held at temperature of at least 70^0C (158^0F) for 30 minutes or longer.

I certify, under penalty of law, that the information used to determine compliance with the Class A Pathogen Reduction requirement in 40 CFR Parts 503.32(a) Table 5 - 4 (PFRP's) #7 Pasteurization. (Class A) #2 was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluated this information. I also certify that all Class A biosolids were land applied. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

Date: 2-10-18

Name: Andrew Grant

Signature:

EPA 40 CFR Parts 503.33(b) Vector Attraction Reduction Certification Statement

(Table 5-8 Option 12)

(b)(12)

Vector Attraction Reduction is accomplished during pasteurization. Biosolids are held at a temperature above 70^{0}C (158^{0}F) for a minimum 30 minutes and lime stabilization is used to raise the pH to 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.

I certify, under penalty of law, that the information used to determine compliance with Vector Attraction Reduction requirements in 40 CFR Part 503.33(b)(Table 5-8 Option 6). Biosolids product was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluated this information. I also certify that all Class A biosolids were land applied. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

Date: 2-10-18

Name: ANDREW GRANT

Signature:

Generation

Wastewater Sources & Volumes:	Million Gallons (MG)/yr		Solids Produced:	Dry Tons (DT)/yr
Municipal	774.128	MG/yr	Primary	
Industrial			Secondary	513 DT/yr
Septage	0.356	MG/yr	Other	
Total Gallons	774.484	MG/yr	Total DT	513 DT/yr

Preparation

Mark applicable processes and on separate sheet describe the processes and equipment used for:

Screening	**X**
Grit removal	**X**
Settling	**X**
Thickening	
Digestion	partial, aerated storage tank
Dewatering	**X**

Storage

For each container type, list numbers, sizes, materials (i.e. steel, etc.) and volume.

Containers	X number of units	X volumes of each storage container	(material)	= Total Volume
Solids Holding Tank	1	0.36 MG	Concrete	0.36 MG
Clarifiers	2	0.80 MG	Concrete	1.60 MG
Lagoons				
Drying beds				
Aeration Basin	1	1.44 MG	Concrete	1.44 MG
Total Capacity:				3.40 MG

Application

List transport equipment used from facility to sites:

A 14 yard manure spreader truck.

List application method and equipment used to apply at sites: (e.g. truck splash plate, spray gun, manure spreader, etc.).

A 14 yard manure spreader on a 2003 International truck.

Biosolids Quality

EQ [Class A] Class B

Testing frequency (times/yr) 1 [4] 6 12

[in Metric Tons] [<290] [290>1,500] [1,500>15,000] [³ 15,000]

[in U.S. Tons] [<319] [319>1,650] [1,650>16,500] [³ 16,500]

[Choose one, based on dry weight of biosolids produced and land applied annually.]

Test data:

Use Tables below to record quarterly or annual testing results; use average column for annual test data.
If testing more frequently (monthly), supply data on separate sheet.

Nutrient Monitoring

Item	*1st quarter*	*2nd quarter*	*3rd quarter*	*4th quarter*	*Average*
TKN	4.1	4.3	4.2	4.0	4.2
NO3-N	ND @0.01	ND @0.01	ND @0.01	ND @0.01	ND @0.01
NH4-N	0.21	0.13	0.18	0.20	0.18
P	0.77	1.3	0.73	0.89	0.92
K	0.39	0.78	0.52	0.54	0.56
pH	13	12.5	12	13	12.6
Total Solids	30	29	34	32	31
Volatile Solids	31	46	31	33	35

Test data is expressed in % dry weight (dw), except pH which is standard units.

Pollutant Monitoring

Item	*1st quarter*	*2nd quarter*	*3rd quarter*	*4th quarter*	*Average*
Arsenic (As)	4.2	9.0	6.7	5.6	6.4
Cadmium (Cd)	0.99	1.1	.62	2.2	1.2
Chromium (Cr)	9.2	7.2	5.9	7.5	7.5
Copper (Cu)	55.5	78.1	68.8	56.2	64.7
Lead (Pb)	10	6.5	17.4	30.2	16.0
Mercury (Hg)	0.123	0.105	0.108	0.127	0.116
Molybdenum (Mo)	4.1	3.6	2.3	1.6	2.9
Nickel (Ni)	11.4	7.99	7.01	10.3	9.2
Selenium (Se)	12	3.0	ND	1.9	4.2
Zinc (Zn)	184	379	255	169	247

Test data is expressed in mg/kg (ppm) based on dry weight.

Land Application Site Information

For all sites used during the reporting year period, provide the following information:

(This information can be provided on a separate spreadsheet if available.)

Site Name (resident)	Site ID No.	Location (Sec,Twn,Rge)	Crop(s)	Acres available
City of Newport Municipal Airport	Area 52 (AP)	135 SE 84 TH Street South Beach Newport OR 97366	Grass	52
Terry and Kay Keady Farm	KY	28,12,11W	Grass	25

Site Name (resident)	N lb/ac Applied	Application rate DT/ac	Total DT/site	Seasonal restrictions
City of Newport Municipal Airport	825	9.82	510.75	None
Terry and Kay Keady Farm	7.56	0.09	2.25	Fields too wet

NOTE: Attach the following items if applicable.

Soil test data if site is proposed for application for third consecutive year.

This will apply to all sites used in 2017 that were applied to in 2015 & 2016.

See **OAR 340-50-080(5)**

Cumulative loadings & site life information for sites receiving biosolids with any trace pollutants exceeding Table 3 values.

N/A

See **OAR 340-50-035(6)(b)**

ALG
ANALYTICAL LABORATORY GROUP

ALG ORELAP ID #OR100012
361 West 5th Ave
Eugene, OR 97401
TEL: (541) 485-8404 FAX: (541) 484-5995
Website:

Definition Base

WO#: 1702939
Date: 3/8/2017

Definitions:

Result: Analyte concentration reported

RL: Reporting Limit/Limit of Quantitation; the limit to which data is compared for reporting. Analyte concentrations below the reporting limit are reported as ND or with a "J" qualifier.

Units: The units in which the analyte concentration is reported.

Qualifiers:

*	Value exceeds Maximum Contaminant Level (MCL)
A	Accredited by ORELAP
C	Value is below Minimum Compound Limit.
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
LOD	Limit of Detection
MCL	Maximum Contaminant Level
NAR	See note in Case Narrative
ND	Not Detected at the Reporting Limit
PL	Permit Limit
R	RPD outside accepted recovery limits
RL	Reporting Detection Limit
U	Samples with CalcVal < MDL
W	Sample container temperature was outside of the limits as specified by the method.

Definitions:

% REC: Percent Recovery; a measure of accuracy expressed as a percentage of a measured (recovered) concentration compared to the known concentration added to the sample.

% RPD: Relative Percent Difference; a measure of precision expressed as a percentage of the difference between two duplicates relative to the average concentration.

DF: Dilution factor; the dilution factor applied to the prepared sample.

DUP: Duplicate; aliquots of a sample taken from the same container under laboratory conditions and processed and analyzed independently, used to calculate Precision (%RPD).

LCS: Laboratory Control Sample; prepared by adding a known mass of target analytes to a specified amount of de-ionized water and prepared with the batch of samples, used to calculate Accuracy (%REC).

LCSD: The duplicate sample of the LCS, used to calculate both Accuracy (%REC) and Precision (%RPD)

MBLK: Method Blank; a sample of similar matrix that is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedure, and in which no target analytes or interferences are present at concentrations that impact the analytical results for sample analyses.

MS: Matrix Spike; prepared by adding a known mass of target analytes to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available, used to calculate Accuracy (%REC)

MSD: The duplicate sample of the MS, used to calculate both Accuracy (%REC) and Precision (%RPD)

ND: Not Detected. The analyte level is below the lowest point the laboratory can test for.

PL: Permit limit; only applicable to wastewater reports.

PQL: Practical Quantitation Level or Reporting Limit; the limit to which data is compared for reporting.

Qual: Qualifier that applies to the analyte reported

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Website:

QC SUMMARY REPORT

08-Mar-17

WO#: 1702939
Client: City of Newport
Project: Newport WWTP

QC Type	Sample ID	Analyses	Method	Analysis Date	Result	Units	RL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
MBLK	MB-R15228	Total Solids	EPA 160.3	2/22/2017	ND	%	0.10									
MBLK	MB-R15228	Volatile Solids	EPA 160.3	2/22/2017	ND	%	0.10									
MBLK	MB-2434	Nitrate	EPA 300.0	2/24/2017	ND	% Dry W	0.010									
MBLK	MB-2448	Ammonia-N	EPA 350.2	3/2/2017	ND	mg/L	0.010									
MBLK	MB-2438	Nitrogen, Kjeldahl, Total	EPA 351.3	3/1/2017	ND	% Dry W	0.010									
MBLK	MB-2424	Phosphorus, Total (As P)	EPA 365.3	2/24/2017	ND	% Dry W	.00010									
LCS	LCS-2434	Nitrate	EPA 300.0	2/24/2017	2.6	% Dry W	0.010	2.500	0	103	85	115				
LCS	LCS-2448	Ammonia-N	EPA 350.2	3/2/2017	4.6	mg/L	0.010	5.000	0	91.2	85	115				
LCS	LCS-2438	Nitrogen, Kjeldahl, Total	EPA 351.3	3/1/2017	4.7	% Dry W	0.010	5.000	0	94.6	85	115				
LCS	LCS-2424	Phosphorus, Total (As P)	EPA 365.3	2/24/2017	0.75	% Dry W	.00010	0.8000	0	94.3	85	115				
LCS	LCS-R15220	Hydrogen Ion (pH)	EPA 9045D	2/22/2017	7.1	pH Units	0	7.030	0	100	90	110				

Qualifiers:

Original

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Website:

Analytical Report

Date Reported: **3/8/2017**

WO#: 1702939
CLIENT: City of Newport
Project: Newport WWTP

Received Date: 2/22/2017 3:04:00 PM
Sampler Name Ed McCoy and Dennis Lilly
Matrix: Biosolid

Lab ID: 1702939-001 **Client Sample ID** Biosolid Grab **Collection Date:** 2/22/2017 12:00:00 PM

Analyses	Method	Result	Qual	RL	LOD	Units	Date Analyzed	Analys
Ammonia-N	EPA 350.2	**0.21**		0.010	0.0050	%-dry	03/02/17 16:18	AS
Nitrate	EPA 300.0	**ND**		0.010	0.0050	% Dry W	02/24/17 15:16	RO
Hydrogen Ion (pH)	EPA 9045D	**13**	H	0	0	pH Units	02/22/17 17:40	AS
Phosphorus, Total (As P)	EPA 365.3	**0.77**		0.00010	0.00010	% Dry W	02/24/17 15:00	RV
Percent Moisture	D2216	**70**		0.10	0	%	02/21/17 11:21	RV
Nitrogen, Kjeldahl, Total	EPA 351.3	**4.1**		0.010	0	% Dry W	03/01/17 10:00	ER
Total Solids	EPA 160.3	**30**		0.10	0	%	02/22/17 16:42	RV
Volatile Solids	EPA 160.3	**31**		0.10	0	%	02/22/17 16:42	RV

Definitions:
- A Accredited by ORELAP
- LOD Limit of Detection
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- PL Permit Limit
- RL Reporting Detection Limit

Qualifiers:
- H Holding times for preparation or analysis exceeded

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Website:

Case Narrative

WO#: **1702939**
Date: **3/8/2017**

CLIENT: City of Newport
Project: Newport WWTP

This report presents the results of the analyses of the sample(s) received on the date above and assigned the listed ALG lab report numbers. Test results relate only to the parameters tested and to the samples as received by the laboratory.

All analyses were performed according to the Analytical Laboratory Group, Inc. Quality Assurance Program.
All QA/QC requirements were met except as noted below.

Analytical comments are noted with data flags on the reports and/or below.

pH by EPA 9045D: pH should be analyzed as soon as possible following sample collection. Sample(s) analyzed on receipt in laboratory.

Metals by EPA 6010B, Mercury by EPA 7471A and Total Solids by SM 2540G were analyzed by Neilson Research Corporation, Medford OR; ORELAP ID# OR100016. No anomalies associated with the analysis of these sample(s) were reported except as noted in the NRC Case Narrative or qualified with data flags on the NRC report.

ALG
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ALG ORELAP ID #OR100012
361 West 5th Ave
Eugene, OR 97401
TEL: (541) 485-8404 FAX: (541) 484-5995
Website:

March 08, 2017

Mark Worden
City of Newport
169 SW Coast Hwy
Newport, OR 97365
TEL: (541) 574-3372
FAX

RE: Newport WWTP Order No.: 1702939

Dear Mark Worden:

Analytical Laboratory Group received 1 sample(s) on 2/22/2017 for the analyses presented in the following report.

The analysis was performed according to our laboratory's NELAP/TNI-approved quality assurance program. Any exceptions to this quality assurance program are noted on the case narrative.

Testing methods used are sufficiently sensitive enough to meet the requirements that support client/permittee NPDES permits that we have on file. The client is responsible for reviewing reports. The permittee is responsible for meeting permit limits.

Quality control data is within laboratory defined or method specified acceptance limits except if noted on the case narrative.

If you have any questions regarding these tests results, please feel free to call.

Kimberly J. Reever Morghan

Kimberly Reever Morghan
Quality Manager
361 West 5th Ave
Eugene, OR 97401

NEILSON RESEARCH CORPORATION
Environmental Testing Laboratory

3/7/2017

Cynthia O Kelley
Analytical Laboratory Group, Inc.
361 West Fifth Avenue
Eugene, OR 97401

TEL: (800) 262-5973
FAX (541) 484-5995

RE: 1702939

Order No.: 1702809

Dear Cynthia O Kelley:

Neilson Research Corporation received 1 sample(s) on 2/24/2017 for the analyses presented in the following report.

The results relate only to the parameters tested or to the sample as received by the laboratory. This report shall not be reproduced except in full, without the written approval of Neilson Research Corporation. If you have any questions regarding these test results, please feel free to call.

Sincerely,
Neilson Research Corporation

Ronald W. Canady
Project Manager

Neilson Research Corporation

245 South Grape Street, Medford, Oregon 97501 541-770-5678 Fax 541-770-2901

Analysis Report

ORELAP 100016
EPA OR00028

CLIENT: Analytical Laboratory Group, Inc.
Project: 1702939
Lab Order: 1702809

Date: 07-Mar-17

CASE NARRATIVE

The analyses were performed according to the guidelines in the Neilson Research Corporation Quality Assurance Program. This report contains analytical results for the sample(s) as received by the laboratory.

Neilson Research Corporation certifies that this report is in compliance with the requirements of NELAP. No unusual difficulties were experienced during analysis of this batch except as noted below or qualified with data flags on the reports.

Neilson Research Corporation

245 South Grape Street, Medford, Oregon 97501 541-770-5678 Fax 541-770-2901

Analysis Report

ORELAP 100016
EPA OR00028

Analytical Laboratory Group, Inc.
361 West Fifth Avenue
Eugene, OR 97401
Client Sample ID: **1702939-001B**
Sample Location: **Newport WWTP**
Project: **1702939**

Lab Order: **1702809**
NRC Sample ID **1702809-01A**
Collection Date: **2/22/2017 12:00:00 PM**
Received Date: **2/24/2017 9:50:00 AM**
Reported Date: **3/7/2017 12:00:11 PM**
Matrix: **Solid**

ANALYTICAL RESULTS

Analyses	Result	Qual	MDL	MRL	Units	DF	NELAP	Date Analyzed
TRACE METALS			**EPA 7471A**					Analyst: **OML**
Mercury	0.123		0.00924	0.0285	mg/Kg-dry	1	A	3/2/2017
TRACE METALS			**EPA 6010B**					Analyst: **BAR**
Arsenic	4.2	J	0.838	13.7	mg/Kg-dry	1	A	2/28/2017
Cadmium	0.99	J	0.0307	2.75	mg/Kg-dry	1	A	2/28/2017
Chromium	9.2	J	0.0641	13.7	mg/Kg-dry	1	A	2/28/2017
Copper	55.5		0.208	2.75	mg/Kg-dry	1	A	2/28/2017
Lead	10	J	0.441	13.7	mg/Kg-dry	1	A	2/28/2017
Molybdenum	4.1	J	0.0601	13.7	mg/Kg-dry	1	A	2/28/2017
Nickel	11.4		0.112	1.37	mg/Kg-dry	1	A	2/28/2017
Potassium	3990		0.405	13.7	mg/Kg-dry	1	A	2/28/2017
Selenium	12	J	1.20	13.7	mg/Kg-dry	1	A	2/28/2017
Zinc	184		0.248	13.7	mg/Kg-dry	1	A	2/28/2017
% TOTAL SOLIDS			**SM 2540G**					Analyst: **SCM**
Total Solids	31.6		0.0100	0.01	%	1	A	2/28/2017

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Minimum Reporting Limit
S	Spike Recovery outside accepted recovery limits		

DATA FLAGS

B	Analyte detected in the associated method blank.
BA	BOD Alternative Calculation: The initial results performed by Standard Methods did not fall within parameters of the Standard Methods calculation. An alternate approved calculation was performed using the HACH method and the value reported is an estimated concentration.
C	Sample(s) does not meet NELAP/ORELAP sample acceptance criteria. See Case Narrative.
C1	Sample(s) does not meet NELAP/ORELAP sample acceptance criteria for temperature.
CF	Results confirmed by re-analysis.
CU	Cleanup performed as specified by method.
D1	The diesel elution pattern for the sample is not typical.
D2	The sample appears to be a heavier hydrocarbon range than diesel.
D3	The sample appears to be a lighter hydrocarbon range than diesel.
D4	Detected hydrocarbons do not have pattern and range consistent with typical petroleum products and may be due to biogenic interference.
D5	Detected hydrocarbons in the diesel range appear to be weathered diesel.
E	Estimated value.
ER	Elevated reporting limit due to matrix. Report limits (MDLs, MRLs & PQLs) are adjusted based on variations in sample preparation amounts, analytical dilutions, and percent solids, where applicable.
FC	Fecal Coliforms: Sample(s) received past 40 CFR Part 136 specified holding time. Results reported as estimated values.
G1	The gasoline elution pattern for the sample is not typical.
G2	The sample appears to be a heavier hydrocarbon range than gasoline.
G3	The sample appears to be a lighter hydrocarbon range than gasoline.
G4	Detected hydrocarbons in the gasoline range appear to be weathered gasoline.
HP	Sample re-analysis performed outside of method specified holding time.
HR	Sample received outside of method specified holding time.
HS	Sample analyzed for volatile organics contained headspace.
HT	At the client's request, the sample was analyzed outside of method specified holding time.
H	Analysis performed outside of method specified holding time.
J	Analyte detected below the Minimum Reporting Limit (MRL) and above the Method Detection Limit (MDL). The J flag result is an estimated value and the user should be aware that this data is of limited reliability.
MI	Surrogate or Matrix Spike recovery is out of control limits due to matrix interference. Sample results may be biased.
N	See Case Narrative on page 2 of report.
Q	Closing continuing calibration verification (CCV) or laboratory control sample (LCS) exceeded high recovery limits, but associated samples are non-detect and the sample results are not affected. Data meets EPA/NELAP requirements.
R	Relative percent difference (RPD) is outside of the accepted recovery limits.
R1	Relative percent difference (RPD) is outside of the accepted recovery limits. However, analyses are not controlled on RPD values for sample concentrations that are less than the reporting limit.
R3	The relative percent difference (RPD) and/or percent recovery for the duplicate (DUP) or matrix spike (MS)/matrix spike duplicate (MSD) cannot be accurately calculated due to the concentration of analyte already present in the sample.
R4	Duplicate analysis failed due to result being at or near method reporting limit.
S	Surrogate and/or matrix spike recovery is outside of the accepted recovery limits. Sample results may be biased.
S1	Surrogate or matrix spike recovery is outside of control limits due to dilution necessary for analysis.
SC	Sub-contracted to another laboratory for analysis.
SP	Sample(s) were not collected per EPA Method 5035A protocols. The results are considered minimum values.
T	Toxicity Characteristic Leaching Procedure – Sample submitted contained < 0.5% solids. If the waste contains <0.5% dry solids, the liquid portion of the waste, after filtration, is defined as the TCLP extract.
#	Value exceeds regulatory level for TCLP contaminant.
X1	The motor oil elution pattern for the sample is not typical.
X2	The sample appears to be a heavier hydrocarbon range than motor oil.
X3	The sample appears to be a lighter hydrocarbon range than motor oil.
*	Value exceeds Maximum Contaminant Level or is outside the acceptable range.

Neilson Research Corporation

Date: 07-Mar-17

CLIENT: Analytical Laboratory Group, Inc.
Work Order: 1702809
Project: 1702939

ANALYTICAL QC SUMMARY REPORT

TestCode: HG_S_7471

Sample ID	MB-37717	SampType:	MBLK	TestCode:	HG_S_7471	Units:	mg/Kg	Prep Date:	2/28/2017	RunNo:	93473
Client ID:	ZZZZZ	Batch ID:	37717	TestNo:	EPA 7471A	(EPA 7471A)		Analysis Date:	3/2/2017	SeqNo:	1417298

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.000200									

Sample ID	LCS-37717	SampType:	LCS	TestCode:	HG_S_7471	Units:	mg/Kg	Prep Date:	2/28/2017	RunNo:	93473
Client ID:	ZZZZZ	Batch ID:	37717	TestNo:	EPA 7471A	(EPA 7471A)		Analysis Date:	3/2/2017	SeqNo:	1417299

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	16.40	0.400	18.5	0	88.7	50	150				

Sample ID	1702902-01AMS	SampType:	MS	TestCode:	HG_S_7471	Units:	mg/Kg-dry	Prep Date:	2/28/2017	RunNo:	93473
Client ID:	ZZZZZ	Batch ID:	37717	TestNo:	EPA 7471A	(EPA 7471A)		Analysis Date:	3/2/2017	SeqNo:	1417309

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.3055	0.0340	0.8501	0.1247	21.3	75	125				MI

Sample ID	1702902-01AMSD	SampType:	MSD	TestCode:	HG_S_7471	Units:	mg/Kg-dry	Prep Date:	2/28/2017	RunNo:	93473
Client ID:	ZZZZZ	Batch ID:	37717	TestNo:	EPA 7471A	(EPA 7471A)		Analysis Date:	3/2/2017	SeqNo:	1417310

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.2165	0.0321	0.8026	0.1247	11.4	75	125	0.3055	34.1	25	MI

Qualifiers:

- E Value above quantitation range
- ND Not Detected at the Minimum Reporting Limit
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

CLIENT: Analytical Laboratory Group, Inc.
Work Order: 1702809
Project: 1702939

ANALYTICAL QC SUMMARY REPORT

TestCode: ICP_6010_S

Sample ID **MB-37701**	SampType: **MBLK**	TestCode: **ICP_6010_S**	Units: **mg/Kg**	Prep Date: **2/27/2017**	RunNo: **93447**
Client ID: **ZZZZZ**	Batch ID: **37701**	TestNo: **EPA 6010B**	**(EPA 3050B)**	Analysis Date: **2/28/2017**	SeqNo: **1416881**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4700	5.00									J
Cadmium	ND	1.00									
Chromium	0.06000	5.00									J
Copper	ND	1.00									
Lead	0.4200	5.00									J
Molybdenum	0.8100	5.00									J
Nickel	0.07000	0.500									J
Potassium	1.460	5.00									J
Selenium	3.860	5.00									J
Zinc	0.1100	5.00									J

Sample ID **LCS-37701**	SampType: **LCS**	TestCode: **ICP_6010_S**	Units: **mg/Kg**	Prep Date: **2/27/2017**	RunNo: **93447**
Client ID: **ZZZZZ**	Batch ID: **37701**	TestNo: **EPA 6010B**	**(EPA 3050B)**	Analysis Date: **2/28/2017**	SeqNo: **1416882**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	304.4	10.1	317	0.47	95.9	50	150				
Cadmium	155.8	2.01	182	0	85.6	50	150				
Chromium	300.6	10.1	339	0.06	88.6	50	150				
Copper	312.2	2.01	352	0	88.7	50	150				
Lead	59.83	10.1	66	0.42	90.0	50	150				
Molybdenum	96.30	10.1	111	0.81	86.0	50	150				
Nickel	163.2	1.01	190	0.07	85.9	50	150				
Potassium	8981	10.1	9370	1.46	95.8	50	150				
Selenium	180.6	10.1	210	3.86	84.2	50	150				
Zinc	180.3	10.1	206	0.11	87.5	50	150				

Qualifiers:
E Value above quantitation range
H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits
ND Not Detected at the Minimum Reporting Limit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

CLIENT: Analytical Laboratory Group, Inc.
Work Order: 1702809
Project: 1702939

ANALYTICAL QC SUMMARY REPORT

TestCode: ICP_6010_S

Sample ID **1702719-02AMS** SampType: **MS** TestCode: **ICP_6010_S** Units: **mg/Kg** Prep Date: **2/27/2017** RunNo: **93447**
Client ID: **ZZZZZ** Batch ID: **37701** TestNo: **EPA 6010B** **(EPA 3050B)** Analysis Date: **2/28/2017** SeqNo: **1416892**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	93.11	4.34	86.78	7.573	98.6	70	130				
Cadmium	78.27	0.868	86.78	2.204	87.7	70	130				
Chromium	123.6	4.34	86.78	36.35	101	70	130				
Copper	126.5	0.868	86.78	51.86	86.0	70	130				
Lead	124.3	4.34	86.78	3.388	139	70	130				MI
Molybdenum	80.07	4.34	86.78	1.827	90.2	70	130				
Nickel	131.9	0.434	86.78	50.19	94.2	70	130				
Selenium	101.9	4.34	86.78	17.36	97.4	70	130				
Zinc	142.8	4.34	86.78	162.9	-23.1	70	130				MI

Sample ID **1702719-02AMS** SampType: **MS** TestCode: **ICP_6010_S** Units: **mg/Kg** Prep Date: **2/27/2017** RunNo: **93447**
Client ID: **ZZZZZ** Batch ID: **37701** TestNo: **EPA 6010B** **(EPA 3050B)** Analysis Date: **3/1/2017** SeqNo: **1416900**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	7759	43.4	86.78	8097	-389	70	130				S1

Sample ID **1702719-02AMSD** SampType: **MSD** TestCode: **ICP_6010_S** Units: **mg/Kg** Prep Date: **2/27/2017** RunNo: **93447**
Client ID: **ZZZZZ** Batch ID: **37701** TestNo: **EPA 6010B** **(EPA 3050B)** Analysis Date: **2/28/2017** SeqNo: **1416893**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	91.52	4.28	85.53	7.573	98.1	70	130	93.11	1.73	25	
Cadmium	75.96	0.855	85.53	2.204	86.2	70	130	78.27	3.00	25	
Chromium	107.0	4.28	85.53	36.35	82.6	70	130	123.6	14.4	25	
Copper	125.6	0.855	85.53	51.86	86.3	70	130	126.5	0.696	25	
Lead	120.5	4.28	85.53	3.388	137	70	130	124.3	3.07	25	MI
Molybdenum	76.91	4.28	85.53	1.827	87.8	70	130	80.07	4.03	25	
Nickel	126.1	0.428	85.53	50.19	88.7	70	130	131.9	4.52	25	
Selenium	101.8	4.28	85.53	17.36	98.7	70	130	101.9	0.0936	25	
Zinc	141.7	4.28	85.53	162.9	-24.7	70	130	142.8	0.781	25	MI

Qualifiers:
E Value above quantitation range
H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits
ND Not Detected at the Minimum Reporting Limit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

CLIENT: Analytical Laboratory Group, Inc.
Work Order: 1702809
Project: 1702939

ANALYTICAL QC SUMMARY REPORT

TestCode: ICP_6010_S

Sample ID **1702719-02AMSD**	SampType: **MSD**	TestCode: **ICP_6010_S**	Units: **mg/Kg**	Prep Date: **2/27/2017**	RunNo: **93447**
Client ID: **ZZZZZ**	Batch ID: **37701**	TestNo: **EPA 6010B**	**(EPA 3050B)**	Analysis Date: **3/1/2017**	SeqNo: **1416901**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	8299	42.8	85.53	8097	236	70	130	7759	6.72	25	S1

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Minimum Reporting Limit	R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits

CLIENT: Analytical Laboratory Group, Inc.
Work Order: 1702809
Project: 1702939

ANALYTICAL QC SUMMARY REPORT

TestCode: SOLIDS_TOT_S

Sample ID **MB-R93448**	SampType: **MBLK**	TestCode: **SOLIDS_TOT**	Units: **%**	Prep Date:	RunNo: **93448**
Client ID: **ZZZZZ**	Batch ID: **R93448**	TestNo: **SM 2540G**		Analysis Date: **2/28/2017**	SeqNo: **1416929**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Solids	ND	0.0100									

Sample ID **1702809-01ADUP**	SampType: **DUP**	TestCode: **SOLIDS_TOT**	Units: **%**	Prep Date:	RunNo: **93448**
Client ID: **1702939-001B**	Batch ID: **R93448**	TestNo: **SM 2540G**		Analysis Date: **2/28/2017**	SeqNo: **1416931**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Solids	31.98	0.0100						31.58	1.25	5	

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Minimum Reporting Limit	R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits

Lab Order Number 1702939

Analytical Laboratory Group, Inc.

361 WEST FIFTH AVENUE
EUGENE, OREGON 97401
800-262-5973/541-485-8404 Fax 541-484-5995
Email: alglabs@alglabsinc.com

ALG

CHAIN OF CUSTODY

Attention:	Cynthia O'Kelley	Client:	Analytical Laboratory Group, Inc
Phone:	541-485-8404	Address	361 West 5th Avenue
Fax:	541-484-5995		Eugene, OR 97401
Client Project:	Neilson Subcontract		ALG PO# 170223-01TG

Lab ID	ALG Sample ID	ALG Client ID	Sample Matrix & Description Grab/Comp	Collection Date	Collection Time	Bottles	Analysis Requested
01	1702939-001B	Newport WWTP	Biosolid/Grab	2/22/17	12:00	L	Biosolids 503 Metals: As, Cd, Cr, Cu, Pb, Mo, Ni, K, Se, Zn by EPA 6010B; Hg by EPA 7471A; Total Solids by SM 2540G

Notes:
Please Return Shipper
Include: MDL

Turn Around Time Requested: RUSH NORMAL		Shipped Via:	Refrigerated YES
COC and PO made by: Teresa Garcia-Tomlin	Date 2/23/17 Time 14:47	Received by:	Date Time
Relinquished by:	Date Time	Received by:	Date Time
Relinquished by:	Date Time	Received by Laboratrory:	Date 2/24/17 Time 9:32

Note: Standard Terms and Conditions on Reverse

Lab Order Number 1702931

JAH

Analytical Laboratory Group, Inc.

361 WEST FIFTH AVENUE
EUGENE, OREGON 97401
800-262-5973/541-485-8404 Fax 541-484-5995
Email: alglabs@alglabsinc.com

ALG

NPUC

CHAIN OF CUSTODY

Attention:	Mark Worden	**Client:**	City of Newport
Phone:	541-574-3372	**Address**	169 SW Coast Hwy.
Email:	M.WORDEN@NEWPORTOREGON.GOV E.MCCOY@NEWPORTOREGON.GOV	City, State, Zip	Newport, OR 97365
Client Project:	Newport WWTP	Sampler: Print	Ed McCoy Dennis Kelly
		Sampler: Signature	Ed McCoy Dennis M. Kelly

Client ID	Sample Matrix & Grab/Comp	Collection Date	Collection Time	Analysis Requested	Bottles -Lab Use Only Type	#	Pres	T °C	Lab ID
	GRAB	2-22-17	NOON	503 Biosolids	L	3			~~001~~
	GRAB	2-22-17	NOON	NO3 pH TS VS PMoist					001A
	GRAB	2-22-17	NOON	NH3 TKN TP					001A
	GRAB	2-22-17	NOON	Metals: As Cd Cr Cu Pb Mo Ni K Se Zn Hg					001B

Notes:

Preservation Check

Lab ID	Date/Time	Pre-Preserved	pH	Tech

Turn Around Time Requested (Rush incurs a Surcharge):

☒ NORMAL _____ ☐ RUSH _____

Shipped Via: ALG Courier

Refrigerated 4.8°C ice

	Date	Time
Relinquished by: Ed McCoy	2-22-17	Noon
Relinquished by:		
Relinquished by: Josh Dein	2/22/17	1504

	Date	Time
Received by:		
Received by: Josh Dein	2/22/17	1210
Received by Laboratory:	2/22/17	1524

ALG
ANALYTICAL LABORATORY GROUP
Delivering more than just test results

ALG ORELAP ID #OR100012
361 West 5th Ave
Eugene, OR 97401
TEL: (541) 485-8404 FAX: (541) 484-5995
Website:

June 16, 2017

Mark Worden
City of Newport
169 SW Coast Hwy
Newport, OR 97365
TEL: (541) 574-3372
FAX

RE: Newport WWTP Order No.: 1705742

Dear Mark Worden:

Analytical Laboratory Group received 1 sample(s) on 5/17/2017 for the analyses presented in the following report.

The analysis was performed according to our laboratory's NELAP/TNI-approved quality assurance program. Any exceptions to this quality assurance program are noted on the case narrative.

Testing methods used are sufficiently sensitive enough to meet the requirements that support client/permittee NPDES permits that we have on file. The client is responsible for reviewing reports. The permittee is responsible for meeting permit limits.

Quality control data is within laboratory defined or method specified acceptance limits except if noted on the case narrative.

If you have any questions regarding these tests results, please feel free to call.

Kimberly J. Reever Morghan

Kimberly Reever Morghan
Quality Manager
361 West 5th Ave
Eugene, OR 97401

ALG
ANALYTICAL LABORATORY GROUP
Delivering more than just test results

ALG ORELAP ID #OR100012
361 West 5th Ave
Eugene, OR 97401
TEL: (541) 485-8404 FAX: (541) 484-5995
Website:

Case Narrative

WO#: **1705742**
Date: **6/16/2017**

CLIENT: City of Newport
Project: Newport WWTP

This report presents the results of the analyses of the sample(s) received on the date above and assigned the listed ALG lab report numbers. Test results relate only to the parameters tested and to the samples as received by the laboratory.

All analyses were performed according to the Analytical Laboratory Group, Inc. Quality Assurance Program.
All QA/QC requirements were met except as noted below.

Analytical comments are noted with data flags on the reports and/or below.

pH by EPA 9045D: pH should be analyzed as soon as possible following sample collection. Sample(s) analyzed on receipt in laboratory.

Metals by EPA 6010B, Mercury by EPA 7471A and Total Solids by SM 2540G were analyzed by Neilson Research Corporation, Medford OR; ORELAP ID# OR100016. No anomalies associated with the analysis of these sample(s) were reported except as noted in the NRC Case Narrative or qualified with data flags on the NRC report.

ALG ANALYTICAL LABORATORY GROUP
Delivering more than just test results

ALG ORELAP ID #OR100012
361 West 5th Ave
Eugene, OR 97401
TEL: (541) 485-8404 FAX: (541) 484-5995
Website:

Analytical Report

Date Reported: **6/16/2017**

WO#:	1705742	**Received Date:**	5/17/2017 2:50:00 PM
CLIENT:	City of Newport	**Sampler Name**	Ed McCoy
Project:	Newport WWTP	**Matrix:**	Solid

Lab ID: 1705742-001 **Client Sample ID** Biosolid Grab **Collection Date:** 5/17/2017 11:25:00 A

Analyses	Method	Result	Qual	RL	LOD	Units	Date Analyzed	Analys
Nitrate	EPA 300.0	**ND**		0.010	0.0050	% Dry W	05/18/17 17:34	RO
Ammonia-N	EPA 350.2	**0.13**		0.010	0.0050	%-dry	05/25/17 09:49	JL
Hydrogen Ion (pH)	EPA 9045D	**12.5**	H	0	0	pH Units	05/17/17 17:24	MI
Phosphorus, Total (As P)	EPA 365.3	**1.3**		0.00010	0.00010	% Dry W	05/20/17 12:06	RV
Percent Moisture	D2216	**71**		0.10	0	%	05/18/17 16:54	RV
Nitrogen, Kjeldahl, Total	EPA 351.3	**4.3**		0.010	0	% Dry W	06/06/17 10:30	ER
Total Solids	EPA 160.3	**29**		0.10	0	%	05/18/17 16:54	RV
Volatile Solids	EPA 160.3	**46**		0.10	0	%	05/18/17 16:54	RV

Definitions:

A	Accredited by ORELAP
LOD	Limit of Detection
MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit
PL	Permit Limit
RL	Reporting Detection Limit

Qualifiers:

H	Holding times for preparation or analysis exceeded

ALG
ANALYTICAL LABORATORY GROUP
Delivering more than just test results

ALG ORELAP ID #OR100012
361 West 5th Ave
Eugene, OR 97401
TEL: (541) 485-8404 FAX: (541) 484-5995
Website:

QC SUMMARY REPORT

16-Jun-17

WO#: 1705742
Client: City of Newport
Project: Newport WWTP

QC Type	Sample ID	Analyses	Method	Analysis Date	Result	Units	RL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
MBLK	MB-R16642	Total Solids	EPA 160.3	5/18/2017	ND	%	0.10									
MBLK	MB-R16642	Volatile Solids	EPA 160.3	5/18/2017	ND	%	0.10									
MBLK	MB-2762	Nitrate	EPA 300.0	5/18/2017	ND	% Dry W	0.010									
MBLK	MB-2719	Ammonia-N	EPA 350.2	5/25/2017	ND	mg/L	0.20									
MBLK	MB-2739	Nitrogen, Kjeldahl, Total	EPA 351.3	6/6/2017	ND	% Dry W	0.010									
MBLK	MB-2697	Phosphorus, Total (As P)	EPA 365.3	5/20/2017	ND	% Dry W	0.20									
LCS	LCS-2762	Nitrate	EPA 300.0	5/18/2017	2.5	% Dry W	0.010	2.500	0	98.7	85	115				
LCS	LCS-2719	Ammonia-N	EPA 350.2	5/25/2017	5.0	mg/L	0.20	5.000	0	100	85	115				
LCS	LCS-2739	Nitrogen, Kjeldahl, Total	EPA 351.3	6/6/2017	4.7	% Dry W	0.010	5.000	0	94.6	85	115				
LCS	LCS-2697	Phosphorus, Total (As P)	EPA 365.3	5/20/2017	0.85	% Dry W	0.20	0.8000	0	106	85	115				
LCS	LCS-R16600	Hydrogen Ion (pH)	EPA 9045D	5/17/2017	7.0	pH Units	0	7.020	0	100	90	110				

Qualifiers:

ALG ORELAP ID #OR100012
361 West 5th Ave
Eugene, OR 97401
TEL: (541) 485-8404 FAX: (541) 484-5995
Website:

Definitions:

% REC: Percent Recovery; a measure of accuracy expressed as a percentage of a measured (recovered) concentration compared to the known concentration added to the sample.

% RPD: Relative Percent Difference; a measure of precision expressed as a percentage of the difference between two duplicates relative to the average concentration.

DF: Dilution factor; the dilution factor applied to the prepared sample.

DUP: Duplicate; aliquots of a sample taken from the same container under laboratory conditions and processed and analyzed independently, used to calculate Precision (%RPD).

LCS: Laboratory Control Sample; prepared by adding a known mass of target analytes to a specified amount of de-ionized water and prepared with the batch of samples, used to calculate Accuracy (%REC).

LCSD: The duplicate sample of the LCS, used to calculate both Accuracy (%REC) and Precision (%RPD)

MBLK: Method Blank; a sample of similar matrix that is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedure, and in which no target analytes or interferences are present at concentrations that impact the analytical results for sample analyses.

MS: Matrix Spike; prepared by adding a known mass of target analytes to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available, used to calculate Accuracy (%REC)

MSD: The duplicate sample of the MS, used to calculate both Accuracy (%REC) and Precision (%RPD)

ND: Not Detected. The analyte level is below the lowest point the laboratory can test for.

PL: Permit limit; only applicable to wastewater reports.

PQL: Practical Quantitation Level or Reporting Limit; the limit to which data is compared for reporting.

Qual: Qualifier that applies to the analyte reported

ALG ORELAP ID #OR100012
361 West 5th Ave
Eugene, OR 97401
TEL: (541) 485-8404 FAX: (541) 484-5995
Website:

Definition Base

WO#: **1705742**
Date: **6/16/2017**

Definitions:

Result: Analyte concentration reported

RL: Reporting Limit/Limit of Quantitation; the limit to which data is compared for reporting. Analyte concentrations below the reporting limit are reported as ND or with a "J" qualifier.

Units: The units in which the analyte concentration is reported.

Qualifiers:

*	Value exceeds Maximum Contaminant Level (MCL)
A	Accredited by ORELAP
C	Value is below Minimum Compound Limit.
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
LOD	Limit of Detection
MCL	Maximum Contaminant Level
NAR	See note in Case Narrative
ND	Not Detected at the Reporting Limit
PL	Permit Limit
R	RPD outside accepted recovery limits
RL	Reporting Detection Limit
U	Samples with CalcVal < MDL
W	Sample container temperature was outside of the limits as specified by the method.

NEILSON RESEARCH CORPORATION
Environmental Testing Laboratory

5/31/2017

Cynthia O Kelley
Analytical Laboratory Group, Inc.
361 West Fifth Avenue
Eugene, OR 97401

TEL: (800) 262-5973
FAX (541) 484-5995

RE: 1705742

Order No.: 1705774

Dear Cynthia O Kelley:

Neilson Research Corporation received 1 sample(s) on 5/19/2017 for the analyses presented in the following report.

The results relate only to the parameters tested or to the sample as received by the laboratory. This report shall not be reproduced except in full, without the written approval of Neilson Research Corporation. If you have any questions regarding these test results, please feel free to call.

Sincerely,
Neilson Research Corporation

Alec C Smith
Project Manager

Neilson Research Corporation

245 South Grape Street, Medford, Oregon 97501 541-770-5678 Fax 541-770-2901

Analysis Report

ORELAP 100016
EPA OR00028

CLIENT: Analytical Laboratory Group, Inc.
Project: 1705742
Lab Order: 1705774

Date: 31-May-17

CASE NARRATIVE

The analyses were performed according to the guidelines in the Neilson Research Corporation Quality Assurance Program. This report contains analytical results for the sample(s) as received by the laboratory.

Neilson Research Corporation certifies that this report is in compliance with the requirements of NELAP. No unusual difficulties were experienced during analysis of this batch except as noted below or qualified with data flags on the reports.

Neilson Research Corporation

245 South Grape Street, Medford, Oregon 97501 541-770-5678 Fax 541-770-2901

Analysis Report

ORELAP 100016
EPA OR00028

Analytical Laboratory Group, Inc.
361 West Fifth Avenue
Eugene, OR 97401
Client Sample ID: **1705742-001A**
Sample Location: **Biosolid**
Project: **1705742**

Lab Order: **1705774**
NRC Sample ID **1705774-01A**
Collection Date: **5/17/2017 11:25:00 AM**
Received Date: **5/19/2017 9:25:00 AM**
Reported Date: **5/31/2017 9:08:13 AM**
Matrix: **Solid**

ANALYTICAL RESULTS

Analyses	Result	Qual	MDL	MRL	Units	DF	NELAP	Date Analyzed
TRACE METALS			**EPA 7471A**					Analyst: **OML**
Mercury	0.105		0.0110	0.034	mg/Kg-dry	1	A	5/25/2017
TRACE METALS			**EPA 6010B**					Analyst: **OML**
Arsenic	9.0	J	0.950	15.6	mg/Kg-dry	1	A	5/26/2017
Cadmium	1.1	J	0.0348	3.12	mg/Kg-dry	1	A	5/26/2017
Chromium	7.2	J	0.0727	15.6	mg/Kg-dry	1	A	5/26/2017
Copper	78.1		0.236	3.12	mg/Kg-dry	1	A	5/26/2017
Lead	6.5	J	0.501	15.6	mg/Kg-dry	1	A	5/26/2017
Molybdenum	3.6	J	0.0682	15.6	mg/Kg-dry	1	A	5/26/2017
Nickel	7.99		0.127	1.56	mg/Kg-dry	1	A	5/26/2017
Potassium	7770		0.460	15.6	mg/Kg-dry	1	A	5/26/2017
Selenium	3.0	J	1.37	15.6	mg/Kg-dry	1	A	5/26/2017
Silver	1.22		0.175	0.312	mg/Kg-dry	1	A	5/26/2017
Zinc	379		0.282	15.6	mg/Kg-dry	1	A	5/26/2017
% TOTAL SOLIDS			**SM 2540G**					Analyst: **SCM**
Total Solids	29.9		0.0100	0.01	%	1	A	5/23/2017

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Minimum Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Neilson Research Corporation

DATA FLAGS

B	Analyte detected in the associated method blank.
BA	BOD Alternative Calculation: The initial results performed by Standard Methods did not fall within parameters of the Standard Methods calculation. An alternate approved calculation was performed using the HACH method and the value reported is an estimated concentration.
C	Sample(s) does not meet NELAP/ORELAP sample acceptance criteria. See Case Narrative.
C1	Sample(s) does not meet NELAP/ORELAP sample acceptance criteria for temperature.
CF	Results confirmed by re-analysis.
CU	Cleanup performed as specified by method.
D1	The diesel elution pattern for the sample is not typical.
D2	The sample appears to be a heavier hydrocarbon range than diesel.
D3	The sample appears to be a lighter hydrocarbon range than diesel.
D4	Detected hydrocarbons do not have pattern and range consistent with typical petroleum products and may be due to biogenic interference.
D5	Detected hydrocarbons in the diesel range appear to be weathered diesel.
E	Estimated value.
ER	Elevated reporting limit due to matrix. Report limits (MDLs, MRLs & PQLs) are adjusted based on variations in sample preparation amounts, analytical dilutions, and percent solids, where applicable.
FC	Fecal Coliforms: Sample(s) received past 40 CFR Part 136 specified holding time. Results reported as estimated values.
G1	The gasoline elution pattern for the sample is not typical.
G2	The sample appears to be a heavier hydrocarbon range than gasoline.
G3	The sample appears to be a lighter hydrocarbon range than gasoline.
G4	Detected hydrocarbons in the gasoline range appear to be weathered gasoline.
HP	Sample re-analysis performed outside of method specified holding time.
HR	Sample received outside of method specified holding time.
HS	Sample analyzed for volatile organics contained headspace.
HT	At the client's request, the sample was analyzed outside of method specified holding time.
H	Analysis performed outside of method specified holding time.
J	Analyte detected below the Minimum Reporting Limit (MRL) and above the Method Detection Limit (MDL). The J flag result is an estimated value and the user should be aware that this data is of limited reliability.
MI	Surrogate or Matrix Spike recovery is out of control limits due to matrix interference. Sample results may be biased.
N	See Case Narrative on page 2 of report.
Q	Closing continuing calibration verification (CCV) or laboratory control sample (LCS) exceeded high recovery limits, but associated samples are non-detect and the sample results are not affected. Data meets EPA/NELAP requirements.
R	Relative percent difference (RPD) is outside of the accepted recovery limits.
R1	Relative percent difference (RPD) is outside of the accepted recovery limits. However, analyses are not controlled on RPD values for sample concentrations that are less than the reporting limit.
R3	The relative percent difference (RPD) and/or percent recovery for the duplicate (DUP) or matrix spike (MS)/matrix spike duplicate (MSD) cannot be accurately calculated due to the concentration of analyte already present in the sample.
R4	Duplicate analysis failed due to result being at or near method reporting limit.
S	Surrogate and/or matrix spike recovery is outside of the accepted recovery limits. Sample results may be biased.
S1	Surrogate or matrix spike recovery is outside of control limits due to dilution necessary for analysis.
SC	Sub-contracted to another laboratory for analysis.
SP	Sample(s) were not collected per EPA Method 5035A protocols. The results are considered minimum values.
T	Toxicity Characteristic Leaching Procedure – Sample submitted contained < 0.5% solids. If the waste contains <0.5% dry solids, the liquid portion of the waste, after filtration, is defined as the TCLP extract.
#	Value exceeds regulatory level for TCLP contaminant.
X1	The motor oil elution pattern for the sample is not typical.
X2	The sample appears to be a heavier hydrocarbon range than motor oil.
X3	The sample appears to be a lighter hydrocarbon range than motor oil.
*	Value exceeds Maximum Contaminant Level or is outside the acceptable range.

Neilson Research Corporation

Date: 31-May-17

CLIENT: Analytical Laboratory Group, Inc.
Work Order: 1705774
Project: 1705742

ANALYTICAL QC SUMMARY REPORT

TestCode: HG_S_7471

Sample ID	MB-38323	SampType:	MBLK	TestCode:	HG_S_7471	Units:	mg/Kg	Prep Date:	5/23/2017	RunNo:	95405
Client ID:	ZZZZZ	Batch ID:	38323	TestNo:	EPA 7471A	(EPA 7471A)		Analysis Date:	5/25/2017	SeqNo:	1445079

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.000200									

Sample ID	LCS-38323	SampType:	LCS	TestCode:	HG_S_7471	Units:	mg/Kg	Prep Date:	5/23/2017	RunNo:	95405
Client ID:	ZZZZZ	Batch ID:	38323	TestNo:	EPA 7471A	(EPA 7471A)		Analysis Date:	5/25/2017	SeqNo:	1445080

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	18.73	0.446	18.5	0	101	50	150				

Sample ID	1705507-01AMS	SampType:	MS	TestCode:	HG_S_7471	Units:	mg/Kg	Prep Date:	5/23/2017	RunNo:	95405
Client ID:	ZZZZZ	Batch ID:	38323	TestNo:	EPA 7471A	(EPA 7471A)		Analysis Date:	5/25/2017	SeqNo:	1445085

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.2464	0.00942	0.2356	0.004328	103	75	125				

Sample ID	1705507-01AMSD	SampType:	MSD	TestCode:	HG_S_7471	Units:	mg/Kg	Prep Date:	5/23/2017	RunNo:	95405
Client ID:	ZZZZZ	Batch ID:	38323	TestNo:	EPA 7471A	(EPA 7471A)		Analysis Date:	5/25/2017	SeqNo:	1445086

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.2869	0.00902	0.2254	0.004328	125	75	125	0.2464	15.2	25	MI

Qualifiers:

- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Minimum Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

CLIENT: Analytical Laboratory Group, Inc.
Work Order: 1705774
Project: 1705742

ANALYTICAL QC SUMMARY REPORT

TestCode: ICP_6010_S

Sample ID **MB-38333** SampType: **MBLK** TestCode: **ICP_6010_S** Units: **mg/Kg** Prep Date: **5/24/2017** RunNo: **95477**
Client ID: **ZZZZZ** Batch ID: **38333** TestNo: **EPA 6010B** **(EPA 3050B)** Analysis Date: **5/26/2017** SeqNo: **1446373**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.008000	0.0500									J
Cadmium	0.0002000	0.0100									J
Chromium	0.0005000	0.0500									J
Copper	0.004800	0.0100									J
Lead	ND	0.0500									
Molybdenum	0.0007000	0.0500									J
Nickel	0.0008000	0.00500									J
Potassium	0.1881	0.0500									
Selenium	ND	0.0500									
Silver	ND	0.00100									
Zinc	0.009700	0.0500									J

Sample ID **LCS-38333** SampType: **LCS** TestCode: **ICP_6010_S** Units: **mg/Kg** Prep Date: **5/24/2017** RunNo: **95477**
Client ID: **ZZZZZ** Batch ID: **38333** TestNo: **EPA 6010B** **(EPA 3050B)** Analysis Date: **5/26/2017** SeqNo: **1446374**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	339.8	9.97	317	0.008	107	50	150				
Cadmium	197.9	1.99	182	0.0002	109	50	150				
Chromium	360.8	9.97	339	0.0005	106	50	150				
Copper	360.0	1.99	352	0.0048	102	50	150				
Lead	70.34	9.97	66	0	107	50	150				
Molybdenum	124.9	9.97	111	0.0007	113	50	150				
Nickel	197.6	0.997	190	0.0008	104	50	150				
Potassium	10800	9.97	9370	0.1881	115	50	150				
Selenium	213.6	9.97	210	0	102	50	150				
Silver	40.61	0.199	40.4	0	101	50	150				
Zinc	216.6	9.97	206	0.0097	105	50	150				

Qualifiers:
E Value above quantitation range
H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits
ND Not Detected at the Minimum Reporting Limit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

CLIENT: Analytical Laboratory Group, Inc.
Work Order: 1705774
Project: 1705742

ANALYTICAL QC SUMMARY REPORT

TestCode: ICP_6010_S

Sample ID **1705507-01AMS** SampType: **MS** TestCode: **ICP_6010_S** Units: **mg/Kg** Prep Date: **5/24/2017** RunNo: **95477**
Client ID: **ZZZZZ** Batch ID: **38333** TestNo: **EPA 6010B** **(EPA 3050B)** Analysis Date: **5/26/2017** SeqNo: **1446391**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	99.57	4.90	98.1	2.416	99.0	70	130				
Cadmium	103.9	0.981	98.1	1.379	104	70	130				
Chromium	114.9	4.90	98.1	12.05	105	70	130				
Copper	131.6	0.981	98.1	24.97	109	70	130				
Lead	150.3	4.90	98.1	29.92	123	70	130				MI
Molybdenum	107.8	4.90	98.1	5.677	104	70	130				
Nickel	112.9	0.490	98.1	12.62	102	70	130				
Potassium	3511	4.90	2060	723.5	135	70	130				MI
Selenium	97.44	4.90	98.1	0	99.3	70	130				
Silver	74.73	0.0981	98.1	0	76.2	70	130				
Zinc	187.7	4.90	98.1	95.4	94.0	70	130				MI

Sample ID **1705507-01AMSD** SampType: **MSD** TestCode: **ICP_6010_S** Units: **mg/Kg** Prep Date: **5/24/2017** RunNo: **95477**
Client ID: **ZZZZZ** Batch ID: **38333** TestNo: **EPA 6010B** **(EPA 3050B)** Analysis Date: **5/26/2017** SeqNo: **1446392**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	105.8	4.97	99.48	2.416	104	70	130	99.57	6.12	25	
Cadmium	109.7	0.995	99.48	1.379	109	70	130	103.9	5.47	25	
Chromium	128.0	4.97	99.48	12.05	117	70	130	114.9	10.8	25	
Copper	149.2	0.995	99.48	24.97	125	70	130	131.6	12.5	25	
Lead	159.8	4.97	99.48	29.92	131	70	130	150.3	6.12	25	MI
Molybdenum	114.7	4.97	99.48	5.677	110	70	130	107.8	6.20	25	
Nickel	120.2	0.497	99.48	12.62	108	70	130	112.9	6.23	25	
Potassium	4486	4.97	2089	723.5	180	70	130	3511	24.4	25	MI
Selenium	104.5	4.97	99.48	0	105	70	130	97.44	6.95	25	
Silver	78.98	0.0995	99.48	0	79.4	70	130	74.73	5.53	25	
Zinc	233.1	4.97	99.48	95.4	138	70	130	187.7	21.6	25	MI

Qualifiers:
E Value above quantitation range
H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits
ND Not Detected at the Minimum Reporting Limit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

Neilson Research Corporation

Date: 31-May-17

CLIENT: Analytical Laboratory Group, Inc.
Work Order: 1705774
Project: 1705742

ANALYTICAL QC SUMMARY REPORT

TestCode: SOLIDS_TOT_S

Sample ID **MB-R95392**	SampType: **MBLK**	TestCode: **SOLIDS_TOT**	Units: **%**	Prep Date:	RunNo: **95392**
Client ID: **ZZZZZ**	Batch ID: **R95392**	TestNo: **SM 2540G**		Analysis Date: **5/23/2017**	SeqNo: **1444871**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Solids	ND	0.0100									

Sample ID **1705774-01ADUP**	SampType: **DUP**	TestCode: **SOLIDS_TOT**	Units: **%**	Prep Date:	RunNo: **95392**
Client ID: **1705742-001A**	Batch ID: **R95392**	TestNo: **SM 2540G**		Analysis Date: **5/23/2017**	SeqNo: **1444873**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Solids	28.97	0.0100						29.86	3.01	5	

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Minimum Reporting Limit	R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits

Lab Order Number 1705774-1

Analytical Laboratory Group, Inc.
361 WEST FIFTH AVENUE
EUGENE, OREGON 97401
800-262-5973/541-485-8404 Fax 541-484-5995
Email: alglabs@alglabsinc.com

CHAIN OF CUSTODY

Attention:	Cynthia O'Kelley	Client:	Analytical Laboratory Group, Inc
Phone:	541-485-8404	Address	361 West 5th Avenue
Fax:	541-484-5995		Eugene, OR 97401
Client Project:	Neilson Subcontract		ALG PO# 170518-01TG

Lab ID	ALG Sample ID	ALG Client ID	Sample Matrix & Description Grab/Comp	Collection Date	Collection Time	Bottles	Analysis Requested
01	17405742-001A	Biosolid	Biosolid/Grab	5/17/17	11:25	L	Biosolids 503 Metals: As, Cd, Cr, Cu, Pb, Mo, Ni, K, Se, Ag, Zn by EPA 6010B; Hg by EPA 7471A; Total Solids by SM 2540G

Notes:
Please Return Shipper
Include: MDL

Turn Around Time Requested:	Shipped Via:	Refrigerated
NORMAL	UPS	YES 3.3

	Date	Time		Date	Time
COC and PO made by: Teresa Garcia-Lande	5/18/17	14:35	Received by:		
Relinquished by:			Received by:		
Relinquished by:			Received by Laboratrory:	5/18	9:15

Note: Standard Terms and Conditions on Reverse

Lab Order Number 1705742

Analytical Laboratory Group, Inc.

361 WEST FIFTH AVENUE
EUGENE, OREGON 97401
800-262-5973/541-485-8404 Fax 541-484-5995
Email: alglabs@alglabsinc.com

ALG ANALYTICAL LABORATORY GROUP

NPUC

CHAIN OF CUSTODY

Attention:	Mark Worden / Ed McCoy	**Client:**	City of Newport
Phone:	541-574-3372	**Address**	169 SW Coast Hwy.
Email:	E.MCCOY@NEWPORTOREGON.GOV	**City, State, Zip**	Newport, OR 97365
Client Project:	Newport WWTP	**Sampler: Print**	Ed McCoy
		Sampler: Signature	Ed McCoy

Client ID	Sample Matrix & Grab/Comp	Collection Date	Collection Time	Analysis Requested	Bottles -Lab Use Only Type	#	Pres	T °C	Lab ID
Biosolid	Grab	5-17-17		503 Biosolids	L	3			001A
✓	Grab	5-17-17	11:25A	NO3 pH TS VS PMoist					
✓	Grab	5-17-17	11:25A	NH3 TKN TP					
✓	Grab	5-17-17	11:25A	Metals: As Cd Cr Cu Pb Mo Ni K Se Zn Hg					

Notes:

Preservation Check

Lab ID	Date/Time	Pre-Preserved	pH	Tech

Turn Around Time Requested (Rush incurs a Surcharge): ☒ NORMAL EM ☐ RUSH

Shipped Via: ALG Courier

Refrigerated 11.3°C iR

	Date	Time
Relinquished by: Ed McCoy	5-17-17	11:35A
Relinquished by:		
Relinquished by:	5/17/17	1450

	Date	Time
Received by:		
Received by:	5/17/17	1233
Received by Laboratory:	5/17/17	1450

ALG
ANALYTICAL LABORATORY GROUP

ALG ORELAP ID #OR100012
361 West 5th Ave
Eugene, OR 97401
TEL: (541) 485-8404 FAX: (541) 484-5995
Website:

August 16, 2017

Mark Worden
City of Newport
169 SW Coast Hwy
Newport, OR 97365
TEL: (541) 574-3372
FAX

RE: Newport WWTP Order No.: 1707793

Dear Mark Worden:

Analytical Laboratory Group received 2 sample(s) on 7/19/2017 for the analyses presented in the following report.

The analysis was performed according to our laboratory's NELAP/TNI-approved quality assurance program. Any exceptions to this quality assurance program are noted on the case narrative.

Testing methods used are sufficiently sensitive enough to meet the requirements that support client/permittee NPDES permits that we have on file. The client is responsible for reviewing reports. The permittee is responsible for meeting permit limits.

Quality control data is within laboratory defined or method specified acceptance limits except if noted on the case narrative.

If you have any questions regarding these tests results, please feel free to call.

Kimberly J. Reever Morghan

Kimberly Reever Morghan
Quality Manager
361 West 5th Ave
Eugene, OR 97401

ALG
ANALYTICAL LABORATORY GROUP

ALG ORELAP ID #OR100012
361 West 5th Ave
Eugene, OR 97401
TEL: (541) 485-8404 FAX: (541) 484-5995
Website:

Case Narrative

WO#: **1707793**
Date: **8/16/2017**

CLIENT: City of Newport
Project: Newport WWTP

This report presents the results of the analyses of the sample(s) received on the date above and assigned the listed ALG lab report numbers. Test results relate only to the parameters tested and to the samples as received by the laboratory.

This report shall not be reproduced, except in full, without written consent of Analytical Laboratory Group, Inc.

All analyses were performed according to the Analytical Laboratory Group, Inc. Quality Assurance Program.
All QA/QC requirements were met except as noted below.

Analytical comments are noted with qualifiers (see "Qual" column) or data flags on the reports and/or below.

pH by EPA 9045D: pH should be analyzed as soon as possible following sample collection. Sample(s) analyzed on receipt in laboratory.

Metals by EPA 6010B, Mercury by EPA 7471A and Total Solids by SM 2540G were analyzed by Neilson Research Corporation, Medford OR; ORELAP ID# OR100016. No anomalies associated with the analysis of these sample(s) were reported except as noted in the NRC Case Narrative or qualified with data flags on the NRC report.

ALG
ANALYTICAL LABORATORY GROUP
361 West 5th Ave
Eugene, OR 97401
TEL: (541) 485-8404 FAX: (541) 484-5995
Website:

Analytical Report

Date Reported: **8/16/2017**

WO#:	1707793	**Received Date:**	7/19/2017 2:30:00 PM
CLIENT:	City of Newport	**Sampler Name**	Ed McCoy
Project:	Newport WWTP	**Matrix:**	Solid

Lab ID: 1707793-001 **Client Sample ID** Grab **Collection Date:** 7/19/2017 11:45:00 A

Analyses	Method	Result	Qual	PQL	LOD	Units	Date Analyzed	Analys
Nitrate	EPA 300.0	**ND**		0.010	0.0050	% Dry W	07/20/17 12:43	AS
Ammonia-N	EPA 350.2	**0.18**		0.010	0.0050	%-dry	07/19/17 16:13	AS
Hydrogen Ion (pH)	EPA 9045D	**12**	H	0	0	pH Units	07/19/17 16:05	RV
Phosphorus, Total (As P)	EPA 365.3	**0.73**		0.027		% Dry W	07/26/17 09:14	RV
Percent Moisture	D2216	**66**		0.10	0	%	07/19/17 16:25	RV
Nitrogen, Kjeldahl, Total	EPA 351.3	**4.2**		0.010	0	% Dry W	07/26/17 13:00	ER
Total Solids	EPA 160.3	**34**		0.10	0	%	07/22/17 10:35	RV
Volatile Solids	EPA 160.3	**31**		0.10	0	%	07/22/17 10:35	RV

Definitions:

A	Accredited by ORELAP
LOD	Limit of Detection
MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit
PL	Permit Limit
PQL	Practical Quantitation Level or Reporting Limit

Qualifiers:

H	Holding times for preparation or analysis exceeded

ALG
ANALYTICAL LABORATORY GROUP
Delivering more than just test results

ALG ORELAP ID #OR100012
361 West 5th Ave
Eugene, OR 97401
TEL: (541) 485-8404 FAX: (541) 484-5995
Website:

QC SUMMARY REPORT

16-Aug-17

WO#: 1707793
Client: City of Newport
Project: Newport WWTP

QC Type	Sample ID	Analyses	Method	Analysis Date	Result	Units	RL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
MBLK	MB-R17539	Total Solids	EPA 160.3	7/22/2017	ND	%	0.10									
MBLK	MB-R17539	Total Solids	EPA 160.3	7/19/2017	ND	%	0.10									
MBLK	MB-R17539	Volatile Solids	EPA 160.3	7/22/2017	ND	%	0.10									
MBLK	MB-R17539	Volatile Solids	EPA 160.3	7/19/2017	ND	%	0.10									
MBLK	MB-2877	Nitrate	EPA 300.0	7/20/2017	ND	% Dry W	0.010									
MBLK	MB-2860	Ammonia-N	EPA 350.2	7/19/2017	ND	mg/L	0.010									
MBLK	MB-2873	Nitrogen, Kjeldahl, Total	EPA 351.3	7/26/2017	ND	% Dry W	0.010									
MBLK	MBLK-2871	Phosphorus, Total (As P)	EPA 365.3	7/26/2017	ND	% Dry W	.00010									
LCS	LCS-2877	Nitrate	EPA 300.0	7/20/2017	2.5	% Dry W	0.010	2.500	0	99.4	85	115				
LCS	LCS-2860	Ammonia-N	EPA 350.2	7/19/2017	5.1	mg/L	0.010	5.000	0	102	85	115				
LCS	LCS-2873	Nitrogen, Kjeldahl, Total	EPA 351.3	7/26/2017	5.0	% Dry W	0.010	5.000	0	99.1	85	115				
LCS	LCS-2871	Phosphorus, Total (As P)	EPA 365.3	7/26/2017	0.81	% Dry W	.00010	0.8000	0	101	85	115				
LCS	LCS	Hydrogen Ion (pH)	EPA 9045D	7/19/2017	7.1	pH Units	0	7.010	0	101	90	110				

Qualifiers:

Definitions:

% REC: Percent Recovery; a measure of accuracy expressed as a percentage of a measured (recovered) concentration compared to the known concentration added to the sample.

% RPD: Relative Percent Difference; a measure of precision expressed as a percentage of the difference between two duplicates relative to the average concentration.

DF: Dilution factor; the dilution factor applied to the prepared sample.

DUP: Duplicate; aliquots of a sample taken from the same container under laboratory conditions and processed and analyzed independently, used to calculate Precision (%RPD).

LCS: Laboratory Control Sample; prepared by adding a known mass of target analytes to a specified amount of de-ionized water and prepared with the batch of samples, used to calculate Accuracy (%REC).

LCSD: The duplicate sample of the LCS, used to calculate both Accuracy (%REC) and Precision (%RPD)

MBLK: Method Blank; a sample of similar matrix that is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedure, and in which no target analytes or interferences are present at concentrations that impact the analytical results for sample analyses.

MS: Matrix Spike; prepared by adding a known mass of target analytes to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available, used to calculate Accuracy (%REC)

MSD: The duplicate sample of the MS, used to calculate both Accuracy (%REC) and Precision (%RPD)

ND: Not Detected. The analyte level is below the lowest point the laboratory can test for.

PL: Permit limit; only applicable to wastewater reports.

PQL: Practical Quantitation Level or Reporting Limit; the limit to which data is compared for reporting.

Qual: Qualifier that applies to the analyte reported

ALG
ANALYTICAL LABORATORY GROUP
Delivering more than just test results

ALG ORELAP ID #OR100012
361 West 5th Ave
Eugene. OR 97401
TEL: (541) 485-8404 FAX: (541) 484-5995
Website:

Definition Base

WO#: **1707793**
Date: **8/16/2017**

Definitions:

Result: Analyte concentration reported

RL: Reporting Limit/Limit of Quantitation; the limit to which data is compared for reporting. Analyte concentrations below the reporting limit are reported as ND or with a "J" qualifier.

Units: The units in which the analyte concentration is reported.

Qualifiers:

*	Value exceeds Maximum Contaminant Level (MCL)
A	Accredited by ORELAP
C	Value is below Minimum Compound Limit.
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
LOD	Limit of Detection
MCL	Maximum Contaminant Level
NAR	See note in Case Narrative
ND	Not Detected at the Reporting Limit
PL	Permit Limit
PQL	Practical Quantitation Level or Reporting Limit
R	RPD outside accepted recovery limits
U	Samples with CalcVal < MDL
W	Sample container temperature was outside of the limits as specified by the method.

NEILSON RESEARCH CORPORATION
Environmental Testing Laboratory

8/4/2017

Cynthia O Kelley
Analytical Laboratory Group, Inc.
361 West Fifth Avenue
Eugene, OR 97401

TEL: (800) 262-5973
FAX (541) 484-5995

RE: 1707793

Order No.: 1707911

Dear Cynthia O Kelley:

Neilson Research Corporation received 1 sample(s) on 7/21/2017 for the analyses presented in the following report.

The results relate only to the parameters tested or to the sample as received by the laboratory. This report shall not be reproduced except in full, without the written approval of Neilson Research Corporation. If you have any questions regarding these test results, please feel free to call.

Sincerely,
Neilson Research Corporation

Tamra Schmedemann

Tamra R. Schmedemann
Project Manager

Neilson Research Corporation

245 South Grape Street, Medford, Oregon 97501 541-770-5678 Fax 541-770-2901

Analysis Report ORELAP 100016 EPA OR00028

CLIENT: Analytical Laboratory Group, Inc.
Project: 1707793
Lab Order: 1707911

Date: 04-Aug-17

CASE NARRATIVE

The analyses were performed according to the guidelines in the Neilson Research Corporation Quality Assurance Program. This report contains analytical results for the sample(s) as received by the laboratory.

Neilson Research Corporation certifies that this report is in compliance with the requirements of NELAP. No unusual difficulties were experienced during analysis of this batch except as noted below or qualified with data flags on the reports.

Neilson Research Corporation

245 South Grape Street, Medford, Oregon 97501 541-770-5678 Fax 541-770-2901

Analysis Report

ORELAP 100016
EPA OR00028

Analytical Laboratory Group, Inc.
361 West Fifth Avenue
Eugene, OR 97401
Client Sample ID: **1707793-002A**
Sample Location: **Biosolid/Grab**
Project: **1707793**

Lab Order: **1707911**
NRC Sample ID **1707911-01A**
Collection Date: **7/19/2017 11:45:00 AM**
Received Date: **7/21/2017 9:45:00 AM**
Reported Date: **8/4/2017 8:17:35 AM**
Matrix: **Solid**

ANALYTICAL RESULTS

Analyses	Result	Qual	MDL	MRL	Units	DF	NELAP	Date Analyzed
TRACE METALS			**EPA 7471A**					Analyst: **OML**
Mercury	0.108		0.0101	0.031	mg/Kg-dry	1	A	7/27/2017
TRACE METALS			**EPA 6010B**					Analyst: **OML**
Arsenic	6.7	J	0.949	15.6	mg/Kg-dry	1	A	8/1/2017
Cadmium	0.62	J	0.0347	3.11	mg/Kg-dry	1	A	8/1/2017
Chromium	5.9	J	0.0726	15.6	mg/Kg-dry	1	A	8/1/2017
Copper	68.8		0.236	3.11	mg/Kg-dry	1	A	8/1/2017
Lead	17.4		0.500	15.6	mg/Kg-dry	1	A	8/1/2017
Molybdenum	2.3	J	0.0681	15.6	mg/Kg-dry	1	A	8/1/2017
Nickel	7.01		0.127	1.56	mg/Kg-dry	1	A	8/1/2017
Potassium	5210		0.459	15.6	mg/Kg-dry	1	A	8/1/2017
Selenium	ND		1.36	15.6	mg/Kg-dry	1	A	8/1/2017
Zinc	255		0.281	15.6	mg/Kg-dry	1	A	8/1/2017
% TOTAL SOLIDS			**SM 2540G**					Analyst: **SCM**
Total Solids	31.9		0.0100	0.01	%	1	A	7/26/2017

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Minimum Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Neilson Research Corporation

DATA FLAGS

B	Analyte detected in the associated method blank.
BA	BOD Alternative Calculation: The initial results performed by Standard Methods did not fall within parameters of the Standard Methods calculation. An alternate approved calculation was performed using the HACH method and the value reported is an estimated concentration.
C	Sample(s) does not meet NELAP/ORELAP sample acceptance criteria. See Case Narrative.
C1	Sample(s) does not meet NELAP/ORELAP sample acceptance criteria for temperature.
CF	Results confirmed by re-analysis.
CU	Cleanup performed as specified by method.
D1	The diesel elution pattern for the sample is not typical.
D2	The sample appears to be a heavier hydrocarbon range than diesel.
D3	The sample appears to be a lighter hydrocarbon range than diesel.
D4	Detected hydrocarbons do not have pattern and range consistent with typical petroleum products and may be due to biogenic interference.
D5	Detected hydrocarbons in the diesel range appear to be weathered diesel.
E	Estimated value.
ER	Elevated reporting limit due to matrix. Report limits (MDLs, MRLs & PQLs) are adjusted based on variations in sample preparation amounts, analytical dilutions, and percent solids, where applicable.
FC	Fecal Coliforms: Sample(s) received past 40 CFR Part 136 specified holding time. Results reported as estimated values.
G1	The gasoline elution pattern for the sample is not typical.
G2	The sample appears to be a heavier hydrocarbon range than gasoline.
G3	The sample appears to be a lighter hydrocarbon range than gasoline.
G4	Detected hydrocarbons in the gasoline range appear to be weathered gasoline.
HP	Sample re-analysis performed outside of method specified holding time.
HR	Sample received outside of method specified holding time.
HS	Sample analyzed for volatile organics contained headspace.
HT	At the client's request, the sample was analyzed outside of method specified holding time.
H	Analysis performed outside of method specified holding time.
J	Analyte detected below the Minimum Reporting Limit (MRL) and above the Method Detection Limit (MDL). The J flag result is an estimated value and the user should be aware that this data is of limited reliability.
MI	Surrogate or Matrix Spike recovery is out of control limits due to matrix interference. Sample results may be biased.
N	See Case Narrative on page 2 of report.
Q	Closing continuing calibration verification (CCV) or laboratory control sample (LCS) exceeded high recovery limits, but associated samples are non-detect and the sample results are not affected. Data meets EPA/NELAP requirements.
R	Relative percent difference (RPD) is outside of the accepted recovery limits.
R1	Relative percent difference (RPD) is outside of the accepted recovery limits. However, analyses are not controlled on RPD values for sample concentrations that are less than the reporting limit.
R3	The relative percent difference (RPD) and/or percent recovery for the duplicate (DUP) or matrix spike (MS)/matrix spike duplicate (MSD) cannot be accurately calculated due to the concentration of analyte already present in the sample.
R4	Duplicate analysis failed due to result being at or near method reporting limit.
S	Surrogate and/or matrix spike recovery is outside of the accepted recovery limits. Sample results may be biased.
S1	Surrogate or matrix spike recovery is outside of control limits due to dilution necessary for analysis.
SC	Sub-contracted to another laboratory for analysis.
SP	Sample(s) were not collected per EPA Method 5035A protocols. The results are considered minimum values.
T	Toxicity Characteristic Leaching Procedure – Sample submitted contained < 0.5% solids. If the waste contains <0.5% dry solids, the liquid portion of the waste, after filtration, is defined as the TCLP extract.
#	Value exceeds regulatory level for TCLP contaminant.
X1	The motor oil elution pattern for the sample is not typical.
X2	The sample appears to be a heavier hydrocarbon range than motor oil.
X3	The sample appears to be a lighter hydrocarbon range than motor oil.
*	Value exceeds Maximum Contaminant Level or is outside the acceptable range.

Neilson Research Corporation

Date: 04-Aug-17

CLIENT: Analytical Laboratory Group, Inc.
Work Order: 1707911
Project: 1707793

ANALYTICAL QC SUMMARY REPORT

TestCode: HG_S_7471

Sample ID	MB-38825	SampType:	MBLK	TestCode:	HG_S_7471	Units:	mg/Kg	Prep Date:	7/26/2017	RunNo:	96869
Client ID:	ZZZZZ	Batch ID:	38825	TestNo:	EPA 7471A	(EPA 7471A)		Analysis Date:	7/27/2017	SeqNo:	1466703

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.000200									

Sample ID	LCS-38825	SampType:	LCS	TestCode:	HG_S_7471	Units:	mg/Kg	Prep Date:	7/26/2017	RunNo:	96869
Client ID:	ZZZZZ	Batch ID:	38825	TestNo:	EPA 7471A	(EPA 7471A)		Analysis Date:	7/27/2017	SeqNo:	1466704

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	19.29	0.400	18.5	0	104	50	150				

Sample ID	1707911-01AMS	SampType:	MS	TestCode:	HG_S_7471	Units:	mg/Kg-dry	Prep Date:	7/26/2017	RunNo:	96869
Client ID:	1707793-002A	Batch ID:	38825	TestNo:	EPA 7471A	(EPA 7471A)		Analysis Date:	7/27/2017	SeqNo:	1466706

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9029	0.0275	0.6872	0.1082	116	75	125				

Sample ID	1707911-01AMSD	SampType:	MSD	TestCode:	HG_S_7471	Units:	mg/Kg-dry	Prep Date:	7/26/2017	RunNo:	96869
Client ID:	1707793-002A	Batch ID:	38825	TestNo:	EPA 7471A	(EPA 7471A)		Analysis Date:	7/27/2017	SeqNo:	1466707

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.7975	0.0289	0.7233	0.1082	95.3	75	125	0.9029	12.4	25	

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Minimum Reporting Limit	R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits

CLIENT: Analytical Laboratory Group, Inc.
Work Order: 1707911
Project: 1707793

ANALYTICAL QC SUMMARY REPORT

TestCode: ICP_6010_S

Sample ID **MB-38848** SampType: **MBLK** TestCode: **ICP_6010_S** Units: **mg/Kg** Prep Date: **7/28/2017** RunNo: **96996**
Client ID: **ZZZZZ** Batch ID: **38848** TestNo: **EPA 6010B** **(EPA 3050B)** Analysis Date: **8/1/2017** SeqNo: **1468455**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.003800	0.0500									J
Cadmium	ND	0.0100									
Chromium	0.0003000	0.0500									J
Copper	ND	0.0100									
Lead	0.002900	0.0500									J
Molybdenum	0.0004000	0.0500									J
Nickel	0.0005000	0.00500									J
Potassium	0.01800	0.0500									J
Selenium	ND	0.0500									
Zinc	0.002500	0.0500									J

Sample ID **LCS-38848** SampType: **LCS** TestCode: **ICP_6010_S** Units: **mg/Kg** Prep Date: **7/28/2017** RunNo: **96996**
Client ID: **ZZZZZ** Batch ID: **38848** TestNo: **EPA 6010B** **(EPA 3050B)** Analysis Date: **8/1/2017** SeqNo: **1468456**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	328.4	10.0	317	0.0038	104	50	150				
Cadmium	189.2	2.01	182	0	104	50	150				
Chromium	361.4	10.0	339	0.0003	107	50	150				
Copper	348.1	2.01	352	0	98.9	50	150				
Lead	76.01	10.0	66	0.0029	115	50	150				
Molybdenum	125.6	10.0	111	0.0004	113	50	150				
Nickel	196.4	1.00	190	0.0005	103	50	150				
Potassium	10500	10.0	9370	0.018	112	50	150				
Selenium	207.7	10.0	210	0	98.9	50	150				
Zinc	208.7	10.0	206	0.0025	101	50	150				

Qualifiers:
E Value above quantitation range
ND Not Detected at the Minimum Reporting Limit
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
J Analyte detected below quantitation limits
S Spike Recovery outside accepted recovery limits

CLIENT: Analytical Laboratory Group, Inc.
Work Order: 1707911
Project: 1707793

ANALYTICAL QC SUMMARY REPORT

TestCode: ICP_6010_S

Sample ID **1707928-04AMS** SampType: **MS** TestCode: **ICP_6010_S** Units: **mg/Kg** Prep Date: **7/28/2017** RunNo: **96996**
Client ID: **ZZZZZ** Batch ID: **38848** TestNo: **EPA 6010B (EPA 3050B)** Analysis Date: **8/1/2017** SeqNo: **1468472**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	112.1	4.97	99.36	2.444	110	70	130				
Cadmium	108.1	0.994	99.36	1.792	107	70	130				
Chromium	145.0	4.97	99.36	14.85	131	70	130				MI
Copper	144.1	0.994	99.36	20.25	125	70	130				
Lead	210.5	4.97	99.36	50.81	161	70	130				MI
Molybdenum	112.0	4.97	99.36	0.1131	113	70	130				
Nickel	135.4	0.497	99.36	11.37	125	70	130				
Potassium	4909	4.97	2087	1229	176	70	130				MI
Selenium	106.7	4.97	99.36	1.122	106	70	130				
Zinc	173.2	4.97	99.36	48.69	125	70	130				

Sample ID **1707928-04AMSD** SampType: **MSD** TestCode: **ICP_6010_S** Units: **mg/Kg** Prep Date: **7/28/2017** RunNo: **96996**
Client ID: **ZZZZZ** Batch ID: **38848** TestNo: **EPA 6010B (EPA 3050B)** Analysis Date: **8/1/2017** SeqNo: **1468473**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	110.9	5.09	101.7	2.444	107	70	130	112.1	1.09	25	
Cadmium	106.3	1.02	101.7	1.792	103	70	130	108.1	1.70	25	
Chromium	142.9	5.09	101.7	14.85	126	70	130	145	1.44	25	
Copper	134.7	1.02	101.7	20.25	112	70	130	144.1	6.76	25	
Lead	213.5	5.09	101.7	50.81	160	70	130	210.5	1.43	25	MI
Molybdenum	110.8	5.09	101.7	0.1131	109	70	130	112	1.10	25	
Nickel	135.7	0.509	101.7	11.37	122	70	130	135.4	0.182	25	
Potassium	4803	5.09	2136	1229	167	70	130	4909	2.18	25	MI
Selenium	104.8	5.09	101.7	1.122	102	70	130	106.7	1.85	25	
Zinc	175.9	5.09	101.7	48.69	125	70	130	173.2	1.53	25	

Qualifiers:
E Value above quantitation range
ND Not Detected at the Minimum Reporting Limit
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
J Analyte detected below quantitation limits
S Spike Recovery outside accepted recovery limits

Neilson Research Corporation

Date: 04-Aug-17

CLIENT: Analytical Laboratory Group, Inc.
Work Order: 1707911
Project: 1707793

ANALYTICAL QC SUMMARY REPORT

TestCode: SOLIDS_TOT_S

Sample ID **MB-R96880**	SampType: **MBLK**	TestCode: **SOLIDS_TOT**	Units: **%**		Prep Date:				RunNo: **96880**		
Client ID: **ZZZZZ**	Batch ID: **R96880**	TestNo: **SM 2540G**			Analysis Date: **7/26/2017**				SeqNo: **1466974**		
Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Solids	ND	0.0100									

Sample ID **1707911-01ADUP**	SampType: **DUP**	TestCode: **SOLIDS_TOT**	Units: **%**		Prep Date:				RunNo: **96880**		
Client ID: **1707793-002A**	Batch ID: **R96880**	TestNo: **SM 2540G**			Analysis Date: **7/26/2017**				SeqNo: **1466976**		
Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Solids	30.72	0.0100						31.95	3.93	5	

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Minimum Reporting Limit	R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits

Lab Order Number 1707911

Analytical Laboratory Group, Inc.

361 WEST FIFTH AVENUE
EUGENE, OREGON 97401
800-262-5973/541-485-8404 Fax 541-484-5995
Email: alglabs@alglabsinc.com

ALG
ANALYTICAL LABORATORY GROUP

CHAIN OF CUSTODY

Attention:	Cynthia O'Kelley	Client:	Analytical Laboratory Group, Inc
Phone:	541-485-8404	Address	361 West 5th Avenue
Fax:	541-484-5995		Eugene, OR 97401
Client Project:	Neilson Subcontract		ALG PO# 170720-02RH

Lab ID	ALG Sample ID	ALG Client ID	Sample Matrix & Description Grab/Comp	Collection Date	Collection Time	Bottles	Analysis Requested
	1707793-002A	Grab	Biosolid/Grab	7/19/17	1145	(2) L	Biosolids 503 Metals: As, Cd, Cr, Cu,Pb,Mo, Ni, K, Se, Zn by EPA 6010A; Hg by EPA 7471A; Total Solids by SM 2540G**

Notes:
Please Return Shipper
Include: MDL
** Report results in mg/Kg-dr

Turn Around Time Requested:	Shipped Via:	Refrigerated
NORMAL	UPS	YES 4.8°C

COC and PO made by:	Date	Time	Received by:	Date	Time
Rhonda Hill	7/20/17	14:04			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by Laboratrory:	Date	Time
				7/21/17	9:45

Note: Standard Terms and Conditions on Reverse

Lab Order Number 1707793

Analytical Laboratory Group, Inc.

361 WEST FIFTH AVENUE
EUGENE, OREGON 97401
800-262-5973/541-485-8404 Fax 541-484-5995
Email: alglabs@alglabsinc.com

ALG

PUC

CHAIN OF CUSTODY

Attention:	Mark Worden	**Client:**	City of Newport
Phone:	541-574-3372	**Address**	169 SW Coast Hwy.
Email:	E.MCCOY@NEWPORTOREGON.GOV	City, State, Zip	Newport, OR 97365
Client Project:	M.WORDEN@ " " .GOV Newport WWTP	**Sampler: Print**	Ed McCoy
		Sampler: Signature	Ed McCoy

Client ID	Sample Matrix & Grab/Comp	Collection Date	Collection Time	Analysis Requested	Bottles -Lab Use Only Type	#	Pres	T °C	Lab ID
				503 Biosolids	L	3		7.3 7.2	
	Grab	7-19-17	11:45A	NO3 pH TS VS PMoist				8.1	001A
	Grab	7-19-17	11:45A	NH3 TKN TP					001A
	Grab	7-19-17	11:45AM	Metals: As Cd Cr Cu Pb Mo Ni K Se Zn Hg					002A

Notes:

Preservation Check

Lab ID	Date/Time	Pre-Preserved	pH	Tech

Turn Around Time Requested (Rush incurs a Surcharge):

☒ NORMAL _____ ☐ RUSH _____

Shipped Via: ALG courier

Refrigerated ice

Relinquished by:	Date	Time	Received by:	Date	Time
Ed McCoy	7-19-17	Noon			
Relinquished by:	Date	Time	Received by:	Date	Time
				7/19/17	1210
Relinquished by:	Date	Time	Received by Laboratory:	Date	Time
	7/19/17	1430		7/19/17	1430

ALG ORELAP ID #OR100012
361 West 5th Ave
Eugene, OR 97401
TEL: (541) 485-8404 FAX: (541) 484-5995
Website:

January 03, 2018

Mark Worden
City of Newport
169 SW Coast Hwy
Newport, OR 97365
TEL: (541) 574-3372
FAX

RE: Newport WWTP Order No.: 1712573

Dear Mark Worden:

Analytical Laboratory Group received 2 sample(s) on 12/13/2017 for the analyses presented in the following report.

The analysis was performed according to our laboratory's NELAP/TNI-approved quality assurance program. Any exceptions to this quality assurance program are noted on the case narrative.

Testing methods used are sufficiently sensitive enough to meet the requirements that support client/permittee NPDES permits that we have on file. The client is responsible for reviewing reports. The permittee is responsible for meeting permit limits.

Quality control data is within laboratory defined or method specified acceptance limits except if noted on the case narrative.

If you have any questions regarding these tests results, please feel free to call.

Kimberly J. Reever Morghan

Kimberly Reever Morghan
Quality Manager
361 West 5th Ave
Eugene, OR 97401

ALG
ANALYTICAL LABORATORY GROUP

ALG ORELAP ID #OR100012
361 West 5th Ave
Eugene, OR 97401
TEL: (541) 485-8404 FAX: (541) 484-5995
Website:

Case Narrative

WO#: **1712573**
Date: **1/3/2018**

CLIENT: City of Newport
Project: Newport WWTP

This report presents the results of the analyses of the sample(s) received on the date above and assigned the listed ALG lab report numbers. Test results relate only to the parameters tested and to the samples as received by the laboratory.

All analyses were performed according to the Analytical Laboratory Group, Inc. Quality Assurance Program.
All QA/QC requirements were met except as noted below.

Analytical comments are noted with qualifiers (see "Qual" column) or data flags on the reports and/or below.

pH by EPA 9040D: pH should be analyzed as soon as possible following sample collection. Sample(s) analyzed on receipt in laboratory.

Metals by EPA 6010B, Mercury by EPA 7471A and Total Solids by SM 2540G were analyzed by Neilson Research Corporation, Medford OR; ORELAP ID# OR100016. No anomalies associated with the analysis of these sample(s) were reported except as noted in the NRC Case Narrative or qualified with data flags on the NRC report.

ALG
ANALYTICAL LABORATORY GROUP

ALG ORELAP ID #OR100012
361 West 5th Ave
Eugene, OR 97401
TEL: (541) 485-8404 FAX: (541) 484-5995
Website:

Analytical Report

Date Reported: **1/3/2018**

WO#: 1712573
CLIENT: City of Newport
Project: Newport WWTP

Received Date: 12/13/2017 3:53:00 PM
Sampler Name Mark Worden
Matrix: Biosolid

Lab ID: 1712573-001 **Client Sample ID** Solid Pasturizer **Collection Date:** 12/13/2017 10:30:00 A

Analyses	Method	Result	Qual	PQL	LOD	Units	Date Analyzed	Analys
Nitrate	EPA 300.0	ND		0.010	0.0050	% Dry W	12/14/17 13:28	MJ
Ammonia-N	EPA 350.2	0.20		0.010	0.0050	%-dry	12/22/17 16:13	AS
Hydrogen Ion (pH)	EPA 9045D	13	H	0	0	pH Units	12/13/17 17:15	MJ
Phosphorus, Total (As P)	EPA 365.3	0.89		0.00031	0.00031	% Dry W	12/23/17 10:18	RV
Percent Moisture	D2216	68		0.10	0	%	12/15/17 13:36	RV
Nitrogen, Kjeldahl, Total	EPA 351.3	4.0		0.015	0	% Dry W	12/21/17 09:00	ER
Total Solids	EPA 160.3	32		0.10	0	%	12/15/17 13:36	RV
Volatile Solids	EPA 160.3	33		0.10	0	%	12/15/17 13:36	RV

Definitions:
- A Accredited by ORELAP
- LOD Limit of Detection
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- PL Permit Limit
- PQL Practical Quantitation Level or Reporting Limit

Qualifiers:
- H Holding times for preparation or analysis exceeded

Original

ALG
ANALYTICAL LABORATORY GROUP

ALG ORELAP ID #OR100012
361 West 5th Ave
Eugene, OR 97401
TEL: (541) 485-8404 FAX: (541) 484-5995
Website:

QC SUMMARY REPORT

03-Jan-18

VO#: 1712573
Client: City of Newport
Project: Newport WWTP

QC Type	Sample ID	Analyses	Method	Analysis Date	Result	Units	RL	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
MBLK	MB-R19875	Total Solids	EPA 160.3	12/15/2017	ND	%	0.10									
MBLK	MB-R19875	Volatile Solids	EPA 160.3	12/15/2017	ND	%	0.10									
MBLK	MB-3292	Nitrate	EPA 300.0	12/14/2017	ND	% Dry W	0.010									
MBLK	MB-3301	Ammonia-N	EPA 350.2	12/22/2017	ND	mg/L	0.010									
MBLK	MB-3285	Nitrogen, Kjeldahl, Total	EPA 351.3	12/21/2017	ND	% Dry W	0.010									
MBLK	MB-3291	Phosphorus, Total (As P)	EPA 365.3	12/23/2017	ND	% Dry W	.00010									
LCS	LCS-3292	Nitrate	EPA 300.0	12/14/2017	2.4	% Dry W	0.010	2.500	0	95.4	85	115				
LCS	LCS-3301	Ammonia-N	EPA 350.2	12/22/2017	5.2	mg/L	0.010	5.000	0	104	85	115				
LCS	LCS-3285	Nitrogen, Kjeldahl, Total	EPA 351.3	12/21/2017	4.7	% Dry W	0.010	5.000	0	94.1	85	115				
LCS	LCS-3291	Phosphorus, Total (As P)	EPA 365.3	12/23/2017	0.86	% Dry W	.00010	0.8000	0	108	85	115				
LCS	LCS-R19821	Hydrogen Ion (pH)	EPA 9045D	12/13/2017	7.1	pH Units	0	7.040	0	101	90	110				

Qualifiers:

Definitions:

% REC: Percent Recovery; a measure of accuracy expressed as a percentage of a measured (recovered) concentration compared to the known concentration added to the sample.

% RPD: Relative Percent Difference; a measure of precision expressed as a percentage of the difference between two duplicates relative to the average concentration.

DF: Dilution factor; the dilution factor applied to the prepared sample.

DUP: Duplicate; aliquots of a sample taken from the same container under laboratory conditions and processed and analyzed independently, used to calculate Precision (%RPD).

LCS: Laboratory Control Sample; prepared by adding a known mass of target analytes to a specified amount of de-ionized water and prepared with the batch of samples, used to calculate Accuracy (%REC).

LCSD: The duplicate sample of the LCS, used to calculate both Accuracy (%REC) and Precision (%RPD)

MBLK: Method Blank; a sample of similar matrix that is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedure, and in which no target analytes or interferences are present at concentrations that impact the analytical results for sample analyses.

MS: Matrix Spike; prepared by adding a known mass of target analytes to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available, used to calculate Accuracy (%REC)

MSD: The duplicate sample of the MS, used to calculate both Accuracy (%REC) and Precision (%RPD)

ND: Not Detected. The analyte level is below the lowest point the laboratory can test for.

PL: Permit limit; only applicable to wastewater reports.

PQL: Practical Quantitation Level or Reporting Limit; the limit to which data is compared for reporting.

Qual: Qualifier that applies to the analyte reported

ALG
ANALYTICAL LABORATORY GROUP

ALG ORELAP ID #OR100012
361 West 5th Ave
Eugene, OR 97401
TEL: (541) 485-8404 FAX: (541) 484-5995
Website:

Definition Base

WO#: **1712573**
Date: **1/3/2018**

Definitions:

Result: Analyte concentration reported

RL: Reporting Limit/Limit of Quantitation; the limit to which data is compared for reporting. Analyte concentrations below the reporting limit are reported as ND or with a "J" qualifier.

Units: The units in which the analyte concentration is reported.

Qualifiers:

*	Value exceeds Maximum Contaminant Level (MCL)
A	Accredited by ORELAP
C	Value is below Minimum Compound Limit.
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
LOD	Limit of Detection
MCL	Maximum Contaminant Level
NAR	See note in Case Narrative
ND	Not Detected at the Reporting Limit
PL	Permit Limit
PQL	Practical Quantitation Level or Reporting Limit
R	RPD outside accepted recovery limits
U	Samples with CalcVal < MDL
W	Sample container temperature was outside of the limits as specified by the method.

NEILSON RESEARCH CORPORATION
Environmental Testing Laboratory

12/26/2017

Cynthia O Kelley
Analytical Laboratory Group, Inc.
361 West Fifth Avenue
Eugene, OR 97401
TEL: (800) 262-5973
FAX: (541) 484-5995

RE: 1712573

Order No.: 1712519

Dear Cynthia O Kelley:

Neilson Research Corporation received 1 sample(s) on 12/15/2017 for the analyses presented in the following report.

The results relate only to the parameters tested or to the sample as received by the laboratory. This report shall not be reproduced except in full, without the written approval of Neilson Research Corporation. If you have any questions regarding these test results, please feel free to call.

Sincerely,
Neilson Research Corporation

Tamra Schmedemann

Tamra R. Schmedemann
Project Manager

Neilson Research Corporation

245 South Grape Street, Medford, Oregon 97501 541-770-5678 Fax 541-770-2901

Analysis Report

ORELAP 100016
EPA OR00028

CLIENT: Analytical Laboratory Group, Inc.
Project: 1712573
Lab Order: 1712519

Date: 26-Dec-17

CASE NARRATIVE

The analyses were performed according to the guidelines in the Neilson Research Corporation Quality Assurance Program. This report contains analytical results for the sample(s) as received by the laboratory.

Neilson Research Corporation certifies that this report is in compliance with the requirements of NELAP. No unusual difficulties were experienced during analysis of this batch except as noted below or qualified with data flags on the reports.

Neilson Research Corporation

245 South Grape Street, Medford, Oregon 97501 541-770-5678 Fax 541-770-2901

Analysis Report

ORELAP 100016
EPA OR00028

Analytical Laboratory Group, Inc.
361 West Fifth Avenue
Eugene, OR 97401
Client Sample ID: **1712573-002A**
Sample Location: **Solid Pasturizer**
Project: **1712573**

Lab Order: **1712519**
NRC Sample ID **1712519-01A**
Collection Date: **12/13/2017 10:30:00 AM**
Received Date: **12/15/2017 10:10:00 AM**
Reported Date: **12/26/2017 4:46:13 PM**
Matrix: **Solid**

ANALYTICAL RESULTS

Analyses	Result	Qual	MDL	MRL	Units	DF	NELAP	Date Analyzed
TRACE METALS			**EPA 7471A**					Analyst: **JWC**
Mercury	0.127		0.0100	0.0309	mg/Kg-dry	1	A	12/22/2017
TRACE METALS			**EPA 6010B**					Analyst: **OML**
Arsenic	5.6	J	0.955	15.4	mg/Kg-dry	1	A	12/22/2017
Cadmium	2.2	J	0.0518	3.09	mg/Kg-dry	1	A	12/22/2017
Chromium	7.5	J	0.0518	15.4	mg/Kg-dry	1	A	12/22/2017
Copper	56.2		0.183	3.09	mg/Kg-dry	1	A	12/22/2017
Lead	30.2		0.224	15.4	mg/Kg-dry	1	A	12/22/2017
Molybdenum	1.6	J	0.0762	15.4	mg/Kg-dry	1	A	12/22/2017
Nickel	10.3		0.145	1.54	mg/Kg-dry	1	A	12/22/2017
Potassium	5420		14.7	15.4	mg/Kg-dry	1	A	12/22/2017
Selenium	1.9	J	1.56	15.4	mg/Kg-dry	1	A	12/22/2017
Zinc	169		0.608	15.4	mg/Kg-dry	1	A	12/22/2017
% TOTAL SOLIDS			**SM 2540G**					Analyst: **SCM**
Total Solids	31.8		0.0100	0.01	%	1		12/18/2017

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Minimum Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Neilson Research Corporation

DATA FLAGS

B	Analyte detected in the associated method blank.
BA	BOD Alternative Calculation: The initial results performed by Standard Methods did not fall within parameters of the Standard Methods calculation. An alternate approved calculation was performed using the HACH method and the value reported is an estimated concentration.
C	Sample(s) does not meet NELAP/ORELAP sample acceptance criteria. See Case Narrative.
C1	Sample(s) does not meet NELAP/ORELAP sample acceptance criteria for temperature.
CF	Results confirmed by re-analysis.
CU	Cleanup performed as specified by method.
D1	The diesel elution pattern for the sample is not typical.
D2	The sample appears to be a heavier hydrocarbon range than diesel.
D3	The sample appears to be a lighter hydrocarbon range than diesel.
D4	Detected hydrocarbons do not have pattern and range consistent with typical petroleum products and may be due to biogenic interference.
D5	Detected hydrocarbons in the diesel range appear to be weathered diesel.
E	Estimated value.
ER	Elevated reporting limit due to matrix. Report limits (MDLs, MRLs & PQLs) are adjusted based on variations in sample preparation amounts, analytical dilutions, and percent solids, where applicable.
FC	Fecal Coliforms: Sample(s) received past 40 CFR Part 136 specified holding time. Results reported as estimated values.
G1	The gasoline elution pattern for the sample is not typical.
G2	The sample appears to be a heavier hydrocarbon range than gasoline.
G3	The sample appears to be a lighter hydrocarbon range than gasoline.
G4	Detected hydrocarbons in the gasoline range appear to be weathered gasoline.
HP	Sample re-analysis performed outside of method specified holding time.
HR	Sample received outside of method specified holding time.
HS	Sample analyzed for volatile organics contained headspace.
HT	At the client's request, the sample was analyzed outside of method specified holding time.
H	Analysis performed outside of method specified holding time.
J	Analyte detected below the Minimum Reporting Limit (MRL) and above the Method Detection Limit (MDL). The J flag result is an estimated value and the user should be aware that this data is of limited reliability.
MI	Surrogate or Matrix Spike recovery is out of control limits due to matrix interference. Sample results may be biased.
N	See Case Narrative on page 2 of report.
Q	Closing continuing calibration verification (CCV) or laboratory control sample (LCS) exceeded high recovery limits, but associated samples are non-detect and the sample results are not affected. Data meets EPA/NELAP requirements.
R	Relative percent difference (RPD) is outside of the accepted recovery limits.
R1	Relative percent difference (RPD) is outside of the accepted recovery limits. However, analyses are not controlled on RPD values for sample concentrations that are less than the reporting limit.
R3	The relative percent difference (RPD) and/or percent recovery for the duplicate (DUP) or matrix spike (MS)/matrix spike duplicate (MSD) cannot be accurately calculated due to the concentration of analyte already present in the sample.
R4	Duplicate analysis failed due to result being at or near method reporting limit.
S	Surrogate and/or matrix spike recovery is outside of the accepted recovery limits. Sample results may be biased.
S1	Surrogate or matrix spike recovery is outside of control limits due to dilution necessary for analysis.
SC	Sub-contracted to another laboratory for analysis.
SP	Sample(s) were not collected per EPA Method 5035A protocols. The results are considered minimum values.
T	Toxicity Characteristic Leaching Procedure – Sample submitted contained < 0.5% solids. If the waste contains <0.5% dry solids, the liquid portion of the waste, after filtration, is defined as the TCLP extract.
#	Value exceeds regulatory level for TCLP contaminant.
X1	The motor oil elution pattern for the sample is not typical.
X2	The sample appears to be a heavier hydrocarbon range than motor oil.
X3	The sample appears to be a lighter hydrocarbon range than motor oil.
*	Value exceeds Maximum Contaminant Level or is outside the acceptable range.

Neilson Research Corporation

Date: 26-Dec-17

CLIENT: Analytical Laboratory Group, Inc.
Work Order: 1712519
Project: 1712573

ANALYTICAL QC SUMMARY REPORT

TestCode: HG_S_7471

Sample ID: **MB-39984**	SampType: **MBLK**	TestCode: **HG_S_7471**	Units: **mg/Kg**	Prep Date: **12/18/2017**	RunNo: **100308**
Client ID: **ZZZZZ**	Batch ID: **39984**	TestNo: **EPA 7471A**	**(EPA 7471A)**	Analysis Date: **12/22/2017**	SeqNo: **1513456**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.000200									

Sample ID: **LCS-39984**	SampType: **LCS**	TestCode: **HG_S_7471**	Units: **mg/Kg**	Prep Date: **12/18/2017**	RunNo: **100308**
Client ID: **ZZZZZ**	Batch ID: **39984**	TestNo: **EPA 7471A**	**(EPA 7471A)**	Analysis Date: **12/22/2017**	SeqNo: **1513457**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	7.280	0.202	7.18	0	101	50	150				

Sample ID: **1712290-01AMS**	SampType: **MS**	TestCode: **HG_S_7471**	Units: **mg/Kg**	Prep Date: **12/18/2017**	RunNo: **100308**
Client ID: **ZZZZZ**	Batch ID: **39984**	TestNo: **EPA 7471A**	**(EPA 7471A)**	Analysis Date: **12/22/2017**	SeqNo: **1513462**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.4462	0.00871	0.4353	0.01122	99.9	75	125				

Sample ID: **1712290-01AMSD**	SampType: **MSD**	TestCode: **HG_S_7471**	Units: **mg/Kg**	Prep Date: **12/18/2017**	RunNo: **100308**
Client ID: **ZZZZZ**	Batch ID: **39984**	TestNo: **EPA 7471A**	**(EPA 7471A)**	Analysis Date: **12/22/2017**	SeqNo: **1513463**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.4219	0.00857	0.4286	0.01122	95.8	75	125	0.4462	5.60	25	

Qualifiers:

- E Value above quantitation range
- ND Not Detected at the Minimum Reporting Limit
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

CLIENT: Analytical Laboratory Group, Inc.
Work Order: 1712519
Project: 1712573

ANALYTICAL QC SUMMARY REPORT

TestCode: ICP_6010_S

Sample ID: **MB-39978** SampType: **MBLK** TestCode: **ICP_6010_S** Units: **mg/Kg** Prep Date: **12/18/2017** RunNo: **100343**
Client ID: **ZZZZZ** Batch ID: **39978** TestNo: **EPA 6010B** **(EPA 3050B)** Analysis Date: **12/22/2017** SeqNo: **1513876**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.003800	0.0500									J
Cadmium	0.0004000	0.0100									J
Chromium	0.0005000	0.0500									J
Copper	0.0008000	0.0100									J
Lead	0.001300	0.0500									J
Molybdenum	0.0007000	0.0500									J
Nickel	0.001000	0.00500									J
Potassium	ND	0.0500									
Selenium	ND	0.0500									
Zinc	ND	0.0500									

Sample ID: **LCS-39978** SampType: **LCS** TestCode: **ICP_6010_S** Units: **mg/Kg** Prep Date: **12/18/2017** RunNo: **100343**
Client ID: **ZZZZZ** Batch ID: **39978** TestNo: **EPA 6010B** **(EPA 3050B)** Analysis Date: **12/22/2017** SeqNo: **1513877**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	69.07	5.27	65.4	0.0038	106	50	150				
Cadmium	131.0	1.05	126	0.0004	104	50	150				
Chromium	261.1	5.27	260	0.0005	100	50	150				
Copper	214.2	1.05	199	0.0008	108	50	150				
Lead	245.5	5.27	212	0.0013	116	50	150				
Molybdenum	127.8	5.27	132	0.0007	96.8	50	150				
Nickel	80.79	0.527	76.9	0.001	105	50	150				
Potassium	7593	5.27	5910	0	128	50	150				
Selenium	80.45	5.27	73.7	0	109	50	150				
Zinc	698.0	5.27	703	0	99.3	50	150				

Qualifiers:
E Value above quantitation range
ND Not Detected at the Minimum Reporting Limit
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
J Analyte detected below quantitation limits
S Spike Recovery outside accepted recovery limits

CLIENT: Analytical Laboratory Group, Inc.
Work Order: 1712519
Project: 1712573

ANALYTICAL QC SUMMARY REPORT

TestCode: ICP_6010_S

Sample ID: **1712290-01AMS** SampType: **MS** TestCode: **ICP_6010_S** Units: **mg/Kg-dry** Prep Date: **12/18/2017** RunNo: **100343**
Client ID: **ZZZZZ** Batch ID: **39978** TestNo: **EPA 6010B** **(EPA 3050B)** Analysis Date: **12/22/2017** SeqNo: **1513885**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	194.2	50.1	100.2	78.41	115	70	130				

Sample ID: **1712290-01AMS** SampType: **MS** TestCode: **ICP_6010_S** Units: **mg/Kg-dry** Prep Date: **12/18/2017** RunNo: **100343**
Client ID: **ZZZZZ** Batch ID: **39978** TestNo: **EPA 6010B** **(EPA 3050B)** Analysis Date: **12/22/2017** SeqNo: **1513888**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	92.01	5.01	100.2	2.89	88.9	70	130				
Cadmium	93.45	1.00	100.2	6.036	87.2	70	130				
Chromium	100.8	5.01	100.2	17.3	83.3	70	130				
Copper	96.15	1.00	100.2	14.68	81.3	70	130				
Molybdenum	83.22	5.01	100.2	0.503	82.5	70	130				
Nickel	97.92	0.501	100.2	12.83	84.9	70	130				
Potassium	6028	5.01	2105	2675	159	70	130				MI
Selenium	88.36	5.01	100.2	0	88.2	70	130				
Zinc	133.5	5.01	100.2	45.69	87.6	70	130				

Sample ID: **1712290-01AMSD** SampType: **MSD** TestCode: **ICP_6010_S** Units: **mg/Kg-dry** Prep Date: **12/18/2017** RunNo: **100343**
Client ID: **ZZZZZ** Batch ID: **39978** TestNo: **EPA 6010B** **(EPA 3050B)** Analysis Date: **12/22/2017** SeqNo: **1513886**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	179.4	51.7	103.4	78.41	97.7	70	130	194.2	7.92	25	

Sample ID: **1712290-01AMSD** SampType: **MSD** TestCode: **ICP_6010_S** Units: **mg/Kg-dry** Prep Date: **12/18/2017** RunNo: **100343**
Client ID: **ZZZZZ** Batch ID: **39978** TestNo: **EPA 6010B** **(EPA 3050B)** Analysis Date: **12/22/2017** SeqNo: **1513889**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	100.7	5.17	103.4	2.89	94.6	70	130	92.01	9.06	25	
Cadmium	103.3	1.03	103.4	6.036	94.1	70	130	93.45	10.0	25	
Chromium	110.9	5.17	103.4	17.3	90.6	70	130	100.8	9.53	25	

Qualifiers:
E Value above quantitation range
H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits
ND Not Detected at the Minimum Reporting Limit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

CLIENT: Analytical Laboratory Group, Inc.
Work Order: 1712519
Project: 1712573

ANALYTICAL QC SUMMARY REPORT

TestCode: ICP_6010_S

Sample ID: **1712290-01AMSD** SampType: **MSD** TestCode: **ICP_6010_S** Units: **mg/Kg-dry** Prep Date: **12/18/2017** RunNo: **100343**
Client ID: **ZZZZZ** Batch ID: **39978** TestNo: **EPA 6010B** **(EPA 3050B)** Analysis Date: **12/22/2017** SeqNo: **1513889**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	106.6	1.03	103.4	14.68	88.9	70	130	96.15	10.3	25	
Molybdenum	91.84	5.17	103.4	0.503	88.3	70	130	83.22	9.85	25	
Nickel	108.2	0.517	103.4	12.83	92.3	70	130	97.92	10.0	25	
Potassium	6186	5.17	2171	2675	162	70	130	6028	2.57	25	MI
Selenium	94.47	5.17	103.4	0	91.4	70	130	88.36	6.69	25	
Zinc	145.3	5.17	103.4	45.69	96.3	70	130	133.5	8.42	25	

Qualifiers:
E Value above quantitation range
ND Not Detected at the Minimum Reporting Limit
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
J Analyte detected below quantitation limits
S Spike Recovery outside accepted recovery limits

CLIENT: Analytical Laboratory Group, Inc.
Work Order: 1712519
Project: 1712573

ANALYTICAL QC SUMMARY REPORT

TestCode: SOLIDS_TOT_S

Sample ID: **MB-R100272**	SampType: **MBLK**	TestCode: **SOLIDS_TOT**	Units: **%**	Prep Date:	RunNo: **100272**
Client ID: **ZZZZZ**	Batch ID: **R100272**	TestNo: **SM 2540G**		Analysis Date: **12/18/2017**	SeqNo: **1512922**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Solids	ND	0.0100									

Sample ID: **1712519-01ADUP**	SampType: **DUP**	TestCode: **SOLIDS_TOT**	Units: **%**	Prep Date:	RunNo: **100272**
Client ID: **1712573-002A**	Batch ID: **R100272**	TestNo: **SM 2540G**		Analysis Date: **12/18/2017**	SeqNo: **1512924**

Analyte	Result	MRL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Solids	32.29	0.0100						31.76	1.64	5	

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Minimum Reporting Limit	R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits

Lab Order Number 1712519

Analytical Laboratory Group, Inc.

361 WEST FIFTH AVENUE
EUGENE, OREGON 97401
800-262-5973/541-485-8404 Fax 541-484-5995
Email: alglabs@alglabsinc.com

CHAIN OF CUSTODY

Attention:	Cynthia O'Kelley	Client:	Analytical Laboratory Group, Inc
Phone:	541-485-8404	Address	361 West 5th Avenue
Fax:	541-484-5995		Eugene, OR 97401
Client Project:	Neilson Subcontract		ALG PO# 171214-01

Lab ID	ALG Sample ID	ALG Client ID	Sample Matrix & Description Grab/Comp	Collection Date	Collection Time	Bottles	Analysis Requested
01	1712573-002A	Solid Pasturizer	Biosolid/Grab	12/13/17	10:30	L	Biosolids 503 Metals: As, Cd, Cr, Cu, Pb, Mo, Ni, K, Se, ~~Ag~~, Zn by EPA 6010B; Hg by EPA 7471A; Total Solids by SM 2540G
							12/14/17 CO

Notes:
Please Return Shipper
Include: MDL
Report results in mg/Kg-dr

Turn Around Time Requested: NORMAL		Shipped Via: UPS	Refrigerated (YES) 3.9
COC and PO made by: Rhonda Hill	Date 12/14/17 Time 14:00	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by Laboratrory: Terrie Neel	Date 12/15/17 Time 10:10

Note: Standard Terms and Conditions on Reverse

Lab Order Number 1112573

CO

Analytical Laboratory Group, Inc.

361 WEST FIFTH AVENUE
EUGENE, OREGON 97401
800-262-5973/541-485-8404 Fax 541-484-5995
Email: alglabs@alglabsinc.com

ALG ANALYTICAL LABORATORY GROUP

Delivering more than just test results

CHAIN OF CUSTODY

Attention:	Mark Worden	**Client:**	City of Newport
Phone:	541-574-3372	**Address:**	169 SW Coast Hwy.
Email:	m.worden@NewportOREGON.GOV	**City, State, Zip**	Newport, OR 97365
Client Project:	Newport WWTP	**Sampler: Print**	Mark Worden
		Sampler: Signature	Mark Worden

Client ID	Sample Matrix & Grab/Comp	Collection Date	Collection Time	Analysis Requested	Bottles -Lab Use Only Type	#	Pres	T °C	Lab ID
Solid Pasteurized	grab	12-13-17	10:30AM	503 Biosolids	L	3		11.3 9.8	001A
				NO3 pH TS VS PMoist				SK 12/13/17	
				NH3 TKN TP					
				Metals: As Cd Cr Cu Pb Mo Ni K Se Zn Hg TS	"			9.2	002A

Notes:

Preservation Check

Lab ID	Date/Time	Pre-Preserved	pH	Tech

Turn Around Time Requested (Rush incurs a Surcharge):

☒ NORMAL _____ ☐ RUSH _____

Shipped Via: AIG

Refrigerated ice Pak

Relinquished by:	Date	Time	Received by:	Date	Time
Mark Worden	12-13	10:45AM		12/13/17	1300
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by Laboratory:	Date	Time
	12/13/17	1553		12/13/17	1553

169 SW COAST HWY
NEWPORT, OREGON 97365
COAST GUARD CITY, USA

NEWPORT
OREGON

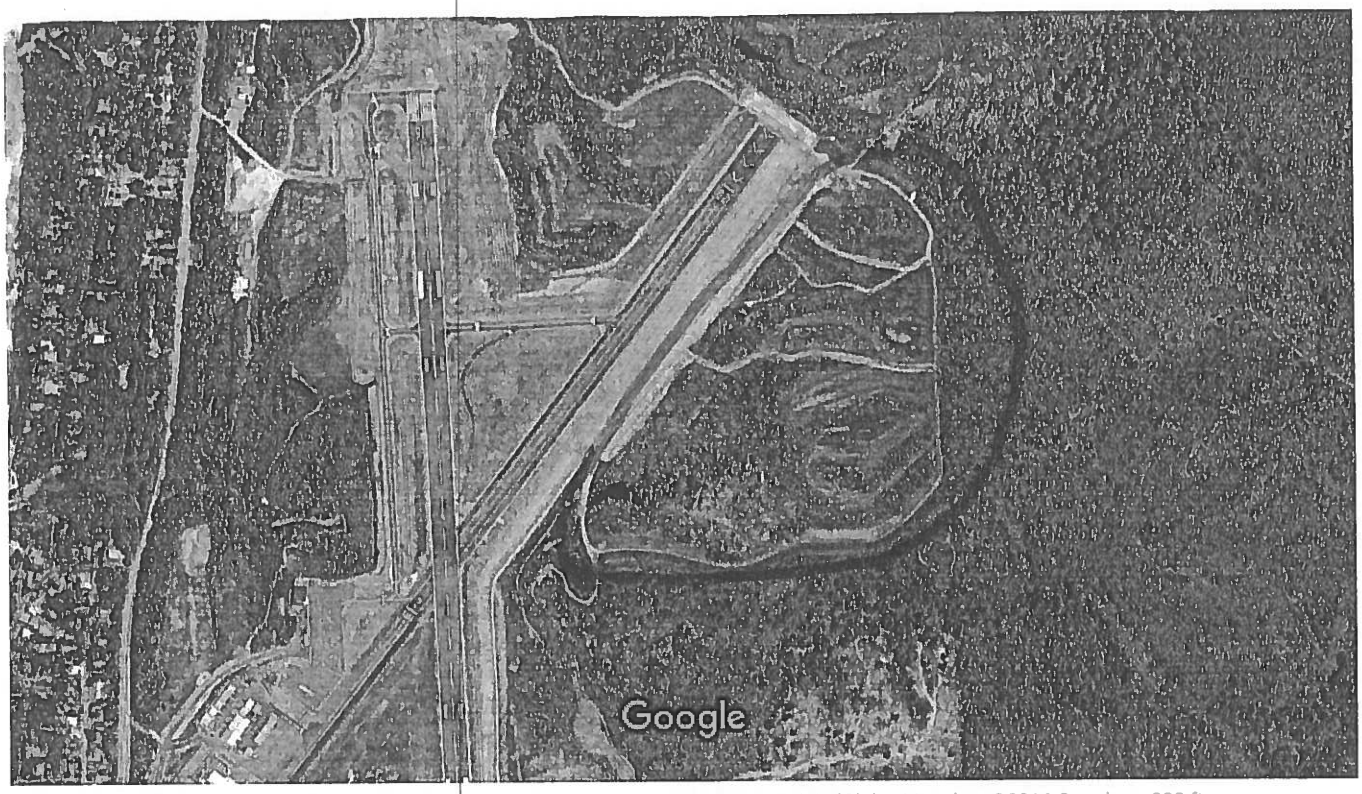
www.thecityofnewport.net
MOMBETSU, JAPAN, SISTER CITY

Wastewater Treatment Division

2017	Class A biosolids Applied at airport	Class A biosolids Applied off site
January	78,877 pounds.	0 pounds.
February	72,535 pounds.	0 pounds.
March	72,490 pounds.	0 pounds.
April	79,089 pounds.	0 pounds.
May	100,273 pounds.	0 pounds.
June	105,454 pounds.	0 pounds.
July	90,227 pounds.	0 pounds.
August	100,572 pounds.	0 pounds.
September	91,025 pounds.	0 pounds.
October	104,097 pounds.	0 pounds.
November	55,159 pounds.	0 pounds.
December	77,174 pounds.	4519 pounds.
	1026972	4500
Total pounds land applied	1,026,972 pounds.	4,519 pounds.

EST. 1882

Google Maps Hidden Valley Rd



Imagery ©2016 DigitalGlobe, Map data ©2016 Google 200 ft

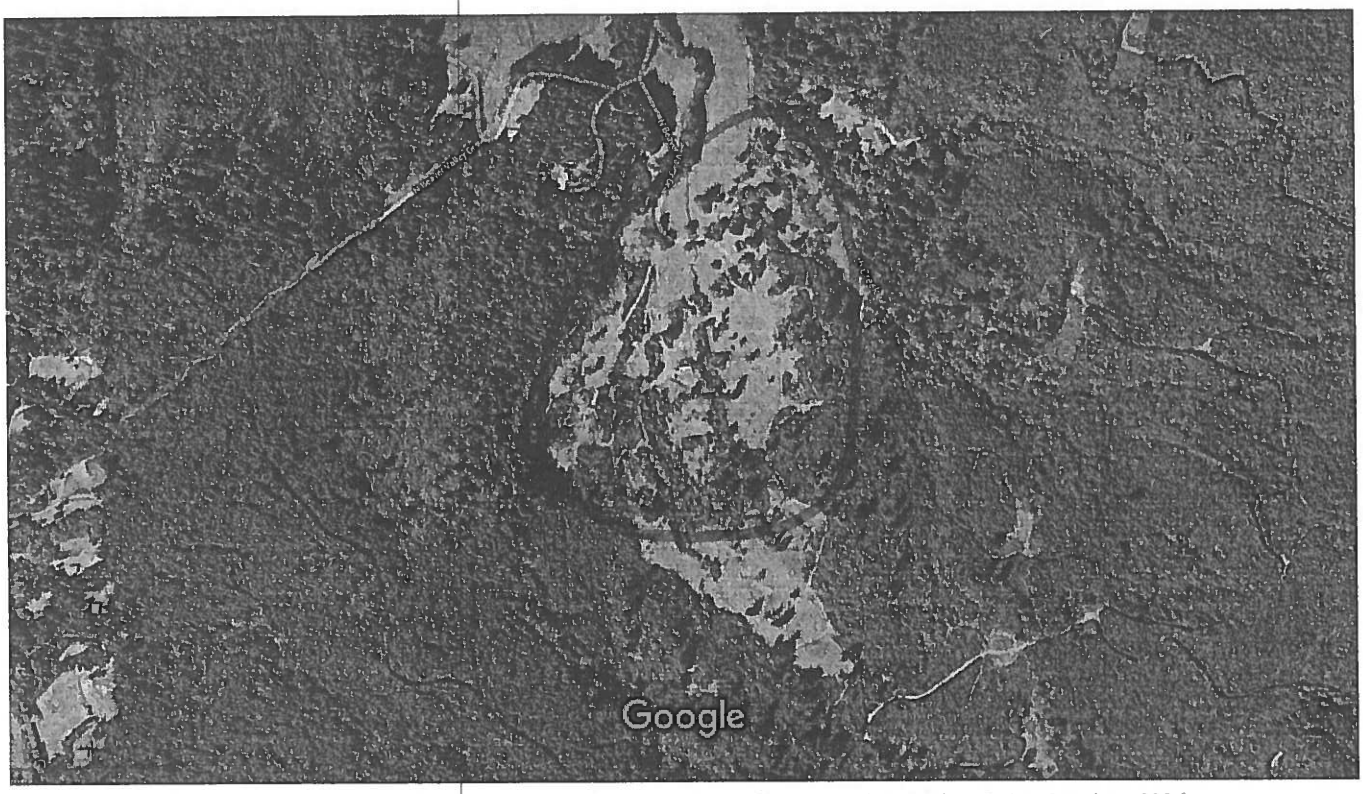
Hidden Valley Rd
Toledo, OR 97391

Google Maps

City of Newport, OR
Municipal Airport, Area 52
135 SE 84 TH Street
South Beach
Newport OR, 97366

page 25

Google Maps



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Google Maps

Terry and Kay Keady Farm
1930 N. Beaver Creek Road
Seal Rock, OR 97376

page 27

A & L WESTERN AGRICULTURAL LABORATORIES

10220 S.W. NIMBUS AVE I BUILDING K-9 I PORTLAND, OREGON 97223 I (503) 968-9225 I FAX (503) 598-7702

REPORT NUMBER: 18-022-072

CLIENT NO:

SEND TO: CITY OF NEWPORT WWTP
169 SW COAST HWY
NEWPORT, OR 97365-

SUBMITTED BY:

GROWER: GRANT

DATE OF REPORT: 02/01/18

SOIL ANALYSIS REPORT

SAMPLE ID	LAB NUMBER	Organic Matter		Phosphorus		Potassium	Magnesium	Calcium	Sodium	pH		Hydrogen	Cation Exchange Capacity	PERCENT CATION SATURATION (COMPUTED)				
		* % Rating	** ENR lbs/A	P1 (Weak Bray) **** * ppm	$NaHCO_3$-P (OlsenMethod) **** * ppm	K ***** * ppm	Mg *** * ppm	Ca *** * ppm	Na *** * ppm	Soil pH	Buffer Index	H meq/100g	C.E.C. meq/100g	K %	Mg %	Ca %	H %	Na %
AP1FT	59470	14.7VH	323	61VH	248VH	118L	73VL	3657VH	17VL	7.4	7.3	0.0	19.2	1.6	3.1	94.9	0.0	0.4
AP2FT	59471	4.6H	121	2VL	19H	111M	41VL	1823VH	19VL	6.9	7.0	0.1	9.9	2.8	3.4	91.5	1.5	0.8
AP3FT	59472	5.0H	130	1VL	8VL	97M	37VL	1141VH	19L	6.2	6.8	0.9	7.2	3.5	4.2	79.2	12.0	1.1
KY1FT	59473	16.3VH	355	7VL	12**	154M	210M	712VL	31L	4.7	4.8	5.9	11.7	3.4	14.7	30.3	50.5	1.1
KY2FT	59474	12.7VH	284	5VL	11**	176M	251M	836VL	38L	4.8	4.9	6.1	12.9	3.5	16.0	32.3	47.0	1.3

** NaHCO3-P unreliable at this soil pH

SAMPLE NUMBER	Nitrogen NO_3-N ppm	Sulfur SO_4-S ppm	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Excess Lime Rating	Soluble Salts mmhos/cm	Chloride Cl ppm		PARTICLE SIZE ANALYSIS			
												SAND %	SILT %	CLAY %	SOIL TEXTURE
AP1FT	17M	30H	6.0H	2L	47VH	2.1H	0.5L	L	0.6L						
AP2FT	17M	58VH	0.8L	1VL	26VH	0.4L	0.3VL	L	0.6L						
AP3FT	23M	109VH	0.4VL	1VL	22H	0.8L	0.2VL	L	0.6L						
KY1FT	5L	30H	0.2VL	5M	18H	0.1VL	0.1VL	L	0.2VL						
KY2FT	3VL	40VH	0.1VL	2L	11M	0.1VL	0.1VL	L	0.2VL						

* CODE TO RATING: VERY LOW (VL), LOW (L), MEDIUM (M), HIGH (H), AND VERY HIGH (VH).
** ENR - ESTIMATED NITROGEN RELEASE
*** MULTIPLY THE RESULTS IN ppm BY 2 TO CONVERT TO LBS. PER ACRE OF THE ELEMENTAL FORM
**** MULTIPLY THE RESULTS IN ppm BY 4.6 TO CONVERT TO LBS. PER ACRE P_2O_5
***** MULTIPLY THE RESULTS IN ppm BY 2.4 TO CONVERT TO LBS. PER ACRE K_2O
MOST SOILS WEIGH TWO (2) MILLION POUNDS (DRY WEIGHT) FOR AN ACRE OF SOIL 6-2/3 INCHES DEEP

This report applies only to the sample(s) tested. Samples are retained a maximum of thirty days after testing.

Rogell Rogers, CCA, PCA
A & L WESTERN LABORATORIES, INC.

A & L WESTERN AGRICULTURAL LABORATORIES

10220 S.W. NIMBUS AVE I BUILDING K-9 I PORTLAND, OREGON 97223 I (503) 968-9225 I FAX (503) 598-7702

REPORT NUMBER: 18-022-072

CLIENT NO:

SEND TO: CITY OF NEWPORT WWTP
169 SW COAST HWY
NEWPORT, OR 97365-

SUBMITTED BY:

GROWER: GRANT

DATE OF REPORT: 02/01/18

SOIL ANALYSIS REPORT

SAMPLE ID	LAB NUMBER	Organic Matter		Phosphorus		Potassium	Magnesium	Calcium	Sodium	pH		Hydrogen	Cation Exchange Capacity	PERCENT CATION SATURATION (COMPUTED)				
		* % Rating	** ENR lbs/A	P1 (Weak Bray) **** * ppm	$NaHCO_3$-P (OlsenMethod) **** * ppm	K ***** * ppm	Mg *** * ppm	Ca *** * ppm	Na *** * ppm	Soil pH	Buffer Index	H meq/100g	C.E.C. meq/100g	K %	Mg %	Ca %	H %	Na %
KY3FT	59475	7.4VH	178	5VL	9**	179M	278M	904VL	44L	4.7	5.1	7.6	15.0	3.0	15.2	30.0	50.5	1.3

** NaHCO3-P unreliable at this soil pH

SAMPLE NUMBER	Nitrogen NO_3-N ppm	Sulfur SO_4-S ppm	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Excess Lime Rating	Soluble Salts mmhos/cm	Chloride Cl ppm		PARTICLE SIZE ANALYSIS			
												SAND %	SILT %	CLAY %	SOIL TEXTURE
KY3FT	2VL	47VH	0.1VL	1VL	7L	0.1VL	0.1VL	L	0.3L						

* CODE TO RATING: VERY LOW (VL), LOW (L), MEDIUM (M), HIGH (H), AND VERY HIGH (VH).
** ENR - ESTIMATED NITROGEN RELEASE
*** MULTIPLY THE RESULTS IN ppm BY 2 TO CONVERT TO LBS. PER ACRE OF THE ELEMENTAL FORM
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MOST SOILS WEIGH TWO (2) MILLION POUNDS (DRY WEIGHT) FOR AN ACRE OF SOIL 6-2/3 INCHES DEEP

This report applies only to the sample(s) tested. Samples are retained a maximum of thirty days after testing.

Rogell Rogers, CCA, PCA
A & L WESTERN LABORATORIES, INC.

A & L WESTERN AGRICULTURAL LABORATORIES, INC.

1311 Woodland Avenue, Suite 1 • Modesto, California 95351 • (209) 529-4080

Report No: 18-022-073

Account No: 99999-D

Send to: CITY OF NEWPORT WWTP
169 SW COAST HWY
NEWPORT, OR 97365

Grower: GRANT

Lab Number: 59476 **Sample ID:** AP1FT

Date Received: 01/23/2018
Date Reported: 02/01/2018

EPA 503 METALS SOIL ANALYSIS REPORT

Sample Preparation Method: EPA SW846-3050 B

Detection Limit mg/kg	Analyte	Level Found mg/kg	Method Code
0.25	Arsenic	3.74	EPA SW846-6010
0.03	Cadmium	0.12	EPA SW846-6010
0.1	Chromium	25.7	EPA SW846-6010
0.1	Copper	26.3	EPA SW846-6010
0.5	Lead	6.8	EPA SW846-6010
0.05	Mercury	0.18	EPA SW846-7471A
0.1	Molybdenum	0.9	EPA SW846-6010
0.1	Nickel	8.5	EPA SW846-6010
0.5	Selenium	BDL	EPA SW846-6010
0.05	Zinc	58.85	EPA SW846-6010

BDL - INDICATES THE LEVEL FOUND IS BELOW THE ESTABLISHED DETECTION LIMIT FOR THAT ANALYTE.
ANALYZED ON A DRY WEIGHT BASIS

A & L Western Agricultural Laboratories, Inc.

Rogell Rogers, CCA, PCA
Agronomist

A & L WESTERN AGRICULTURAL LABORATORIES, INC.

1311 Woodland Avenue, Suite 1 • Modesto, California 95351 • (209) 529-4080

Report No: 18-022-072

Account No: 9999

Send to: CITY OF NEWPORT WWTP
169 SW COAST HWY
NEWPORT, OR 97365

Grower: GRANT

Date Received: 01/22/2018
Date Reported: 02/01/2018

SOIL ANALYSIS REPORT

Analyte:		**TKN**
Detection Limit:		**40 mg/kg**
Method Code:		**WREP 125 2nd Ed. S - 8.10**
Lab Number:	**Sample ID:**	**mg/kg (ppm)**
59470	AP1FT	4048
59171	AP2FT	1127
59172	AP3FT	786
59173	KY1FT	5260
59174	KY2FT	3671
59175	KY3FT	3671

A & L Western Agricultural Laboratories, Inc.

Rogell Rogers, CCA, PCA
Agronomist