Alliance WATER RESOURCES®
Professional Water and Wastewater Operations

OPERATIONS REPORT – NEVADA DIVISION

January 2017 Report to the City of Nevada

OPERATING DIVISIONS

MISSOURI

Atchison County
Bonne Terre
Boonville
Bowling Green
Buchanan County #1
Cameron
Cape Girardeau
Craig
East Central Missouri Water & Sewer Authority
Elsberry
Fayette
Franklin County #1
Franklin County #3
Henry County Water Company
Henry County #3
Lake Ozark/ Osage Beach
Lincoln County #1
Neosho
Nevada
Parkville
Phelps County #2
Platte County #C-1
Ralls County #1
Russelville
St Charles County #2
St Genevieve
Sedalia
Versailles

Water Treatment Plant Operations & Maintenance

1. Gathered and tested samples for Langelier Index
2. Flushed eyewash stations
3. Changed caustic filters
4. Serviced high service pumps
5. Changed nozzles on scrubber #1
6. Acid cleaned drain lines on scrubber #1
7. General Maintenance on recirculation pump scrubber #1
8. Completed major water users report
9. Performed cross section for deep well #3
10. Acid cleaned and changed fluids in Cl 17
11. Performed cross section on deep well #4
12. C&M Restoration has completed the acid room repairs

Waste Water Treatment Plant Operations & Maintenance

1. Completed weekly ammonia sampling
2. Worked on headworks building heaters
3. Completed weekly and monthly influent and effluent testing
4. Completed annual sludge report
5. Repaired east basin blower #1
6. Trimmed trees at pump station #3
7. Megger tested pumps at pump station #2
8. Completed monthly and weekly sampling and testing
9. Repaired bearing assembly on blower #2
10. Completed annual fire extinguisher inspections

Waste Water Collection / Water Distribution

1. Completed 106 locates
2. Completed monthly inspection on wells and towers
3. Inspected new sewer service on west Austin Street
4. Cleaned sewer main at career center
5. Dye tested sewers on 400 block of Hunter Street
6. Performed service on Jet VAC truck
7. Cleaned multiple sewer mains due to blockage
8. Filmed multiple sewer mains in system
9. Continued to GPS manholes for GIS system mapping
10. Vacuum tested manhole east of Hedges Plaza
11. Chemically treated sewer mains where root problems are occurring
12. Repaired 2 inch water leak at Clay and Sycamore

Recommendations

1. Change language of City code Sec. 40-4 and 40-11 to minimize possible liability. Responsibility should be from the water main to the first point of shut off, whether it is a corporate shut off (curb stop) or inside the meter box.

Alliance WATER RESOURCES®
Professional Water and Wastewater Operations

OPERATIONS REPORT – NEVADA DIVISION

WATER TREATMENT PLANT PERFORMANCE

4 Log Sampling

Parameter	Monthly Average
pH	8.64
Temperature	19.4
Lowest Cl_2 residual	1.70

Bacteriological Results

Date	Results (Absent or Present)
01/03/17	A
01/17/17	A

Flow Totals (Million Gallons per Day)

Meter	Average Daily Flow	Total Monthly Flow
Feed	0.76 MGD	23.49 MG
Product	0.46 MGD	14.22 MG
Blend	0.21 MGD	6.58 MG
Brine	0.24 MGD	7.45 MG
Distribution	0.74 MGD	23.04 MG

Alliance WATER RESOURCES®
Professional Water and Wastewater Operations

OPERATIONS REPORT – NEVADA DIVISION

WASTE WATER TREATMENT PLANT PERFORMANCE

NPDES Effluent Limits

Parameter	Monthly Average	Permit Limit
pH	7.0 min. and 7.3 max.	6.5 - 9.0
TSS	3 mg/L	20 mg/L
BOD_5	4 mg/L	20 mg/L
NH_3-N	0.17 mg/L	1.40 mg/L
E. coli	No test /100 mL	206 #/100mL
Oil & Grease	0.0 mg/L	10 mg/L

Flow Totals (Million Gallons per Day)

Average Daily Flow	Total Monthly Flow
1.21 MGD	37.62 MG

Biosolids

	Report Period	Year to Date
Quantity Applied	None applied	
Acres Applied		

Alliance WATER RESOURCES®
Professional Water and Wastewater Operations

OPERATIONS REPORT – NEVADA DIVISION

January 2017 Customer Service Work Orders

Action	Completed This Period	Completed Year to Date
Connect	39	39
Disconnect	51	51
Cut Off	0	0
Meter Info	214	214
Meter Change	26	26
OCC Change	52	52
Reinstate	26	26
Service Change	0	0
Miscellaneous	3	3
TOTALS	411	411
Utility Locates	114	114

NEVADA WATER TREATMENT PLANT
PLANT TOTALS FOR THE YEAR OF: 2017

MONTH OF January
REPORT FROM: Joseph Tipper

	Current Month	Total for Year
GALLONS PUMPED		
(N)		0
(S)	23,036,000	23,036,000
TOTAL	23,036,000	23,036,000
R.O. HOURS		
TOTAL	461.40	461.40
POSSITIVE PESSURE SYSTEM:	15,260	15,260
CHEMICALS USED:		
Pounds of Chlorine:	2,250	2,250
Gallons of Antiscalent:	85.23	85.23
Gallons of Caustic Soda:	982	982
Gallons of Sulfuric Acid:	731	731
Gallons of 12.5% Sodium Hypo:	1,320	1,320
HIGH SERVICE PUMP HOURS:		
#1	220.75	220.75
#2	349.5	349.50
#3	3.5	3.50
#4	167.5	167.50
TOTAL	741.25	741.25
DEEPWELL HOURS:		
#1	246.75	246.75
#2	228.25	228.25
Blend Wells Total:	475.00	475.00
#3	250.25	250.25
#4	224.75	224.75
RO Wells Total:	475.00	475.00
Product Meter:	14,224,000.00	14,224,000
Blend Meter:	6,581,000.00	6,581,000
Feed Meter:	23,490,000.00	23,490,000.00
Brine Meter:	7,446,000.00	7,446,000.00
Electrical North:	320	320
Electrical West:	1,005	1,005

MONTHLY TOTALS FOR : January 2017

	HIGH SERVICE PUMP HRS.				DEEP WELL PUMP HRS.				RO RUN HRS.
Day	1	2	3	4	1	2	3	4	
1	5			17.75	6.5	7.75	6.5	7.75	
2	24				7	8	7	8	
3	5	18.25			8.75	7	8.75	7	
4	18.25			5.75	9	6.5	9	6.5	
5	6.5	17.5			7	9	7	9	
6		24			8	7	8	7	
7		24			7.5	6.25	7.5	6.25	
8	6.75	17.25			8.5	6	8.5	6	
9	6.5			17.5	5.75	12	5.75	12	
10	5.25	11		7.75	11	5	11	5	
11	5.75	18.25			5	12	5	12	
12	5.75	8		10.25	10	6.5	10	6.5	
13		22	2		12.75	6	12.75	6	
14		23	1			12		12	
15	24				7	6.75	7	6.75	
16	5.75	18.25			8	9.25	8	9.25	
17	6.5	1.25		16.25	9	5.75	9	5.75	
18	5.75	18.25			9	6.5	9	6.5	
19	6			18	7	7.75	7	7.75	
20	9.25	11.75		3	6	8.25	6	8.25	
21	24				7.5	6	7.5	6	
22	5.25	17.5	0.5		6.75	6.5	6.75	6.5	
23	6.5			17.5	4.5	10.5	4.5	10.5	
24	6.75	16.25		1	11	5.25	14.5	1.75	
25	6.25			17.75	12	4.5	12	4.5	
26	6.5	17.5			6.5	10	6.5	10	
27		24			9	6	9	6	
28		24			5.5	8	5.5	8	
29	6.5			17.5	9.5	6.5	9.5	6.5	
30	6.5	17.5			8	9	8	9	
31	6.5			17.5	13.75	0.75	13.75	0.75	
TOTAL:	**220.75**	**349.5**	**3.5**	**167.5**	**246.75**	**228.25**	**250.25**	**224.75**	**461.4**

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

MONTHLY COMPLIANCE MONITORING REPORT FOR GROUNDWATER SYSTEMS

PUBLIC WATER SYSTEM NAME	PUBLIC WATER SYSTEM ID NUMBER	COUNTY
City of Nevada, Mo	5010562	Vernon

Jan/2017	Minimum Residual ____ 4-log Sample Location ____			Minimum Residual ____ 4-log Sample Location ____			Minimum Residual ____ 4-log Sample Location ____		
Month/ Year	pH	Temp °C	Lowest Free Chlorine (mg/l)	pH	Temp °C	Lowest Free Chlorine (mg/l)	pH	Temp °C	Lowest Free Chlorine (mg/l)
1.	8.67	19.2	1.6						
2.	8.64	19.2	1.9						
3.	8.58	19.0	1.7						
4.	8.74	19.1	1.7						
5.	8.73	19.1	1.7						
6.	8.70	19.6	1.8						
7.	8.76	18.7	1.7						
8.	8.65	19.1	1.7						
9.	8.65	19.3	1.9						
10.	8.74	19.7	1.6						
11.	8.61	19.6	1.7						
12.	8.67	20.0	1.6						
13.	8.61	19.8	1.6						
14.	8.56	19.3	1.6						
15.	8.62	19.1	1.7						
16.	8.71	19.4	1.7						
17.	8.63	19.3	1.9						
18.	8.64	19.4	1.9						
19.	8.56	19.8	1.8						
20.	8.58	19.7	1.8						
21.	8.54	19.7	1.4						
22.	8.53	19.4	1.6						
23.	8.62	19.5	1.7						
24.	8.64	19.2	1.7						
25.	8.60	19.5	1.6						
26.	8.62	19.1	1.6						
27.	8.65	19.7	1.9						
28.	8.65	19.3	1.7						
29.	8.63	19.1	1.7						
30.	8.62	19.8	1.7						
31.	8.64	19.7	1.7						

Was the disinfectant residual ever less than the State required level for 4-log inactivation of viruses at this entry point?
☐ **Yes** ☑ **No**

If so, did the water system collect grab samples every four hours until the disinfectant residual was above the State required level?
☐ **Yes** ☑ **No** (If you answer yes to this question, attach the results of the grab samples to this form).

(For systems serving more than 3,300) Did continuous monitoring equipment fail at any time during this reporting period?
☐ **Yes** ☑ **No**

(For systems serving more than 3,300) If monitoring equipment failed, were grab samples collected every 4 hours until the continuous monitoring equipment was returned to service?
☐ **Yes** ☑ **No** (Attach grab sample results to this form)

NAME OF PERSON PREPARING REPORT
Joseph Tipper

SIGNATURE OF RESPONSIBLE PARTY
Joseph D. Tipper

DATE
02/01/2017

Mail completed form to:
Missouri Department of Natural Resources
Public Drinking Water Branch - Monitoring
P.O. Box 176
Jefferson City, MO 65102-0176
Phone 800-361-4827 or 573-751-5331
Fax 573-751-3110

MO 780-2094 (12-09)

Month/Year	pH	Temp (C)	Lowest Free Chlorine (mg/l)
Jan-17			
1	8.67	19.2	1.6
2	8.64	19.2	1.9
3	8.58	19.0	1.7
4	8.74	19.1	1.7
5	8.73	19.1	1.7
6	8.7	19.6	1.8
7	8.76	18.7	1.7
8	8.65	19.1	1.7
9	8.65	19.3	1.9
10	8.74	19.7	1.6
11	8.61	19.6	1.7
12	8.67	20.0	1.6
13	8.61	19.8	1.6
14	8.56	19.3	1.6
15	8.62	19.1	1.7
16	8.71	19.4	1.7
17	8.63	19.3	1.9
18	8.64	19.4	1.9
19	8.56	19.8	1.8
20	8.58	19.7	1.8
21	8.54	19.7	1.4
22	8.53	19.4	1.6
23	8.62	19.5	1.7
24	8.64	19.2	1.7
25	8.6	19.5	1.6
26	8.62	19.1	1.6
27	8.65	19.7	1.9
28	8.65	19.3	1.7
29	8.63	19.1	1.7
30	8.62	19.8	1.7
31	8.64	19.7	1.7
Average	8.64	19.4	1.7

Laboratory Log-In and Chlorine Report form (January, 2017)

Sample ID	Date Received	Time Received	Initals	Supply ID	Date Taken	Time Taken	Location	Chlorine Free	Chlorine Total	Collectors Initials	Remarks
56615	1-3-17	0930	MF	5010562	1-3-17	0827	Country Club Drive	1.6	1.8	MF	
56730	1/3-17	0930	MF	5010562	1-3-17	0841	501 S Jefferson	1.5	1.5	MF	
56852	1-3-17	0930	MF	5010562	1-3-17	0855	71 Hwy N	1.4	1.6	MF	
57099	1-3-17	0930	MF	5010562	1-3-17	0907	500 W Highland Ave	1.4	1.4	MF	
57118	1-3-17	0930	MF	5010562	1-3-17	0920	200 N ASH	1.5	1.5	MF	
62590	1-11-17	1600	[illegible]	1024035	1/11/17	1350	Rt. 5 Box 412	0.37	1.96	J.J.	
58704	1-17-17	1030	JT.	5010562	1-17-17	1015	Country Club Drive	1.4	1.6	JT.	
58693	1-17-17	1030	JT.	5010562	1-17-17	0940	501 S. Jefferson	1.5	1.6	JT.	
58790	1-17-17	1030	JT.	5010562	1-17-17	0920	71 Hwy N	1.4	1.7	JT.	
58730	1-17-17	1030	JT.	5010562	1-17-17	0900	500 W. Highland Ave	1.4	1.4	JT.	
5854	1-17-17	1030	JT.	5010562	1-17-17	0835	200 N. Ash	1.1	1.1	JT.	
2547	1-24-17 ~~1715~~	1715	MF	5010562	1-24-17	1650	3805 Enterprise Dr	1.4	1.4	[illegible]	
2548	1-24-17	1715	MF	5010562	1-24-17	1700	3000 Ind Park Way	1.4	1.4	[illegible]	
53777	1-26-17 ~~1-26-17~~	1430	MF	1024030	1-26-17	1014	Wright Rd Butler	—	—	[illegible]	
62367	1-30-17	1100	JT.	1024030	1-30-17	1000	Wright Rd (Butler)	—	—	A.S.	

Water Treatment Plant
1300 W. Cherry Street
Nevada, MO 64772

Bulk Water Readings

Month Of: January 2017

Beginning Readings:

Date: 1/1/2017

Readings: 1548189

Total: 3,954 gal.

Ending Readings:

Date: 1/31/2017

Readings: 1552143

BULK WATER

Customer Name: Alliance

Address:

Phone Number:

Date	Start Meter Reading	Stop Meter Reading	Gallons	Initials
1/1/17	1548189	→ Beginning		
1-18-17	1549635	1550321	686	RS
1-19-17	1550321	1551222	901	RS
1-31-17	1551308	1552143	835	RS

MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Public Drinking Water Branch
P.O. Box 176
Jefferson City, MO 65102
(573)751-8526

Public Water System Bacteriological Report

PWS Name : NEVADA
Mail to : JOSEPH TIPPER
1300 W CHERRY
NEVADA, MO 64772

PWS ID : MO5010562
County : VERNON

Please notify us of any name and address changes

Date Collected : 01/03/2017
Collector : FRAKES,,FRED
Sample Type : Routine
Lab Sample ID : OE76968
Location Name: 501 S JEFFERSON
Location ID: NEVADA5
Lab Results : A

Coliform absent. Sample considered safe.

Date Collected : 01/03/2017
Collector : FRAKES,,FRED
Sample Type : Routine
Lab Sample ID : OE76996
Location Name: 200 N ASH
Location ID: NEVADA10
Lab Results : A

Coliform absent. Sample considered safe.

Date Collected : 01/03/2017
Collector : FRAKES,,FRED
Sample Type : Routine
Lab Sample ID : OE76969
Location Name: 71 HWY N
Location ID: NEVADA4
Lab Results : A

Coliform absent. Sample considered safe.

Date Collected : 01/03/2017
Collector : FRAKES,,FRED
Sample Type : Routine
Lab Sample ID : OE76967
Location Name: TOTAL COLIFORM RULE
Location ID: TCR
Lab Results : A

Coliform absent. Sample considered safe.

Date Collected : 01/03/2017
Collector : FRAKES,,FRED
Sample Type : Routine
Lab Sample ID : OE76970
Location Name: 500 W HIGHLAND AVE
Location ID: NEVADA8
Lab Results : A

Coliform absent. Sample considered safe.

These sample test results were analyzed by the Missouri State Public Health Laboratory.

Note to Public Water Systems:

Routine samples must be taken from the distribution system. Routine samples collected at the well will be invalidated, possibly resulting in your system receiving a monitoring violation for failure to collect enough valid routine samples.

Friday, January 06, 2017

MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Public Drinking Water Branch
P.O. Box 176
Jefferson City, MO 65102
(573)751-8526

Public Water System Bacteriological Report

PWS Name : NEVADA
Mail to : JOSEPH TIPPER
1300 W CHERRY
NEVADA, MO 64772

PWS ID : MO5010562
County : VERNON
Please notify us of any name and address changes

Date Collected : 01/17/2017 **Collector :** TIPPER,,JOSEPH **Sample Type :** Routine
Lab Sample ID : OE79303 **Location Name:** COUNTRY CLUB DRIVE **Location ID:** NEVADA7 **Lab Results :** A
Coliform absent. Sample considered safe.

Date Collected : 01/17/2017 **Collector :** TIPPER,,JOSEPH **Sample Type :** Routine
Lab Sample ID : OE79307 **Location Name:** 200 N ASH **Location ID:** NEVADA10 **Lab Results :** A
Coliform absent. Sample considered safe.

Date Collected : 01/17/2017 **Collector :** TIPPER,,JOSEPH **Sample Type :** Routine
Lab Sample ID : OE79306 **Location Name:** 71 HWY N **Location ID:** NEVADA4 **Lab Results :** A
Coliform absent. Sample considered safe.

Date Collected : 01/17/2017 **Collector :** TIPPER,,JOSEPH **Sample Type :** Routine
Lab Sample ID : OE79304 **Location Name:** 501 S JEFFERSON **Location ID:** NEVADA5 **Lab Results :** A
Coliform absent. Sample considered safe.

Date Collected : 01/17/2017 **Collector :** TIPPER,,JOSEPH **Sample Type :** Routine
Lab Sample ID : OE79305 **Location Name:** 500 W HIGHLAND AVE **Location ID:** NEVADA8 **Lab Results :** A
Coliform absent. Sample considered safe.

These sample test results were analyzed by the Missouri State Public Health Laboratory.

Note to Public Water Systems:
Routine samples must be taken from the distribution system. Routine samples collected at the well will be invalidated, possibly resulting in your system receiving a monitoring violation for failure to collect enough valid routine samples.

Friday, January 20, 2017

Well # 2
Well # 4

CITY OF NEVADA, MO
LANGELIER SATURATION INDEX ANALYSIS

Sample Date
1/5/2017

Time
1055

Collection Point
(1) 1300 W. Cherry(WTP)

Sample Type	Grab
Chlorine	1.0
pH	8.27
Temperature (Degree C)	21.8
TDS	549
Calcium Hardness (mg/L)	68
Alkalinity (mg/L)	40
Total Hardness	108
Chloride	185
Langelier Index	-0.017

Sample Date
1/5/2017

Time
907

Collection Point
(2) 1413 Rd. & Noah Rd

Sample Type	Grab
Chlorine	1.7
pH	8.6
Temperature (Degree C)	20.4
TDS	552
Calcium Hardness (mg/L)	70
Alkalinity (mg/L)	42
Total Hardness	110
Chloride	185
Langelier Index	0.32

Sample Date
1/5/2017

Time
922

Collection Point
(4) West & Bowman Bldg.

Sample Type	Grab
Chlorine	1.8
pH	8.67
Temperature (Degree C)	20.0
TDS	544
Calcium Hardness (mg/L)	64
Alkalinity (mg/L)	40
Total Hardness	112
Chloride	185
Langelier Index	0.32

Sample Date
1/5/2017

Time
933

Collection Point
(6) Commercial & Minnesota

Sample Type	Grab
Chlorine	1.8
pH	8.68
Temperature (Degree C)	20.2
TDS	547
Calcium Hardness (mg/L)	64
Alkalinity (mg/L)	40
Total Hardness	112
Chloride	180
Langelier Index	0.33

CITY OF NEVADA, MO

LANGELIER SATURATION INDEX ANALYSIS

Sample Date
1/5/2017

Time
1017

Collection Point
(8) Century 6 Cinema

Sample Type	Grab
Chlorine	1.4
pH	8.57
Temperature (Degree C)	20.1
TDS	550
Calcium Hardness (mg/L)	66
Alkalinity (mg/L)	38
Total Hardness	110
Chloride	185
Langelier Index	0.21

Sample Date
1/5/2017

Time
1026

Collection Point
(10) Maple & Washington

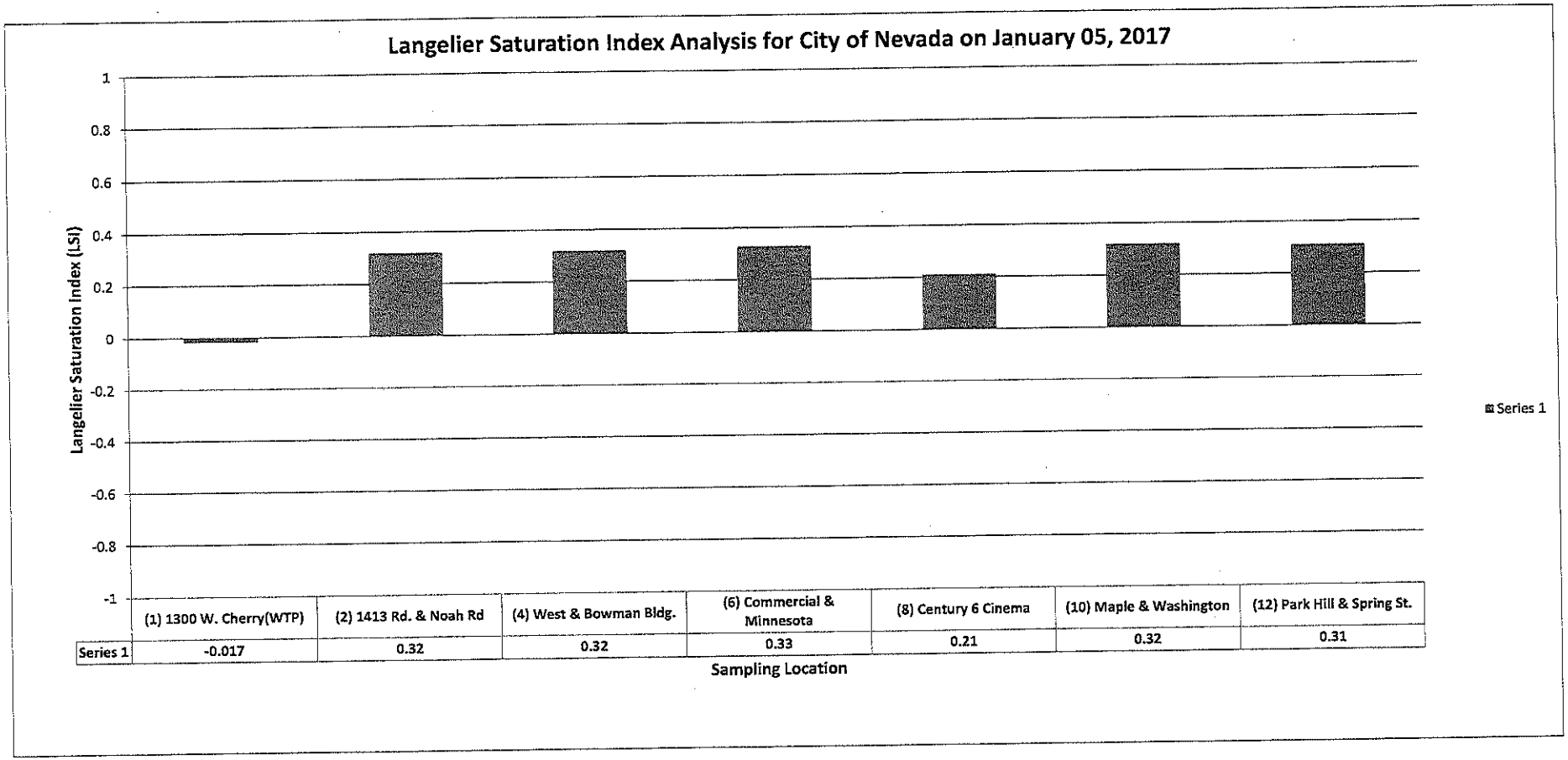
Sample Type	Grab
Chlorine	1.6
pH	8.66
Temperature (Degree C)	20.5
TDS	550
Calcium Hardness (mg/L)	64
Alkalinity (mg/L)	40
Total Hardness	112
Chloride	190
Langelier Index	0.32

Sample Date
1/5/2017

Time
1040

Collection Point
(12) Park Hill & Spring St.

Sample Type	Grab
Chlorine	1.5
pH	8.64
Temperature (Degree C)	21.0
TDS	550
Calcium Hardness (mg/L)	64
Alkalinity (mg/L)	40
Total Hardness	108
Chloride	190
Langelier Index	0.31



	(1) 1300 W. Cherry(WTP)	(2) 1413 Rd. & Noah Rd	(4) West & Bowman Bldg.	(6) Commercial & Minnesota	(8) Century 6 Cinema	(10) Maple & Washington	(12) Park Hill & Spring St.
Series 1	-0.017	0.32	0.32	0.33	0.21	0.32	0.31

Well # 2
Well # 4

CITY OF NEVADA, MO
LANGELIER SATURATION INDEX ANALYSIS

Sample Date
1/11/2017

Time
1135

Collection Point
(1) 1300 W. Cherry(WTP)

Sample Type	Grab
Chlorine	1.7
pH	8.42
Temperature (Degree C)	23.6
TDS	563
Calcium Hardness (mg/L)	68
Alkalinity (mg/L)	40
Total Hardness	112
Chloride	190
Langelier Index	0.17

Sample Date
1/11/2017

Time
1030

Collection Point
(3) Olive & Floral

Sample Type	Grab
Chlorine	1.6
pH	8.59
Temperature (Degree C)	23.0
TDS	552
Calcium Hardness (mg/L)	68
Alkalinity (mg/L)	40
Total Hardness	116
Chloride	185
Langelier Index	0.33

Sample Date
1/11/2017

Time
1040

Collection Point
(5) Quality Dr.

Sample Type	Grab
Chlorine	1.6
pH	8.52
Temperature (Degree C)	22.4
TDS	558
Calcium Hardness (mg/L)	68
Alkalinity (mg/L)	40
Total Hardness	112
Chloride	185
Langelier Index	0.24

Sample Date
1/11/2017

Time
1054

Collection Point
(7) Locust & Jason
(Katy Allen Lake)

Sample Type	Grab
Chlorine	1.8
pH	8.65
Temperature (Degree C)	22.4
TDS	563
Calcium Hardness (mg/L)	68
Alkalinity (mg/L)	38
Total Hardness	110
Chloride	190
Langelier Index	0.35

CITY OF NEVADA, MO

LANGELIER SATURATION INDEX ANALYSIS

Sample Date
1/11/2017

Time
1000

Collection Point
(9) Division & Barrett

Sample Type	Grab
Chlorine	1.7
pH	8.56
Temperature (Degree C)	22.5
TDS	563
Calcium Hardness (mg/L)	68
Alkalinity (mg/L)	38
Total Hardness	112
Chloride	190
Langelier Index	0.26

Sample Date
1/11/2017

Time
1104

Collection Point
(11) Deer Run

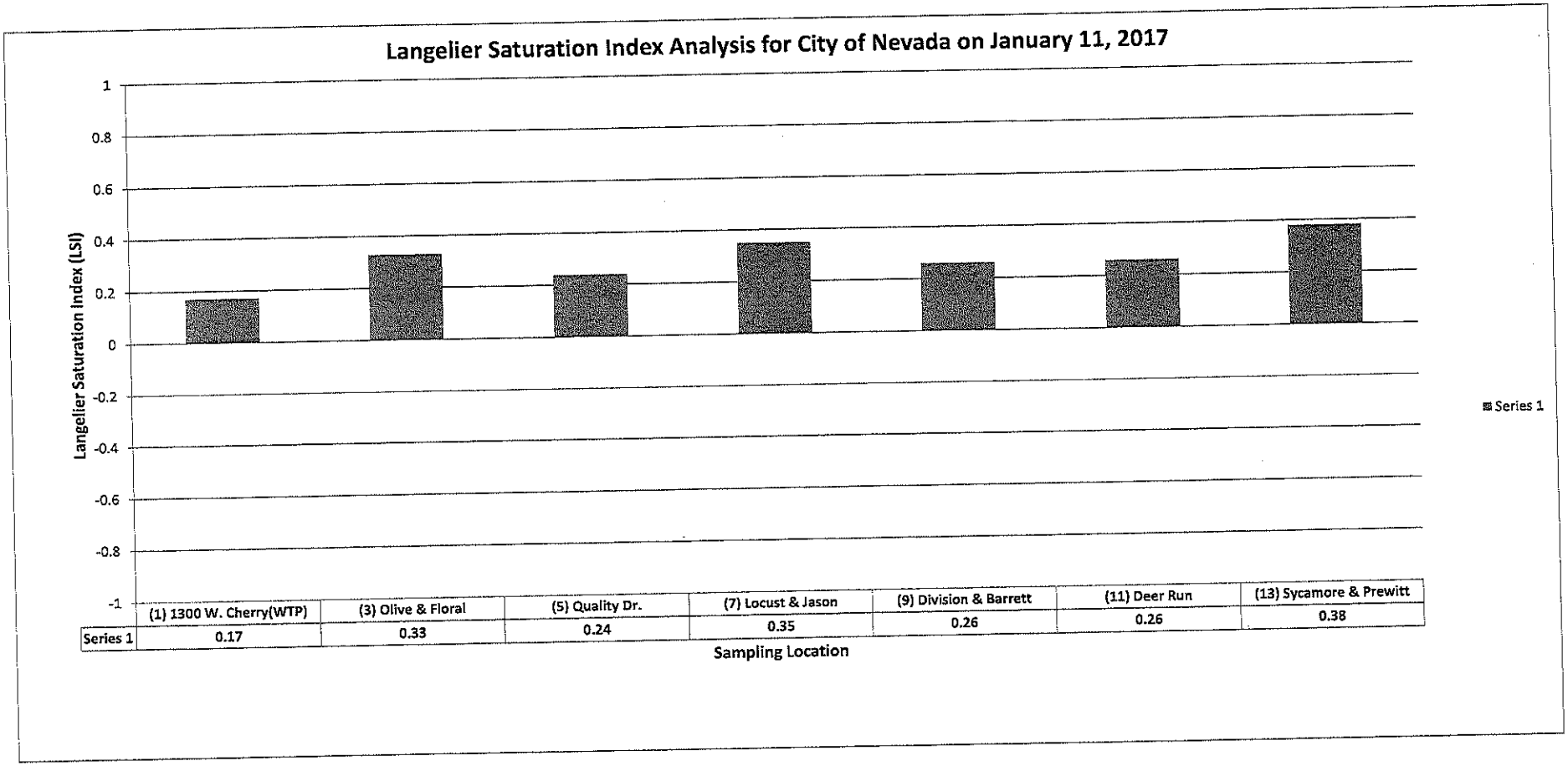
Sample Type	Grab
Chlorine	1.6
pH	8.59
Temperature (Degree C)	22.6
TDS	557
Calcium Hardness (mg/L)	62
Alkalinity (mg/L)	38
Total Hardness	114
Chloride	190
Langelier Index	0.26

Sample Date
1/11/2017

Time
1114

Collection Point
(13) Sycamore & Prewitt

Sample Type	Grab
Chlorine	1.6
pH	8.65
Temperature (Degree C)	23.1
TDS	558
Calcium Hardness (mg/L)	66
Alkalinity (mg/L)	40
Total Hardness	110
Chloride	190
Langelier Index	0.38



	(1) 1300 W. Cherry(WTP)	(3) Olive & Floral	(5) Quality Dr.	(7) Locust & Jason	(9) Division & Barrett	(11) Deer Run	(13) Sycamore & Prewitt
Series 1	0.17	0.33	0.24	0.35	0.26	0.26	0.38

Well # 1
Well # 3

CITY OF NEVADA, MO
LANGELIER SATURATION INDEX ANALYSIS

Sample Date
1/18/2017

Time
1050

Collection Point
(1) 1300 W. Cherry(WTP)

Sample Type	Grab
Chlorine	2.2
pH	8.58
Temperature (Degree C)	21.6
TDS	563
Calcium Hardness (mg/L)	66
Alkalinity (mg/L)	38
Total Hardness	110
Chloride	185
Langelier Index	0.25

Sample Date
1/18/2017

Time
945

Collection Point
(2) 1413 Rd. & Noah Rd

Sample Type	Grab
Chlorine	1.8
pH	8.6
Temperature (Degree C)	20.4
TDS	574
Calcium Hardness (mg/L)	68
Alkalinity (mg/L)	36
Total Hardness	116
Chloride	195
Langelier Index	0.23

Sample Date
1/18/2017

Time
950

Collection Point
(4) West & Bowman Bldg.

Sample Type	Grab
Chlorine	1.5
pH	8.7
Temperature (Degree C)	19.9
TDS	578
Calcium Hardness (mg/L)	66
Alkalinity (mg/L)	40
Total Hardness	118
Chloride	190
Langelier Index	0.35

Sample Date
1/18/2017

Time
1000

Collection Point
(6) Commercial & Minnesota

Sample Type	Grab
Chlorine	1.9
pH	8.56
Temperature (Degree C)	20.4
TDS	576
Calcium Hardness (mg/L)	68
Alkalinity (mg/L)	40
Total Hardness	120
Chloride	185
Langelier Index	0.24

CITY OF NEVADA, MO

LANGELIER SATURATION INDEX ANALYSIS

Sample Date
1/18/2017

Time
1015

Collection Point
(8) Century 6 Cinema

Sample Type	Grab
Chlorine	1.3
pH	8.6
Temperature (Degree C)	21.0
TDS	547
Calcium Hardness (mg/L)	66
Alkalinity (mg/L)	34
Total Hardness	106
Chloride	180
Langelier Index	0.21

Sample Date
1/18/2017

Time
1024

Collection Point
(10) Maple & Washington

Sample Type	Grab
Chlorine	1.9
pH	8.59
Temperature (Degree C)	20.7
TDS	573
Calcium Hardness (mg/L)	68
Alkalinity (mg/L)	36
Total Hardness	118
Chloride	190
Langelier Index	0.23

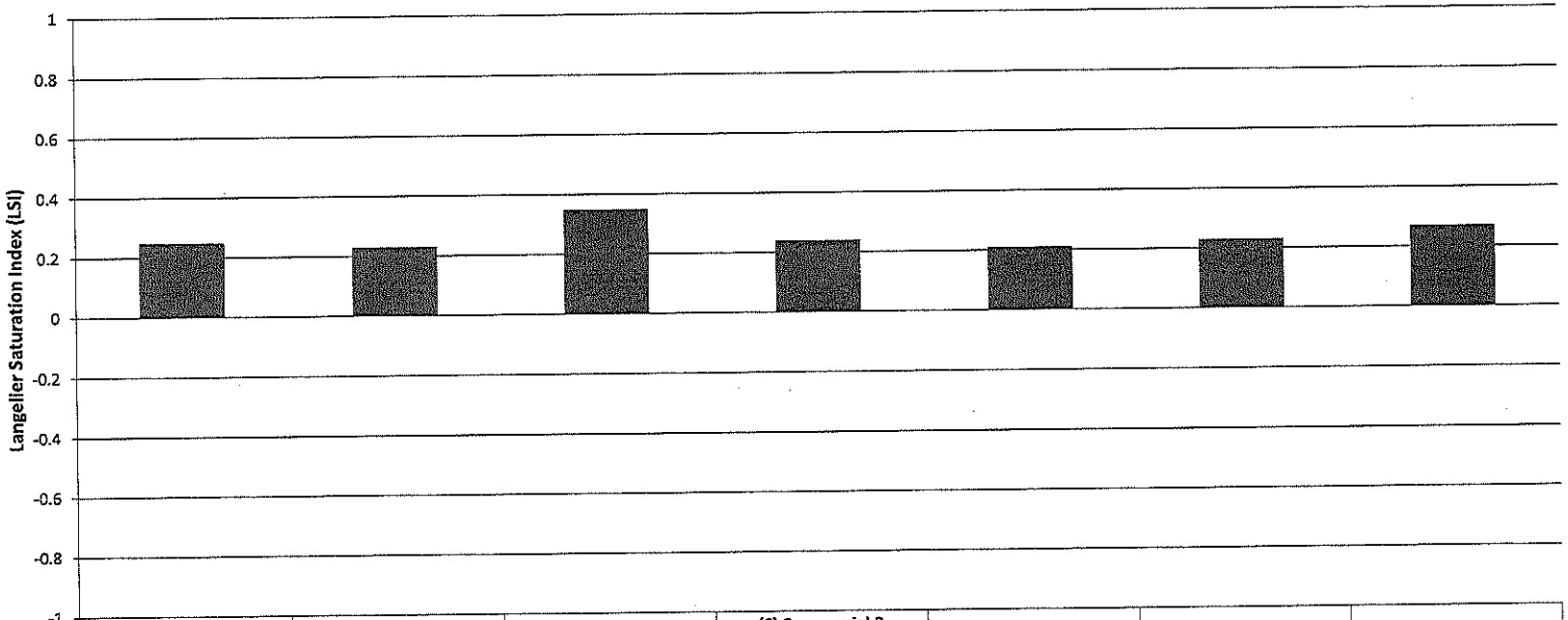
Sample Date
1/18/2017

Time
1032

Collection Point
(12) Park Hill & Spring St.

Sample Type	Grab
Chlorine	1.9
pH	8.60
Temperature (Degree C)	20.7
TDS	571
Calcium Hardness (mg/L)	66
Alkalinity (mg/L)	40
Total Hardness	118
Chloride	85
Langelier Index	0.27

Langelier Saturation Index Analysis for City of Nevada on January 18, 2017



	(1) 1300 W. Cherry(WTP)	(2) 1413 Rd. & Noah Rd	(4) West & Bowman Bldg.	(6) Commercial & Minnesota	(8) Century 6 Cinema	(10) Maple & Washington	(12) Park Hill & Spring St.
Series 1	0.25	0.23	0.35	0.24	0.21	0.23	0.27

Sampling Location

Well # 2
Well # 4

CITY OF NEVADA, MO
LANGELIER SATURATION INDEX ANALYSIS

Sample Date
1/26/2017

Time
1315

Collection Point
(1) 1300 W. Cherry(WTP)

Sample Type	Grab
Chlorine	1.5
pH	8.58
Temperature (Degree C)	21.9
TDS	571
Calcium Hardness (mg/L)	68
Alkalinity (mg/L)	40
Total Hardness	120
Chloride	190
Langelier Index	0.29

Sample Date
1/26/2017

Time
1201

Collection Point
(3) Olive & Floral

Sample Type	Grab
Chlorine	1.4
pH	8.53
Temperature (Degree C)	21.0
TDS	568
Calcium Hardness (mg/L)	64
Alkalinity (mg/L)	38
Total Hardness	114
Chloride	18.5
Langelier Index	0.17

Sample Date
1/26/2017

Time
1215

Collection Point
(5) Quality Dr.

Sample Type	Grab
Chlorine	0.9
pH	8.62
Temperature (Degree C)	20.0
TDS	576
Calcium Hardness (mg/L)	68
Alkalinity (mg/L)	34
Total Hardness	126
Chloride	185
Langelier Index	0.22

Sample Date
1/26/2017

Time
1238

Collection Point
(7) Locust & Jason
(Katy Allen Lake)

Sample Type	Grab
Chlorine	1.6
pH	8.55
Temperature (Degree C)	20.0
TDS	568
Calcium Hardness (mg/L)	60
Alkalinity (mg/L)	36
Total Hardness	120
Chloride	190
Langelier Index	0.12

CITY OF NEVADA, MO

LANGELIER SATURATION INDEX ANALYSIS

Sample Date
1/26/2017

Time
1245

Collection Point
(9) Division & Barrett

Sample Type	Grab
Chlorine	1.6
pH	8.58
Temperature (Degree C)	20.7
TDS	564
Calcium Hardness (mg/L)	66
Alkalinity (mg/L)	34
Total Hardness	110
Chloride	185
Langelier Index	0.18

Sample Date
1/26/2017

Time
1255

Collection Point
(11) Deer Run

Sample Type	Grab
Chlorine	1.8
pH	8.44
Temperature (Degree C)	20.3
TDS	567
Calcium Hardness (mg/L)	62
Alkalinity (mg/L)	34
Total Hardness	114
Chloride	190
Langelier Index	0.0064

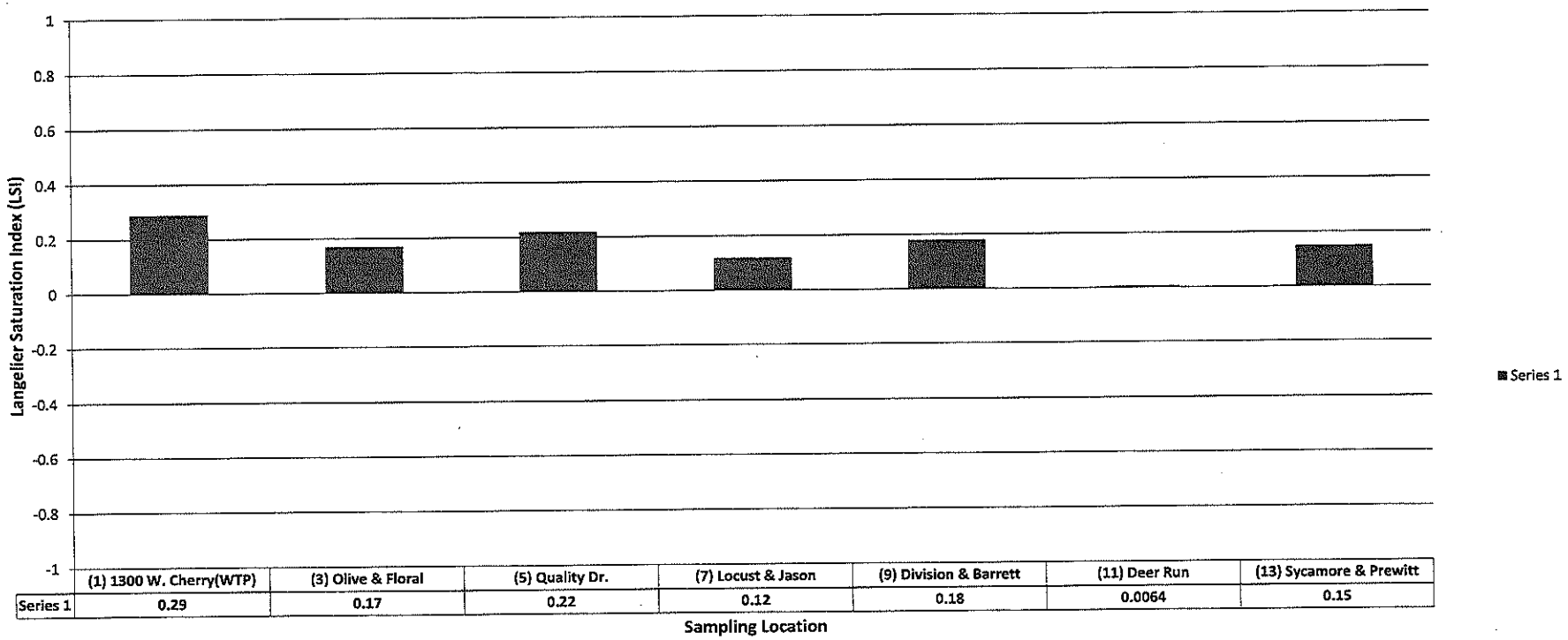
Sample Date
1/26/2017

Time
1305

Collection Point
(13) Sycamore & Prewitt

Sample Type	Grab
Chlorine	1.5
pH	8.59
Temperature (Degree C)	20.6
TDS	569
Calcium Hardness (mg/L)	60
Alkalinity (mg/L)	34
Total Hardness	110
Chloride	185
Langelier Index	0.15

Langelier Saturation Index Analysis for City of Nevada on January 26, 2017



	(1) 1300 W. Cherry(WTP)	(3) Olive & Floral	(5) Quality Dr.	(7) Locust & Jason	(9) Division & Barrett	(11) Deer Run	(13) Sycamore & Prewitt
Series 1	0.29	0.17	0.22	0.12	0.18	0.0064	0.15

Missouri Department of Natural Resources
Water Resources Center
Major Water Use Report Date: 01/18/2017

Major Water Use Information System

Registration / Report Year: 2016
Gallons of Ground Water: 386,471,077
Gallons of Surface Water: 0
Total Annual Gallons Used: 386,471,077

Reporter Identifiers

Type of Reporter: MAJOR WATER USER - NONIRRIGATOR
E-mail Address: jtipper@alliancewater.com
Major Water User ID: 43437229

Applicant Contact Information

Organization: NEVADA WTP
First Name: JOSEPH
Last Name: TIPPER
Mailing Address: 1300 W CHERRY ST
Address 2: MO5010562
City: NEVADA
State: MISSOURI
Zip: 64772
County: VERNON
Telephone Number: 417-448-5117

Water User Information

- [ ] **No Water User**
- [ ] **All**
- [ ] **Unknown**

[X] **Jan** [X] **Feb** [X] **Mar** [X] **Apr** [X] **May** [X] **Jun**
[X] **Jul** [X] **Aug** [X] **Sep** [X] **Oct** [X] **Nov** [X] **Dec**

Comment:

Water days withdrawn: 365
Amount Used each day: 1058824
Unit: GALLONS
Total Gallons: 386470760

Log Main ID:			
Year Drilled:	1984		
Pump Capacity (gpm):	1250	**Measurement Type:**	METERED
Section:	4	**County:**	VERNON
Township:	35	**Latitude:**	37.84011
Range:	31W	**Longitude:**	-94.36

Crops and Acres

Water Use Information

Withdraw ID:	3866809	**Total Annual Usage:**	143998152
Unit:	GALLONS	**User Description:**	Well # 4
Acres Irrigated:	0	**Inches Applied:**	0.0
Water Draw Type:	WELL	**Status:**	ACTIVE
Well Certification No.:	PRELAW	**Casing Depth (ft.):**	300
PWS Well ID:	14753	**Total Depth (ft.):**	1105
Log Main ID:	028613		
Year Drilled:	1984		
Pump Capacity (gpm):	1250	**Measurement Type:**	METERED
Section:	4	**County:**	VERNON
Township:	35	**Latitude:**	37.84639
Range:	31W	**Longitude:**	-94.36061

Crops and Acres

Water Use Information

Withdraw ID:	3986011	**Total Annual Usage:**	41132415
Unit:	GALLONS	**User Description:**	Well # 2
Acres Irrigated:	0	**Inches Applied:**	0.0
Water Draw Type:	WELL	**Status:**	ACTIVE
Well Certification No.:	PRELAW	**Casing Depth (ft.):**	270
PWS Well ID:		**Total Depth (ft.):**	1100
Log Main ID:	022030		
Year Drilled:	1964		
Pump Capacity (gpm):	225	**Measurement Type:**	METERED
Section:	5	**County:**	VERNON
Township:	35	**Latitude:**	37.8485
Range:	31W	**Longitude:**	-94.37081

Crops and Acres

CATEGORY	DEFINITION	TOTAL
Municipal	Public, private and rural water suppliers. Includes water used for domestic, commercial and industrial purposes.	100%
Commercial	Hotels, restaurants, office buildings, or institutions.	0%
Fish and Wildlife	Fish and wildlife habitat including aquaculture.	0%
Livestock	Livestock watering, feedlots, dairy operations and other farm needs.	0%
Electrical	Generation of electricity: nuclear, hydropower, thermoelectric and pumped storage operations.	0%
Industrial	Industrial purposes such as refining, smelting, fabrication, processing, washing and cooling.	0%
Drainage and Dewatering	Removal of water through draining or pumping to lower the water table.	0%
Irrigation	Water used for ornamental or consumptive agricultural production.	0%
Recreation	Water used pleasurably for purposes of swimming, boating, game fishing, and aesthetics.	0%
Other	Please explain:	0%
	Total:	100

Water Use Information

Withdraw ID: 1475591
Unit: GALLONS
Acres Irrigated: 0
Water Draw Type: WELL
Well Certification No.: PRELAW
PWS Well ID: 14750
Log Main ID: 012280
Year Drilled: 1953
Pump Capacity (gpm): 375
Section: 5
Township: 35
Range: 31W

Total Annual Usage: 44806573
User Description: Well# 1
Inches Applied: 0.0
Status: ACTIVE
Casing Depth (ft.): 277
Total Depth (ft.): 1100

Measurement Type: METERED
County: VERNON
Latitude: 37.8427
Longitude: -94.37219

Crops and Acres

Water Use Information

Withdraw ID: 2757146
Unit: GALLONS
Acres Irrigated: 0
Water Draw Type: WELL
Well Certification No.: PRELAW
PWS Well ID:

Total Annual Usage: 156533937
User Description: Well # 3
Inches Applied: 0.0
Status: ACTIVE
Casing Depth (ft.): 300
Total Depth (ft.): 1100

MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENVIROMENTAL QUALITY

Discharge Monitoring Report For Municipal Wastewater Treatment Facilities

NAME OF FACILITY	LOCATION ADDRESS & CITY	COUNTY/REGION
Nevada WWTF	16517 S 1338 Road Nevada	VERNON/SWRO

MONTH/YEAR	PERMIT NUMBER	OUTFALL #	TYPE TREATMENT FACILTY
Jan./2017	MO-0089109	001	4 Clarifiers, 2 Aeration Basins, UV, Aerobic Digester, Sludge Holding, Sludge Land Applied

		INFLUENT		EFFLUENT										Sample twice/year - March & Sept					
DATE	FLOW MGD	BOD mg/L	TSS mg/L	pH units	BOD mg/l	TSS mg/l	NH_3 as N mg/l	Phos. as P mg/l	Nitro. as N mg/l	E. coli #/100 ml	Chlo-ride mg/l	O & G mg/l	DO mg/l	Chrom. III µg/L	Chrom. VI µg/L	Copper µg/L	Iron µg/L	Zinc µg/L	Phe-nol µg/L
1	0.80																		
2	1.00																		
3	0.76																		
4	0.63	256	203	7.0	7	9							8.2						
5	0.58						<1												
6	0.49																		
7	0.59																		
8	0.69																		
9	0.89						<1												
10	1.01							1.8	5		272	<5							
11	0.98	258	378	7.3	4	2													
12	0.74																		
13	0.69																		
14	0.74																		
15	2.04																		
16	2.78																		
17	1.54						0.17												
18	1.33	157	180	7.1	4	2													
19	1.25																		
20	1.27																		
21	1.17																		
22	2.45																		
23	2.65						0.17												
24	2.02																		
25	1.50	142	168	7.2	1	1													
26	1.25																		
27	1.21																		
28	1.15																		
29	1.14																		
30	1.17																		
31	1.12																		
Total	37.62																		
Avg	1.21	203	232		4	3	0.17	1.8	5										
Min	0.49			7.0															
Max	2.78			7.3	7	9	0.17	1.8	5		272	0.0	8.2						

Keystone
LABORATORIES, INC.

ANALYTICAL REPORT

January 31, 2017

Work Order: 1A71461

Report To	Work Order Information
Mark Mendenhall	Date Received: 01/25/2017 12:50PM
Alliance Water Resources - Nevada WWTP	Collector: Mendenhall, Mark
16517 S 1338 Road	Phone: (417) 448-2761
Nevada, MO 64772	PO Number: Routine Analysis

Project : Routine Analyisis

Project Number: Alliance Water Resources - WWTP

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
1A71461-01 Nevada WWTP - EFF.				Matrix:Water		Collected: 01/17/17 08:00	
Nitrogen, Ammonia	**0.17 mg/L**	**0.10**	1AA0880	SM 4500 NH3 B,D-97/1	TJS	01/27/17 15:23	
1A71461-02 Nevada WWTP - EFF.				Matrix:Water		Collected: 01/23/17 08:00	
Nitrogen, Ammonia	**0.17 mg/L**	**0.10**	1AA0880	SM 4500 NH3 B,D-97/1	TJS	01/27/17 15:23	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL= Method Reporting Limit.

Keystone
LABORATORIES, INC.

ANALYTICAL REPORT

January 16, 2017

Work Order: 1A70636

Report To	Work Order Information
Mark Mendenhall	Date Received: 01/11/2017 1:15PM
Alliance Water Resources - Nevada WWTP	Collector: Mendenhall, Mark
16517 S 1338 Road	Phone: (417) 448-2761
Nevada, MO 64772	PO Number: Routine Analysis

Project : Routine Analyisis

Project Number: Alliance Water Resources - WWTP

Analyte		Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
1A70636-01	Nevada WWTP EFF				Matrix:Water		Collected: 01/05/17 08:00	
Nitrogen, Ammonia		<1.0 mg/L	1.0	1AA0370	SM 4500 NH3 B,C-97/1	JDK	01/12/17 13:05	
1A70636-02	Nevada WWTP EFF				Matrix:Water		Collected: 01/09/17 11:00	
Nitrogen, Ammonia		<1.0 mg/L	1.0	1AA0370	SM 4500 NH3 B,C-97/1	JDK	01/12/17 13:05	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL= Method Reporting Limit.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: MONTHLY SAMPLING
Pace Project No.: 60235729

Sample: NEVADA WWTP EFF **Lab ID: 60235729001** Collected: 01/10/17 11:00 Received: 01/10/17 18:56 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	ND	mg/L	5.0	1		01/20/17 12:21		
Total Nitrogen Calculation	Analytical Method: TKN+NO3+NO2 Calculation							
Nitrogen	**5.0**	mg/L	0.10	1		01/23/17 00:00	7727-37-9	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**272**	mg/L	20.0	20		01/21/17 19:34	16887-00-6	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	**1.4**	mg/L	0.50	1		01/17/17 09:13	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**3.6**	mg/L	0.10	1		01/11/17 08:58		
Nitrogen, Nitrite	ND	mg/L	0.10	1		01/11/17 08:58		
Nitrogen, NO2 plus NO3	**3.6**	mg/L	0.10	1		01/11/17 08:58		
365.4 Total Phosphorus	Analytical Method: EPA 365.4							
Phosphorus	**1.8**	mg/L	0.10	1		01/20/17 14:14	7723-14-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Nevada Waste Water Treatment Plant
VERNON COUNTY/SOUTHWEST REGION

Permit # MO-0089109

QUARTERLY INSTREAM MONITORING REPORT

Sample Date	Time	ID	Temp	Ammonia	D.O.	pH	Chlorophyll a	Flow
12/13/16	7:10a.m	SM1 (upstream)	4.1 C	0.24 mg/L	11.1 mg/L	7.3	27.8 ug/L	.48 MGD
12/13/16	7:20a.m	SM2 (downstream)	6.9 C	0.21 mg/L	10.0 mg/L	7.5	22.4 ug/L	1.9 MGD

Comments: SM1 Open channel. SM2 Open channel.
Weather: Clear
Water Clarity: SM1 Clear. SM2 Clear.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

FORM S – SECTION 1. DOMESTIC SLUDGE REPORTING

GENERAL INFORMATION

REPORTING PERIOD: (YEAR)

2016

FACILITY NAME	CITY NAME
Nevada WWTP	Nevada
PERMIT NUMBER	COUNTY NAME
MO-0089109	Vernon

INSTRUCTIONS: See attached instruction sheet for directions.

1. Sludge Production, including sludge received from others:

ACTUAL DRY TONS/YEAR	ACTUAL POPULATION EQUIVALENT
177.8	11,113

2. Sludge Treatment

- ☐ Anaerobic Digester
- ☑ Aerobic Digester
- ☐ Composting
- ☐ Storage Tank
- ☐ Air or Heat Drying
- ☐ Lime Stabilization
- ☐ Other, Describe: _____

3. Sludge Use or Disposal: Complete the rest of this form only for the sections applicable to your method of sludge and biosolids use or disposal.

X All Permittees	Complete Section 1
☑ Land Application (LA)	Complete Sections 2 and 3
☐ Contract Hauler (CH) >150 PE	Complete Sections 2 and 4
☐ Contract Hauler (CH) <150 PE	Complete Section 4
☐ Hauled to another Treatment Facility (HT)	Complete Section 4
☐ Solid Waste Landfill (LF)	Complete Section 4
☐ Sludge Disposal Lagoon (SD)	Complete Section 5
☐ Incineration (IN)	Complete Section 6
☐ Sludge Hauled to Incinerator (IO)	Complete Section 6

4. Certification: I certify under penalty of law that the information contained in this report and attachments are true and correct. This determination has been made under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information used to determine these requirements have been met. I am aware that there are significant penalties for false certification, including the possibility of fine and imprisonment.

NAME (PRINT OR TYPE)	OFFICIAL TITLE	
Mark Mendenhall	WWTP Superintendent	
SIGNATURE	DATE	TELEPHONE NUMBER WITH AREA CODE
Mark Mendenhall	01/30/2017	(417) 448-5118

MO 780-1636 (11-09)

INSTRUCTIONS FOR FILLING OUT ANNUAL REPORT
FORM S – DOMESTIC SLUDGE

GENERAL

The attached report form (**FORM S**) is to be used for submitting the annual sludge report as required under Standard Conditions Part III of the Missouri State Operating Permit, or NPDES. **This form is to be used only for domestic wastewater sludges.** It does NOT apply to industrial sludges.

Use the attached **Form S as a master copy** and make copies off of it as required for sludge reporting in subsequent years. This form must be signed by an appropriate official. Keep a copy for your records. **Send the completed Form S to your nearest Department of Natural Resources regional office. A list of regional offices is available on the department's Web site at dnr.mo.gov/regions/regions.htm.**

APPLICABILITY

Mechanical Wastewater Treatment Facilities must sign and submit the form, even if no sludge was removed during the report period. You must complete and submit Form S by Jan. 28 for each year for the previous calendar year.

Wastewater treatment lagoons need to submit the Form S report **only** when sludge is removed from the lagoon. Complete and submit the Form S by Jan. 28 for sludge removed during the previous calendar year.

Complete the sections of the Form S that are applicable to your facility. See the table below for guidance.

All permittees	Complete Section 1
Land Application (LA)	Complete Sections 2 and 3
Contract Hauler (CH) >150 PE	Complete Sections 2 and 4
Contract Hauler (CH) <150 PE	Complete Section 4
Hauled to another Treatment Facility (HT)	Complete Section 4
Solid Waste Landfill	Complete Section 4
Sludge Disposal Lagoon (SD)	Complete Section 5
Incineration (IN)	Complete Section 6
Sludge Hauled to Incinerator (IO)	Complete Section 6

ENVIRONMENTAL PROTECTION AGENCY, or EPA, REQUIREMENTS

Your facility may also be required to obtain a separate sludge permit from the EPA and to submit reports directly to EPA. Contact the EPA at the following address to determine the EPA's requirements for your facility.

Tanya Nix
Regional Sludge Coordinator
U.S. EPA Region 7
Water Management Division
901 N. 5th Street
Kansas City, KS 66101
Phone: 913-551-7170
FAX: 913-551-7765

For More Information
For assistance regarding this form or other sludge issues, please contact your nearest Department of Natural Resources regional office or contact the department at 800-361-4827 or the Water Protection Program at 573-751-1300.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH

FORM S – SECTION 2 – LABORATORY RESULTS – FORM SA

SLUDGE MONITORING RESULTS FOR METALS, NUTRIENTS, PATHOGENS AND VETORS

PERMIT NO:	REPORT PERIOD: (CALENDAR YEAR)
MO - 0089109	12/31/2016

FACILITY NAME

Nevada WWTP

Use this form to report sludge monitoring required under Standard Conditions for NPDES Permits, Part III, dated Aug. 15, 1994. For a copy, contact the department at (573) 751-6825.

If the facility has a design population equivalent (P.E.) of 150 or less, treat the sludge generated as septage and consequently, no testing is required. See WQ 422 guide, *Land Application of Septage*, for further guidance.

Report all results on **dry weight** basis.

Attach copies of all laboratory results for the items below.

A. MINIMUM MONITORING LIST FOR ALL PERMITTEES

PARAMETER	UNITS	AVERAGE	MINIMUM	MAXIMUM	NUMBER OF SAMPLES
TOTAL SOLIDS	%	2.90	2.10	3.80	4
TOTAL ARSENIC	mg/kg	3.80	3.00	4.70	4
TOTAL CADMIUM	mg/kg	6.80	6.40	7.20	4
TOTAL CHROMIUM	mg/kg	26.80	23.50	31.40	4
TOTAL COPPER	mg/kg	435.00	374.00	490.00	4
TOTAL LEAD	mg/kg	62.00	56.00	66.90	4
TOTAL MERCURY	mg/kg	1.00	0.72	1.80	4
TOTAL MOLYBDENUM	mg/kg	7.60	5.90	9.40	4
TOTAL NICKEL	mg/kg	32.40	30.30	34.90	4
TOTAL SELENIUM	mg/kg	5.70	4.40	7.10	4
TOTAL ZINC	mg/kg	1,673.00	1,510.00	1,850.00	4

B. ADDITIONAL MONITORING FOR LAND APPLICATION

PARAMETER	UNITS	AVERAGE	MINIMUM	MAXIMUM	NUMBER OF SAMPLES
TOTAL KJELDAHL NITROGEN	mg/kg	80,025.00	53,100.00	102,000.00	4
TOTAL PHOSPHORUS AS P	mg/kg	15,675.00	13,100.00	20,000.00	4
TOTAL POTASSIUM AS K	mg/kg	3,618.00	2,920.00	4,680.00	4
If more than two dry tons of sludge per acre/year is applied complete the following:					
ORGANIC NITROGEN AS N	mg/kg				
AMMONIA NITROGEN AS N	mg/kg				
NITRATE NITROGEN AS N	mg/kg				

C. POLLUTANT LIMITS

POLLUTANT	AVERAGE SAMPLE CONCENTRATION mg/kg DRY WEIGHT	LOW METAL CONCENTRATION mg/kg DRY WEIGHT	CEILING CONCENTRATION mg/kg DRY WEIGHT
ARSENIC	3.80	41	75
CADMIUM	6.80	39	85
CHROMIUM	26.80	1,200	3,000
COPPER	435.00	1,500	4,300
LEAD	62.00	300	840
MERCURY	1.00	17	57
MOLYBDENUM	7.60	18	75
NICKEL	32.40	420	420
SELENIUM	5.70	36	100
ZINC	1,673.00	2,800	7,500

D. PATHOGENS

Pathogen testing is required for all sludges to show operational compliance, including sludges treated by a PSRP approved method.

The geometric mean of the density of fecal coliform is less than 2,000,000 Most Probable Number (MPN) or Colony Forming Units (CFU) per gram of total solids (dry weight basis) for each group of seven samples:

☑ Yes ☐ No Sampling frequency 9tr.

Geometric mean per gram of total solids for each group of seven samples was:

MPN/CFU 67396	SAMPLE DATE 03/01/2016
MPN/CFU 41810	SAMPLE DATE 06/06/2016
MPN/CFU 19168	SAMPLE DATE 09/06/2016

E. VECTOR REDUCTION PROCESSES

☐ 38 percent volatile solids reduction (attach calculations).
☑ SOUR test, mg 0/hr/g (attach graph and calculations).
☐ Other. Attach explanation.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH

FORM S – SECTION 2 – LABORATORY RESULTS – FORM SB

SLUDGE MONITORING RESULTS FOR METALS, NUTRIENTS, PATHOGENS AND VETORS

PERMIT NO:	REPORT PERIOD: (CALENDAR YEAR)
MO - 0089109	2016

FACILITY NAME
Nevada WWTP

Report all results on **dry weight** basis.

F. PRIORITY POLLUTANTS

Report only those pollutants that were above detection limits. Do not repeat pollutants listed in section 2A. Attach additional sheets as needed.

PARAMETER	UNITS	AVERAGE	MINIMUM	MAXIMUM	NUMBER OF SAMPLES

G. OTHER SPECIAL MONITORING REQUIRED BY PERMIT

Report results of any additional testing required under the Special Conditions section of your permit.

PARAMETER	UNITS	AVERAGE	MINIMUM	MAXIMUM	NUMBER OF SAMPLES

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH

FORM S – SECTION 3. LAND APPLICATION

PERMIT NO.	REPORTING PERIOD: CALENDAR YEAR
MO-0089109	2016

FACILITY NAME
Nevada WWTP

3.00 Land Application - General

This section is based on Standard Conditions for NPDES Permits, Part III, dated Aug. 15, 1994. For a copy, contact the department at (573) 751-6825.

Complete this section if sludge or biosolids were land applied for beneficial use by permittee or by contract hauler under permittee authority.

3.01 ☑ dry tons of sludge applied during the report period. 177.8
☑ average percent solids 2.6
If less than 12 percent solids: 2.2m total gallons for year.
If 12 percent solids or greater: _____ cubic yards for year.

3.02 SLUDGE STORAGE PROVIDED
350000 cubic feet; 180 days of storage.
Number of days each month that sludge was land applied: 50
☐ Jan ☐ Feb ☑ Mar ☐ Apr ☐ May ☐ June ☐ July ☑ Aug ☑ Sept ☑ Oct ☑ Nov ☑ Dec

3.03 WHO APPLIES YOUR SLUDGE
Permittee personnel ☑ Yes ☐ No
Contract person ☐ Yes ☐ No
Other, describe: _____

3.10 Applicability (Per Section H or Part III Standard Conditions)

3.11 ARE THERE ANY LAND APPLICATION SITES FARTHER THAN 20 MILES FROM THE WASTEWATER TREATMENT FACILITY?
☐ Yes ☑ No If yes, a separate permit is required for those sites. Indicate permit numbers or submit new permit application for each site.
Permit numbers: _____

3.12 ARE ANY INDUSTRIAL SLUDGES LAND APPLIED BY THE PERMITTEE?
☐ Yes ☑ No If yes, complete the following: Permit No: _____
Type of Sludge _____ SIC Code _____

3.13 ARE ALTERNATE LIMITS OR EXCEPTIONS LISTED IN THE SPECIAL CONDITIONS SECTION OF THE PERMIT?
☐ Yes ☑ No If yes, attach explanation sheet.

3.14 IS SLUDGE RECEIVED FROM ANY OUT-OF-STATE GENERATORS?
☐ Yes ☑ No If this sludge is handled separately, complete separate Sections 2 and 3 of Form S for the out-of-state sludge.

3.20 Pollutant Limitations

3.21 ARE METALS WITHIN THE CEILING CONCENTRATION LIMIT?
☑ Yes ☐ No If no, attach explanation sheet.

3.22 ARE METALS WITHIN THE LOW METALS CONCENTRATIONS AND THE TOAL OF ALL SLUDGE APPLICATIONS TO DATE (INCLUDING PREVIOUS YEARS) HAVE NOT EXCEEDED 500 DRY TONS/ACRE?
☑ Yes ☐ No Attach list of sites using Form SC.

3.23 IF YOU ANSWERED NO TO 3.22, COMPLETE THE FOLLOWING:
Have metals application rates reached any of the cumulative metals loadings? This is based on contributions from all historical sludge loadings, including industrial sludges.
☐ Yes ☑ No Attach a list of sites using Form SD.
Soil test results for metals may be used if historical use is not known. Test metals concentration in parts per million (ppm) dry weight for the top six inches of soil and calculate pounds per acre using this formula:

ppm (dry wt) in soil x 2 = pounds per acre for 6 inches soil depth.

3.30 Management Practices

3.31 NITROGEN LIMITATIONS

Which of the following nitrogen approaches was used?

Sludge applied up to two dry tons/acre/year. ☒ Yes ☐ No

Plant Available Nitrogen (PAN) approach. ☒ Yes ☐ No

4 Number of composite samples. Results for PAN in mg/kg dry weight and pounds per dry ton of sludge (lb/dt) [lb/dt = 0.002 x mg/kg]:

	AVERAGE		MINIMUM		MAXIMUM	
PAN	21375	mg/kg	16600	mg/kg	27900	mg/kg
PAN	42.75	lb/dT	33.2	lb/dT	55.8	lb/dT

3.32 HAVE SLUDGE APPLICATIONS COMPLIED WITH THE FOLLOWING MANAGEMENT PRACTICES AS LISTED IN THE UNIVERSITY OF MISSOURI WQ 426 GUIDE, BEST MANAGEMENT PRACTICES FOR BIOSOLIDS LAND APPLICATION?

1. No discharge of biosolids from application site. ☑ Yes ☐ No
2. Public contact sites restriction. ☑ Yes ☐ No
3. Crop restrictions. ☑ Yes ☐ No
4. Harvest and grazing restrictions. ☑ Yes ☐ No
5. Threatened or endangered species protection. ☑ Yes ☐ No
6. Nitrogen limitations. ☑ Yes ☐ No
7. Buffer zones. ☑ Yes ☐ No
8. Slope limitations for application sites. ☑ Yes ☐ No
9. Storm water runoff ☑ Yes ☐ No
10. Frozen, snow-covered or saturated soil conditions. ☑ Yes ☐ No
11. Biosolids storage. ☑ Yes ☐ No
12. Application rates. ☑ Yes ☐ No
13. Application equipment. ☑ Yes ☐ No
14. Soil pH limitations. ☑ Yes ☐ No
15. Soil phosphorus limitations. ☑ Yes ☐ No
16. Soil depth limitations. ☑ Yes ☐ No
17. Record keeping: ☑ Yes ☐ No

    If No, attach sheet with explanation

3.33 CLASS A SLUDGE (PER WQ 424 GUIDE – BIOSOLIDS STANDARDS FOR PATHOGENS AND VECTORS).

Does the sludge meet Class A pathogen reduction? ☐ Yes ☑ No

Has Class A sludge been applied to public use sites? ☐ Yes ☑ No

If yes to the second question in 3.33, contact Department of Natural Resources

3.40 Operational Standards for Class B Biosolids (See WQ 424).

☑ Class B pathogen reduction requirements were met by either fecal coliform limits under section 2D or a PSRP listed in WQ 424, Table 2. Attach supporting data and indicate process option used.

☐ Class B pathogen requirements not currently met. Attach explanation and schedule of compliance.

3.41 VECTOR ATTRACTION REDUCTION REQUIREMENTS WERE MET.

☑ YES ☐ NO

3.50 Monitoring Frequency (Per WQ 424 – Monitoring Requirements for Biosolids Land Application.)

Attach a summary of the monitoring results on Form SA.

3.51 SLUDGE TESTING FOR METALS WAS PERFORMED:

☐ once/year ☐ once/six months

☑ once/quarter ☐ once/month

☐ once/week ☐ once/100 dry tons removed from lagoon.

☐ other, specify: _____

3.52 PERMITTEE IS REQUIRED TO HAVE AN APPROVED PRETREATMENT PROGRAM.

☑ YES ☐ NO If Yes, attach Form SB.

3.53 TOTAL SOLIDS TESTING WAS PERFORMED AT LEAST ONCE PER DAY DURING LAND APPLICATOIN PERIODS?

☑ YES ☐ NO If No, attach explanation.

3.54 NITROGEN TESTING WAS PERFORMED PER THE FREQUENCY IN WQ 423.

This frequency is qtr. ☑ YES ☐ NO If No, attach explanation.

3.55 TOTAL PHOSPHORUS AND TOTAL POTASSIUM WERE TESTED AT THE SAME FREQUENCY REQUIRED FOR METALS AS INDICATED IN WQ 423.

☑ YES ☐ NO If No, attach explanation.

3.56 SOIL TESTING FOR PH AND CATION EXCHANGE CAPACITY (CEC) AND AVAILABLE PHOSPHORUS HAS BEEN CONDUCTED WITHIN THE LAST FIVE YEARS.

☑ YES ☐ NO If No, attach explanation

3.57 WAS ANY ADDITIONAL SLUDGE OR SOIL TESTING REQUIRED UNDER THE SPECIAL CONDITIONS SECTION OF YOUR WATER POLLUTION CONTROL (NPDES) PERMIT?

☑ YES ☐ NO If Yes, attach a summary using Form SB.

PERMIT NO	REPORT PERIOD: CALENDAR YEAR
MO-0089109	2016

FACILITY NAME

Nevada WWTP

3.60 Certification for Land Application

Check all that apply.

I certify under penalty of law that:

☑ records on testing, and pollutant loadings, as listed above in Section 2, have been kept in accordance with 40 CFR 503.17,

☑ the management practices, as listed above in Section 2, have been met in accordance with 40 CFR 503.14

☑ the Class B pathogen requirements and the site restrictions, as listed above in Section 2, have been met in accordance with 40 CFR 503.15 and 503.32.

☑ one of the vector attraction requirements, as listed above in Section 2, have been met in accordance with 40 CFR 503.15 and 503.33.

This determination has been made under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information used to determine these requirements have been met. I am aware that there are significant penalties for false certification, including the possibility of fine and imprisonment.

NAME	OFFICIAL TITLE
Mark Mendenhall	Nevada WWTP Superintendent
SIGNATURE Mark Mendenhall	DATE 01/30/2017

MO 780-1629 (6-04)

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH

FORM SC – LAND APPLICATION OF BIOSOLIDS WITH LOW METALS CONCENTRATIONS

Use this form for application sites that have received biosolids with low metal(s) concentrations per section 3.22 of Form S. Enter the site number for each field based on the site maps on file at the facility. Report biosolids application rate in dry tons per acre per year (dt/ac/yr). Attach additional copies of this sheet as needed.

PERMIT NO. MO - 0089109	REPORTING PERIOD: CALENDAR YEAR 2016
FACILITY NAME Nevada WWTP	
SITE NO. 45	OWNERS NAME City of Nevada
LEGAL NW ¼, ___ ¼, Sec 29, T 36, R 31, County Vern	
BIOSOLIDS 1.9 dt/ac/yr 30 acres	NITROGEN 201 lbs/ac/yr (TKN/PAN)
CROPS GROWN Hay	SOIL pH 6.3
SITE NO. SE 10	OWNERS NAME Don Stidham
LEGAL NE ¼, ___ ¼, Sec 4, T 36, R 31, County ___	
BIOSOLIDS 1.2 dt/ac/yr 10 acres	NITROGEN 127 lbs/ac/yr (TKN/PAN)
CROPS GROWN Hay	SOIL pH 6.6
SITE NO. HOS 1 South	OWNERS NAME Kevin Fox
LEGAL SW ¼, SW ¼, Sec 29, T 36, R 31, County Vern	
BIOSOLIDS .427 dt/ac/yr 202 acres	NITROGEN 75 lbs/ac/yr (TKN/PAN)
CROPS GROWN Corn/Soy Beans	SOIL pH 6.4
SITE NO. HOS 1 North	OWNERS NAME Kevin Fox
LEGAL NE ¼, ___ ¼, Sec 29, T 36, R 31, County Vern	
BIOSOLIDS .166 dt/ac/yr 151 acres	NITROGEN 18 lbs/ac/yr (TKN/PAN)
CROPS GROWN Corn/Soy Beans	SOIL pH 7.3
SITE NO.	OWNERS NAME
LEGAL ___ ¼, ___ ¼, Sec ___, T ___, R ___, County ___	
BIOSOLIDS ___ dt/ac/yr ___ acres	NITROGEN ___ lbs/ac/yr (TKN/PAN)
CROPS GROWN	SOIL pH
SITE NO.	OWNERS NAME
LEGAL ___ ¼, ___ ¼, Sec ___, T ___, R ___, County ___	
BIOSOLIDS ___ dt/ac/yr ___ acres	NITROGEN ___ lbs/ac/yr (TKN/PAN)
CROPS GROWN	SOIL pH

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH

FORM SD – CUMULATIVE METAL LOADINGS FOR LAND APPLICATOIN OF BIOSOLIDS

Use this form for application sites that have received biosolids that exceed the low metals concentrations or have exceeded a cumulative site loading of 500 dry tons/acre of biosolids per Section 3.22 of Form S. Enter the site number for each field based on the site maps on file at the facility. Attach additional copies of this sheet as needed.

PERMIT NO.
MO - 0089109

REPORTING PERIOD: CALENDAR YEAR
2016

FACILITY NAME
Nevada WWTP

SITE NO.
45

LAND OWNERS NAME
City of Nevada

LEGAL
NW ¼, ___ ¼, Sec 27, T 36, R 31, County Vern

BIOSOLIDS
1.9 dt/ac/yr 30 acres

NITROGEN
201 lbs/ac/yr (TKN OR PAN)

CROPS GROWN
Hay

PARAMETER	UNITS	CUMULATIVE LOADINGS			
		PREVIOUS TOTAL	ADDED THIS YEAR	CURRENT TOTAL	PERCENT OF** ALLOWED LOAD
BIOSOLIDS	TON/ACRE*	4.85	1.9	6.75	<10%
TOTAL ARSENIC	LBS/ACRE*	.0796	.011	.0906	<10 %
TOTAL CADMIUM	LBS/ACRE*	.0633	.026	.0893	<10 %
TOTAL CHROMIUM	LBS/ACRE*	.3168	.119	.4358	<10 %
TOTAL COPPER	LBS/ACRE*	4.255	1.862	6.117	<10 %
TOTAL LEAD	LBS/ACRE*	.6305	.254	.8845	<10 %
TOTAL MERCURY	LBS/ACRE*	.0074	.003	.0104	<10 %
TOTAL MOLYBDENUM	LBS/ACRE*	.1935	.022	.2155	<10 %
TOTAL NICKEL	LBS/ACRE*	.3235	.133	.4565	<10 %
TOTAL SELENIUM	LBS/ACRE*	.1052	.017	.1222	<10 %
TOTAL ZINC	LBS/ACRE*	15.98	6.46	22.44	<10 %
SOIL pH (SALT TEST)	pH UNITS		6.3		%
SOIL CEC	meg/100g SOIL		13.8		%

* Report as dry weight.

** Report the percentage of the allowable cumulative loading for the site based on the limits in Permit Standard Conditions Part III. Round to the nearest 5 percent. If less than 10 percent, report as <10.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH

FORM SD – CUMULATIVE METAL LOADINGS FOR LAND APPLICATOIN OF BIOSOLIDS

Use this form for application sites that have received biosolids that exceed the low metals concentrations or have exceeded a cumulative site loading of 500 dry tons/acre of biosolids per Section 3.22 of Form S. Enter the site number for each field based on the site maps on file at the facility. Attach additional copies of this sheet as needed.

PERMIT NO.
MO - 0089109

REPORTING PERIOD: CALENDAR YEAR
2016

FACILITY NAME
Nevada WWTP

SITE NO.
SE 10

LAND OWNERS NAME
Don Stidham

LEGAL
___ ¼, NE ¼, Sec 4, T 36, R 31, County Vern

BIOSOLIDS
1.57 dt/ac/yr 10 acres

NITROGEN
132 lbs/ac/yr (TKN OR PAN)

CROPS GROWN
Hay

PARAMETER	UNITS	CUMULATIVE LOADINGS			
		PREVIOUS TOTAL	ADDED THIS YEAR	CURRENT TOTAL	PERCENT OF** ALLOWED LOAD
BIOSOLIDS	TON/ACRE*	3.173	1.2	4.373	<10%
TOTAL ARSENIC	LBS/ACRE*	.052	.007	.059	<10 %
TOTAL CADMIUM	LBS/ACRE*	.0432	.016	.0592	<10 %
TOTAL CHROMIUM	LBS/ACRE*	.393	.075	.468	<10 %
TOTAL COPPER	LBS/ACRE*	3.428	1.176	4.604	<10 %
TOTAL LEAD	LBS/ACRE*	.494	.161	.655	<10 %
TOTAL MERCURY	LBS/ACRE*	.009	.0018	.0108	<10 %
TOTAL MOLYBDENUM	LBS/ACRE*	.065	.014	.079	<10 %
TOTAL NICKEL	LBS/ACRE*	.212	.084	.296	<10 %
TOTAL SELENIUM	LBS/ACRE*	.082	.011	.093	<10 %
TOTAL ZINC	LBS/ACRE*	10.9	4.08	14.98	<10 %
SOIL pH (SALT TEST)	pH UNITS		6.6		%
SOIL CEC	meg/100g SOIL		9.0		%

* Report as dry weight.

** Report the percentage of the allowable cumulative loading for the site based on the limits in Permit Standard Conditions Part III. Round to the nearest 5 percent. If less than 10 percent, report as <10.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH

FORM SD – CUMULATIVE METAL LOADINGS FOR LAND APPLICATOIN OF BIOSOLIDS

Use this form for application sites that have received biosolids that exceed the low metals concentrations or have exceeded a cumulative site loading of 500 dry tons/acre of biosolids per Section 3.22 of Form S. Enter the site number for each field based on the site maps on file at the facility. Attach additional copies of this sheet as needed.

PERMIT NO.
MO - 0089109

REPORTING PERIOD: CALENDAR YEAR
2016

FACILITY NAME
Nevada WWTP

SITE NO.
HOS 1 South

LAND OWNERS NAME
Kevin Fox

LEGAL
SW ¼, SW ¼, Sec 32, T 36, R 31, County Vern

BIOSOLIDS
.43 dt/ac/yr 20 acres

NITROGEN
75 lbs/ac/yr (TKN OR PAN)

CROPS GROWN
Corn/Soy Beans

PARAMETER	UNITS	CUMULATIVE LOADINGS			
		PREVIOUS TOTAL	ADDED THIS YEAR	CURRENT TOTAL	PERCENT OF** ALLOWED LOAD
BIOSOLIDS	TON/ACRE*	.551	.709	1.26	<10%
TOTAL ARSENIC	LBS/ACRE*	.0576	.005	.06	<10 %
TOTAL CADMIUM	LBS/ACRE*	.0203	.0096	.02	<10 %
TOTAL CHROMIUM	LBS/ACRE*	.1719	.033	.205	<10 %
TOTAL COPPER	LBS/ACRE*	1.1681	.53	1.698	<10 %
TOTAL LEAD	LBS/ACRE*	.2841	.08	.3641	<10 %
TOTAL MERCURY	LBS/ACRE*	.004	.001	.003	<10 %
TOTAL MOLYBDENUM	LBS/ACRE*	.06	.01	.07	<10 %
TOTAL NICKEL	LBS/ACRE*	.1456	.04	.1856	<10 %
TOTAL SELENIUM	LBS/ACRE*	.0259	.008	.0339	<10 %
TOTAL ZINC	LBS/ACRE*	4.2184	2.1	6.318	<10 %
SOIL pH (SALT TEST)	pH UNITS		6.4		%
SOIL CEC	meg/100g SOIL		14.3		%

* Report as dry weight.

** Report the percentage of the allowable cumulative loading for the site based on the limits in Permit Standard Conditions Part III. Round to the nearest 5 percent. If less than 10 percent, report as <10.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH

FORM SD – CUMULATIVE METAL LOADINGS FOR LAND APPLICATOIN OF BIOSOLIDS

Use this form for application sites that have received biosolids that exceed the low metals concentrations or have exceeded a cumulative site loading of 500 dry tons/acre of biosolids per Section 3.22 of Form S. Enter the site number for each field based on the site maps on file at the facility. Attach additional copies of this sheet as needed.

PERMIT NO.
MO - 0089109

REPORTING PERIOD: CALENDAR YEAR
2016

FACILITY NAME
Nevada WWTP

SITE NO.
HOS 1 North

LAND OWNERS NAME
Kevin Fox

LEGAL
NE ¼, SW ¼, Sec 32, T 36, R 31, County Vern

BIOSOLIDS
.17 dt/ac/yr 15 acres

NITROGEN
18 lbs/ac/yr (TKN OR PAN)

CROPS GROWN
Corn/Soy Beans

PARAMETER	UNITS	CUMULATIVE LOADINGS			
		PREVIOUS TOTAL	ADDED THIS YEAR	CURRENT TOTAL	PERCENT OF** ALLOWED LOAD
BIOSOLIDS	TON/ACRE*	.440	.166	.606	<10%
TOTAL ARSENIC	LBS/ACRE*	.004	.0010	.005	<10 %
TOTAL CADMIUM	LBS/ACRE*	.008	.002	.01	<10 %
TOTAL CHROMIUM	LBS/ACRE*	.033	.011	.044	<10 %
TOTAL COPPER	LBS/ACRE*	.589	.163	.752	<10 %
TOTAL LEAD	LBS/ACRE*	.077	.02	.097	<10 %
TOTAL MERCURY	LBS/ACRE*	.011	.0002	.0112	<10 %
TOTAL MOLYBDENUM	LBS/ACRE*	.007	.002	.051	<10 %
TOTAL NICKEL	LBS/ACRE*	.039	.012	.051	<10 %
TOTAL SELENIUM	LBS/ACRE*	.012	.001	.013	<10 %
TOTAL ZINC	LBS/ACRE*	2.015	.564	2.58	<10 %
SOIL pH (SALT TEST)	pH UNITS		6.4		%
SOIL CEC	meg/100g SOIL		14.4		%

* Report as dry weight.

** Report the percentage of the allowable cumulative loading for the site based on the limits in Permit Standard Conditions Part III. Round to the nearest 5 percent. If less than 10 percent, report as <10.

SOUR-Specific Oxygen Uptake Rate

The SOUR or specific oxygen uptake rate may be used to meet the requirements for vector attraction reduction of aerobically digested sludge.The SOUR is expressed as mg of O_2/hr-gram of total solids at20°C. To meet the new requirments for vector attratction reduction, the SOUR must be less than or equal to 1.5 mg of O_2/hr-gram of total solids.

Procedure: Take a one liter sample of the digested sludge. Shake the sample well in a sample bottle which is less than full to saturate the sample with dissolved oxygen. Fill a BOD bottle with this sample. Immediately insert a self-stirring DO probe into the bottle and take the intial DO reading. Take readings every minute for 10 min. Record the readings in the table below and complete the calculations as shown below.

Date 3/1/16 Time 2:15
Sample Temp. 20°
Facility Nevada WWTP
Name Mark Mendenhall
Sample location E+W Digesters

Time	DO	ΔDO
0 min	8.41	—
1	7.89	.52
2	7.08	.81
3	6.59	.49
4	5.91	.68
5	5.44	.47
6	5.03	.41
7	4.51	.52
8	3.89	.62
9	3.18	.71
10	2.78	.40

Average ΔDO = .56.3

sum of ΔDO 5.63
Number of readings 10

ΔDO=change in DO

ΔDO/hr=ΔDO/min x 60
33.78

SOUR=ΔDO/hr x 1000
mg/L total solids
33,780

SOUR=1.35 mg O_2
per hr-gram solids

1% solids=10,000mg/l

2.5 x 10,000 = 25,000
33,780 ÷ 25,000 = 1.35

TOTAL & VOLATILE SOLIDS ON SLUDGE

SAMPLE DATE	WT. OF DISH	WT. OF DISH and sample 100ml	WT. OF DISH and sample dryed	WT. OF DISH and sample ignited	TOTAL	VOLATILE		PH
							%	
3/2/16	76.8	176.8	79.3		2.5			7.6

SOUR-Specific Oxygen Uptake Rate

The SOUR or specific oxygen uptake rate may be used to meet the requirements for vector attraction reduction of aerobically digested sludge.The SOUR is expressed as mg of O_2/hr-gram of total solids at20°C. To meet the new requirments for vector attratction reduction, the SOUR must be less than or equal to 1.5 mg of O_2/hr-gram of total solids.

Procedure: Take a one liter sample of the digested sludge. Shake the sample well in a sample bottle which is less than full to saturate the sample with dissolved oxygen. Fill a BOD bottle with this sample. Immediately insert a self-stirring DO probe into the bottle and take the intial DO reading. Take readings every minute for 10 min. Record the readings in the table below and complete the calculations as shown below.

Date 6/15/16 Time 2:00
Sample Temp. 20°
Facility Nevada WWTP
Name Mark Mendenhall
Sample location Digester's

Time	DO	ΔDO
0 min	8.13	
1	7.08	1.05
2	6.46	.62
3	5.96	.50
4	5.53	.43
5	5.14	.39
6	4.78	.36
7	4.44	.34
8	4.10	.34
9	3.77	.33
10	3.34	.43

Average ΔDO = .479

$\frac{\text{sum of } \Delta DO}{\text{Number of readings}}$ $\frac{4.79}{10}$

ΔDO=change in DO

ΔDO/hr=ΔDO/min x 60
29

SOUR=$\frac{\Delta DO/hr \times 1000}{\text{mg/L total solids}}$

29x1000 = 29,000

SOUR= .91 mg O_2 per hr-gram solids

1% solids=10,000mg/l

3.2 x 10,000 = 32,000

29,000 ÷ 32,000 = .91

TOTAL & VOLATILE SOLIDS ON SLUDGE

SAMPLE DATE	WT. OF DISH	WT. OF DISH and sample 100ml	WT. OF DISH and sample dryed	WT. OF DISH and sample ignited	TOTAL	VOLATILE		PH
							%	
6/15/16	76.4	176.4	79.6		3.2			7.1

SOUR-Specific Oxygen Uptake Rate

The SOUR or specific oxygen uptake rate may be used to meet the requirements for vector attraction reduction of aerobically digested sludge. The SOUR is expressed as mg of O_2/hr-gram of total solids at 20°C. To meet the new requirments for vector attratction reduction, the SOUR must be less than or equal to 1.5 mg of O_2/hr-gram of total solids.

Procedure: Take a one liter sample of the digested sludge. Shake the sample well in a sample bottle which is less than full to saturate the sample with dissolved oxygen. Fill a BOD bottle with this sample. Immediately insert a self-stirring DO probe into the bottle and take the intial DO reading. Take readings every minute for 10 min. Record the readings in the table below and complete the calculations as shown below.

Date 9/29/16 Time 11:10
Sample Temp. 22°
Facility Nevada WWTP
Name Mark Mendenhall
Sample location E+W Digester's

Time	DO	ΔDO
0 min	7.91	—
1	7.23	.68
2	6.95	.28
3	6.11	.84
4	5.43	.68
5	5.03	.40
6	4.81	.22
7	4.13	.68
8	3.41	.72
9	2.94	.47
10	2.08	.86

Average ΔDO = .58

sum of ΔDO 5.83
Number of readings 10

ΔDO=change in DO

ΔDO/hr=ΔDO/min x 60
34.8

SOUR=ΔDO/hr x 1000
mg/L total solids
34,800

SOUR= 1.1 mg O_2
per hr-gram solids

1% solids=10,000mg/l

3.2 x 10,000 = 32,000

34,800 ÷ 32,000 = 1.09

TOTAL & VOLATILE SOLIDS ON SLUDGE

SAMPLE DATE	WT. OF DISH	WT. OF DISH and sample 100ml	WT. OF DISH and sample dryed	WT. OF DISH and sample ignited	TOTAL	VOLATILE		PH
							%	
9/29/16	76.2	176.2	79.4		3.2			7.2

SOUR-Specific Oxygen Uptake Rate

The SOUR or specific oxygen uptake rate may be used to meet the requirements for vector attraction reduction of aerobically digested sludge. The SOUR is expressed as mg of O_2/hr-gram of total solids at 20°C. To meet the new requirments for vector attratction reduction, the SOUR must be less than or equal to 1.5 mg of O_2/hr-gram of total solids.

Procedure: Take a one liter sample of the digested sludge. Shake the sample well in a sample bottle which is less than full to saturate the sample with dissolved oxygen. Fill a BOD bottle with this sample. Immediately insert a self-stirring DO probe into the bottle and take the intial DO reading. Take readings every minute for 10 min. Record the readings in the table below and complete the calculations as shown below.

Date 12/21/16 Time 1:45
Sample Temp. 21°C
Facility Nevada WWTP
Name Mark Mendenhall
Sample location #11 Sludge Tank

Time	DO	ΔDO
0 min	8.7	—
1	7.9	.8
2	6.9	1.0
3	6.2	.7
4	5.8	.4
5	5.4	.4
6	5.0	.4
7	4.7	.3
8	4.5	.2
9	4.2	.3
10	3.9	.3

Average ΔDO = .48

$\frac{\text{sum of } \Delta DO}{\text{Number of readings}}$ 4.8 / 10

ΔDO=change in DO

ΔDO/hr=ΔDO/min x 60
29

SOUR=$\frac{\Delta DO/hr \times 1000}{\text{mg/L total solids}}$

29 x 1000 = 29,000

SOUR= .91 mg O_2 per hr-gram solids

1% solids=10,000mg/l

3.2 x 10,000 = 32,000

29,000 ÷ 32,000 = .91

TOTAL & VOLATILE SOLIDS ON SLUDGE

SAMPLE DATE	WT. OF DISH	WT. OF DISH and sample 100ml	WT. OF DISH and sample dryed	WT. OF DISH and sample ignited	TOTAL	VOLATILE		PH
							%	
12/21/16	76.8	176.8			3.2			7.4

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ANALYTICAL RESULTS

Project: Nevada QTR Sludge
Pace Project No.: 60213962

Sample: NEVADA QTR SLUDGE #1 **Lab ID: 60213962001** Collected: 03/01/16 10:50 Received: 03/01/16 14:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**70732**	CFU/g	24.7	1	03/01/16 15:10	03/02/16 15:00		
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**95.9**	%	0.50	1		03/03/16 17:25		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**4.1**	%	0.10	1		03/03/16 17:25		

Sample: NEVADA QTR SLUDGE #2 **Lab ID: 60213962002** Collected: 03/01/16 10:50 Received: 03/01/16 14:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**61538**	CFU/g	25.6	1	03/01/16 15:10	03/02/16 15:00		
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**96.1**	%	0.50	1		03/03/16 17:25		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**3.9**	%	0.10	1		03/03/16 17:25		

Sample: NEVADA QTR SLUDGE #3 **Lab ID: 60213962003** Collected: 03/01/16 10:50 Received: 03/01/16 14:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**65789**	CFU/g	26.5	1	03/01/16 15:10	03/02/16 15:00		
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**96.2**	%	0.50	1		03/03/16 17:25		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**3.8**	%	0.10	1		03/03/16 17:25		

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ANALYTICAL RESULTS

Project: Nevada QTR Sludge
Pace Project No.: 60213962

Sample: NEVADA QTR SLUDGE #4 **Lab ID: 60213962004** Collected: 03/01/16 10:50 Received: 03/01/16 14:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**71053**	CFU/g	26.3	1	03/01/16 15:10	03/02/16 15:00		
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**96.2**	%	0.50	1		03/03/16 17:25		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**3.8**	%	0.10	1		03/03/16 17:25		

Sample: NEVADA QTR SLUDGE #5 **Lab ID: 60213962005** Collected: 03/01/16 10:50 Received: 03/01/16 14:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**79487**	CFU/g	25.7	1	03/01/16 15:10	03/02/16 15:00		
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**96.1**	%	0.50	1		03/03/16 17:25		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**3.9**	%	0.10	1		03/03/16 17:25		

Sample: NEVADA QTR SLUDGE #6 **Lab ID: 60213962006** Collected: 03/01/16 10:50 Received: 03/01/16 14:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**69231**	CFU/g	25.4	1	03/01/16 15:10	03/02/16 15:00		
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**96.1**	%	0.50	1		03/03/16 17:25		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**3.9**	%	0.10	1		03/03/16 17:25		

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ANALYTICAL RESULTS

Project: Nevada QTR Sludge
Pace Project No.: 60213962

Sample: NEVADA QTR SLUDGE #7 **Lab ID: 60213962007** Collected: 03/01/16 10:50 Received: 03/01/16 14:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**56410**	CFU/g	25.7	1	03/01/16 15:10	03/02/16 15:00		
Geometric Mean	Analytical Method: SM 2710B							
Fecal Coliforms	**67396**	CFU/g	25.7	1		03/02/16 15:00		
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**96.1**	%	0.50	1		03/03/16 17:25		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**3.9**	%	0.10	1		03/03/16 17:25		

Sample: NEVADA QTR SLUDGE **Lab ID: 60213962008** Collected: 03/01/16 10:50 Received: 03/01/16 18:40 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Arsenic	ND	mg/kg	7.4	1	03/03/16 11:30	03/04/16 11:53	7440-38-2	
Cadmium	**6.8**	mg/kg	3.7	1	03/03/16 11:30	03/04/16 11:53	7440-43-9	
Chromium	**23.5**	mg/kg	3.7	1	03/03/16 11:30	03/04/16 11:53	7440-47-3	
Copper	**374**	mg/kg	7.4	1	03/03/16 11:30	03/04/16 11:53	7440-50-8	
Lead	**55.5**	mg/kg	7.4	1	03/03/16 11:30	03/04/16 11:53	7439-92-1	
Molybdenum	ND	mg/kg	14.8	1	03/03/16 11:30	03/04/16 11:53	7439-98-7	
Nickel	**30.3**	mg/kg	3.7	1	03/03/16 11:30	03/04/16 11:53	7440-02-0	
Potassium	**2920**	mg/kg	370	1	03/03/16 11:30	03/04/16 11:53	7440-09-7	
Selenium	ND	mg/kg	11.1	1	03/03/16 11:30	03/04/16 11:53	7782-49-2	
Silver	ND	mg/kg	5.2	1	03/03/16 11:30	03/04/16 11:53	7440-22-4	
Zinc	**1510**	mg/kg	73.9	1	03/03/16 11:30	03/04/16 11:53	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	**0.86**	mg/kg	0.77	1	03/08/16 09:15	03/08/16 13:20	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**96.2**	%	0.50	1		03/03/16 17:25		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**3.8**	%	0.10	1		03/03/16 17:25		
Plant Available Nitrogen	Analytical Method: SM 2710B							
Plant Available Nitrogen	**22600**	mg/kg	2.0	1		03/15/16 13:38		
Total Organic Nitrogen Soil	Analytical Method: TKN-NH3 Calculation							
Total Organic Nitrogen	**97900**	mg/kg	50.0	1		03/15/16 13:30		

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ANALYTICAL RESULTS

Project: Nevada QTR Sludge
Pace Project No.: 60213962

Sample: NEVADA QTR SLUDGE **Lab ID: 60213962008** Collected: 03/01/16 10:50 Received: 03/01/16 18:40 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**4090**	mg/kg	263	10		03/04/16 12:17	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	**102000**	mg/kg	8910	5		03/13/16 15:24	7727-37-9	M1
365.4 Total Phosphorus	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4							
Phosphorus	**13100**	mg/kg	265	1	03/07/16 13:00	03/09/16 10:36	7723-14-0	
9056 IC Anions	Analytical Method: EPA 9056 Preparation Method: EPA 9056							
Nitrate as N	**83.5**	mg/kg	26.0	1	03/07/16 13:00	03/08/16 09:12	14797-55-8	M1
Nitrite as N	**111**	mg/kg	26.0	1	03/07/16 13:00	03/08/16 09:12	14797-65-0	M1

Sample: NEVADA QTR SLUDGE - MO **Lab ID: 60213962009** Collected: 03/01/16 10:50 Received: 03/01/16 18:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8							
Molybdenum	**233**	ug/L	100	20	03/09/16 09:20	03/12/16 21:23	7439-98-7	

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ANALYTICAL RESULTS

Project: 503
Pace Project No.: 60220699

Sample: QTR. SLUDGE 1 **Lab ID: 60220699001** Collected: 06/06/16 11:18 Received: 06/06/16 14:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**48387**	CFU/g	40.3	1	06/06/16 15:10	06/07/16 15:25		R5
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**97.5**	%	0.50	1		06/08/16 17:12		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**2.5**	%	0.10	1		06/08/16 00:00		

Sample: QTR. SLUDGE 2 **Lab ID: 60220699002** Collected: 06/06/16 11:18 Received: 06/06/16 14:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**40323**	CFU/g	40.3	1	06/06/16 15:10	06/07/16 15:25		R5
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**97.5**	%	0.50	1		06/08/16 17:14		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**2.5**	%	0.10	1		06/08/16 00:00		

Sample: QTR. SLUDGE 3 **Lab ID: 60220699003** Collected: 06/06/16 11:18 Received: 06/06/16 14:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**47809**	CFU/g	39.8	1	06/06/16 15:10	06/07/16 15:25		R5
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**97.5**	%	0.50	1		06/08/16 17:16		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**2.5**	%	0.10	1		06/08/16 00:00		

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ANALYTICAL RESULTS

Project: 503
Pace Project No.: 60220699

Sample: QTR. SLUDGE 4 **Lab ID: 60220699004** Collected: 06/06/16 11:18 Received: 06/06/16 14:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**44355**	CFU/g	40.3	1	06/06/16 15:10	06/07/16 15:25		R5
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**97.5**	%	0.50	1		06/08/16 17:18		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**2.5**	%	0.10	1		06/08/16 00:00		

Sample: QTR. SLUDGE 5 **Lab ID: 60220699005** Collected: 06/06/16 11:18 Received: 06/06/16 14:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**47809**	CFU/g	39.9	1	06/06/16 15:10	06/07/16 15:25		R5
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**97.5**	%	0.50	1		06/08/16 17:19		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**2.5**	%	0.10	1		06/08/16 00:00		

Sample: QTR. SLUDGE 6 **Lab ID: 60220699006** Collected: 06/06/16 11:18 Received: 06/06/16 14:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**39683**	CFU/g	39.8	1	06/06/16 15:10	06/07/16 15:25		R5
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**97.5**	%	0.50	1		06/08/16 17:21		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**2.5**	%	0.10	1		06/08/16 00:00		

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ANALYTICAL RESULTS

Project: 503
Pace Project No.: 60220699

Sample: QTR. SLUDGE 7 **Lab ID: 60220699007** Collected: 06/06/16 11:18 Received: 06/06/16 14:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**28455**	CFU/g	40.6	1	06/06/16 15:10	06/07/16 15:25		R5
Geometric Mean	Analytical Method: SM 2710B							
Fecal Coliforms	**41810**	CFU/g	40.6	1		06/07/16 15:25		
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**97.5**	%	0.50	1		06/08/16 17:23		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**2.5**	%	0.10	1		06/08/16 00:00		

Sample: NEVADA QTR SLUDGE **Lab ID: 60220699008** Collected: 06/06/16 11:18 Received: 06/06/16 18:35 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Arsenic	ND	mg/kg	9.4	1	06/13/16 11:30	06/14/16 13:05	7440-38-2	
Cadmium	**6.4**	mg/kg	4.7	1	06/13/16 11:30	06/14/16 13:05	7440-43-9	
Chromium	**25.8**	mg/kg	4.7	1	06/13/16 11:30	06/14/16 13:05	7440-47-3	
Copper	**413**	mg/kg	9.4	1	06/13/16 11:30	06/14/16 13:05	7440-50-8	
Lead	**60.1**	mg/kg	9.4	1	06/13/16 11:30	06/14/16 13:05	7439-92-1	
Molybdenum	ND	mg/kg	18.8	1	06/13/16 11:30	06/14/16 13:05	7439-98-7	
Nickel	**31.6**	mg/kg	4.7	1	06/13/16 11:30	06/14/16 13:05	7440-02-0	
Potassium	**4680**	mg/kg	471	1	06/13/16 11:30	06/14/16 13:05	7440-09-7	
Selenium	ND	mg/kg	14.1	1	06/13/16 11:30	06/14/16 13:05	7782-49-2	
Silver	ND	mg/kg	6.6	1	06/13/16 11:30	06/14/16 13:05	7440-22-4	
Zinc	**1630**	mg/kg	94.2	1	06/13/16 11:30	06/14/16 13:05	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	**0.72**	mg/kg	0.26	1	06/14/16 10:40	06/14/16 16:35	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**97.6**	%	0.50	1		06/08/16 17:26		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**2.4**	%	0.10	1		06/08/16 00:00		
Plant Available Nitrogen	Analytical Method: SM 2710B							
Plant Available Nitrogen	**16600**	mg/kg	2.0	1		06/17/16 00:00		
Total Organic Nitrogen Soil	Analytical Method: TKN-NH3 Calculation							
Total Organic Nitrogen	**46700**	mg/kg	50.0	1		06/14/16 00:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 503
Pace Project No.: 60220699

Sample: NEVADA QTR SLUDGE **Lab ID: 60220699009** Collected: 06/06/16 11:18 Received: 06/06/16 18:35 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**10300**	mg/kg	418	10		06/08/16 14:09	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	**57000**	mg/kg	2120	1		06/10/16 09:45	7727-37-9	M1
365.4 Total Phosphorus	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4							
Phosphorus	**13400**	mg/kg	411	1	06/08/16 11:00	06/14/16 09:19	7723-14-0	
9056 IC Anions	Analytical Method: EPA 9056 Preparation Method: EPA 9056							
Nitrate as N	**73.2**	mg/kg	42.5	1	06/16/16 15:15	06/16/16 22:41	14797-55-8	
Nitrite as N	ND	mg/kg	42.5	1	06/16/16 15:15	06/16/16 22:41	14797-65-0	

Sample: Nevada Qtr Sludge - Mo **Lab ID: 60220699009** Collected: 06/06/16 11:18 Received: 06/06/16 18:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8							
Molybdenum	**158**	ug/L	10.0	10	06/08/16 14:45	06/09/16 12:43	7439-98-7	

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ANALYTICAL RESULTS

Project: SLUDGE
Pace Project No.: 60227032

Sample: QTR. SLUDGE 1 **Lab ID: 60227032001** Collected: 09/06/16 12:03 Received: 09/06/16 14:30 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**9375**	CFU/g	32.1	1	09/06/16 15:00	09/07/16 15:15		R5
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**96.9**	%	0.50	1		09/08/16 15:02		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**3.1**	%	0.10	1		09/08/16 15:02		

Sample: QTR. SLUDGE 2 **Lab ID: 60227032002** Collected: 09/06/16 12:03 Received: 09/06/16 14:30 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**17647**	CFU/g	29.5	1	09/06/16 15:00	09/07/16 15:15		R5
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**96.6**	%	0.50	1		09/08/16 15:04		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**3.4**	%	0.10	1		09/08/16 15:04		

Sample: QTR. SLUDGE 3 **Lab ID: 60227032003** Collected: 09/06/16 12:03 Received: 09/06/16 14:30 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**38889**	CFU/g	28.0	1	09/06/16 15:00	09/07/16 15:15		R5
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**96.4**	%	0.50	1		09/08/16 15:05		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**3.6**	%	0.10	1		09/08/16 15:05		

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ANALYTICAL RESULTS

Project: SLUDGE
Pace Project No.: 60227032

Sample: QTR. SLUDGE 4 **Lab ID: 60227032004** Collected: 09/06/16 12:03 Received: 09/06/16 14:30 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**13514**	CFU/g	27.0	1	09/06/16 15:00	09/07/16 15:15		R5
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**96.3**	%	0.50	1		09/08/16 15:07		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**3.7**	%	0.10	1		09/08/16 15:07		

Sample: QTR. SLUDGE 5 **Lab ID: 60227032005** Collected: 09/06/16 12:03 Received: 09/06/16 14:30 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**31579**	CFU/g	26.1	1	09/06/16 15:00	09/07/16 15:15		R5
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**96.2**	%	0.50	1		09/08/16 15:09		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**3.8**	%	0.10	1		09/08/16 15:09		

Sample: QTR. SLUDGE 6 **Lab ID: 60227032006** Collected: 09/06/16 12:03 Received: 09/06/16 14:30 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**26316**	CFU/g	26.1	1	09/06/16 15:00	09/07/16 15:15		R5
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**96.2**	%	0.50	1		09/08/16 15:10		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**3.8**	%	0.10	1		09/08/16 15:10		

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ANALYTICAL RESULTS

Project: SLUDGE
Pace Project No.: 60227032

Sample: QTR. SLUDGE 7 **Lab ID: 60227032007** Collected: 09/06/16 12:03 Received: 09/06/16 14:30 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**13158**	CFU/g	26.4	1	09/06/16 15:00	09/07/16 15:15		R5
Geometric Mean	Analytical Method: SM 2710B							
Fecal Coliforms	**19168**	CFU/g	26.4	1		09/07/16 15:15		
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**96.2**	%	0.50	1		09/08/16 15:11		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**3.8**	%	0.10	1		09/08/16 15:11		

Sample: NEVADA QTR SLUDGE **Lab ID: 60227032008** Collected: 09/06/16 12:03 Received: 09/06/16 19:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Arsenic	ND	mg/kg	5.9	1	09/07/16 10:05	09/07/16 16:13	7440-38-2	
Cadmium	**6.7**	mg/kg	2.9	1	09/07/16 10:05	09/07/16 16:13	7440-43-9	
Chromium	**31.4**	mg/kg	2.9	1	09/07/16 10:05	09/07/16 16:13	7440-47-3	
Copper	**490**	mg/kg	5.9	1	09/07/16 10:05	09/07/16 16:13	7440-50-8	
Lead	**66.9**	mg/kg	5.9	1	09/07/16 10:05	09/07/16 16:13	7439-92-1	
Molybdenum	ND	mg/kg	11.8	1	09/07/16 10:05	09/07/16 16:13	7439-98-7	
Nickel	**34.9**	mg/kg	2.9	1	09/07/16 10:05	09/07/16 16:13	7440-02-0	
Potassium	**3380**	mg/kg	294	1	09/07/16 10:05	09/07/16 16:13	7440-09-7	
Selenium	ND	mg/kg	8.8	1	09/07/16 10:05	09/07/16 16:13	7782-49-2	
Silver	ND	mg/kg	4.1	1	09/07/16 10:05	09/07/16 16:13	7440-22-4	
Zinc	**1700**	mg/kg	58.9	1	09/07/16 10:05	09/07/16 16:13	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	**0.77**	mg/kg	0.50	1	09/12/16 09:00	09/12/16 11:43	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**96.6**	%	0.50	1		09/08/16 15:13		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**3.4**	%	0.10	1		09/08/16 15:13		
Plant Available Nitrogen	Analytical Method: SM 2710B							
Plant Available Nitrogen	**18400**	mg/kg	2.0	1		09/26/16 00:00		
Total Organic Nitrogen Soil	Analytical Method: TKN-NH3 Calculation							
Total Organic Nitrogen	**37500**	mg/kg	50.0	1		09/19/16 00:00		

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ANALYTICAL RESULTS

Project: SLUDGE
Pace Project No.: 60227032

Sample: NEVADA QTR SLUDGE Lab ID: 60227032008 Collected: 09/06/16 12:03 Received: 09/06/16 19:20 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**15600**	mg/kg	148	5		09/19/16 10:22	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	**53100**	mg/kg	1430	1		09/13/16 15:09	7727-37-9	
365.4 Total Phosphorus	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4							
Phosphorus	**20000**	mg/kg	1320	5	09/19/16 11:05	09/20/16 11:28	7723-14-0	M1
Phosphorus as PO4	**61200**	mg/kg		5	09/19/16 11:05	09/20/16 11:28		
9056 IC Anions	Analytical Method: EPA 9056 Preparation Method: EPA 9056							
Nitrate as N	ND	mg/kg	29.8	1	09/20/16 08:00	09/20/16 13:11	14797-55-8	M1
Nitrite as N	ND	mg/kg	29.8	1	09/20/16 08:00	09/20/16 13:11	14797-65-0	M1

Sample: NEVADA QTR SLUDGE MO Lab ID: 60227032009 Collected: 09/06/16 12:03 Received: 09/06/16 19:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8							
Molybdenum	**417**	ug/L	20.0	2	09/21/16 15:55	09/22/16 12:47	7439-98-7	

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ANALYTICAL RESULTS

Project: 503 SLUDGE
Pace Project No.: 60233663

Sample: QTR SLUDGE 1 **Lab ID: 60233663001** Collected: 12/06/16 11:18 Received: 12/06/16 15:15 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**94017**	CFU/g	28.5	1	12/06/16 15:30	12/07/16 15:20		
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**96.5**	%	0.50	1		12/09/16 11:06		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**3.5**	%	0.10	1		12/09/16 11:06		

Sample: QTR SLUDGE 2 **Lab ID: 60233663002** Collected: 12/06/16 11:18 Received: 12/06/16 15:15 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**141176**	CFU/g	58.9	1	12/06/16 15:30	12/07/16 15:20		
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**98.3**	%	0.50	1		12/09/16 11:08		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**1.7**	%	0.10	1		12/09/16 11:08		

Sample: QTR SLUDGE 3 **Lab ID: 60233663003** Collected: 12/06/16 11:18 Received: 12/06/16 15:15 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**127273**	CFU/g	30.3	1	12/06/16 15:30	12/07/16 15:20		
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**96.7**	%	0.50	1		12/09/16 11:09		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**3.3**	%	0.10	1		12/09/16 11:09		

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ANALYTICAL RESULTS

Project: 503 SLUDGE
Pace Project No.: 60233663

Sample: QTR SLUDGE 4 Lab ID: 60233663004 Collected: 12/06/16 11:18 Received: 12/06/16 15:15 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**117647**	CFU/g	42.0	1	12/06/16 15:30	12/07/16 15:20		
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**97.6**	%	0.50	1		12/09/16 11:12		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**2.4**	%	0.10	1		12/09/16 11:12		

Sample: QTR SLUDGE 5 Lab ID: 60233663005 Collected: 12/06/16 11:18 Received: 12/06/16 15:15 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**160584**	CFU/g	73.1	1	12/06/16 15:30	12/07/16 15:20		
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**98.6**	%	0.50	1		12/09/16 11:13		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**1.4**	%	0.10	1		12/09/16 11:13		

Sample: QTR SLUDGE 6 Lab ID: 60233663006 Collected: 12/06/16 11:18 Received: 12/06/16 15:15 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**138889**	CFU/g	92.6	1	12/06/16 15:30	12/07/16 15:20		R5
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**98.9**	%	0.50	1		12/09/16 11:15		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**1.1**	%	0.10	1		12/09/16 11:15		

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ANALYTICAL RESULTS

Project: 603 SLUDGE
Pace Project No.: 60233663

Sample: QTR SLUDGE 7 Lab ID: 60233663007 Collected: 12/06/16 11:18 Received: 12/06/16 15:15 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
MBIO 9222DS Fecal Coliform	Analytical Method: SM 9222D Preparation Method: SM 9222D							
Fecal Coliforms	**115385**	CFU/g	96.4	1	12/06/16 15:30	12/07/16 15:20		R5
Geometric Mean	Analytical Method: SM 2710B							
Fecal Coliforms	**<19402**	CFU/g	96.4	1		12/08/16 09:15		
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**99.0**	%	0.50	1		12/09/16 11:16		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**1.0**	%	0.10	1		12/09/16 11:16		

Sample: NEVADA QTR SLUDGE Lab ID: 60233663008 Collected: 12/06/16 11:18 Received: 12/06/16 19:00 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Arsenic	ND	mg/kg	7.5	1	12/13/16 10:00	12/14/16 15:56	7440-38-2	
Cadmium	**7.2**	mg/kg	3.7	1	12/13/16 10:00	12/14/16 15:56	7440-43-9	
Chromium	**26.5**	mg/kg	3.7	1	12/13/16 10:00	12/14/16 15:56	7440-47-3	
Copper	**464**	mg/kg	7.5	1	12/13/16 10:00	12/14/16 15:56	7440-50-8	
Lead	**66.4**	mg/kg	3.7	1	12/13/16 10:00	12/14/16 15:56	7439-92-1	
Molybdenum	ND	mg/kg	15.0	1	12/13/16 10:00	12/14/16 15:56	7439-98-7	
Nickel	**32.7**	mg/kg	3.7	1	12/13/16 10:00	12/14/16 15:56	7440-02-0	
Potassium	**3490**	mg/kg	374	1	12/13/16 10:00	12/14/16 15:56	7440-09-7	
Selenium	ND	mg/kg	11.2	1	12/13/16 10:00	12/14/16 15:56	7782-49-2	
Silver	ND	mg/kg	5.2	1	12/13/16 10:00	12/14/16 15:56	7440-22-4	
Zinc	**1850**	mg/kg	74.8	1	12/13/16 10:00	12/14/16 15:56	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	**1.8**	mg/kg	0.47	1	12/19/16 09:15	12/19/16 11:22	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**97.9**	%	0.50	1		12/09/16 11:25		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**2.1**	%	0.10	1		12/09/16 11:25		
Plant Available Nitrogen	Analytical Method: SM 2710B							
Plant Available Nitrogen	**27900**	mg/kg	2.0	1		12/20/16 00:00		
Total Organic Nitrogen Soil	Analytical Method: TKN-NH3 Calculation							
Total Organic Nitrogen	**95400**	mg/kg	50.0	1		12/20/16 00:00		

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ANALYTICAL RESULTS

Project: 503 SLUDGE
Pace Project No.: 60233663

Sample: NEVADA QTR SLUDGE **Lab ID: 60233663008** Collected: 12/06/16 11:18 Received: 12/06/16 19:00 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**12600**	mg/kg	97.5	2		12/14/16 18:48	7664-41-7	M1
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	**108000**	mg/kg	12500	5		12/14/16 14:36	7727-37-9	
365.4 Total Phosphorus	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4							
Phosphorus	**16200**	mg/kg	482	10	12/12/16 08:30	12/13/16 11:38	7723-14-0	
9056 IC Anions	Analytical Method: EPA 9056 Preparation Method: EPA 9056							
Nitrate as N	ND	mg/kg	48.4	1	12/20/16 08:00	12/20/16 11:40	14797-55-8	
Nitrite as N	ND	mg/kg	48.4	1	12/20/16 08:00	12/20/16 11:40	14797-65-0	

Sample: Nevada Qtr. Sludge Mo **Lab ID: 60233663009** Collected: 12/06/16 11:18 Received: 12/06/16 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8							
Molybdenum	**88.3**	ug/L	25.0	25	12/08/16 15:20	12/09/16 16:04	7439-98-7	

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ANALYTICAL RESULTS

Project: TCLP
Pace Project No.: 60229729

Sample: NEVADA WWTP SLUDGE Lab ID: 60229729001 Collected: 10/11/16 11:00 Received: 10/11/16 19:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1311; 10/19/16 00:00							
Arsenic	ND	mg/L	0.50	1	10/20/16 12:00	10/21/16 09:25	7440-38-2	1e,3e
Barium	ND	mg/L	2.5	1	10/20/16 12:00	10/21/16 09:25	7440-39-3	1e,3e
Cadmium	ND	mg/L	0.050	1	10/20/16 12:00	10/21/16 09:25	7440-43-9	1e,3e
Chromium	ND	mg/L	0.10	1	10/20/16 12:00	10/21/16 09:25	7440-47-3	1e,3e
Lead	ND	mg/L	0.50	1	10/20/16 12:00	10/21/16 09:25	7439-92-1	1e,3e
Selenium	ND	mg/L	0.50	1	10/20/16 12:00	10/21/16 09:25	7782-49-2	1e,3e
Silver	ND	mg/L	0.10	1	10/20/16 12:00	10/21/16 09:25	7440-22-4	1e,3e
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1311; 10/19/16 00:00							
Mercury	ND	mg/L	0.0020	1	10/20/16 12:45	10/21/16 09:37	7439-97-6	1e,3e
8270 MSSV TCLP Sep Funnel	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Leachate Method/Date: EPA 1311; 10/19/16 00:00							
1,4-Dichlorobenzene	ND	ug/L	100	1	10/21/16 00:00	10/24/16 19:53	106-46-7	1e,2e
2,4-Dinitrotoluene	ND	ug/L	100	1	10/21/16 00:00	10/24/16 19:53	121-14-2	1e,2e
Hexachloro-1,3-butadiene	ND	ug/L	100	1	10/21/16 00:00	10/24/16 19:53	87-68-3	1e,2e
Hexachlorobenzene	ND	ug/L	100	1	10/21/16 00:00	10/24/16 19:53	118-74-1	1e,2e
Hexachloroethane	ND	ug/L	100	1	10/21/16 00:00	10/24/16 19:53	67-72-1	1e,2e
2-Methylphenol(o-Cresol)	ND	ug/L	100	1	10/21/16 00:00	10/24/16 19:53	95-48-7	1e,2e
3&4-Methylphenol(m&p Cresol)	ND	ug/L	200	1	10/21/16 00:00	10/24/16 19:53		1e,2e
Nitrobenzene	ND	ug/L	100	1	10/21/16 00:00	10/24/16 19:53	98-95-3	1e,2e
Pentachlorophenol	ND	ug/L	500	1	10/21/16 00:00	10/24/16 19:53	87-86-5	1e,2e
Pyridine	ND	ug/L	100	1	10/21/16 00:00	10/24/16 19:53	110-86-1	1e,2e
2,4,5-Trichlorophenol	ND	ug/L	500	1	10/21/16 00:00	10/24/16 19:53	95-95-4	1e,2e
2,4,6-Trichlorophenol	ND	ug/L	100	1	10/21/16 00:00	10/24/16 19:53	88-06-2	1e,2e
Surrogates								
Nitrobenzene-d5 (S)	66	%	56-104	1	10/21/16 00:00	10/24/16 19:53	4165-60-0	
2-Fluorobiphenyl (S)	61	%	60-98	1	10/21/16 00:00	10/24/16 19:53	321-60-8	
Terphenyl-d14 (S)	88	%	68-107	1	10/21/16 00:00	10/24/16 19:53	1718-51-0	
Phenol-d6 (S)	61	%	52-98	1	10/21/16 00:00	10/24/16 19:53	13127-88-3	
2-Fluorophenol (S)	63	%	48-97	1	10/21/16 00:00	10/24/16 19:53	367-12-4	
2,4,6-Tribromophenol (S)	96	%	54-116	1	10/21/16 00:00	10/24/16 19:53	118-79-6	
8260 MSV TCLP	Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 10/20/16 00:00							
Benzene	ND	ug/L	50.0	1		10/21/16 12:58	71-43-2	
2-Butanone (MEK)	ND	ug/L	1000	1		10/21/16 12:58	78-93-3	
Carbon tetrachloride	ND	ug/L	50.0	1		10/21/16 12:58	56-23-5	
Chlorobenzene	ND	ug/L	50.0	1		10/21/16 12:58	108-90-7	
Chloroform	ND	ug/L	200	1		10/21/16 12:58	67-66-3	
1,2-Dichloroethane	ND	ug/L	50.0	1		10/21/16 12:58	107-06-2	
1,1-Dichloroethene	ND	ug/L	50.0	1		10/21/16 12:58	75-35-4	
Tetrachloroethene	ND	ug/L	50.0	1		10/21/16 12:58	127-18-4	
Trichloroethene	ND	ug/L	50.0	1		10/21/16 12:58	79-01-6	
Vinyl chloride	ND	ug/L	50.0	1		10/21/16 12:58	75-01-4	

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ANALYTICAL RESULTS

Project: TCLP
Pace Project No.: 60229729

Sample: NEVADA WWTP SLUDGE **Lab ID: 60229729001** Collected: 10/11/16 11:00 Received: 10/11/16 19:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV TCLP	Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 10/20/16 00:00							
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%	80-120	1		10/21/16 12:58	17060-07-0	
Toluene-d8 (S)	99	%	80-120	1		10/21/16 12:58	2037-26-5	
4-Bromofluorobenzene (S)	109	%	80-120	1		10/21/16 12:58	460-00-4	

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ANALYTICAL RESULTS

Project: PRIORITY POLLUTANTS
Pace Project No.: 60229733

Sample: NEVADA WWTP SLUDGE **Lab ID: 60229733001** Collected: 10/11/16 11:00 Received: 10/11/16 19:30 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8081 GCS Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3546							
Aldrin	ND	ug/kg	52.7	1	10/19/16 10:28	10/19/16 16:37	309-00-2	
alpha-BHC	ND	ug/kg	52.7	1	10/19/16 10:28	10/19/16 16:37	319-84-6	
beta-BHC	ND	ug/kg	52.7	1	10/19/16 10:28	10/19/16 16:37	319-85-7	
delta-BHC	ND	ug/kg	52.7	1	10/19/16 10:28	10/19/16 16:37	319-86-8	
gamma-BHC (Lindane)	ND	ug/kg	52.7	1	10/19/16 10:28	10/19/16 16:37	58-89-9	
alpha-Chlordane	ND	ug/kg	52.7	1	10/19/16 10:28	10/19/16 16:37	5103-71-9	
gamma-Chlordane	ND	ug/kg	52.7	1	10/19/16 10:28	10/19/16 16:37	5103-74-2	
4,4'-DDD	ND	ug/kg	103	1	10/19/16 10:28	10/19/16 16:37	72-54-8	
4,4'-DDE	ND	ug/kg	103	1	10/19/16 10:28	10/19/16 16:37	72-55-9	
4,4'-DDT	ND	ug/kg	103	1	10/19/16 10:28	10/19/16 16:37	50-29-3	
Dieldrin	ND	ug/kg	103	1	10/19/16 10:28	10/19/16 16:37	60-57-1	
Endosulfan I	ND	ug/kg	52.7	1	10/19/16 10:28	10/19/16 16:37	959-98-8	
Endosulfan II	ND	ug/kg	103	1	10/19/16 10:28	10/19/16 16:37	33213-65-9	
Endosulfan sulfate	ND	ug/kg	103	1	10/19/16 10:28	10/19/16 16:37	1031-07-8	
Endrin	ND	ug/kg	103	1	10/19/16 10:28	10/19/16 16:37	72-20-8	
Endrin aldehyde	ND	ug/kg	103	1	10/19/16 10:28	10/19/16 16:37	7421-93-4	
Heptachlor	ND	ug/kg	52.7	1	10/19/16 10:28	10/19/16 16:37	76-44-8	
Heptachlor epoxide	ND	ug/kg	52.7	1	10/19/16 10:28	10/19/16 16:37	1024-57-3	
Toxaphene	ND	ug/kg	2070	1	10/19/16 10:28	10/19/16 16:37	8001-35-2	
Surrogates								
Tetrachloro-m-xylene (S)	32	%.	10-178	1	10/23/16 10:12	10/27/16 04:41	877-09-8	
Tetrachloro-m-xylene (S)	25	%.	10-178	1	10/19/16 10:28	10/19/16 16:37	877-09-8	
Tetrachloro-m-xylene (S)	28	%.	10-178	1	10/23/16 10:12	10/27/16 04:41	877-09-8	
Tetrachloro-m-xylene (S)	20	%.	10-178	1	10/19/16 10:28	10/19/16 16:37	877-09-8	
Decachlorobiphenyl (S)	11	%.	15-177	1	10/23/16 10:12	10/27/16 04:41	2051-24-3	S2
Decachlorobiphenyl (S)	9	%.	15-177	1	10/19/16 10:28	10/19/16 16:37	2051-24-3	S2
Decachlorobiphenyl (S)	9	%.	15-177	1	10/19/16 10:28	10/19/16 16:37	2051-24-3	S2
Decachlorobiphenyl (S)	8	%.	15-177	1	10/23/16 10:12	10/27/16 04:41	2051-24-3	S2
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3546							
PCB-1016 (Aroclor 1016)	ND	ug/kg	985	1	10/19/16 08:34	10/20/16 13:02	12674-11-2	
PCB-1016 (Aroclor 1016)	ND	ug/kg	1030	1	10/25/16 09:43	10/25/16 16:50	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/kg	985	1	10/19/16 08:34	10/20/16 13:02	11104-28-2	
PCB-1221 (Aroclor 1221)	ND	ug/kg	1030	1	10/25/16 09:43	10/25/16 16:50	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/kg	985	1	10/19/16 08:34	10/20/16 13:02	11141-16-5	
PCB-1232 (Aroclor 1232)	ND	ug/kg	1030	1	10/25/16 09:43	10/25/16 16:50	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/kg	985	1	10/19/16 08:34	10/20/16 13:02	53469-21-9	
PCB-1242 (Aroclor 1242)	ND	ug/kg	1030	1	10/25/16 09:43	10/25/16 16:50	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/kg	985	1	10/19/16 08:34	10/20/16 13:02	12672-29-6	
PCB-1248 (Aroclor 1248)	ND	ug/kg	1030	1	10/25/16 09:43	10/25/16 16:50	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/kg	985	1	10/19/16 08:34	10/20/16 13:02	11097-69-1	
PCB-1254 (Aroclor 1254)	ND	ug/kg	1030	1	10/25/16 09:43	10/25/16 16:50	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/kg	985	1	10/19/16 08:34	10/20/16 13:02	11096-82-5	
PCB-1260 (Aroclor 1260)	ND	ug/kg	1030	1	10/25/16 09:43	10/25/16 16:50	11096-82-5	
Surrogates								
Tetrachloro-m-xylene (S)	31	%.	10-171	1	10/25/16 09:43	10/25/16 16:50	877-09-8	

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ANALYTICAL RESULTS

Project: PRIORITY POLLUTANTS
Pace Project No.: 60229733

Sample: NEVADA WWTP SLUDGE **Lab ID: 60229733001** Collected: 10/11/16 11:00 Received: 10/11/16 19:30 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3546							
Surrogates								
Tetrachloro-m-xylene (S)	38	%.	10-171	1	10/25/16 09:43	10/25/16 16:50	877-09-8	
Tetrachloro-m-xylene (S)	89	%.	10-171	1	10/19/16 08:34	10/20/16 13:02	877-09-8	
Tetrachloro-m-xylene (S)	39	%.	10-171	1	10/19/16 08:34	10/20/16 13:02	877-09-8	
Decachlorobiphenyl (S)	11	%.	15-184	1	10/19/16 08:34	10/20/16 13:02	2051-24-3	S2
Decachlorobiphenyl (S)	8	%.	15-184	1	10/25/16 09:43	10/25/16 16:50	2051-24-3	S2
Decachlorobiphenyl (S)	8	%.	15-184	1	10/25/16 09:43	10/25/16 16:50	2051-24-3	S2
Decachlorobiphenyl (S)	11	%.	15-184	1	10/19/16 08:34	10/20/16 13:02	2051-24-3	S2
8141 O/P Pesticides Microwave	Analytical Method: EPA 8141A Preparation Method: EPA 3546							
Diazinon	ND	ug/kg	2070	1	10/25/16 10:24	11/07/16 03:28	333-41-5	
Malathion	ND	ug/kg	2070	1	10/25/16 10:24	11/07/16 03:28	121-75-5	
Surrogates								
Triphenylphosphate (S)	54	%.	13-160	1	10/25/16 10:24	11/07/16 03:28	115-86-6	
Triphenylphosphate (S)	55	%.	13-160	1	10/25/16 10:24	11/07/16 03:28	115-86-6	
Tributylphosphate (S)	71	%.	32-121	1	10/25/16 10:24	11/07/16 03:28	126-73-8	
Tributylphosphate (S)	61	%.	32-121	1	10/25/16 10:24	11/07/16 03:28	126-73-8	
6010 MET ICP Rad. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Antimony	ND	mg/kg	17.9	1	10/13/16 09:30	10/13/16 14:50	7440-36-0	
Arsenic	ND	mg/kg	17.9	1	10/13/16 09:30	10/13/16 14:50	7440-38-2	
Beryllium	ND	mg/kg	1.8	1	10/13/16 09:30	10/13/16 14:50	7440-41-7	
Cadmium	ND	mg/kg	8.9	1	10/13/16 09:30	10/13/16 14:50	7440-43-9	
Chromium	**33.6**	mg/kg	8.9	1	10/13/16 09:30	10/13/16 14:50	7440-47-3	
Copper	**578**	mg/kg	17.9	1	10/13/16 09:30	10/13/16 14:50	7440-50-8	
Lead	**81.2**	mg/kg	8.9	1	10/13/16 09:30	10/13/16 14:50	7439-92-1	
Nickel	**42.5**	mg/kg	8.9	1	10/13/16 09:30	10/13/16 14:50	7440-02-0	
Selenium	ND	mg/kg	26.6	1	10/13/16 09:30	10/13/16 14:50	7782-49-2	
Silver	ND	mg/kg	12.5	1	10/13/16 09:30	10/13/16 14:50	7440-22-4	
Thallium	ND	mg/kg	35.7	1	10/13/16 09:30	10/13/16 14:50	7440-28-0	
Zinc	**2070**	mg/kg	179	1	10/13/16 09:30	10/13/16 14:50	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	**1.2**	mg/kg	0.44	1	10/13/16 09:00	10/13/16 11:25	7439-97-6	
8270 MSSV Semivolatiles	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
Acenaphthene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	83-32-9	
Acenaphthylene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	208-96-8	
Anthracene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	120-12-7	
Benzo(a)anthracene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	56-55-3	
Benzo(a)pyrene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	207-08-9	
Benzoic acid	ND	ug/kg	308000	1	10/13/16 00:00	10/17/16 17:51	65-85-0	

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ANALYTICAL RESULTS

Project: PRIORITY POLLUTANTS
Pace Project No.: 60229733

Sample: NEVADA WWTP SLUDGE **Lab ID: 60229733001** Collected: 10/11/16 11:00 Received: 10/11/16 19:30 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatiles	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
Benzyl alcohol	ND	ug/kg	122000	1	10/13/16 00:00	10/17/16 17:51	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	101-55-3	
Butylbenzylphthalate	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	85-68-7	
Carbazole	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	86-74-8	
4-Chloro-3-methylphenol	ND	ug/kg	122000	1	10/13/16 00:00	10/17/16 17:51	59-50-7	
4-Chloroaniline	ND	ug/kg	122000	1	10/13/16 00:00	10/17/16 17:51	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	39638-32-9	
2-Chloronaphthalene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	91-58-7	
2-Chlorophenol	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	7005-72-3	
Chrysene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	53-70-3	
Dibenzofuran	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	122000	1	10/13/16 00:00	10/17/16 17:51	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	120-83-2	
Diethylphthalate	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	105-67-9	
Dimethylphthalate	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	131-11-3	
Di-n-butylphthalate	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	308000	1	10/13/16 00:00	10/17/16 17:51	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	308000	1	10/13/16 00:00	10/17/16 17:51	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	606-20-2	
Di-n-octylphthalate	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	117-81-7	
Fluoranthene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	206-44-0	
Fluorene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	87-68-3	
Hexachlorobenzene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	77-47-4	
Hexachloroethane	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	193-39-5	
Isophorone	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	78-59-1	
2-Methylnaphthalene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51		
Naphthalene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	91-20-3	
2-Nitroaniline	ND	ug/kg	122000	1	10/13/16 00:00	10/17/16 17:51	88-74-4	
3-Nitroaniline	ND	ug/kg	122000	1	10/13/16 00:00	10/17/16 17:51	99-09-2	
4-Nitroaniline	ND	ug/kg	122000	1	10/13/16 00:00	10/17/16 17:51	100-01-6	
Nitrobenzene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	98-95-3	

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ANALYTICAL RESULTS

Project: PRIORITY POLLUTANTS
Pace Project No.: 60229733

Sample: NEVADA WWTP SLUDGE **Lab ID: 60229733001** Collected: 10/11/16 11:00 Received: 10/11/16 10:30 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatiles	Analytical Method: EPA 8270 Preparation Method: EPA 3546							
2-Nitrophenol	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	88-75-5	
4-Nitrophenol	ND	ug/kg	308000	1	10/13/16 00:00	10/17/16 17:51	100-02-7	
N-Nitroso-di-n-propylamine	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	86-30-6	
Pentachlorophenol	ND	ug/kg	308000	1	10/13/16 00:00	10/17/16 17:51	87-86-5	
Phenanthrene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	85-01-8	
Phenol	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	108-95-2	
Pyrene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	129-00-0	
Pyridine	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	60900	1	10/13/16 00:00	10/17/16 17:51	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	75	%	44-115	1	10/13/16 00:00	10/17/16 17:51	4165-60-0	
2-Fluorobiphenyl (S)	78	%	57-117	1	10/13/16 00:00	10/17/16 17:51	321-60-8	
Terphenyl-d14 (S)	94	%	45-129	1	10/13/16 00:00	10/17/16 17:51	1718-51-0	
Phenol-d6 (S)	75	%	46-104	1	10/13/16 00:00	10/17/16 17:51	13127-88-3	
2-Fluorophenol (S)	75	%	29-110	1	10/13/16 00:00	10/17/16 17:51	367-12-4	
2,4,6-Tribromophenol (S)	85	%	28-122	1	10/13/16 00:00	10/17/16 17:51	118-79-6	
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Acetone	ND	ug/kg	30600	50		10/21/16 16:00	67-64-1	
Acrolein	ND	ug/kg	153000	50		10/21/16 16:00	107-02-8	
Acrylonitrile	ND	ug/kg	153000	50		10/21/16 16:00	107-13-1	
Benzene	ND	ug/kg	7640	50		10/21/16 16:00	71-43-2	
Bromobenzene	ND	ug/kg	7640	50		10/21/16 16:00	108-86-1	
Bromochloromethane	ND	ug/kg	7640	50		10/21/16 16:00	74-97-5	
Bromodichloromethane	ND	ug/kg	7640	50		10/21/16 16:00	75-27-4	
Bromoform	ND	ug/kg	7640	50		10/21/16 16:00	75-25-2	
Bromomethane	ND	ug/kg	7640	50		10/21/16 16:00	74-83-9	
2-Butanone (MEK)	ND	ug/kg	15300	50		10/21/16 16:00	78-93-3	
n-Butylbenzene	ND	ug/kg	7640	50		10/21/16 16:00	104-51-8	
sec-Butylbenzene	ND	ug/kg	7640	50		10/21/16 16:00	135-98-8	
tert-Butylbenzene	ND	ug/kg	7640	50		10/21/16 16:00	98-06-6	
Carbon disulfide	ND	ug/kg	7640	50		10/21/16 16:00	75-15-0	
Carbon tetrachloride	ND	ug/kg	7640	50		10/21/16 16:00	56-23-5	
Chlorobenzene	ND	ug/kg	7640	50		10/21/16 16:00	108-90-7	
Chloroethane	ND	ug/kg	7640	50		10/21/16 16:00	75-00-3	
Chloroform	ND	ug/kg	7640	50		10/21/16 16:00	67-66-3	
Chloromethane	ND	ug/kg	7640	50		10/21/16 16:00	74-87-3	
2-Chlorotoluene	ND	ug/kg	7640	50		10/21/16 16:00	95-49-8	
4-Chlorotoluene	ND	ug/kg	7640	50		10/21/16 16:00	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	15300	50		10/21/16 16:00	96-12-8	
Dibromochloromethane	ND	ug/kg	7640	50		10/21/16 16:00	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	7640	50		10/21/16 16:00	106-93-4	
Dibromomethane	ND	ug/kg	7640	50		10/21/16 16:00	74-95-3	

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ANALYTICAL RESULTS

Project: PRIORITY POLLUTANTS
Pace Project No.: 60229733

Sample: NEVADA WWTP SLUDGE **Lab ID: 60229733001** Collected: 10/11/16 11:00 Received: 10/11/16 19:30 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
1,2-Dichlorobenzene	ND	ug/kg	7640	50		10/21/16 16:00	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	7640	50		10/21/16 16:00	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	7640	50		10/21/16 16:00	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	7640	50		10/21/16 16:00	75-71-8	
1,1-Dichloroethane	ND	ug/kg	7640	50		10/21/16 16:00	75-34-3	
1,2-Dichloroethane	ND	ug/kg	7640	50		10/21/16 16:00	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	7640	50		10/21/16 16:00	540-59-0	
1,1-Dichloroethene	ND	ug/kg	7640	50		10/21/16 16:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	7640	50		10/21/16 16:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	7640	50		10/21/16 16:00	156-60-5	
1,2-Dichloropropane	ND	ug/kg	7640	50		10/21/16 16:00	78-87-5	
1,3-Dichloropropane	ND	ug/kg	7640	50		10/21/16 16:00	142-28-9	
2,2-Dichloropropane	ND	ug/kg	7640	50		10/21/16 16:00	594-20-7	
1,1-Dichloropropene	ND	ug/kg	7640	50		10/21/16 16:00	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	7640	50		10/21/16 16:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	7640	50		10/21/16 16:00	10061-02-6	
Ethylbenzene	ND	ug/kg	7640	50		10/21/16 16:00	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	7640	50		10/21/16 16:00	87-68-3	
2-Hexanone	ND	ug/kg	30600	50		10/21/16 16:00	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	7640	50		10/21/16 16:00	98-82-8	
p-Isopropyltoluene	ND	ug/kg	7640	50		10/21/16 16:00	99-87-6	
Methylene chloride	ND	ug/kg	7640	50		10/21/16 16:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	15300	50		10/21/16 16:00	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	7640	50		10/21/16 16:00	1634-04-4	
Naphthalene	ND	ug/kg	15300	50		10/21/16 16:00	91-20-3	
n-Propylbenzene	ND	ug/kg	7640	50		10/21/16 16:00	103-65-1	
Styrene	ND	ug/kg	7640	50		10/21/16 16:00	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	7640	50		10/21/16 16:00	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	7640	50		10/21/16 16:00	79-34-5	
Tetrachloroethene	ND	ug/kg	7640	50		10/21/16 16:00	127-18-4	
Toluene	ND	ug/kg	7640	50		10/21/16 16:00	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	7640	50		10/21/16 16:00	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	7640	50		10/21/16 16:00	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	7640	50		10/21/16 16:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	7640	50		10/21/16 16:00	79-00-5	
Trichloroethene	ND	ug/kg	7640	50		10/21/16 16:00	79-01-6	
Trichlorofluoromethane	ND	ug/kg	7640	50		10/21/16 16:00	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	7640	50		10/21/16 16:00	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	7640	50		10/21/16 16:00	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	7640	50		10/21/16 16:00	108-67-8	
Vinyl chloride	ND	ug/kg	7640	50		10/21/16 16:00	75-01-4	
Xylene (Total)	ND	ug/kg	7640	50		10/21/16 16:00	1330-20-7	
Surrogates								
Toluene-d8 (S)	99	%	80-120	50		10/21/16 16:00	2037-26-5	D3
4-Bromofluorobenzene (S)	100	%	80-120	50		10/21/16 16:00	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	83-120	50		10/21/16 16:00	17060-07-0	

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ANALYTICAL RESULTS

Project: PRIORITY POLLUTANTS
Pace Project No.: 60229733

Sample: NEVADA WWTP SLUDGE Lab ID: 60229733001 Collected: 10/11/16 11:00 Received: 10/11/16 19:30 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**96.8**	%	0.50	1		10/19/16 00:00		
Phenolics, Total Recoverable	Analytical Method: EPA 420.1 Modified							
Phenolics, Total Recoverable	ND	mg/kg	46.9	1		10/14/16 11:31		
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E							
Cyanide	ND	mg/kg	4.7	1		10/13/16 11:38	57-12-5	

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FACILITY INSPECTION FORM

Department: Alliance Water Resources
Facility: Waste Water Treatment-Alliance

Date: 2/1/2017
Completed by: Mark Mendenhall

Dept. Head Signature: [signature]

Work Practices

Situation: Action	Yes	No	N/A	Comments/Follow Up
▶ Smoking only in designated areas	✓			
▶ Machine guards/shields placed in proper position	✓			
▶ Appropriate personal protective equipment used	✓			
▶ Appropriate equipment used for the work being done	✓			
▶ Proper lifting techniques utilized	✓			
▶ Safe use of compressed air hoses	✓			
▶ Rests on grinders 1/8 of an inch or less from wheel			✓	
▶ Extension cords properly used	✓			
▶ Other unsafe practices observed	✓			

Fire Safety

Situation: Action	Yes	No	N/A	Comments/Follow Up
▶ Storage of flammable materials	✓			

Fire Safety (con't)

Situation: Action	Yes	No	N/A	Comments/Follow Up
▶ Fire extinguishers properly charged and serviced	✓			Checked 7, all OK.
▶ Fire extinguishers securely mounted and visible	✓			
▶ Emergency exits clearly marked and accessible	✓			
▶ All smoke detectors functioning	✓			
▶ Other fire safety issues observed	✓			

Housekeeping

Situation: Action	Yes	No	N/A	Comments/Follow Up
▶ Floors, stairs and walkways free of slip and trip hazards	✓			
▶ Oil spots on floor covered with proper material	✓			
▶ Compressed gas cylinders stored in a secure manner			✓	
▶ Equipment and materials safely stored	✓			
▶ Adequate lighting inside and at parking lots	✓			

Housekeeping (con't)

Situation:

Action	Yes	No	N/A	Comments/Follow Up
▶ Upper storage areas are equipped with toe boards			✓	
▶ Trash and other waste is properly disposed of	✓			
▶ Covers on switches and outlets in tact	✓			
▶ Other housekeeping issues observed	✓			

First Aid

Situation:

Action	Yes	No	N/A	Comments/Follow Up
▶ First aid kits contain adequate supplies	✓			
▶ Emergency eye wash should be available if appropriate	✓			Flushed on 1/4,9,20,27&30/2017
▶ Emergency showers should be available if warranted	✓			
▶ MSDS Sheets available if needed	✓			
▶ Lock Out/Tag Out available if needed	✓			
▶ AED battery good, pads not expired	✓			

Equipment Hazards

Situation:

Action	Yes	No	N/A	Comments/Follow Up
▶ All equipment with moving parts should have guards	✓			
▶ Electrical cords should be free of defects	✓			
▶ All chairs with casters have five legs	✓			
▶ GFCIs should be used when appropriate	✓			
▶ Ladders should be free of defects or missing parts	✓			Checked 3 step and 2 extension, all OK
▶ Other equipment issues observed	✓			

RESET FORM

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FACILITY INSPECTION FORM

Department: Alliance Water Resources
Facility: Water Treatment-Alliance

Date: 1-31-2017
Completed by: Joe Carter

Dept. Head Signature: E. McPeak

Work Practices

Situation: Action	Yes	No	N/A	Comments/Follow Up
▶ Smoking only in designated areas	✓			
▶ Machine guards/shields placed in proper position	✓			
▶ Appropriate personal protective equipment used	✓			
▶ Appropriate equipment used for the work being done	✓			
▶ Proper lifting techniques utilized	✓			
▶ Safe use of compressed air hoses	✓			
▶ Rests on grinders 1/8 of an inch or less from wheel	✓			
▶ Extension cords properly used	✓			
▶ Other unsafe practices observed		✓		

Fire Safety

Situation: Action	Yes	No	N/A	Comments/Follow Up
▶ Storage of flammable materials	✓			

Fire Safety (con't)

Situation:

Action	Yes	No	N/A	Comments/Follow Up
▶ Fire extinguishers properly charged and serviced	✓			Check four charges and initialed ok
▶ Fire extinguishers securely mounted and visible	✓			
▶ Emergency exits clearly marked and accessible	✓			
▶ All smoke detectors functioning	✓			
▶ Other fire safety issues observed		✓		

Housekeeping

Situation:

Action	Yes	No	N/A	Comments/Follow Up
▶ Floors, stairs and walkways free of slip and trip hazards	✓			
▶ Oil spots on floor covered with proper material	✓			
▶ Compressed gas cylinders stored in a secure manner	✓			
▶ Equipment and materials safely stored	✓			
▶ Adequate lighting inside and at parking lots	✓			

Housekeeping (con't)

Situation:

Action	Yes	No	N/A	Comments/Follow Up
▶ Upper storage areas are equipped with toe boards			✓	
▶ Trash and other waste is properly disposed of	✓			
▶ Covers on switches and outlets in tact	✓			
▶ Other housekeeping issues observed		✓		

First Aid

Situation:

Action	Yes	No	N/A	Comments/Follow Up
▶ First aid kits contain adequate supplies	✓			Checked expiration date and contents ok
▶ Emergency eye wash should be available if appropriate	✓			Checked expiration on two eyewash squeeze bottles ok
▶ Emergency showers should be available if warranted	✓			
▶ MSDS Sheets available if needed	✓			
▶ Lock Out/Tag Out available if needed	✓			
▶ AED battery good, pads not expired	✓			

Equipment Hazards

Situation:

Action	Yes	No	N/A	Comments/Follow Up
▶ All equipment with moving parts should have guards	✓			
▶ Electrical cords should be free of defects	✓			
▶ All chairs with casters have five legs	✓			
▶ GFCIs should be used when appropriate	✓			
▶ Ladders should be free of defects or missing parts	✓			Inspected one step ladder and one ext. ladder ok
▶ Other equipment issues observed		✓		

RESET FORM

Submit Form

FACILITY INSPECTION FORM

Department: Alliance Water Resources
Facility: Water Treatment-Alliance

Date: 01-03-2017
Completed by: Max Frakes

Dept. Head Signature: E. McReal

Work Practices

Situation: Action	Yes	No	N/A	Comments/Follow Up
▶ Smoking only in designated areas	✓			
▶ Machine guards/shields placed in proper position	✓			
▶ Appropriate personal protective equipment used	✓			
▶ Appropriate equipment used for the work being done	✓			
▶ Proper lifting techniques utilized	✓			
▶ Safe use of compressed air hoses	✓			
▶ Rests on grinders 1/8 of an inch or less from wheel	✓			Checked with gauge.
▶ Extension cords properly used	✓			
▶ Other unsafe practices observed		✓		

Fire Safety

Situation: Action	Yes	No	N/A	Comments/Follow Up
▶ Storage of flammable materials	✓			

Fire Safety (con't)

Situation: Action	Yes	No	N/A	Comments/Follow Up
▶ Fire extinguishers properly charged and serviced	✓			Checked 7, ok.
▶ Fire extinguishers securely mounted and visible	✓			
▶ Emergency exits clearly marked and accessible	✓			
▶ All smoke detectors functioning	✓			
▶ Other fire safety issues observed		✓		

Housekeeping

Situation: Action	Yes	No	N/A	Comments/Follow Up
▶ Floors, stairs and walkways free of slip and trip hazards	✓			
▶ Oil spots on floor covered with proper material	✓			
▶ Compressed gas cylinders stored in a secure manner	✓			
▶ Equipment and materials safely stored	✓			
▶ Adequate lighting inside and at parking lots	✓			

Housekeeping (con't)

Situation: Action	Yes	No	N/A	Comments/Follow Up
▶ Upper storage areas are equipped with toe boards			✓	
▶ Trash and other waste is properly disposed of	✓			
▶ Covers on switches and outlets in tact	✓			
▶ Other housekeeping issues observed		✓		

First Aid

Situation: Action	Yes	No	N/A	Comments/Follow Up
▶ First aid kits contain adequate supplies	✓			Checked exp dates, ok.
▶ Emergency eye wash should be available if appropriate	✓			Flushed on 12/7, 12/14, 12/22, and 12/29. ok Checked exp date on lat
▶ Emergency showers should be available if warranted	✓			Flushed on 12/7, 12/14, 12/22, and 12/29. ok
▶ MSDS Sheets available if needed	✓			
▶ Lock Out/Tag Out available if needed	✓			
▶ AED battery good, pads not expired	✓			

Equipment Hazards

Situation:

Action	Yes	No	N/A	Comments/Follow Up
▶ All equipment with moving parts should have guards	✓			
▶ Electrical cords should be free of defects	✓			
▶ All chairs with casters have five legs	✓			
▶ GFCIs should be used when appropriate	✓			checked 3, ok.
▶ Ladders should be free of defects or missing parts	✓			
▶ Other equipment issues observed		✓		

RESET FORM

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