2023

CENTRAL DAVIS SEWER DISTRICT BIOSOLIDS REPORT

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PERMIT: UT-0020974
Biosolids Annual Report
2023

Facility Owner:	Central Davis Sewer District
Owner Status:	Political Subdivision of the State of Utah
Contact Person:	Jill S. Jones
Telephone Number:	(801) 451-2190
Mailing Address:	2200 South Sunset Drive Kaysville, Utah 84037
Treatment Plant Address:	Same
Land Application Site:	Latitude - 40 degrees 59 minutes 55 seconds Longitude - 111 degrees 56 minutes 49 secs. The Northwest quarter corner of Section 15 of Township 3 North, Range 1 West of the Salt Lake Base and Meridian.

Land Application Site: The land application site used by the District surrounds the wastewater treatment plant and is owned by the District.

Indian Land Status: All sites associated with the general reuse of biosolids are not located on Indian Lands.

Landfill Site: Republic Services - Wasatch Regional Landfill located at 8883 North, Rowley Rd, North Skull Valley, UT 84029.

Permits: UPDES Permit No: UT-0020974

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Central Davis Sewer District
Annual Biosolids Report
2023

Central Davis Sewer District is providing the included information in fulfillment of the annual report requirement contained in permit UT-0020974. The report is divided according to the EPA requirements found in 40 CFR Part 503.

Chemical Pollutant Analysis

During 2023, Central Davis Sewer District tracked the chemical quality of biosolids produced by its wastewater treatment plant according to the method of treatment. Since each treatment method is tracked separately, the results are reported individually below.

Anaerobic Digested Biosolids

Metals analysis stipulated in 40 CFR Part 503 was performed quarterly by Central Davis Sewer District on anaerobic digested biosolids. Quarterly results, lab reports and quality control charts have been calculated and are included in a separate section. The summaries of the results are presented below:

(All values presented are in mg/KG on a dry weight basis)

Metal	Annual Average	Limit
Aluminum	40,113	None
Arsenic	40	41
Cadmium	0.83	39
Chromium	24	None
Copper	787	1,500
Lead	8	300
Mercury	0.4	17
Molybdenum	13	75
Nickel	13	420
Phosphorous	36,975	None
Selenium	7	100
Silver	2	None
Zinc	892	2,800

As can be seen, all results are within the acceptance limits. The District saw an increase in the concentration of arsenic in the secondary anaerobic digester biosolids in the fourth quarter of 2023. Some of the samples taken during the period exceeded the 40 CFR part 503 Table 3 value of 41 mg/KG for exceptional quality biosolids. In an abundance of caution, the District land application of anaerobic biosolids was ceased until two consecutive tests came back below the Table 3 threshold value. Since the District's arsenic concentration in anaerobic biosolids has always been significantly below the Table 3 limit, the District began immediately looking for a possible cause of the high concentration in the anaerobic biosolids. Initially the District looked at the laboratory results and found that some of the reporting limits due to dilutions were also above the Table 3 concentration. This issue was discussed with the contract laboratory and corrected. However, even with the correction of the dilution problem a result of a sample on November 16, 2023, came back with a concentration of 40.8 mg/KG with a reporting limit of 5.52 mg/KG. The District investigated further and looked at concentrations in the influent and in chemicals used in the treatment process. This investigation did not show anything out of the ordinary. Compost samples for the year were lower than Table 3 so it was then assumed that a slug load of arsenic contamination was introduced into the treatment system and concentrated in the anaerobic digesters as the most probable cause. The yield from the oxidation ditch is higher than that from the trickling filter/anaerobic digestion process so the higher value was more exaggerated in biosolids coming from the anaerobic digesters. The assumption that the high arsenic in the anaerobic samples was from a slug load seems to be confirmed with subsequent samples decreasing in concentration and the average for the quarter was below the Table 3 value. Because the District did not identify a source for the slug load, the District will remain vigilant to insure it does not happen again.

Compost Biosolids

Compost is sampled when the pile is ready for distribution and marketing. In 2023, six samples were taken and analyzed. The yearly average is shown below. A summary report, lab reports and quality charts are included in a separate section.

(All values presented are in mg/KG on a dry weight basis)

Metal	Averages	Limits
Aluminum	10,995	None
Arsenic	4.9	41
Cadmium	0.5	39
Chromium	7.7	None
Copper	240	1,500
Lead	3.9	300
Mercury	0.1	17
Molybdenum	3.1	75
Nickel	4.3	420
Phosphorus	10,372	None
Selenium	1.8	100
Silver	0.6	None
Zinc	256	2,800

As can be seen, all results are within the acceptance limits.

Biosolids Pathogen Reduction

During 2023, Central Davis Sewer District met the permit and regulatory requirement for pathogen reduction in two separate ways. The two methods are discussed below. Since one method produces Class B pathogen reduction, a discussion of the site restrictions is presented at the end of this section.

Anaerobic Digestion

Anaerobic digestion stipulates both time and temperature requirements be met while the biosolids are in the digester. The permit requires that the temperature remain above 35º C for at least 15 days. During 2023, the digester monthly average temperatures remained above 35º C for the entire year. A history of the digester temperatures is given in this report. Calculation sheets determining the duration biosolids remained in the digester are also included. The shortest duration for biosolids remaining in the primary digesters was 15.9 days.

Composting Class A – Aerated Static Pile (ASP)

ASP composting requirements stipulate that Class A compost produced under the windrow method remain above 55^{o} C. for 3 days or longer. At the end of the compost period, the compost must have less than either 1000 MPN/gram fecal coliforms or 3 MPN/4 grams for Salmonella. For composting, the District takes two or more weeks building a pile. At the end of the pile-building period the pile is generally large enough to maintain temperature and moisture. After one-week, active composting begins, and temperatures are recorded. All piles are capped with finished compost to maintain temperatures and to reduce odors. Each pile is then monitored for 15 days or longer and daily temperatures are recorded. Copies of the composting log sheets are included. During 2023, all ASP compost complied with the regulatory requirements.

Composting Class B

No Class B compost was produced in 2023.

Site Restrictions

The land on which biosolids are applied is owned by the District and is used to produce feed crops and turf grass. Harvesting of all feed crops occurs at least 30 days after the application of the last load of biosolids. Turf grass is not harvested until at least one year after application. In 2023 no turf grass was harvested although there are two fields with aged turf grass available. This land is farmed and separated from the public and is considered to have a low potential for public contact. The entire site is fenced with security fencing and warning signs are posted to inform the public that the area is a designated biosolids application site. The District has very few problems with unauthorized entry to the site.

Vector Attraction Reduction Requirement

Central Davis Sewer District evaluates VAR methods separately for the two biosolids production streams which operate at the plant. These two production streams are Trickling Filter - Anaerobic Digested Biosolids and Oxidation Ditch - Composted Biosolids.

Trickling Filter - Anaerobic Biosolids

The District meets the VAR requirements for biosolids produced through anaerobic digestion by complying with the 38% or greater volatile solids reduction. All quarters exceeded the 38% requirement, and the annual average volatile solids reduction was 56%.

Oxidation Ditch - Compost

The composting process VAR requirements are met by the biosolids being in an aerobic process for at least 14 days and during that time the compost maintains a temperature above 40^{o}C with the average temperature being above 45^{o}C. This requirement was met for all piles and documentation of the temperatures can be found on the log sheets included in the pathogen reduction section. Final curing for the compost lasts anywhere from 45 days to 120 days depending on moisture reduction and when screening takes place.

Landfilling of Biosolids

At the beginning of 2015, the District lost one of its major wood waste suppliers. This loss of wood waste forced the District to rely on green waste to continue composting. Composting with green waste is viable during the spring, summer and fall but presented problems in the winter since green waste compost has a higher odor potential. The loss of wood waste has allowed the District to see if there are still odors when no active compost piles remain. The District did not receive any odor complaints about the biosolids when landfilling during 2023. There is a significant cost increase with landfilling, approximately $202,480 in tipping fees alone, but the lack of complaints is viewed as a major benefit. In addition, this is the second year where the District has signed a 3-year contract with the landfill and due to the contract, the District is obligated to take a steady amount of biosolids to the landfill which will in return has produce significantly less compost this year.

Biosolids Production Rates

Central Davis Sewer District produced composted, anaerobic digested and landfilled biosolids. The District maintained separate records for production of each type. The 2023 quantities are presented separately below.

Anaerobic Digested Biosolids Production

During 2023, the District tracked the number of loads of anaerobic biosolids applied to agricultural land and composted. A total of 225 loads were applied at an average of about 16.5% solids. This represents 206 English tons or 187 metric tons of dry biosolids. While this represents about one-third of the wastewater flows it only represents about 25% of the biosolids production. This is most likely due to additional volatile solids destruction in the digesters.

Oxidation Ditch Biosolids Production

In 2023, the District also tracked the weight of aerobic biosolids incorporated into compost. 450 Mixer truckloads of 414,408 lbs. and Dump truckloads of 1,520,640 lbs. were hauled to the composting area at an average of 17.6% solids. This represents a total of 924 English tons or 840 metric tons of dry biosolids, sent to composting.

Trickling Filter Biosolids Production

In 2023, the District also tracked the weight of anaerobic biosolids incorporated into compost. 450 Mixer truckloads of 173,580 lbs. were hauled to the composting area at an average of 16.5% solids. This represents a total of 87 English tons or 79 metric tons of dry biosolids, sent to composting.

Final Compost Production

639 metric tons of 2022 compost was sold in 2023. A total of 1075 metric tons of compost were produced in 2023. All the 2023 compost remains to be screened and/or marketed.

Land Filled Production

The District hauled 4017 wet English tons of biosolids to the Wasatch Regional Landfill. This represents 707 English tons or 643 metric tons of dry biosolids that were landfilled.

Total Biosolids Production

Biosolids or biosolids derived material produced in 2023 were 1749 Metric tons. Of this total, 643 metric tons were landfilled, and the remainder was or will be beneficially reused on the District's farm or sold as compost to the general public.

Application Zones

Records for land application to fields or zones are included in this report. The report only includes information on zones where land application took place in 2023. Zone 03 has about 30 percent of the allowed loads applied, and this zone will continue to be applied to in 2024.

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Central Davis Sewer District

Permit #: UT-0020974

Certification Statement for Pathogens, VAR, Management Practices, Site Restrictions and Chemical Pollutant Limits

I certify under the penalty of law, that the heavy metal requirements, the pathogen requirements and the vector attraction reduction requirements found in Part III.B, the Management Practices in Part III.C and the Special Conditions in III.D have been met during 2020 for biosolids land applied or sold for soil amendment. This determination has been made under my direction and supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate information used to determine that the pathogen reduction requirements, the vector attraction reduction requirements, the management practices, and the site restrictions have been met. I am aware that there are significant penalties for false certification including fine and/or imprisonment.

Jill S. Jones

Jill S. Jones
District Manager

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Anaerobic Biosolids Chemical Quality

1. 2023 Testing Summary
2. Historical Testing Summary
3. Quality Control Charts
4. Laboratory Reports

CDSD Anaerobic Biosolids Chemical Quality - 2023

Date	Type	Aluminum ppm	Arsenic ppm	Cadmium ppm	Chromium ppm	Copper ppm	Lead ppm	Mercury ppm	Molyb ppm	Nickel ppm	Phosphorus ppm	Selenium ppm	Silver ppm	Zinc ppm
2/17/2023	AN	40,300	25.6	0.66	20.5	813	11.2	0.329	15	9.02	34,800	5.54	2.32	844
4/7/2023	AN	44,200	25.2	0.954	26.8	837	8.13	0.42	12.5	15.3	37,100	11.8	0.871	928
7/28/2023	AN	51,400	18.2	0.889	28.9	819	6.95	0.30	10.3	14.4	36,900	2.78	2.28	969
10/16/2023	AN	60,550	40.0	0.8305	20.5	787	5.75	0.37	15.6	13.15	39,100	7.07	2.555	828
Total Year Values														
Minimum		**40,300**	**18**	**1**	**20**	**787**	**6**	**0.3**	**10**	**9**	**34,800**	**3**	**1**	**828**
Average		**49,113**	**27**	**1**	**24**	**814**	**8**	**0.4**	**13**	**13**	**36,975**	**7**	**2**	**892**
Maximum		**60,550**	**40**	**1**	**29**	**837**	**11**	**0.4**	**16**	**15**	**39,100**	**12**	**3**	**969**

Date	TKN ppm	Ammonia as N ppm	Nitrate+Nitrite-Total ppm	Total Solids ppm
2/17/2023	8,710	773	0.25	16.3
4/7/2023	6,820	851	0.25	16.7
7/28/2023	7,290	923	0.25	15.6
10/16/2023	7,250	593.5	0.03	14.9
Minimum	**6,820**	**594**	**0.03**	**15**
Average	**7,518**	**785**	**0.2**	**16**
Maximum	**8,710**	**923**	**0.3**	**17**

***Notes**: All ND values are taken as 0.25*MDL and shown as blue

Central Davis Sewer District

Anaerobic Biosolids - Historic Table

Date	Type	Aluminum ppm	Arsenic ppm	Cadmium ppm	Chromium ppm	Copper ppm	Lead ppm	Mercury ppm	Molyb ppm	Nickel ppm	Phosphorus ppm	Selenium ppm	Silver ppm	Zinc ppm **ppm**
11/7/1988	AN		1.8	1.8	38.2	372.7	35.2	3.1		23.5				557
12/8/1988	AN		**	2.5	16.4	237.7	24.6	1.7		13.1				341
12/22/1988	AN		3.9	2.3	22.7	175.1	18.2	0.9		15.9				271
1/9/1989	AN		3.1	2.2	19.3	235.1	22.8	0.9		15.8				581
2/10/1989	AN		**	2.0	21.9	260.1	32.2	4.9		11.1				430
3/5/1989	AN		**	2.6	19.4	248.0	31.3	10.3		10.8				374
4/14/1989	AN		**	2.0	17.9	260.9	37.3	3.1		10.2				412
4/24/1989	AN		**	2.2	21.9	320.2	35.4	4.6		11.8				490
5/29/1989	AN		**	2.4	20.8	346.8	**	4.0		13.5				574
7/8/1989	AN		8.8	2.1	25.9	325.8	62.3	2.4		18.5				486
8/7/1989	AN		4.0	2.0	27.6	394.4	60.0	3.4		18.1				525
8/25/1989	AN		2.6	2.4	23.5	361.9	47.9	3.6		9.9				528
3/5/1990	AN		**	1.8	22.1	306.0	34.9	1.9		8.5				401
4/2/1990	AN		**	1.8	31.9	359.4	38.0	3.1		9.9				469
5/31/1990	AN		3.7	2.4	19.7	337.3	41.3	2.7		11.8				485
8/30/1990	AN		4.9	3.0	21.0	388.0	35.0	3.2		17.0				594
3/13/1991	AN			1.7	34.4	277.4	34.4	**		**				456
8/8/1991	AN		18.3	3.1	20.0	399.5	38.6	3.5		18.6				654
9/9/1991	AN		7.6	2.0	23.3	400.0	30.2	**		13.8				600
1/23/1992	AN		4.0	2.3	15.0	333.6	31.3	**		13.4				541
2/24/1992	AN		2.1	2.0	16.2	368.6	**	**		22.6				468
3/1/1992	AN		2.3	1.1	7.7	318.0	**	**		13.0				
3/27/1992	A		1.7	2.1	9.9	215.0	19.2	**		12.8				255
4/16/1992	AN		3.1	1.0	11.0	394.0	**	**		**				608
5/22/1992	A		**	1.2	9.4	151.0	18.7	**		7.7				208
6/15/1992	AN		8.7	2.3	12.1	**	19.6	**		10.9				514
10/27/1992	A		**	**	29.1	305.0	36.2	**	1.1	19.7		**		475
12/28/1992	AN		1.2	2.3	19.5	488.0	46.3	2.3	7.9	13.5		23.5		515
12/28/1992	A		12.3	1.2	8.6	206.0	16.1	4.9	4.6	8.1		17.7		213
1/29/1993	A		14.2	1.7	13.9	239.0		**	3.1	15.4		12.5		216
3/22/1993	A		2.4	**	**	278.0		1.8	3.5	**		2.1		364
4/23/1993	AN		2.5	7.5	28.0	385.0		3.3	3.5	22.7		16.2		1,110
5/28/1993	A		2.4	1.5	7.5	315.0	101.0	2.1	7.7	12.5		7.5		
5/31/1993	AN		2.4	2.0	9.0	410.0	108.0	0.5	11.9	16.0		7.5		765
6/2/1993	A		2.4	1.7	7.5	300.0	76.0	1.6	7.7	13.5		7.5		
6/2/1993	AN		**	2.5	13.5	422.0	125.0	6.4	12.6	16.5		7.5		
6/21/1993	AN		2.4	2.5	14.0	623.0	39.0	4.4	12.7	15.5		7.5		583
6/21/1993	A		2.4	1.4	6.5	263.0	20.5	3.3	4.3	11.0		7.5		258
7/29/1993	A		2.4	2.2	12.5	334.0	24.5	0.2	7.1	14.0		7.5		325
7/29/1993	AN		2.4	2.5	15.6	369.0	34.5	0.5	9.6	15.0		7.5		603
8/26/1993	A		2.4	1.8	16.5	347.0	21.5	2.1	7.3	15.5		7.5		244
8/26/1993	AN		2.4	2.8	23.8	410.0	35.0	4.3	9.4	16.5		7.5		588
9/23/1993	A		5.5	2.8	14.6	364.0	24.0	4.2	6.0	16.0		5.4		370
9/23/1993	AN		3.6	3.4	20.0	439.0	34.4	7.4	6.8	17.1		5.4		664
10/25/1993	AN		15.0	4.4	23.1	383.0	35.1	2.9	12.0	14.0		20.3		479
10/25/1993	A		2.4	1.8	14.0	307.0	23.2	1.7	9.0	12.0		7.5		328
11/29/1993	AN		2.4	2.5	14.0	353.0	30.0	0.3	6.5	14.0		7.8		414
11/29/1993	A		2.4	1.7	9.8	286.0	15.0	0.1	11.0	14.0		7.8		256
12/20/1993	AN		2.4	3.0	24.5	388.5	49.0	0.3	10.5	14.6		13.2		563
12/20/1993	A		2.4	1.9	14.3	299.0	10.0	0.1	2.5	12.1		2.5		272
1/17/1994	AN		8.2	2.6	27.0	420.0	35.0	0.1	12.1	17.2		2.5		542
1/17/1994	A		6.4	2.0	15.8	314.0	18.5	0.1	9.2	13.4		5.5		288
2/14/1994	AN		12.9	6.0	22.7	392.0	27.4	2.9	6.4	14.1		3.4		538
2/14/1994	A		8.6	2.9	13.1	270.0	15.8	0.1	4.0	11.3		0.7		247
3/25/1994	AN		15.3	7.4	21.1	390.0	32.0	5.6	4.0	11.4		11.9		531
3/25/1994	A		1.5	2.5	9.9	295.0	22.6	1.8	4.0	6.8		2.5		287
4/19/1994	AN		5.0	5.8	21.4	406.0	33.3	2.0	3.5	12.5		3.5		536
4/19/1994	A		4.4	3.4	13.7	318.0	15.2	7.9	3.5	11.2		3.5		285
5/17/1994	AN		7.0	8.3	34.9	634.0	83.9	5.5	7.0	23.5		7.0		882
5/17/1994	A		0.7	1.8	14.6	364.0	28.1	2.5	7.0	12.1		7.0		298
6/28/1994	AN		5.5	2.2	22.0	465.0	33.0	4.4	6.5	16.7		10.0		463
6/28/1994	A		5.5	0.5	12.0	376.0	25.0	1.0	7.4	12.6		18.0		242
7/19/1994	AN		3.4	1.7	17.5	463.0	30.5	4.4	7.7	15.9		7.1		608
7/19/1994	A		6.4	1.4	11.8	405.0	17.3	2.3	5.6	16.9		2.8		374
8/16/1994	AN		4.6	2.3	24.3	458.0	29.3	9.4	6.9	18.9		2.8		613
8/16/1994	A		4.2	3.0	14.2	381.0	17.5	3.9	5.6	17.0		3.0		330
9/23/1994	AN		6.6	2.5	15.6	445.0	29.3	3.0	8.2	12.7		1.0		65
9/23/1994	A		6.7	1.4	8.3	296.0	14.5	1.2	5.5	11.2		1.0		274
10/18/1994	A		5.8	1.1	12.8	322.0	18.8	1.4	6.2	14.4		4.1		327
10/18/1994	AN		7.5	2.3	21.3	493.0	35.4	2.8	9.2	16.1		1.0		428
11/22/1994	A		3.1	1.4	11.5	308.0	16.5	1.2	6.5	12.7		0.3		269
11/22/1994	AN		8.7	2.6	24.9	523.7	35.9	2.9	10.1	17.9		0.5		635
12/20/1994	A		2.8	1.0	24.3	281.0	17.8	2.0	5.6	19.4		4.9		235
12/20/1994	AN		6.1	1.5	18.5	361.0	28.4	2.0	7.1	23.9		2.0		420
1/17/1995	A		4.6	1.4	14.8	286.0	17.2	0.8	6.1	15.7		4.9		252
1/17/1995	AN		6.3	2.8	27.6	465.0	38.3	2.5	10.1	20.2		3.3		571
2/14/1995	A		6.5	1.5	11.6	226.0	16.4	1.3	5.8	12.5		2.4		235

Central Davis Sewer District

Anaerobic Biosolids - Historic Table

		Aluminum	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Molyb	Nickel	Phosphorus	Selenium	Silver	Zinc ppm
Date	Type	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	**ppm**
2/14/1995	AN		11.9	3.7	25.6	394.0	43.0	2.4	8.7	19.8		5.0		574
3/21/1995	A		12.0	3.0	15.1	300.0	33.0	1.3	5.5	15.4		1.5		281
3/21/1995	AN		12.0	4.7	28.0	406.0	52.0	2.3	8.2	19.7		2.5		544
4/18/1995	A		6.8	1.2	13.4	270.0	13.4	1.6	5.0	13.1		0.3		277
4/18/1995	AN		5.3	2.5	24.7	397.0	28.4	3.7	7.6	20.1		0.3		514
5/16/1995	A		9.1	1.1	15.5	192.0	17.7	0.8	6.6	13.6		2.7		277
6/19/1995	AN		2.0	1.0	17.0	330.0	29.0	0.0	4.0	15.0		4.0		320
7/19/1995	A		4.5	1.1	12.3	184.0	6.0	0.7	4.9	11.6		0.4		223
8/29/1995	AN		2.0	2.0	14.5	219.4	18.5	1.2	6.7	16.1		2.0		314
9/17/1995	A		6.2	2.0	18.8	447.0	26.7	0.3	7.7	17.5		6.2		405
10/24/1995	AN		2.0	2.0	20.0	446.0	44.0	3.9	6.0	16.0		4.0		516
11/20/1995	A		6.5	1.5	16.3	357.0	38.6	1.8	3.5	19.5		13.0		314
12/17/1995	AN		10.0	2.5	17.0	416.0	40.0	3.4	10.0	20.0		20.0		550
1/16/1996	A		14.0	2.0	10.0	294.0	3.5	0.3	7.0	14.0		14.0		287
2/12/1996	AN		19.8	1.5	11.5	208.0	67.8	9.7	3.1	8.7		3.2		291
3/19/1996	A		20.0	1.0	20.0	273.0	18.0	2.0	5.0	17.0		6.5		285
4/16/1996	AN		13.0	1.8	19.0	396.0	27.0	3.3	5.0	15.0		13.0		512
5/21/1996	A		4.0	1.3	12.5	290.0	18.0	1.3	6.0	13.0		5.5		225
6/21/1996	AN		3.0	2.3	18.4	429.0	31.0	3.7	6.0	17.0		4.0		532
7/23/1996	A		5.0	1.1	12.0	350.0	25.0	1.0	6.0	12.0		10.0		298
8/20/1996	AN		3.0	1.8	14.0	386.0	23.0	3.0	6.0	11.0		4.0		400
9/24/1996	A		2.0	1.4	11.5	428.0	16.0	1.7	7.0	13.0		15.0		306
10/22/1996	AN		6.0	1.8	16.5	402.0	21.0	2.0	7.0	13.0		3.5		384
11/26/1996	A		5.0	1.0	10.2	273.0	10.0	1.3	4.0	10.1		2.5		190
12/19/1996	AN		2.4	1.5	15.9	411.0	32.0	6.0	2.1	14.4		3.5		422
1/21/1997	A		2.8	0.8	8.6	295.0	12.0	0.3	4.0	12.0		3.8		168
2/10/1997	AN		2.5	1.4	13.4	398.0	25.0	1.6	6.0	10.3		3.5		402
3/17/1997	A		3.5	1.1	12.2	374.0	16.0	0.5	5.0	12.0		4.6		255
4/21/1997	AN		4.0	2.2	19.0	626.0	30.0	2.7	10.0	15.0		3.0		592
5/19/1997	A		3.0	0.9	11.0	395.0	14.0	1.3	7.0	11.0		4.0		278
6/27/1997	AN		3.0	1.4	15.1	405.0	27.0	3.5	5.0	16.0		4.0		451
7/22/1997	A		4.0	1.0	11.2	383.0	15.0	2.9	5.9	12.7		2.0		288
8/26/1997	AN		3.0	1.8	16.7	587.0	29.0	3.1	7.0	14.0		4.0		563
9/23/1997	A		2.9	1.1	12.2	473.0	22.0	4.2	6.0	11.0		3.9		306
10/21/1997	AN		3.0	1.1	12.4	333.0	14.0	0.9	6.0	9.0		4.0		312
11/28/1997	A		3.0	0.5	9.0	446.0	15.0	2.0	5.0	10.0		3.8		240
12/19/1997	AN		6.0	2.2	24.0	750.0	36.0	4.0	11.0	17.4		3.5		632
1/28/1998	AN		5.0	0.5	10.6	290.0	14.0	1.9	4.0	9.3		5.7		186
2/10/1998	A	8,860.0	5.2	1.4	20.0	477.0	27.0	5.3	8.0	13.0		7.0	7.7	454
3/31/1998	AN	16,600.0	11.0	1.1	17.8	429.0	20.0	2.5	5.0	12.0		11.0	10.2	422
4/21/1998	A	9,930.0	8.0	0.4	11.7	334.0	15.0	2.7	4.6	11.0		8.0	6.4	219
5/20/1998	AN	20,100.0	10.0	0.8	23.4	465.0	26.0	3.6	5.0	14.0		10.0	9.7	452
6/30/1998	A	13,000.0	9.0	1.0	16.5	376.0	12.0	3.2	6.0	13.0		9.0	6.6	290
7/31/1998	AN	22,000.0	10.0	2.0	20.0	630.0	25.0	3.0	12.0	15.0		10.0	15.0	701
8/14/1998	A	12,900.0	10.0	1.2	14.6	534.0	21.0	1.4	8.0	11.0		10.0	10.6	355
9/22/1998	AN	19,200.0	10.0	1.7	16.2	578.0	16.0	5.2	10.0	13.0		10.0	12.2	605
10/26/1998	A	11,800.0	11.0	0.5	13.5	471.0	11.0	**	7.0	11.0		11.0	8.6	280
11/20/1998	AN	17,300.0	10.0	1.0	16.7	470.0	17.0	**	8.0	12.0		10.0	9.1	510
12/8/1998	A	10,400.0	14.0	0.7	12.8	384.0	7.0	8.2	6.0	11.0		14.0	7.8	234
1/18/1999	AN	19,000.0	11.0	14.5	23.0	460.0	22.0	1.0	7.0	14.0		11.0	8.9	510
2/12/1999	A	9,800.0	5.0	0.6	12.0	350.0	11.0	0.1	6.0	11.0		5.0	7.0	210
3/2/1999	AN	9,500.0	10.0	0.7	11.0	240.0	16.0	5.0	4.0	7.0		10.0	4.0	250
5/25/1999	AN	21,000.0	10.0	1.4	21.0	560.0	27.0	5.9	6.0	13.0		10.0	9.0	560
7/10/1999	AN	18,000.0	10.0	1.0	20.0	540.0	18.0	3.8	6.0	14.0		10.0	9.0	520
9/11/1999	AN	16,000.0	10.0	1.4	15.2	500.0	16.0	5.6	6.0	10.0		10.0	8.5	490
12/13/1999	AN	22,000.0	9.0	1.6	18.0	760.0	21.0	8.6	9.0	15.0		9.0	16.0	620
2/14/2000	AN	27,000.0	5.0	2.0	21.7	790.0	27.0	4.0	9.0	14.0		5.0	19.0	700
4/10/2000	AN	22,000.0	5.0	1.7	21.6	700.0	23.0	3.5	7.0	12.0		5.0	16.0	580
6/27/2000	AN	19,000.0	5.0	1.4	19.0	590.0	18.0	3.1	11.0	11.0		5.0	21.0	570
8/21/2000	AN	26,000.0	4.5	2.0	22.0	860.0	27.0	3.1	15.0	15.0		4.5	17.0	800
10/16/2000	AN	22,000.0	15.0	2.0	16.0	710.0	21.0	5.0	11.0	11.0		5.0	19.0	620
1/22/2001	AN	22,000.0	5.0	1.4	17.0	700.0	23.0	3.1	10.0	11.0		5.0	5.0	630
1/22/2001	A	11,000.0	5.0	0.3	9.3	440.0	3.5	1.4	5.0	9.0		5.0	5.0	420
3/7/2001	AN	24,000.0	10.0	1.5	18.0	680.0	24.0	3.5	9.0	12.0		10.0	11.0	620
5/1/2001	AN	24,000.0	5.0	1.7	20.0	690.0	24.0	3.8	7.0	13.0		5.0	12.0	650
7/3/2001	AN	19,000.0	0.5	1.1	18.0	560.0	16.0	4.2	11.0	11.0		0.5	13.0	600
12/18/2001	AN	24,000.0	12.0	0.9	17.0	720.0	15.0	3.9	11.0	14.0			5.5	630
3/12/2002	AN	33,000.0	8.0	1.7	26.0	890.0	26.0	3.2	12.0	17.0	29,000	15.0	16.0	880
5/14/2002	AN	22,000.0	5.0	1.7	20.0	600.0	28.0	5.2	8.0	12.0	23,000	5.0	12.0	640
7/1/2002	AN	22,000.0	5.0	1.3	20.0	620.0	16.0	4.0	8.0	12.0	22,000	13.0	9.8	600
9/13/2002	AN	29,000.0	9.0	1.9	20.0	870.0	21.0	4.4	12.0	14.0	26,000	9.0	13.0	600
11/25/2002	A	9,100.0	4.0	0.6	7.0	340.0	7.0	0.3	5.0	6.0	13,000	5.0	4.2	230
12/31/2002	AN	17,000.0	8.5	0.4	10.0	580.0	6.0	8.0	8.0	10.0	25,000	8.5	6.7	420
2/22/2003	A	12,000	5	0.6	8	430	3.5	2	5	8	21,000	5	6.1	310
2/22/2003	AN	21,000	10	1.5	18	800	18	4	12	12	25,000	10	12	680
4/14/2003	AN	28,000	5	1.8	18	760	28	4.3	13	12	25,000	5	16	630
7/17/2003	AN	28,000	5	2	18	840	27	4.2	13	16	27,000	5	31	660
10/6/2003	AN	29,000	12	1.9	16	860	28	3.8	16	15	24,000	5	29	730

Central Davis Sewer District

Anaerobic Biosolids - Historic Table

		Aluminum	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Molyb	Nickel	Phosphorus	Selenium	Silver	Zinc ppm
Date	Type	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	**ppm**
1/28/2004	A	14,000	5	0.25	11	520	11	1.3	7	12	22,000	5	19	850
1/28/2004	AN	31,000	2	1.3	18	780	26	3.6	13	13	26,000	2	38	720
4/13/2004	AN	26,000	5	1.4	19	710	24	3.2	9	15	24,000	5	31	620
7/23/2004	AN	28,000	5	1.6	21	920	22	3.2	12	18	26,000	5	32	780
10/7/2004	AN	19,000	5	0.8	16	530	17	2.9	8	16	14,000	5	17	490
1/11/2005	AN	21,000	5	1	15	770	13	3	4	13	20,000	5	33	690
4/12/2005	AN	18,000	5.5	0.7	16	580	19	4.1	1.1	13	15,000	5.5	20	490
7/15/2005	AN	16,100	5	1.9	17.9	606	14	2.7	1	16	15,900	5	18	577
10/5/2005	AN	16,000	18	1.5	15	840	14	2.7	7	14	19,000	5	16	700
1/10/2006	AN	19,000	5	1.4	18	1000	13	2.7	11	15	23,000	5	29	800
4/3/2006	AN	16,100	5	1.5	14.7	843	19.9	1.22	8.89	10.3	20,000	5	22	626
7/14/2006	AN	15,000	14	1	18	900	21	2	10	14	20,000	5	24	660
10/6/2006	AN	13,000	13	0.8	15	800	17	2.2	10	11	15,000	5	16	600
1/5/2007	AN	15,500	15	1	17.2	970	15	3.7	11	11.4	1,660	5	25.6	706
4/4/2007	AN	15,000	13	1	19	980	20	1.3	12	13	26,000	6	19	800
7/6/2007	AN	14,000	16	1	17	1080	17	2	13	13	22,000	5	21	800
10/1/2007	AN	11,300	17	1.2	15.1	1090	19	2.5	15	6.7	18,600	7	13.7	873
1/8/2008	AN	11,500	14	1	14.6	913	15.2	0.12	11	11	18,400	2.5	20.3	715
4/4/2008	AN	13,500	15.7	1	17	940	75	2.3	12	13	24,800	6.6	16	800
7/8/2008	AN	12,700	15	1.2	16.8	978	25	2.5	11.7	13.2	23,200	0.25	14.7	543
10/21/2008	AN	12,000	18	1.1	15.6	1200	27	0.18	13	12.5	24,000	2.5	15.5	880
1/5/2009	AN	11,400	25	1.2	29	1280	20	1.6	13	11.2	23,500	2.5	16.4	826
4/6/2009	AN	11,500	16	1.1	18.6	1150	18.3	1.7	11.4	15.5	25,900	8.2	14.6	859
7/6/2009	AN	12,100	18	1.1	18.3	1260	21.4	2	11.6	14.3	23,500	9.4	14.4	901
10/12/2009	AN	11,100	20	1.2	16	1400	16.7	2	13	12.6	24,000	5.6	12.4	987
1/12/2010	AN	10,300	18.6	1.03	13.5	1200	13.7	1.75	12.3	10.9	24,000	6.21	13.3	884
4/8/2010	AN	11,200	15.9	1.07	19.1	998	15.7	3.03	12.3	12.9	11,200	12.2	12.2	913
7/16/2010	AN	11,700	35.5	2.29	22.1	1120	34.8	0.45	15.7	15.6	25,600	21.5	21.5	983
10/4/2010	AN	10,200	20.1	1.06	14.3	1240	15.5	1.5	12.8	11.6	20,800	8.02	12	922
1/14/2011	AN	10,700	19.5	1.02	14.7	1270	13.2	1.31	13.2	10.4	22,100	5.16	11.7	852
4/4/2011	AN	9,560	17.4	0.86	15.2	850	16.2	2.2	10.7	12	19,800	6.89	9.63	733
7/14/2011	AN	3,410	13.6	0.49	6.78	425	10.6	3.1	5.0	5.6	8,460	11.8	4.51	345
10/6/2011	AN	7,430	21.7	1.05	14.3	1250	16.7	2.04	10.9	12.6	17,900	8.45	8.69	812
1/9/2012	AN	4,210	14.6	0.674	6.75	771	9.4	1.15	8.47	9.24	15,100	8.17	5.61	570
4/9/2012	AN	4,710	14.7	0.811	10.6	807	11	1.77	9.03	9.36	16,400	8.35	6.55	632
7/6/2012	AN	5,000	16.7	0.88	13.3	948	13.3	1.64	10.2	9.83	17,100	6.59	7.46	744
10/1/2012	AN	4,870	21.7	0.501	11.7	1210	16.6	2.16	12.5	10	18,800	8.76	4.08	794
1/7/2013	AN	9,320	20.3	0.857	10.3	1050	12.1	1.72	11.8	9.06	21,000	8.58	5.95	691
4/8/2013	AN	7,460	23.6	0.884	15.6	1090	13.4	0.77	13.2	12.8	24,500	10.8	6.76	827
7/8/2013	AN	3,790	14.6	0.632	10.7	721	11.9	1.98	8.39	8.12	12,800	7.28	5.03	560
10/4/2013	AN	5,030	21	1.14	15.7	1340	16.8	1.91	14.6	13.7	18,500	9.99	7.35	995
1/6/2014	AN	4,200	14.7	0.816	10.5	828	10.4	0.79	10.1	9.31	12,000	7.1	4.8	541
4/4/2014	AN	4,910	13.2	1.12	14	1110	13.4	1.81	13.2	13.3	19,200	8.87	7.14	105
7/7/2014	AN	5,100	16.7	0.788	14.3	1170	15.4	1.99	12.8	12.7	19,600	10.7	6.14	939
10/8/2014	AN	4,070	15.1	0.585	11.6	908	9.21	0.9	3.11	9.48	13,300	3.54	4.67	716
1/7/2015	AN	5,270	18	0.779	14.3	1220	13.2	1.88	15.9	12.3	18,400	3.9	5.2	906
4/3/2015	AN	4,880	13.4	1.05	13.5	1090	13.7	0.34	14	12	20,500	6.33	3.83	792
7/13/2015	AN	5,240	15.5	0.785	16.2	1020	14.2	1.45	11.7	12.1	16,100	2.46	2.25	868
10/9/2015	AN	4,380	13.4	0.7	11.4	974	11.3	1.5	9.62	9.52	13,000	5.01	1.46	630
1/8/2016	AN	6,810	18.4	1.1	18	1370	15.6	0.77	15.6	14.7	25,000	8.7	2.5	983
4/4/2016	AN	5,260	13.2	0.71	16.1	1040	12.3	1.43	11.4	12.2	21,600	7.9	2.1	761
8/2/2016	AN	4,640	16.2	0.84	16.5	1330	16.1	0.66	15.6	13.6	19,700	14.3	2.57	1000
10/6/2016	AN	5,190	23.5	1.01	17.6	1400	17.1	0.74	16.5	14.6	22,100	7.5	4.25	1060
1/6/2017	AN	2,260	8.17	1.01	7.35	487	10.1	0.69	5.41	5.16	14,800	1.18	1.92	374
4/3/2017	AN	5,620	19.9	0.95	21.6	1140	13.3	2.33	17.2	14.5	23,500	3.16	3.73	1080
7/10/2017	AN	44,600		1.34	19.1	1050	18.6	0.18	16.3	12.5	36,300	34.2	2.52	940
10/4/2017	AN	49,000	34.2	0.993	16.1	1160	17.3	2.17	14.6	10.9	37,000	29.1	2.36	933
1/2/2018	AN	15,900	25.4	1.04	18.4	1240	15	1.28	19.1	12.9	24,700	4.99	2.08	1020
4/6/2018	AN	7,660	17.3	0.733	12.1	895	11.8	2.63	14.7	9.27	15,700	6.13	2.65	902
7/16/2018	AN	6,650	15.2	0.895	21.9	1130	17.5	1.08	17	18.9	22,000	51.9	2.89	1020
11/26/2018	AN	7,480	27.2	1.25	19.8	1430	11.1	3.76	24.8	15	27,000	6.52	1.41	55.4
1/11/2019	AN	5,800	26.6	1.23	18.3	1370	7.75	0.66	22.3	13.3	26,200	5.63	2.27	1390
4/8/2019	AN	4,240	15.8	0.796	14.9	861	5.07	1.78	13.6	10.5	13,600	3.12	2.91	559
7/15/2019	AN	22,300	23.9	0.768	19.2	1220	4.41	0.23	15.6	14	31,100	2.06	1.89	731
10/7/2019	AN	32,500	29.4	0.78	19.1	1490	3.14	0.39	20.1	12.8	35,700	2.58	3.17	760
1/6/2020	AN	29,700	26	1.11	17.8	1370	10.9	0.98	18.4	14.2	40,300	9.53	2.22	1070
4/60/20	AN	30,100	20.6	0.738	15.9	1010	9.37	0.56	13.6	9.22	37,900	5.32	1.3	848
7/13/2020	AN	36,400	24.9	0.673	16.9	1030	9.71	1.35	16	10.6	40,900	6.91	0.902	906
10/21/2020	AN	41,400	30.3	0.651	16.7	1280	11.5	1.46	16.7	9.89	42,100	4.94	2.39	927
1/15/2021	AN	32,600	20.2	0.662	12.5	1060	8.01	0.42	14.1	8.92	35,100	5.68	1.48	763
4/13/2021	AN	39,800	21.7	0.561	17.1	1140	9.53	0.09	15.8	10.7	31,100	10.80	1.62	859
7/15/2021	AN	34,100	21.4	0.776	17.5	946	10.3	0.083	14.8	9.86	35,200	4.51	1.4	890
10/25/2021	AN	49,600	29	0.561	15.6	1060	10.1	0.3	15.4	11.8	31,300	5.45	1.12	882
1/31/20022	AN	44,000	20.5	0.32	17.1	802	9.11	0.2	11.4	9.26	28,200	5.6	1.23	682
4/22/2022	AN	61,200	29	0.168	24.4	1020	8.19	0.24	12.6	9.07	32,600	9.33	0.929	809
7/15/2022	AN	71,800	32.9	0.899	24.5	963	7.89	0.38	14.4	14.7	36,300	8.84	1.95	926

Central Davis Sewer District

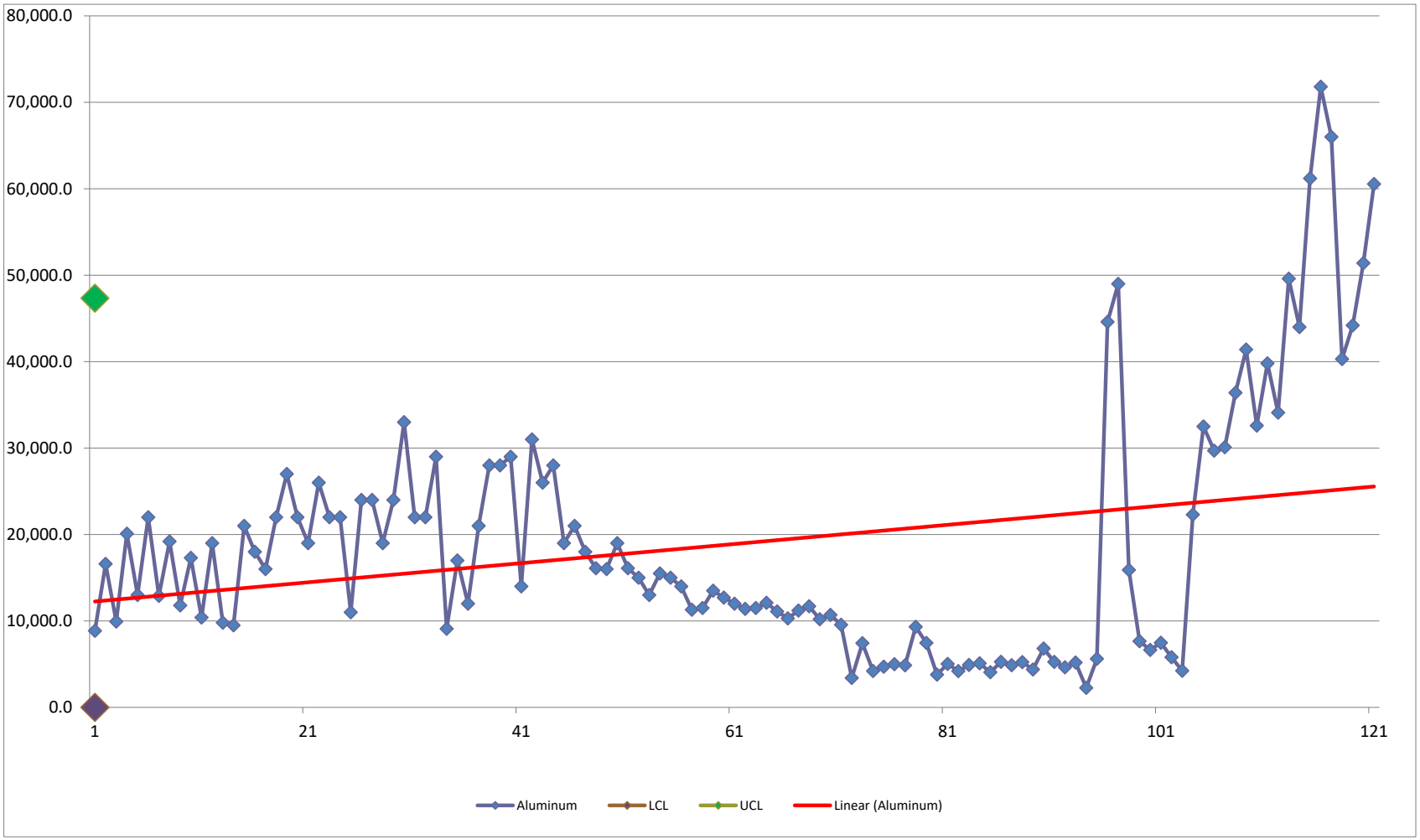
Anaerobic Biosolids - Historic Table

		Aluminum	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Molyb	Nickel	Phosphorus	Selenium	Silver	Zinc ppm
Date	Type	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	**ppm**
10/4/2022	AN	66,000	27.1	0.834	16.4	992	8.81	0.229	14.9	11.5	42,000	6.31	1.73	907
2/17/2023	AN	40,300	25.6	0.66	20.5	813	11.2	0.329	15	9.02	34,800	5.54	2.32	844
4/7/2023	AN	44,200	25.2	0.954	26.8	837	8.13	0.42	12.5	15.3	37,100	11.8	0.871	928
7/28/2023	AN	51,400	18.2	0.889	28.9	819	6.95	0.297	10.3	14.4	36,900	2.775	2.28	969
10/16/2023	AN	60,550	40.0333	0.8305	20.45	787	5.7525	0.37	15.6	13.15	39,100	7.065	2.555	827.5
average		**18,903.2**	**10.5**	**1.6**	**16.9**	**624.2**	**23.1**	**2.4**	**9.3**	**13.2**	**23,679.6**	**7.0**	**10.2**	**563.1**
Std. Dev.		**14,216.0**	**8.0**	**1.4**	**5.4**	**340.0**	**16.3**	**1.9**	**4.2**	**3.2**	**8,136.9**	**5.7**	**8.3**	**245.6**
Avg-2StDv		**0.0**	**0.0**	**0.0**	**6.1**	**0.0**	**0.0**	**0.0**	**0.8**	**6.7**	**7,405.9**	**0.0**	**0.0**	**71.9**
Avg+2StDv		**47,335.3**	**26.6**	**4.4**	**27.8**	**1,304.3**	**55.7**	**6.2**	**17.7**	**19.7**	**39,953.3**	**18.4**	**26.7**	**1,054.4**
	Note: 1. When a value was found to be below the detection limit, the whole number of the detection limit was used in the analysis.													
	2. An ** indicates that the value has not been used because of suspect integrity													

Central Davis Sewer District

Anaerobic Biosolids

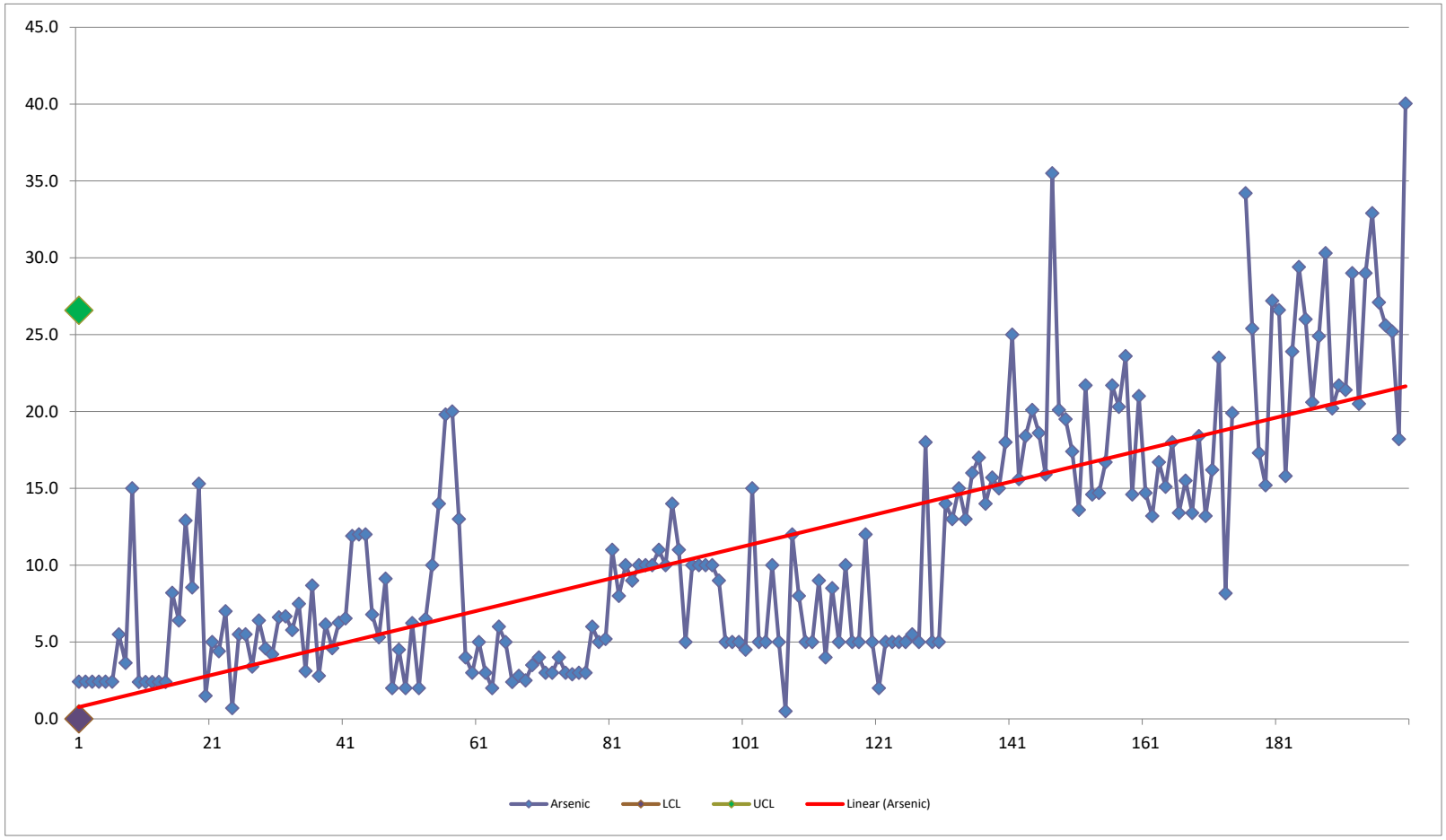
Aluminum Quality Control Chart



Central Davis Sewer District

Anaerobic Biosolids

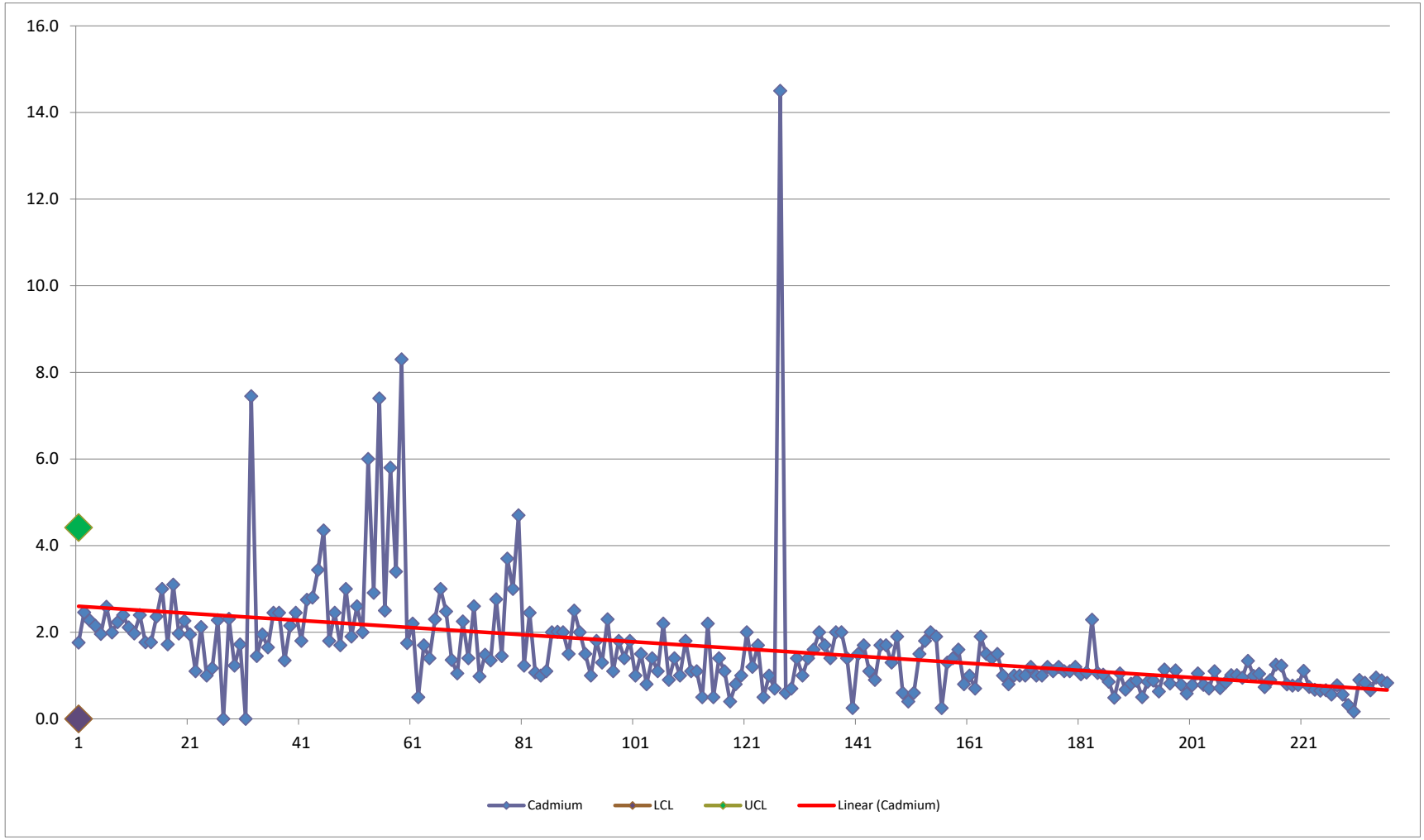
Arsenic Quality Control Chart



Central Davis Sewer District

Anaerobic Biosolids

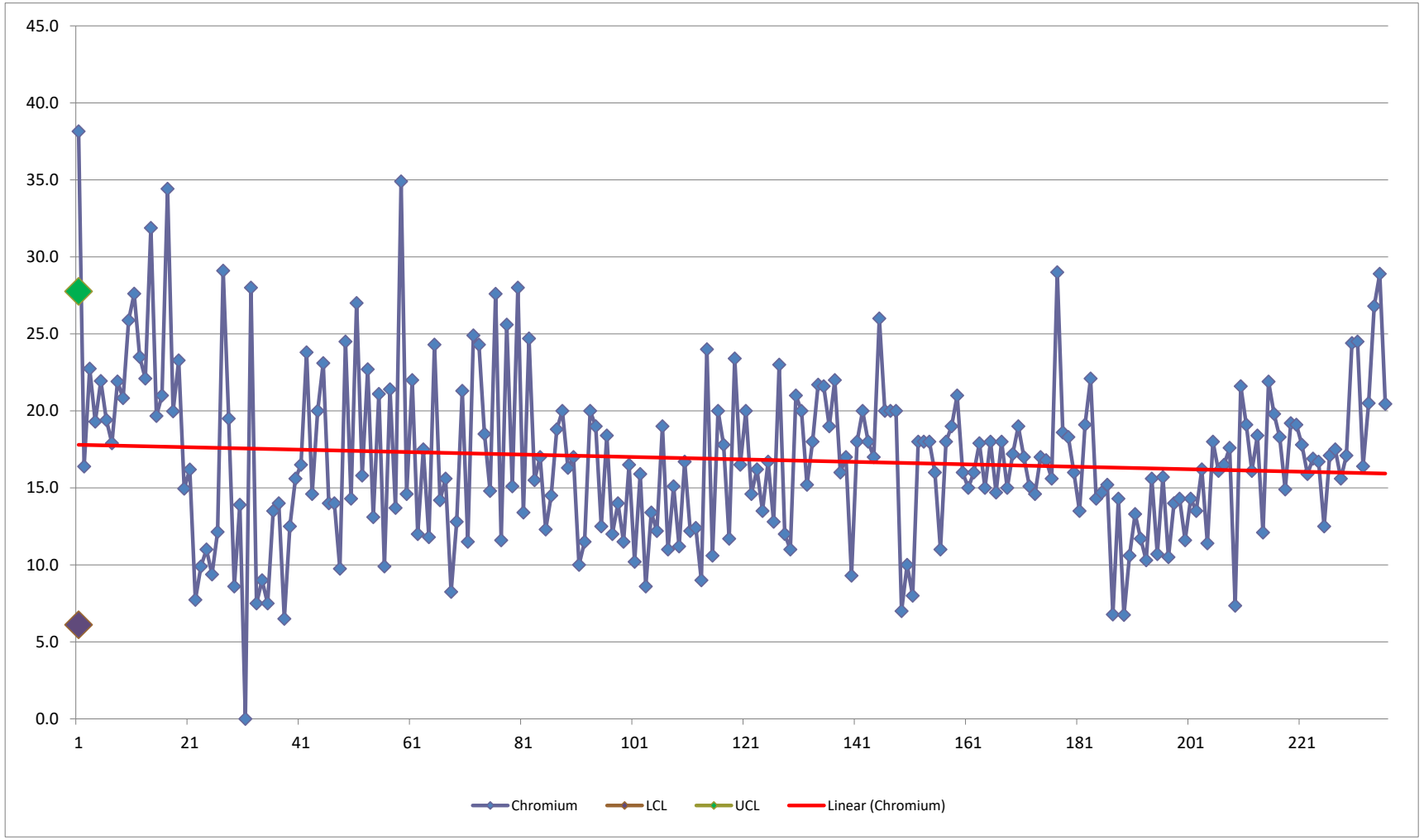
Cadmium Quality Control Chart



Central Davis Sewer District

Anaerobic Biosolids

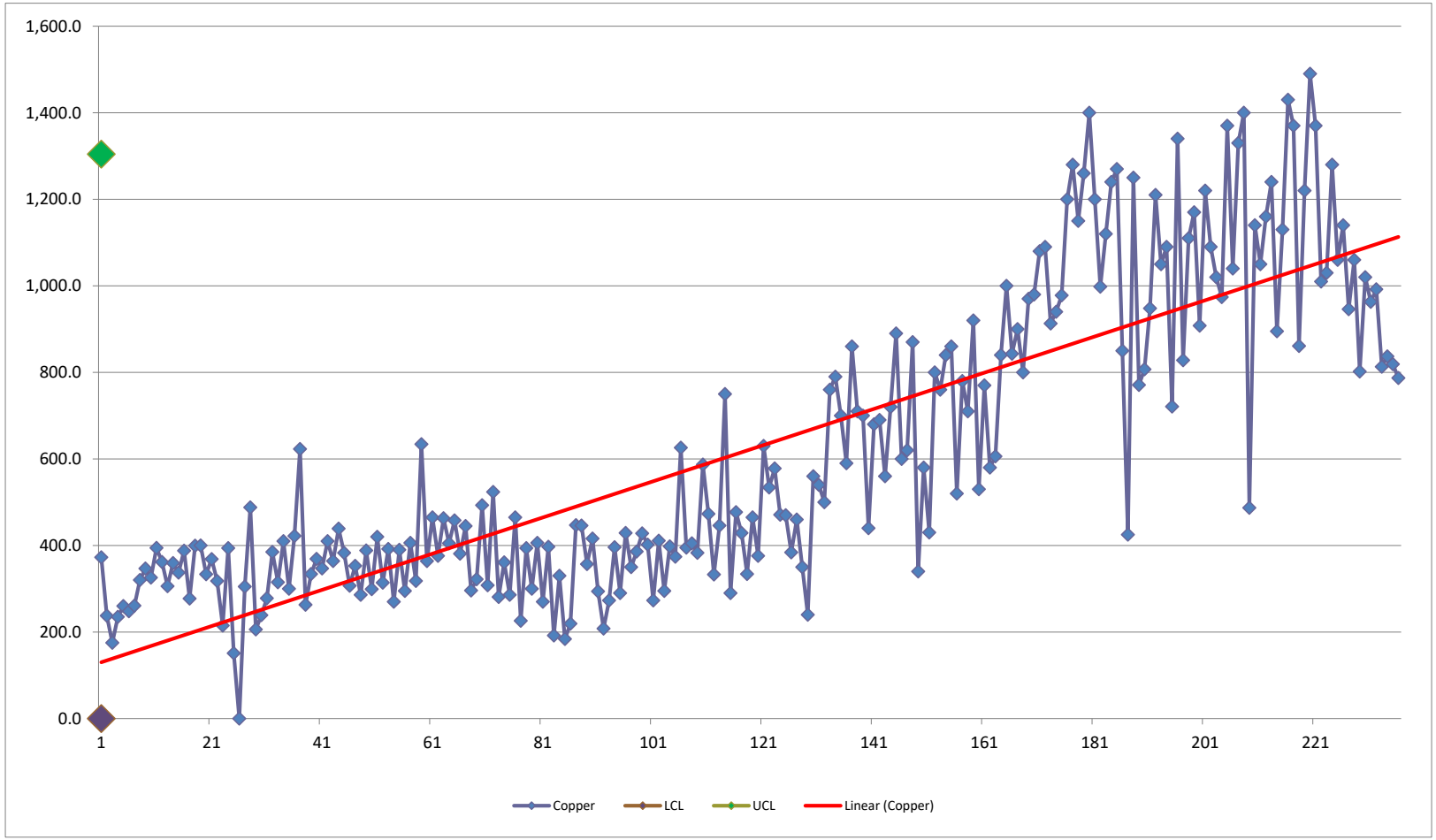
Chromium Quality Control Chart



Central Davis Sewer District

Anaerobic Biosolids

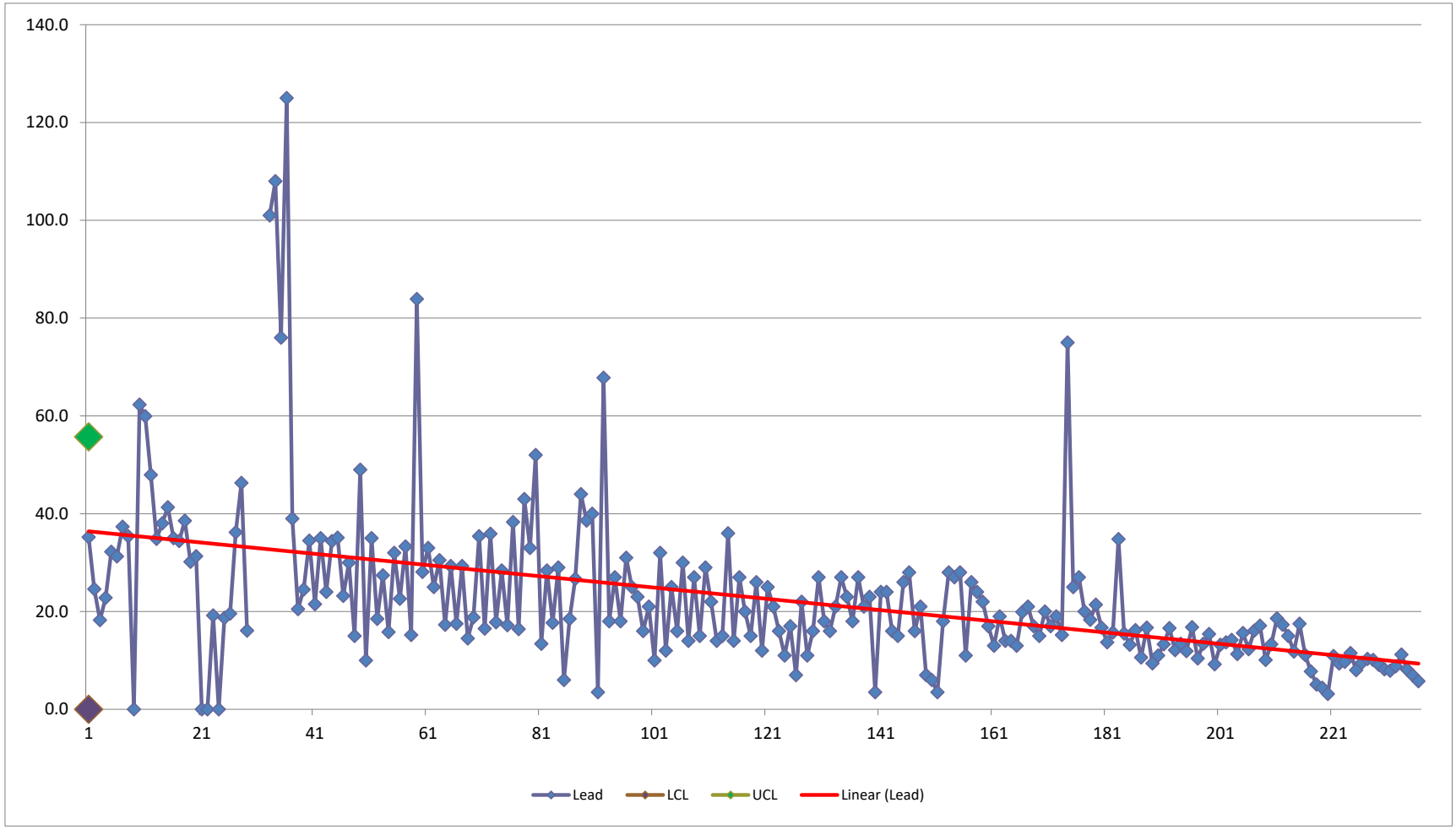
Copper Quality Control Chart



Central Davis Sewer District

Anaerobic Biosolids

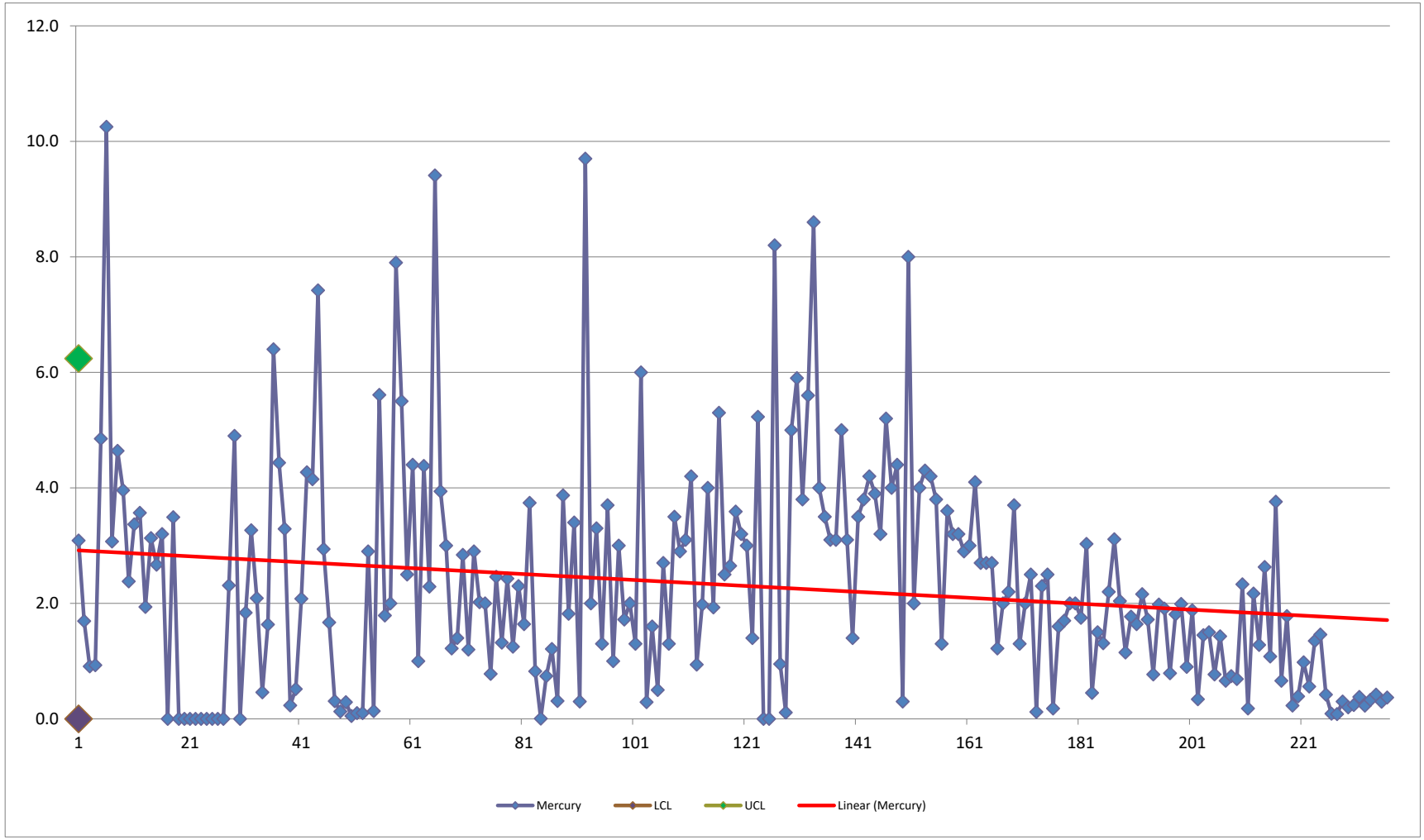
Lead Quality Control Chart



Central Davis Sewer District

Anaerobic Biosolids

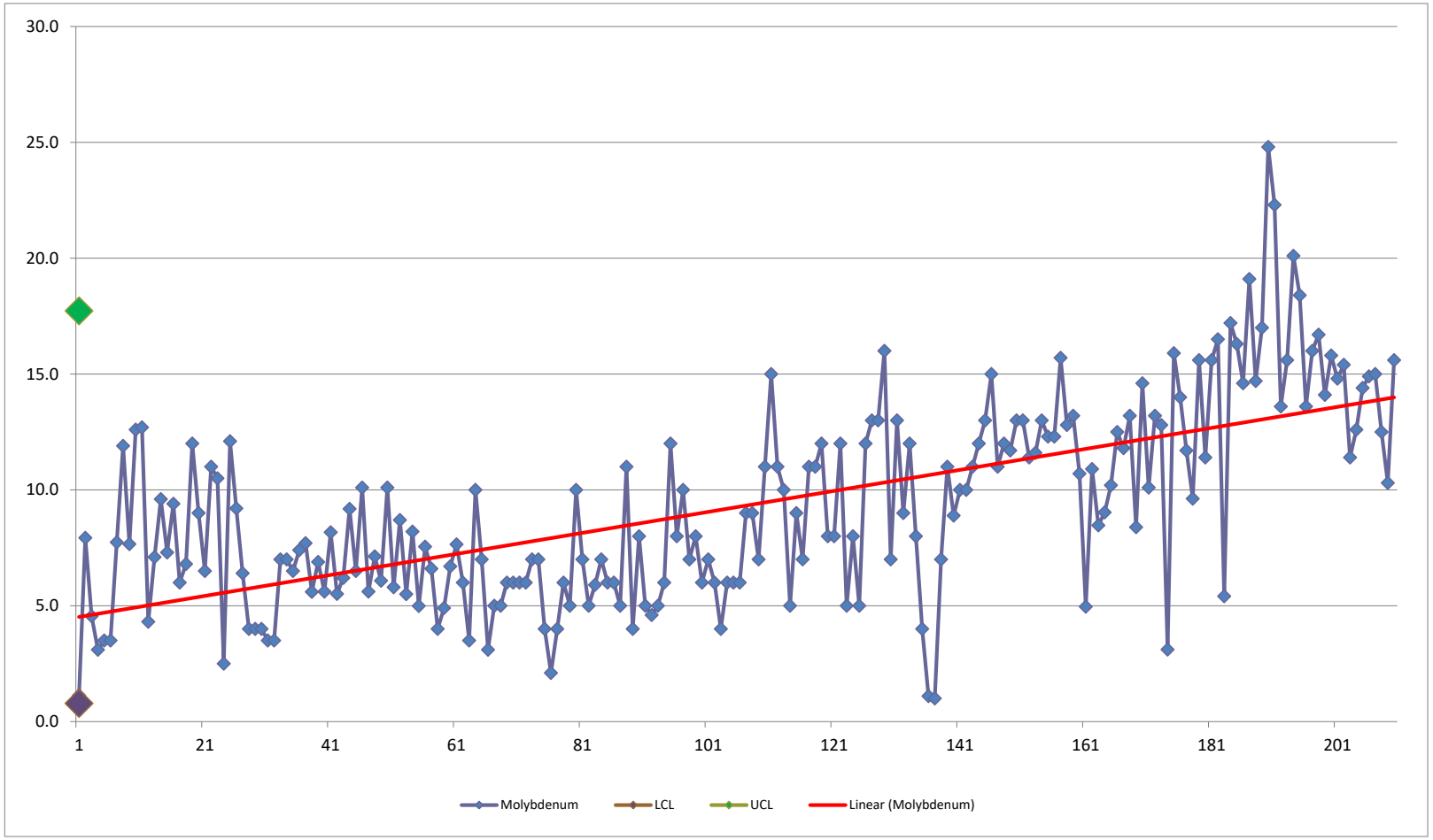
Mercury Quality Control Chart



Central Davis Sewer District

Anaerobic Biosolids

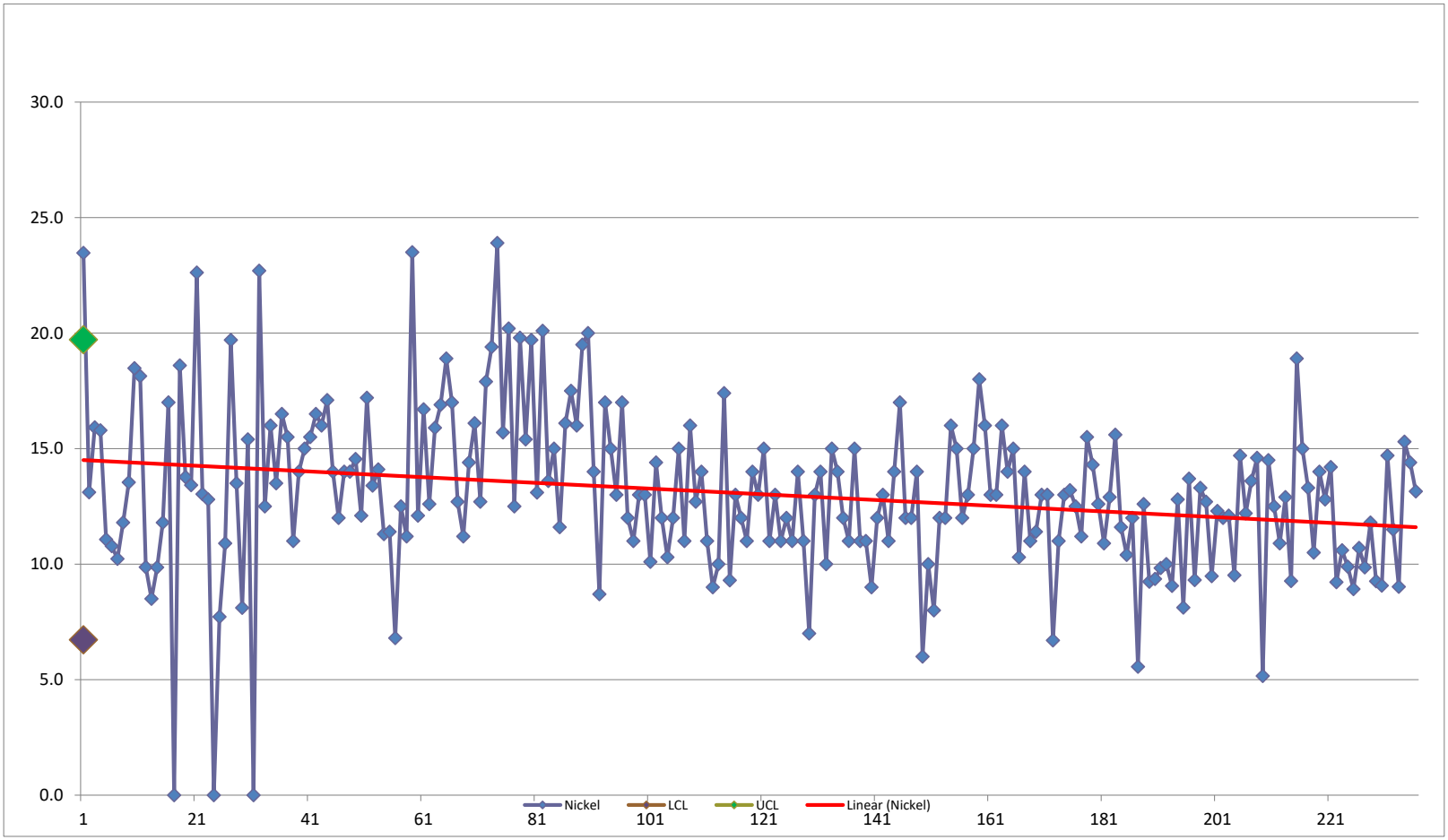
Molybdenum Quality Control Chart



Central Davis Sewer District

Anaerobic Biosolids

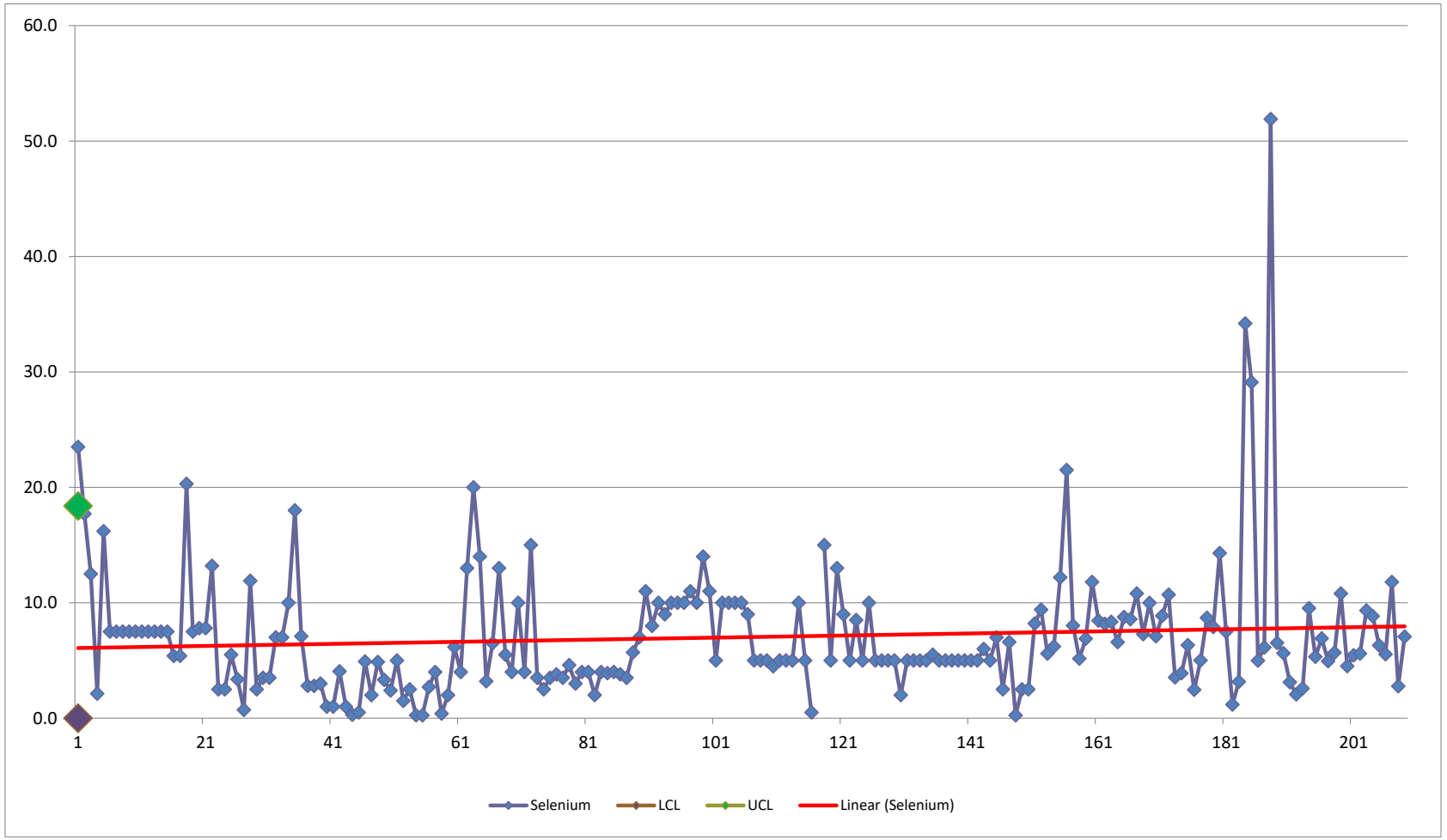
Nickel Quality Control Chart



Central Davis Sewer District

Anaerobic Biosolids

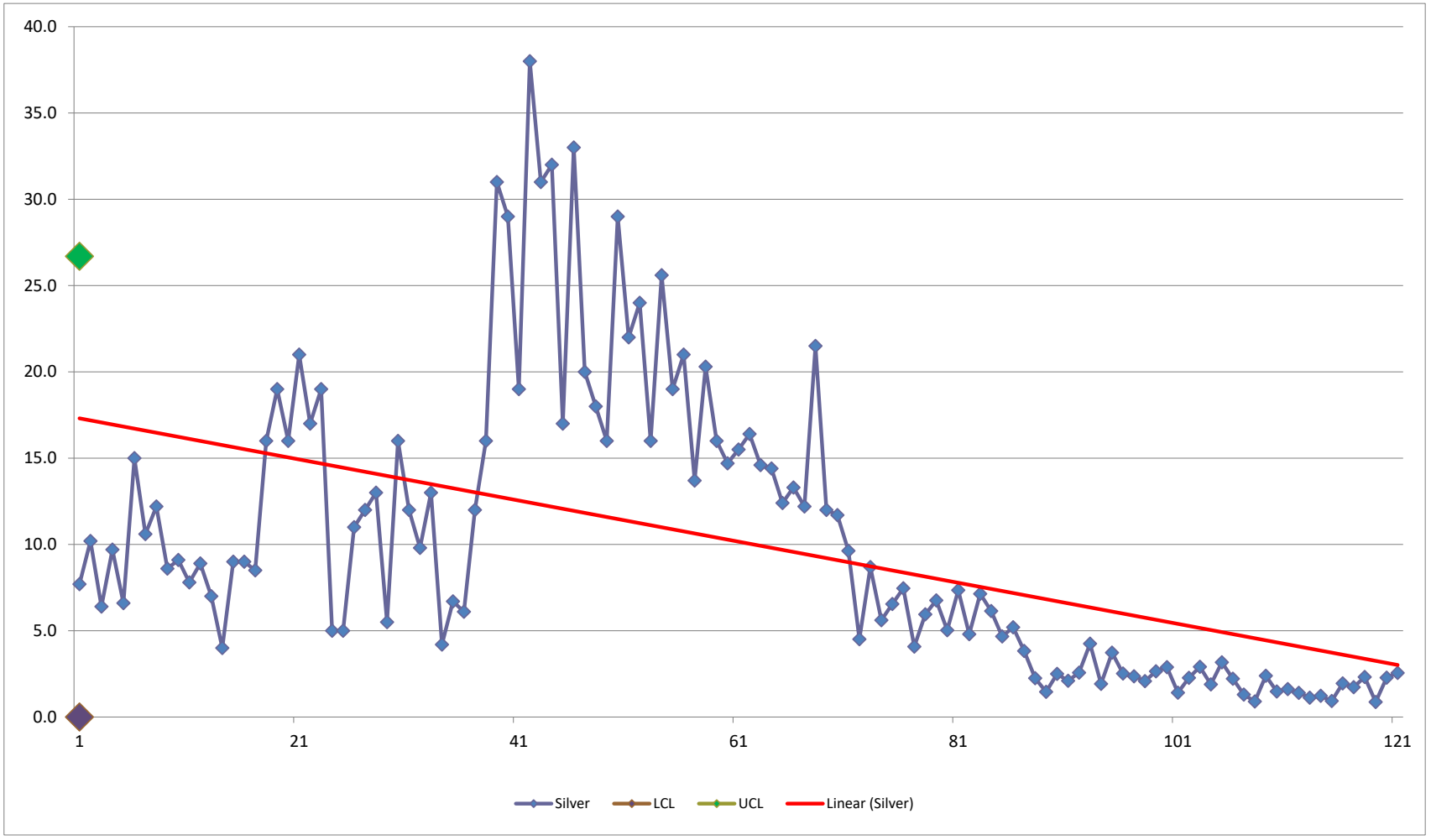
Selenium Quality Control Chart



Central Davis Sewer District

Anaerobic Biosolids

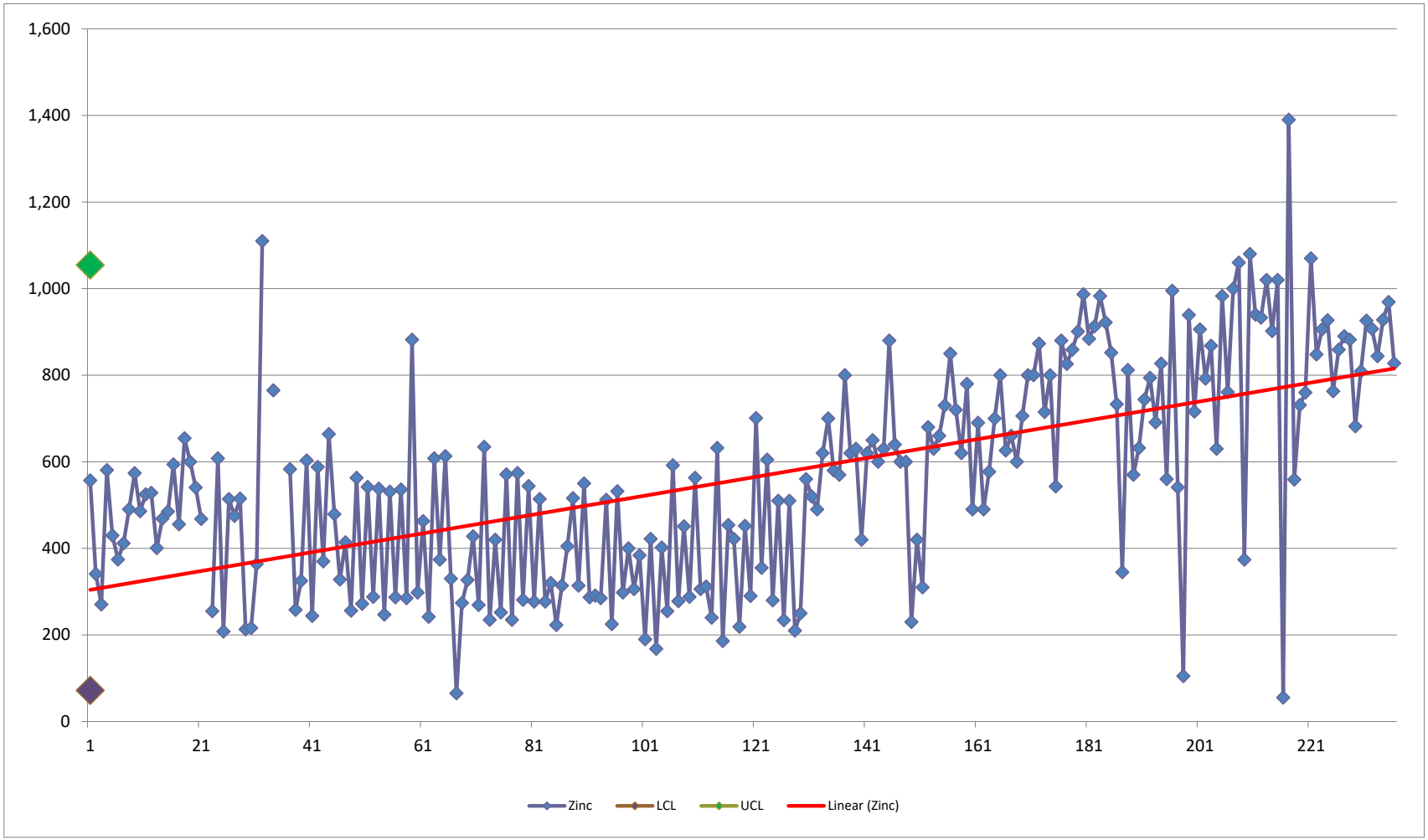
Silver Quality Control Chart



Central Davis Sewer District

Anaerobic Biosolids

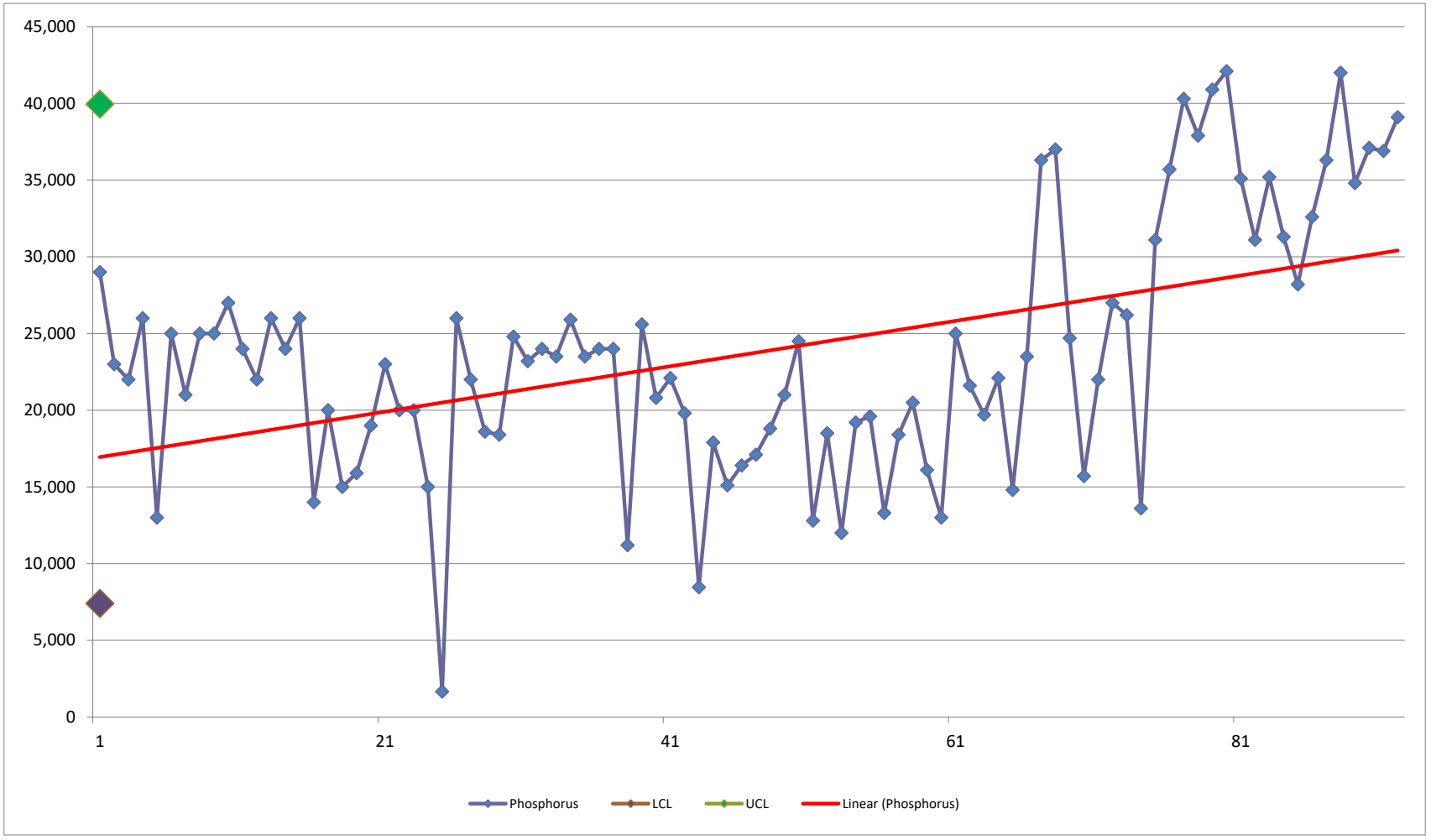
Zinc Quality Control Chart



Central Davis Sewer District

Anaerobic Biosolids

Phosphorus Quality Control Chart



CHEMTECH-FORD
LABORATORIES

3/8/2023

Work Order: 23B1690
Project: Aerobic & Anaerobic Solids

Central Davis Sewer District
Attn: Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

Client Service Contact: 801.262.7299

The analyses presented on this report were performed in accordance with the National Environmental Laboratory Accreditation Program (NELAP) unless noted in the comments, flags, or case narrative. If the report is to be used for regulatory compliance, it should be presented in its entirety, and not be altered.

NELAP ACCREDITED TNI LABORATORY

Approved By:

Mark Broadhead, Project Manager

Chemtech-Ford Laboratories
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Sandy, UT 84070
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www.ChemtechFord.com

Certificate of Analysis

Central Davis Sewer District
Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

PO#:
Receipt: **2/23/23 16:20 @ 5.6** °C
Date Reported: 3/8/2023
Project Name: **Aerobic & Anaerobic Solids**

Sample ID: **Aerobic Sludge**

Matrix: **Solid**
Lab ID: **23B1690-01**

Date Sampled: **2/17/23 8:20**
Sampled By: **Paco/Jeffry**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Ammonia (Soluble) as N	281	mg/kg	10.0	SM 4500 NH3 H	2/27/23	2/28/23	
Total Kjeldahl Nitrogen	15200	mg/L	1090	SM 4500 Norg	2/28/23	2/28/23	
Total Solids	19.0	%	0.1	EPA 8000C	2/27/23	2/28/23	
Total Volatile Solids	78.5	%	0.1	SM 2540 E	2/27/23	2/28/23	
Conductivity (Soluble)	4720	umho/cm	10	SSSA 10-3.3	2/24/23	2/24/23	
Nitrate + Nitrite, Soluble, as N	ND	mg/kg	1.0	SM 4500 NO3- F	3/6/23	3/7/23	
Metals							
Aluminum, Total	6360	mg/kg dry	31.3	EPA 6010B/C/D	3/1/23	3/2/23	
Arsenic, Total	5.42	mg/kg dry	15.7	EPA 6010B/C/D	3/1/23	3/2/23	J
Cadmium, Total	ND	mg/kg dry	1.57	EPA 6010B/C/D	3/1/23	3/2/23	
Chromium, Total	11.4	mg/kg dry	1.57	EPA 6010B/C/D	3/1/23	3/2/23	
Copper, Total	420	mg/kg dry	1.57	EPA 6010B/C/D	3/1/23	3/2/23	
Lead, Total	5.48	mg/kg dry	15.7	EPA 6010B/C/D	3/1/23	3/2/23	J
Mercury, Total	0.069	mg/kg dry	0.141	EPA 7471A	2/27/23	2/27/23	J
Molybdenum, Total	6.20	mg/kg dry	3.13	EPA 6010B/C/D	3/1/23	3/2/23	
Nickel, Total	9.42	mg/kg dry	1.57	EPA 6010B/C/D	3/1/23	3/2/23	
Phosphorus, Total as P	17800	mg/kg dry	157	EPA 6010B/C/D	3/1/23	3/2/23	
Selenium, Total	3.85	mg/kg dry	15.7	EPA 6010B/C/D	3/1/23	3/2/23	J
Silver, Total	2.60	mg/kg dry	1.57	EPA 6010B/C/D	3/1/23	3/2/23	
Zinc, Total	363	mg/kg dry	3.13	EPA 6010B/C/D	3/1/23	3/2/23	

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Certificate of Analysis

Central Davis Sewer District
Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

PO#:
Receipt: **2/23/23 16:20 @ 5.6** °C
Date Reported: 3/8/2023
Project Name: **Aerobic & Anaerobic Solids**

Sample ID: **Anaerobic Sludge**

Matrix: **Solid**
Lab ID: **23B1690-02**
Date Sampled: **2/17/23 8:20**
Sampled By: **Paco/Jeffry**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Ammonia (Soluble) as N	773	mg/kg	20.0	SM 4500 NH3 H	2/27/23	2/28/23	
Total Kjeldahl Nitrogen	8710	mg/L	1120	SM 4500 Norg	2/28/23	2/28/23	
Total Solids	16.3	%	0.1	EPA 8000C	2/27/23	2/28/23	
Total Volatile Solids	63.2	%	0.1	SM 2540 E	2/27/23	2/28/23	
Conductivity (Soluble)	5140	umho/cm	10	SSSA 10-3.3	2/24/23	2/24/23	
Nitrate + Nitrite, Soluble, as N	ND	mg/kg	1.0	SM 4500 NO3- F	3/6/23	3/7/23	
Metals							
Aluminum, Total	40300	mg/kg dry	52.7	EPA 6010B/C/D	3/1/23	3/2/23	
Arsenic, Total	25.6	mg/kg dry	26.4	EPA 6010B/C/D	3/1/23	3/2/23	J
Cadmium, Total	ND	mg/kg dry	2.64	EPA 6010B/C/D	3/1/23	3/2/23	
Chromium, Total	20.5	mg/kg dry	2.64	EPA 6010B/C/D	3/1/23	3/2/23	
Copper, Total	813	mg/kg dry	2.64	EPA 6010B/C/D	3/1/23	3/2/23	
Lead, Total	11.2	mg/kg dry	26.4	EPA 6010B/C/D	3/1/23	3/2/23	J
Mercury, Total	0.329	mg/kg dry	0.175	EPA 7471A	2/27/23	2/27/23	
Molybdenum, Total	15.0	mg/kg dry	5.27	EPA 6010B/C/D	3/1/23	3/2/23	
Nickel, Total	9.02	mg/kg dry	2.64	EPA 6010B/C/D	3/1/23	3/2/23	
Phosphorus, Total as P	34800	mg/kg dry	264	EPA 6010B/C/D	3/1/23	3/2/23	
Selenium, Total	5.54	mg/kg dry	26.4	EPA 6010B/C/D	3/1/23	3/2/23	J
Silver, Total	2.32	mg/kg dry	2.64	EPA 6010B/C/D	3/1/23	3/2/23	J
Zinc, Total	844	mg/kg dry	5.27	EPA 6010B/C/D	3/1/23	3/2/23	

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Certificate of Analysis

Central Davis Sewer District
Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

PO#:
Receipt: **2/23/23 16:20 @ 5.6** °C
Date Reported: 3/8/2023
Project Name: **Aerobic & Anaerobic Solids**

Report Footnotes

Abbreviations

ND = Not detected at the corresponding Minimum Reporting Limit (MRL).
1 mg/L = one milligram per liter or 1 mg/kg = one milligram per kilogram = 1 part per million.
1 ug/L = one microgram per liter or 1 ug/kg = one microgram per kilogram = 1 part per billion.
1 ng/L = one nanogram per liter or 1 ng/kg = one nanogram per kilogram = 1 part per trillion.

Flag Descriptions

J = Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

CHAIN OF CUSTODY - SAMPLE SUBMITTAL FORM

COMPANY: Central Davis Sewer District
ADDRESS: 2200 S. Sunset Dr.
CITY/STATE/ZIP: Kaysville, UT 84037
PHONE #: 801-451-2190
CONTACT: Jill Jones, Manjot Masson
EMAIL: jillj@cdsewer.org, lab@cdsewer.org
PROJECT: Aerobic & Anaerobic Solids
PO Number:
INVOICE EMAIL ADDRESS:

23B1690

RUSH Due Date*:

* Expedited turnaround subject to additional charge

QC Level
1 2 3 4

QC levels definition: QC1: none QC2: Batch QC, random sample
QC3: 25% surcharge. Narrative plus Batch QC, your sample selected
QC4: 40% surcharge. Add raw data

CHEMTECH-FORD LABORATORIES

Chemtech-Ford Laboratories
9632 South 500 West
Sandy, UT 84070
Phone: 801-262-7299
www.chemtechford.com

Sample condition				Delivery Method			
	Custody Seal	✓	Correct Containers		UPS		USPS
✓	Container Intact	✓	Sufficient Sample Volume		FedEx	✓	Chemtech-Ford Courier
✓	COC/Labels Agree		Headspace Present (VOC)		Walk-in		Customer Courier
✓	Received on Ice		Temperature Blank				
		✓	Received within Holding Time				

Lab Use Only	CLIENT SAMPLE INFORMATION				TESTS REQUESTED																
	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX	Metals - long list														E. Coli/Coliform (Absent/Present)	E. Coli/Coliform (Enumerated)	HPC
01	1. Aerobic Sludge	2-17-23	08:20 am	Sludge	✓																
02	2. Anaerobic Sludge	2-17-23	08:20 am	Sludge	✓																
	3.																				
	4.																				
	5.																				
	6.																				
	7.																				
	8.																				
	9.																				
	10.																				
				Bottle type	Sludge																
				Lot #	1237																

Sampled by: [print] Paco / Jeffry
Sampled by: [signature] PO/JC
Special Instructions:

ON ICE NOT ON ICE Temp (C°): 5.6
Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.

Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time
[signature]	2-23-23 09:45am		
P. Hann	2-23-23 10:40am	[signature]	2-23-23 1040
[signature]	2/23/23 1620	Denise Brue	2/23/23 1620

Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum). Client agrees to pay collection costs and attorney's fees.

Chain of Custody
Metals Analysis
Central Davis Sewer District

Analysis Required (YES/NO)	Parameter	Approved Analysis Method	Requied Prep. Method	Maximum Holding Time after Preservation
✓	Aluminum	SW-6010	SW-3050	6 months
✓	Arsenic	SW-6010/7060/7061	SW-3050	6 months
✓	Cadmium	SW-6010/7130/7131	SW-3050	6 months
✓	Chromium	SW-6010/7190/71911	SW-3050	6 months
✓	Copper	SW-6010/7210	SW-3050	6 months
✓	Lead	SW-6010/7420/7421	SW-7471	6 months
✓	Mercury	SW-7471	SW-3050	28 days
✓	Molybdenum	SW-6010/7480/7481	SW-3050	6 months
✓	Nickel	SW-6010/7520	SW-3050	6 months
✓	Selenium	SW-6010/7740/7741	SW-3050	6 months
✓	Silver	SW-6010	SW-3050	6 months
✓	Zinc	SW-6010/7950	SW-3050	6 months
✓	Total, Fixed & Volatile Solids	SM-2540	N/A	7 days
	pH	SW-9045	N/A	Immediately
	Total Volatile Acids	SM-5560	N/A	7 days
✓	Total Phosphorus	SM-1500-P	4500-PB	28 days
✓	Total Ammonia	SM-4500-NH_3	N/A	28 days
✓	Conductivity	SW-9050	N/A	28 days
✓	Nitrite+ Nitrate	SM-4500-NO2/4500_NO3 SW-846 Method 9200	N/A	28 days 28 days
✓	TKN or Organic N	SM-4500-N org	N/A	28 days
✓	Total Solids	SM-2540 G	N/A	7 days

Sample Date 2-17-23
# of Samples 2
Sample Location Aerobic / Anaerobic
Samples Collected By: Paco / Jace

NPDES: #UT-0020974
Sample Quantity 1 jar
Composite/Grab

Sample ID	Date and Time Collected
Aerobic	2-17-23 0820
Anaerobic	2-17-23 0820

Date and Time:
Reliquished By: Jace

Date and Time:
Received By:

Facility Name: Central Davis Sewer District
Address: 2200 South Sunset Drive, Kaysville UT 84037
Contact: Jill S. Jones/Manjot K. Masson
Phone # 801-451-2190

Note: The laboratory report must include all metal analysis results in dry weight basis(do not include TKN, Nitrates or Ammonia), analyst identification, laboratory supervisor name and signature, a laboratory certification statement (if applicable), and the chain of custody form(s). Also, the laboratory must utilize appropriate QA/QC methodology as found in method reference source document (i.e., Standard Methods or SW-846) depending on the analysis preformed.

CHEMTECH-FORD
LABORATORIES

4/21/2023

Work Order: 23D0625
Project: Anaerobic Metals

Central Davis Sewer District
Attn: Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

Client Service Contact: 801.262.7299

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NELAP ACCREDITED TNI LABORATORY

Approved By:

Mark Broadhead, Project Manager

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Sandy, UT 84070
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Certificate of Analysis

Central Davis Sewer District
Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

PO#:
Receipt: **4/11/23 14:00 @ 14.3** °C
Date Reported: 4/21/2023
Project Name: **Anaerobic Metals**

Sample ID: **Anaerobic Sludge**

Matrix: **Solid** Sample Type: **Grab** Lab ID: **23D0625-01**

Date Sampled: **4/7/23 8:40** Sampled By: **Jace**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Ammonia (Soluble) as N	851	mg/kg	20.0	SM 4500 NH3 H	4/17/23	4/17/23	
Total Kjeldahl Nitrogen	6820	mg/kg	1110	SM 4500 Norg	4/17/23	4/18/23	
Total Solids	16.7	%	0.1	CTF8000	4/17/23	4/17/23	
Total Solids	16.7	%	0.1	SM 2540G	4/13/23	4/13/23	
Total Volatile Solids	59.4	%	0.1	SM 2540 E	4/13/23	4/13/23	
Conductivity (Soluble)	3570	umho/cm	10	SSSA 10-3.3	4/12/23	4/12/23	
Nitrate + Nitrite, Soluble, as N	ND	mg/kg	1.0	SM 4500 NO3- F	4/18/23	4/19/23	
Metals							
Aluminum, Total	44200	mg/kg dry	41.5	EPA 6010B/C/D	4/17/23	4/18/23	
Arsenic, Total	25.2	mg/kg dry	20.7	EPA 6010B/C/D	4/17/23	4/18/23	
Cadmium, Total	0.954	mg/kg dry	2.07	EPA 6010B/C/D	4/17/23	4/18/23	J
Chromium, Total	26.8	mg/kg dry	2.07	EPA 6010B/C/D	4/17/23	4/18/23	
Copper, Total	837	mg/kg dry	2.07	EPA 6010B/C/D	4/17/23	4/18/23	
Lead, Total	8.13	mg/kg dry	20.7	EPA 6010B/C/D	4/17/23	4/18/23	J
Mercury, Total	0.420	mg/kg dry	0.080	EPA 7471A	4/17/23	4/18/23	
Molybdenum, Total	12.5	mg/kg dry	4.15	EPA 6010B/C/D	4/17/23	4/18/23	
Nickel, Total	15.3	mg/kg dry	2.07	EPA 6010B/C/D	4/17/23	4/18/23	
Phosphorus, Total as P	37100	mg/kg dry	4.15	EPA 6010B/C/D	4/17/23	4/18/23	
Selenium, Total	11.8	mg/kg dry	8.29	EPA 6010B/C/D	4/17/23	4/18/23	
Silver, Total	0.871	mg/kg dry	2.07	EPA 6010B/C/D	4/17/23	4/18/23	J
Zinc, Total	928	mg/kg dry	4.15	EPA 6010B/C/D	4/17/23	4/18/23	

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Certificate of Analysis

Central Davis Sewer District
Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

PO#:
Receipt: **4/11/23 14:00** @ **14.3** °C
Date Reported: 4/21/2023
Project Name: **Anaerobic Metals**

Report Footnotes

Abbreviations

ND = Not detected at the corresponding Minimum Reporting Limit (MRL).
1 mg/L = one milligram per liter or 1 mg/kg = one milligram per kilogram = 1 part per million.
1 ug/L = one microgram per liter or 1 ug/kg = one microgram per kilogram = 1 part per billion.
1 ng/L = one nanogram per liter or 1 ng/kg = one nanogram per kilogram = 1 part per trillion.
On calculated parameters, there may be a slight difference between summing the rounded values shown on the report vs the unrounded values used in the calculation.

Flag Descriptions

J = Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

CHAIN OF CUSTODY - SAMPLE SUBMITTAL FORM

COMPANY: Central Davis Sewer District
ADDRESS: 2200 S. Sunset Dr.
CITY/STATE/ZIP: Kaysville, UT 84037
PHONE #: 801-451-2190
CONTACT: Jill Jones, Manjot Masson
EMAIL: jillj@cdsewer.org / lab@cdsewer.org
PROJECT: Anaerobic Metals
PO Number:
INVOICE EMAIL ADDRESS:

23D0625

RUSH Due Date*:

* Expedited turnaround subject to additional charge

QC Level
1 2 3 4

QC levels definition: QC1: none QC2: Batch QC, random sample
QC3: 25% surcharge. Narrative plus Batch QC, your sample selected
QC4: 40% surcharge. Add raw data

CHEMTECH-FORD LABORATORIES

Chemtech-Ford Laboratories
9632 South 500 West
Sandy, UT 84070
Phone: 801-262-7299
www.chemtechford.com

Sample condition					
	Custody Seal	✓	Correct Containers		
✓	Container Intact	✓	Sufficient Sample Volume	Delivery Method	
✓	COC/Labels Agree		Headspace Present (VOC)	UPS	USPS
✓	Received on Ice		Temperature Blank	FedEx	✓ Chemtech-Ford Courier
		✓	Received within Holding Time	Walk-in	Customer Courier

Lab Use Only	CLIENT SAMPLE INFORMATION				TESTS REQUESTED														
	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX	Metals - see attached page												E. Coli/Coliform (Absent/Present)	E. Coli/Coliform (Enumerated)	HPC
-01	1. ~~Acc~~ Anaerobic Sludge	4-7-23	08:40am	Sludge	✓														
	2.																		
	3.																		
	4.																		
	5.																		
	6.																		
	7.																		
	8.																		
	9.																		
	10.																		

Bottle type: Sludge Cup
Lot #: 1237

Sampled by: [print] Jace
Sampled by: [signature] Jace

ON ICE NOT ON ICE Temp (C°): 14.3

Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.

Special Instructions:

Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time
Aimee Matthies	4-11-23 09:45am		4-11-23 10:25
	4/11/23 1400	Denise Brun	4/11/23 14:00

Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum). Client agress to pay collection costs and attorney's fees.

23D0625 (Attachment)

Chain of Custody
Metals Analysis
Central Davis Sewer District

Analysis Required (YES/NO)	Parameter	Approved Analysis Method	Requied Prep. Method	Maximum Holding Time after Preservation
✓	Aluminum	SW-6010	SW-3050	6 months
✓	Arsenic	SW-6010/7060/7061	SW-3050	6 months
✓	Cadmium	SW-6010/7130/7131	SW-3050	6 months
✓	Chromium	SW-6010/7190/71911	SW-3050	6 months
✓	Copper	SW-6010/7210	SW-3050	6 months
✓	Lead	SW-6010/7420/7421	SW-7471	6 months
✓	Mercury	SW-7471	SW-3050	28 days
✓	Molybdenum	SW-6010/7480/7481	SW-3050	6 months
✓	Nickel	SW-6010/7520	SW-3050	6 months
✓	Selenium	SW-6010/7740/7741	SW-3050	6 months
✓	Silver	SW-6010	SW-3050	6 months
✓	Zinc	SW-6010/7950	SW-3050	6 months
✓	Total, Fixed & Volatile Solids	SM-2540	N/A	7 days
	pH	SW-9045	N/A	Immediately
	Total Volatile Acids	SM-5560	N/A	7 days
✓	Total Phosphorus	SM-1500-P	4500-PB	28 days
✓	Total Ammonia	SM-4500-NH_3	N/A	28 days
✓	Conductivity	SW-9050	N/A	28 days
✓	Nitrite+ Nitrate	SM-4500-NO2/4500_NO3 SW-846 Method 9200	N/A	28 days 28 days
✓	TKN or Organic N	SM-4500-N org	N/A	28 days
✓	Total Solids	SM-2540 G	N/A	7 days

Sample Date 4-7-23
# of Samples 1
Sample Location Anaerobic
Samples Collected By: Jace

NPDES: #UT-0020974
Sample Quantity jar

Composite/(Grab)

Sample ID	Date and Time Collected
Anaerobic	4-7-23 08:40 am

Date and Time:
Reliquished By:

Date and Time:
Received By:

Facility Name: Central Davis Sewer District
Address: 2200 South Sunset Drive, Kaysville UT 84037
Contact: Jill S. Jones/Manjot K. Masson
Phone # 801-451-2190

Note: The laboratory report must include all metal analysis results in dry weight basis(do not include TKN, Nitrates or Ammonia), analyst identification, laboratory supervisor name and signature, a laboratory certification statement (if applicable), and the chain of custody form(s). Also, the laboratory must utilize appropriate QA/QC methodology as found in method reference source document (i.e., Standard Methods or SW-846) depending on the analysis preformed.

CHEMTECH-FORD
LABORATORIES

8/11/2023

Work Order: 23H0014
Project: Anerobic Metals

Central Davis Sewer District
Attn: Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

Client Service Contact: 801.262.7299

The analyses presented on this report were performed in accordance with the National Environmental Laboratory Accreditation Program (NELAP) unless noted in the comments, flags, or case narrative. If the report is to be used for regulatory compliance, it should be presented in its entirety, and not be altered.

NELAP ACCREDITED TNI LABORATORY

Approved By:

Mark Broadhead, Project Manager

Chemtech-Ford Laboratories
Serving the Intermountain West Since 1953

9632 South 500 West
Sandy, UT 84070
O:(801) 262-7299 F: (866) 792-0093
www.ChemtechFord.com

Certificate of Analysis

Central Davis Sewer District
Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

PO#:
Receipt: **8/1/23 13:30 @ 12.9** °C
Date Reported: 8/11/2023
Project Name: **Anerobic Metals**

Sample ID: **Anerobic Sludge**

Matrix: **Solid** Sample Type: **Grab** Lab ID: **23H0014-01**

Date Sampled: **7/28/23 12:00** Sampled By: **Jeff Coneda**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Ammonia (Soluble) as N	923	mg/kg	40.0	SM 4500 NH3 H	8/7/23	8/7/23	
Nitrate, Soluble	ND	mg/kg	1.00	EPA 300.0	8/3/23	8/9/23	
Nitrite, Soluble	ND	mg/kg	1.00	EPA 300.0	8/3/23	8/9/23	
Total Kjeldahl Nitrogen	7840	mg/kg	2.0	SM 4500 Norg	8/4/23	8/7/23	
Total Solids	15.6	%	0.1	SM 2540G	8/3/23	8/3/23	
Total Volatile Solids	64.4	%	0.1	SM 2540 E	8/3/23	8/3/23	
Conductivity (Soluble)	7290	umho/cm	10	SSSA 10-3.3	8/4/23	8/4/23	
Metals							
Aluminum, Total	51400	mg/kg dry	42.6	EPA 6010D	8/4/23	8/7/23	
Arsenic, Total	18.2	mg/kg dry	27.8	EPA 6010D	8/1/23	8/2/23	J
Cadmium, Total	0.889	mg/kg dry	2.78	EPA 6010D	8/1/23	8/2/23	J
Chromium, Total	28.9	mg/kg dry	2.78	EPA 6010D	8/1/23	8/2/23	
Copper, Total	819	mg/kg dry	2.78	EPA 6010D	8/1/23	8/2/23	
Lead, Total	ND	mg/kg dry	27.8	EPA 6010D	8/1/23	8/2/23	
Mercury, Total	0.297	mg/kg dry	0.115	EPA 7471A	8/1/23	8/2/23	
Molybdenum, Total	10.3	mg/kg dry	5.56	EPA 6010D	8/1/23	8/2/23	
Nickel, Total	14.4	mg/kg dry	2.78	EPA 6010D	8/1/23	8/2/23	
Phosphorus, Total as P	36900	mg/kg dry	5.56	EPA 6010D	8/1/23	8/2/23	
Selenium, Total	ND	mg/kg dry	11.1	EPA 6010D	8/1/23	8/2/23	
Silver, Total	2.28	mg/kg dry	2.78	EPA 6010D	8/1/23	8/2/23	J
Zinc, Total	969	mg/kg dry	5.56	EPA 6010D	8/1/23	8/2/23	

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O:(801) 262-7299 F: (866) 792-0093
www.ChemtechFord.com

Certificate of Analysis

Central Davis Sewer District
Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

PO#:
Receipt: **8/1/23 13:30 @ 12.9** °C
Date Reported: 8/11/2023
Project Name: **Anerobic Metals**

Report Footnotes

Abbreviations

ND = Not detected at the corresponding Minimum Reporting Limit (MRL).
1 mg/L = one milligram per liter or 1 mg/kg = one milligram per kilogram = 1 part per million.
1 ug/L = one microgram per liter or 1 ug/kg = one microgram per kilogram = 1 part per billion.
1 ng/L = one nanogram per liter or 1 ng/kg = one nanogram per kilogram = 1 part per trillion.
On calculated parameters, there may be a slight difference between summing the rounded values shown on the report vs the unrounded values used in the calculation.

Flag Descriptions

J = Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

CHAIN OF CUSTODY - SAMPLE SUBMITTAL FORM

COMPANY: Central Davis Sewer District
ADDRESS: 2200 S. Sunset Dr.
CITY/STATE/ZIP: Kaysville, UT 84037
PHONE #: 801-451-2190
CONTACT: Jill Jones, Manjot Masson
EMAIL: jillj@cdsewer.org, lab@cdsewer.org
PROJECT: Anaerobic ~~Mid~~ Metals
PO Number:
INVOICE EMAIL ADDRESS:

23H0014

RUSH Due Date*:

* Expedited turnaround subject to additional charge

QC Level
1 2 3 4

QC levels definition: QC1: none QC2: Batch QC, random sample
QC3: 25% surcharge. Narrative plus Batch QC, your sample selected
QC4: 40% surcharge. Add raw data

CHEMTECH-FORD LABORATORIES

Chemtech-Ford Laboratories
9632 South 500 West
Sandy, UT 84070
Phone: 801-262-7299
www.chemtechford.com

Sample condition			
	Custody Seal	✓	Correct Containers
✓	Container Intact	✓	Sufficient Sample Volume
✓	COC/Labels Agree		Headspace Present (VOC)
✓	Received on Ice		Temperature Blank
		✓	Received within Holding Time

Delivery Method			
	UPS		USPS
	FedEx	✓	Chemtech-Ford Courier
~~✓~~	~~Walk-in~~		Customer Courier

Lab Use Only	CLIENT SAMPLE INFORMATION			
	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX
-01	1. Anaerobic Sludge	7.28.23	12:00pm	Sludge
	2.			
	3.			
	4.			
	5.			
	6.			
	7.			
	8.			
	9.			
	10.			

TESTS REQUESTED

See attached sheet														E. Coli/Coliform (Absent/Present)	E. Coli/Coliform (Enumerated)	HPC
✓																
Bottle type					G	16										
Lot #	Sludge Cup 1159				1328											

Sampled by: [print] Jeff
Sampled by: [signature] Jeff

ON ICE NOT ON ICE Temp (C°): 12.9

Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.

Special Instructions:

Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time
Aimee Matthews	7.31.23 12:30pm		8/1/23 10:00
	8.1.23 1330	Renee Brem	8/1/23 13:30

Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum). Client agrees to pay collection costs and attorney's fees.

23H0014 (Attachment)

Chain of Custody
Metals Analysis
Central Davis Sewer District

Analysis Required (YES/NO)	Parameter	Approved Analysis Method	Requied Prep. Method	Maximum Holding Time after Preservation
✓	Aluminum	SW-6010	SW-3050	6 months
✓	Arsenic	SW-6010/7060/7061	SW-3050	6 months
✓	Cadmium	SW-6010/7130/7131	SW-3050	6 months
✓	Chromium	SW-6010/7190/71911	SW-3050	6 months
✓	Copper	SW-6010/7210	SW-3050	6 months
✓	Lead	SW-6010/7420/7421	SW-7471	6 months
✓	Mercury	SW-7471	SW-3050	28 days
✓	Molybdenum	SW-6010/7480/7481	SW-3050	6 months
✓	Nickel	SW-6010/7520	SW-3050	6 months
✓	Selenium	SW-6010/7740/7741	SW-3050	6 months
✓	Silver	SW-6010	SW-3050	6 months
✓	Zinc	SW-6010/7950	SW-3050	6 months
✓	Total, Fixed & Volatile Solids	SM-2540	N/A	7 days
	pH	SW-9045	N/A	Immediately
	Total Volatile Acids	SM-5560	N/A	7 days
✓	Total Phosphorus	SM-1500-P	4500-PB	28 days
✓	Total Ammonia	SM-4500-NH_3	N/A	28 days
✓	Conductivity	SW-9050	N/A	28 days
✓	Nitrite+ Nitrate	SM-4500-NO2/4500_NO3 SW-846 Method 9200	N/A	28 days 28 days
✓	TKN or Organic N	SM-4500-N org	N/A	28 days
✓	Total Solids	SM-2540 G	N/A	7 days

Sample Date 7-28-23
# of Samples 1
Sample Location Anaerobic
Samples Collected By: Jeff

NPDES: #UT-0020974
Sample Quantity jar
Composite/(Grab)

Sample ID	Date and Time Collected
Anaerobic	7-28-23 12:00pm

Date and Time:
Reliquished By: Aimee McKinnis

Date and Time:
Received By:

Facility Name: Central Davis Sewer District
Address: 2200 South Sunset Drive, Kaysville UT 84037
Contact: Jill S. Jones/Manjot K. Masson
Phone # 801-451-2190

Note: The laboratory report must include all metal analysis results in dry weight basis(do not include TKN, Nitrates or Ammonia), analyst identification, laboratory supervisor name and signature, a laboratory certification statement (if applicable), and the chain of custody form(s). Also, the laboratory must utilize appropriate QA/QC methodology as found in method reference source document (i.e., Standard Methods or SW-846) depending on the analysis preformed.

CHEMTECH-FORD
LABORATORIES

Amended

11/1/2023

Work Order: 23J1341
Project: Anerobic Metals

Central Davis Sewer District
Attn: Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

Client Service Contact: 801.262.7299

The analyses presented on this report were performed in accordance with the National Environmental Laboratory Accreditation Program (NELAP) unless noted in the comments, flags, or case narrative. If the report is to be used for regulatory compliance, it should be presented in its entirety, and not be altered.

NELAP ACCREDITED TNI LABORATORY

Approved By:

DRAFT REPORT, DATA SUBJECT TO CHANGE

Central Davis Sewer District
2200 South Sunset Drive
Kaysville, UT 84037

Project: Anerobic Metals
Project Manager: Jill Jones

Laboratory ID	Sample Name
23J1341-01	**Anerobic Sludge**

Amended Report Narrative

Report Changes:

Due to a laboratory error a dilution factor was missed on the TKN. This report corrects the TKN value.

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www.ChemtechFord.com

Amended **Certificate of Analysis** ***Amended***

Central Davis Sewer District
Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

PO#:
Receipt: **10/17/23 14:15 @ 6.6** °C
Date Reported: 11/1/2023
Project Name: **Anerobic Metals**

Sample ID: **Anerobic Sludge**

Matrix: **Solid** Sample Type: **Composite** Lab ID: **23J1341-01**
Date Sampled: **10/17/23 11:00** Sampled By: **Torrey**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Ammonia (Soluble) as N	564	mg/kg	20.0	SM 4500 NH3 H	10/18/23	10/18/23	
Nitrate, Soluble	ND	mg/kg	0.10	EPA 300.0	10/19/23	10/19/23	
Nitrite, Soluble	ND	mg/kg	0.10	EPA 300.0	10/19/23	10/19/23	
Total Kjeldahl Nitrogen	7840	mg/kg	495	SM 4500 Norg	10/24/23	10/26/23	
Total Solids	15.4	%	0.1	SM 2540G	10/24/23	10/24/23	
Total Volatile Solids	64.2	%	0.1	SM 2540 E	10/24/23	10/24/23	
Conductivity (Soluble)	4800	umho/cm	10	SSSA 10-3.3	10/19/23	10/19/23	
Metals							
Aluminum, Total	63000	mg/kg dry	47.4	EPA 6010D/3050B	10/18/23	10/19/23	
Arsenic, Total	46.3	mg/kg dry	23.7	EPA 6010D/3050B	10/18/23	10/19/23	
Cadmium, Total	0.948	mg/kg dry	2.37	EPA 6010D/3050B	10/18/23	10/19/23	J
Chromium, Total	22.3	mg/kg dry	2.37	EPA 6010D/3050B	10/18/23	10/19/23	
Copper, Total	844	mg/kg dry	2.37	EPA 6010D/3050B	10/18/23	10/19/23	
Lead, Total	ND	mg/kg dry	23.7	EPA 6010D/3050B	10/18/23	10/19/23	
Mercury, Total	0.527	mg/kg dry	0.154	EPA 7471A	10/18/23	10/19/23	
Molybdenum, Total	18.4	mg/kg dry	4.74	EPA 6010D/3050B	10/18/23	10/19/23	
Nickel, Total	15.5	mg/kg dry	2.37	EPA 6010D/3050B	10/18/23	10/19/23	
Phosphorus, Total as P	41900	mg/kg dry	4.74	EPA 6010D/3050B	10/18/23	10/19/23	
Selenium, Total	5.17	mg/kg dry	9.48	EPA 6010D/3050B	10/18/23	10/19/23	J
Silver, Total	2.23	mg/kg dry	2.37	EPA 6010D/3050B	10/18/23	10/19/23	J
Zinc, Total	905	mg/kg dry	4.74	EPA 6010D/3050B	10/18/23	10/19/23	

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Sandy, UT 84070
O:(801) 262-7299 F: (866) 792-0093
www.ChemtechFord.com

Amended **Certificate of Analysis** ***Amended***

Central Davis Sewer District
Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

PO#:
Receipt: **10/17/23 14:15** @ **6.6** °C
Date Reported: 11/1/2023
Project Name: **Anerobic Metals**

Report Footnotes

Abbreviations

ND = Not detected at the corresponding Minimum Reporting Limit (MRL).
1 mg/L = one milligram per liter or 1 mg/kg = one milligram per kilogram = 1 part per million.
1 ug/L = one microgram per liter or 1 ug/kg = one microgram per kilogram = 1 part per billion.
1 ng/L = one nanogram per liter or 1 ng/kg = one nanogram per kilogram = 1 part per trillion.
On calculated parameters, there may be a slight difference between summing the rounded values shown on the report vs the unrounded values used in the calculation.

Flag Descriptions

J = Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

CHAIN OF CUSTODY - SAMPLE SUBMITTAL FORM

COMPANY: Central Davis Sewer District
ADDRESS: 2200 S Sunset Drive
CITY/STATE/ZIP: Kaysville, UT 84037
PHONE #: 801-451-2190
CONTACT: Jill Jones, Manjot Masson
EMAIL: jillj@cdsewer.org, lab@cdsewer.org
PROJECT:
PO Number:
INVOICE EMAIL ADDRESS:

23J1341

RUSH Due Date*:

* Expedited turnaround subject to additional charge

QC Level
1 2 3 4

QC levels definition: QC1: none QC2: Batch QC, random sample
QC3: 25% surcharge. Narrative plus Batch QC, your sample selected
QC4: 40% surcharge. Add raw data

CHEMTECH-FORD LABORATORIES

Chemtech-Ford Laboratories
9632 South 500 West
Sandy, UT 84070
Phone: 801-262-7299
www.chemtechford.com

Sample condition			
☐ Custody Seal	☑ Correct Containers	Delivery Method	
☑ Container Intact	☑ Sufficient Sample Volume	☐ UPS	☐ USPS
☑ COC/Labels Agree	☐ Headspace Present (VOC)	☐ FedEx	☑ Chemtech-Ford Courier
☑ Received on Ice	☐ Temperature Blank	☐ Walk-in	☐ Customer Courier
☐	☑ Received within Holding Time		

Lab Use Only	CLIENT SAMPLE INFORMATION			
	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX
-01	1. Anaerobic Sludge	10-16-23	11:00 am	Sludge
	2.			
	3.			
	4.			
	5.			
	6.			
	7.			
	8.			
	9.			
	10.			

TESTS REQUESTED

✓ see attachment sheet													E. Coli/Coliform (Absent/Present)	E. Coli/Coliform (Enumerated)	HPC
Bottle type	G	16													
Lot #	1319														

Sampled by: [print] Torrey
Sampled by: [signature] Torrey

ON ICE NOT ON ICE Temp (C°): 6.6

Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.

Special Instructions:

Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time
T. Herrin	10-17-23 9:30	Tara Lee	10-17-23 9:40
[signature]	10-17-23 13:14	Denise Brun	10/17/23 14:15

Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum). Client agress to pay collection costs and attorney's fees.

23J1341 (Attachment)

Chain of Custody
Metals Analysis
Central Davis Sewer District

Analysis Required (YES/NO)	Parameter	Approved Analysis Method	Requied Prep. Method	Maximum Holding Time after Preservation
✓	Aluminum	SW-6010	SW-3050	6 months
✓	Arsenic	SW-6010/7060/7061	SW-3050	6 months
✓	Cadmium	SW-6010/7130/7131	SW-3050	6 months
✓	Chromium	SW-6010/7190/71911	SW-3050	6 months
✓	Copper	SW-6010/7210	SW-3050	6 months
✓	Lead	SW-6010/7420/7421	SW-7471	6 months
✓	Mercury	SW-7471	SW-3050	28 days
✓	Molybdenum	SW-6010/7480/7481	SW-3050	6 months
✓	Nickel	SW-6010/7520	SW-3050	6 months
✓	Selenium	SW-6010/7740/7741	SW-3050	6 months
✓	Silver	SW-6010	SW-3050	6 months
✓	Zinc	SW-6010/7950	SW-3050	6 months
✓	Total, Fixed & Volatile Solids	SM-2540	N/A	7 days
	pH	SW-9045	N/A	Immediately
	Total Volatile Acids	SM-5560	N/A	7 days
✓	Total Phosphorus	SM-1500-P	4500-PB	28 days
✓	Total Ammonia	SM-4500-NH_3	N/A	28 days
✓	Conductivity	SW-9050	N/A	28 days
✓	Nitrite+ Nitrate	SM-4500-NO2/4500_NO3 SW-846 Method 9200	N/A	28 days 28 days
✓	TKN or Organic N	SM-4500-N org	N/A	28 days
✓	Total Solids	SM-2540 G	N/A	7 days

Sample Date 10-16-23
# of Samples 1
Sample Location Anaerobic
Samples Collected By: Torrey

NPDES: #UT-0020974
Sample Quantity ~~Varies~~ Jar

Composite/Grab

Sample ID	Date and Time Collected
Anaerobic	10-16-23 11:00 am

Date and Time:
Reliquished By: P. Olsen

Date and Time:
Received By:

Facility Name: Central Davis Sewer District
Address: 2200 South Sunset Drive, Kaysville UT 84037
Contact: Jill S. Jones/Manjot K. Masson
Phone # 801-451-2190

Note: The laboratory report must include all metal analysis results in dry weight basis(do not include TKN, Nitrates or Ammonia), analyst identification, laboratory supervisor name and signature, a laboratory certification statement (if applicable), and the chain of custody form(s). Also, the laboratory must utilize appropriate QA/QC methodology as found in method reference source document (i.e., Standard Methods or SW-846) depending on the analysis preformed.

CHEMTECH-FORD
LABORATORIES

11/3/2023

Work Order: 23J2467
Project: Anerobic Metals

Central Davis Sewer District
Attn: Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

Client Service Contact: 801.262.7299

The analyses presented on this report were performed in accordance with the National Environmental Laboratory Accreditation Program (NELAP) unless noted in the comments, flags, or case narrative. If the report is to be used for regulatory compliance, it should be presented in its entirety, and not be altered.

NELAP ACCREDITED TNI LABORATORY

Approved By:

Mark Broadhead, Project Manager

Chemtech-Ford Laboratories
Serving the Intermountain West Since 1953

9632 South 500 West
Sandy, UT 84070
O:(801) 262-7299 F: (866) 792-0093
www.ChemtechFord.com

Certificate of Analysis

Central Davis Sewer District
Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

PO#:
Receipt: **10/31/23 13:35 @ 7.9** °C
Date Reported: 11/3/2023
Project Name: **Anerobic Metals**

Sample ID: **Anerobic**

Matrix: **Solid** Sample Type: **Composite** Lab ID: **23J2467-01**

Date Sampled: **10/30/23 9:40** Sampled By: **Jeffery Canada**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Ammonia (Soluble) as N	697	mg/kg	20.0	SM 4500 NH3 H	10/31/23	11/1/23	
Nitrate, Soluble	ND	mg/kg	1.00	EPA 300.0	10/31/23	11/1/23	
Nitrite, Soluble	ND	mg/kg	1.00	EPA 300.0	10/31/23	11/1/23	
Total Kjeldahl Nitrogen	969	mg/kg	1.0	SM 4500 Norg	11/2/23	11/3/23	
Total Solids	1.7	%	0.1	CTF8000	11/2/23	11/2/23	
Total Solids	2.7	%	0.1	SM 2540G	11/2/23	11/2/23	
Total Volatile Solids	54.2	%	0.1	SM 2540 E	11/2/23	11/2/23	
Conductivity (Soluble)	7760	umho/cm	10	SSSA 10-3.3	11/2/23	11/2/23	
Metals							
Aluminum, Total	88200	mg/kg dry	125	EPA 6010D/3010A	11/1/23	11/2/23	
Arsenic, Total	73.5	mg/kg dry	62.6	EPA 6010D/3010A	11/1/23	11/2/23	
Cadmium, Total	3.01	mg/kg dry	6.26	EPA 6010D/3010A	11/1/23	11/2/23	J
Chromium, Total	41.7	mg/kg dry	6.26	EPA 6010D/3010A	11/1/23	11/2/23	
Copper, Total	1240	mg/kg dry	6.26	EPA 6010D/3010A	11/1/23	11/2/23	
Lead, Total	21.7	mg/kg dry	62.6	EPA 6010D/3010A	11/1/23	11/2/23	J
Mercury, Total	1.06	mg/kg dry	0.252	EPA 7471A	11/2/23	11/2/23	
Molybdenum, Total	40.9	mg/kg dry	12.5	EPA 6010D/3010A	11/1/23	11/3/23	
Nickel, Total	20.8	mg/kg dry	6.26	EPA 6010D/3010A	11/1/23	11/2/23	
Phosphorus, Total as P	51800	mg/kg dry	12.5	EPA 6010D/3010A	11/1/23	11/2/23	
Selenium, Total	20.4	mg/kg dry	25.0	EPA 6010D/3010A	11/1/23	11/2/23	J
Silver, Total	9.89	mg/kg dry	6.26	EPA 6010D/3010A	11/1/23	11/3/23	
Zinc, Total	1290	mg/kg dry	12.5	EPA 6010D/3010A	11/1/23	11/2/23	

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Kaysville, UT 84037

PO#:
Receipt: **10/31/23 13:35 @ 7.9** °C
Date Reported: 11/3/2023
Project Name: **Anerobic Metals**

Report Footnotes

Abbreviations

ND = Not detected at the corresponding Minimum Reporting Limit (MRL).
1 mg/L = one milligram per liter or 1 mg/kg = one milligram per kilogram = 1 part per million.
1 ug/L = one microgram per liter or 1 ug/kg = one microgram per kilogram = 1 part per billion.
1 ng/L = one nanogram per liter or 1 ng/kg = one nanogram per kilogram = 1 part per trillion.
On calculated parameters, there may be a slight difference between summing the rounded values shown on the report vs the unrounded values used in the calculation.

Flag Descriptions

J = Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

CHAIN OF CUSTODY - SAMPLE SUBMITTAL FORM

COMPANY: Central Davis Sewer District
ADDRESS: 2200 South Sunset Drive
CITY/STATE/ZIP: Kaysville UT 84037
PHONE #: 801-451-2190
CONTACT: Jill Jones, Manjot Masson
EMAIL: jilly@cdsewer.org, Lab@cdsewer.org
PROJECT: Anaerobic Metals
PO Number:
INVOICE EMAIL ADDRESS:

23J2467

RUSH Due Date*:
3 Day Rush

* Expedited turnaround subject to additional charge

QC Level
1 2 3 4

QC levels definition: QC1: none QC2: Batch QC, random sample
QC3: 25% surcharge. Narrative plus Batch QC, your sample selected
QC4: 40% surcharge. Add raw data

CHEMTECH-FORD LABORATORIES

Chemtech-Ford Laboratories
9632 South 500 West
Sandy, UT 84070
Phone: 801-262-7299
www.chemtechford.com

Sample condition			
	Custody Seal	✓	Correct Containers
✓	Container Intact	✓	Sufficient Sample Volume
✓	COC/Labels Agree		Headspace Present (VOC)
✓	Received on Ice		Temperature Blank
		✓	Received within Holding Time

Delivery Method			
	UPS		USPS
	FedEx	✓	Chemtech-Ford Courier
	Walk-in		Customer Courier

Lab Use Only	CLIENT SAMPLE INFORMATION			
	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX
-01	1. Anaerobic	10.30.23	9:40am	WW
	2.			
	3.			
	4.			
	5.			
	6.			
	7.			
	8.			
	9.			
	10.			

Bottle type: G16
Lot #: 1319

TESTS REQUESTED

Anaerobic Metals (see attached)	E. Coli/Coliform (Absent/Present)	E. Coli/Coliform (Enumerated)	HPC
✓			

Due 11/3
RUSH
S-8194, ULINE, 800-295-5510

Sampled by: [print]
Sampled by: [signature]

ON ICE NOT ON ICE Temp (C°): 7.9

Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.

Special Instructions:

Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time
TRACE WORKMAN	10/31/23 9:59 AM		10-31-23 10:00
	10-31-23 1335	Denise Brun	10/31/23 1335

Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum). Client agress to pay collection costs and attorney's fees.

23J2467 (Attachment)

Chain of Custody
Metals Analysis
Central Davis Sewer District

Analysis Required (YES/NO)	Parameter	Approved Analysis Method	Requied Prep. Method	Maximum Holding Time after Preservation
✓	Aluminum	SW-6010	SW-3050	6 months
✓	Arsenic	SW-6010/7060/7061	SW-3050	6 months
✓	Cadmium	SW-6010/7130/7131	SW-3050	6 months
✓	Chromium	SW-6010/7190/71911	SW-3050	6 months
✓	Copper	SW-6010/7210	SW-3050	6 months
✓	Lead	SW-6010/7420/7421	SW-7471	6 months
✓	Mercury	SW-7471	SW-3050	28 days
✓	Molybdenum	SW-6010/7480/7481	SW-3050	6 months
✓	Nickel	SW-6010/7520	SW-3050	6 months
✓	Selenium	SW-6010/7740/7741	SW-3050	6 months
✓	Silver	SW-6010	SW-3050	6 months
✓	Zinc	SW-6010/7950	SW-3050	6 months
✓	Total, Fixed & Volatile Solids	SM-2540	N/A	7 days
	pH	SW-9045	N/A	Immediately
	Total Volatile Acids	SM-5560	N/A	7 days
✓	Total Phosphorus	SM-1500-P	4500-PB	28 days
✓	Total Ammonia	SM-4500-NH_3	N/A	28 days
✓	Conductivity	SW-9050	N/A	28 days
✓	Nitrite+ Nitrate	SM-4500-NO2/4500_NO3 SW-846 Method 9200	N/A	28 days 28 days
✓	TKN or Organic N	SM-4500-N org	N/A	28 days
✓	Total Solids	SM-2540 G	N/A	7 days

Sample Date 10.30.23
# of Samples 1
Sample Location Anaerobic
Samples Collected By: Jeffery Canada.

NPDES: #UT-0020974
Sample Quantity JAR

(Composite/Grab)

Sample ID	Date and Time Collected
Anaerobic	10.30.23 9:40am

Date and Time:
Reliquished By:

Date and Time:
Received By:

Facility Name: Central Davis Sewer District
Address: 2200 South Sunset Drive, Kaysville UT 84037
Contact: Jill S. Jones/Manjot K. Masson
Phone # 801-451-2190

Note: The laboratory report must include all metal analysis results in dry weight basis(do not include TKN, Nitrates or Ammonia), analyst identification, laboratory supervisor name and signature, a laboratory certification statement (if applicable), and the chain of custody form(s). Also, the laboratory must utilize appropriate QA/QC methodology as found in method reference source document (i.e., Standard Methods or SW-846) depending on the analysis preformed.

CHEMTECH-FORD
LABORATORIES

12/6/2023

Work Order: 23L0202
Project: Anaerobic Metals

Central Davis Sewer District
Attn: Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

Client Service Contact: 801.262.7299

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NELAP ACCREDITED TNI LABORATORY

Approved By:

Mark Broadhead, Project Manager

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www.ChemtechFord.com

Certificate of Analysis

Central Davis Sewer District
Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

PO#:
Receipt: **12/5/23 14:45 @ 9.7** °C
Date Reported: 12/6/2023
Project Name: **Anaerobic Metals**

Sample ID: **Anaerobic Sludge**

Matrix: **Solid** Sample Type: **Composite** Lab ID: **23L0202-01**

Date Sampled: **12/4/23 14:17** Sampled By: **Paco / Wesley**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Total Solids	14.1	%	0.1	CTF8000	12/5/23	12/6/23	
Metals							
Arsenic, Total	41.8	mg/kg dry	9.02	EPA 6010D/3050B	12/5/23	12/6/23	

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Central Davis Sewer District
Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

PO#:
Receipt: **12/5/23 14:45 @ 9.7** °C
Date Reported: 12/6/2023
Project Name: **Anaerobic Metals**

Report Footnotes

Abbreviations

ND = Not detected at the corresponding Minimum Reporting Limit (MRL).
1 mg/L = one milligram per liter or 1 mg/kg = one milligram per kilogram = 1 part per million.
1 ug/L = one microgram per liter or 1 ug/kg = one microgram per kilogram = 1 part per billion.
1 ng/L = one nanogram per liter or 1 ng/kg = one nanogram per kilogram = 1 part per trillion.
On calculated parameters, there may be a slight difference between summing the rounded values shown on the report vs the unrounded values used in the calculation.

CHAIN OF CUSTODY - SAMPLE SUBMITTAL FORM

COMPANY: Central Davis Sewer District
ADDRESS: 2200 S Sunset Drive
CITY/STATE/ZIP: Kaysville, UT 84037
PHONE #: 801-451-2190
CONTACT: Jill Jones / Manjot Masson
EMAIL: jillj@cdsewer.org / lab@cdsewer.org
PROJECT: Anaerobic & Aerobic sludge
PO Number:
INVOICE EMAIL ADDRESS:

23L0202

RUSH Due Date*: 12-6-23 rush on arsenic for anaerobic

** Expedited turnaround subject to additional charge*

QC Level: 1 2 3 4

QC levels definition: QC1: none QC2: Batch QC, random sample
QC3: 25% surcharge. Narrative plus Batch QC, your sample selected
QC4: 40% surcharge. Add raw data

CHEMTECH-FORD LABORATORIES
Chemtech-Ford Laboratories
9632 South 500 West
Sandy, UT 84070
Phone: 801-262-7299
www.chemtechford.com

Sample condition			
Custody Seal	✓ Correct Containers	Delivery Method	
✓ Container Intact	✓ Sufficient Sample Volume	UPS	USPS
✓ COC/Labels Agree	Headspace Present (VOC)	FedEx	✓ Chemtech-Ford Courier
✓ Received on Ice	Temperature Blank	Walk-in	Customer Courier
	✓ Received within Holding Time		

Due 12/6
RUSH
S-8194, ULINE, 800-295-5510

Lab Use Only	CLIENT SAMPLE INFORMATION				TESTS REQUESTED																
	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX	metals - list														E. Coli/Coliform (Absent/Present)	E. Coli/Coliform (Enumerated)	HPC
-01	1. Anaerobic sludge	12-4-23	2:17pm	sludge	✓																
~~-02~~ DB	2. Aerobic sludge	12-4-23	4:00pm	sludge	✓																
	3.																				
	4.																				
	5.																				
	6.																				
	7.																				
	8.																				
	9.																				
	10.																				

Bottle type: G16
Lot #: 1174

Sampled by: [print] Paco / Wesley
Sampled by: [signature] PO / WJ

ON ICE NOT ON ICE Temp (C°): 9.7

Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.

Special Instructions:

Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time
[signature]	12-5-23 1055	[signature]	12-5-23 1055
[signature]	12-5-23 1445	[signature]	12/5/23 1445

Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum). Client agrees to pay collection costs and attorney's fees.

2310202 (Attachment)

Chain of Custody
Metals Analysis
Central Davis Sewer District

Analysis Required (YES/NO)	Parameter	Approved Analysis Method	Requied Prep. Method	Maximum Holding Time after Preservation
	Aluminum	SW-6010	SW-3050	6 months
✓	Arsenic	SW-6010/7060/7061	SW-3050	6 months
	Cadmium	SW-6010/7130/7131	SW-3050	6 months
	Chromium	SW-6010/7190/71911	SW-3050	6 months
	Copper	SW-6010/7210	SW-3050	6 months
	Lead	SW-6010/7420/7421	SW-7471	6 months
	Mercury	SW-7471	SW-3050	28 days
	Molybdenum	SW-6010/7480/7481	SW-3050	6 months
	Nickel	SW-6010/7520	SW-3050	6 months
	Selenium	SW-6010/7740/7741	SW-3050	6 months
	Silver	SW-6010	SW-3050	6 months
	Zinc	SW-6010/7950	SW-3050	6 months
	Total, Fixed & Volatile Solids	SM-2540	N/A	7 days
	pH	SW-9045	N/A	Immediately
	Total Volatile Acids	SM-5560	N/A	7 days
	Total Phosphorus	SM-1500-P	4500-PB	28 days
	Total Ammonia	SM-4500-NH_3	N/A	28 days
	Conductivity	SW-9050	N/A	28 days
	Nitrite+ Nitrate	SM-4500-NO2/4500_NO3 SW-846 Method 9200	N/A	28 days 28 days
	TKN or Organic N	SM-4500-N org	N/A	28 days
	Total Solids	SM-2540 G	N/A	7 days

Sample Date 12-4-23
# of Samples 1
Sample Location Anaerobic
Samples Collected By: Wesley

NPDES: #UT-0020974
Sample Quantity Jar

Composite/Grab

Sample ID	Date and Time Collected
Anaerobic	12-4-23 2:17pm

Date and Time:
Reliquished By: P. Glenn

Date and Time:
Received By:

Facility Name: Central Davis Sewer District
Address: 2200 South Sunset Drive, Kaysville UT 84037
Contact: Jill S. Jones/Manjot K. Masson
Phone # 801-451-2190

Note: The laboratory report must include all metal analysis results in dry weight basis(do not include TKN, Nitrates or Ammonia), analyst identification, laboratory supervisor name and signature, a laboratory certification statement (if applicable), and the chain of custody form(s). Also, the laboratory must utilize appropriate QA/QC methodology as found in method reference source document (i.e., Standard Methods or SW-846) depending on the analysis preformed.

CHEMTECH-FORD
LABORATORIES

12/18/2023

Work Order: 23L0334
Project: Anaerobic & Aerobic Sludge

Central Davis Sewer District
Attn: Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

Client Service Contact: 801.262.7299

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Approved By:

Mark Broadhead, Project Manager

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Certificate of Analysis

Central Davis Sewer District
Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

PO#:
Receipt: **12/5/23 14:45 @ 9.3** °C
Date Reported: 12/18/2023
Project Name: **Anaerobic & Aerobic Sludge**

Sample ID: **Anaerobic Sludge**

Matrix: **Solid**
Lab ID: **23L0334-01**
Date Sampled: **12/4/23 14:17**
Sampled By: **Paco/Wesley**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Ammonia (Soluble) as N	623	mg/kg	20.0	SM 4500 NH3 H	12/8/23	12/8/23	
Nitrate, Soluble	ND	mg/kg	0.10	EPA 300.0	12/7/23	12/7/23	
Nitrite, Soluble	ND	mg/kg	0.10	EPA 300.0	12/7/23	12/7/23	
Total Kjeldahl Nitrogen	6660	mg/kg	2.0	SM 4500 Norg	12/12/23	12/13/23	
Total Solids	14.3	%	0.1	CTF8000	12/13/23	12/14/23	
Conductivity (Soluble)	4710	umho/cm	10	SSSA 10-3.3	12/7/23	12/7/23	
Metals							
Aluminum, Total	58100	mg/kg dry	31.0	EPA 6010D/3050B	12/6/23	12/7/23	
Cadmium, Total	0.713	mg/kg dry	1.55	EPA 6010D/3050B	12/6/23	12/7/23	J
Chromium, Total	18.6	mg/kg dry	1.55	EPA 6010D/3050B	12/6/23	12/7/23	
Copper, Total	730	mg/kg dry	1.55	EPA 6010D/3050B	12/6/23	12/7/23	
Lead, Total	5.83	mg/kg dry	15.5	EPA 6010D/3050B	12/6/23	12/7/23	J
Mercury, Total	0.213	mg/kg dry	0.174	EPA 7471A	12/8/23	12/8/23	
Molybdenum, Total	12.8	mg/kg dry	3.10	EPA 6010D/3050B	12/6/23	12/7/23	
Nickel, Total	10.8	mg/kg dry	1.55	EPA 6010D/3050B	12/6/23	12/7/23	
Phosphorus, Total as P	36300	mg/kg dry	15.5	EPA 6010D/3050B	12/6/23	12/7/23	
Selenium, Total	8.96	mg/kg dry	6.20	EPA 6010D/3050B	12/6/23	12/7/23	
Silver, Total	2.88	mg/kg dry	1.55	EPA 6010D/3050B	12/6/23	12/7/23	
Zinc, Total	750	mg/kg dry	3.10	EPA 6010D/3050B	12/6/23	12/7/23	

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Certificate of Analysis

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Jill Jones
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Kaysville, UT 84037

PO#:
Receipt: **12/5/23 14:45 @ 9.3** °C
Date Reported: 12/18/2023
Project Name: **Anaerobic & Aerobic Sludge**

Sample ID: **Aerobic Sludge**
Matrix: **Solid**
Lab ID: **23L0334-02**
Date Sampled: **12/4/23 16:00**
Sampled By: **Paco/Wesley**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Ammonia (Soluble) as N	57.6	mg/kg	2.00	SM 4500 NH3 H	12/8/23	12/8/23	
Nitrate, Soluble	ND	mg/kg	0.10	EPA 300.0	12/7/23	12/7/23	
Nitrite, Soluble	ND	mg/kg	0.10	EPA 300.0	12/7/23	12/7/23	
Total Kjeldahl Nitrogen	13400	mg/kg	5.3	SM 4500 Norg	12/12/23	12/13/23	
Total Solids	18.6	%	0.1	CTF8000	12/6/23	12/7/23	
Conductivity (Soluble)	4290	umho/cm	10	SSSA 10-3.3	12/7/23	12/7/23	
Metals							
Aluminum, Total	10000	mg/kg dry	15.2	EPA 6010D/3050B	12/6/23	12/7/23	
Arsenic, Total	9.07	mg/kg dry	7.62	EPA 6010D/3050B	12/6/23	12/7/23	
Cadmium, Total	0.564	mg/kg dry	0.762	EPA 6010D/3050B	12/6/23	12/7/23	J
Chromium, Total	8.56	mg/kg dry	0.762	EPA 6010D/3050B	12/6/23	12/7/23	
Copper, Total	464	mg/kg dry	0.762	EPA 6010D/3050B	12/6/23	12/7/23	
Lead, Total	4.62	mg/kg dry	7.62	EPA 6010D/3050B	12/6/23	12/7/23	J
Mercury, Total	0.196	mg/kg dry	0.146	EPA 7471A	12/8/23	12/8/23	
Molybdenum, Total	7.91	mg/kg dry	1.52	EPA 6010D/3050B	12/6/23	12/7/23	
Nickel, Total	8.43	mg/kg dry	0.762	EPA 6010D/3050B	12/6/23	12/7/23	
Phosphorus, Total as P	20500	mg/kg dry	7.62	EPA 6010D/3050B	12/6/23	12/7/23	
Selenium, Total	10.8	mg/kg dry	3.05	EPA 6010D/3050B	12/6/23	12/7/23	
Silver, Total	1.54	mg/kg dry	0.762	EPA 6010D/3050B	12/6/23	12/7/23	
Zinc, Total	397	mg/kg dry	1.52	EPA 6010D/3050B	12/6/23	12/7/23	

Chemtech-Ford Laboratories
Serving the Intermountain West Since 1953

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www.ChemtechFord.com

Certificate of Analysis

Central Davis Sewer District
Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

PO#:
Receipt: **12/5/23 14:45 @ 9.3** °C
Date Reported: 12/18/2023
Project Name: **Anaerobic & Aerobic Sludge**

Report Footnotes

Abbreviations

ND = Not detected at the corresponding Minimum Reporting Limit (MRL).
1 mg/L = one milligram per liter or 1 mg/kg = one milligram per kilogram = 1 part per million.
1 ug/L = one microgram per liter or 1 ug/kg = one microgram per kilogram = 1 part per billion.
1 ng/L = one nanogram per liter or 1 ng/kg = one nanogram per kilogram = 1 part per trillion.
On calculated parameters, there may be a slight difference between summing the rounded values shown on the report vs the unrounded values used in the calculation.

Flag Descriptions

J = Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

CHAIN OF CUSTODY - SAMPLE SUBMITTAL FORM

COMPANY: Central Davis Sewer District
ADDRESS: 2200 S Sunset Drive
CITY/STATE/ZIP: Kaysville, UT 84037
PHONE #: 801-451-2190
CONTACT: Jill Jones / Manjot Masson
EMAIL: jillj@cdsewer.org / lab@cdsewer.org
PROJECT: Anaerobic & Aerobic sludge
PO Number:
INVOICE EMAIL ADDRESS:

23L0334

Arsenic will be reported on Workorder 23L0202

RUSH Due Date*:
12-6-23 rush on arsenic for anaerobic

* Expedited turnaround subject to additional charge DB 12/5/23

QC Level
1 2 3 4

QC levels definition: QC1: none QC2: Batch QC, random sample
QC3: 25% surcharge. Narrative plus Batch QC, your sample selected
QC4: 40% surcharge. Add raw data

CHEMTECH-FORD LABORATORIES

Chemtech-Ford Laboratories
9632 South 500 West
Sandy, UT 84070
Phone: 801-262-7299
www.chemtechford.com

Sample condition			
	Custody Seal	✓	Correct Containers
✓	Container Intact	✓	Sufficient Sample Volume
✓	COC/Labels Agree		Headspace Present (VOC)
✓	Received on Ice	✓	Temperature Blank
		✓	Received within Holding Time

Delivery Method			
	UPS	✓	USPS
	FedEx	✓	Chemtech-Ford Courier
	Walk-in		Customer Courier

12/6/23

Lab Use Only	CLIENT SAMPLE INFORMATION – LOCATION / IDENTIFICATION	DATE	TIME	MATRIX	TESTS REQUESTED: metals - list												E. Coli/Coliform (Absent/Present)	E. Coli/Coliform (Enumerated)	HPC
DB 01	1. Anaerobic sludge	12-4-23	2:17pm	sludge	✓														
02 01	2. Aerobic sludge	12-4-23	4:00pm	sludge	✓	←													
	3. 02																		
	4.																		
	5.																		
	6.																		
	7.																		
	8.																		
	9.																		
	10.																		

Bottle type G1L
Lot # 1319

Sampled by: [print] Paco / Wesley
Sampled by: [signature] PO / WJ

ON ICE NOT ON ICE Temp (C°): 9.3

Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.

Special Instructions:

Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time
	12-5-23 1055		12-5-23 1055
Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time
	12-5-23 1445		12/5/23 1445
Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time

Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum). Client agress to pay collection costs and attorney's fees.

2310334 (Attachment)

Chain of Custody
Metals Analysis
Central Davis Sewer District

Analysis Required (YES/NO)	Parameter	Approved Analysis Method	Requied Prep. Method	Maximum Holding Time after Preservation
✓	Aluminum	SW-6010	SW-3050	6 months
✓	Arsenic	SW-6010/7060/7061	SW-3050	6 months
✓	Cadmium	SW-6010/7130/7131	SW-3050	6 months
✓	Chromium	SW-6010/7190/71911	SW-3050	6 months
✓	Copper	SW-6010/7210	SW-3050	6 months
✓	Lead	SW-6010/7420/7421	SW-7471	6 months
✓	Mercury	SW-7471	SW-3050	28 days
✓	Molybdenum	SW-6010/7480/7481	SW-3050	6 months
✓	Nickel	SW-6010/7520	SW-3050	6 months
✓	Selenium	SW-6010/7740/7741	SW-3050	6 months
✓	Silver	SW-6010	SW-3050	6 months
✓	Zinc	SW-6010/7950	SW-3050	6 months
	Total, Fixed & Volatile Solids	SM-2540	N/A	7 days
	pH	SW-9045	N/A	Immediately
	Total Volatile Acids	SM-5560	N/A	7 days
✓	Total Phosphorus	SM-1500-P	4500-PB	28 days
✓	Total Ammonia	SM-4500-NH_3	N/A	28 days
✓	Conductivity	SW-9050	N/A	28 days
/	Nitrite+ Nitrate	SM-4500-NO2/4500_NO3 SW-846 Method 9200	N/A	28 days 28 days
✓	TKN or Organic N	SM-4500-N org	N/A	28 days
✓	Total Solids	SM-2540 G	N/A	7 days

Sample Date 12-4-23
# of Samples 1
Sample Location Aerobic
Samples Collected By: Paco

NPDES: #UT-0020974
Sample Quantity Jar
Composite/Grab

Sample ID	Date and Time Collected
Aerobic	12-4-23 4:00pm

Date and Time:
Reliquished By: P. Jones

Date and Time:
Received By:

Facility Name: Central Davis Sewer District
Address: 2200 South Sunset Drive, Kaysville UT 84037
Contact: Jill S. Jones/Manjot K. Masson
Phone # 801-451-2190

Note: The laboratory report must include all metal analysis results in dry weight basis(do not include TKN, Nitrates or Ammonia), analyst identification, laboratory supervisor name and signature, a laboratory certification statement (if applicable), and the chain of custody form(s). Also, the laboratory must utilize appropriate QA/QC methodology as found in method reference source document (i.e., Standard Methods or SW-846) depending on the analysis preformed.

CHEMTECH-FORD
LABORATORIES

12/29/2023

Work Order: 23L1946
Project: Anaerobic Sludge

Central Davis Sewer District
Attn: Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

Client Service Contact: 801.262.7299

The analyses presented on this report were performed in accordance with the National Environmental Laboratory Accreditation Program (NELAP) unless noted in the comments, flags, or case narrative. If the report is to be used for regulatory compliance, it should be presented in its entirety, and not be altered.

NELAP ACCREDITED TNI LABORATORY

Approved By:

Andrew Royer, Project Manager

Chemtech-Ford Laboratories
Serving the Intermountain West Since 1953

9632 South 500 West
Sandy, UT 84070
O:(801) 262-7299 F: (866) 792-0093
www.ChemtechFord.com

Certificate of Analysis

Central Davis Sewer District
Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

PO#:
Receipt: **12/26/23 13:30 @ 10.4** °C
Date Reported: 12/29/2023
Project Name: **Anaerobic Sludge**

Sample ID: **Anaerobic Sludge**
Matrix: **Solid**
Lab ID: **23L1946-01**
Date Sampled: **12/22/23 11:04**
Sampled By: **Jace**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Total Solids	16.3	%	0.1	SM 2540G	12/28/23	12/28/23	
Metals							
Arsenic, Total	32.0	mg/kg dry	19.3	EPA 6010D/3050B	12/27/23	12/28/23	

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Certificate of Analysis

Central Davis Sewer District
Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

PO#:
Receipt: **12/26/23 13:30 @ 10.4** °C
Date Reported: 12/29/2023
Project Name: **Anaerobic Sludge**

Report Footnotes

Abbreviations

ND = Not detected at the corresponding Minimum Reporting Limit (MRL).
1 mg/L = one milligram per liter or 1 mg/kg = one milligram per kilogram = 1 part per million.
1 ug/L = one microgram per liter or 1 ug/kg = one microgram per kilogram = 1 part per billion.
1 ng/L = one nanogram per liter or 1 ng/kg = one nanogram per kilogram = 1 part per trillion.
On calculated parameters, there may be a slight difference between summing the rounded values shown on the report vs the unrounded values used in the calculation.

CHAIN OF CUSTODY - SAMPLE SUBMITTAL FORM

COMPANY: Central Davis Sewer District
ADDRESS: 2200 S Sunset Drive
CITY/STATE/ZIP: Kaysville, UT 84037
PHONE #: 801-451-2190
CONTACT: Jill Jones / Manjot Masson
EMAIL: jillj@cdsewer.org / lab@cdsewer.org
PROJECT: Anaerobic Sludge
PO Number:
INVOICE EMAIL ADDRESS:

23L1946

RUSH Due Date*:
3 Days.

*Expedited turnaround subject to additional charge

QC Level
1 2 3 4

QC levels definition: QC1: none QC2: Batch QC, random sample
QC3: 25% surcharge. Narrative plus Batch QC, your sample selected
QC4: 40% surcharge. Add raw data

CHEMTECH-FORD LABORATORIES

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Phone: 801-262-7299
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Sample condition			
	Custody Seal	✓	Correct Containers
✓	Container Intact	✓	Sufficient Sample Volume
✓	COC/Labels Agree		Headspace Present (VOC)
✓	Received on Ice		Temperature Blank
		✓	Received within Holding Time

Delivery Method			
	UPS		USPS
	FedEx	✓	Chemtech-Ford Courier
	Walk-in		Customer Courier

Lab Use Only	CLIENT SAMPLE INFORMATION			
	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX
01	1. Anaerobic Sludge	12-22-23	11:04 am	Sludge
	2.			
	3.			
	4.			
	5.			
	6.			
	7.			
	8.			
	9.			
	10.			

TESTS REQUESTED

metals - list (Arsenic only)	E. Coli/Coliform (Absent/Present)	E. Coli/Coliform (Enumerated)	HPC
✓			

Due 12/29
RUSH
S-8194, ULINE, 800-295-5510

Bottle type: G1602
Lot #: 1319

Sampled by: [print] Jace
Sampled by: [signature] Jace

ON ICE NOT ON ICE Temp (C°): 10.4

Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.

Special Instructions:

Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time
Nolan Baggs	12-26-23 10:13		12-26-23 10:13
Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time
	12-26-23 1330		12/26/23 1350
Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time

Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum). Client agrees to pay collection costs and attorney's fees.

2361946

Chain of Custody
Metals Analysis
Central Davis Sewer District

Analysis Required (YES/NO)	Parameter	Approved Analysis Method	Requied Prep. Method	Maximum Holding Time after Preservation
_____	Aluminum	SW-6010	SW-3050	6 months
✓	Arsenic	SW-6010/7060/7061	SW-3050	6 months
_____	Cadmium	SW-6010/7130/7131	SW-3050	6 months
_____	Chromium	SW-6010/7190/71911	SW-3050	6 months
_____	Copper	SW-6010/7210	SW-3050	6 months
_____	Lead	SW-6010/7420/7421	SW-7471	6 months
_____	Mercury	SW-7471	SW-3050	28 days
_____	Molybdenum	SW-6010/7480/7481	SW-3050	6 months
_____	Nickel	SW-6010/7520	SW-3050	6 months
_____	Selenium	SW-6010/7740/7741	SW-3050	6 months
_____	Silver	SW-6010	SW-3050	6 months
_____	Zinc	SW-6010/7950	SW-3050	6 months
_____	Total, Fixed & Volatile Solids	SM-2540	N/A	7 days
_____	pH	SW-9045	N/A	Immediately
_____	Total Volatile Acids	SM-5560	N/A	7 days
_____	Total Phosphorus	SM-1500-P	4500-PB	28 days
_____	Total Ammonia	SM-4500-NH_3	N/A	28 days
_____	Conductivity	SW-9050	N/A	28 days
_____	Nitrite+ Nitrate	SM-4500-NO2/4500_NO3 SW-846 Method 9200	N/A	28 days 28 days
_____	TKN or Organic N	SM-4500-N org	N/A	28 days
_____	Total Solids	SM-2540 G	N/A	7 days

Sample Date 12-22-23 NPDES: #UT-0020974

# of Samples 1 Sample Quantity Jar

Sample Location Anaerobic

Samples Collected By: Jace Composite/Grab

Sample ID	Date and Time Collected
Anaerobic	12-22-23 11:04 am
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Date and Time:
Reliquished By:_____

Date and Time:
Received By:_____

Facility Name: Central Davis Sewer District
Address: 2200 South Sunset Drive, Kaysville UT 84037
Contact: Jill S. Jones/Manjot K. Masson
Phone # 801-451-2190

Note: The laboratory report must include all metal analysis results in dry weight basis(do not include TKN, Nitrates or Ammonia), analyst identification, laboratory supervisor name and signature, a laboratory certification statement (if applicable), and the chain of custody form(s). Also, the laboratory must utilize appropriate QA/QC methodology as found in method reference source document (i.e., Standard Methods or SW-846) depending on the analysis preformed.

Compost Biosolids Chemical Quality

1. 2023 Testing Summary
2. Historical Testing Summary
3. Quality Control Charts
4. Laboratory Reports

CDSD Compost Metals Quality - 2023

Date	Type	Aluminum ppm	Arsenic ppm	Cadmium ppm	Chromium ppm	Copper ppm	Lead ppm	Mercury ppm	Molyb ppm	Nickel ppm	Phosphorus ppm	Selenium ppm	Silver ppm	Zinc ppm
5/8/2023	CPT	20,000	7.7	0.6	9.0	302	4.7	0.09	5.5	5.1	13,100	2.8	0.8	358
5/8/2023	CPT	20,000	8.2	0.6	8.9	306	5.2	0.13	4.2	4.5	13,300	2.6	0.8	346
5/30/2023	CPT	5,360	3.1	0.3	6.0	177	3.0	0.10	2.7	3.4	7,390	0.6	0.3	171
5/30/2023	CPT	5,870	4.2	0.3	6.4	206	4.5	0.20	2.7	3.6	7,950	1.6	0.3	209
5/30/2023	CPT	6,800	3.3	0.4	7.4	229	3.6	0.01	2.3	4.2	8,790	1.6	0.4	206
7/5/2023	CPT	7,940	3.0	0.6	8.7	221	2.4	0.1	1.3	5.1	11,700	1.4	0.7	243
Total Year Values														
Minimum		**5,360**	**3.0**	**0.3**	**6.0**	**177**	**2.4**	**0.0**	**1.3**	**3.4**	**7,390**	**0.6**	**0.3**	**171**
Average		**10,995**	**4.9**	**0.5**	**7.7**	**240**	**3.9**	**0.1**	**3.1**	**4.3**	**10,372**	**1.8**	**0.6**	**256**
Maximum		**20,000**	**8.2**	**0.6**	**9.0**	**306**	**5.2**	**0.2**	**5.5**	**5.1**	**13,300**	**2.8**	**0.8**	**358**

Date	TKN ppm	Ammonia as N ppm	Nitrate+ Nitrite- Total ppm	Total Solids %
5/8/2023	7,620	218	217	52
5/8/2023	6,680	184	231	47
5/30/2023	8,390	826	109	62
5/30/2023	8,450	906	5	57
5/30/2023	11,700	1,030	435	65
7/5/2023	11,600	1,050	78	55
Minimum	**6,680**	**184**	**5**	**47**
Average	**9,073**	**702**	**179**	**56**
Maximum	**11,700**	**1,050**	**435**	**65**

***Notes**: All ND values are taken as 0.25*MDL and shown as blue

Central Davis Sewer District
Composted Biosolids - Historic Table

		Aluminum	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Molyb	Nickel	Phosphr	Selenium	Silver	Zinc
Date	#	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
4/5/1999	Compost 1	7,700.0	14	0.7	14	290	18	2.4	15	12		14	4.7	220
4/5/1999	Compost 2	11,000.0	15	0.8	18	320	22	2.8	3	15		15	6	340
4/5/1999	Compost 3	9,900.0	14	0.7	17	300	32	3	2.8	13		14	5.5	260
4/5/1999	Compost 4	9,800.0	14	0.7	16	300	25	2.4	4	13		14	5.3	260
4/6/2000	N22	12,000.0	11	1	18	410	52	1.4	3	13	17,000.0	5	9	320
4/6/2000	S22	10,000.0	5	1.1	17	380	28	1.3	7	12	15,000.0	5	8	300
4/6/2000	W12	13,000.0	5	1	21	400	33	1.9	3	16	18,000.0	5	8.7	310
4/6/2000	E12	12,000.0	5	1.4	19	430	39	1.6	4	14	19,000.0	5	9	330
4/6/2000	N21	12,000.0	5	1	18	380	38	1.64	3	13	17,000.0	5	8	310
4/6/2000	S21	9,400.0	5	1	19	340	28	1.6	2	11	14,000.0	5	7	260
4/6/2000	W11	13,000.0	5	1	19	450	36	1.6	4	14	19,000.0	5	9.5	320
4/6/2000	E11	11,000.0	5	1	17	360	120	2.3	3	13	17,000.0	10	8.6	310
11/3/2000	18	12,000.0	5	0.6	15	390	20	1.3	6	11	18,000.0	13	10	280
11/3/2000	43	10,000.0	5.5	0.6	13	350	16	1.6	3	9	16,000.0	5.5	8	250
11/3/2000	80	13,000.0	6	0.3	17	460	26	1.9	5	13	19,000.0	16	9.3	330
11/3/2000	86	17,000.0	6.5	0.9	20	0.5	37	1.9	7	15	24,000.0	19	14	410
11/3/2000	87	12,000.0	6.5	0.35	15	420	27	2	6	11	17,000.0	6.5	9	310
11/3/2000	93	14,000.0	6.5	0.3	16	450	23	2	5	12	20,000.0	6.5	9.6	300
12/5/2001	1	8,400.0	5	0.25	9.6	370	16	2	4	9	13,000.0	5	6.9	220.0
12/5/2001	2	12,000.0	4.5	0.6	13	450	21	2.1	4	10	19,000.0	11	9	300.0
12/5/2001	3	9,300.0	5	0.5	11	370	14	1.2	4	9	14,000.0	5	7	230.0
12/5/2001	4	15,000.0	4.5	0.8	15	540	34	2.6	5	13	22,000.0	4.5	13	380.0
6/17/2002	1 1	8,800.0	17	0.6	26	360	10	4		9	13000.0	11	5.4	250
6/17/2002	1 2	13,000.0	5	0.5	15	460	11	5		12	20000.0	5	8.2	290
6/17/2002	2 1	13,000.0	5	0.7	14	430	14	5		10	18000.0	11	7.3	290
6/17/2002	2 2	6,800.0	5	0.025	7.7	290	9	6		7	10000.0	5	4.4	170
6/17/2002	3 1	31,000.0	5	0.025	30.7	170	3.5	4		4	7100.0	5	2.4	96
6/17/2002	3 2	16,000.0	10	0.5	19	530	7	5		14	24000.0	10	8	370
5/8/2003	11	13,000	12	1	12	390	15	1.7	3	11	16000.0	5	6.8	290
5/8/2003	12	13,000	5	1.1	11	410	17	2	4	10	16000.0	5	7.8	280
5/8/2003	13	14,000	5	1.2	13	480	18	2.3	5	12	20000.0	5	8.2	330
5/8/2003	14	9,800	5	0.9	8.8	310	12	2.2	4	8	14000.0	5	4.5	240
5/8/2003	21	12,000	5	1	11	370	16	1.6	4	9	15000.0	5	5.7	280
5/8/2003	22	12,000	5	1	11	360	16	2	4	10	16000.0	5	5.4	260
5/8/2003	23	11,000	5	1	10	380	14	1.4	4	9	15000.0	5	5.6	270
10/8/2003	101	8,600	5	0.7	7	310	12	1.9	3	7	11000.0	5	8.2	220
10/8/2003	102	7,000	5	0.7	5.9	250	9	1.3	3	6	10000.0	5	4.8	190
10/8/2003	103	12,000	5	1	10	400	17	1.9	4	9.6	17000.0	5	8.1	300
1/31/2004	B-40	15,000	5	0.7	12	570	18	1.7	8	11	21000	5	24	340
3/18/2004	4041	13,000	5	0.8	13	400	19	2.1	6	10	18000	5	8.4	290
3/18/2004	4042	11,000	5	0.7	9.3	340	22	1.5	3	7	16000	5	8.3	250
8/27/2004	8041	12,000	11	0.7	17	360	20	1.2	12	13	15000	5	13	290
8/27/2004	8042	12,000	5	0.6	14	380	20	1.5	8	11	16000	5	15	290
8/27/2004	8043	13,000	12	0.7	22	420	15	1.5	7	11	19000	5	18	310
8/27/2004	8044	12,000	5	0.5	14	380	12	1.5	6	11	16000	5	15	280
8/19/2005	C-17	7500	5	1.2	11	280	13	2.7	1	9	10000	5	9	220
8/19/2005	C-37	10400	5	1.3	12.6	353	14	2.7	1	12	13900	5	10.5	309
8/19/2005	C-63	8860	5	1.2	10.9	322	12	2.7	1	10	12300	5	9.6	539
11/6/2005	c-51	7800	5	0.7	12	330	8	2.7	3	11	11500	5	8.8	250
11/6/2005	c-52	7240	5	0.7	12	305	8	2.7	3	11	10600	5	8.7	225
11/6/2005	c-53	7850	5	0.6	12	300	8	2.7	3	10	11700	5	9.5	230
6/4/2006	1	3020	5	0.25	5.2	189	3.5	0.97	3.5	4.7	6400	5	5.2	113
6/4/2006	2	7200	5	0.5	10	400	10	0.7	3	8	12000	5	10	240
6/4/2006	3	7400	5	0.25	11	370	11	1	3	8.6	12000	5	10	240
6/4/2006	4	7500	5	0.25	10	370	11	1.1	4	8	12000	5	12	230
6/4/2006	5	6100	5	0.25	9.5	300	9.4	0.8	3	7	9900	5	9.4	200
10/5/2006	1	6000	5	0.25	10	300	12	1.3	3	8	12000	5	9.3	250
4/27/2007	4271	5900	6	0.6	10.55	420	9.6	0.9	4.5	8	12000	2.5	8	260
4/28/2007	4272	5600	6.3	0.6	10	400	9	0.8	4.5	8	12000	2.5	9.2	270
4/29/2007	4273	6300	6.8	6	11	440	10	1.2	6.7	8.7	13000	2.5	8.7	300
7/27/2007	CM-72707-1	3500	5.3	0.25	10	247	7	0.5	4	6.7	7500	2.5	5.2	170
7/28/2007	CM-72707-2	3000	6	0.25	8.4	222	7	0.6	4	7.4	6500	2.5	4.4	140
8/16/07	07 09065	5918	6	0.5	11.1	392	12	0.9	3	11.1	13800	2	9.2	298
8/28/07	07 09527	8100	8	0.7	17	574	13	1.3	4	11.5	20700	2.5	14	360
4/15/08	804513	5690	7	0.5	9	511	9	1.54	3	8	13700	2.5	7.8	300
4/15/08	804514	6440	7	0.5	10.6	558	11	1.26	5	8.6	15600	2.5	8.3	342
5/20/2008	806162	4730	7	0.5	10.1	376	10	0.81	4	7.8	11100	2.5	6.4	260
8/1/2008	810140	5900	7	0.6	12.3	384	31	1.31	4	8.6	15200	2.5	7.1	286
9/19/2008	813057	5420	7.7	0.7	11.2	404	26	0.84	3.3	8.4	15850	2.5	6.7	307

Central Davis Sewer District
Composted Biosolids - Historic Table

		Aluminum	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Molyb	Nickel	Phosphr	Selenium	Silver	Zinc
Date	#	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
9/30/08	813589	6500	8	0.7	13.6	451	21	1.21	3	9.4	19100	2..5	7.1	348
4/14/09	CPT	5480	10.4	0.7	14.2	585	13.5	1.2	4.1	9.4	14300	3.8	6.8	375
4/30/09	CPT	4910	8.2	0.6	9	462	12.4	0.7	3.8	7.1	12300	3	5.4	320
5/28/09	CPT	5760	8.9	0.8	11.4	535	18.3	0.9	4.4	8.6	15500	5.2	6.7	387
5/28/09	CPT	6090	8.1	0.8	12	554	18.2	0.9	4.7	8.7	15500	3.2	7.1	391
5/28/09	CPT	3620	8	0.6	8.3	395	14.1	0.5	4.5	7.3	9990	5.1	4.3	251
9/24/09	CPT	6760	10.6	0.8	14.2	586	14.1	1.2	8.2	11	18000	4.7	6.9	497
4/21/10	CPT	3960	9.1	0.6	9.8	471	9.7	0.7	5.6	6.8	11300	3.7	5.0	293
4/21/10	CPT	3440	8.1	0.5	7.9	436	8.9	0.6	3.7	6.6	9240	5.0	4.4	254
4/21/10	CPT	4640	9.3	0.7	10.0	533	9.9	0.8	4.9	8.1	12800	5.1	5.6	334
6/23/2010	CPT	3,740	8.9	0.6	8.2	403	7.2	0.7	4.1	6.5	12,600	4.2	4.7	259
6/23/2010	CPT	3,790	8.3	0.5	8.6	395	7.5	0.7	4.0	6.5	13,100	3.6	4.4	253
10/11/2010	CPT	4,520	8.5	0.5	10.4	409	9.4	0.9	3.2	8.0	1,480	5.3	4.2	254
6/6/2011	CPT	6,430	17.5	0.7	14.6	559	17.2	0.8	5.2	10.3	15,400	11.7	5.3	349
6/6/2011	CPT	4,820	19.2	0.7	10.1	561	14.4	0.1	5.1	8.0	13,200	13.0	5.1	330
6/6/2011	CPT	5,200	15.7	0.7	10.6	562	13.3	0.6	4.5	8.1	13,900	9.8	5.5	334
7/26/2011	CPT	3,480	14.6	0.5	10.6	415	14.0	0.6	4.8	7.9	10,100	8.7	4.0	263
7/26/2011	CPT	4,740	16.4	0.7	12.1	495	13.3	0.9	4.4	8.3	12,500	10.0	5.0	312
10/10/2011	CPT	5,070	12.7	0.7	15.4	503	12.9	0.7	3.7	10.6	14,200	6.5	5.0	332
5/3/2012	CPT	2,500	13.9	0.6	10.3	399	7.6	0.7	4.5	6.6	9,890	8.3	2.7	258
5/3/2012	CPT	2,510	13.5	0.6	11.4	404	8.5	0.7	4.2	6.9	9,640	7.1	2.7	259
5/3/2012	CPT	3,150	16.4	0.7	18.1	478	9.6	0.6	5.1	7.7	11,600	6.1	3.4	311
8/14/2012	CPT	3,820	12.3	0.8	13.8	466	13.0	0.8	3.8	8.7	14,500	7.5	3.7	316
8/14/2012	CPT	4,200	12.6	0.7	14.5	472	12.9	0.8	4.0	8.8	15,400	7.3	3.8	325
8/14/2012	CPT	4,030	4.9	0.2	8.0	22.9	8.2	0.2	0.9	4.3	1,630	2.8	0.2	71.7
5/14/2013	CPT	2,550	14.7	0.6	7.6	464	10.9	0.4	3.8	6.8	10,200	7.1	3.3	266
6/27/2013	CPT	4,250	15.1	0.6	13.7	474	13.3	0.8	3.9	8.9	19,900	6.7	2.9	318
6/27/2013	CPT	3,400	12.6	0.7	11.8	502	25.4	0.3	3.8	8.1	13,400	6.6	3.5	337
6/27/2013	CPT	3,290	14.3	0.6	10.7	407	10.5	0.1	3.4	7.3	15,400	6.2	2.6	278
10/8/2013	CPT	2,390	10.8	0.5	9.5	392	8.5	0.8	4.3	7.0	9,390	3.1	2.6	254
10/8/2013	CPT	1,730	10.1	0.4	6.7	317	7.3	0.4	3.1	5.4	7,410	5.2	1.9	186
5/22/2014	CPT	1,510	5.8	0.3	5.1	303	5.5	0.5	3.2	2.2	7,160	3.1	1.9	220
5/22/2014	CPT	1,300	4.9	0.3	4.7	273	4.8	0.5	3.3	4.4	6,330	2.8	1.5	179
5/22/2014	CPT	1,720	4.4	0.4	5.5	300	6.0	0.5	4.5	5.2	7,460	3.0	1.6	202
6/9/2014	CPT	2,970	7.2	0.5	10.0	397	12.7	0.6	4.2	8.0	11,500	1.8	1.9	261
10/20/2014	CPT	494	6.3	0.2	2.6	174	3.8	0.8	2.9	4.1	7,920	1.7	0.6	102
10/20/2014	CPT	677	4.3	0.1	2.8	167	3.6	1.1	2.8	3.3	5,360	1.1	0.8	100
5/11/2015	CPT	821	2.6	0.3	4.1	172	9.5	0.2	1.7	3.0	4,530	1.8	0.4	138
5/11/2015	CPT	1,250	3.5	0.4	9.6	277	7.7	0.3	2.6	7.6	6,620	3.7	1.2	189
5/11/2015	CPT	1,260	3.9	0.4	5.1	298	6.8	0.3	2.9	4.3	5,370	2.5	1.1	180
5/11/2015	CPT	1,410	4.7	0.4	5.2	304	7.5	0.3	3.1	4.6	8,184	3.2	1.1	211
10/1/2015	CPT	3,550	7.1	0.5	10.9	408	10.1	0.5	3.4	8.6	10,500	1.9	1.0	292
10/1/2015	CPT	2,540	7.3	0.5	13.8	474	11.5	0.5	4.4	8.5	11,000	2.0	1.9	328
9/28/2016	CPT	2,610	8.4	0.7	7.2	377	9.6	0.1	3.3	6.8	6,920	3.7	0.7	209
9/28/2016	CPT	2,420	10.0	1.0	13.1	300	10.0	0.1	1.0	10.9	7,310	15.8	1.0	198
9/28/2016	CPT	2,610	7.6	0.8	9.3	368	9.1	0.2	2.1	7.6	8,960	3.8	0.8	274
9/28/2016	CPT	1,790	7.2	0.7	6.5	258	7.2	0.3	1.9	5.3	8,110	3.6	0.7	166
9/28/2016	CPT	2,400	7.4	0.6	8.8	352	8.0	0.2	2.8	7.2	10,500	3.1	0.6	236
9/28/2016	CPT	1,730	6.6	0.7	6.7	243	6.6	0.1	2.3	5.2	6,710	3.3	0.7	169
2/22/2017	CPT	597	27.3	1.4	2.8	86.9	13.7	0.1	1.1	1.8	2,100	13.7	1.4	63.7
2/22/2017	CPT	1,390	8.8	1.4	4.9	240	4.9	0.3	6.7	4.5	8,590	13.9	0.3	305
2/22/2017	CPT	952	4.4	1.4	3.5	179	3.4	0.4	2.0	3.3	3,360	14.0	1.4	122
7/31/2017	CPT	2,590	16.7	0.3	8.7	292	5.9	0.1	3.0	6.1	7,400	12.1	0.4	223
7/31/2017	CPT	2,580	13.2	0.4	9.2	318	7.7	0.1	2.3	6.7	7,300	11.1	0.4	249
7/31/2017	CPT	3,000	13.8	0.3	9.4	293	7.9	0.1	2.5	7.8	7,280	12.5	0.4	246
2/27/2019	CPT	2,100	6.4	0.3	6.5	276	4.0	0.3	2.8	5.3	7,640	5.9	0.5	122
2/27/2019	CPT	2,940	7.1	0.4	16.0	411	<8.49	0.3	4.4	7.3	10,200	8.6	0.6	187
3/12/2019	CPT	2,130	9.2	0.3	7.8	355	<5.59	0.2	3.6	6.8	11,800	0.6	0.8	185
3/12/2019	CPT	2,560	9.7	0.3	9.0	424	<6.83	0.2	4.0	9.2	13,100	1.2	0.8	205
6/18/2019	CPT	3,920	7.6	0.4	7.3	399	35.5	0.2	3.5	6.7	10,800	5.0	0.6	233
7/25/2019	CPT	3,460	4.9	0.3	4.7	295	15.7	0.2	5.9	5.6	9,070	1.3	0.3	194
5/14/2020	CPT	1,570	6.1	0.3	6.0	276	7.2	0.1	4.0	5.0	10,200	3.4	0.5	176
5/14/2020	CPT	2,240	6.5	0.3	7.7	328	9.7	0.1	3.2	6.1	11,000	2.4	0.6	234
5/14/2020	CPT	2,850	6.3	0.3	7.8	330	12.1	0.1	3.4	6.1	10,100	2.4	0.6	232
5/14/2020	CPT	2,810	7.8	0.4	9.6	378	16.6	0.1	4.2	7.2	12,900	2.8	0.8	257
6/1/2020	CPT	1,450	4.6	0.2	4.9	232	6.4	0.1	3.1	4.8	7,930	2.0	0.4	150
6/1/2020	CPT	2,440	5.6	0.3	4.5	315	12.2	0.1	3.8	6.4	10,500	2.2	0.7	227
3/29/2021	CPT	9,507	10.1	0.3	9.4	434	10.9	0.0	3.9	7.0	13,700	2.7	0.8	343
3/29/2021	CPT	10,800	9.8	0.3	10.4	449	10.5	0.2	5.0	8.6	13,600	2.1	0.8	352

Central Davis Sewer District

Composted Biosolids - Historic Table

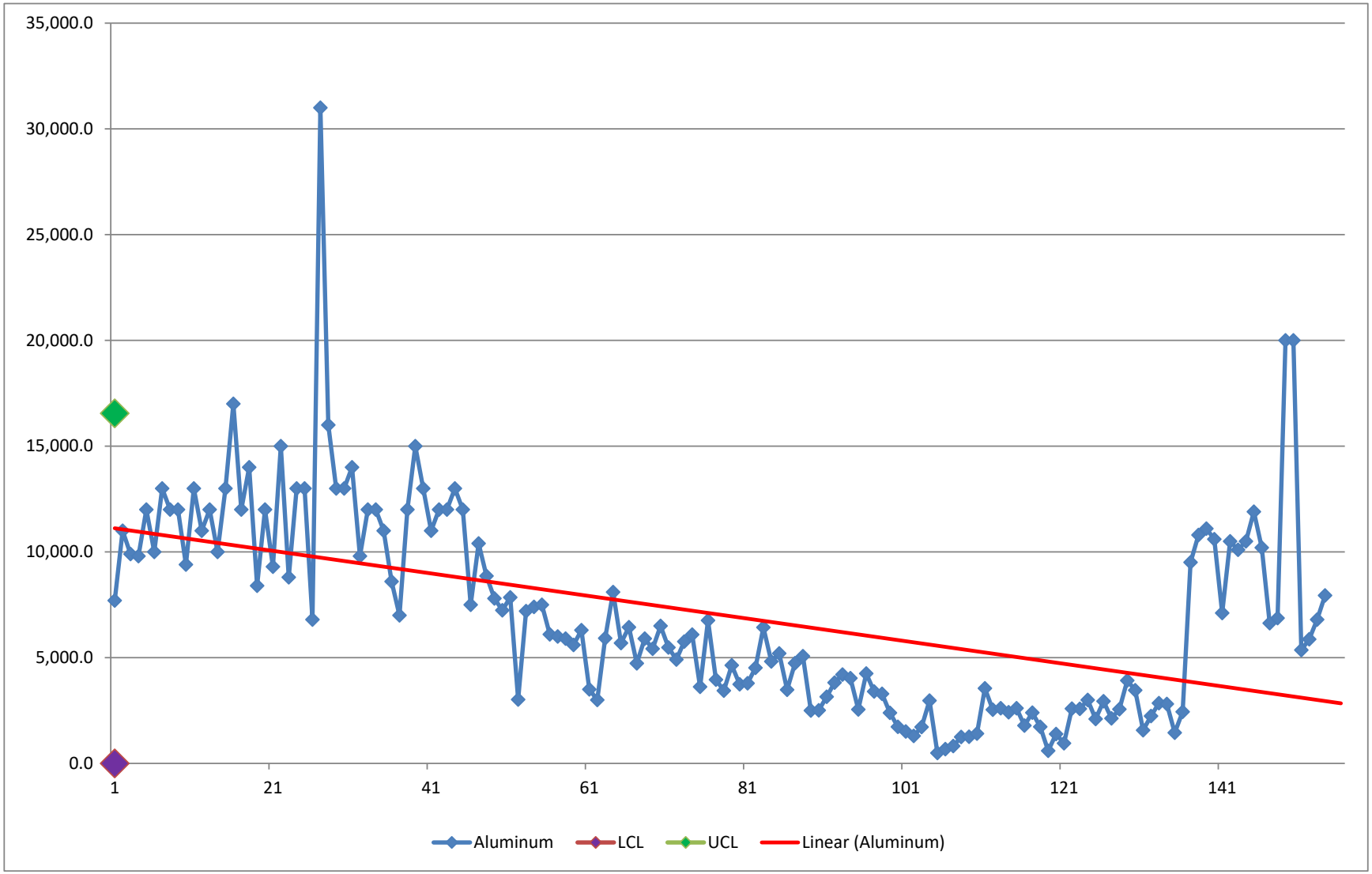
		Aluminum	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Molyb	Nickel	Phosphr	Selenium	Silver	Zinc
Date	#	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
3/29/2021	CPT	11,100	6.5	0.2	9.9	393	9.4	0.0	4.5	6.8	13,500	4.1	0.8	313
3/29/2021	CPT	10,600	8.3	0.2	10.1	416	16.1	0.1	4.6	6.4	14,500	3.5	0.8	321
3/29/2021	CPT	7,110	6.2	ND	6.7	349	7.6	0.1	3.3	7.0	10,300	3.6	0.5	257
3/29/2021	CPT	10,500	7.6	0.2	7.8	409	9.1	0.1	5.1	6.3	14,600	3.6	0.4	309
3/28/2022	CPT	10,100	6.8	0.2	6.6	352	6.8	0.1	3.9	4.8	14,100	2.7	0.5	291
3/28/2022	CPT	10,500	8.0	0.2	7.3	372	8.0	0.1	3.4	5.5	11,600	2.7	0.5	316
3/28/2022	CPT	11,900	9.4	0.3	8.6	434	7.6	0.1	4.0	5.7	18,800	3.9	0.7	320
3/28/2022	CPT	10,200	8.9	0.2	9.9	422	4.5	0.2	5.4	6.5	18,600	3.3	0.6	304
3/28/2022	CPT	6,630	5.5	0.1	5.3	292	4.1	0.1	4.0	3.9	9,810	2.9	0.5	205
3/28/2022	CPT	6870	5.7	0.1	5.7	306	5.2	0.1	3.4	4.5	10200	3.2	0.4	219
5/8/2023	CPT	20,000	7.7	0.6	9.0	302	4.7	0.09	5.5	5.1	13,100	2.8	0.8	358
5/8/2023	CPT	20,000	8.2	0.6	8.9	306	5.2	0.13	4.2	4.5	13,300	2.6	0.8	346
5/30/2023	CPT	5,360	3.1	0.3	6.0	177	3.0	0.10	2.7	3.4	7,390	0.6	0.3	171
5/30/2023	CPT	5,870	4.2	0.3	6.4	206	4.5	0.20	2.7	3.6	7,950	1.6	0.3	209
5/30/2023	CPT	6,800	3.3	0.4	7.4	229	3.6	0.01	2.3	4.2	8,790	1.6	0.4	206
7/5/2023	CPT	7,940	3.0	0.6	8.7	221	2.4	0.1	1.3	5.1	11,700	1.4	0.7	243
average		**7,033**	**7.9**	**0.6**	**10.9**	**368**	**14.0**	**1.1**	**4.0**	**8.2**	**12,550**	**5.4**	**5.0**	**264**
Std. Dev.		**4,759**	**3.9**	**0.5**	**4.5**	**105**	**12.1**	**1.1**	**1.8**	**2.9**	**4,431**	**3.6**	**4.2**	**74**
Avg-2StDv		**0**	**0.1**	**0.0**	**1.9**	**157**	**0.0**	**0.0**	**0.4**	**2.4**	**3,687**	**0.0**	**0.0**	**117**
Avg+2StDv		**16,550**	**15.6**	**1.7**	**19.9**	**579**	**38.3**	**3.3**	**7.5**	**13.9**	**21,412**	**12.6**	**13.5**	**412**

Note: 1. When a value was found to be below the detection limit, the whole number of the detection limit was used in the analysis.

2. An ** indicates that the value has not been used because of suspect integrity

Central Davis Sewer District
Composted Biosolids

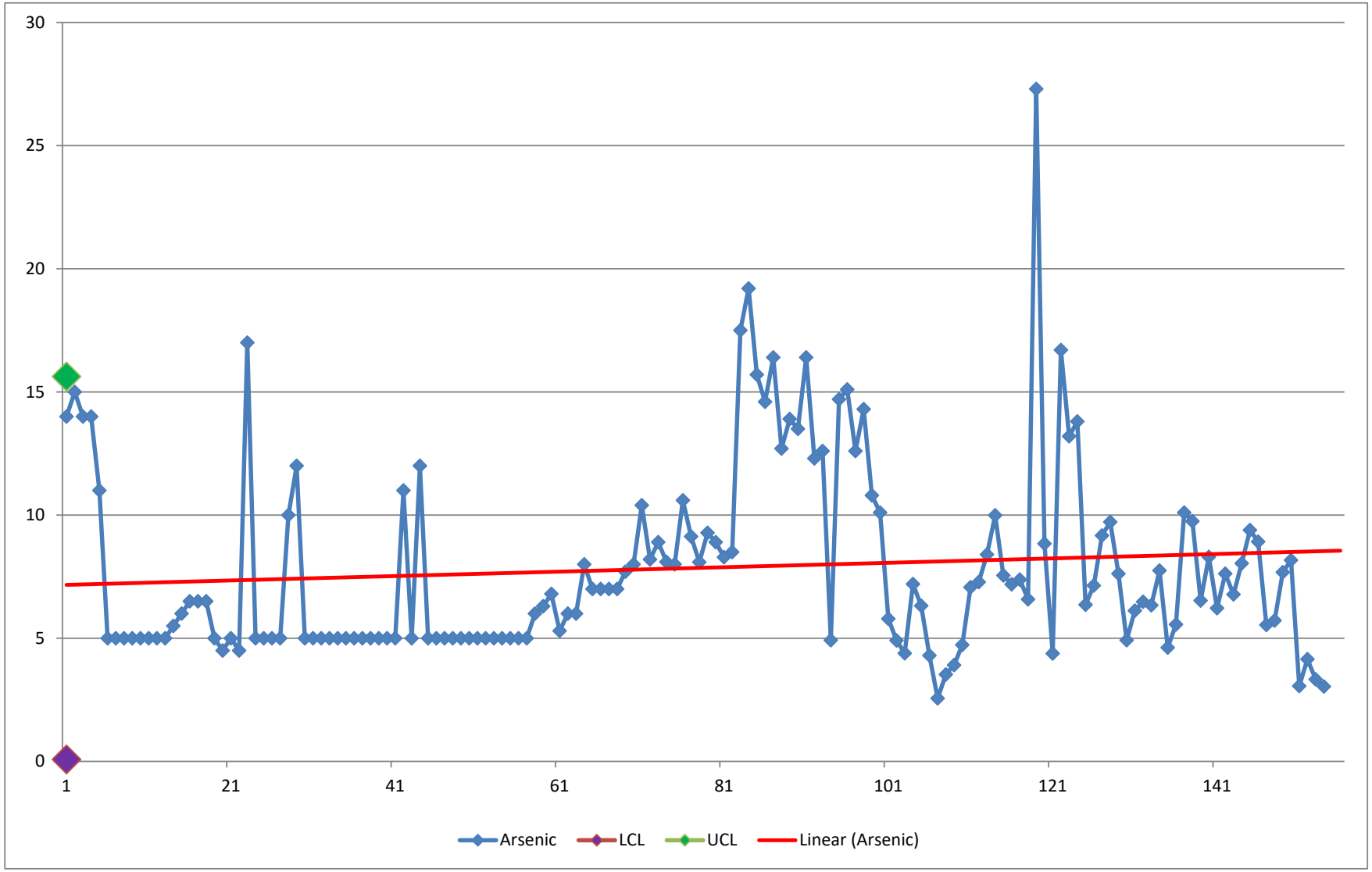
Aluminum Quality Control Chart



1/29/2024 11:46 AM
Compost Biosolids Metals Summary - 2023 Al QC Chart

Central Davis Sewer District
Composted Biosolids

Arsenic Quality Control Chart



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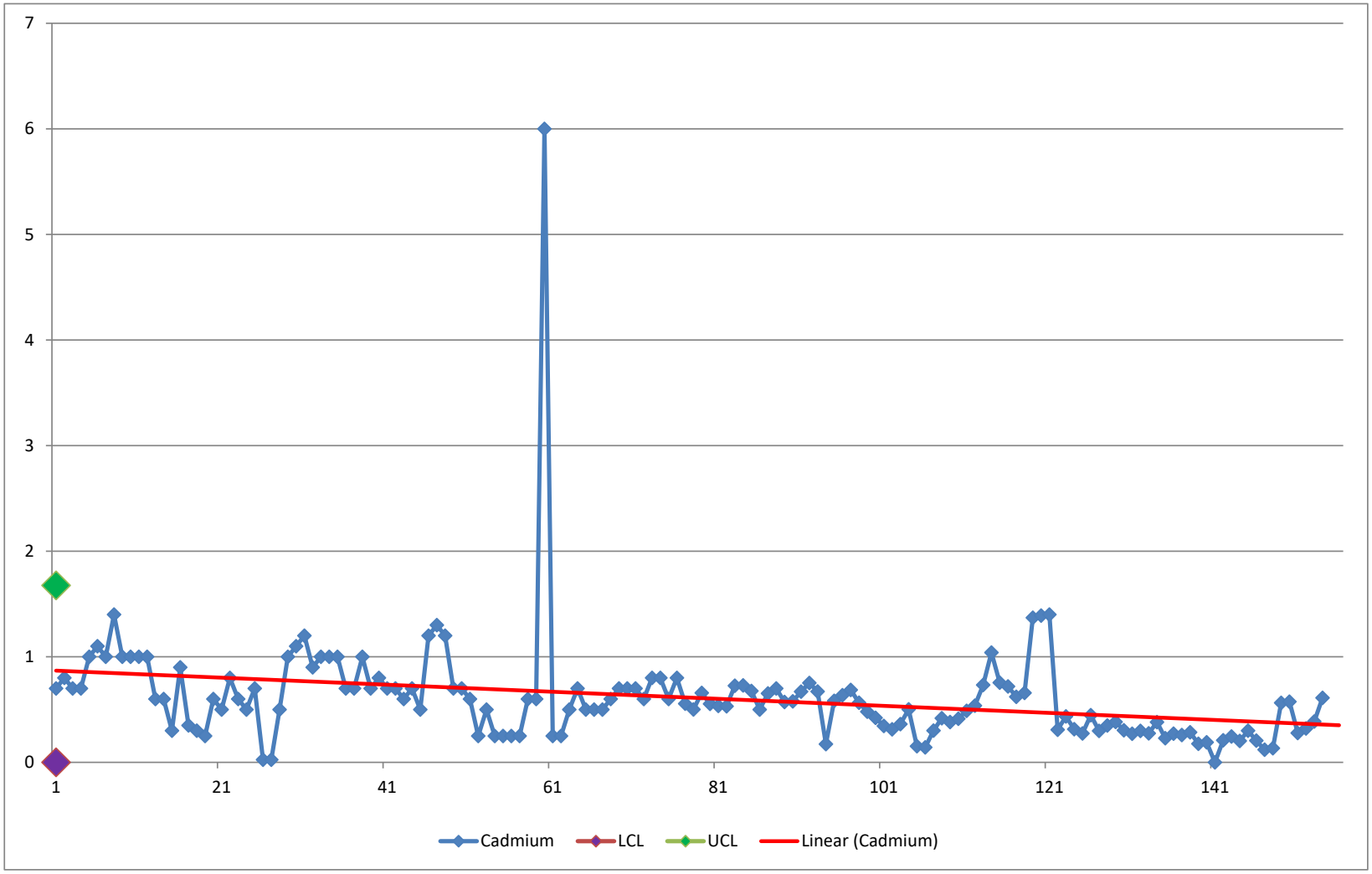
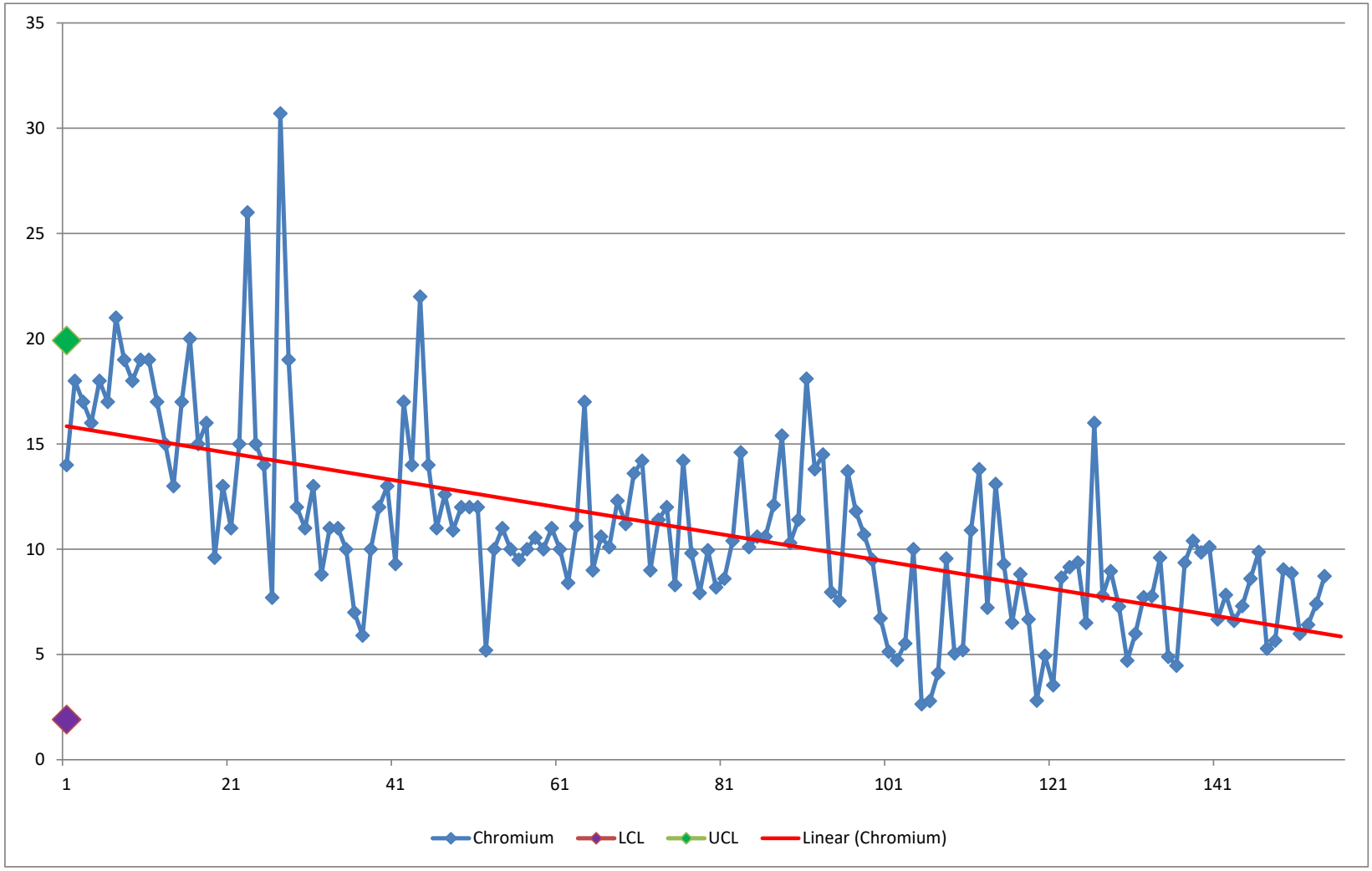
Compost Biosolids Metals Summary - 2023 As QC Chart

Central Davis Sewer District
Composted Biosolids

Cadmium Quality Control Chart

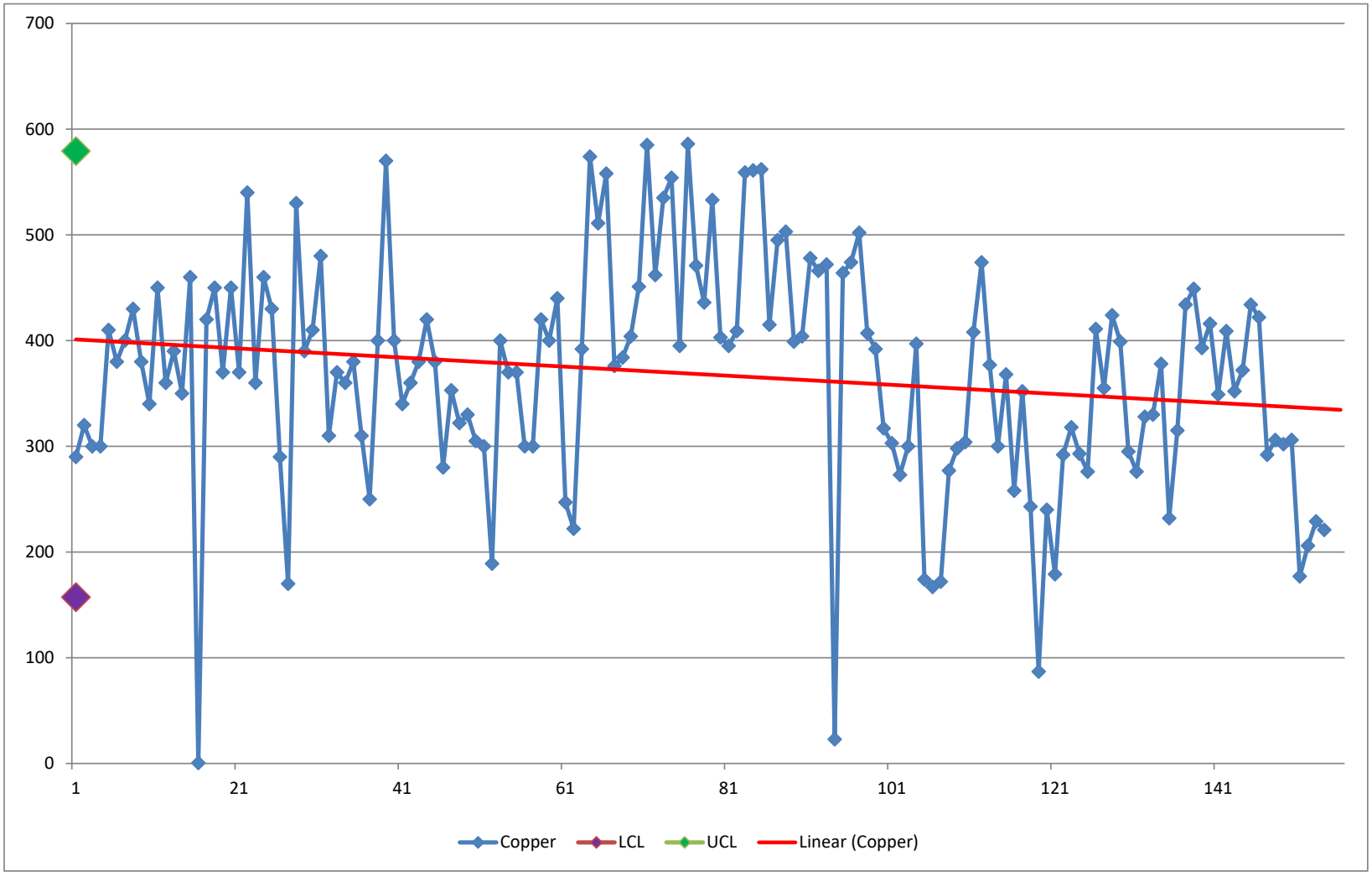


Central Davis Sewer District
Composted Biosolids
Chromium Quality Control Chart



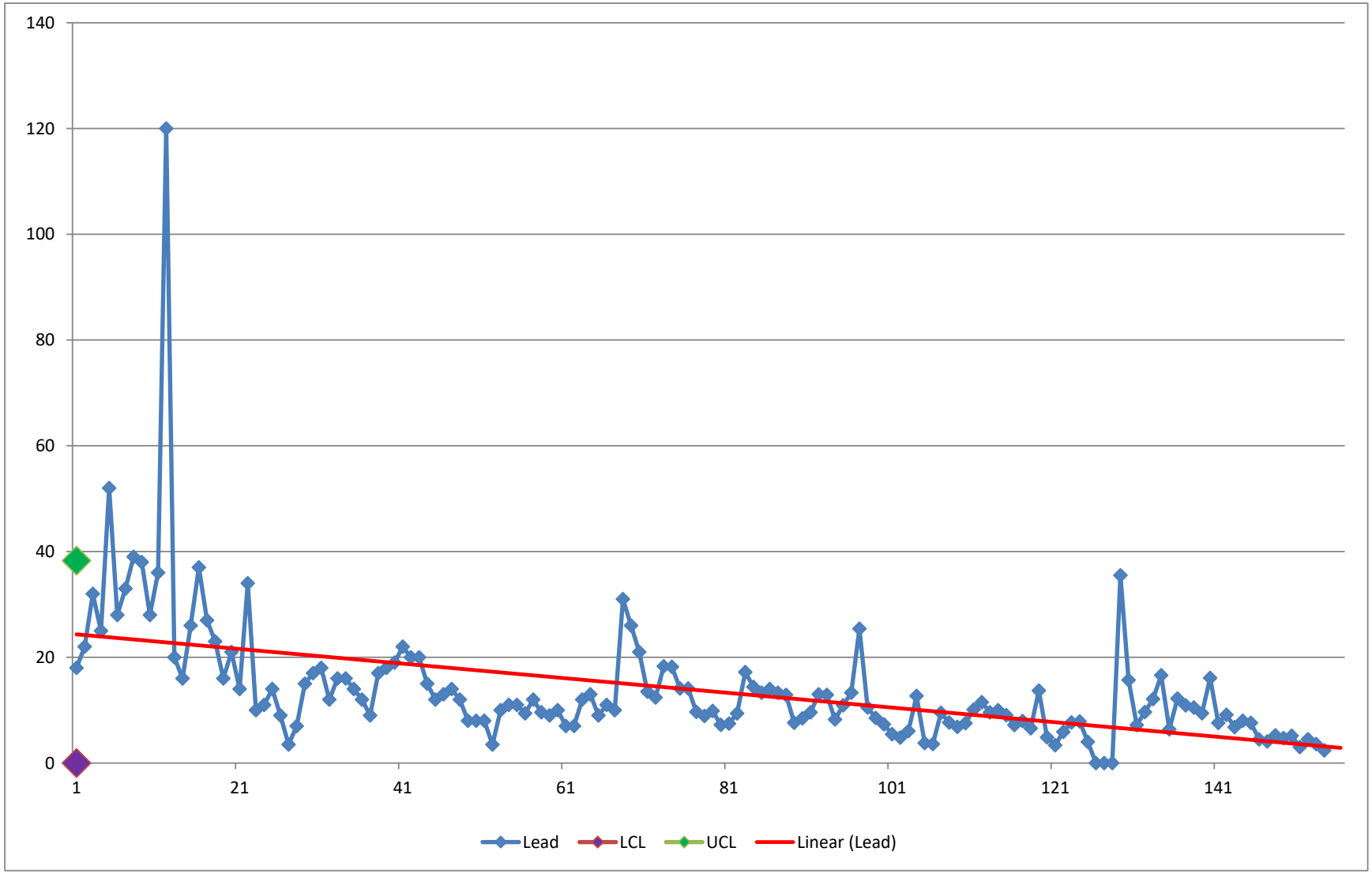
Central Davis Sewer District
Composted Biosolids

Copper Quality Control Chart



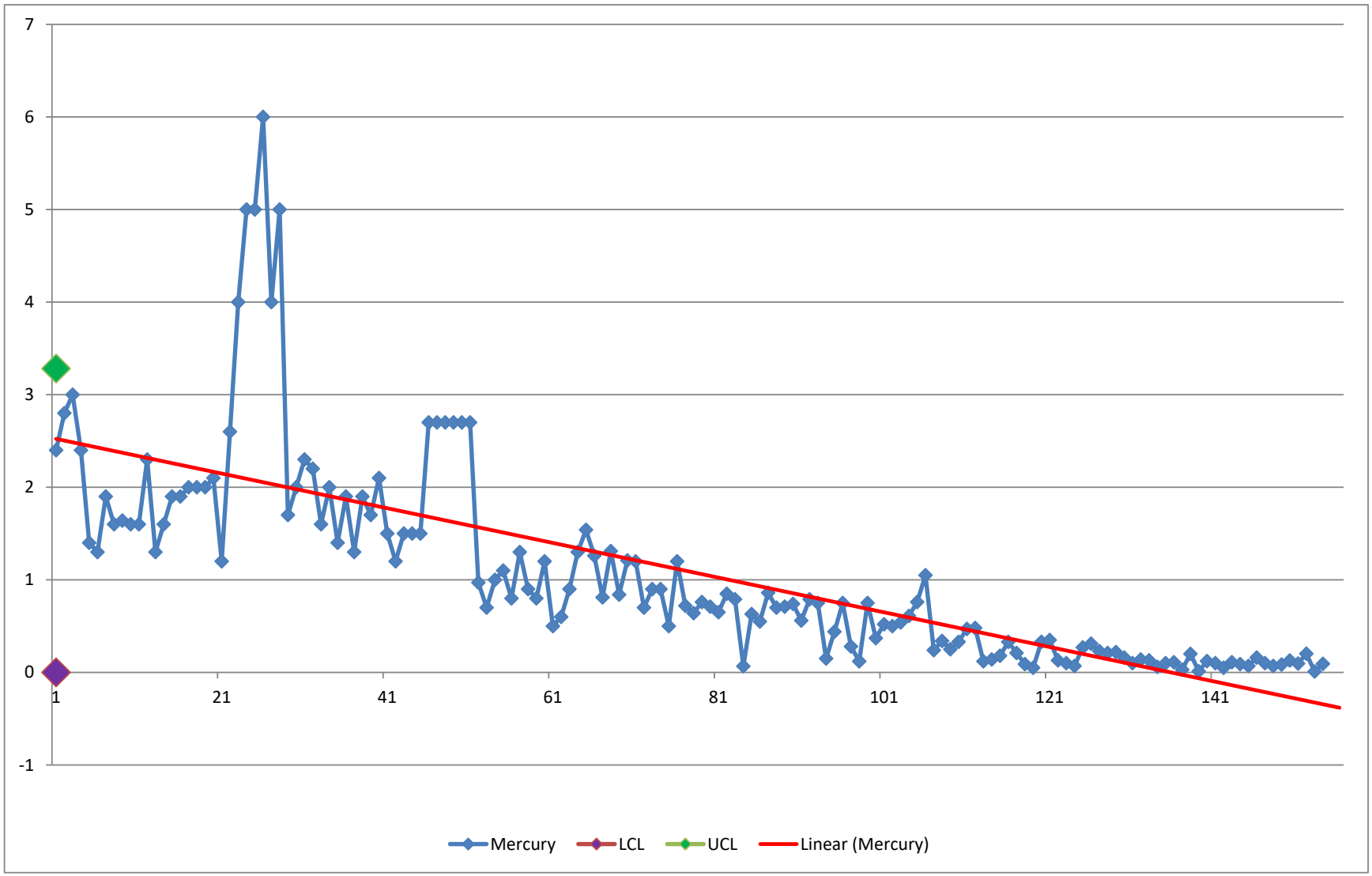
Central Davis Sewer District
Composted Biosolids

Lead Quality Control Chart



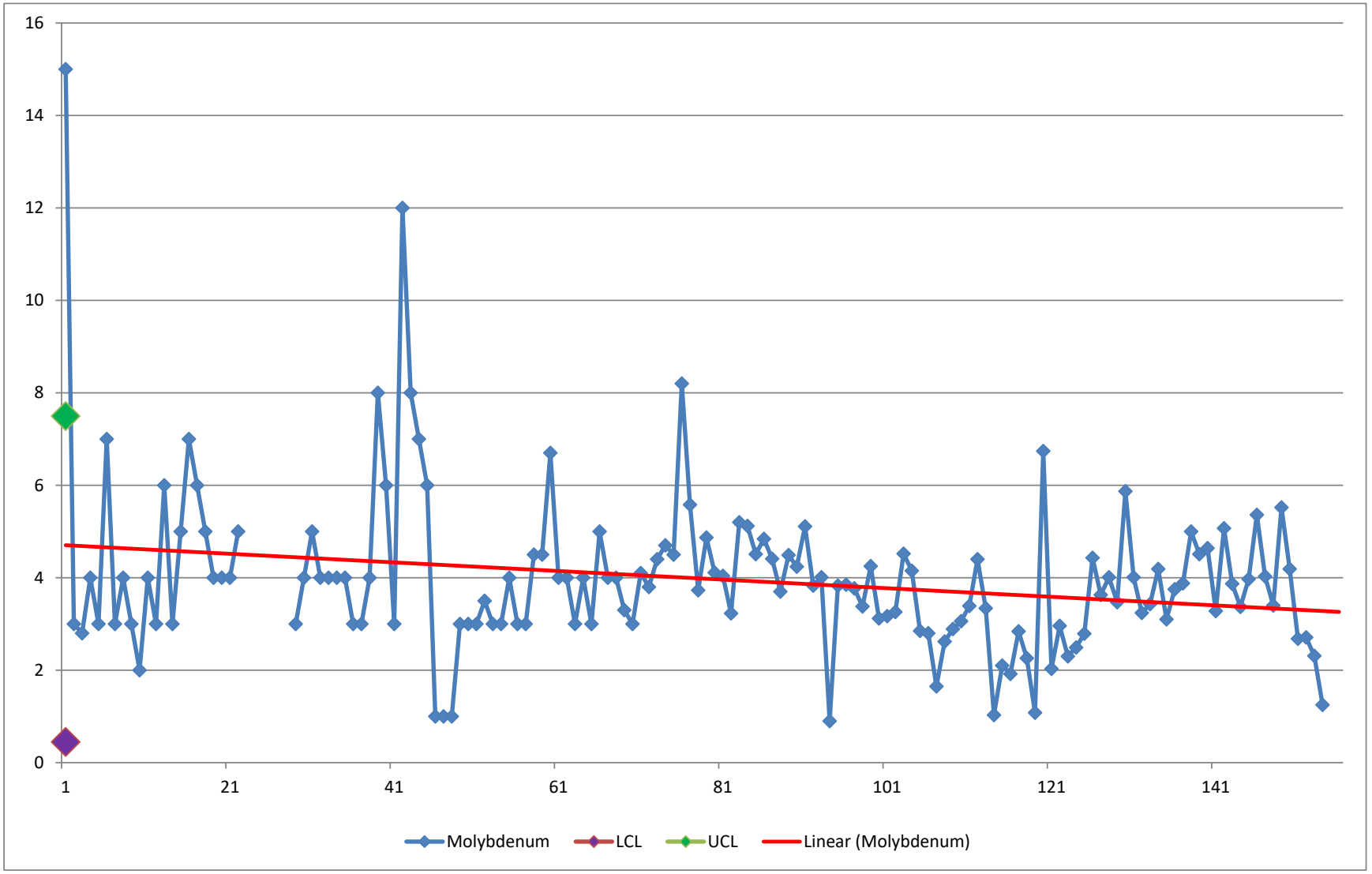
Central Davis Sewer District
Composted Biosolids

Mercury Quality Control Chart



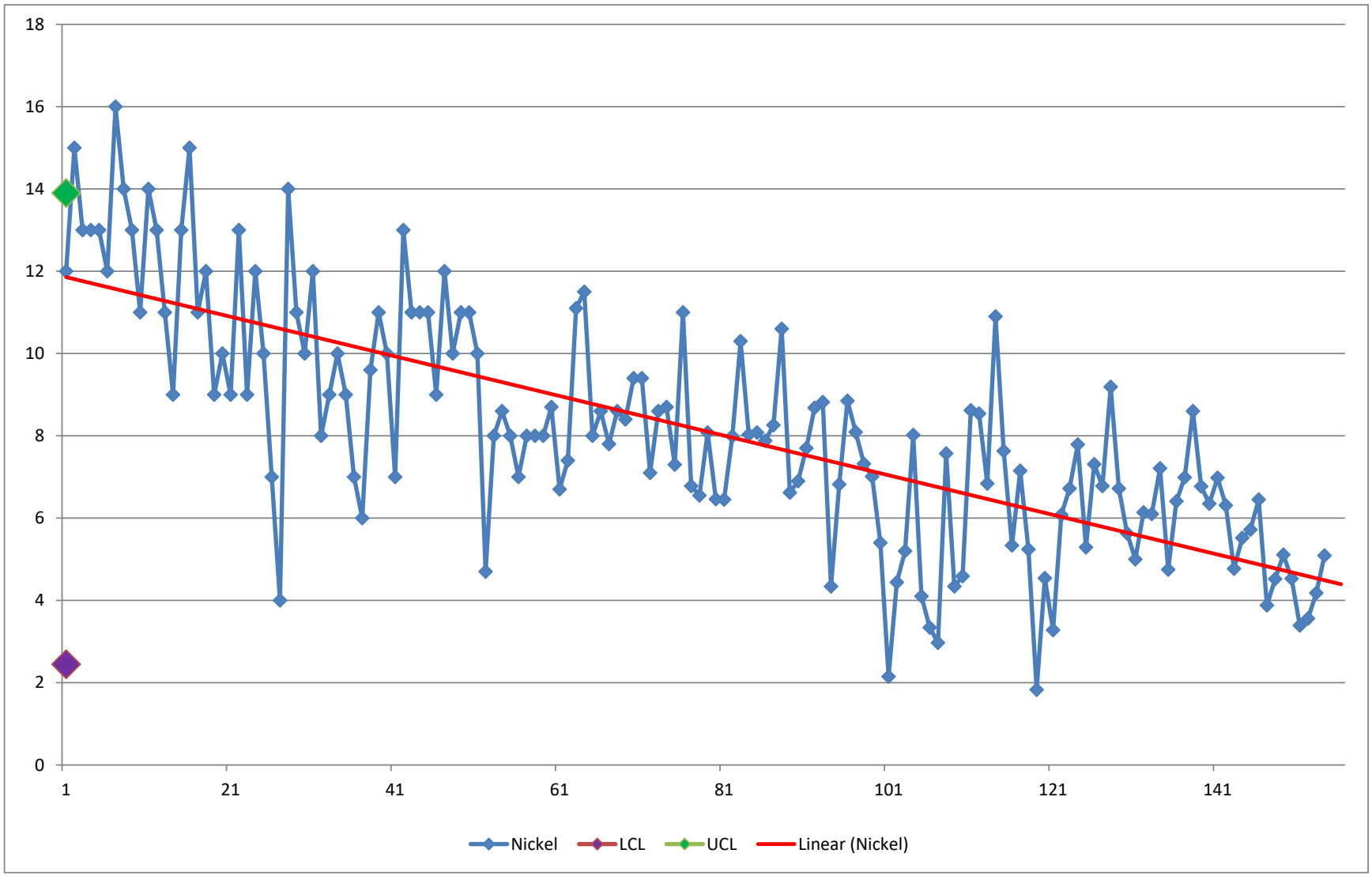
Central Davis Sewer District
Composted Biosolids

Molybdenum Quality Control Chart

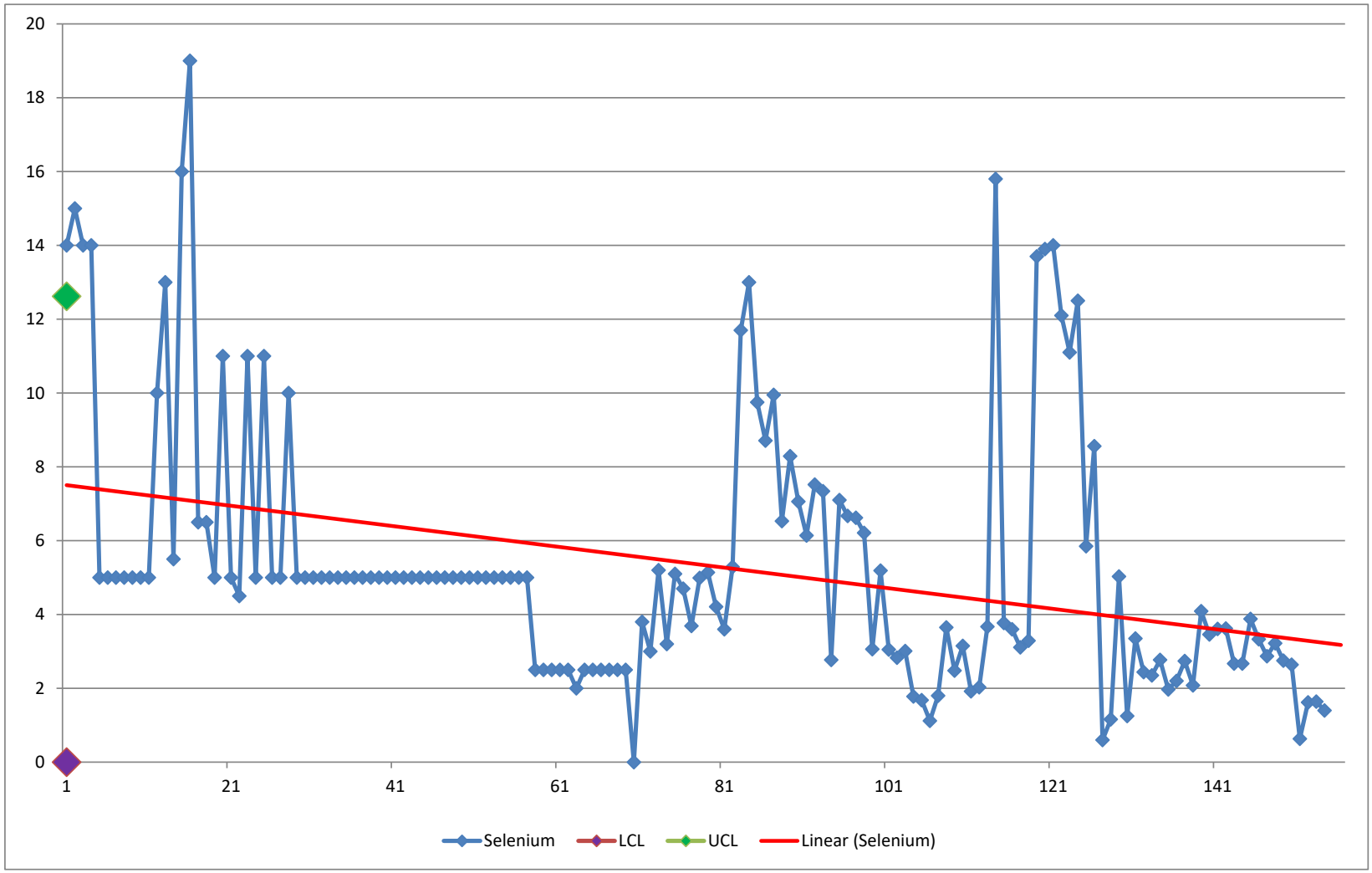


Central Davis Sewer District
Composted Biosolids

Nickel Quality Control Chart

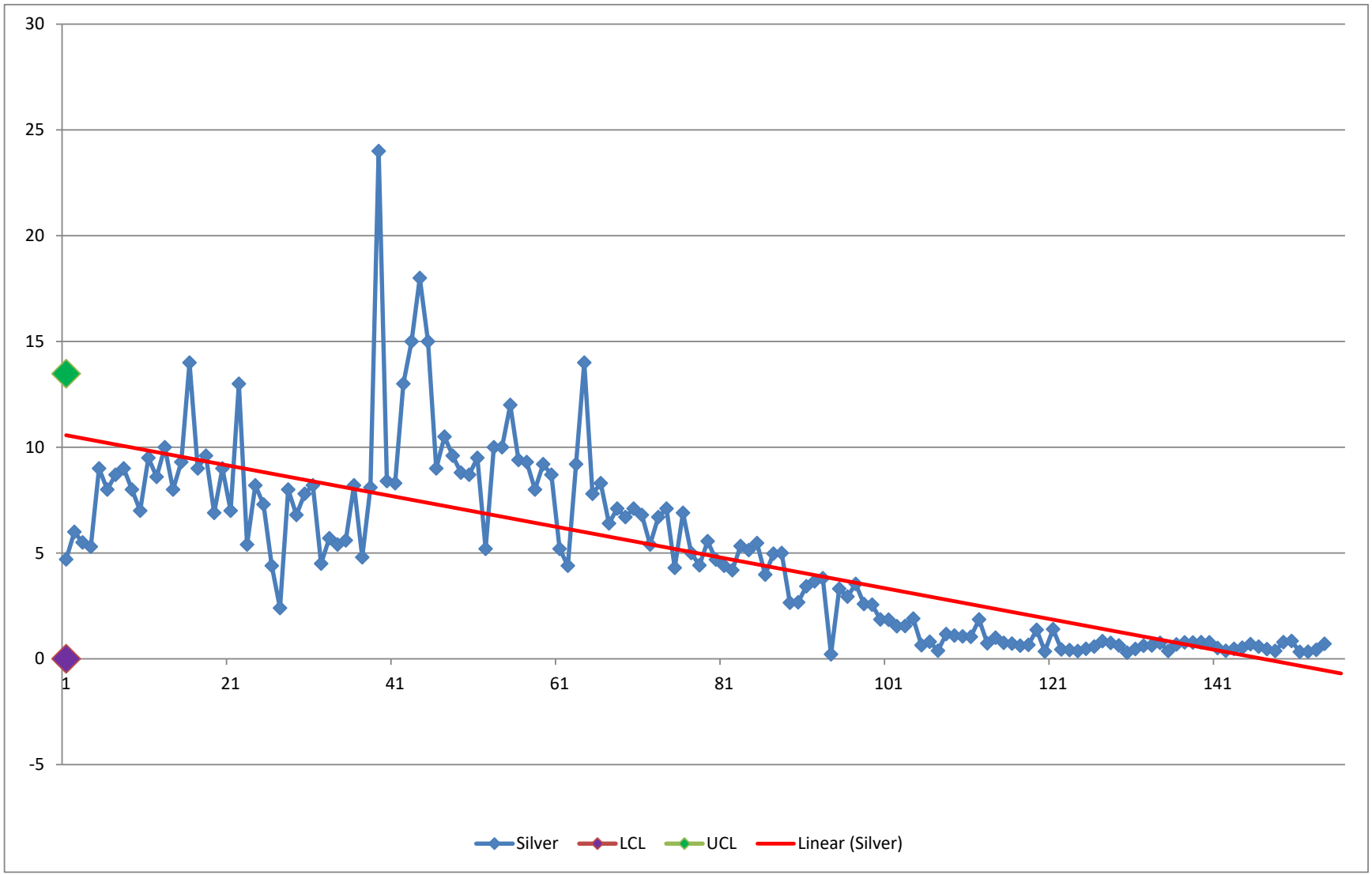


Central Davis Sewer District
Composted Biosolids
Selenium Quality Control Chart



Central Davis Sewer District
Composted Biosolids

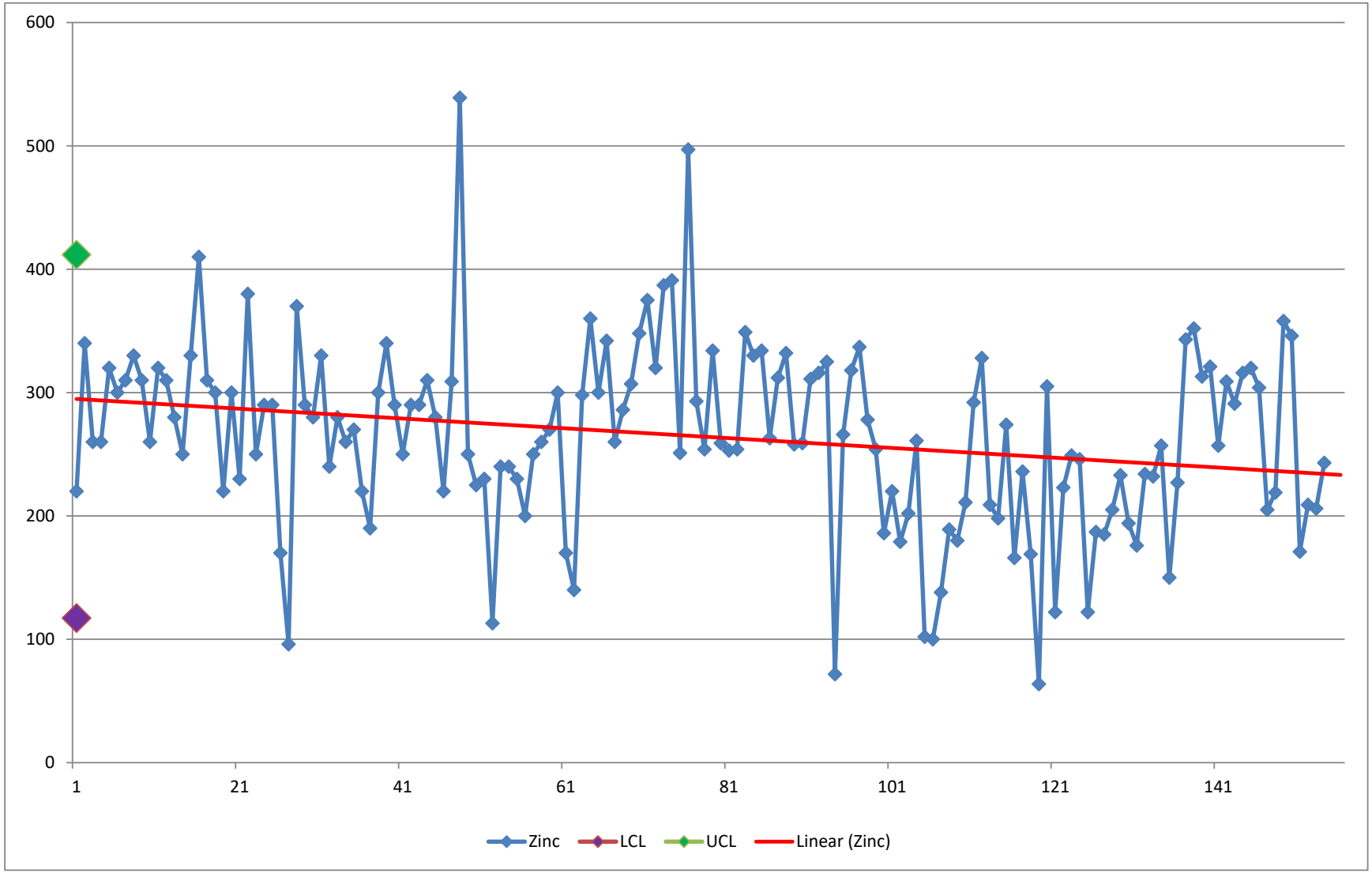
Silver Quality Control Chart



1/29/2024 11:46 AM
Compost Biosolids Metals Summary - 2023 Ag QC Chart

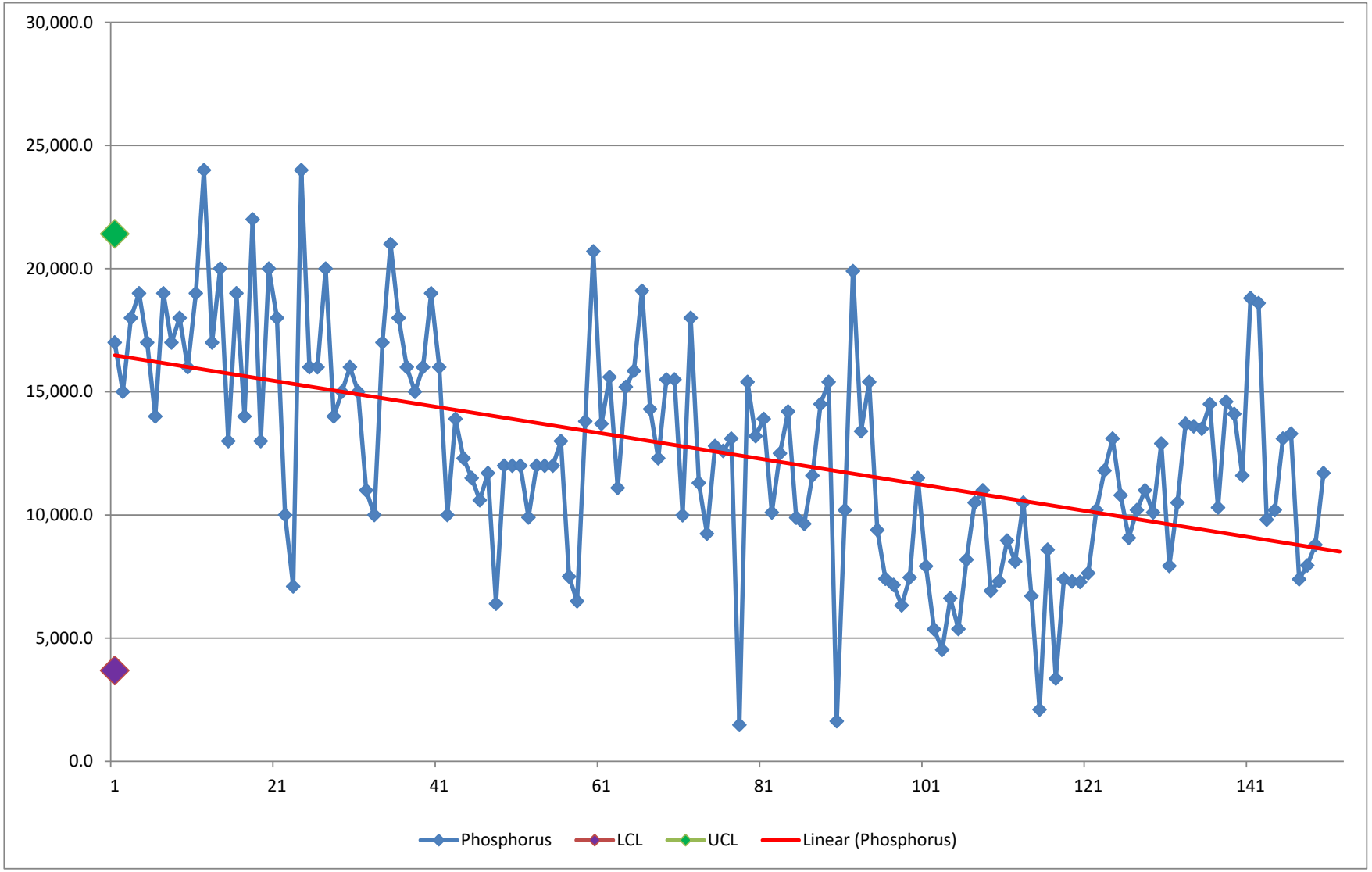
Central Davis Sewer District
Composted Biosolids

Zinc Quality Control Chart



Central Davis Sewer District
Composted Biosolids

Phosphorus Quality Control Chart



CHEMTECH-FORD
LABORATORIES

5/19/2023

Work Order: 23E0697
Project: Compost

Central Davis Sewer District
Attn: Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

Client Service Contact: 801.262.7299

The analyses presented on this report were performed in accordance with the National Environmental Laboratory Accreditation Program (NELAP) unless noted in the comments, flags, or case narrative. If the report is to be used for regulatory compliance, it should be presented in its entirety, and not be altered.

NELAP ACCREDITED TNI LABORATORY

Approved By:

Mark Broadhead, Project Manager

Chemtech-Ford Laboratories
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Certificate of Analysis

Central Davis Sewer District
Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

PO#:
Receipt: **5/9/23 14:05 @ 9.3** °C
Date Reported: 5/19/2023
Project Name: **Compost**

Sample ID: **Compost #1**

Matrix: **Solid** Sample Type: **Grab** Lab ID: **23E0697-01**

Date Sampled: **5/8/23 9:40** Sampled By: **Manjot Masson/Jace Woodrow**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Ammonia (Soluble) as N	218	mg/kg	20.0	SM 4500 NH3 H	5/11/23	5/11/23	
Nitrate, Soluble	215	mg/kg	10.0	EPA 300.0	5/12/23	5/15/23	
Nitrite, Soluble	2.47	mg/kg	1.00	EPA 300.0	5/12/23	5/15/23	
Total Kjeldahl Nitrogen	7620	mg/kg	5.0	SM 4500 Norg	5/12/23	5/15/23	
Total Solids	51.6	%	0.1	CTF8000	5/15/23	5/15/23	
Total Solids	51.6	%	0.1	SM 2540G	5/15/23	5/15/23	
Total Volatile Solids	76.1	%	0.1	SM 2540 E	5/15/23	5/15/23	
Metals							
Aluminum, Total	20000	mg/kg dry	13.8	EPA 6010B/C/D	5/11/23	5/12/23	
Arsenic, Total	7.68	mg/kg dry	6.88	EPA 6010B/C/D	5/11/23	5/12/23	
Cadmium, Total	0.564	mg/kg dry	0.688	EPA 6010B/C/D	5/11/23	5/12/23	J
Chromium, Total	9.04	mg/kg dry	0.688	EPA 6010B/C/D	5/11/23	5/12/23	
Copper, Total	302	mg/kg dry	0.688	EPA 6010B/C/D	5/11/23	5/12/23	
Lead, Total	4.71	mg/kg dry	6.88	EPA 6010B/C/D	5/11/23	5/12/23	J
Mercury, Total	0.085	mg/kg dry	0.036	EPA 7471A	5/15/23	5/17/23	
Molybdenum, Total	5.52	mg/kg dry	1.38	EPA 6010B/C/D	5/11/23	5/12/23	
Nickel, Total	5.11	mg/kg dry	0.688	EPA 6010B/C/D	5/11/23	5/12/23	
Phosphorus, Total as P	13100	mg/kg dry	1.38	EPA 6010B/C/D	5/11/23	5/12/23	
Selenium, Total	2.75	mg/kg dry	2.75	EPA 6010B/C/D	5/11/23	5/12/23	
Silver, Total	0.785	mg/kg dry	0.688	EPA 6010B/C/D	5/11/23	5/12/23	
Zinc, Total	358	mg/kg dry	1.38	EPA 6010B/C/D	5/11/23	5/12/23	

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Certificate of Analysis

Central Davis Sewer District
Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

PO#:
Receipt: **5/9/23 14:05 @ 9.3** °C
Date Reported: 5/19/2023
Project Name: **Compost**

Sample ID: **Compost #2**

Matrix: **Solid** Sample Type: **Grab** Lab ID: **23E0697-02**

Date Sampled: **5/8/23 9:40** Sampled By: **Manjot Masson/Jace Woodrow**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Ammonia (Soluble) as N	184	mg/kg	10.0	SM 4500 NH3 H	5/11/23	5/11/23	
Nitrate, Soluble	229	mg/kg	10.0	EPA 300.0	5/12/23	5/15/23	
Nitrite, Soluble	1.71	mg/kg	1.00	EPA 300.0	5/12/23	5/15/23	
Total Kjeldahl Nitrogen	6680	mg/kg	5.2	SM 4500 Norg	5/12/23	5/15/23	
Total Solids	47.3	%	0.1	CTF8000	5/15/23	5/15/23	
Total Solids	47.3	%	0.1	SM 2540G	5/15/23	5/15/23	
Total Volatile Solids	81.8	%	0.1	SM 2540 E	5/15/23	5/15/23	
Metals							
Aluminum, Total	20000	mg/kg dry	18.0	EPA 6010B/C/D	5/11/23	5/12/23	
Arsenic, Total	8.17	mg/kg dry	8.98	EPA 6010B/C/D	5/11/23	5/12/23	J
Cadmium, Total	0.575	mg/kg dry	0.898	EPA 6010B/C/D	5/11/23	5/12/23	J
Chromium, Total	8.86	mg/kg dry	0.898	EPA 6010B/C/D	5/11/23	5/12/23	
Copper, Total	306	mg/kg dry	0.898	EPA 6010B/C/D	5/11/23	5/12/23	
Lead, Total	5.16	mg/kg dry	8.98	EPA 6010B/C/D	5/11/23	5/12/23	J
Mercury, Total	0.129	mg/kg dry	0.028	EPA 7471A	5/15/23	5/17/23	
Molybdenum, Total	4.19	mg/kg dry	1.80	EPA 6010B/C/D	5/11/23	5/12/23	
Nickel, Total	4.53	mg/kg dry	0.898	EPA 6010B/C/D	5/11/23	5/12/23	
Phosphorus, Total as P	13300	mg/kg dry	1.80	EPA 6010B/C/D	5/11/23	5/12/23	
Selenium, Total	2.64	mg/kg dry	3.59	EPA 6010B/C/D	5/11/23	5/12/23	J
Silver, Total	0.844	mg/kg dry	0.898	EPA 6010B/C/D	5/11/23	5/12/23	J
Zinc, Total	346	mg/kg dry	1.80	EPA 6010B/C/D	5/11/23	5/12/23	

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PO#:
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Date Reported: 5/19/2023
Project Name: **Compost**

Report Footnotes

Abbreviations

ND = Not detected at the corresponding Minimum Reporting Limit (MRL).
1 mg/L = one milligram per liter or 1 mg/kg = one milligram per kilogram = 1 part per million.
1 ug/L = one microgram per liter or 1 ug/kg = one microgram per kilogram = 1 part per billion.
1 ng/L = one nanogram per liter or 1 ng/kg = one nanogram per kilogram = 1 part per trillion.
On calculated parameters, there may be a slight difference between summing the rounded values shown on the report vs the unrounded values used in the calculation.

Flag Descriptions

J = Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

CHAIN OF CUSTODY - SAMPLE SUBMITTAL FORM

COMPANY: Central Davis Sewer District
ADDRESS: 2200 S Sunset Dr.
CITY/STATE/ZIP: Kaysville, UT 84037
PHONE #: 801-451-2190
CONTACT: Jill Jones, Manjot Masson
EMAIL: jillj@cdsewer.org / lab@cdsewer.org
PROJECT: Compost
PO Number:
INVOICE EMAIL ADDRESS:

RUSH Due Date*:

* Expedited turnaround subject to additional charge

QC Level

1 2 3 4

QC levels definition: QC1: none QC2: Batch QC, random sample
QC3: 25% surcharge. Narrative plus Batch QC, your sample selected
QC4: 40% surcharge. Add raw data

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23E0697

Sample condition		
	Custody Seal	✓ Correct Containers
✓	Container Intact	✓ Sufficient Sample Volume
✓	COC/Labels Agree	Headspace Present (VOC)
✓	Received on Ice	✓ Temperature Blank
		Received within Holding Time

Delivery Method	
UPS	USPS
FedEx	Chemtech-Ford Courier
✓ Walk-in	Customer Courier

TESTS REQUESTED

Lab Use Only	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX	See attached sheet	E. Coli/Coliform (Absent/Present)	E. Coli/Coliform (Enumerated)	HPC
-01	1. Compost #1	5-8-23	09:40am	compost	✓			
-02	2. Compost #2	5-8-23	09:40am	compost	✓			
	3.							
	4.							
	5.							
	6.							
	7.							
	8.							
	9.							
	10.							

Bottle type: Q
Lot #

Sampled by: (print) Manjot & Jace
Sampled by: (signature)

ON ICE (circled) NOT ON ICE Temp (C°): 9.3

Special Instructions:

Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Aimee Mattos	5-9-23 08:00am	[signature]	5-9-23 9:55
[signature]	5-9-23 1405	Denise Brown	5/9/23 14:05

Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum). Client agrees to pay collection costs and attorney's fees.

23E0697 (Attachment)

Chain of Custody
Metals Analysis
Central Davis Sewer District

Analysis Required (YES/NO)	Parameter	Approved Analysis Method	Requied Prep. Method	Maximum Holding Time after Preservation
✓	Aluminum	SW-6010	SW-3050	6 months
✓	Arsenic	SW-6010/7060/7061	SW-3050	6 months
✓	Cadmium	SW-6010/7130/7131	SW-3050	6 months
✓	Chromium	SW-6010/7190/71911	SW-3050	6 months
✓	Copper	SW-6010/7210	SW-3050	6 months
✓	Lead	SW-6010/7420/7421	SW-7471	6 months
✓	Mercury	SW-7471	SW-3050	28 days
✓	Molybdenum	SW-6010/7480/7481	SW-3050	6 months
✓	Nickel	SW-6010/7520	SW-3050	6 months
✓	Selenium	SW-6010/7740/7741	SW-3050	6 months
✓	Silver	SW-6010	SW-3050	6 months
✓	Zinc	SW-6010/7950	SW-3050	6 months
✓	Total, Fixed & Volatile Solids	SM-2540	N/A	7 days
	pH	SW-9045	N/A	Immediately
	Total Volatile Acids	SM-5560	N/A	7 days
✓	Total Phosphorus	SM-1500-P	4500-PB	28 days
✓	Total Ammonia	SM-4500-NH_3	N/A	28 days
	Conductivity	SW-9050	N/A	28 days
✓	Nitrite+ Nitrate	SM-4500-NO2/4500_NO3 SW-846 Method 9200	N/A	28 days 28 days
✓	TKN or Organic N	SM-4500-N org	N/A	28 days
✓	Total Solids	SM-2540 G	N/A	7 days

Sample Date 5/18/23
# of Samples 2
Sample Location Compost Beds
Samples Collected By: Manjot & Jace

NPDES: #UT-0020974
Sample Quantity Gallon Bags
Composite / (Grab)

Sample ID	Date and Time Collected
Compost #1	5/18/23
Compost #2	5/18/23

Date and Time: 5/19/23 08:00am
Reliquished By: [signature]

Date and Time:
Received By:

Facility Name: Central Davis Sewer District
Address: 2200 South Sunset Drive, Kaysville UT 84037
Contact: Jill S. Jones/Manjot K. Masson
Phone # 801-451-2190

Note: The laboratory report must include all metal analysis results in dry weight basis(do not include TKN, Nitrates or Ammonia), analyst identification, laboratory supervisor name and signature, a laboratory certification statement (if applicable), and the chain of custody form(s). Also, the laboratory must utilize appropriate QA/QC methodology as found in method reference source document (i.e., Standard Methods or SW-846) depending on the analysis preformed.

CHEMTECH-FORD
LABORATORIES

6/9/2023

Work Order: 23E2363
Project: Compost

Central Davis Sewer District
Attn: Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

Client Service Contact: 801.262.7299

The analyses presented on this report were performed in accordance with the National Environmental Laboratory Accreditation Program (NELAP) unless noted in the comments, flags, or case narrative. If the report is to be used for regulatory compliance, it should be presented in its entirety, and not be altered.

NELAP ACCREDITED TNI LABORATORY

Approved By:

Mark Broadhead, Project Manager

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PO#:
Receipt: **5/30/23 14:00 @ 16.1** °C
Date Reported: 6/9/2023
Project Name: **Compost**

Sample ID: **Compost #3**

Matrix: **Solid** Sample Type: **Grab** Lab ID: **23E2363-01**

Date Sampled: **5/30/23 8:30** Sampled By: **Manjot**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Ammonia (Soluble) as N	826	mg/kg	40.0	SM 4500 NH3 H	6/1/23	6/1/23	
Nitrate, Soluble	50.5	mg/kg	1.00	EPA 300.0	5/31/23	5/31/23	
Nitrite, Soluble	58.6	mg/kg	10.0	EPA 300.0	5/31/23	5/31/23	
Total Kjeldahl Nitrogen	8390	mg/kg	5.3	SM 4500 Norg	6/1/23	6/2/23	
Total Solids	61.6	%	0.1	SM 2540G	5/31/23	6/1/23	
Total Solids	61.7	%	0.1	CTF8000	5/31/23	6/1/23	
Total Volatile Solids	77.0	%	0.1	SM 2540 E	5/31/23	6/1/23	
Metals							
Aluminum, Total	5360	mg/kg dry	12.6	EPA 6010B/C/D	5/30/23	6/1/23	
Arsenic, Total	3.06	mg/kg dry	6.32	EPA 6010B/C/D	5/30/23	6/1/23	J
Cadmium, Total	0.278	mg/kg dry	0.632	EPA 6010B/C/D	5/30/23	6/1/23	J
Chromium, Total	5.99	mg/kg dry	0.632	EPA 6010B/C/D	5/30/23	6/1/23	
Copper, Total	177	mg/kg dry	0.632	EPA 6010B/C/D	5/30/23	6/1/23	
Lead, Total	3.02	mg/kg dry	6.32	EPA 6010B/C/D	5/30/23	6/1/23	J
Mercury, Total	0.096	mg/kg dry	0.040	EPA 7471A	6/1/23	6/7/23	
Molybdenum, Total	2.68	mg/kg dry	1.26	EPA 6010B/C/D	5/30/23	6/1/23	
Nickel, Total	3.39	mg/kg dry	0.632	EPA 6010B/C/D	5/30/23	6/1/23	
Phosphorus, Total as P	7390	mg/kg dry	1.26	EPA 6010B/C/D	5/30/23	6/1/23	
Selenium, Total	ND	mg/kg dry	2.53	EPA 6010B/C/D	5/30/23	6/1/23	
Silver, Total	0.329	mg/kg dry	0.632	EPA 6010B/C/D	5/30/23	6/1/23	J
Zinc, Total	171	mg/kg dry	1.26	EPA 6010B/C/D	5/30/23	6/1/23	

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PO#:
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Date Reported: 6/9/2023
Project Name: **Compost**

Sample ID: **Compost #4**

Matrix: **Solid** Sample Type: **Grab** Lab ID: **23E2363-02**

Date Sampled: **5/30/23 8:30** Sampled By: **Manjot**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Ammonia (Soluble) as N	906	mg/kg	40.0	SM 4500 NH3 H	6/1/23	6/1/23	
Nitrate, Soluble	4.62	mg/kg	1.00	EPA 300.0	5/31/23	5/31/23	
Nitrite, Soluble	ND	mg/kg	10.0	EPA 300.0	5/31/23	5/31/23	
Total Kjeldahl Nitrogen	8450	mg/kg	5.0	SM 4500 Norg	6/1/23	6/2/23	
Total Solids	56.8	%	0.1	SM 2540G	5/31/23	6/1/23	
Total Solids	56.8	%	0.1	CTF8000	5/31/23	6/1/23	
Total Volatile Solids	80.3	%	0.1	SM 2540 E	5/31/23	6/1/23	
Metals							
Aluminum, Total	5870	mg/kg dry	14.6	EPA 6010B/C/D	5/30/23	6/1/23	
Arsenic, Total	4.15	mg/kg dry	7.29	EPA 6010B/C/D	5/30/23	6/1/23	J
Cadmium, Total	0.321	mg/kg dry	0.729	EPA 6010B/C/D	5/30/23	6/1/23	J
Chromium, Total	6.41	mg/kg dry	0.729	EPA 6010B/C/D	5/30/23	6/1/23	
Copper, Total	206	mg/kg dry	0.729	EPA 6010B/C/D	5/30/23	6/1/23	
Lead, Total	4.50	mg/kg dry	7.29	EPA 6010B/C/D	5/30/23	6/1/23	J
Mercury, Total	0.202	mg/kg dry	0.050	EPA 7471A	6/1/23	6/7/23	
Molybdenum, Total	2.71	mg/kg dry	1.46	EPA 6010B/C/D	5/30/23	6/1/23	
Nickel, Total	3.56	mg/kg dry	0.729	EPA 6010B/C/D	5/30/23	6/1/23	
Phosphorus, Total as P	7950	mg/kg dry	1.46	EPA 6010B/C/D	5/30/23	6/1/23	
Selenium, Total	1.62	mg/kg dry	2.92	EPA 6010B/C/D	5/30/23	6/1/23	J
Silver, Total	0.335	mg/kg dry	0.729	EPA 6010B/C/D	5/30/23	6/1/23	J
Zinc, Total	209	mg/kg dry	1.46	EPA 6010B/C/D	5/30/23	6/1/23	

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Kaysville, UT 84037

PO#:
Receipt: **5/30/23 14:00 @ 16.1** °C
Date Reported: 6/9/2023
Project Name: **Compost**

Sample ID: **Compost #5**

Matrix: **Solid** Sample Type: **Grab** Lab ID: **23E2363-03**

Date Sampled: **5/30/23 8:30** Sampled By: **Manjot**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Ammonia (Soluble) as N	1030	mg/kg	40.0	SM 4500 NH3 H	6/1/23	6/1/23	
Nitrate, Soluble	435	mg/kg	10.0	EPA 300.0	5/31/23	6/1/23	
Nitrite, Soluble	ND	mg/kg	10.0	EPA 300.0	5/31/23	6/1/23	
Total Kjeldahl Nitrogen	11700	mg/kg	5.3	SM 4500 Norg	6/5/23	6/7/23	
Total Solids	65.0	%	0.1	CTF8000	5/31/23	6/1/23	
Total Solids	64.9	%	0.1	SM 2540G	5/31/23	6/1/23	
Total Volatile Solids	76.4	%	0.1	SM 2540 E	5/31/23	6/1/23	
Metals							
Aluminum, Total	6800	mg/kg dry	13.3	EPA 6010B/C/D	5/30/23	6/1/23	
Arsenic, Total	3.33	mg/kg dry	6.66	EPA 6010B/C/D	5/30/23	6/1/23	J
Cadmium, Total	0.387	mg/kg dry	0.666	EPA 6010B/C/D	5/30/23	6/1/23	J
Chromium, Total	7.41	mg/kg dry	0.666	EPA 6010B/C/D	5/30/23	6/1/23	
Copper, Total	229	mg/kg dry	0.666	EPA 6010B/C/D	5/30/23	6/1/23	
Lead, Total	3.59	mg/kg dry	6.66	EPA 6010B/C/D	5/30/23	6/1/23	J
Mercury, Total	ND	mg/kg dry	0.039	EPA 7471A	6/1/23	6/7/23	
Molybdenum, Total	2.31	mg/kg dry	1.33	EPA 6010B/C/D	5/30/23	6/1/23	
Nickel, Total	4.18	mg/kg dry	0.666	EPA 6010B/C/D	5/30/23	6/1/23	
Phosphorus, Total as P	8790	mg/kg dry	1.33	EPA 6010B/C/D	5/30/23	6/1/23	
Selenium, Total	1.64	mg/kg dry	2.67	EPA 6010B/C/D	5/30/23	6/1/23	J
Silver, Total	0.426	mg/kg dry	0.666	EPA 6010B/C/D	5/30/23	6/1/23	J
Zinc, Total	206	mg/kg dry	1.33	EPA 6010B/C/D	5/30/23	6/1/23	

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Jill Jones
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Kaysville, UT 84037

PO#:
Receipt: **5/30/23 14:00 @ 16.1** °C
Date Reported: 6/9/2023
Project Name: **Compost**

Report Footnotes

Abbreviations

ND = Not detected at the corresponding Minimum Reporting Limit (MRL).
1 mg/L = one milligram per liter or 1 mg/kg = one milligram per kilogram = 1 part per million.
1 ug/L = one microgram per liter or 1 ug/kg = one microgram per kilogram = 1 part per billion.
1 ng/L = one nanogram per liter or 1 ng/kg = one nanogram per kilogram = 1 part per trillion.
On calculated parameters, there may be a slight difference between summing the rounded values shown on the report vs the unrounded values used in the calculation.

Flag Descriptions

J = Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

CHAIN OF CUSTODY - SAMPLE SUBMITTAL FORM

COMPANY: Central Davis Sewer District
ADDRESS: 2200 S Sunset Dr
CITY/STATE/ZIP: Kaysville, UT 84037
PHONE #: 801-451-2190
CONTACT: Jill Jones, Manjot Masson
EMAIL: jillj@cdsewer.org / lab@cdsewer.org
PROJECT: Compost
PO Number:
INVOICE EMAIL ADDRESS:

23E2363

RUSH Due Date*:

* Expedited turnaround subject to additional charge

QC Level
1 2 3 4

QC levels definition: QC1: none QC2: Batch QC, random sample
QC3: 25% surcharge. Narrative plus Batch QC, your sample selected
QC4: 40% surcharge. Add raw data

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Sandy, UT 84070
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Sample condition			
	Custody Seal	✓	Correct Containers
✓	Container Intact	✓	Sufficient Sample Volume
✓	COC/Labels Agree		Headspace Present (VOC)
✓	Received on Ice		Temperature Blank
		✓	Received within Holding Time

Delivery Method			
	UPS		USPS
✓	FedEx		Chemtech-Ford Courier
	Walk-in		Customer Courier

Lab Use Only	CLIENT SAMPLE INFORMATION				TESTS REQUESTED																
	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX	See attachment sheet													E. Coli/Coliform (Absent/Present)	E. Coli/Coliform (Enumerated)	HPC
-01	1. compost #3	5-30-23	8:30 am	compost	✓																
-02	2. compost #4	5-30-23	8:30 am	compost	✓																
-03	3. compost #5	5-30-23	8:30 am	compost	✓																
	4.																				
	5.																				
	6.																				
	7.																				
	8.																				
	9.																				
	10.																				
				Bottle type	Q																
				Lot #																	

Sampled by: [print] Manjot
Sampled by: [signature]

ON ICE NOT ON ICE Temp (C°): 16.1

Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.

Special Instructions:

Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time
P. Hann	5-30-23		5-30-23 10:05
	5/30/23 1400	Denise Brun	5/30/23 14:00

Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum). Client agress to pay collection costs and attorney's fees.

23F2363 (attachment)

Chain of Custody
Metals Analysis
Central Davis Sewer District

Analysis Required (YES/NO)	Parameter	Approved Analysis Method	Requied Prep. Method	Maximum Holding Time after Preservation
✓	Aluminum	SW-6010	SW-3050	6 months
✓	Arsenic	SW-6010/7060/7061	SW-3050	6 months
✓	Cadmium	SW-6010/7130/7131	SW-3050	6 months
✓	Chromium	SW-6010/7190/71911	SW-3050	6 months
✓	Copper	SW-6010/7210	SW-3050	6 months
✓	Lead	SW-6010/7420/7421	SW-7471	6 months
✓	Mercury	SW-7471	SW-3050	28 days
✓	Molybdenum	SW-6010/7480/7481	SW-3050	6 months
✓	Nickel	SW-6010/7520	SW-3050	6 months
✓	Selenium	SW-6010/7740/7741	SW-3050	6 months
✓	Silver	SW-6010	SW-3050	6 months
✓	Zinc	SW-6010/7950	SW-3050	6 months
✓	Total, Fixed & Volatile Solids	SM-2540	N/A	7 days
	pH	SW-9045	N/A	Immediately
	Total Volatile Acids	SM-5560	N/A	7 days
✓	Total Phosphorus	SM-1500-P	4500-PB	28 days
✓	Total Ammonia	SM-4500-NH_3	N/A	28 days
	Conductivity	SW-9050	N/A	28 days
✓	Nitrite+ Nitrate	SM-4500-NO2/4500_NO3 SW-846 Method 9200	N/A	28 days 28 days
✓	TKN or Organic N	SM-4500-N org	N/A	28 days
✓	Total Solids	SM-2540 G	N/A	7 days

Sample Date: 5-30-23
# of Samples: 3
Sample Location: Compost Beds
Samples Collected By: Manjot

NPDES: #UT-0020974
Sample Quantity: Quart Bags
Composite/Grab

Sample ID	Date and Time Collected
#5 Compost #3	5-30-23
Compost #4	5-30-23
Compost #5	5-30-23

Date and Time: 5-30-23 8:30 pm
Reliquished By: P. Hr
Date and Time:
Received By:

Facility Name: Central Davis Sewer District
Address: 2200 South Sunset Drive, Kaysville UT 84037
Contact: Jill S. Jones/Manjot K. Masson
Phone # 801-451-2190

Note: The laboratory report must include all metal analysis results in dry weight basis(do not include TKN, Nitrates or Ammonia), analyst identification, laboratory supervisor name and signature, a laboratory certification statement (if applicable), and the chain of custody form(s). Also, the laboratory must utilize appropriate QA/QC methodology as found in method reference source document (i.e., Standard Methods or SW-846) depending on the analysis preformed.

CHEMTECH-FORD
LABORATORIES

7/21/2023

Work Order: 23G0541
Project: Compost

Central Davis Sewer District
Attn: Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

Client Service Contact: 801.262.7299

The analyses presented on this report were performed in accordance with the National Environmental Laboratory Accreditation Program (NELAP) unless noted in the comments, flags, or case narrative. If the report is to be used for regulatory compliance, it should be presented in its entirety, and not be altered.

NELAP ACCREDITED TNI LABORATORY

Approved By:

Mark Broadhead, Project Manager

Chemtech-Ford Laboratories
Serving the Intermountain West Since 1953

9632 South 500 West
Sandy, UT 84070
O:(801) 262-7299 F: (866) 792-0093
www.ChemtechFord.com

Certificate of Analysis

Central Davis Sewer District
Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

PO#:
Receipt: **7/11/23 14:00 @ 17.4** °C
Date Reported: 7/21/2023
Project Name: **Compost**

Sample ID: **Compost #6**

Matrix: **Solid** Sample Type: **Grab** Lab ID: **23G0541-01**

Date Sampled: **7/5/23 15:00** Sampled By: **Manjot**

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Ammonia (Soluble) as N	1050	mg/kg	40.0	SM 4500 NH3 H	7/14/23	7/14/23	
Nitrate, Soluble	77.8	mg/kg	1.00	EPA 300.0	7/13/23	7/13/23	
Nitrite, Soluble	ND	mg/kg	1.00	EPA 300.0	7/13/23	7/13/23	
Total Kjeldahl Nitrogen	11600	mg/kg	5.3	SM 4500 Norg	7/13/23	7/14/23	
Total Solids	54.9	%	0.1	CTF8000	7/12/23	7/13/23	
Total Solids	54.2	%	0.1	SM 2540G	7/12/23	7/12/23	
Total Volatile Solids	86.3	%	0.1	SM 2540 E	7/12/23	7/12/23	
Metals							
Aluminum, Total	7940	mg/kg dry	12.2	EPA 6010D	7/12/23	7/13/23	
Arsenic, Total	3.04	mg/kg dry	6.11	EPA 6010D	7/12/23	7/13/23	J
Cadmium, Total	0.611	mg/kg dry	0.611	EPA 6010D	7/12/23	7/13/23	
Chromium, Total	8.72	mg/kg dry	0.611	EPA 6010D	7/12/23	7/13/23	
Copper, Total	221	mg/kg dry	0.611	EPA 6010D	7/12/23	7/13/23	
Lead, Total	2.39	mg/kg dry	6.11	EPA 6010D	7/12/23	7/13/23	J
Mercury, Total	0.093	mg/kg dry	0.045	EPA 7471A	7/12/23	7/13/23	
Molybdenum, Total	1.25	mg/kg dry	1.22	EPA 6010D	7/12/23	7/13/23	
Nickel, Total	5.09	mg/kg dry	0.611	EPA 6010D	7/12/23	7/13/23	
Phosphorus, Total as P	11700	mg/kg dry	1.22	EPA 6010D	7/12/23	7/13/23	
Selenium, Total	1.40	mg/kg dry	2.44	EPA 6010D	7/12/23	7/13/23	J
Silver, Total	0.708	mg/kg dry	0.611	EPA 6010D	7/12/23	7/13/23	
Zinc, Total	243	mg/kg dry	1.22	EPA 6010D	7/12/23	7/13/23	

Chemtech-Ford Laboratories
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9632 South 500 West
Sandy, UT 84070
O:(801) 262-7299 F: (866) 792-0093
www.ChemtechFord.com

Certificate of Analysis

Central Davis Sewer District
Jill Jones
2200 South Sunset Drive
Kaysville, UT 84037

PO#:
Receipt: **7/11/23 14:00 @ 17.4** °C
Date Reported: 7/21/2023
Project Name: **Compost**

Report Footnotes

Abbreviations

ND = Not detected at the corresponding Minimum Reporting Limit (MRL).
1 mg/L = one milligram per liter or 1 mg/kg = one milligram per kilogram = 1 part per million.
1 ug/L = one microgram per liter or 1 ug/kg = one microgram per kilogram = 1 part per billion.
1 ng/L = one nanogram per liter or 1 ng/kg = one nanogram per kilogram = 1 part per trillion.
On calculated parameters, there may be a slight difference between summing the rounded values shown on the report vs the unrounded values used in the calculation.

Flag Descriptions

J = Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

CHAIN OF CUSTODY - SAMPLE SUBMITTAL FORM

COMPANY: Central Davis Sewer District
ADDRESS: 2200 S. Sunset Dr.
CITY/STATE/ZIP: Kaysville, UT 84037
PHONE #: 801-451-2190
CONTACT: Jill Jones, Manjot Masson
EMAIL: jillj@cdsewer.org, lab@cdsewer.org
PROJECT: Compost
PO Number:
INVOICE EMAIL ADDRESS:

2360541

RUSH Due Date*:

* Expedited turnaround subject to additional charge

QC Level
1 2 3 4

QC levels definition: QC1: none QC2: Batch QC, random sample
QC3: 25% surcharge. Narrative plus Batch QC, your sample selected
QC4: 40% surcharge. Add raw data

CHEMTECH-FORD LABORATORIES

Chemtech-Ford Laboratories
9632 South 500 West
Sandy, UT 84070
Phone: 801-262-7299
www.chemtechford.com

Sample condition			
	Custody Seal	✓	Correct Containers
✓	Container Intact		Sufficient Sample Volume
✓	COC/Labels Agree		Headspace Present (VOC)
✓	Received on Ice		Temperature Blank
		✓	Received within Holding Time

Delivery Method			
	UPS		USPS
	FedEx	✓	Chemtech-Ford Courier
	Walk-in		Customer Courier

Lab Use Only	CLIENT SAMPLE INFORMATION				TESTS REQUESTED														
	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX	See Attached Sheet												E. Coli/Coliform (Absent/Present)	E. Coli/Coliform (Enumerated)	HPC
-01	1. Compost #1e	7-5-23	15:00	Solid	✓														
	2.																		
	3.																		
	4.																		
	5.																		
	6.																		
	7.																		
	8.																		
	9.																		
	10.																		
			Bottle type		Q														
			Lot #																

Sampled by: [print] Manjot
Sampled by: [signature] MM

ON ICE NOT ON ICE Temp (C°): 17.4

Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.

Special Instructions:

Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time
	7-11-23 09:00 am		7/11/23 10:10
	7/11/23 1400	Denise Brem	7/11/23 14:00

Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum). Client agress to pay collection costs and attorney's fees.

23G0541 (Attachment)

Chain of Custody
Metals Analysis
Central Davis Sewer District

Analysis Required (YES/NO)	Parameter	Approved Analysis Method	Requied Prep. Method	Maximum Holding Time after Preservation
✓	Aluminum	SW-6010	SW-3050	6 months
✓	Arsenic	SW-6010/7060/7061	SW-3050	6 months
✓	Cadmium	SW-6010/7130/7131	SW-3050	6 months
✓	Chromium	SW-6010/7190/71911	SW-3050	6 months
✓	Copper	SW-6010/7210	SW-3050	6 months
✓	Lead	SW-6010/7420/7421	SW-7471	6 months
✓	Mercury	SW-7471	SW-3050	28 days
✓	Molybdenum	SW-6010/7480/7481	SW-3050	6 months
✓	Nickel	SW-6010/7520	SW-3050	6 months
✓	Selenium	SW-6010/7740/7741	SW-3050	6 months
✓	Silver	SW-6010	SW-3050	6 months
✓	Zinc	SW-6010/7950	SW-3050	6 months
✓	Total, Fixed & Volatile Solids	SM-2540	N/A	7 days
	pH	SW-9045	N/A	Immediately
	Total Volatile Acids	SM-5560	N/A	7 days
✓	Total Phosphorus	SM-1500-P	4500-PB	28 days
✓	Total Ammonia	SM-4500-NH_3	N/A	28 days
	Conductivity	SW-9050	N/A	28 days
✓	Nitrite+ Nitrate	SM-4500-NO2/4500_NO3 SW-846 Method 9200	N/A	28 days 28 days
✓	TKN or Organic N	SM-4500-N org	N/A	28 days
✓	Total Solids	SM-2540 G	N/A	7 days

Sample Date 7-5-23
# of Samples 1
Sample Location Compost Bed #6
Samples Collected By: Manjot

NPDES: #UT-0020974
Sample Quantity Ballon Bag
Composite/Grab

Sample ID	Date and Time Collected
Compost #6	7-5-23 15:00

Date and Time:
Reliquished By: Aimee Matthews

Date and Time:
Received By:

Facility Name: Central Davis Sewer District
Address: 2200 South Sunset Drive, Kaysville UT 84037
Contact: Jill S. Jones/Manjot K. Masson
Phone # 801-451-2190

Note: The laboratory report must include all metal analysis results in dry weight basis(do not include TKN, Nitrates or Ammonia), analyst identification, laboratory supervisor name and signature, a laboratory certification statement (if applicable), and the chain of custody form(s). Also, the laboratory must utilize appropriate QA/QC methodology as found in method reference source document (i.e., Standard Methods or SW-846) depending on the analysis preformed.

Pathogen Reduction Compliance Documentation

1. 2023 Digester Temperatures
2. 2023 Digester HRT Calculations
3. Class A Compost Testing- Salmonella
4. Class A Time, Temperature and Turning

Central Davis Sewer District
Anaerobic Biosolids Digestion Temperatures - 2023

	JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		OCT		NOV		DEC	
Day	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2
1	101	100	102	102	100	99	102	102	101	102	101	101	100	100	100	100	100	100	100	101	100	101	96	101
2	102	101	102	102	100	100	102	102	101	102	100	101	100	101	100	100	100	100	100	100	100	100	100	102
3	101	100	103	101	100	100	102	101	102	102	100	101	101	101	100	100	100	100	100	100	100	100	101	101
4	102	102	104	102	101	101	101	102	100	108	101	102	100	101	100	100	100	100	100	101	100	100	102	101
5	102	102	104	102	101	101	102	101	98	100	101	102	101	101	100	100	101	101	100	101	100	100	101	101
6	102	102	101	102	101	101	101	102	97	99	99	100	100	100	99	100	100	101	100	101	100	100	101	101
7	102	102	102	102	101	100	101	101	96	98	102	101	101	102	100	100	101	101	100	101	100	100	100	101
8	101	101	101	101	102	101	102	102	95	98	102	101	100	101	100	100	101	101	100	101	100	98	99	102
9	101	100	102	101	102	101	103	101	96	98	104	101	100	101	100	100	101	101	100	101	100	98	102	102
10	100	101	102	111	101	102	103	100	98	98	102	101	101	101	100	100	101	101	100	102	100	98	103	102
11	101	101	100	110	102	102	102	100	100	100	101	101	100	100	101	101	101	101	100	101	100	99	101	100
12	102	101	98	108	102	102	102	100	102	102	101	101	101	101	100	100	101	101	100	101	100	99	101	103
13	102	101	98	106	101	101	100	100	102	103	101	102	100	101	101	101	101	101	100	102	100	99	101	101
14	101	101	101	105	100	100	100	100	101	104	101	102	101	101	100	101	101	101	100	101	100	99	100	101
15	102	101	102	105	98	101	100	100	100	102	101	101	101	101	101	101	100	101	100	102	100	98	102	101
16	102	100	102	101	97	100	100	100	100	102	101	101	100	100	100	100	100	100	100	100	100	99	101	101
17	100	100	99	100	98	100	99	102	98	102	101	101	100	100	100	100	100	100	100	100	100	99	100	102
18	100	100	99	100	100	101	99	102	99	102	101	101	100	100	101	100	100	100	100	100	100	99	101	102
19	102	102	100	100	101	100	100	101	99	101	101	101	100	101	100	100	100	100	100	100	100	99	101	101
20	102	101	100	100	103	100	99	101	98	102	101	101	101	100	99	99	100	100	100	100	100	99	100	101
21	102	101	101	101	103	102	100	102	98	102	102	102	101	101	100	99	100	97	100	100	100	99	102	101
22	102	101	100	100	102	101	102	102	97	102	100	102	100	100	99	99	100	97	100	100	100	101	101	102
23	101	101	102	102	100	100	102	102	101	102	102	102	101	101	100	101	100	98	100	100	100	102	98	101
24	101	101	102	102	100	100	100	102	101	101	101	102	100	100	101	100	100	99	100	100	100	102	100	102
25	101	101	102	101	101	101	100	102	99	101	101	102	98	100	99	101	100	99	100	100	100	102	100	101
26	102	101	101	100	101	101	102	103	100	101	100	101	100	100	101	101	100	99	100	99	100	102	102	104
27	102	102	100	100	102	101	102	103	100	102	101	101	101	100	101	101	100	100	100	100	100	102	102	102
28	102	102	100	99	103	101	100	101	99	100	100	101	100	100	100	101	100	100	100	99	90	102	101	101
29	102	101			100	101	101	102	101	101	101	101	101	100	100	100	100	100	100	100	91	101	101	103
30	102	101			101	101	102	102	99	101	101	101	101	100	100	100	100	100	100	101	91	100	104	101
31	102	102			102	102			100	101			101	100	99	100			100	100			102	101
Average	102	101	101	102	101	101	101	101	99	101	101	101	100	101	100	100	100	100	100	100	99	100	101	101
Deg C	39	38	38	39	38	38	38	39	37	38	38	38	38	38	38	38	38	38	38	38	37	38	38	39
Note:	The Primary Digester #1 was down for cleaning from Septmeber 15-November 27, the temp values are estimated for this tim																							

https://d.docs.live.net/98ae734ac05258f0/BIOSOLIDS Files/Biosolids - Consolidated Data/Biosolids Report - Calendar Year 2023/6. Pathogen Reduction/Digester HRT and Temps/Digester Temperatures - 2023

Central Davis Sewer District
Digester HRT Calculations

DATES
12/23/2022-3/2/2023

Central Davis Sewer District Digesters HRT's are calculated as if there is no supernating. The District does supernate so actual HRT's are longer than calculated.

Primary Digesters - Heated and Mixed - Active Volume

Digester 1	27,800	ft cubed
Digester 2	43,100	ft cubed
Total Volume	70,900	ft cubed
Gallons Conversion	7.48	gal/ft cubed
Storage Volume	530,332	gallons
Dead Storage - 1 foot	4%	
Active Storage	509,119	gallons

Daily Pumping Rate - Plunger Pumps

Pump Rate 1		90	gpm
Pump Rate 2		90	gpm
Pump 1 time		3.5	min
	Per	60	min
Pump 2 time		5.5	min
	Per	60	min
Total Pump 1 per day		84.00	min/day
Total Pump 2 per day		132.00	min/day
Total Pump Volume		19,440	gal/day

Primary Digester HRT

Hydraulic Residence 26.2 Days

Secondary Digester HRT - Unheated

Active Storage	207,944	gallons

Hydraulic Residence 10.7 Days

Total Digester HRT 36.9 Days

Central Davis Sewer District
Digester HRT Calculations

DATES
3/2/23 - 3/23/2023

Central Davis Sewer District Digesters HRT's are calculated as if there is no supernating. The District does supernate so actual HRT's are longer than calculated.

Primary Digesters - Heated and Mixed - Active Volume

Digester 1	27,800	ft cubed
Digester 2	43,100	ft cubed
Total Volume	70,900	ft cubed
Gallons Conversion	7.48	gal/ft cubed
Storage Volume	530,332	gallons
Dead Storage - 1 foot	4%	
Active Storage	509,119	gallons

Daily Pumping Rate - Plunger Pumps

Pump Rate 1		90	gpm
Pump Rate 2		90	gpm
Pump 1 time		4	min
	Per	60	min
Pump 2 time		6	min
	Per	60	min
Total Pump 1 per day		96.00	min/day
Total Pump 2 per day		144.00	min/day
Total Pump Volume		21,600	gal/day

Primary Digester HRT

Hydraulic Residence 23.6 Days

Secondary Digester HRT - Unheated

Active Storage	207,944	gallons

Hydraulic Residence 9.6 Days

Total Digester HRT 33.2 Days

Central Davis Sewer District
Digester HRT Calculations

DATES
3/23/2023 - 4/13/2023

Central Davis Sewer District Digesters HRT's are calculated as if there is no supernating. The District does supernate so actual HRT's are longer than calculated.

Primary Digesters - Heated and Mixed - Active Volume

Digester 1	27,800	ft cubed
Digester 2	43,100	ft cubed
Total Volume	70,900	ft cubed
Gallons Conversion	7.48	gal/ft cubed
Storage Volume	530,332	gallons
Dead Storage - 1 foot	4%	
Active Storage	509,119	gallons

Daily Pumping Rate - Plunger Pumps

Pump Rate 1		90	gpm
Pump Rate 2		90	gpm
Pump 1 time		4	min
	Per	60	min
Pump 2 time		4	min
	Per	60	min
Total Pump 1 per day		96.00	min/day
Total Pump 2 per day		96.00	min/day
Total Pump Volume		17,280	gal/day

Primary Digester HRT

Hydraulic Residence 29.5 Days

Secondary Digester HRT - Unheated

Active Storage	207,944	gallons

Hydraulic Residence 12.0 Days

Total Digester HRT 41.5 Days

Central Davis Sewer District
Digester HRT Calculations

DATES
4/13/2023 - 5/24/2023

Central Davis Sewer District Digesters HRT's are calculated as if there is no supernating. The District does supernate so actual HRT's are longer than calculated.

Primary Digesters - Heated and Mixed - Active Volume

Digester 1	27,800	ft cubed
Digester 2	43,100	ft cubed
Total Volume	70,900	ft cubed
Gallons Conversion	7.48	gal/ft cubed
Storage Volume	530,332	gallons
Dead Storage - 1 foot	4%	
Active Storage	509,119	gallons

Daily Pumping Rate - Plunger Pumps

Pump Rate 1		90	gpm
Pump Rate 2		90	gpm
Pump 1 time		3.5	min
	Per	60	min
Pump 2 time		5	min
	Per	60	min
Total Pump 1 per day		84.00	min/day
Total Pump 2 per day		120.00	min/day
Total Pump Volume		18,360	gal/day

Primary Digester HRT

Hydraulic Residence 27.7 Days

Secondary Digester HRT - Unheated

Active Storage	207,944	gallons

Hydraulic Residence 11.3 Days

Total Digester HRT 39.1 Days

Central Davis Sewer District
Digester HRT Calculations

DATES
5/24/2023 - 6/10/2023

Central Davis Sewer District Digesters HRT's are calculated as if there is no supernating. The District does supernate so actual HRT's are longer than calculated.

Primary Digesters - Heated and Mixed - Active Volume

Digester 1	27,800	ft cubed
Digester 2	43,100	ft cubed
Total Volume	70,900	ft cubed
Gallons Conversion	7.48	gal/ft cubed
Storage Volume	530,332	gallons
Dead Storage - 1 foot	4%	
Active Storage	509,119	gallons

Daily Pumping Rate - Plunger Pumps

Pump Rate 1		90	gpm
Pump Rate 2		90	gpm
Pump 1 time		3	min
	Per	60	min
Pump 2 time		5	min
	Per	60	min
Total Pump 1 per day		72.00	min/day
Total Pump 2 per day		120.00	min/day
Total Pump Volume		17,280	gal/day

Primary Digester HRT

Hydraulic Residence 29.5 Days

Secondary Digester HRT - Unheated

Active Storage	207,944	gallons

Hydraulic Residence 12.0 Days

Total Digester HRT 41.5 Days

Central Davis Sewer District
Digester HRT Calculations

DATES
6/10/2023 - 6/22/2023

Central Davis Sewer District Digesters HRT's are calculated as if there is no supernating. The District does supernate so actual HRT's are longer than calculated.

Primary Digesters - Heated and Mixed - Active Volume

Digester 1	27,800	ft cubed
Digester 2	43,100	ft cubed
Total Volume	70,900	ft cubed
Gallons Conversion	7.48	gal/ft cubed
Storage Volume	530,332	gallons
Dead Storage - 1 foot	4%	
Active Storage	509,119	gallons

Daily Pumping Rate - Plunger Pumps

Pump Rate 1		90	gpm
Pump Rate 2		90	gpm
Pump 1 time		3.5	min
	Per	60	min
Pump 2 time		4.5	min
	Per	60	min
Total Pump 1 per day		84.00	min/day
Total Pump 2 per day		108.00	min/day
Total Pump Volume		17,280	gal/day

Primary Digester HRT

Hydraulic Residence 29.5 Days

Secondary Digester HRT - Unheated

Active Storage	207,944	gallons

Hydraulic Residence 12.0 Days

Total Digester HRT 41.5 Days

Central Davis Sewer District
Digester HRT Calculations

DATES
6/22/2023 - 6/23/2023

Central Davis Sewer District Digesters HRT's are calculated as if there is no supernating. The District does supernate so actual HRT's are longer than calculated.

Primary Digesters - Heated and Mixed - Active Volume

Digester 1	27,800	ft cubed
Digester 2	43,100	ft cubed
Total Volume	70,900	ft cubed
Gallons Conversion	7.48	gal/ft cubed
Storage Volume	530,332	gallons
Dead Storage - 1 foot	4%	
Active Storage	509,119	gallons

Daily Pumping Rate - Plunger Pumps

Pump Rate 1		90	gpm
Pump Rate 2		90	gpm
Pump 1 time		4	min
	Per	60	min
Pump 2 time		2.5	min
	Per	60	min
Total Pump 1 per day		96.00	min/day
Total Pump 2 per day		60.00	min/day
Total Pump Volume		14,040	gal/day

Primary Digester HRT

Hydraulic Residence 36.3 Days

Secondary Digester HRT - Unheated

Active Storage	207,944	gallons

Hydraulic Residence 14.8 Days

Total Digester HRT 51.1 Days

Central Davis Sewer District
Digester HRT Calculations

DATES
6/23/2023 - 7/25/2023

Central Davis Sewer District Digesters HRT's are calculated as if there is no supernating. The District does supernate so actual HRT's are longer than calculated.

Primary Digesters - Heated and Mixed - Active Volume

Digester 1	27,800	ft cubed
Digester 2	43,100	ft cubed
Total Volume	70,900	ft cubed
Gallons Conversion	7.48	gal/ft cubed
Storage Volume	530,332	gallons
Dead Storage - 1 foot	4%	
Active Storage	509,119	gallons

Daily Pumping Rate - Plunger Pumps

Pump Rate 1		90	gpm
Pump Rate 2		90	gpm
Pump 1 time		3	min
	Per	60	min
Pump 2 time		4.5	min
	Per	60	min
Total Pump 1 per day		72.00	min/day
Total Pump 2 per day		108.00	min/day
Total Pump Volume		16,200	gal/day

Primary Digester HRT

Hydraulic Residence 31.4 Days

Secondary Digester HRT - Unheated

Active Storage	207,944	gallons

Hydraulic Residence 12.8 Days

Total Digester HRT 44.3 Days

Central Davis Sewer District
Digester HRT Calculations

DATES
7/25/2023 - 8/23/2023

Central Davis Sewer District Digesters HRT's are calculated as if there is no supernating. The District does supernate so actual HRT's are longer than calculated.

Primary Digesters - Heated and Mixed - Active Volume

Digester 1	27,800	ft cubed
Digester 2	43,100	ft cubed
Total Volume	70,900	ft cubed
Gallons Conversion	7.48	gal/ft cubed
Storage Volume	530,332	gallons
Dead Storage - 1 foot	4%	
Active Storage	509,119	gallons

Daily Pumping Rate - Plunger Pumps

Pump Rate 1		90	gpm
Pump Rate 2		90	gpm
Pump 1 time		3.5	min
	Per	60	min
Pump 2 time		4.5	min
	Per	60	min
Total Pump 1 per day		84.00	min/day
Total Pump 2 per day		108.00	min/day
Total Pump Volume		17,280	gal/day

Primary Digester HRT

Hydraulic Residence 29.5 Days

Secondary Digester HRT - Unheated

Active Storage	207,944	gallons

Hydraulic Residence 12.0 Days

Total Digester HRT 41.5 Days

Central Davis Sewer District
Digester HRT Calculations

DATES
8/23/2023 - 9/15/2023

Central Davis Sewer District Digesters HRT's are calculated as if there is no supernating. The District does supernate so actual HRT's are longer than calculated.

Primary Digesters - Heated and Mixed - Active Volume

Digester 1	27,800	ft cubed
Digester 2	43,100	ft cubed
Total Volume	70,900	ft cubed
Gallons Conversion	7.48	gal/ft cubed
Storage Volume	530,332	gallons
Dead Storage - 1 foot	4%	
Active Storage	509,119	gallons

Daily Pumping Rate - Plunger Pumps

Pump Rate 1		90	gpm
Pump Rate 2		90	gpm
Pump 1 time		4	min
	Per	60	min
Pump 2 time		5	min
	Per	60	min
Total Pump 1 per day		96.00	min/day
Total Pump 2 per day		120.00	min/day
Total Pump Volume		19,440	gal/day

Primary Digester HRT

Hydraulic Residence 26.2 Days

Secondary Digester HRT - Unheated

Active Storage	207,944	gallons

Hydraulic Residence 10.7 Days

Total Digester HRT 36.9 Days

Central Davis Sewer District
Digester HRT Calculations

DATES
9/15/2023 - 9/29/2023

Central Davis Sewer District Digesters HRT's are calculated as if there is no supernating. The District does supernate so actual HRT's are longer than calculated.

Primary Digesters - Heated and Mixed - Active Volume

Digester 1	-	ft cubed
Digester 2	43,100	ft cubed
Total Volume	43,100	ft cubed
Gallons Conversion	7.48	gal/ft cubed
Storage Volume	322,388	gallons
Dead Storage - 1 foot	4%	
Active Storage	309,492	gallons

Daily Pumping Rate - Plunger Pumps

Pump Rate 1		90	gpm
Pump Rate 2		90	gpm
Pump 1 time		4	min
	Per	60	min
Pump 2 time		5	min
	Per	60	min
Total Pump 1 per day		96.00	min/day
Total Pump 2 per day		120.00	min/day
Total Pump Volume		19,440	gal/day

Primary Digester HRT

Hydraulic Residence	**15.9**	**Days**

Secondary Digester HRT - Unheated

Active Storage	207,944	gallons
Hydraulic Residence	**10.7**	**Days**
Total Digester HRT	**26.6**	**Days**

Central Davis Sewer District
Digester HRT Calculations

DATES
9/29/2023 - 10/24/2023

Central Davis Sewer District Digesters HRT's are calculated as if there is no supernating. The District does supernate so actual HRT's are longer than calculated.

Primary Digesters - Heated and Mixed - Active Volume

Digester 1	-	ft cubed
Digester 2	43,100	ft cubed
Total Volume	43,100	ft cubed
Gallons Conversion	7.48	gal/ft cubed
Storage Volume	322,388	gallons
Dead Storage - 1 foot	4%	
Active Storage	309,492	gallons

Daily Pumping Rate - Plunger Pumps

Pump Rate 1		90	gpm
Pump Rate 2		90	gpm
Pump 1 time		3	min
	Per	60	min
Pump 2 time		3	min
	Per	60	min
Total Pump 1 per day		72.00	min/day
Total Pump 2 per day		72.00	min/day
Total Pump Volume		12,960	gal/day

Primary Digester HRT

Hydraulic Residence	**23.9**	**Days**

Secondary Digester HRT - Unheated

Active Storage	207,944	gallons
Hydraulic Residence	**16.0**	**Days**
Total Digester HRT	**39.9**	**Days**

Central Davis Sewer District
Digester HRT Calculations

DATES
10/24/2023 - 10/29/2023

Central Davis Sewer District Digesters HRT's are calculated as if there is no supernating. The District does supernate so actual HRT's are longer than calculated.

Primary Digesters - Heated and Mixed - Active Volume

Digester 1	-	ft cubed
Digester 2	43,100	ft cubed
Total Volume	43,100	ft cubed
Gallons Conversion	7.48	gal/ft cubed
Storage Volume	322,388	gallons
Dead Storage - 1 foot	4%	
Active Storage	309,492	gallons

Daily Pumping Rate - Plunger Pumps

Pump Rate 1		90	gpm
Pump Rate 2		90	gpm
Pump 1 time		3	min
	Per	60	min
Pump 2 time		3	min
	Per	60	min
Total Pump 1 per day		72.00	min/day
Total Pump 2 per day		72.00	min/day
Total Pump Volume		12,960	gal/day

Primary Digester HRT

Hydraulic Residence 23.9 Days

Secondary Digester HRT - Unheated

Active Storage	207,944	gallons

Hydraulic Residence 16.0 Days

Total Digester HRT 39.9 Days

Central Davis Sewer District
Digester HRT Calculations

DATES
10/29/2023 - 11/26/2023

Central Davis Sewer District Digesters HRT's are calculated as if there is no supernating. The District does supernate so actual HRT's are longer than calculated.

Primary Digesters - Heated and Mixed - Active Volume

Digester 1	-	ft cubed
Digester 2	43,100	ft cubed
Total Volume	43,100	ft cubed
Gallons Conversion	7.48	gal/ft cubed
Storage Volume	322,388	gallons
Dead Storage - 1 foot	4%	
Active Storage	309,492	gallons

Daily Pumping Rate - Plunger Pumps

Pump Rate 1		90	gpm
Pump Rate 2		90	gpm
Pump 1 time		3.5	min
	Per	60	min
Pump 2 time		4.5	min
	Per	60	min
Total Pump 1 per day		84.00	min/day
Total Pump 2 per day		108.00	min/day
Total Pump Volume		17,280	gal/day

Primary Digester HRT

Hydraulic Residence 17.9 Days

Secondary Digester HRT - Unheated

Active Storage	207,944	gallons

Hydraulic Residence 12.0 Days

Total Digester HRT 29.9 Days

Central Davis Sewer District
Digester HRT Calculations

DATES
10/29/2023 - 11/26/2023

Central Davis Sewer District Digesters HRT's are calculated as if there is no supernating. The District does supernate so actual HRT's are longer than calculated.

Primary Digesters - Heated and Mixed - Active Volume

Digester 1	-	ft cubed
Digester 2	43,100	ft cubed
Total Volume	43,100	ft cubed
Gallons Conversion	7.48	gal/ft cubed
Storage Volume	322,388	gallons
Dead Storage - 1 foot	4%	
Active Storage	309,492	gallons

Daily Pumping Rate - Plunger Pumps

Pump Rate 1		90	gpm
Pump Rate 2		90	gpm
Pump 1 time		3.5	min
	Per	60	min
Pump 2 time		4.5	min
	Per	60	min
Total Pump 1 per day		84.00	min/day
Total Pump 2 per day		108.00	min/day
Total Pump Volume		17,280	gal/day

Primary Digester HRT

Hydraulic Residence 17.9 Days

Secondary Digester HRT - Unheated

Active Storage	207,944	gallons

Hydraulic Residence 12.0 Days

Total Digester HRT 29.9 Days

Central Davis Sewer District
Digester HRT Calculations

DATES
11/26/2023 - 11/27/2023

Central Davis Sewer District Digesters HRT's are calculated as if there is no supernating. The District does supernate so actual HRT's are longer than calculated.

Primary Digesters - Heated and Mixed - Active Volume

Digester 1	-	ft cubed
Digester 2	43,100	ft cubed
Total Volume	43,100	ft cubed
Gallons Conversion	7.48	gal/ft cubed
Storage Volume	322,388	gallons
Dead Storage - 1 foot	4%	
Active Storage	309,492	gallons

Daily Pumping Rate - Plunger Pumps

Pump Rate 1		90	gpm
Pump Rate 2		90	gpm
Pump 1 time		3.5	min
	Per	60	min
Pump 2 time		4.5	min
	Per	60	min
Total Pump 1 per day		84.00	min/day
Total Pump 2 per day		108.00	min/day
Total Pump Volume		17,280	gal/day

Primary Digester HRT

Hydraulic Residence 17.9 Days

Secondary Digester HRT - Unheated

Active Storage	207,944	gallons

Hydraulic Residence 12.0 Days

Total Digester HRT 29.9 Days

Central Davis Sewer District
Digester HRT Calculations

DATES
11/27/2023 - 12/8/2023

Central Davis Sewer District Digesters HRT's are calculated as if there is no supernating. The District does supernate so actual HRT's are longer than calculated.

Primary Digesters - Heated and Mixed - Active Volume

Digester 1	27,800	ft cubed
Digester 2	43,100	ft cubed
Total Volume	70,900	ft cubed
Gallons Conversion	7.48	gal/ft cubed
Storage Volume	530,332	gallons
Dead Storage - 1 foot	4%	
Active Storage	509,119	gallons

Daily Pumping Rate - Plunger Pumps

Pump Rate 1		90	gpm
Pump Rate 2		90	gpm
Pump 1 time		3.5	min
	Per	60	min
Pump 2 time		4.5	min
	Per	60	min
Total Pump 1 per day		84.00	min/day
Total Pump 2 per day		108.00	min/day
Total Pump Volume		17,280	gal/day

Primary Digester HRT

Hydraulic Residence 29.5 Days

Secondary Digester HRT - Unheated

Active Storage	207,944	gallons

Hydraulic Residence 12.0 Days

Total Digester HRT 41.5 Days

Central Davis Sewer District
Digester HRT Calculations

DATES
12/8/2023 - Present

Central Davis Sewer District Digesters HRT's are calculated as if there is no supernating. The District does supernate so actual HRT's are longer than calculated.

Primary Digesters - Heated and Mixed - Active Volume

Digester 1	27,800	ft cubed
Digester 2	43,100	ft cubed
Total Volume	70,900	ft cubed
Gallons Conversion	7.48	gal/ft cubed
Storage Volume	530,332	gallons
Dead Storage - 1 foot	4%	
Active Storage	509,119	gallons

Daily Pumping Rate - Plunger Pumps

Pump Rate 1		90	gpm
Pump Rate 2		90	gpm
Pump 1 time		3	min
	Per	60	min
Pump 2 time		4.5	min
	Per	60	min
Total Pump 1 per day		72.00	min/day
Total Pump 2 per day		108.00	min/day
Total Pump Volume		16,200	gal/day

Primary Digester HRT

Hydraulic Residence 31.4 Days

Secondary Digester HRT - Unheated

Active Storage	207,944	gallons

Hydraulic Residence 12.8 Days

Total Digester HRT 44.3 Days

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 830-9158

All samples tested according to NELAP requirements

Date Report Printed *Monday, May 15, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

SAMPLE SITE: Sampler: JW Received 5/9/2023 13:38

Sample ID	2396.9770 COMPOST						*Receiving Temp*	°C
	Date and Time Sample 5/8/2022 9:40							
Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.6	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 09-May-23	14:00
							Analysis 11-May-23	15:30
2023-01-23							*Completed* 11-May-23	15:30

Sample ID	2396.9771 COMPOST						*Receiving Temp*	°C
	Date and Time Sample 5/8/2022 9:40							
Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 09-May-23	14:00
							Analysis 11-May-23	15:30
2023-01-87							*Completed* 11-May-23	15:30

Sample ID	2396.9772 COMPOST						*Receiving Temp*	°C
	Date and Time Sample 5/8/2023 9:40							
Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 09-May-23	14:00
							Analysis 11-May-23	15:30
2023-01-52							*Completed* 11-May-23	15:30

Sample ID	2396.9773 COMPOST						*Receiving Temp*	°C
	Date and Time Sample 5/8/2023 9:40							
Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.5	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 09-May-23	14:00
							Analysis 11-May-23	15:30
2023-01-42							*Completed* 11-May-23	15:30

Sample ID	2396.9774 COMPOST						*Receiving Temp*	°C
	Date and Time Sample 5/8/2023 9:40							
Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 09-May-23	14:00
							Analysis 11-May-23	15:30
2023-01-57							*Completed* 11-May-23	15:30

David A Burton

Richards Industrial Microbiology Laboratory, Inc

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 830-9158

All samples tested according to NELAP requirements

Date Report Printed *Monday, May 15, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

SAMPLE SITE: Sampler: JW Received 5/9/2023 13:38

Sample ID **2396.9775 COMPOST** *Receiving Temp* °C

Date and Time Sample 5/8/2023 9:40

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 09-May-23	14:00
							Analysis 11-May-23	15:30
2023-01-16							*Completed* 11-May-23	15:30

Sample ID **2396.9776 COMPOST** *Receiving Temp* °C

Date and Time Sample 5/8/2023 9:40

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 09-May-23	14:00
							Analysis 11-May-23	15:30
2023-01-79							*Completed* 11-May-23	15:30

Richards Industrial Microbiology Laboratory, Inc

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 785-2500 Ext 134
All samples tested according to NELAP requirements

Date Report Printed *Monday, May 15, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

Phone: 801 451-2190
Fax: (801) 451-6836

SAMPLE SITE: Sampler: JW Received 13:38 5/9/2023

Sample ID	2396.9770 COMPOST					Receiving Tem	°C
	Grab	Sample Date Tim 08-May-22 9:40					
Lab Techs	Test	Test Results		MRL	Method	Sample	Date: Time
AR	**Total Solids**	**61.36**	%	1 %	EPA 160.3	Preparation	09-May-23 14:00
						Analysis	10-May-23 15:30
2023-01-23						Completed	10-May-23 15:30
Sample ID	2396.9771 COMPOST					Receiving Tem	°C
	Grab	Sample Date Tim 08-May-22 9:40					
Lab Techs	Test	Test Results		MRL	Method	Sample	Date: Time
AR	**Total Solids**	**68.23**	%	1 %	EPA 160.3	Preparation	09-May-23 14:00
						Analysis	10-May-23 15:30
2023-01-87						Completed	10-May-23 15:30
Sample ID	2396.9772 COMPOST					Receiving Tem	°C
	Grab	Sample Date Tim 08-May-23 9:40					
Lab Techs	Test	Test Results		MRL	Method	Sample	Date: Time
AR	**Total Solids**	**69.24**	%	1 %	EPA 160.3	Preparation	09-May-23 14:00
						Analysis	10-May-23 15:30
2023-01-52						Completed	10-May-23 15:30
Sample ID	2396.9773 COMPOST					Receiving Tem	°C
	Grab	Sample Date Tim 08-May-23 9:40					
Lab Techs	Test	Test Results		MRL	Method	Sample	Date: Time
AR	**Total Solids**	**63.87**	%	1 %	EPA 160.3	Preparation	09-May-23 14:00
						Analysis	10-May-23 15:30
2023-01-42						Completed	10-May-23 15:30
Sample ID	2396.9774 COMPOST					Receiving Tem	°C
	Grab	Sample Date Tim 08-May-23 9:40					
Lab Techs	Test	Test Results		MRL	Method	Sample	Date: Time
AR	**Total Solids**	**70.12**	%	1 %	EPA 160.3	Preparation	09-May-23 14:00
						Analysis	10-May-23 15:30
2023-01-57						Completed	10-May-23 15:30
Sample ID	2396.9775 COMPOST					Receiving Tem	°C
	Grab	Sample Date Tim 08-May-23 9:40					
Lab Techs	Test	Test Results		MRL	Method	Sample	Date: Time
AR	**Total Solids**	**69.11**	%	1 %	EPA 160.3	Preparation	09-May-23 14:00
						Analysis	10-May-23 15:30
2023-01-16						Completed	10-May-23 15:30

Richards Industrial Microbiology Laboratory, Inc.

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 785-2500 Ext 134
All samples tested according to NELAP requirements

Date Report Printed *Monday, May 15, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

Phone: 801 451-2190
Fax: (801) 451-6836

SAMPLE SITE: Sampler: JW Received 13:38 5/9/2023

Sample ID **2396.9776 COMPOST** *Receiving Tem* °C

Grab Sample Date Tim 08-May-23 9:40

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**70.58**	%	1 %	EPA 160.3	*Preparation*	09-May-23	14:00
						Analysis	10-May-23	15:30
2023-01-79						*Completed*	10-May-23	15:30

Richards Industrial Microbiology Laboratory, Inc.

2396

CENTRAL DAVIS SEWER DISTRICT
2200 South Sunset Drive
KAYSVILLE, UTAH 84037
801-451-2190
801-451-6836 FAX #
CHAIN OF CUSTODY

	SAMPLE TYPE	SAMPLE DATE	TIME STARTED	MATRIX	TSS	BOD 5	DISSOLVED BOD 5	BIOMONITORING	OIL AND GREASE	FECAL COLIFORM	TOTAL COLIFORM	SALMONELLA
2023-01-23 SAMPLED BY: Jace Woodrow	Grab	5/8/2022	9:40 AM	Compost								X
2023-01-87 SAMPLED BY: Jace Woodrow	Grab	5/8/2022	9:40 AM	Compost								X
2023-01-52 SAMPLED BY: Jace Woodrow	Grab	5/8/2022	9:40 AM	Compost								X
2023-01-42 SAMPLED BY: Jace Woodrow	Grab	5/8/2022	9:40 AM	Compost								X
2023-01-57 SAMPLED BY: Jace Woodrow	Grab	5/8/2022	9:40 AM	Compost								X
2023-01-16 SAMPLED BY: Jace Woodrow	Grab	5/8/2022	9:40 AM	Compost								X
2023-01-79 SAMPLED BY: Jace Woodrow	Grab	5/8/2022	9:40 AM	Compost								X

RELINQUISHED BY: [signature] DATE 05/9/23 TIME 1:38

RECEIVED BY: Angie Richards DATE 5/9/23 TIME 1:38

TOTAL NUMBER OF SAMPLES 7

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 785-2500 Ext 134
All samples tested according to NELAP requirements

Date Report Printed *Monday, May 15, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

Phone: 801 451-2190
Fax: (801) 451-6836

SAMPLE SITE: Sampler: MM Received 13:38 5/9/2023

Sample ID	Test	Test Results		MRL	Method	Sample	Date:	Time
2397.9777 COMPOST						Receiving Tem		°C
Grab		Sample Date Tim 08-May-23 9:40						
AR	**Total Solids**	**68.41**	%	1 %	EPA 160.3	Preparation	09-May-23	14:00
						Analysis	10-May-23	15:30
2023-02-70						Completed	10-May-23	15:30
2397.9778 COMPOST						Receiving Tem		°C
Grab		Sample Date Tim 08-May-23 9:40						
AR	**Total Solids**	**67.25**	%	1 %	EPA 160.3	Preparation	09-May-23	14:00
						Analysis	10-May-23	15:30
2023-02-37						Completed	10-May-23	15:30
2397.9779 COMPOST						Receiving Tem		°C
Grab		Sample Date Tim 08-May-23 9:40						
AR	**Total Solids**	**64.32**	%	1 %	EPA 160.3	Preparation	09-May-23	14:00
						Analysis	10-May-23	15:30
2023-02-20						Completed	10-May-23	18:53
2397.9780 COMPOST						Receiving Tem		°C
Grab		Sample Date Tim 08-May-23 9:40						
AR	**Total Solids**	**68.10**	%	1 %	EPA 160.3	Preparation	09-May-23	14:00
						Analysis	10-May-23	15:30
2023-02-01						Completed	10-May-23	15:30
2397.9781 COMPOST						Receiving Tem		°C
Grab		Sample Date Tim 08-May-23 9:40						
AR	**Total Solids**	**64.59**	%	1 %	EPA 160.3	Preparation	09-May-23	14:00
						Analysis	10-May-23	15:30
2023-02-99						Completed	10-May-23	15:30
2397.9782 COMPOST						Receiving Tem		°C
Grab		Sample Date Tim 08-May-23 9:40						
AR	**Total Solids**	**63.21**	%	1 %	EPA 160.3	Preparation	09-May-23	14:00
						Analysis	10-May-23	15:30
2023-02-34						Completed	10-May-23	15:30

Richards Industrial Microbiology Laboratory, Inc.

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 785-2500 Ext 134
All samples tested according to NELAP requirements

Date Report Printed *Monday, May 15, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

Phone: 801 451-2190
Fax: (801) 451-6836

SAMPLE SITE: Sampler: MM Received 13:38 5/9/2023

Sample ID 2397.9783 COMPOST *Receiving Tem* °C

Grab Sample Date Tim 08-May-23 9:40

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**66.43**	%	1 %	EPA 160.3	*Preparation*	09-May-23	14:00
						Analysis	10-May-23	15:30
2023.02-66						*Completed*	10-May-23	15:30

Richards Industrial Microbiology Laboratory, Inc.

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 830-9158

All samples tested according to NELAP requirements

Date Report Printed *Monday, May 15, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

SAMPLE SITE: Sampler: MM Received 5/9/2023 13:38

Sample ID	2397.9777 COMPOST						Receiving Temp	°C
	Date and Time Sample 5/8/2023 9:40							
Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 09-May-23	14:00
							Analysis 11-May-23	15:30
2023-02-70							*Completed* 11-May-23	15:30

Sample ID	2397.9778 COMPOST						Receiving Temp	°C
	Date and Time Sample 5/8/2023 9:40							
Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.4	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 09-May-23	14:00
							Analysis 11-May-23	15:30
2023-02-37							*Completed* 11-May-23	15:30

Sample ID	2397.9779 COMPOST						Receiving Temp	°C
	Date and Time Sample 5/8/2023 9:40							
Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.5	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 09-May-23	14:00
							Analysis 11-May-23	15:30
2023-02-20							*Completed* 11-May-23	15:30

Sample ID	2397.9780 COMPOST						Receiving Temp	°C
	Date and Time Sample 5/8/2023 9:40							
Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 09-May-23	14:00
							Analysis 11-May-23	15:30
2023-02-01							*Completed* 11-May-23	15:30

Sample ID	2397.9781 COMPOST						Receiving Temp	°C
	Date and Time Sample 5/8/2023 9:40							
Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.5	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 09-May-23	14:00
							Analysis 11-May-23	15:30
2023-02-99							*Completed* 11-May-23	15:30

Richards Industrial Microbiology Laboratory, Inc

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 830-9158

All samples tested according to NELAP requirements

Date Report Printed *Monday, May 15, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

SAMPLE SITE: Sampler: MM Received 5/9/2023 13:38

Sample ID **2397.9782 COMPOST** *Receiving Temp* °C

Date and Time Sample 5/8/2023 9:40

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.5	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 09-May-23	14:00
							Analysis 11-May-23	15:30
2023-02-34							*Completed* 11-May-23	15:30

Sample ID **2397.9783 COMPOST** *Receiving Temp* °C

Date and Time Sample 5/8/2023 9:40

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.4	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 09-May-23	14:00
							Analysis 11-May-23	15:30
2023.02-66							*Completed* 11-May-23	15:30

Richards Industrial Microbiology Laboratory, Inc

2397

CENTRAL DAVIS SEWER DISTRICT
2200 South Sunset Drive
KAYSVILLE, UTAH 84037
801-451-2190
801-451-6836 FAX #
CHAIN OF CUSTODY

	SAMPLE TYPE	SAMPLE DATE	TIME STARTED	MATRIX	TSS	BOD 5	DISSOLVED BOD 5	BIOMONITORING	OIL AND GREASE	FECAL COLIFORM	TOTAL COLIFORM	SALMONELLA
2023-02-70 SAMPLED BY: Manjot Masson	Grab	5/8/2023	9:40 AM	Compost								X
2023-02-37 SAMPLED BY: Manjot Masson	Grab	5/8/2023	9:40 AM	Compost								X
2023-02-20 SAMPLED BY: Manjot Masson	Grab	5/8/2023	9:40 AM	Compost								X
2023-02-01 SAMPLED BY: Manjot Masson	Grab	5/8/2023	9:40 AM	Compost								X
2023-02-99 SAMPLED BY: Manjot Masson	Grab	5/8/2023	9:40 AM	Compost								X
2023-02-34 SAMPLED BY: Manjot Masson	Grab	5/8/2023	9:40 AM	Compost								X
2023-02-66 SAMPLED BY: Manjot Masson	Grab	5/8/2023	9:40 AM	Compost								X

RELINQUISHED BY: [signature] DATE 05/01/23 TIME 1:38 TOTAL NUMBER OF SAMPLES 7

RECEIVED BY: Angie Richards DATE 5/9/23 TIME 1:38

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 830-9158

All samples tested according to NELAP requirements

Date Report Printed *Tuesday, June 6, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

SAMPLE SITE: Sampler: JW Received 5/31/2023 10:10

Sample ID **2499.10142 COMPOST** *Receiving Temp* °C

Date and Time Sample 5/30/2023 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
							Completed 02-Jun-23	13:30

2023-03-05

Sample ID **2499.10143 COMPOST** *Receiving Temp* °C

Date and Time Sample 5/30/2023 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.2	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
							Completed 02-Jun-23	13:30

2023-03-20

Sample ID **2499.10144 COMPOST** *Receiving Temp* °C

Date and Time Sample 5/30/2023 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.2	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
							Completed 02-Jun-23	13:30

2023-03-18

Sample ID **2499.10145 COMPOST** *Receiving Temp* °C

Date and Time Sample 5/30/2023 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
							Completed 02-Jun-23	13:30

2023-03-03

Sample ID **2499.10146 COMPOST** *Receiving Temp* °C

Date and Time Sample 5/30/2023 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
							Completed 02-Jun-23	13:30

2023-03-41

Richards Industrial Microbiology Laboratory, Inc

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 830-9158

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Date Report Printed *Tuesday, June 6, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

SAMPLE SITE: Sampler: JW Received 5/31/2023 10:10

Sample ID **2499.10147 COMPOST** *Receiving Temp* °C

Date and Time Sample 5/30/2023 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	Analysis Date:	Time:
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
2023-03-92							*Completed* 02-Jun-23	13:30

Sample ID **2499.10148 COMPOST** *Receiving Temp* °C

Date and Time Sample 5/30/2023 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	Analysis Date:	Time:
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
2023-03-93							*Completed* 02-Jun-23	13:30

Richards Industrial Microbiology Laboratory, Inc

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 785-2500 Ext 134

All samples tested according to NELAP requirements

Date Report Printed *Tuesday, June 6, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

Phone: 801 451-2190
Fax: (801) 451-6836

SAMPLE SITE: Sampler: JW Received 10:10 5/31/2023

Sample ID **2499.10142 COMPOST** *Receiving Tem* °C

Grab Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**69.23**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-03-05						*Completed*	01-Jun-23	12:30

Sample ID **2499.10143 COMPOST** *Receiving Tem* °C

Grab Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**71.46**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-03-20						*Completed*	01-Jun-23	12:30

Sample ID **2499.10144 COMPOST** *Receiving Tem* °C

Grab Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**73.18**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-03-18						*Completed*	01-Jun-23	12:30

Sample ID **2499.10145 COMPOST** *Receiving Tem* °C

Grab Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**70.28**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-03-03						*Completed*	01-Jun-23	12:30

Sample ID **2499.10146 COMPOST** *Receiving Tem* °C

Grab Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**69.96**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-03-41						*Completed*	01-Jun-23	12:30

Sample ID **2499.10147 COMPOST** *Receiving Tem* °C

Grab Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**70.01**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-03-92						*Completed*	01-Jun-23	12:30

Richards Industrial Microbiology Laboratory, Inc.

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 785-2500 Ext 134
All samples tested according to NELAP requirements

Date Report Printed *Tuesday, June 6, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

Phone: 801 451-2190
Fax: (801) 451-6836

SAMPLE SITE: Sampler: JW Received 10:10 5/31/2023

Sample ID **2499.10148 COMPOST** *Receiving Tem* °C

Grab Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**70.49**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-03-93						*Completed*	01-Jun-23	12:30

Richards Industrial Microbiology Laboratory, Inc.

2499

CENTRAL DAVIS SEWER DISTRICT
2200 South Sunset Drive
KAYSVILLE, UTAH 84037
801-451-2190
801-451-6836 FAX #
CHAIN OF CUSTODY

	SAMPLE TYPE	SAMPLE DATE	TIME STARTED	MATRIX	TSS	BOD 5	DISSOLVED BOD 5	BIOMONITORING	OIL AND GREASE	FECAL COLIFORM	TOTAL COLIFORM	SALMONELLA
2023-03-05 SAMPLED BY: Jace Woodrow	Grab	5/30/2023	3:30 PM	Compost								X
2023-03-20 SAMPLED BY: Jace Woodrow	Grab	5/30/2023	3:30 PM	Compost								X
2023-03-18 SAMPLED BY: Jace Woodrow	Grab	5/30/2023	3:30 PM	Compost								X
2023-03-03 SAMPLED BY: Jace Woodrow	Grab	5/30/2023	3:30 PM	Compost								X
2023-03-41 SAMPLED BY: Jace Woodrow	Grab	5/30/2023	3:30 PM	Compost								X
2023-03-92 SAMPLED BY: Jace Woodrow	Grab	5/30/2023	3:30 PM	Compost								X
2023-03-93 SAMPLED BY: Jace Woodrow	Grab	5/30/2023	3:30 PM	Compost								X

		DATE	TIME	TOTAL NUMBER OF SAMPLES
RELINQUISHED BY:		5/31/23	10:06Am	
RECEIVED BY:	A. Richards	5/31/23	10:10	7

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 785-2500 Ext 134

All samples tested according to NELAP requirements

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CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

Phone: 801 451-2190
Fax: (801) 451-6836

SAMPLE SITE: Sampler: JW Received 10:10 5/31/2023

Sample ID **2500.10149 COMPOST** *Receiving Tem* °C

Grab Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**70.29**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-04-64						*Completed*	01-Jun-23	12:30

Sample ID **2500.10150 COMPOST** *Receiving Tem* °C

Grab Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**70.02**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-04-46						*Completed*	01-Jun-23	12:30

Sample ID **2500.10151 COMPOST** *Receiving Tem* °C

Grab Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**69.48**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-04-73						*Completed*	01-Jun-23	12:30

Sample ID **2500.10152 COMPOST** *Receiving Tem* °C

Grab Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**70.13**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-04-14						*Completed*	01-Jun-23	12:30

Sample ID **2500.10153 COMPOST** *Receiving Tem* °C

Grab Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**70.46**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-04-95						*Completed*	01-Jun-23	12:30

Sample ID **2500.10154 COMPOST** *Receiving Tem* °C

Grab Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**69.27**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-04-70						*Completed*	01-Jun-23	12:30

Richards Industrial Microbiology Laboratory, Inc.

RICHARDS LABORATORIES
OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 785-2500 Ext 134
All samples tested according to NELAP requirements

Date Report Printed *Tuesday, June 6, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

Phone: 801 451-2190
Fax: (801) 451-6836

SAMPLE SITE: Sampler: JW Received 10:10 5/31/2023

Sample ID 2500.10155 COMPOST *Receiving Tem* °C

Grab Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**70.26**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-04-69						*Completed*	01-Jun-23	12:30

Richards Industrial Microbiology Laboratory, Inc.

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 830-9158

All samples tested according to NELAP requirements

Date Report Printed *Tuesday, June 6, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

SAMPLE SITE: Sampler: JW Received 5/31/2023 10:10

Sample ID	2500.10149 COMPOST						Receiving Temp	°C
	Date and Time Sample 5/30/2023 15:30							
Lab Techs	**Test**	**Test Results**		**MRL**	**Units**	**Method**	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
2023-04-64							*Completed* 02-Jun-23	13:30

Sample ID	2500.10150 COMPOST						Receiving Temp	°C
	Date and Time Sample 5/30/2023 15:30							
Lab Techs	**Test**	**Test Results**		**MRL**	**Units**	**Method**	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
2023-04-46							*Completed* 02-Jun-23	13:30

Sample ID	2500.10151 COMPOST						Receiving Temp	°C
	Date and Time Sample 5/30/2023 15:30							
Lab Techs	**Test**	**Test Results**		**MRL**	**Units**	**Method**	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
2023-04-73							*Completed* 02-Jun-23	13:30

Sample ID	2500.10152 COMPOST						Receiving Temp	°C
	Date and Time Sample 5/30/2023 15:30							
Lab Techs	**Test**	**Test Results**		**MRL**	**Units**	**Method**	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
2023-04-14							*Completed* 02-Jun-23	13:30

Sample ID	2500.10153 COMPOST						Receiving Temp	°C
	Date and Time Sample 5/30/2023 15:30							
Lab Techs	**Test**	**Test Results**		**MRL**	**Units**	**Method**	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
2023-04-95							*Completed* 02-Jun-23	13:30

Richards Industrial Microbiology Laboratory, Inc

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 830-9158

All samples tested according to NELAP requirements

Date Report Printed *Tuesday, June 6, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

SAMPLE SITE: Sampler: JW Received 5/31/2023 10:10

Sample ID **2500.10154 COMPOST** *Receiving Temp* °C

Date and Time Sample 5/30/2023 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	Analysis Date:	Time:
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
2023-04-70							*Completed* 02-Jun-23	13:30

Sample ID **2500.10155 COMPOST** *Receiving Temp* °C

Date and Time Sample 5/30/2023 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	Analysis Date:	Time:
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
2023-04-69							*Completed* 02-Jun-23	13:30

Richards Industrial Microbiology Laboratory, Inc

CENTRAL DAVIS SEWER DISTRICT
2200 South Sunset Drive
KAYSVILLE, UTAH 84037
801-451-2190
801-451-6836 FAX #
CHAIN OF CUSTODY

	SAMPLE TYPE	SAMPLE DATE	TIME STARTED	MATRIX	TSS	BOD 5	DISSOLVED BOD 5	BIOMONITORING	OIL AND GREASE	FECAL COLIFORM	TOTAL COLIFORM	SALMONELLA
2023-04-64 SAMPLED BY: Jace Woodrow	Grab	5/30/2023	3:30 PM	Compost								X
2023-04-46 SAMPLED BY: Jace Woodrow	Grab	5/30/2023	3:30 PM	Compost								X
2023-04-73 SAMPLED BY: Jace Woodrow	Grab	5/30/2023	3:30 PM	Compost								X
2023-04-14 SAMPLED BY: Jace Woodrow	Grab	5/30/2023	3:30 PM	Compost								X
2023-04-95 SAMPLED BY: Jace Woodrow	Grab	5/30/2023	3:30 PM	Compost								X
2023-04-70 SAMPLED BY: Jace Woodrow	Grab	5/30/2023	3:30 PM	Compost								X
2023-04-69 SAMPLED BY: Jace Woodrow	Grab	5/30/2023	3:30 PM	Compost								X

		DATE	TIME	TOTAL NUMBER OF SAMPLES
RELINQUISHED BY:		5/31/23	10:06am	
RECEIVED BY:	A. Richards	5/31/23	10:10	7

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 785-2500 Ext 134

All samples tested according to NELAP requirements

Date Report Printed *Tuesday, June 6, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

Phone: 801 451-2190
Fax: (801) 451-6836

SAMPLE SITE: Sampler: JW Received 10:10 5/31/2023

Sample ID **2502.10156 COMPOST** *Receiving Tem* °C

Grab Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**69.73**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-05-61						*Completed*	01-Jun-23	12:30

Sample ID **2502.10157 COMPOST** *Receiving Tem* °C

Grab Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**69.00**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-05-77						*Completed*	01-Jun-23	12:30

Sample ID **2502.10158 COMPOST** *Receiving Tem* °C

Grab Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**71.22**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-05-65						*Completed*	01-Jun-23	12:30

Sample ID **2502.10159 COMPOST** *Receiving Tem* °C

Grab Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**70.16**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-05-42						*Completed*	01-Jun-23	12:30

Sample ID **2502.10160 COMPOST** *Receiving Tem* °C

Grab Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**70.29**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-05-88						*Completed*	01-Jun-23	12:30

Sample ID **2502.10161 COMPOST** *Receiving Tem* °C

Grab Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**71.48**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-05-87						*Completed*	01-Jun-23	12:30

Chad D Burton

Richards Industrial Microbiology Laboratory, Inc.

RICHARDS LABORATORIES
OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 785-2500 Ext 134
All samples tested according to NELAP requirements

Date Report Printed *Tuesday, June 6, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

Phone: 801 451-2190
Fax: (801) 451-6836

SAMPLE SITE: Sampler: JW   Received 10:10 5/31/2023

Sample ID 2502.10162 COMPOST   *Receiving Tem* °C

Grab   Sample Date Tim 30-May-23 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	**Sample**	**Date:**	**Time**
AR	**Total Solids**	**69.96**	%	1 %	EPA 160.3	*Preparation*	31-May-23	11:30
						Analysis	01-Jun-23	12:30
2023-05-57						*Completed*	01-Jun-23	12:30

Richards Industrial Microbiology Laboratory, Inc.

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 830-9158

All samples tested according to NELAP requirements

Date Report Printed *Tuesday, June 6, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

SAMPLE SITE: Sampler: JW Received 5/31/2023 10:10

Sample ID	2502.10156 COMPOST						Receiving Temp	°C
	Date and Time Sample 5/30/2023 15:30							
Lab Techs	**Test**	**Test Results**		**MRL**	**Units**	**Method**	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
2023-05-61							*Completed* 02-Jun-23	13:30

Sample ID	2502.10157 COMPOST						Receiving Temp	°C
	Date and Time Sample 5/30/2023 15:30							
Lab Techs	**Test**	**Test Results**		**MRL**	**Units**	**Method**	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
2023-05-77							*Completed* 02-Jun-23	13:30

Sample ID	2502.10158 COMPOST						Receiving Temp	°C
	Date and Time Sample 5/30/2023 15:30							
Lab Techs	**Test**	**Test Results**		**MRL**	**Units**	**Method**	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.2	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
2023-05-65							*Completed* 02-Jun-23	13:30

Sample ID	2502.10159 COMPOST						Receiving Temp	°C
	Date and Time Sample 5/30/2023 15:30							
Lab Techs	**Test**	**Test Results**		**MRL**	**Units**	**Method**	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
2023-05-42							*Completed* 02-Jun-23	13:30

Sample ID	2502.10160 COMPOST						Receiving Temp	°C
	Date and Time Sample 5/30/2023 15:30							
Lab Techs	**Test**	**Test Results**		**MRL**	**Units**	**Method**	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
2023-05-88							*Completed* 02-Jun-23	13:30

Richards Industrial Microbiology Laboratory, Inc

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 830-9158

All samples tested according to NELAP requirements

Date Report Printed *Tuesday, June 6, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

SAMPLE SITE: Sampler: JW Received 5/31/2023 10:10

Sample ID **2502.10161 COMPOST** *Receiving Temp* °C

Date and Time Sample 5/30/2023 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.2	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
2023-05-57							*Completed* 02-Jun-23	13:30

Sample ID **2502.10162 COMPOST** *Receiving Temp* °C

Date and Time Sample 5/30/2023 15:30

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 31-May-23	11:30
							Analysis 02-Jun-23	13:30
2023-05-57							*Completed* 02-Jun-23	13:30

Richards Industrial Microbiology Laboratory, Inc

2502

CENTRAL DAVIS SEWER DISTRICT
2200 South Sunset Drive
KAYSVILLE, UTAH 84037
801-451-2190
801-451-6836 FAX #
CHAIN OF CUSTODY

	SAMPLE TYPE	SAMPLE DATE	TIME STARTED	MATRIX	TSS	BOD 5	DISSOLVED BOD 5	BIOMONITORING	OIL AND GREASE	FECAL COLIFORM	TOTAL COLIFORM	SALMONELLA
2023-05-61 SAMPLED BY: Terence Hansen	Grab	5/30/2023	3:30 PM	Compost								X
2023-05-77 SAMPLED BY: Terence Hansen	Grab	5/30/2023	3:30 PM	Compost								X
2023-05-65 SAMPLED BY: Terence Hansen	Grab	5/30/2023	3:30 PM	Compost								X
2023-05-42 SAMPLED BY: Terence Hansen	Grab	5/30/2023	3:30 PM	Compost								X
2023-05-88 SAMPLED BY: Terence Hansen	Grab	5/30/2023	3:30 PM	Compost								X
2023-05-87 SAMPLED BY: Terence Hansen	Grab	5/30/2023	3:30 PM	Compost								X
2023-05-57 SAMPLED BY: Terence Hansen	Grab	5/30/2023	3:30 PM	Compost								X

		DATE	TIME	TOTAL NUMBER OF SAMPLES
RELINQUISHED BY:		5/31/23	10:08 AM	
RECEIVED BY:	A. Richards	5/31/23	10:10	7

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 830-9158

All samples tested according to NELAP requirements

Date Report Printed *Tuesday, July 11, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

SAMPLE SITE: Sampler: MM Received 7/6/2023 10:15

Sample ID **2751.10880 COMPOST** *Receiving Temp* °C

Date and Time Sample 7/5/2023 15:00

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.2	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 06-Jul-23	11:00
							Analysis 07-Jul-23	13:15
2023-06-65							*Completed* 07-Jul-23	13:15

Sample ID **2751.10881 COMPOST** *Receiving Temp* °C

Date and Time Sample 7/5/2023 15:00

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 06-Jul-23	11:00
							Analysis 07-Jul-23	13:15
2023-06-39							*Completed* 07-Jul-23	13:15

Sample ID **2751.10882 COMPOST** *Receiving Temp* °C

Date and Time Sample 7/5/2023 15:00

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.2	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 06-Jul-23	11:00
							Analysis 07-Jul-23	13:15
2023-06-81							*Completed* 07-Jul-23	13:15

Sample ID **2751.10883 COMPOST** *Receiving Temp* °C

Date and Time Sample 7/5/2023 15:00

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 06-Jul-23	11:00
							Analysis 07-Jul-23	13:15
2023-06-40							*Completed* 07-Jul-23	13:15

Sample ID **2751.10884 COMPOST** *Receiving Temp* °C

Date and Time Sample 7/5/2023 15:00

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 06-Jul-23	11:00
							Analysis 07-Jul-23	13:15
2023-06-83							*Completed* 07-Jul-23	13:15

Richards Industrial Microbiology Laboratory, Inc

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 830-9158

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Date Report Printed *Tuesday, July 11, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

SAMPLE SITE: Sampler: MM Received 7/6/2023 10:15

Sample ID **2751.10885 COMPOST** *Receiving Temp* °C

Date and Time Sample 7/5/2023 15:00

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.2	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 06-Jul-23	11:00
							Analysis 07-Jul-23	13:15
2023-06-30							*Completed* 07-Jul-23	13:15

Sample ID **2751.10886 COMPOST** *Receiving Temp* °C

Date and Time Sample 7/5/2023 15:00

Lab Techs	*Test*	*Test Results*		*MRL*	*Units*	*Method*	**Analysis Date:**	**Time:**
AR AR	**Salmonella**	<2.3	MPN/4 g dry	3	MPN/4 g dry	EPA 1682	*Preparation* 06-Jul-23	11:00
							Analysis 07-Jul-23	13:15
2023-06-45							*Completed* 07-Jul-23	13:15

Richards Industrial Microbiology Laboratory, Inc

RICHARDS LABORATORIES OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 785-2500 Ext 134
All samples tested according to NELAP requirements

Date Report Printed *Tuesday, July 11, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE, UT 84037

Phone: 801 451-2190
Fax: (801) 451-6836

SAMPLE SITE: Sampler: MM Received 10:15 7/6/2023

Sample ID **2751.10880 COMPOST** *Receiving Tem* °C
Grab Sample Date Tim 05-Jul-23 15:00

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**71.36**	%	1 %	EPA 160.3	*Preparation*	06-Jul-23	11:00
						Analysis	07-Jul-23	12:00
2023-06-65						*Completed*	07-Jul-23	12:00

Sample ID **2751.10881 COMPOST** *Receiving Tem* °C
Grab Sample Date Tim 05-Jul-23 15:00

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**70.12**	%	1 %	EPA 160.3	*Preparation*	06-Jul-23	11:00
						Analysis	07-Jul-23	12:00
2023-06-39						*Completed*	07-Jul-23	12:00

Sample ID **2751.10882 COMPOST** *Receiving Tem* °C
Grab Sample Date Tim 05-Jul-23 15:00

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**73.25**	%	1 %	EPA 160.3	*Preparation*	06-Jul-23	11:00
						Analysis	07-Jul-23	12:00
2023-06-81						*Completed*	07-Jul-23	12:00

Sample ID **2751.10883 COMPOST** *Receiving Tem* °C
Grab Sample Date Tim 05-Jul-23 15:00

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**68.13**	%	1 %	EPA 160.3	*Preparation*	06-Jul-23	11:00
						Analysis	07-Jul-23	12:00
2023-06-40						*Completed*	07-Jul-23	12:00

Sample ID **2751.10884 COMPOST** *Receiving Tem* °C
Grab Sample Date Tim 05-Jul-23 15:00

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**69.01**	%	1 %	EPA 160.3	*Preparation*	06-Jul-23	11:00
						Analysis	07-Jul-23	12:00
2023-06-83						*Completed*	07-Jul-23	12:00

Sample ID **2751.10885 COMPOST** *Receiving Tem* °C
Grab Sample Date Tim 05-Jul-23 15:00

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**71.98**	%	1 %	EPA 160.3	*Preparation*	06-Jul-23	11:00
						Analysis	07-Jul-23	12:00
2023-06-30						*Completed*	07-Jul-23	12:00

Richards Industrial Microbiology Laboratory, Inc.

RICHARDS LABORATORIES
OF UTAH

45 North 100 East Pleasant Grove UT 84062 (801) 785-2500 Ext 134
All samples tested according to NELAP requirements

Date Report Printed *Tuesday, July 11, 2023*

CENTRAL DAVIS SEWER DISTRICT
2200 SOUTH SUNSET DRIVE

KAYSVILLE. UT 84037

Phone: 801 451-2190
Fax: (801) 451-6836

SAMPLE SITE: Sampler: MM Received 10:15 7/6/2023

Sample ID 2751.10886 COMPOST *Receiving Tem* °C

Sample Date Tim 05-Jul-23 15:00

Lab Techs	*Test*	*Test Results*		*MRL*	*Method*	Sample	Date:	Time
AR	**Total Solids**	**69.48**	%	1 %	EPA 160.3	*Preparation*	06-Jul-23	11:00
						Analysis	07-Jul-23	12:00
2023-06-45						*Completed*	07-Jul-23	12:00

Richards Industrial Microbiology Laboratory, Inc.

2751

CENTRAL DAVIS SEWER DISTRICT
2200 South Sunset Drive
KAYSVILLE, UTAH 84037
801-451-2190
801-451-6836 FAX #
CHAIN OF CUSTODY

	SAMPLE TYPE	SAMPLE DATE	TIME STARTED	MATRIX	TSS	BOD 5	DISSOLVED BOD 5	BIOMONITORING	OIL AND GREASE	FECAL COLIFORM	TOTAL COLIFORM	SALMONELLA
2023-06-65 SAMPLED BY: Manjot Masson	Grab	7/5/2023	3:00 PM	Compost								X
2023-06-39 SAMPLED BY: Manjot Masson	Grab	7/5/2023	3:00 PM	Compost								X
2023-06-81 SAMPLED BY: Manjot Masson	Grab	7/5/2023	3:00 PM	Compost								X
2023-06-40 SAMPLED BY: Manjot Masson	Grab	7/5/2023	3:00 PM	Compost								X
2023-06-83 SAMPLED BY: Manjot Masson	Grab	7/5/2023	3:00 PM	Compost								X
2023-06-30 SAMPLED BY: Manjot Masson	Grab	7/5/2023	3:00 PM	Compost								X
2023-06-45 SAMPLED BY: Manjot Masson	Grab	7/5/2023	3:00 PM	Compost								X

		DATE	TIME	TOTAL NUMBER OF SAMPLES
RELINQUISHED BY:	[illegible]	07/6/23		
RECEIVED BY:	Angie Richards	7/6/23	10:15	7

Central Davis Sewer District
Anaerobic Compost Pile # 230605

Action Item	Date	Temperature		
		Time	Temperature	Operator Initials
Begin Pile Construction	Monday, June 5, 2023	7:54 AM	68°	MC
Temperature Monitoring	Monday, June 12, 2023	7:54 AM	68°	MC
	Tuesday, June 13, 2023	7:55 AM	67°	MC
	Wednesday, June 14, 2023	7:53 AM	65°	MC
	Thursday, June 15, 2023	8:29 AM	66°	SW
	Friday, June 16, 2023	7:56 AM	72°	MC
	Saturday, June 17, 2023	8:34 am	68°	JH
	Sunday, June 18, 2023	11:32 am	66°	JH
	Monday, June 19, 2023	8:04 am	66°	JH
	Tuesday, June 20, 2023	7:55 AM	64°	MC
	Wednesday, June 21, 2023	7:49 AM	69°	MC
	Thursday, June 22, 2023	7:47 AM	64°	MC
	Friday, June 23, 2023	7:59 AM	64°	MC
	Saturday, June 24, 2023	8:32 AM	65°	KM
	Sunday, June 25, 2023	8:22 AM	61°	KM
	Monday, June 26, 2023	8:10 AM	65°	SW
	Tuesday, June 27, 2023	8:17 AM	63°	SW
	Wednesday, June 28, 2023	7:52 AM	57°	MC
	Thursday, June 29, 2023	8:02 AM	61°	MC
	Friday, June 30, 2023	7:59 AM	58°	MC
	Saturday, July 1, 2023	8:15 AM	60°	SW
	Sunday, July 2, 2023	8:07 AM	60°	SW
Pile Complete	Monday, July 3, 2023	8:00 AM	57°	NB

Central Davis Sewer District
Anaerobic Compost Pile # 230619

Action Item	Date	Temperature		
		Time	Temperature	Operator Initials
Begin Pile Construction	Monday, June 19, 2023			
Temperature Monitoring	Monday, June 26, 2023	8:13Am	67°	JW
	Tuesday, June 27, 2023	8:17Am	63°	SW
	Wednesday, June 28, 2023	7:52 AM	63°	MC
	Thursday, June 29, 2023	8:03 AM	59°	MC
	Friday, June 30, 2023	8:00AM	60°	MC
	Saturday, July 1, 2023	8:15Am	64°	JW
	Sunday, July 2, 2023	8:07Am	66°	JW
	Monday, July 3, 2023	8:01Am	73°	DS
	Tuesday, July 4, 2023	8:09AM	72°	SM
	Wednesday, July 5, 2023	8:13 AM	62°	MC
	Thursday, July 6, 2023	7:52 AM	67°	MC
	Friday, July 7, 2023	7:58AM	67°	MC
	Saturday, July 8, 2023	8:11 AM	65°	KM
	Sunday, July 9, 2023	8:03 AM	63°	KM
	Monday, July 10, 2023	8:05Am	64°	JW
	Tuesday, July 11, 2023	7:54 AM	63°	MC
	Wednesday, July 12, 2023	8:04 AM	63°	MC
	Thursday, July 13, 2023	8:31 AM	60°	MC
	Friday, July 14, 2023	8:03 AM	61°	MC
	Saturday, July 15, 2023	8:57 AM	60°	MC
	Sunday, July 16, 2023	8:09 AM	60°	MC
Pile Complete	Monday, July 17, 2023	8:15Am	58°	JW

Central Davis Sewer District
Anaerobic Compost Pile # 230703

Action Item	Date	Temperature		
		Time	Temperature	Operator Initials
Begin Pile Construction	Monday, July 3, 2023	9:45am	75°	JT
Temperature Monitoring	Monday, July 10, 2023	9:07Am	63°	JC
	Tuesday, July 11, 2023	7:55 AM	57°	MC
	Wednesday, July 12, 2023	8:05 AM	62°	MC
	Thursday, July 13, 2023	8:30 AM	62°	MC
	Friday, July 14, 2023	8:03 AM	60°	MC
	Saturday, July 15, 2023	8:58AM	59°	MC
	Sunday, July 16, 2023	8:10 AM	57°	MC
	Monday, July 17, 2023	8:15Am	67°	JC
	Tuesday, July 18, 2023	8:57Am	72°	JC
	Wednesday, July 19, 2023	8:15am	61°	JT
	Thursday, July 20, 2023	8:23Am	64°	JC
	Friday, July 21, 2023	9:35Am	64°	TAH
	Saturday, July 22, 2023	8:40a	65°	JC
	Sunday, July 23, 2023	9:30a	64°	JC
	Monday, July 24, 2023	~~9:40~~ JC 8:10	~~64°~~ JC 64°	JC
	Tuesday, July 25, 2023	9:24A	57°	TAH
	Wednesday, July 26, 2023	8:26 AM	60°	MC
	Thursday, July 27, 2023	8:15Am	61°	JC
	Friday, July 28, 2023	8:05Am	58°	JC
	Saturday, July 29, 2023	8:14AM	57°	JH
	Sunday, July 30, 2023	8:03AM	55°	JH
Pile Complete	Monday, July 31, 2023	8:03 AM	56°	MC

Central Davis Sewer District
Anaerobic Compost Pile # 230717

Action Item	Date	Temperature		
		Time	Temperature	Operator Initials
Begin Pile Construction	Monday, July 17, 2023			
Temperature Monitoring	Monday, July 24, 2023	1200pm	64°	SWC
	Tuesday, July 25, 2023	9:30 A	67°	TAH
	Wednesday, July 26, 2023	8:26 AM	67°	NC
	Thursday, July 27, 2023	8:15AM	63°	SW
	Friday, July 28, 2023	8:05AM	70°	SW
	Saturday, July 29, 2023	8:14AM	~~70~~ no 65°	TH
	Sunday, July 30, 2023	8:03AM	67	TH
	Monday, July 31, 2023	8:03 AM	65°	NC
	Tuesday, August 1, 2023	8:50 AM	50°	KM
	Wednesday, August 2, 2023	7:55AM	69°	SW
	Thursday, August 3, 2023	8:34 AM	57°	NC
	Friday, August 4, 2023	8:02AM	65°	NC
	Saturday, August 5, 2023	8:03AM	~~58~~	SW
	Sunday, August 6, 2023	8:06AM	60°	SW
	Monday, August 7, 2023	8:10 AM	60°	NC
	Tuesday, August 8, 2023	8:30 AM	56°	TAH
	Wednesday, August 9, 2023	8:10 AM	59°	NC
	Thursday, August 10, 2023	8:18 AM	62°	NC
	Friday, August 11, 2023	6:53AM	63°	SW
	Saturday, August 12, 2023	9:15 AM	63°	NC
	Sunday, August 13, 2023	8:25am	60°	JH
Pile Complete	Monday, August 14, 2023	8:06Am	62°	SW

Central Davis Sewer District
Anaerobic Compost Pile # 230731

Action Item	Date	Temperature		
		Time	Temperature	Operator Initials
Begin Pile Construction	Monday, July 31, 2023			
Temperature Monitoring	Monday, August 7, 2023	8:10 AM	66°	NC
	Tuesday, August 8, 2023	8:32 AM	69°	TAH
	Wednesday, August 9, 2023	8:10 AM	~~69°~~ NC 63°	NC
	Thursday, August 10, 2023	8:18 AM	61°	NC
	Friday, August 11, 2023	8:53 AM	61°	
	Saturday, August 12, 2023	9:15 AM	61°	NC
	Sunday, August 13, 2023	8:25 am	60	
	Monday, August 14, 2023	8:36 AM	61°	
	Tuesday, August 15, 2023	8:14 AM	63°	
	Wednesday, August 16, 2023	8:15 AM	64°	NC
	Thursday, August 17, 2023	8:02 AM	65°	NC
	Friday, August 18, 2023	8:20 AM	65°	
	Saturday, August 19, 2023	630A	68°	SC
	Sunday, August 20, 2023	631A	58°	SC
	Monday, August 21, 2023	8:30 AM	61°	KM
	Tuesday, August 22, 2023	8:31 AM	55°	KM
	Wednesday, August 23, 2023	8:30 AM	56°	KM
	Thursday, August 24, 2023	8:06 AM	57°	NC
	Friday, August 25, 2023	7:57 AM	57°	NC
	Saturday, August 26, 2023	7:58 AM	57	KM
	Sunday, August 27, 2023	7:53 AM	52°	KM
Pile Complete	Monday, August 28, 2023	8:05 AM	55°	

Central Davis Sewer District
Anaerobic Compost Pile # 230814

Action Item	Date	Temperature		
		Time	Temperature	Operator Initials
Begin Pile Construction	Monday, August 14, 2023			
Temperature Monitoring	Monday, August 21, 2023	8:30 AM	59°	KM
	Tuesday, August 22, 2023	8:30 AM	57°	KM
	Wednesday, August 23, 2023	8:30 AM	60°	KM
	Thursday, August 24, 2023	8:06 AM	61°	NC
	Friday, August 25, 2023	7:57 AM	60°	NC
	Saturday, August 26, 2023	7:58 AM	64	↑N
	Sunday, August 27, 2023	7:53 AM	62	↑N
	Monday, August 28, 2023	8:06 AM	67°	[illegible]
	Tuesday, August 29, 2023	8:04 AM	69°	NC
	Wednesday, August 30, 2023	8:03 AM	65°	NC
	Thursday, August 31, 2023	8:01 AM	64°	[illegible]
	Friday, September 1, 2023	8:25 AM	59°	[illegible]
	Saturday, September 2, 2023	8:09 AM	66°	[illegible]
	Sunday, September 3, 2023	7:59 AM	69°	[illegible]
	Monday, September 4, 2023	7:34 AM	64°	[illegible]
	Tuesday, September 5, 2023	8:37 AM	63°	TAH
	Wednesday, September 6, 2023	9:05 AM	57°	TAH
	Thursday, September 7, 2023	8:55 AM	57°	TAH
	Friday, September 8, 2023	8:05 AM	62°	NC
	Saturday, September 9, 2023	9:19 AM	62°	NC
	Sunday, September 10, 2023	8:22 am	64°	JH
Pile Complete	Monday, September 11, 2023	8:04 AM	62°	[illegible]

Central Davis Sewer District
Anaerobic Compost Pile # 230828

Action Item	Date	Temperature		
		Time	Temperature	Operator Initials
Begin Pile Construction	Monday, August 28, 2023			
Temperature Monitoring	Monday, September 4, 2023	7:36Am	66°	
	Tuesday, September 5, 2023	8:37Am	58°	
	Wednesday, September 6, 2023	9:05 Am	71°	TAH
	Thursday, September 7, 2023	8:55 Am	65°	TAH
	Friday, September 8, 2023	8:06 AM	59°	NC
	Saturday, September 9, 2023	9:19 AM	57°	NC
	Sunday, September 10, 2023	8:20 am	55°	JH
	Monday, September 11, 2023	8:05Am	57°	
	Tuesday, September 12, 2023	8:13Am	61°	
	Wednesday, September 13, 2023	8:11Am	61°	
	Thursday, September 14, 2023	8:15Am	62°	
	Friday, September 15, 2023	8:21Am	59°	
	Saturday, September 16, 2023	8:10a	58	JC
	Sunday, September 17, 2023	8:16a	58°	JC
	Monday, September 18, 2023	8:11Am	56°	
	Tuesday, September 19, 2023	8:09Am	56°	
	Wednesday, September 20, 2023	8:22Am	51°	
	Thursday, September 21, 2023	7:47Am	50°	
	Friday, September 22, 2023	8:21Am	48°	
	Saturday, September 23, 2023	8:08AM	47°	
	Sunday, September 24, 2023	8:08AM	45°	
Pile Complete	Monday, September 25, 2023	8:04Am	45°	

Central Davis Sewer District
Anaerobic Compost Pile # 230911

Action Item	Date	Temperature		
		Time	Temperature	Operator Initials
Begin Pile Construction	Monday, September 11, 2023			
Temperature Monitoring	Monday, September 18, 2023	8:14Am	61°	SW
	Tuesday, September 19, 2023	8:04Am	61°	SW
	Wednesday, September 20, 2023	8:23Am	60°	SW
	Thursday, September 21, 2023	7:44AM	61°	SW
	Friday, September 22, 2023	8:20Am	65°	SW
	Saturday, September 23, 2023	8:08AM	63°	TH
	Sunday, September 24, 2023	8:08AM	60°	TH
	Monday, September 25, 2023	8:06Am	71°	SW
	Tuesday, September 26, 2023	8:01Am	76°	SW
	Wednesday, September 27, 2023	9:00Am	72°	TAH
	Thursday, September 28, 2023	9:24AM	71°	TAH
	Friday, September 29, 2023	7:12Am	69°	SW
	Saturday, September 30, 2023	8:22Am	68°	SW
	Sunday, October 1, 2023	8:27Am	68°	SW
	Monday, October 2, 2023	9:00AM	67°	TAH
	Tuesday, October 3, 2023	8:50AM	66°	TAH
	Wednesday, October 4, 2023	9:02Am	66°	SW
	Thursday, October 5, 2023	8:47Am	64°	SW
	Friday, October 6, 2023	8:14Am	61°	SW
	Saturday, October 7, 2023	8:40am	60	JTP
	Sunday, October 8, 2023	9:38AM	59°	BW
Pile Complete	Monday, October 9, 2023	9:03	60°	TAH

Central Davis Sewer District
Anaerobic Compost Pile # 230925

Action Item	Date	Temperature		
		Time	Temperature	Operator Initials
Begin Pile Construction	Monday, September 25, 2023			
Temperature Monitoring	Monday, October 2, 2023			
	Tuesday, October 3, 2023			
	Wednesday, October 4, 2023	9:05AM	61°	SW
	Thursday, October 5, 2023	8:48AM	63°	SW
	Friday, October 6, 2023	8:15AM	58°	SW
	Saturday, October 7, 2023	8:35AM	53°	JP
	Sunday, October 8, 2023	9:38AM	59°	BW
	Monday, October 9, 2023	9:00	69°	TAH
	Tuesday, October 10, 2023	9:05AM	68°	SW
	Wednesday, October 11, 2023	8:20AM	67°	SW
	Thursday, October 12, 2023	8:35AM	66°	SW
	Friday, October 13, 2023	8:57AM	63°	SW
	Saturday, October 14, 2023	900A	62°	SC
	Sunday, October 15, 2023	930A	62°	SC
	Monday, October 16, 2023	8:19AM	61°	SW
	Tuesday, October 17, 2023	8:06AM	60°	SW
	Wednesday, October 18, 2023	9:00AM	58°	TAH
	Thursday, October 19, 2023	8:15AM	57°	SWC
	Friday, October 20, 2023	8:18AM	58°	SWC
	Saturday, October 21, 2023	10:18AM	59°	MC
	Sunday, October 22, 2023	7:55AM	59°	TH
Pile Complete	Monday, October 23, 2023	8:22AM	58°	SW
	Tuesday, Oct. 24, 2023	8:04AM	57°	SW
	Wed., Oct. 25, 2023	8:20AM	55°	SW

temps / blower not yet started

Central Davis Sewer District
Anaerobic Compost Pile # 231009

Action Item	Date	Temperature		
		Time	Temperature	Operator Initials
Begin Pile Construction	Monday, October 9, 2023			
Temperature Monitoring	Monday, October 16, 2023	8:23Am	65°	SW
	Tuesday, October 17, 2023	8:07Am	70°	SW
	Wednesday, October 18, 2023	9800 AM	67°	TAH
	Thursday, October 19, 2023	8:15 am	67°	JWC
	Friday, October 20, 2023	8:20A	67°	JWC
	Saturday, October 21, 2023	10:18AM	66°	MC
	Sunday, October 22, 2023	7:55AM	66°	AH
	Monday, October 23, 2023	8:23Am	65°	SW
	Tuesday, October 24, 2023	8:03Am	61°	SW
	Wednesday, October 25, 2023	8:21Am	58°	SW
	Thursday, October 26, 2023	8:08Am	57°	SW
	Friday, October 27, 2023	8:03Am	57°	SW
	Saturday, October 28, 2023	8:21Am	56°	SW
	Sunday, October 29, 2023	8:17AM	56°	SW
	Monday, October 30, 2023	820 AM	55°	JC
	Tuesday, October 31, 2023	825A.	55°	JC
	Wednesday, November 1, 2023	855A	54°	JC
	Thursday, November 2, 2023	805A	55°	JC
	Friday, November 3, 2023	930A	52°	JC
	Saturday, November 4, 2023	9:14 am	48°	JH
	Sunday, November 5, 2023	1:10 P.M	50°	BH
Pile Complete	Monday, November 6, 2023	8:07Am	52°	SW

Central Davis Sewer District
Anaerobic Compost Pile #231218

covered Pile

Action Item	Date	Temperature		
		Time	Temperature	Operator Initials
Begin Pile Construction	Monday, December 18, 2023			
Temperature Monitoring	Monday, December 25, 2023	9:25Am	57°	SW
	Tuesday, December 26, 2023	8:55am	64°	JC
	Wednesday, December 27, 2023	8:30am	66°	JC
	Thursday, December 28, 2023	11:05AM	66°	TAH
	Friday, December 29, 2023	8:20A	66°	JC
	Saturday, December 30, 2023	9:10 Am	64°	MC
	Sunday, December 31, 2023	9:53AM	63°	MC
	Monday, January 1, 2024	1:18pm	61°	MC
	Tuesday, January 2, 2024	8:35Am	59°	SW
	Wednesday, January 3, 2024	9:05AM	61°	TAH
	Thursday, January 4, 2024	8:12Am	60°	SW
	Friday, January 5, 2024	8:23Am	61°	SW
	Saturday, January 6, 2024	8:09AM	60°	TH
	Sunday, January 7, 2024	9:06AM	61°	JW
	Monday, January 8, 2024	8:05Am	60°	SW
	Tuesday, January 9, 2024	8:26Am	61°	SW
	Wednesday, January 10, 2024	8:45Am	60°	JW
	Thursday, January 11, 2024	8:13Am	58°	SW
	Friday, January 12, 2024	8:09Am	57°	SW
	Saturday, January 13, 2024	8:25 Am	57°	DB
	Sunday, January 14, 2024	9:55pm	55°	KM
Pile Complete	Monday, January 15, 2024	8:26AM	55°	BM

Central Davis Sewer District
Compost Pile # 230508

Action Item	Date	Temperature		
		Time	Temperature	Operator Initials
Begin Pile Construction	Monday, May 8, 2023			
Temperature Monitoring	Monday, May 15, 2023	7:56 AM	69°	MC
	Tuesday, May 16, 2023	7:53 AM	68°	MC
	Wednesday, May 17, 2023	7:53 AM	66°	MC
	Thursday, May 18, 2023	8:42 AM	62°	TH
	Friday, May 19, 2023	7:55 AM	69°	MC
	Saturday, May 20, 2023	7:59 AM	66°	MC
	Sunday, May 21, 2023	7:54 AM	67°	MC
	Monday, May 22, 2023	8:01 AM	68°	TH
	Tuesday, May 23, 2023	7:55 AM	67°	TH
	Wednesday, May 24, 2023	7:54 AM	69°	MC
	Thursday, May 25, 2023	7:46 AM	63°	MC
	Friday, May 26, 2023	8:05 AM	65°	JW
	Saturday, May 27, 2023	805 AM	65°	JC
	Sunday, May 28, 2023	755 A	66°	JC
	Monday, May 29, 2023	640A	66°	JC
	Tuesday, May 30, 2023	8:20 AM	64°	TH
	Wednesday, May 31, 2023	7:59 AM	66	TH
	Thursday, June 1, 2023	8:07 AM	67°	JW
	Friday, June 2, 2023	8:04	65	TH
	Saturday, June 3, 2023	8:43	65	TH
	Sunday, June 4, 2023	8:19 AM	61°	JW
Pile Complete	Monday, June 5, 2023	7:54 AM	62°	MC

Central Davis Sewer District
Compost Pile # 230605

Action Item	Date	Temperature		
		Time	Temperature	Operator Initials
Begin Pile Construction	Monday, June 5, 2023	7:53AM	73°	NC
Temperature Monitoring	Monday, June 12, 2023	7:53 AM	73°	NC
	Tuesday, June 13, 2023	7:54 AM	71°	NC
	Wednesday, June 14, 2023	7:53 AM	70°	NC
	Thursday, June 15, 2023	8:29Am	71°	SW
	Friday, June 16, 2023	7:55 AM	69°	NC
	Saturday, June 17, 2023	8:36 am	69°	JH
	Sunday, June 18, 2023	11:30am	66°	JH
	Monday, June 19, 2023	8:04 am	66°	JH
	Tuesday, June 20, 2023	7:55 AM	66°	NC
	Wednesday, June 21, 2023	7:49 AM	67°	NC
	Thursday, June 22, 2023	7:47 AM	67°	NC
	Friday, June 23, 2023	7:59 AM	68°	NC
	Saturday, June 24, 2023	8:32AM	68	KM
	Sunday, June 25, 2023	8:22AM	65°	KM
	Monday, June 26, 2023	8:10AM	66°	SW
	Tuesday, June 27, 2023	8:15Am	66°	SW
	Wednesday, June 28, 2023	7:52 AM	66°	NC
	Thursday, June 29, 2023	8:02AM	66°	NC
	Friday, June 30, 2023	7:56AM	65°	NC
	Saturday, July 1, 2023	8:14Am	64°	SW
	Sunday, July 2, 2023	8:05Am	62°	SW
Pile Complete	Monday, July 3, 2023	7:57 Am	65°	NB

Central Davis Sewer District
Compost Pile # 230703

Action Item	Date	Temperature		
		Time	Temperature	Operator Initials
Begin Pile Construction	Monday, July 3, 2023			
Temperature Monitoring	Monday, July 10, 2023	8:04Am	72°	JW
	Tuesday, July 11, 2023	7:53 AM	73°	NC
	Wednesday, July 12, 2023	8:04 AM	72°	NC
	Thursday, July 13, 2023	8:30 AM	72°	NC
	Friday, July 14, 2023	8:02AM	72°	NC
	Saturday, July 15, 2023	8:57 AM	71°	NC
	Sunday, July 16, 2023	8:09 AM	71°	NC
	Monday, July 17, 2023	8:13Am	71°	JW
	Tuesday, July 18, 2023	8:40 Am	65°	TAH
	Wednesday, July 19, 2023	8:Bam	63°	JH
	Thursday, July 20, 2023	8:24Am	63°	JW
	Friday, July 21, 2023	840a	63	JC
	Saturday, July 22, 2023	942a	63°	JC
	Sunday, July 23, 2023	930	63°	JC
	Monday, July 24, 2023	805a	64°	JC
	Tuesday, July 25, 2023	927a	67°	TAH
	Wednesday, July 26, 2023	8:25 AM	62°	NC
	Thursday, July 27, 2023	8:12Am	62°	JW
	Friday, July 28, 2023	8:02Am	62°	JW
	Saturday, July 29, 2023	8:14AM	60°	JH
	Sunday, July 30, 2023	8:03AM	59°	JH
Pile Complete	Monday, July 31, 2023	8:00 AM	57°	NC

Central Davis Sewer District
Compost Pile # 230731

Action Item	Date	Temperature		
		Time	Temperature	Operator Initials
Begin Pile Construction	Monday, July 31, 2023			
Temperature Monitoring	Monday, August 7, 2023	8:09 AM	70°	NC
	Tuesday, August 8, 2023	8:31 AM	65°	TAH
	Wednesday, August 9, 2023	8:09 AM	69°	NC
	Thursday, August 10, 2023	8:18 AM	69°	NC
	Friday, August 11, 2023	6:50 AM	69°	SW
	Saturday, August 12, 2023	9:15 AM	69°	NC
	Sunday, August 13, 2023	8:23 am	67°	JH
	Monday, August 14, 2023	8:04 AM	65°	SW
	Tuesday, August 15, 2023	8:13 AM	67°	SW
	Wednesday, August 16, 2023	8:14 AM	68°	NC
	Thursday, August 17, 2023	8:01 AM	68°	NC
	Friday, August 18, 2023	8:18 AM	67°	SW
	Saturday, August 19, 2023	831a	65°	JC
	Sunday, August 20, 2023	830a	62°	JC
	Monday, August 21, 2023	8:30 AM	63°	KM
	Tuesday, August 22, 2023	8:30 AM	57°	KM
	Wednesday, August 23, 2023	8:30 AM	59°	KM
	Thursday, August 24, 2023	8:05 AM	62°	NC
	Friday, August 25, 2023	7:58 AM	62°	NC
	Saturday, August 26, 2023	7:59 AM	62°	↑N
	Sunday, August 27, 2023	7:53 AM	62	↑N
Pile Complete	Monday, August 28, 2023	8:01 AM	61°	SW

Central Davis Sewer District
Compost Pile # 230828

Action Item	Date	Temperature		
		Time	Temperature	Operator Initials
Begin Pile Construction	Monday, August 28, 2023			
Temperature Monitoring	Monday, September 4, 2023	7:35AM	58°	
	Tuesday, September 5, 2023	8:37AM	58°	TAM
	Wednesday, September 6, 2023	9:05AM	57°	TAH
	Thursday, September 7, 2023	8:55AM	60°	TAH
	Friday, September 8, 2023	8:05AM	60°	NC
	Saturday, September 9, 2023	9:19AM	63°	NC
	Sunday, September 10, 2023	8:22am	64°	JH
	Monday, September 11, 2023	8:02AM	60°	
	Tuesday, September 12, 2023	8:12AM	65°	
	Wednesday, September 13, 2023	8:09AM	63°	
	Thursday, September 14, 2023	8:13AM	57°	
	Friday, September 15, 2023	8:22AM	58°	
	Saturday, September 16, 2023	8:10AM	57	JC
	Sunday, September 17, 2023	8:15A	58°	JC
	Monday, September 18, 2023	8:10AM	57°	
	Tuesday, September 19, 2023	8:07AM	59°	
	Wednesday, September 20, 2023	8:20AM	58°	
	Thursday, September 21, 2023	7:45AM	58°	
	Friday, September 22, 2023	8:19AM	58°	
	Saturday, September 23, 2023	8:19AM	47°	TH
	Sunday, September 24, 2023	8:08AM	45°	TH
Pile Complete	Monday, September 25, 2023	8:01AM	57°	

Central Davis Sewer District
Aerobic Compost Pile #230918

Action Item	Date	Temperature		
		Time	Temperature	Operator Initials
Begin Pile Construction	Monday, September 18, 2023			
Temperature Monitoring	Monday, September 25, 2023	8:03AM	64°	
	Tuesday, September 26, 2023	8:00AM	70°	
	Wednesday, September 27, 2023	9:00AM	67°	TAH
	Thursday, September 28, 2023	9:24AM	64°	TAH
	Friday, September 29, 2023	7:10AM	67°	
	Saturday, September 30, 2023	8:20AM	66°	
	Sunday, October 1, 2023	8:25AM	66°	
	Monday, October 2, 2023	9:00 AM	62°	TAH
	Tuesday, October 3, 2023	8:50 AM	63°	TAH
	Wednesday, October 4, 2023	9:00AM	66°	
	Thursday, October 5, 2023	8:45AM	65°	
	Friday, October 6, 2023	8:13AM	66°	
	Saturday, October 7, 2023	8:40 am	63°	JH
	Sunday, October 8, 2023	9:38AM	61°	
	Monday, October 9, 2023	9:00 AM	57°	TAH
	Tuesday, October 10, 2023	9:03AM	63°	
	Wednesday, October 11, 2023	8:20AM	62°	
	Thursday, October 12, 2023	8:34AM	62°	
	Friday, October 13, 2023	8:55AM	60°	
	Saturday, October 14, 2023	902AM	59°	
	Sunday, October 15, 2023	932AM	58°	
Pile Complete	Monday, October 16, 2023	8:20AM	60°	

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Vector Attraction Reduction Compliance Documentation

1. 2023 Anaerobic Digester Volatile Solids Reduction Calculations
2. Compost VAR Time and Temperature (This requirement is Met as a Part of the Windrow Time and Temperature Pathogen Reduction Requirements).

Central Davis Sewer District
2023 Biosolids Precent Solids Analysis

	Aerobic Press		Anaerobic & Thickened		Primary to Digester		Digester to Thickening	
1st Quarter								
Date	**% Solids**	**%VS**	**% Solids**	**% VS**	**% Solids**	**% VS**	**% Solids**	**% VS**
1/5/2023	17.4%	85%	17.5%	62.4%	2.9%	79.4%	2.1%	61.4%
Quarter Average	**17.4%**	**84.6%**	**17.5%**	**62.4%**	**2.9%**	**79.4%**	**2.1%**	**61.4%**
2nd Quarter								
Date	**% Solids**	**%VS**	**% Solids**	**% VS**	**% Solids**	**% VS**	**% Solids**	**% VS**
4/7/2023	16.7%	81.9%	16.6%	61.4%	5.5%	78.4%	3.4%	60.8%
Quarter Average	**16.7%**	**81.9%**	**16.6%**	**61.4%**	**5.5%**	**78.4%**	**3.4%**	**60.8%**
3rd Quarter								
Date	**% Solids**	**%VS**	**% Solids**	**% VS**	**% Solids**	**% VS**	**% Solids**	**% VS**
7/12/2023 & 9/22/2023	18.0%	81.0%	15.6%	61.3%	4.3%	78.6%	2.3%	60.2%
Quarter Average	**18.0%**	**81.0%**	**15.6%**	**61.3%**	**4.3%**	**78.6%**	**2.3%**	**60.2%**
4th Quarter								
Date	**% Solids**	**%VS**	**% Solids**	**% VS**	**% Solids**	**% VS**	**% Solids**	**% VS**
10/4/2022	18.3%	80.9%	16.3%	57.0%	4.5%	73.0%	3.1%	58.8%
Quarter Average	**18.3%**	**80.9%**	**16.3%**	**57.0%**	**4.5%**	**73.0%**	**3.1%**	**58.8%**
Annual Average	**17.6%**	**82.1%**	**16.5%**	**60.5%**	**4.3%**	**77.3%**	**2.7%**	**60.3%**

Central Davis Sewer District

Anaerobic Biosolids

2023 Anaerobic VAR Summary

Date	Volatile Solids Reduction
1st Quarter	
Date	
1/5/2023	59%
Quarter Average	59%
2nd Quarter	
Date	
4/11/2023	57%
Quarter Average	57%
3rd Quarter	
Date	
7/12/2023	59%
Quarter Average	59%
4th Quarter	
Date	
10/23/2023	47%
Quarter Average	47%
Annual Average	56%

Total & Volatile Solids

SM 2540 B & E

Central Davis Sewer District

SRM ID: P303-506 SRM Exp: 7/4/2023 SRM TV: 433 mg/L SRM Limits: 388-478 mg/L

Date sampled 1/5/2023 Sampled By Paco, Jeff Date Analyzed 1/11/2023 Analyst Aimee

In Incubtor 1/11/2023 15:05 Out Incubator 1/12/2023 9:57 In Furnace 1/12/2023 11:34 Out Furnace 1/12/2023 14:25

Line	Sample Location	Blank (mg/L)	SRM (mg/L)	Aerobic (%)	Aerobic Dup (%)	Anaerobic (%)	Primary (%)	Digester (%)
1	Bottle #			12	12	13	11	10
2	Dish + Sample wt			58.4838	53.0098	57.4919	65.1951	61.4884
3	Dish wt	55.0524	43.5188	52.461	46.8009	50.0371	54.6711	55.9854
4	Sample wt	100	45	6.0228	6.2089	7.4548	10.524	5.503
5	Dish + Dry Sample wt	55.0524	43.538	53.5131	47.8746	51.339	54.9809	56.0991
6	Dry Sample wt	0.0000	0.0192	1.0521	1.0737	1.3019	0.3098	0.1137
7	Dish + Ash Sample wt			52.624	46.9651	50.5269	54.7349	56.0293
8	Ash Sample wt			0.163	0.1642	0.4898	0.0638	0.0439
9	Total Solids % (Ln6*100/ Ln4)	0	427	17.4686	17.2929	17.4639	2.9437	2.0661
10	Volatile Solids % (Ln5-Ln7*100/ Ln6)			84.5072	84.7071	62.3781	79.4061	61.3896

QA Check

QA/QC by: AM

Date: 4-13-23

Revision 1/12/23 AM

Central Davis Co. Sewer District

VS Reduction

Van Kleek Equation- White House Manual

Date Tested:	1/5/2023

$$FVSR = 1 - \frac{VSb \times (1-VSf)}{VSf \times (1-VSb)}$$

Where		
	Digester volatile solids as a fraction	0.613896
	Primary volatile solids as a fraction	0.794061

0.205939
0.386104

$$1 - \frac{0.126425128}{0.306590128}$$

1- 0.41235877

Reduction 0.5876 59%

Total & Volatile Solids

SM 2540 B & E

Central Davis Sewer District

SRM ID: P310-506 SRM Exp: 3/2/2024 SRM TV: 331 mg/L SRM Limits: 287-368 mg/L

Date sampled 4/7/2023 Sampled By Wesley, Jace Date Analyzed 4/11/2023 Analyst Aimee

In Incubtor 4/11/2023 16:05 Out Incubator 4/12/2023 9:45 In Furnace 4/12/2023 11:23 Out Furnace 4/12/2023 13:50

Line	Sample Location	Blank (mg/L)	SRM (mg/L)	Aerobic (%)	Aerobic Dup (%)	Anaerobic (%)	Primary (%)	Digester (%)
1	Bottle #			12	12	13	11	10
2	Dish + Sample wt			59.9495	59.546	61.0815	59.8435	58.9808
3	Dish wt	46.7999	52.4609	54.6713	54.4582	55.9855	55.0548	50.0376
4	Sample wt	100	50	5.2782	5.0878	5.096	4.7887	8.9432
5	Dish + Dry Sample wt	46.8000	52.477	55.5596	55.3002	56.8307	55.317	50.3445
6	Dry Sample wt	0.0001	0.0161	0.8883	0.842	0.8452	0.2622	0.3069
7	Dish + Ash Sample wt			54.8325	54.6094	56.3119	55.1115	50.158
8	Ash Sample wt			0.1612	0.1512	0.3264	0.0567	0.1204
9	Total Solids % (Ln6*100/ Ln4)	1	322	16.8296	16.5494	16.5856	5.4754	3.4317
10	Volatile Solids % (Ln5-Ln7*100/ Ln6)			81.8530	82.0428	61.3819	78.3753	60.7690

QA/QC by: QA Check

Date: 4-13-23

		Duplicate RPD%
Aerobic TS avg:	16.6895	1.68
Aerobic VS avg:	81.9479	-0.23

Revision 3/21/23 AM

Central Davis Co. Sewer District

VS Reduction

Van Kleek Equation- White House Manual

Date Tested:	4/11/2023

$$FVSR = 1 - \frac{VSb \times (1-VSf)}{VSf \times (1-VSb)}$$

Where		
	Digester volatile solids as a fraction	0.60769
	Primary volatile solids as a fraction	0.783753

0.216247
0.39231

$$1 - \frac{0.131411139}{0.307474139}$$

1- 0.427389242

Reduction 0.5726 57%

Total & Volatile Solids

SM 2540 B & E

Central Davis Sewer District

SRM ID: P310-5016 SRM Exp: 3-2-2024 SRM TV: 331 mg/L SRM Limits: 287-368

Date sampled 7/12/2023 Sampled By Jace Date Analyzed 7/12/2023 Analyst Aimee

In Incubtor 7/12/2023 15:25 Out Incubator 7/13/2023 8:17 In Furnace 7/13/2023 11:39 Out Furnace 7/13/2023 13:40

Line	Sample Location	Blank (mg/L)	SRM (mg/L)	Aerobic (%)	Aerobic Dup (%)	Anaerobic (%)	Primary (%)	Digester (%)
1	Bottle #			12	12	13	11	10
2	Dish + Sample wt			60.9452	55.5270		64.7438	57.6630
3	Dish wt	52.4607	54.6712	55.0537	50.0372		55.9855	50.6328
4	Sample wt	100	50	5.8915	5.4898	0.0000	8.7583	7.0302
5	Dish + Dry Sample wt	52.4608	54.6875	56.1087	51.0283		56.3602	50.7950
6	Dry Sample wt	0.0001	0.0163	1.0550	0.9911	0.0000	0.3747	0.1622
7	Dish + Ash Sample wt			55.2550	50.2251		56.0656	50.6973
8	Ash Sample wt			0.2013	0.1879	0.0000	0.0801	0.0645
9	Total Solids % (Ln6*100/ Ln4)	1	326	17.9072	18.0535	#DIV/0!	4.2782	2.3072
10	Volatile Solids % (Ln5-Ln7*100/ Ln6)			80.9194	81.0413	#DIV/0!	78.6229	60.2343

QA Check

QA/QC by: AM

Date: 7-13-23

		Duplicate RPD%
Aerobic TS avg:	17.9803	-0.81
Aerobic VS avg:	80.9803	-0.15

Revision 3/21/23 AM

Central Davis Co. Sewer District

VS Reduction

Van Kleek Equation- White House Manual

Date Tested:	7/12/2023

$$FVSR = 1 - \frac{VSb \times (1-VSf)}{VSf \times (1-VSb)}$$

Where	Digester volatile solids as a fraction	0.602343
	Primary volatile solids as a fraction	0.786229

0.213771
0.397657

$$1 - \frac{0.128763465}{0.312649465}$$

1- 0.411846108

Reduction 0.5882 59%

Total & Volatile Solids

SM 2540 B & E

Central Davis Sewer District

SRM ID: WP340 SRM Exp: 06/2024 SRM TV: 367 SRM Limits: 284-414

Date sampled 9-22-23 Sampled By Paco / Trace Date Analyzed 9-25-23 Analyst Priscilla

In Incubtor 10:52 am Out Incubator 7:27 am 9/25 In Furnace 8:40 am Out Furnace 11:25 am

Line	Sample Location	Blank (mg/L)	SRM (mg/L)	Aerobic (%)	Aerobic Dup (%)	Anaerobic (%)	Primary (%)	Digester (%)
1	Bottle #							
2	Dish + Sample wt			59.7065	57.7028	59.0341		
3	Dish wt	54.6709	43.5192	55.9855	52.4602	55.0529		
4	Sample wt / vol	100	100	3.721	5.2426	3.9812		
5	Dish + Dry Sample wt	54.6706	43.5502	56.6817	53.4438	55.6748		
6	Dry Sample wt	-0.0003	0.0310	0.6962	0.9836	0.6219		
7	Dish + Ash Sample wt			56.1215	52.65~~4~~38 PH	55.2935		
8	Ash Sample wt			0.1360	0.1936	0.2406		
9	Total Solids % (Ln6*100/ Ln4)	-3	310	18.7100	18.7617	15.6209		
10	Volatile Solids % (Ln5-Ln7*100/ Ln6)			80.4654	80.3172	61.3121		

QA/QC by: QA Check

Date: 10/2/2023

Revision 1/12/23 AM

Total & Volatile Solids

SM 2540 B & E

Central Davis Sewer District

SRM ID: WP340 SRM Exp: 06/2024 SRM TV: 367 SRM Limits: 284-414

Date sampled 10-20-23 Sampled By Torrey/Jeffery Date Analyzed 10-23-23 Analyst Priscilla

In Incubtor 12:00 pm Out Incubator 8:01 am 10/23 In Furnace 9:07 am / 10:09 am Out Furnace 10:08 am / 11:30 am

Line	Sample Location	Blank (mg/L) Liquid		Aerobic (%)	Aerobic Dup (%)	Anaerobic (%)	Primary (%)	Digester (%)
1	Bottle #							
2	Dish + Sample wt			53.2361	53.0251	58.7662	99.4050	96.4885
3	Dish wt	43.5185		50.6331	50.0385	55.9855	55.0549	54.4572
4	Sample wt / vol	100		2.603	2.9876	2.7807	44.3501	42.0313
5	Dish + Dry Sample wt	43.5182		51.1119	50.5822	56.4382	57.0460	55.7648
6	Dry Sample wt	-0.0003		0.4788	0.5447	0.4527	1.9911	1.3076
7	Dish + Ash Sample wt			50.7242	50.1414	56.1800	55.5927	54.9954
8	Ash Sample wt			0.0911	0.1039	0.1945	0.5378	0.5382
9	Total Solids % (Ln6*100/ Ln4) (mg/L for Liquid Samples)	-3	For Liquid Sample: (Ln6*1000000/Ln4)	18.3941	18.2320	16.2801	4.4895	3.1110
10	Volatile Solids % (Ln5-Ln7*100/ Ln6)			80.9733	80.9253	57.0356	72.9898	58.8406

QA/QC by: QA Check

Date: 10/32/2023

Revision 1/12/23 AM

Central Davis Co. Sewer District

VS Reduction

Van Kleek Equation- White House Manual

Date Tested:	10/23/2023

$$FVSR = 1 - \frac{VSb \times (1-VSf)}{VSf \times (1-VSb)}$$

Where		
	Digester solids as a fraction	0.588406
	Primary solids as a fraction	0.729898

0.270102
0.411594

$$1 - \frac{0.158929637}{0.300421637}$$

1- 0.52902194

Reduction	**0.4710**	**47%**

Biosolids and Biosolids Derived Production

1. 2023 Anaerobic Land Applied Biosolids Production
2. 2023 Aerobic Biosolids Production
3. 2023 Compost Biosolids Derived Production
4. 2023 Landfill Summary

Central Davis Sewer District
Aerobic Biosolids 2023 Loads

	Aerobic Loads			
Month	**450 Mixer Truck**	**Dump Truck**	**620 Mixer Truck**	**Landfill (Tons)**
January	0	890,000	-	429
February	0	1,335,000	-	397
March	0	855,000	-	427
April	0	815,000	-	413
May	280,000	670,000	-	269
June	352,000	440,000	-	270
July	364,000	400,000	-	188
August	432,000	415,000	-	198
September	432,000	190,000	-	94
October	0	905,000	-	394
November	0	895,000	-	428
December	0	830,000	-	426
		Year Totals		
Load Total lbs	**1,860,000**	**8640000**	**0**	**8,649,190**
% Solids	**17.6%**	**17.6%**	**17.6%**	**17.6%**
Dry Weigh(lbs)	**327,360**	**1,520,640**	**0**	**1,522,257**
English Tons	**164**	**760**	**0**	**761**
Metric Tons	**149**	**691**	**0**	**692**

Total Tons per Year - Metric	**1532**

https://d.docs.live.net/98ae734ac05258f0/BIOSOLIDS Files/Biosolids - Consolidated Data/Biosolids Report - Calendar Year 2023/8. Biosolids and Biosolids Derivded Production/Aerobic Biosolids Load Counts 2022

Central Davis Sewer District
Anaerobic Biosolids 2023 Loads

	Anaerobic Loads			
Month	**450 Mixer Truck**	**Dump Truck**	**620 Mixer Truck**	**Landfill (Tons)**
January	0	-	-	
February	0	-	-	
March	0	-	-	
April	0	-	-	72,000
May	0	-	-	
June	184,000	-	-	
July	200,000	-	-	
August	172,000	-	-	
September	364,000	-	-	
October	132,000	-	-	
November	0	-	-	
December	0	-	-	100,000
	Year Totals			
Load Total lbs	**1,052,000**			**172,000**
% Solids	**16.5%**			**16.5%**
Dry Weigh(lbs)	**173,580**			**28,380**
English Tons	**87**			**14**
Metric Tons	**79**			**13**
Total Tons per Year - Metric		**92**		

https://d.docs.live.net/98ae734ac05258f0/BIOSOLIDS Files/Biosolids - Consolidated Data/Biosolids Report - Calendar Year 2023/8. Biosolids and Biosolids Derivded Production/Anaerobic Biosolids Load Counts 2023

Central Davis Sewer District
2023 Anaerobic Biosolids Spreader Loads

Month	Anaerobic Loads Composted
April	18
December	25

Year Totals	
Load Total	**43**
% Solids	**16.5%**
Dry Weigh(lbs)	**28,380**
English Tons	**14**
Metric Tons	**13**

CENTRAL DAVIS SEWER DISTRICT

Compost Production Analysis
2023

2022 Compost Balance

Screened		41	Metric Tons
Unscreened/Reground		-	Metric Tons
Unscreened		1,725	Metric Tons
	Total	1,766	Metric Tons

Compost Screened and Tested 5/8/2023

2022	182	Metric Tons*
2023	-	Metric Tons
	182	Metric Tons

Compost Screened and Tested 5/30/2023

2022	726	Metric Tons*
2023	-	Metric Tons
	726	Metric Tons

Compost Screened and Tested 7/15/2023

2022	191	Metric Tons*
2023	-	Metric Tons
	191	Metric Tons

Compost Screened

2022 Year	1,099	Metric Tons
	1,099	Metric Tons

Remaining At End 2023

2023 Finished Compost	501	MT Measured
2023 Windrows	1,075	MT Measured
Total Remaining	1,576	Metric Tons

Compost Production in 2023 1,075 Metric Tons

Compost Sold During 2022 639 Metric Tons

Central Davis Sewer District

COMPOST PILE MEASUREMENT

Screened, Tested and Stored 5/8/2023

Compost Pile Dimensions:	Values in Feet
Width	50
Length	40
Height	5

Note: Pile width and height are measured from a point mid-way up the slope each direction.

Pile Volume	10,000	Cubic Feet
	370	Cubic Yards
Dry Weight per Cubic Yard	540	pounds/CY
Pile Weight	200,000	pounds
English tons of Compost	100.00	Tons-E
Metric Tons of Compost	91	Tons-M

Pile Measured by: Manjot Masson and Brent Justensen

Central Davis Sewer District

COMPOST PILE MEASUREMENT

Screened, Tested and Stored 5/8/2023

Compost Pile Dimensions:	Values in Feet
Width	50
Length	40
Height	5

Note: Pile width and height are measured from a point mid-way up the slope each direction.

Pile Volume	10,000	Cubic Feet
	370	Cubic Yards
Dry Weight per Cubic Yard	540	pounds/CY
Pile Weight	200,000	pounds
English tons of Compost	100.00	Tons-E
Metric Tons of Compost	91	Tons-M

Pile Measured by: Manjot Masson and Brent Justensen

Central Davis Sewer District

COMPOST PILE MEASUREMENT

Screened, Tested and Stored 5/30/2023

Compost Pile Dimensions:		Values in Feet
	Width	127
	Length	30
	Height	7

Note: Pile width and height are measured from a point mid-way up the slope each direction.

Pile Volume	26,670	Cubic Feet
	988	Cubic Yards
Dry Weight per Cubic Yard	540	pounds/CY
Pile Weight	533,400	pounds
English tons of Compost	266.70	Tons-E
Metric Tons of Compost	242	Tons-M

Pile Measured by: Manjot Masson and Brent Justensen

Central Davis Sewer District

COMPOST PILE MEASUREMENT

Screened, Tested and Stored 5/30/2023

Compost Pile Dimensions:		Values in Feet
	Width	127
	Length	30
	Height	7

Note: Pile width and height are measured from a point mid-way up the slope each direction.

Pile Volume	26,670	Cubic Feet
	988	Cubic Yards
Dry Weight per Cubic Yard	540	pounds/CY
Pile Weight	533,400	pounds
English tons of Compost	266.70	Tons-E
Metric Tons of Compost	242	Tons-M

Pile Measured by: Manjot Masson and Brent Justensen

Central Davis Sewer District

COMPOST PILE MEASUREMENT

Screened, Tested and Stored 5/30/2023

Compost Pile Dimensions:		Values in Feet
	Width	127
	Length	30
	Height	7

Note: Pile width and height are measured from a point mid-way up the slope each direction.

Pile Volume	26,670	Cubic Feet
	988	Cubic Yards
Dry Weight per Cubic Yard	540	pounds/CY
Pile Weight	533,400	pounds
English tons of Compost	266.70	Tons-E
Metric Tons of Compost	242	Tons-M

Pile Measured by: Manjot Masson and Brent Justensen

Central Davis Sewer District

COMPOST PILE MEASUREMENT

Screened, Tested and Stored 7/15/2023

Compost Pile Dimensions:		Values in Feet
	Width	70
	Length	50
	Height	6

Note: Pile width and height are measured from a point mid-way up the slope each direction.

Pile Volume	21,000	Cubic Feet
	778	Cubic Yards
Dry Weight per Cubic Yard	540	pounds/CY
Pile Weight	420,000	pounds
English tons of Compost	210.00	Tons-E
Metric Tons of Compost	191	Tons-M

Pile Measured by: Manjot Masson and Brent Justensen

Central Davis Sewer District

COMPOST PILE MEASUREMENT

Screened, Tested and Stored 1/29/2024

Compost Pile Dimensions:		Values in Feet
	Width	124
	Length	37
	Height	12

Note: Pile width and height are measured from a point mid-way up the slope each direction.

Pile Volume	55,056	Cubic Feet
	2,039	Cubic Yards
Dry Weight per Cubic Yard	540	pounds/CY
Pile Weight	1,101,120	pounds
English tons of Compost	550.56	Tons-E
Metric Tons of Compost	501	Tons-M

Pile Measured by: Manjot Masson and Brent Justensen

Central Davis Sewer District

COMPOST PILE MEASUREMENT

Unscreened, Un-tested and Windrowed 1/29/2024

Compost Pile Dimensions:	Values in Feet		
	Storage	Active$_1$	Active$_2$
Width	0	20	20
Length	0	160	162
Height	0	7	7

Note: Pile width and height are measured from a point mid-way up the slope each direction.

Pile Volume	0	11,200	11340	Cubic Feet
	0	415	420	Cubic Yards

	Storage Pile	*Active Pile*
Dry Weight per Cubic Yard	540 pounds/CY	540 pounds/CY

Pile Weight	-	224,000	226,800	pounds
English tons of Compost	-	112.00	113.40	Tons-E
Metric Tons of Compost	-	102	103	Tons-M
Total Number of Piles	0	6	4.5	

Metric Tons of Unscreened Compost 1,074.82 Tons-M

Pile Measured by: Brent Justensen and Manjot Masson

CENTRAL DAVIS SEWER DISTRICT

LANDFILLED BIOSOLIDS SUMMARY

2023

Delivery Date	Ticket Number	Tons Delivered	Month Total
1/3/2023	1068197	34.07	
1/5/2023	1068315	33.48	
1/6/2023	1068371	33.62	
1/10/2023	1068488	34.35	
1/12/2023	1068604	34.58	
1/13/2023	1068662	22.01	
1/19/2023	1068846	33.75	
1/20/2023	1068901	33.23	
1/23/2023	1068963	33.49	
1/25/2023	1069106	33.97	
1/26/2023	1069162	33.61	
1/27/2023	1069209	34.23	
1/31/2023	1069336	34.24	428.63
2/2/2023	1069478	33.60	
2/3/2023	1069585	28.68	
2/7/2023	1069747	33.43	
2/9/2023	1069928	34.39	
2/10/2023	1069993	34.40	
2/14/2023	1070014	33.75	
2/16/2023	1070252	33.03	
2/16/2023	1070277	9.80	
2/16/2023	1070253	33.47	
2/17/2023	1070328	20.93	
2/21/2023	1070457	34.98	
2/23/2023	1070538	33.13	
2/28/2023	1070748	33.07	396.66
3/1/2023	1070806	33.39	
3/2/2023	1070871	33.94	
3/6/2023	1070987	28.83	
3/8/2023	1071106	33.42	
3/9/2023	1071182	33.15	
3/10/2023	1071239	31.71	
3/15/2023	1071429	30.00	
3/16/2023	1071484	30.00	
3/21/2023	1071669	34.42	
3/22/2023	1071734	34.46	
3/23/2023	1071803	33.63	
3/28/2023	1071965	34.42	
3/30/2023	1072096	35.26	426.63
4/5/2023	1072360	34.13	
4/6/2023	1072428	12.87	
4/6/2023	1072433	34.43	
4/10/2023	1072574	33.84	
4/12/2023	1072705	9.96	
4/12/2023	1072707	32.77	
4/13/2023	1072782	32.75	
4/14/2023	1072845	33.66	
4/18/2023	1073005	37.83	
4/19/2023	1073060	8.42	
4/20/2023	1073139	33.17	
4/21/2023	1073228	36.43	
4/24/2023	1073291	9.90	
4/25/2023	1073362	34.03	
4/26/2023	1073427	33.06	
4/27/2023	1073494	31.57	448.82
5/2/2023	1073704	33.93	
5/4/2023	1073833	34.65	
5/5/2023	1073911	34.21	
5/9/2023	1074067	34.46	
5/23/2023	1074824	35.40	
5/25/2023	1074968	34.47	
5/26/2023	1075036	28.26	
5/30/2023	1075117	33.84	269.22

Delivery Date	Ticket Number	Tons Delivered	Month Total
6/1/2023	1075246	37.61	
6/5/2023	1075419	33.18	
6/21/2023	1076241	32.16	
6/22/2023	1076310	34.89	
6/23/2023	1076367	34.32	
6/27/2023	1076542	33.53	
6/28/2023	1076605	38.06	
6/30/2023	1076727	26.04	269.79
7/19/2023	1077545	32.48	
7/20/2023	1077620	33.30	
7/21/2023	1077675	32.62	
7/26/2023	1077860	33.02	
7/27/2023	1077931	31.49	
7/28/2023	1077992	24.75	187.66
8/15/2023	1078825	34.30	
8/16/2023	1078889	32.99	
8/18/2023	1079008	33.34	
8/23/2023	1079200	32.90	
8/24/2023	1079272	31.89	
8/25/2023	1079342	32.93	198.35
9/13/2023	1080180	33.64	
9/14/2023	1080216	33.95	
9/15/2023	1080293	26.42	94.01
10/3/2023	1081098	33.72	
10/5/2023	1081253	31.52	
10/5/2023	1081252	29.35	
10/11/2023	1081526	34.57	
10/12/2023	1081588	33.88	
10/13/2023	1081656	27.73	
10/18/2023	1081846	33.71	
10/19/2023	1081914	34.42	
10/23/2023	1082069	35.33	
10/24/2023	1082141	35.35	
10/26/2023	1082318	33.94	
10/27/2023	1082386	30.65	394.17
11/1/2023	1082593	34.84	
11/2/2023	1082665	33.00	
11/3/2023	1082739	31.99	
11/8/2023	1082966	34.21	
11/9/2023	1083051	34.80	
11/9/2023	1083048	24.22	
11/14/2023	1083244	32.76	
11/16/2023	1083371	32.69	
11/17/2023	1083427	32.24	
11/20/2023	1083502	34.15	
11/21/2023	1083569	33.88	
11/28/2023	1083844	34.55	
11/30/2023	1083988	34.24	427.57
12/1/2023	1084045	33.19	
12/5/2023	1084154	34.43	
12/5/2023	1084176	13.37	
12/6/2023	1084221	34.34	
12/7/2023	1084282	11.51	
12/8/2023	1084350	33.34	
12/12/2023	1084459	9.44	
12/12/2023	1084465	31.19	
12/14/2023	1084589	34.01	
12/15/2023	1084655	30.17	
12/18/2023	1084727	12.84	
12/19/2023	1084832	34.61	
12/20/2023	1084934	33.54	
12/21/2023	1085033	28.44	
12/26/2023	1085198	33.71	
12/28/2023	1085340	33.93	
12/29/2023	1085397	33.88	475.94

TOTAL (TONS)	4017.45	
TOTAL SOLIDS WEIGHT (TONS)	707.07	642.79
	English Tons	Metric Tons
Total Costs	$ 202,480	Per Year $ 50.40

Land Application Records- 2023

1. Zone 13 Information
2. Zone 12 Information
3. Zone 03 Information
4. Soil Sampling Results and Deep Soil Monitoring Graphs

Application Analysis for Zone 13

Total Loads 278

Zone Number	13	
Acres in Zone	12.7	Acres
Fertilizer Required per Acre	400	lbs/acre
(Based on Cropping Values)		
(for orchard grass and alfalfa mix)		
Total Fertilizer Required	5080	lbs
Fertilizer Available in Soil	10	ppm NO3-N
Total NO3-N Available in Soil	635	lbs
(Five times the NO3-N in Soil)		
Net Fertilizer Required for Zone	4445	lbs

Anaerobic Sample - in ppm

Date	TKN (organic nitrogen)	NO3-N Nitraite+Nitrite as N	NH3-N Ammonia as N
1/31/2022	3,850	0	646
4/22/2022	7800	0	410
7/15/2022	7253	1.9	688
Total	18903	1.9	1744
Average	6301.0	0.6	581.33

Percent Solids:	TKN - NH3-N=organic N ppm
13%	5719.7

Total Available Nitrogen - Anaerobic Biosolids

Load Volume	1300	gal
Weight per gallon	8.35	lbs.
Specific Gravity	1.025	
Weight per Load	11126	lbs
NH4-N Concentration	581	ppm
Volatilization Factor - Kv	50%	
Fertilizer Value per Load	3.2	lbs
Organic Nitrogen Concentration (TKN-NH4-N)	5719.7	ppm
Mineralization Rate	20%	
Organic - N per Load	12.7	lbs
NO3 Concentration	0.6	ppm
NO3-N per Load	0.0	lbs
Total Available Nitrogen per Load	16.0	lbs

Date Application Began: ***10/10/2022***

Date Application Ended: ***3/20/2023***

Load Analysis

fertilizer required	4445	lbs
nitrogen per load	16.0	lbs
Total Loads - Calc	**278**	

Whole Sludge Application Rate Analysis - Calculated

Application Acres	12.7	
Loads Per Acre	22	
Percent Solids	13.0%	
Solids Per Load	1450	lbs
Application Rate	15.9	tons/acre
Metric Rate	35.6	MT/Ha

Whole Sludge Application Rate Analysis - Actual

Total Loads Applied	267	
Loads Per Acre	21.0	
Application Rate	15.2	tons/acre
Metric Rate	34.2	MT/Ha

Biosolids Application Record - Zone 13

Maximum Applied Loads - 278

Date	# Loads	Cummulative Loads	Inspection time	Operator	Signature
10/10/22	8	8	2:44	Torrey H	
10/14/22	7	15	1343	Jeffrey C	
10/17/22	5	20	1:04	Wesley J	Wesley J
10/21/22	9	29	1530	Canada J.	
10/25/22	8	37	1:21	Torrey Hansen	
10/26/22	5	41	1:30pm		
10/31/22	6	47	2:50	Wesley J	Wesley
11/4/22	6	53	1305	Canada Jeffrey	
11/7/22	6	59	12:59	Wesley	WJ
11/10/22	7	66	1300	Canada J.	
11/14/22	4	70	1145a	Canada J	
11/18/22	6	76	1315	Canada J	
11/21/22	6	82	1:18	Wesley J	WJ
11/25/22	6	88	1400	Canada J	
11/28/22	6	94	1320	Canada J	
12/5/22	5	99	1:05	Wesley	WJ
12-9-22	8	108	1:30pm	Nate NC	
12-12-22	6	114	1:56	Wesley	WJ
12-16-22	7	121	320	Jeffrey	Je
12-19-22	6	127	1:55	Wesley	WJ

Cummulative numbers were off corrections made by Jace

Biosolids Application Record - Zone 13

Maximum Applied Loads - 278

Date	# Loads	Cummulative Loads	Inspection time	Operator	Signature
12-22-22	8	135	3:23	Wesley	WJ
12-26-22	7	142	2:30pm	Jake	
12-29-22	7	149	200 pm	Jeffrey	
1-1-23	4	153	12:00 pm	NC	
1-3-23	4	157	1:00 pm	TH	
1-6-23	6	163	130pm	JC	
1-9-23	6	169	2:51	WJ	WJ
1-11-23	7	176	3:04	WJ	WJ
1-13-23	7	183	3:17	WJ	WJ
1-23-23	6	189	104pm	JCANADA	
1-27-23	5	194	1207	JCanada	
1-30-23	6	200	2:12	Wesley	WJ
2-3-23	5	205	1300	Jeff Canada	
2-6-23	4	209	1:22	WJ	WJ
2-10-23	2	211	1135	Jeff Canada	
2-14-23	7	218	1230	Jeff C	
2-17-23	5	223	1345	Jeff C.	
2-21-23	3	226	11:21	Torrey H	
2-24-23	4	230	11.35	Jeffrey C	
2-27-23	5	235	1:30	Wesley	WJ

Biosolids Application Record - Zone 13

Maximum Applied Loads - 278

Date	# Loads	Cummulative Loads	Inspection time	Operator	Signature
3-3-23	5	240	2:27	Wesley	WJ
3-6-23	5	245	2:18	Wesley	WJ
3-8-23	4	249	2:22	Wesley	WJ
3-10-23	3	2:52	2:00	Wesley	WJ
3-13-23	5	2:57	2:11	Wesley	WJ
3-16-23	5	2:62	1:40	Wesley	WJ
3-20-23	5	267	1:45	Wesley	WJ

Application Analysis for Zone 12

Total Loads 104

Zone Number	12	
Acres in Zone	7.18	Acres
Fertilizer Required per Acre	400	lbs/acre
(Based on Cropping Values)		
(for orchard grass and alfalfa mix)		
Total Fertilizer Required	2872	lbs
Fertilizer Available in Soil	21	ppm NO3-N
Total NO3-N Available in Soil	753.9	lbs
(Five times the NO3-N in Soil)		
Net Fertilizer Required for Zone	2118.1	lbs

Anaerobic Sample - in ppm

Date	TKN (organic nitrogen)	NO3-N Nitraite+Nitrite as N	NH3-N Ammonia as N
2/17/2023	8,710	0	773
10/4/2022	8460	0.3	537
7/15/2022	7240	0.25	667
Total	24410	0.8	1977
Average	8136.7	0.3	659.00

Percent Solids:	TKN - NH3-N=organic N ppm
13%	7477.7

Total Available Nitrogen - Anaerobic Biosolids

Load Volume	1300	gal
Weight per gallon	8.35	lbs.
Specific Gravity	1.025	
Weight per Load	11126	lbs
NH4-N Concentration	659	ppm
Volatilization Factor - Kv	50%	
Fertilizer Value per Load	3.7	lbs
Organic Nitrogen Concentration (TKN-NH4-N)	7477.7	ppm
Mineralization Rate	20%	
Organic - N per Load	16.6	lbs
NO3 Concentration	0.3	ppm
NO3-N per Load	0.0	lbs
Total Available Nitrogen per Load	20.3	lbs

Date Application Began: ***3/24/2023***

Date Application Ended: ***6/2/2023***

Load Analysis

fertilizer required	2118.1	lbs
nitrogen per load	20.3	lbs
Total Loads - Calc	**104**	

Whole Sludge Application Rate Analysis - Calculated

Application Acres	7.18	
Loads Per Acre	15	
Percent Solids	13.0%	
Solids Per Load	1450	lbs
Application Rate	10.5	tons/acre
Metric Rate	23.6	MT/Ha

Whole Sludge Application Rate Analysis - Actual

Total Loads Applied	89	
Loads Per Acre	12.4	
Application Rate	9.0	tons/acre
Metric Rate	20.2	MT/Ha

Biosolids Application Record - Zone 12

Maximum Applied Loads - 104

Date	# Loads	Cummulative Loads	Inspection time	Operator	Signature
3-24-23	5	5	150pm	Canada J	
3-27-23	3	8	11:30Am	Jace	
3-31-23	5	13	1:56Pm	Wesley	WJ
4-3-23	5	18	1:15	Wesley	WJ
4-24-23	6	24	3:00	Wesley	WJ
4-28-23	5	29	2:10	Wesley	WJ
5-1-23	6	35	2:07	Wesley	WJ
5-4-23	5	40	1:27	Wesley	WJ
5-8-23	5	45	2:03	Wesley	WJ
5-12-23	3	48	1:06	Wesley	WJ
5-15-23	4	52	1:07	Wesley	WJ
5-18-23	7	59	4:07	Wesley	WJ
5-22-23	5	64	3:01	Wesley	WJ
5-24-23	5	69	2:14	Wesley	WJ
5-26-23	6	75	1405	Jeffrey	Joe
5-30-23	5	80	1:04	Wesley	WJ
6-2-23	9	89	4:17	Wesley	WJ

Application Analysis for Zone 3

Total Loads 61

Zone Number	3	
	4.15	Acres
Fertilizer Required per Acre	400	lbs/acre
(Based on Cropping Values)		
(for orchard grass and alfalfa mix)		
Total Fertilizer Required	1660	lbs
Fertilizer Available in Soil	21	ppm NO3-N
Total NO3-N Available in Soil	435.75	lbs
(Five times the NO3-N in Soil)		
Net Fertilizer Required for Zone	1224.25	lbs

Anaerobic Sample - in ppm

Date	TKN (organic nitrogen)	NO3-N Nitraite+Nitrite as N	NH3-N Ammonia as N
2/17/2023	8,710	0	773
4/7/2023	6820	0.25	851
7/28/2023	7840	0.25	923
Total	23370	0.75	2547
Average	7790.0	0.3	849.00

Percent Solids:	TKN - NH3-N=organic N ppm
16.50%	6941.0

Total Available Nitrogen - Anaerobic Biosolids

Load Volume	1300	gal
Weight per gallon	8.35	lbs.
Specific Gravity	1.025	
Weight per Load	11126	lbs
NH4-N Concentration	849	ppm
Volatilization Factor - Kv	50%	
Fertilizer Value per Load	4.7	lbs
Organic Nitrogen Concentration (TKN-NH4-N)	6941.0	ppm
Mineralization Rate	20%	
Organic - N per Load	15.4	lbs
NO3 Concentration	0.3	ppm
NO3-N per Load	0.0	lbs
Total Available Nitrogen per Load	20.2	lbs

Date Application Began: ***10/23/2023***

Date Application Ended: ***Present***

Load Analysis

fertilizer required	1224.25	lbs
nitrogen per load	20.2	lbs
Total Loads - Calc	**61**	

Whole Sludge Application Rate Analysis - Calculated

Application Acres	4.15	
Loads Per Acre	15	
Percent Solids	16.5%	
Solids Per Load	1836	lbs
Application Rate	13.4	tons/acre
Metric Rate	30.1	MT/Ha

Whole Sludge Application Rate Analysis - Actual

Total Loads Applied	18	
Loads Per Acre	4.3	
Application Rate	4.0	tons/acre
Metric Rate	8.9	MT/Ha

Biosolids Application Record - Zone 03

Maximum Applied Loads - 61

Date	# Loads	Cummulative Loads	Inspection time	Operator	Signature
10-23-23	6	6	2:30 Pm	Wesley	WT
11-13-23	~~12~~ 2	8	10:05 Am	Wesley	WT
11/16/23	2	10	11:40 Am	Jace	
11-30-23	8	18	3:00 Pm	Wesley	WT
		total for 2023			

2023 Soil Sampling

QA Consulting and Testing, LLC
PO Box 627
Salem, Utah 84653

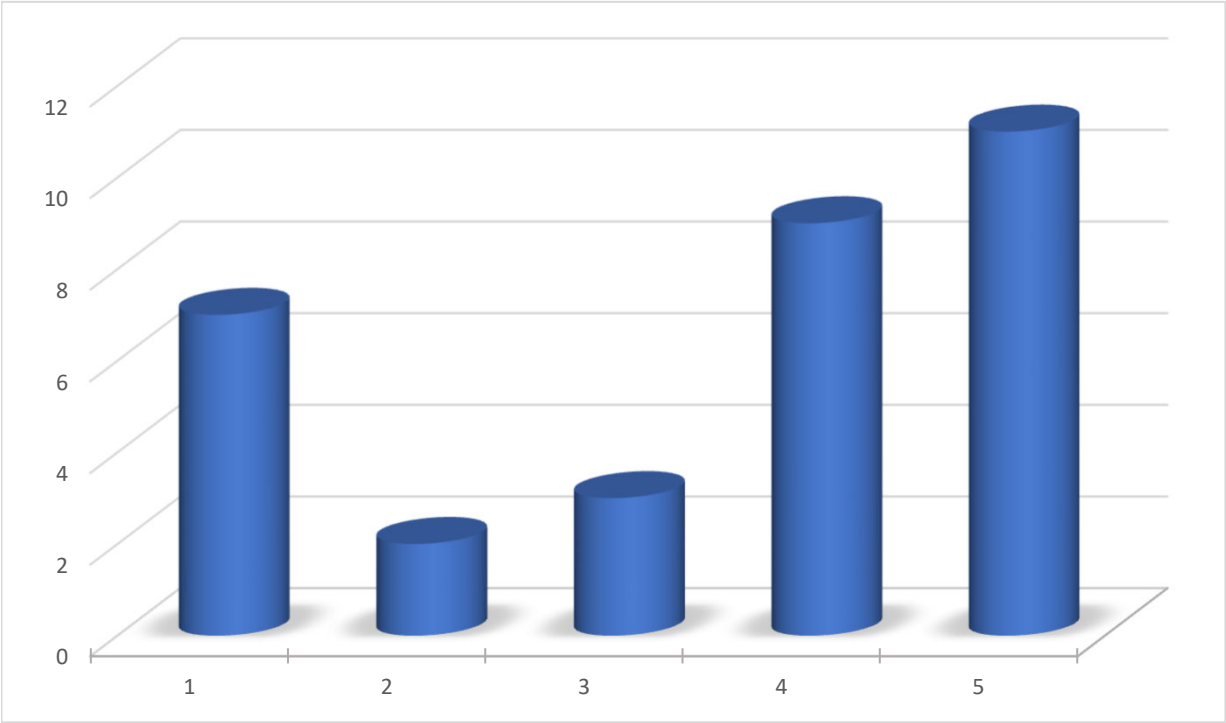
801-423-1116

Name: Von Isaman

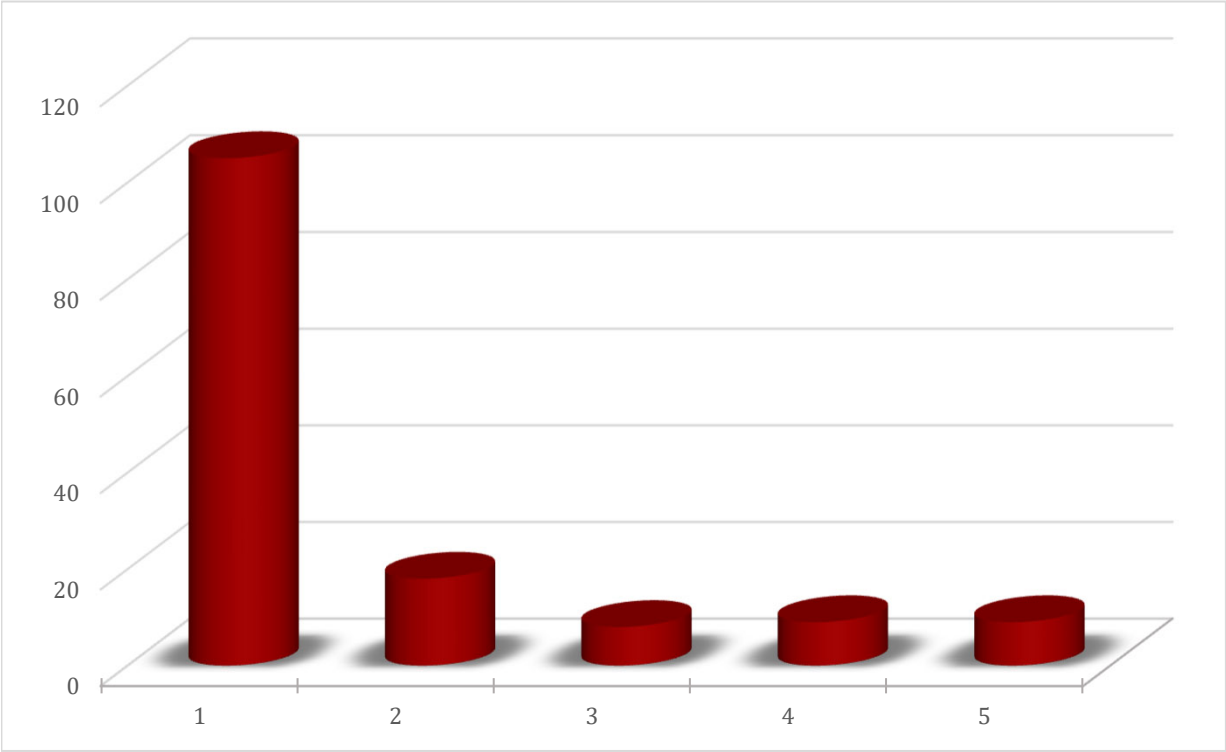
Date: November 15, 2023

Customer Sample ID	AB-DTPA Extract Method ppm P	Chromotropic Acid Method ppm NO3-N
Composite D 0/1	105.00	7.00
Composite D 1/2	18.00	2.00
Composite D 2/3	8.00	3.00
Composite D 3/4	9.00	9.00
Composite D 4/5	9.00	11.00
Composite Surface Sample	114.00	15.00

CDSD - 2023 Composite Deep Soil Sampling- to Confining Layer

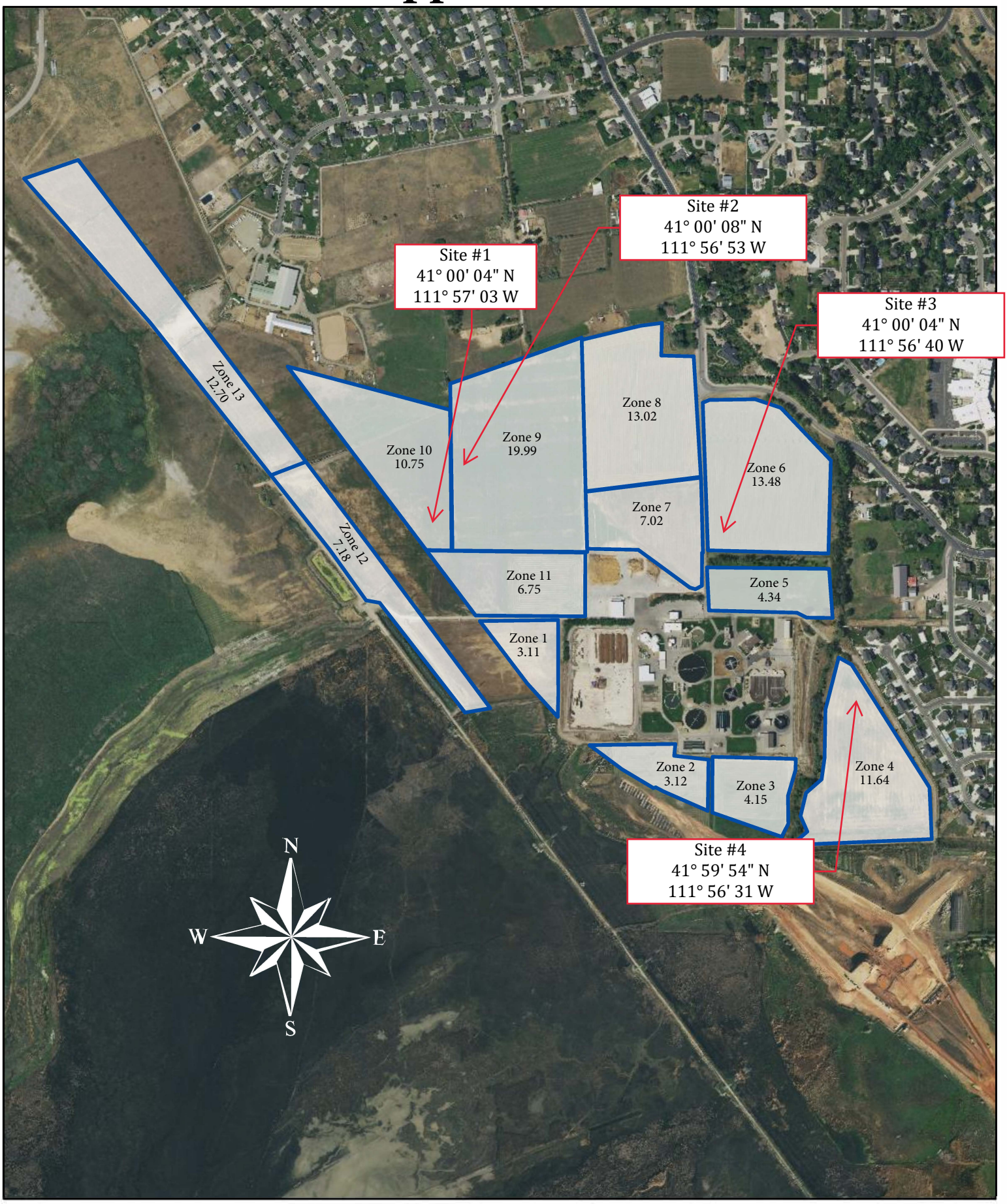


Nitrates



Phosphorus

Land Application Zones



Created 2022

Sampled: November 15, 2023

National Biosolids Partnership Annual Reports 2023

1. Biosolids Management Report
2. Management Review
3. Goals Report
4. External Audit

Central Davis Sewer District
2023 Biosolids Management Report

This report will fulfill the requirement in Element 15 of the District's Biosolids EMS System. This report is submitted to the Board for Central Davis Sewer District in conjunction with the District's Annual Biosolids Report prepared for submission to Utah DWQ and EPA. The summary information contained in this report is supported by additional documentation in the Annual Report.

Chemical Pollutant Analysis

During 2023, Central Davis Sewer District tracked the chemical quality of biosolids produced by its wastewater treatment plant according to the method of treatment. Since each treatment method is tracked separately, the results are reported individually below.

Anaerobic Digested Biosolids

Metals analysis stipulated in 40 CFR Part 503 was performed quarterly by Central Davis Sewer District on anaerobic digested biosolids. Quarterly results, lab reports and quality control charts have been calculated and are included in a section of the biosolids annual report. All metals were in compliance with Table 3 Exceptional Quality Biosolids standards. The District did see an increased amount of arsenic in the secondary digester in the fourth quarter. Samples taken exceeded the 40 CFR part 503 Table 2 value, however no values with proper quality control data exceeded the 40 CFR part 503 Table 3 values. At this time land application was ceased until two consecutive tests came back below the Table 2 threshold value. It has been assumed that arsenic contamination was introduced into the Trickling Filter treatment train.

Compost Biosolids

Compost is sampled when the pile is ready for distribution and marketing. In 2023, six samples were taken and analyzed. The yearly averages and individual test values comply with Table 3 of the 503 regulations. A summary report, lab reports

and quality charts are included in a separate section of the annual report.

Biosolids Pathogen Reduction

During 2023, Central Davis Sewer District met the permit and regulatory requirement for pathogen reduction in two separate ways. One method produces Class A compost, and the second method produces Class B anaerobic biosolids. Biosolids produced in 2023 that were land applied or sold met either Class A or Class B standards. In addition, since Class B biosolids must meet site restrictions, these requirements were also complied with in 2023.

Vector Attraction Reduction Requirement

Central Davis Sewer District evaluates VAR methods separately for the two biosolids production streams that are beneficially reused which operate at the plant. These two production streams are Trickling Filter - Anaerobic Digested Biosolids and Oxidation Ditch - Composted Biosolids. The anaerobic biosolids met the VAR requirement by complying with 38% reduction of volatile solids. The composted biosolids met VAR requirement by being in process for more than 14 days with temperatures higher than 45-degrees centigrade. All biosolids produced by the District met these standards.

Biosolids Production Rates

Central Davis Sewer District produced composted and anaerobic digested biosolids. The District maintained separate records for production of each type. The 2023 quantities of biosolids or biosolids derived material sold or land applied away are 1,749 MT.

Landfilled Biosolids

During the winter, the District landfills biosolids to conserve wood waste and to prevent odor complaints. The District landfilled 643 metric tons of biosolids during 2023. While landfilling is not beneficial reuse of the resource, winter landfilling is preferable to complaints and losing the compost process. Thermal drying has been investigated but the high cost relative to landfilling is not acceptable at the present time. The District will

continue to explore other options for beneficial reuse.

Contractor Activities

There were no contractors used in the biosolids value chain in 2023.

Goals and Objectives

The Goals and Objectives for 2023 were the following:

- Environmental Performance
  - ✓ Objective: The District would like to reduce biosolids sent to the landfill and direct.
    - Goal: The District will compost anaerobic biosolids and cover it during the winter months and determine if times and temperature can be met for the pile as per regulatory code in 40 CFR part 503.32(a)(7)

Cost Savings: The cost savings associated with this Goal are significant, currently the District pays $58 per ton of biosolids disposal.

- Regulatory Compliance
  - ✓ Objective: Continuous effluent quality of less than 10.0 mg/L by the end of 2025. This goal is in preparation for any potential total inorganic nitrogen limits.
    - Goal: Future regulations may require compliance with a 10.0 mg/L total inorganic nitrogen. The District has a multi-tasked goal to determine if this is achievable with its current facilities. In 2023 the District will complete task 1 as a part of 2023 Biosolid Goal. Task 1 is establishing baseline conditions for the nutrient levels in the oxidation ditches.

Cost Savings: The cost savings associated with this goal would be in the millions of dollars as this could potentially delay the need for treatment plant upgrades.

- Relations with Interested Parties
  - ✓ Objective: Staff will design a plant guidebook that will provide an education on the District's current treatment process. The guidebook will discuss the treatment process at Central Davis and go through the Biosolids treatment

train as well. The guidebook will be provided to District citizens, staff, and the Board. In addition, the guidebook will be posted on the District website.

- Goal: Educate District Citizens on the District's treatment train and biosolids treatment train process. At least 10 District citizens will be provided the District Plant Guidebook

Cost Savings: Educating the public is always invaluable, as the District's primary purpose is to serve its residents.

- Quality Biosolids Management Practice
  - ✓ Objective: The District will take six samples on land applied District grounds; the samples will be taken from four random fields chosen by the Biosolid Coordinator. The six samples will include 1', 2', 3', 4' and 5' cores from the four random fields and the last sample will be a composite sample of 1' cores from 10 out of 13 District owned fields.
    - Goal: Determine the quantity of PFAS compounds present on District ground

Cost Savings: The cost savings of this goal are to be determined by the regulations that will follow from EPA, potentially in the years to come.

Biosolids goals 1, 3 and 4 were completed in 2023. Biosolids Goal 2 will being continued into 2024 New Goals.

Internal Audit

The internal audit did not demonstrate any material weaknesses in the program. The internal audit report may be reviewed in the Lead Auditor's Office or on the District website. The conclusion of the internal audit report was the following:

"Central Davis Sewer District has committed to a tremendous use of time, energy, and manpower towards certification through the National Biosolids Partnership (NBP). The commitment to the EMS by the team at CDSD should be recognized for their dedication.

Auditors for this year determined that most of the findings they had were grammatical

and/ or wording changes due to changes in staff responsibilities and titles. The only actionable changes for the plant were those that included the need for more signs to be posted around the plant at appropriate areas for "Authorized Personnel" and "Biosolids Land Application Site" signage and "Critical Control Point" labels. These findings are minimal and the documents were reviewed and discussed to ensure details were clearly understood by the team and any needed corrections submitted before adjournment."

The District Manager followed up on the internal audit report and changes were made. This documentation can be found in the District Manager's office.

External Interim Audit

A third-party audit was not conducted, due to the passing away of the NSF International auditor.

Central Davis Sewer District

Period: January 1, 2023 to December 31, 2023
Review Conducted by Jill S. Jones

February 1, 2024

Annual Activities – Management Review

The following activities are described in the EMS Manual as required activities on a periodic or annual basis. In italics are quotations from the EMS Manual and below the quote is the Management Response.

The District Manager will bring the revisions to the Board of Trustees for consideration. Recommended revisions to the policy may also be included in the annual EMS Management Review.

- The annual report and management review for 2023 will be presented to the Board on February 08, 2024. The Internal Audit was reviewed at the November 2023 Board meeting. An Interim Reverification Audit was not conducted by NSF, due to the passing of the auditor. The District increased hauling biosolids to the landfill in 2019 due to contract negotiations with Wasatch Regional landfill, the contract requires a minimum tonnage to be met every month. A new contract was signed in 2022 that continues into 2023, with the same minimum tonnage requirements and an increase in tipping fees.

Central Davis Sewer District Manager will review information in Table 3.1 on an annual basis, when there are regulatory changes or whenever major operational changes occur. The annual review will be conducted by February 28th each year.

- Table 3.1 on critical control points was reviewed as of February 1, 2023.

Check with the state biosolids coordinator at least annually on an informal basis.

- Numerous formal and informal contacts with Dan Griffin, the Utah State Biosolids Coordinator were made in 2023.

Central Davis Sewer District will set or revise goals and objectives for its biosolids program on an as-needed basis. Any new goals and strategies will be finalized no later than February 28th of each year.

- The goals and objectives for 2023 were completed and/or in the process of being completed. The Goals report was presented to the Board at the October 2022 Board Meeting. Goals specific to each of the four outcome areas were identified and completed or were in the process of being completed. Due to the passing of the NSF international auditor of the NBP program, the Board will need to determine the future of the EMS program.

Goals and objectives will be posted in the District office on the main bulletin board.

- Goals are included in the manual that is posted on the District's website at cdsewer.org. The EMS Manual and the associated goals and objectives are available electronically for all employees by accessing the District's website. In addition, a paper copy of the goals and objectives are posted on the Main bulletin board.

Roles and responsibilities for various individuals that are specific to the EMS are assigned by the District Manager. They are reviewed and updated as necessary on an annual basis (by February 28th of each year).

- The roles and responsibilities outlined in Element 7 are up to date. However, changes are ongoing, and the roles and responsibilities will be reevaluated on an annual basis along with the EMS review.

The District maintains several lists of individuals interested in Central Davis Sewer District biosolids program and/or EMS related activities. These lists include the Odor Complaint Log, attendance lists in the minutes of Board meetings, and a Telephone Log for specific concerns expressed by the public (not including queries about compost availability or pricing) and is maintained by the District Manager and the Accountant.

- The accountant/clerk maintains the complaint log and the telephone query log. There were multiple queries about availability and pricing of compost that were not logged. There were two odor comments or complaints in 2023. The District Manager and or Staff contacted all individuals that contacted the District with comment or concerns. The District believes all comments and concerns have been addressed.

Operational controls will be reviewed by the District Manager on an annual basis (by February 28th) or whenever significant changes in plant processes and/or operations occur. Revisions (if any) to Table 3.1 and associated SOP's and monitoring/measurements will be made by the District Manager following these reviews.

- All operational controls appear to be adequate. No new control processes were installed, only routine maintenance was performed.

Significant changes will be documented in writing and will be noted in the annual biosolids program report and updated to the NBP and the 3rd party auditor.

- A 3rd party audited was not conducted in 2023, as stated previously.

Central Davis Sewer District Wastewater Treatment Plant has an Emergency Response Program which is reviewed yearly and updated as needed. Interim revisions to specific sections of the Emergency Response Program are made on an "as needed" basis. A specific biosolids section is included in the manual and covers impacts from significant load changes, slug loads, extreme weather conditions, and equipment failures.

- The emergency response plan was updated in 2012 and implemented in 2013 continuous changes are made on an annual basis due to the EMS being a living document. Currently, the EMS is current with present practices. The District switched to an inherently safer technology for disinfection in place of gaseous chlorine. The District now uses liquid sodium hypochlorite for disinfection. In 2023 there were no incidents requiring emergency response. Annual training on the emergency response program and complete program review was conducted with staff during safety day training in February 2023 and February 2024. An Emergency Action for Biosolids Transportation Release procedure was implemented in December of 2017 and converted to an SOP in 2019.

Important emergency contact information is kept by each phone and in the manual.

- Emergency notice information is posted at each phone as of December 27, 2016. Periodic checks are made by the safety officer throughout the year to ensure the phone information is current and not destroyed or removed. The information was checked in 2023.

Monitoring and measurement activities will be reviewed by the District Manager on an annual basis (by February 28th) or whenever significant changes in plant processes and/or operations occur. Revisions (if any) to Tables 3.1 and associated SOPs and monitoring/measurement documents will be made by the District Manager.

- All current SOP's and associated documentation are adequate and current with EMS needs. The Manager reviewed all documentation associated with the annual report during safety days in February 2023 and February 2024. All activities comply with regulatory and permitted requirements.

The District Manager will prepare and submit a written report to the Board of Trustees by February 28th of each year, summarizing the internal audit results and corrective actions (if necessary) that have already been taken or will be taken to address any non-conformances.

- The Internal Audit report was reviewed with the Board in October 2022. Corrective actions taken throughout the year have been discussed with the Board as needed.

The District Manager will prepare a written report on an annual basis that summarizes the performance of the biosolids management program. The performance report will be completed by February 28th of each year and will address performance during the previous calendar year. At a minimum, the report will contain the following information:

a. *Summaries of monitoring data and other measurements that demonstrate the performance of Central Davis Sewer District biosolids program relative to established goals, objectives, and legal requirements.*
b. *Summary of relevant contractor activities (if any).*
c. *Summaries of actions that have been taken on a voluntary basis.*
d. *Progress towards achieving biosolids program goals and objectives.*
e. *A summary of internal audits.*
f. *A summary of independent third-party audits (if applicable).*

- The District's Annual Biosolids Report will be submitted to the Board for review in February 2024. This report summarizes all needed regulatory compliance issues. The report contains information from the 2022 calendar year activities. The 2022 goals were discussed and approved by the Board during the October 2022 Board meeting. 2023 Goals will be presented to the Board during the second Board Meeting in 2023.

The scope of the management review will include:

a. *Review monitoring data and other measurements that demonstrate the performance of Central Davis Sewer District biosolids program relative to established goals, objectives and legal requirements.*
b. *Review progress towards achieving biosolids goals and objectives.*
c. *Review internal audit results.*
d. *Review 3rd party audit results.*
e. *Review the need for changes in existing policy or the adoption of new policy to support the EMS and biosolids related activities.*

- No significant changes to the current EMS Manual are needed.

Biosolids Goals - 2023

Goal #1: The District will compost anaerobic biosolids and cover it during the winter months and determine if times and temperature can be met for the pile as per regulatory code in 40 CFR part 503.32(a)(7)
Objective: The District would like to reduce biosolids sent to the landfill and direct it toward beneficial reuse.
Status: This goal has been completed. Covered anaerobic piles are able to meet temperatures during winter.

Goal #2: Future regulations may require compliance with a 10.0 mg/L total inorganic nitrogen. The District has a multi-tasked goal to determine if this is achievable with its current facilities. In 2023 the District will complete task 1 as a part of 2023 Biosolid Goal. Task 1 is establishing baseline conditions for the nutrient levels in the oxidation ditches.
Objective: Continuous effluent quality of less than 10.0 mg/L by the end of 2025. This goal is in preparation for any potential total inorganic nitrogen limits.
Status: The first task of this goal has been completed. The District is able to meet a total inorganic nitrogen effluent limit of 10 mg/L. An updated table can be found in this report.

Goal #3: Educate District Citizens on the District's treatment train and biosolids treatment train process. At least 10 District citizens will be provided the District Plant Guidebook
Objective: Staff will design a plant guidebook that will provide an education on the District's current treatment process. The guidebook will discuss the treatment process at Central Davis and go through the Biosolids treatment train as well. The guidebook will be provided to District citizens, staff, and the Board. In addition, the guidebook will be posted on the District website.
Status: This Goal is done.

Goal #4: Determine the quantity of PFAS compounds present on District ground.
Objective: The District will take six samples on land applied District grounds; the samples will be taken from four random fields chosen by the Biosolid Coordinator. The six samples will include 1', 2', 3', 4' and 5' cores from the four random fields and the last sample will be a composite sample of 1' cores from 10 out of 13 District owned fields.
Status: This Goal has been complete, reports from Eurofins can be found in this report.

Action Plan and Tracking - 2023
Critical Outcome Indicators

Goal Number: 1
Outcome Area: Environmental Performance

Goal: The District will compost anaerobic biosolids and cover it during the winter months and determine if times and temperature can be met for the pile as per regulatory code in 40 CFR part 503.32(a)(7)

Objective: The District would like to reduce biosolids sent to the landfill and direct it toward beneficial reuse.

Specific	Measurable	Achievable	Relevant	Time Bound
Measure time and temperature for a covered anaerobic pile to determine if pathogen reduction can be met.	Determine if time and temperature can be met for one anaerobic covered pile.	Budget and Staff time is allocated.	Biosolids Treatment Train	Finish by December 2023

RESOURCES REQUIRED: Staff Time
RESPONSIBLE PARTY: Biosolids Tech. and Biosolids Coordinator
INTERESTED PARTIES INVOLVED: District Staff and Board

Milestones	Estimated Completion Date	Actual Completion Date
Create and cover anaerobic compost pile.	October 2023	December 2023
Evaluate times and temperature for 3 days as per 40 CFR part 503.32.	November 2023	December 2023
Determine next course of action: 1) If pile meets Pathogen Reduction, test for pathogen reduction OR 2) If pile does not meet Pathogen, land apply on fields.	December 2023	December 2023

Central Davis Sewer District
Anaerobic Compost Pile #231218

covered Pile

Action Item	Date	Temperature		
		Time	Temperature	Operator Initials
Begin Pile Construction	Monday, December 18, 2023			
Temperature Monitoring	Monday, December 25, 2023	9:25Am	57°	SW
	Tuesday, December 26, 2023	8:55am	64°	JC
	Wednesday, December 27, 2023	8:30am	66°	JC
	Thursday, December 28, 2023	11:05AM	66°	TAH
	Friday, December 29, 2023	8:20A	66°	JC
	Saturday, December 30, 2023	9:10 Am	64°	MC
	Sunday, December 31, 2023	9:53AM	63°	MC
	Monday, January 1, 2024	1:18pm	61°	MC
	Tuesday, January 2, 2024	8:35Am	59°	SW
	Wednesday, January 3, 2024	9:05AM	61°	TAH
	Thursday, January 4, 2024	8:12Am	60°	SW
	Friday, January 5, 2024	8:23Am	61°	SW
	Saturday, January 6, 2024	8:09AM	60°	TH
	Sunday, January 7, 2024	9:06AM	61°	JW
	Monday, January 8, 2024	8:05Am	60°	SW
	Tuesday, January 9, 2024	8:26Am	61°	SW
	Wednesday, January 10, 2024	8:45Am	60°	JW
	Thursday, January 11, 2024	8:13Am	58°	SW
	Friday, January 12, 2024	8:09Am	57°	SW
	Saturday, January 13, 2024	8:25 Am	57°	DB
	Sunday, January 14, 2024	9:55pm	55°	KM
Pile Complete	Monday, January 15, 2024	8:26AM	55°	BM

Action Plan and Tracking - 2023
Critical Outcome Indicators

Goal Number: 2
Outcome Area: Regulatory Compliance

Goal: Future regulations may require compliance with a 10.0 mg/L total inorganic nitrogen. The District has a multi-tasked goal to determine if this is achievable with its current facilities. In 2023 the District will complete task 1 as a part of 2023 Biosolid Goal. Task 1 is establishing baseline conditions for the nutrient levels in the oxidation ditches.

Objective: Continuous effluent quality of less than 10.0 mg/L by the end of 2025. This goal is in preparation for any potential total inorganic nitrogen limits.

Specific	Measurable	Achievable	Relevant	Time Bound
Establish baseline for nutrient in the oxidation ditches.	Gather 20 days of data to establish baseline nutrient levels in the oxidation ditches.	Budget and staff time has been allocated.	Regulatory Compliance is a part of the biosolids treatment train.	December 2023

RESOURCES REQUIRED: Budget and staff time has been allocated
RESPONSIBLE PARTY: The District intern and Management
INTERESTED PARTIES INVOLVED: Staff and District Board

Milestones	Estimated Completion Date	Actual Completion Date
Establish a scope of work for the baseline monitoring	March 2023	March 2023
Conduct Study to establish baseline monitoring	July 2023	January 2023
Generate a report for the baseline monitoring	November 2023	December 2023

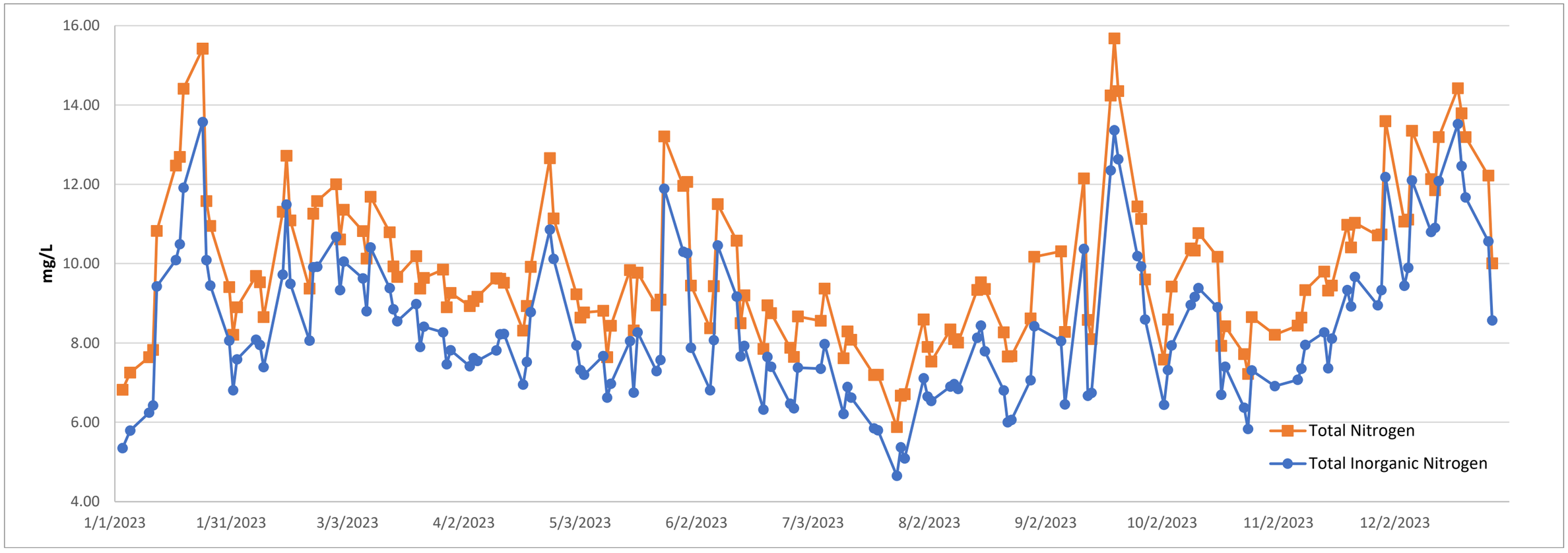
	Ammonia	TKN	Nitrate	Nitrite	Organic N	Total Nitrogen	Total Inorganic Nitrogen
1/3/2023	1.81	3.28	3.31	0.23	1.47	6.82	5.35
1/5/2023	1.64	3.1	3.9	0.25	1.46	7.25	5.79
1/10/2023	2.87		3.13	0.25	1.40	7.64	6.24
1/11/2023	2.44		3.49	0.5	1.40	7.82	6.42
1/12/2023	2.03		6.15	1.25	1.40	10.82	9.42
1/17/2023	1.66	4.04	7.17	1.26	2.38	12.47	10.09
1/18/2023	1.88	4.08	7.33	1.28	2.20	12.69	10.49
1/19/2023	2.17	4.67	8.4	1.34	2.50	14.41	11.91
1/24/2023	2.91	4.76	10.1	0.56	1.85	15.42	13.57
1/25/2023	2.07	3.56	7.83	0.19	1.49	11.58	10.09
1/26/2023	2.24	3.74	7.01	0.2	1.50	10.95	9.45
1/31/2023	4.02	5.37	3.79	0.25	1.35	9.41	8.06
2/1/2023	3.23	4.63	3.37	0.21	1.40	8.21	6.81
2/2/2023	3.79	5.1	3.64	0.16	1.31	8.90	7.59
2/7/2023	5.01	6.62	2.86	0.21	1.61	9.69	8.08
2/8/2023	4.72	6.3	3.04	0.19	1.58	9.53	7.95
2/9/2023	3.78	5.04	3.46	0.15	1.26	8.65	7.39
2/14/2023	6.72	8.31	2.74	0.26	1.59	11.31	9.72
2/15/2023	8.15	9.38	3.09	0.25	1.23	12.72	11.49
2/16/2023	6.42	8.02	2.91	0.16	1.60	11.09	9.49
2/21/2023	5.12	6.43	2.71	0.23	1.31	9.37	8.06
2/22/2023	6.37	7.72	3.21	0.33	1.35	11.26	9.91
2/23/2023	5.9	7.56	3.61	0.41	1.66	11.58	9.92
2/28/2023	7.08	8.4	3.3	0.3	1.32	12.00	10.68
3/1/2023	5.82	7.1	3.47	0.04	1.28	10.61	9.33
3/2/2023	6.34	7.65	3.44	0.27	1.31	11.36	10.05
3/7/2023	6.75	7.94	2.63	0.25	1.19	10.82	9.63
3/8/2023	5.61	6.94	2.95	0.24	1.33	10.13	8.80
3/9/2023	6.46	7.74	3.72	0.23	1.28	11.69	10.41
3/14/2023	6.67	8.08	2.45	0.26	1.41	10.79	9.38
3/15/2023	5.86	6.94	2.76	0.23	1.08	9.93	8.85
3/16/2023	5.52	6.64	2.78	0.25	1.12	9.67	8.55
3/21/2023	6.3	7.51	2.43	0.25	1.21	10.19	8.98
3/22/2023	5.27	6.74	2.43	0.2	1.47	9.37	7.90
3/23/2023	5.49	6.72	2.73	0.19	1.23	9.64	8.41
3/28/2023	5.28	6.86	2.76	0.23	1.58	9.85	8.27
3/29/2023	4.62	6.06	2.65	0.19	1.44	8.90	7.46
3/30/2023	4.42	5.86	3.17	0.23	1.44	9.26	7.82
4/4/2023	3.16	4.68	4.06	0.19	1.52	8.93	7.41
4/5/2023	2.77	4.21	4.72	0.13	1.44	9.06	7.62
4/6/2023	2.59	4.2	4.82	0.14	1.61	9.16	7.55
4/11/2023	3.07	4.89	4.51	0.23	1.82	9.63	7.81
4/12/2023	4.35	5.75	3.71	0.16	1.40	9.62	8.22
4/13/2023	3.93	5.22	4.17	0.13	1.29	9.52	8.23
4/18/2023	5.05	6.41	1.78	0.12	1.36	8.31	6.95
4/19/2023	5.35	6.76	2.07	0.1	1.41	8.93	7.52
4/20/2023	6.6	7.74	2.03	0.15	1.14	9.92	8.78

	Ammonia	TKN	Nitrate	Nitrite	Organic N	Total Nitrogen	Total Inorganic Nitrogen
4/25/2023	8.7	10.5	2.01	0.15	1.80	12.66	10.86
4/26/2023	7.84	8.86	2.11	0.17	1.02	11.14	10.12
5/2/2023	5.53	6.82	2.12	0.29	1.29	9.23	7.94
5/3/2023	4.78	6.1	2.32	0.22	1.32	8.64	7.32
5/4/2023	4.31	5.88	2.64	0.25	1.57	8.77	7.20
5/9/2023	4.44	5.58	2.96	0.27	1.14	8.81	7.67
5/10/2023	2.96	3.98	3.47	0.19	1.02	7.64	6.62
5/11/2023	3.13	4.59	3.68	0.16	1.46	8.43	6.97
5/16/2023	4.06	5.85	3.77	0.22	1.79	9.84	8.05
5/17/2023	3.06	4.63	3.55	0.14	1.57	8.32	6.75
5/18/2023	4.32	5.82	3.81	0.14	1.50	9.77	8.27
5/23/2023	3.62	5.28	3.52	0.15	1.66	8.95	7.29
5/24/2023	3.94	5.46	3.53	0.1	1.52	9.09	7.57
5/25/2023	8.02	9.34	3.77	0.1	1.32	13.21	11.89
5/30/2023	2.36	4.02	7.77	0.17	1.66	11.96	10.30
5/31/2023	2.54	4.34	7.5	0.22	1.80	12.06	10.26
6/1/2023	2.37	3.94	5.32	0.19	1.57	9.45	7.88
6/6/2023	2.92	4.48	3.73	0.16	1.56	8.37	6.81
6/7/2023	3.5	4.86	4.46	0.11	1.36	9.43	8.07
6/8/2023	4.81	5.85	5.39	0.26	1.04	11.50	10.46
6/13/2023	2.65	4.06	6.26	0.26	1.41	10.58	9.17
6/14/2023	1.97	2.81	5.61	0.08	0.84	8.50	7.66
6/15/2023	2.62	3.89	5.18	0.13	1.27	9.20	7.93
6/20/2023	2.39	3.92	3.73	0.2	1.53	7.85	6.32
6/21/2023	3.18	4.48	4.25	0.22	1.30	8.95	7.65
6/22/2023	3.64	4.99	3.43	0.33	1.35	8.75	7.40
6/27/2023	2.14	3.55	4.09	0.24	1.41	7.88	6.47
6/28/2023	1.72	3.02	4.47	0.16	1.30	7.65	6.35
6/29/2023	2.02	3.31	5.18	0.18	1.29	8.67	7.38
7/5/2023	1.65	2.86	5.6	0.1	1.21	8.56	7.35
7/6/2023	1.84	3.24	6.03	0.1	1.40	9.37	7.97
7/11/2023	1.28		4.89	0.01	1.40	7.61	6.21
7/12/2023	1.39		5.35	0.12	1.40	8.29	6.89
7/13/2023	1.37	2.83	5.11	0.14	1.46	8.08	6.62
7/19/2023	0.98	2.32	4.71	0.16	1.34	7.19	5.85
7/20/2023	0.95	2.35	4.7	0.15	1.40	7.20	5.80
7/25/2023	0.68	1.91	3.85	0.12	1.23	5.88	4.65
7/26/2023	1.07	2.37	4.23	0.07	1.30	6.67	5.37
7/27/2023	0.68	2.3	4.33	0.08	1.62	6.71	5.09
8/1/2023	1.8	3.28	5.19	0.12	1.48	8.59	7.11
8/2/2023	1.47	2.72	5.15	0.03	1.25	7.90	6.65
8/3/2023	2.15	3.14	4.3	0.09	0.99	7.53	6.54
8/8/2023	2.03	3.47	4.76	0.11	1.44	8.34	6.90
8/9/2023	1.54	2.68	5.36	0.06	1.14	8.10	6.96
8/10/2023	1.67	2.84	5.15	0.02	1.17	8.01	6.84
8/15/2023	3.15	4.36	4.85	0.13	1.21	9.34	8.13
8/16/2023	3.47	4.56	4.83	0.14	1.09	9.53	8.44

	Ammonia	TKN	Nitrate	Nitrite	Organic N	Total Nitrogen	Total Inorganic Nitrogen
8/17/2023	2.63	4.2	4.95	0.21	1.57	9.36	7.79
8/22/2023	2.17	3.64	4.52	0.11	1.47	8.27	6.80
8/23/2023	1.39	3.05	4.54	0.07	1.66	7.66	6.00
8/24/2023	1.26	2.87	4.69	0.11	1.61	7.67	6.06
8/29/2023	1.16	2.72	5.79	0.11	1.56	8.62	7.06
8/30/2023	1.47	3.22	6.81	0.14	1.75	10.17	8.42
9/6/2023	3.14	5.4	4.75	0.16	2.26	10.31	8.05
9/7/2023	1.29	3.12	5.04	0.12	1.83	8.28	6.45
9/12/2023	0.94	2.72	9.22	0.21	1.78	12.15	10.37
9/13/2023	0.65	2.56	5.95	0.07	1.91	8.58	6.67
9/14/2023	1.54	2.9	5.15	0.05	1.36	8.10	6.74
9/19/2023	2.32	4.21	9.6	0.43	1.89	14.24	12.35
9/20/2023	3.42	5.74	9.4	0.54	2.32	15.68	13.36
9/21/2023	2.25	3.97	10.1	0.28	1.72	14.35	12.63
9/26/2023	3.91	5.16	6	0.28	1.25	11.44	10.19
9/27/2023	1.12	2.32	8.71	0.1	1.20	11.13	9.93
9/28/2023	1.49	2.5	6.98	0.12	1.01	9.60	8.59
10/3/2023	2.53	3.67	3.84	0.07	1.14	7.58	6.44
10/4/2023	2.27	3.54	4.91	0.14	1.27	8.59	7.32
10/5/2023	0.64	2.12	7.24	0.06	1.48	9.42	7.94
10/10/2023	1.01	2.43	7.8	0.15	1.42	10.38	8.96
10/11/2023	0.63	1.8	8.47	0.06	1.17	10.33	9.16
10/12/2023	2.03	3.42	7.23	0.12	1.39	10.77	9.38
10/17/2023	1.76	3.03	6.98	0.16	1.27	10.17	8.90
10/18/2023	1.69	2.93	4.96	0.04	1.24	7.93	6.69
10/19/2023	2.12	3.14	5.25	0.03	1.02	8.42	7.40
10/24/2023	1.49	2.84	4.73	0.15	1.35	7.72	6.37
10/25/2023	1.38	2.77	4.38	0.07	1.39	7.22	5.83
10/26/2023	2.26	3.6	4.97	0.08	1.34	8.65	7.31
11/1/2023	1.19	2.49	5.61	0.11	1.30	8.21	6.91
11/7/2023	1.35	2.72	5.59	0.13	1.37	8.44	7.07
11/8/2023	1.02	2.31	6.24	0.09	1.29	8.64	7.35
11/9/2023	1.75	3.13	6.07	0.13	1.38	9.33	7.95
11/14/2023	1.15	2.68	6.97	0.15	1.53	9.80	8.27
11/15/2023	1.08	3.04	6.15	0.13	1.96	9.32	7.36
11/16/2023	1.36	2.7	6.59	0.16	1.34	9.45	8.11
11/20/2023	1.71	3.36	7.36	0.26	1.65	10.98	9.33
11/21/2023	1.8	3.29	6.86	0.26	1.49	10.41	8.92
11/22/2023	2.22	3.58	7.18	0.27	1.36	11.03	9.67
11/28/2023	1.69	3.45	7.1	0.16	1.76	10.71	8.95
11/29/2023	1.48	2.89	7.75	0.1	1.41	10.74	9.33
11/30/2023	2.95	4.36	8.89	0.34	1.41	13.59	12.18
12/5/2023	1.9	3.52	7.36	0.18	1.62	11.06	9.44
12/6/2023	1.73	2.94	8.06	0.11	1.21	11.11	9.90
12/7/2023	2.64	3.89	9.19	0.27	1.25	13.35	12.10
12/12/2023	2.21	3.54	8.36	0.23	1.33	12.13	10.80
12/13/2023	1.8	2.75	8.96	0.14	0.95	11.85	10.90

	Ammonia	TKN	Nitrate	Nitrite	Organic N	Total Nitrogen	Total Inorganic Nitrogen
12/14/2023	1.98	3.09	9.94	0.16	1.11	13.19	12.08
12/19/2023	2.56	3.46	10.7	0.26	0.90	14.42	13.52
12/20/2023	1.82	3.15	10.5	0.14	1.33	13.79	12.46
12/21/2023	2.59	4.11	8.66	0.42	1.52	13.19	11.67
12/27/2023	4.7	6.36	5.44	0.42	1.66	12.22	10.56
12/28/2023	4.13	5.57	4.14	0.3	1.44	10.01	8.57
Average	**3.07**	**4.54**	**5.12**	**0.21**	**1.43**	**9.83**	**8.40**

*Note = (Data in red is estimated on average)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1/1/2023
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8/2/2023
9/2/2023
10/2/2023
11/2/2023
12/2/2023
Total Nitrogen
Total Inorganic Nitrogen

Action Plan and Tracking - 2023
Critical Outcome Indicators

Goal Number: 3
Outcome Area: Relations with Interested Parties

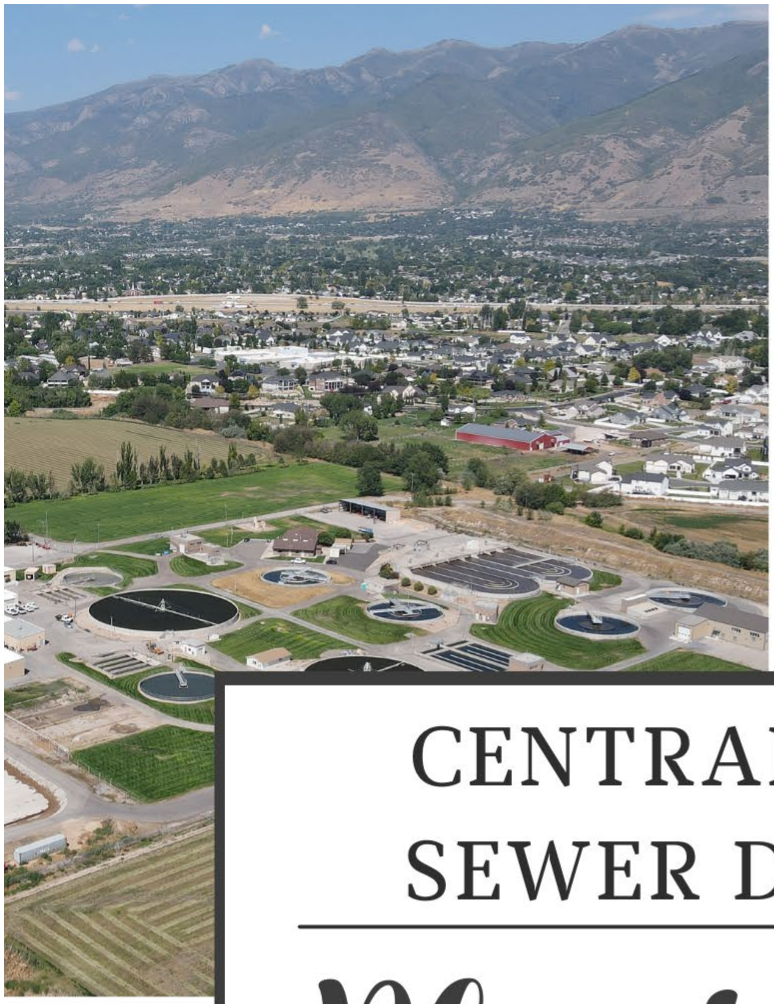
Goal: Educate District Citizens on the District's treatment train and biosolids treatment train process. At least 10 District citizens will be provided the District Plant Guidebook

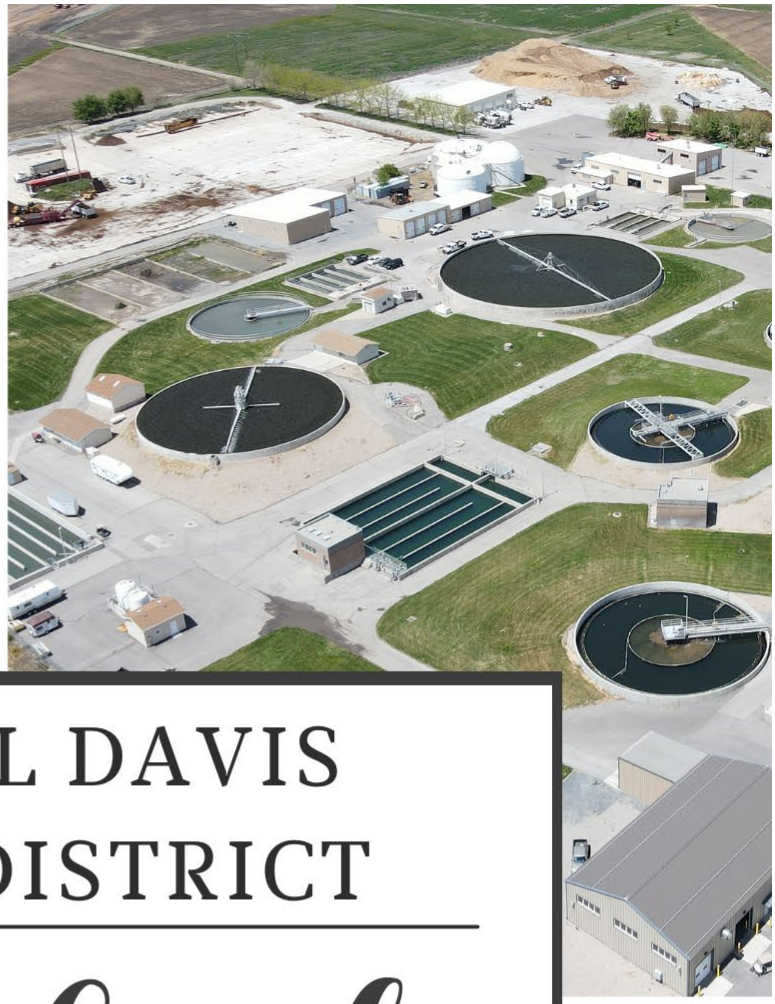
Objective: Staff will design a plant guidebook that will provide an education on the District's current treatment process. The guidebook will discuss the treatment process at Central Davis and go through the Biosolids treatment train as well. The guidebook will be provided to District citizens, staff, and the Board. In addition, the guidebook will be posted on the District website.

Specific	Measurable	Achievable	Relevant	Time Bound
Design a Plant Guidebook, that discusses the treatment train process and biosolids process.	During plant tours the guidebook will be provided to at least 10 citizens.	Time and Budget will be allocated for the task.	The guidebook provides education on the liquid and biosolids treatment train.	This Goal will be completed by December 2023.

RESOURCES REQUIRED: ~15 Hours of Staff Time
RESPONSIBLE PARTY: The Assistant Manager and Treatment Staff
INTERESTED PARTIES INVOLVED: District Citizens, Staff and Board

Milestones	Estimated Completion Date	Actual Completion Date
Information will be gathered on the liquid and treatment train process. This will involve verifying information with the treatment staff.	March 2023	January 2023
Pull all the information together and design a Guidebook.	May 2023	January 2023
Have staff review the guidebook for accuracy.	August 2023	January 2023
Distribute guidebook to citizens.	October 2023	September 2023





CENTRAL DAVIS SEWER DISTRICT

Plant Guide

Wastewater Treatment Plant General Information

First Constructed	1961
Original Capacity	2.0 MGD
Current Capacity – Peak Flow	22.0 MGD
Maximum Monthly Capacity	12.0 MGD
Design Capacity	9.9 MGD
Organic Treatment Capacity	23,100 lbs.
Tons of Compost Produced Annually	1,750
Tons of Biosolids Land Applied	230
Acres of Hay Farmed	130
Collection System Miles	275
Historical Average MGD	5.60
Service Area	Farmington Fruit Heights Kaysville

Central Davis Sewer District

Block Flow Diagram

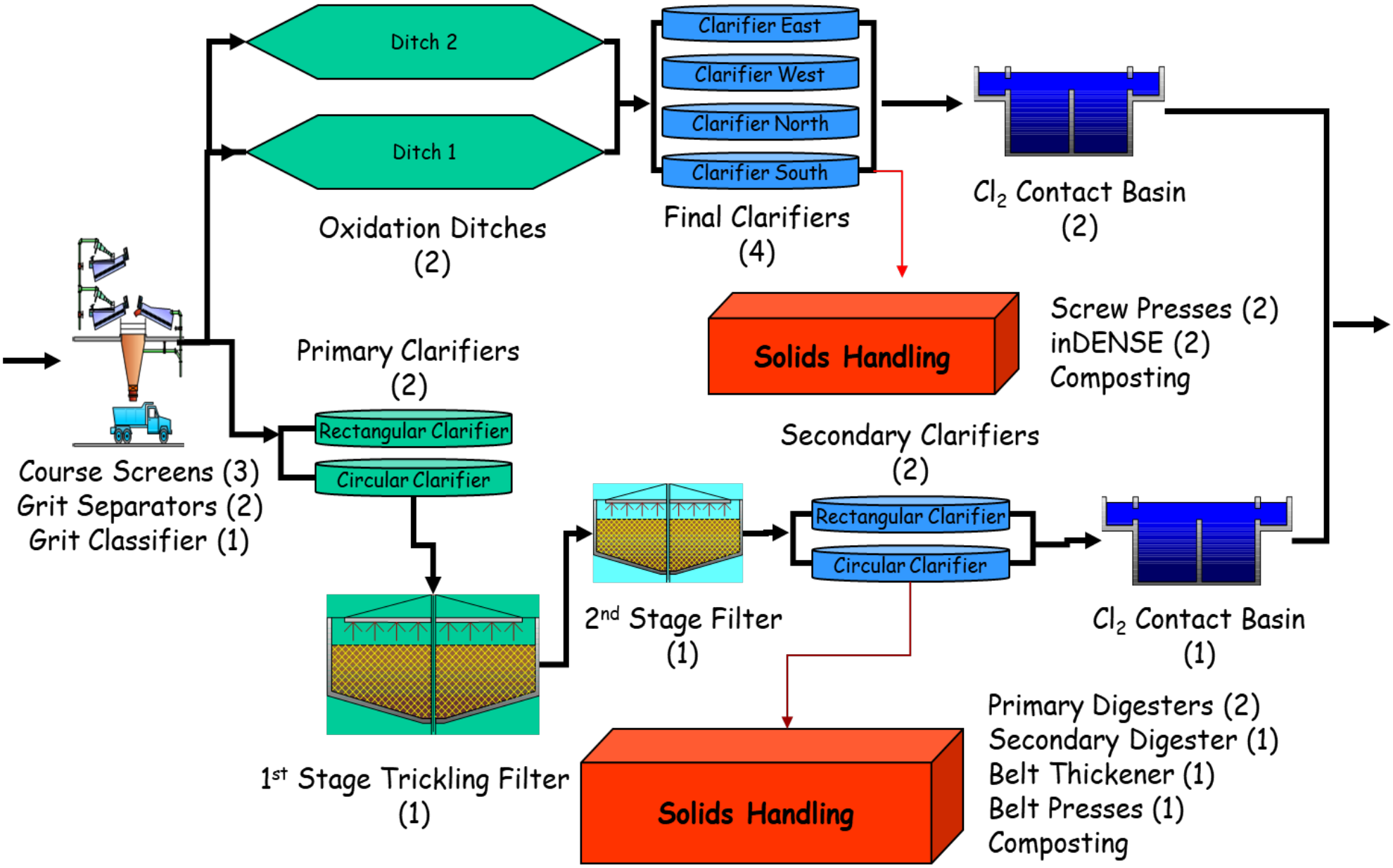


Figure 1: CDSD Treatment Plant

HEADWORKS

Central Davis Sewer District serves the cities of Farmington, Fruit Heights, and Kaysville. The influent flows in from 3 major trunklines on the District's property into the Headworks.

Figures 2: Headworks Arial Photos

Figure 3: Headworks Screens/Compaction and Classifiers

Figure 4: Grit Pumps

Figure 5: Headworks Electrical Panels

The Headworks Building is the primary treatment of the wastewater stream. The plant's headworks plays a crucial role in the pretreatment of the influent for any wastewater treatment facility. It protects the operation of downstream equipment and enhances the efficiency of the overall wastewater treatment process. Because all wastewater debris starts at the headworks, proper screening and debris removal is imperative to the entire wastewater system. Pretreatment devices are designed to remove or reduce large solids like wood, cloth, paper, and plastics, while also dealing with grit and excessive amounts of oil and grease.

CDSD's Headworks contain a total of 3 Screens, two step screens and one band screen. The headwork also contains a grit system with a grit classifier and chambers.

After the Headworks the Flow is then split approximately one third to the Trickling Filter side of the treatment plant and two thirds to the Oxidation Ditch side of the treatment plant. The two processes remain completely separate for the duration of the treatment process until discharge.

Oxidation Ditch Treatment Train

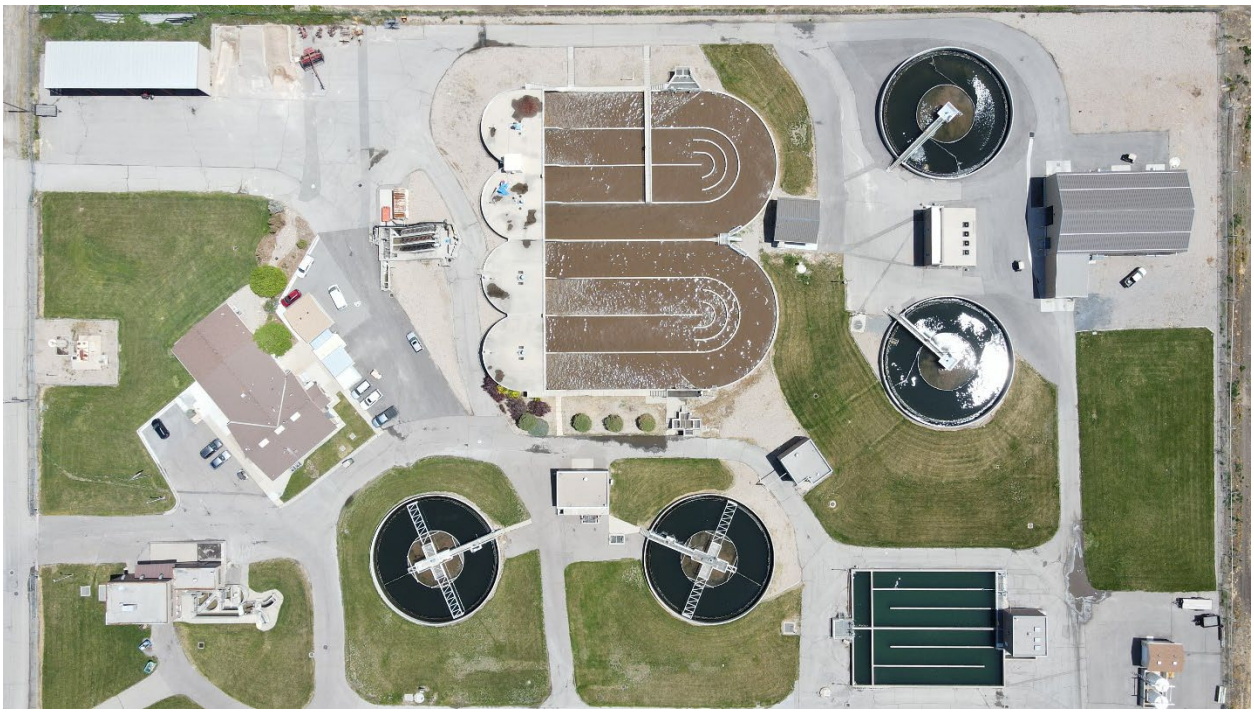


Figure 6: Oxidation Ditch Treatment Arial

After the Headworks, two-thirds of the flow is directed towards the Screw Pumps. The Screw pumps convey the flow into the oxidation ditches.

Figure 7: Screw Pump Station and Generators

Figure 8: Oxidation Ditches

An oxidation ditch is a modified activated sludge biological treatment process that utilizes long solids retention times (SRTs) to remove biodegradable organics. Oxidation ditches are typically complete mix systems. Horizontally or vertically mounted aerators provide circulation, oxygen transfer, and aeration in the ditch. Flow to the oxidation ditch is aerated and mixed with return sludge from a secondary clarifier. The mixing process entrains oxygen into the mixed liquor(the water in the oxidation ditch) to foster microbial growth and the motive velocity ensures contact of microorganisms with the incoming wastewater. Solids are maintained in suspension as the mixed liquor circulates around the ditch. When optimal conditions are maintained the oxidation ditch can provide nitrification and denitrification. Oxidation ditch effluent is usually settled in the secondary or final clarifier.

The Oxidation Ditches were constructed from the late 1980s to the early 1990s. The west ditch being constructed first, along with the north and south final clarifiers. The oxidation ditches can hold a combined volume of 3 MGD (million gallons per day). Each clarifier has a volume of 0.5 MGD.

After the oxidation ditches, the flow is sent to the final clarifiers to separate the solids and the liquid. Alum dosing occurs off the weirs of the oxidation ditch prior to the flow going into the clarifiers.

Figure 9: Oxidation Ditch Alum Building and System

Figure 10: Oxidation Ditch Final Clarifiers

Clarifiers are required wherever the suspended solids in wastewater are higher in concentration. Almost all treatment plant Clarifiers are of circular or rectangular design. Clarifiers work on the principle of gravity settling. The heavier suspended solids settle in the clarifier due to the dormant conditions provided in the Clarification zone. The settled solids are swept to the center well provided for collection of sludge with help of moving scraper blades. Most of the waste waters contain some scum material which does not settle down & needs to be collected on the surface of the clarifier. Hence a scum removal system is typical.

The solids from the clarifiers are directed into the buildings known as RAS1-WAS1 and RAS2-WAS2. Returned Activated Sludge (RAS) is the biosolids that is returned to the system off the bottom of the clarifiers. The RAS is returned back to the oxidation ditch to prevent the loss of microorganisms and to maintain an adequate population in the mixed liquor. The RAS1 building is for the North and South clarifiers for west oxidation ditch. RAS2 is for the east and west clarifiers off the east oxidation ditch. The Waste Activated Sludge (WAS) is the biosolids that is wasted or removed from the bottom of the clarifiers. The WAS is sent to the dewatering building where it is thickened and sent to the landfill or composted.

The WAS is thickened in the dewatering building. The dewatering building contains two screw presses, that were installed in 2019. The dewatering building also houses inDENSE, a hydro-cyclone system that wastes filamentous (lighter particle biosolids that bridges) material and recycles the larger denser flocs.

Figure 11: RAS 1 Building

Figure 12: RAS and WAS Pumps for North and South Clarifiers

Figure 13: RAS 2 Building

Figure 14: RAS and WAS Pumps for East and West Clarifiers

Figure 15: Solids Handling for Oxidation Ditch Treatment Train

Figure 16: Inside Solids Handling for Oxidation Ditch Treatment Train

From the clarifiers the liquid treatment is disinfected through chlorination. Sodium Hypochlorite(liquid bleach) is dripped into the chlorination basin and detained for contact time before discharge.

The final step in the treatment process is disinfection using chlorine. The Chlorine Contact Basins are long, snake-like channels where chlorine is added to the flowing treated wastewater for disinfection. Disinfection is the process where disease-causing organisms (mostly bacteria) are killed by the chlorine. It's the same process used in swimming pools (with the same chlorine smell), but the chemicals used are much stronger. The long channels slow down the flow, allowing the chlorine enough time, at least two hours, to kill all the disease-causing organisms.

Figure 17: Chlorination Basin for Oxidation Treatment Train

Trickling Filter System

Figure 18: Trickling Filter System

After the Headworks, one-thirds of the flow is directed towards the primary clarifiers on the Trickling Filter side.

From the Headworks the flow is split into the two primary clarifiers: the rectangular and circular. The primary clarifiers typically remove 50-70% of the total suspended solids and 25-40 % of the biological oxygen demand (BOD). TSS and BOD are both indicators of the quantity of organic strength of the wastewater.

Figure 19: Primary Clarifiers

After the primary clarifiers the water is combined and pumped into the First Stage Trickling Filter.

The sludge from the bottom of the primary clarifiers is pumped into the primary digestors.

Figure 20: Trickling Filter Primary Pump Station Building

Figure 21: TF Sewage Pumps

Figure 22: Sludge Pumps and Grinder

Trickling filters (TFs) are used to remove organic matter from wastewater. The TF is an aerobic treatment system that utilizes microorganisms attached to a medium to remove organic matter from wastewater. These systems are known as attached-growth processes. Trickling Filters enable organic material in the wastewater to be adsorbed by a population of microorganisms (aerobic, anaerobic, and facultative bacteria; fungi; algae; and protozoa) attached to the medium as a biological film or slime layer (approximately 0.1 to 0.2 mm thick). As the wastewater flows over the medium, microorganisms already in the water gradually attach themselves to the rock, slag, or plastic surface and form a film. The organic material is then degraded by the aerobic microorganisms in the outer part of the slime layer. As the layer thickens through microbial growth, oxygen cannot penetrate the medium face, and anaerobic organisms develop.

From the First Stage Trickling Filter the water is then pumped into the second stage Trickling Filter.

Figure 23: Secondary Pumps

Figure 24: 2nd Stage Trickling Filter

After the Second Stage Trickling Filter the water goes into the secondary clarifiers.

The sludge from the bottom of the secondary clarifiers is pumped into the primary anaerobic digestors.

Figure 25: Second Stage Trickling Filter Pump Station

Anaerobic digestion is a process through which bacteria break down organic matter—such as wastewater biosolids, and food wastes—in the absence of oxygen. Anaerobic digestion for biogas production takes place in a sealed vessel called a reactor. These reactors contain complex microbial communities that break down (or digest) the waste and produce resultant biogas and digestate. The digestate can be sold as a class b product as long as the regulatory requirements are met.

Figure 26: Digestors

Figure 27: Inside the Digestors

After the Second Stage Trickling Filter the water goes into the secondary clarifiers.

The secondary clarifiers are the final step before disinfection to remove biomass from the treated water. Solids settle to the bottom of the clarifier and are pumped into the digestors.

Figure 28: Secondary Clarifiers

The two primary digestors are heated at mesophilic temperatures (85°F-100F°) and then pumped into the secondary digestor. The secondary digestor has a duo sphere membrane lid for gas/methane capture. Although the District at this time is not capturing the gas. The gas is currently being flared. After digestion the solids are sent to the gravity thickener or the gravity belt to thicken the solids for land application or compost.

Figure 29: Trickling Filter Solids Handling Building

Figure 29: Trickling Filter Solids Handling Building

Figure 30: Gravity Thickener

Figure 31: Belt Press and Polymer System

Figure 32: Loading Building

After the secondary clarifiers the water is disinfected like the oxidation treatment train through sodium hypochlorite. The two treatment trains combine after disinfection. The effluent is then sent to Farmington Bay of Great Salt Lake.

Figure 33: Sodium Hypochlorite Holding Tanks for Disinfection

Figure 34: Central Davis Sewer District Outfall

Plant Tour

Photo Tour

Click on image to see larger version
Plant Tour Guide

CDSD Aerial 2022

Headworks

Screening Equipment Headworks

Screw Pumps

Oxidation Ditch (OD)

North and South Clarifiers

East and West Clarifiers

OD Chlorination Basin

TF Primary Clarifiers

Trickling Filter (TF) 1

Trickling Filter (TF) 2

Secondary Clarifier

TF Chlorination Basin

Outfall

Compost Turning

Control Panels

CDSD 2014

CDSD 2014

2200 S Sunset Drive • Kaysville, UT 84037 • (801) 451-2190

Gmail

Manjot Masson <mkaur@cdsewer.org>

Fwd: Plant visit

4 messages

Jill Jones <jillj@cdsewer.org> Tue, Jan 16, 2024 at 1:33 PM
To: Manjot Kaur Masson <mkaur@cdsewer.org>, Brent Justensen <brent@cdsewer.org>, Nate Cloward <nate@cdsewer.org>

Anyone available to help with a tour of the DATC 1st year plumbers class?
Last fall it started at 6:30.
Thanks,

Jill S. Jones
District Manager
Central Davis Sewer District
2200 So. Sunset Dr
Kaysville, UT 84037

801-451-2190 office
801-209-3463 cell

---------- Forwarded message ---------
From: **Craig Randall** <Craig.Randall@davistech.edu>
Date: Tue, Jan 16, 2024 at 12:39 PM
Subject: Plant visit
To: Jill Jones <jillj@cdsewer.org>
Cc: Blair Howe <Blair.Howe@davistech.edu>

Hi Jill,

We have another 1st year class that started this month and would love to bring them to visit the plant again. Would it be possible to come either Tuesday March 5th, or Thursday March 7th? If you don't do tours in the winter, that's fine. Please let me know soon, so I can get it scheduled with my teacher who has that class. Thanks again.

Craig Randall

Davistech Apprenticeship Manager

Jill Jones <jillj@cdsewer.org> Tue, Jan 16, 2024 at 2:47 PM
To: Craig Randall <Craig.Randall@davistech.edu>
Cc: Blair Howe <Blair.Howe@davistech.edu>, Manjot Kaur Masson <mkaur@cdsewer.org>, Nate Cloward <nate@cdsewer.org>, Brent Justensen <brent@cdsewer.org>

Craig,
I think we can make either dayTuesday March 5th or Thursday March 7th work. Which day would you prefer?

Jill S. Jones
District Manager
Central Davis Sewer District
2200 So. Sunset Dr
Kaysville, UT 84037

801-451-2190 office
801-209-3463 cell

On Tue, Jan 16, 2024 at 2:33 PM Craig Randall <Craig.Randall@davistech.edu> wrote:

> Probably around 6pm. About 28 people if everyone comes
>
> ---
>
> **From:** Jill Jones <jillj@cdsewer.org>
> **Sent:** Tuesday, January 16, 2024 1:43 PM
> **To:** Craig Randall <Craig.Randall@davistech.edu>
> **Cc:** Blair Howe <Blair.Howe@davistech.edu>
> **Subject:** [External email] Re: Plant visit
>
> **Caution this email is from a sender outside Davis Tech. Please verify the sender before opening links or attachments.**
>
> ---
>
> Hi Craig,
>
> What time are you thinking? About how many students?
>
> I'm checking to see who is available
>
> Thanks,
>
> Jill S. Jones
>
> District Manager
>
> Central Davis Sewer District
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> 2200 So. Sunset Dr
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> > Craig Randall
> >
> > Davistech Apprenticeship Manager

Craig Randall <Craig.Randall@davistech.edu> Tue, Jan 16, 2024 at 3:17 PM
To: Jill Jones <jillj@cdsewer.org>

Cc: Blair Howe <Blair.Howe@davistech.edu>, Manjot Kaur Masson <mkaur@cdsewer.org>, Nate Cloward <nate@cdsewer.org>, Brent Justensen <brent@cdsewer.org>

Let's do Tuesday March 5

From: Jill Jones <jillj@cdsewer.org>
Sent: Tuesday, January 16, 2024 2:48 PM
To: Craig Randall <Craig.Randall@davistech.edu>
Cc: Blair Howe <Blair.Howe@davistech.edu>; Manjot Kaur Masson <mkaur@cdsewer.org>; Nate Cloward <nate@cdsewer.org>; Brent Justensen <brent@cdsewer.org>
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Cc: Blair Howe <Blair.Howe@davistech.edu>, Manjot Kaur Masson <mkaur@cdsewer.org>, Nate Cloward <nate@cdsewer.org>, Brent Justensen <brent@cdsewer.org>

Sounds good,
I just sent out an invite.
Thanks,
Jill S. Jones
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>
> Davistech Apprenticeship Manager

Action Plan and Tracking - 2023
Critical Outcome Indicators

Goal Number: 4
Outcome Area: Quality Biosolids Management Practices

Goal: Determine the quantity of PFAS compounds present on District ground.

Objective: The District will take six samples on land applied District grounds; the samples will be taken from four random fields chosen by the Biosolid Coordinator. The six samples will include 1', 2', 3', 4' and 5' cores from the four random fields and the last sample will be a composite sample of 1' cores from 10 out of 13 District owned fields.

Specific	Measurable	Achievable	Relevant	Time Bound
Samples will be gathered from District grounds and tested for 41 PFAS compounds.	Six samples will be gathered from land applied District property and tested for 41 PFAS analytes.	Budget and Staff time has been allocated.	Land application is apart of the Biosolids Treatment Train.	December 2023

RESOURCES REQUIRED: $5000 Budget allocation for staff time and outside laboratory services.
RESPONSIBLE PARTY: Assistant Manager and Fleet/Maintenance Manager
INTERESTED PARTIES INVOLVED: District citizens, staff and Board

Milestones	Estimated Completion Date	Actual Completion Date
Contact Outside Laboratory for sample containers.	June 2023	June 2023
Take samples from land application fields.	November 2023	November 2023
Send samples to Outside Laboratory	November 2023	November 2023
Analyze Report Received by Lab	December 2023	January 2024

	11/15/23					
	1 ft	**2 ft**	**3 ft**	**4 ft**	**5 ft**	**Composite**
	ug/Kg					
PFBA	0.47	ND	0.25	0.16	0.14	0.42
PFPeA	1.3	1	0.73	0.51	0.42	0.96
PFHxA	1.3	1.8	1.1	0.62	0.56	0.99
PFHpA	0.66	1.2	0.49	0.23	0.18	0.69
PFOA	4.7	4.1	0.98	0.36	0.34	3.2
PFNA	1.1	0.26	0.064	0.037	0.071	1.1
PFDA	3.5	ND	0.2	0.17	0.29	4
PFUnA	0.47	ND	ND	ND	ND	0.46
PFDoA	0.99	ND	0.068	0.055	0.088	1.2
PFTrDA	0.11	ND	ND	ND	ND	0.13
PFTeA	0.29	ND	ND	ND	ND	0.34
FPHxDA	0.074	ND	ND	ND	ND	0.085
PFBS	0.27	ND	0.34	0.28	0.3	0.34
PFHxS	0.14	ND	0.081	0.044	0.037	0.15
PFHpS	0.12	ND	ND	ND	ND	0.11
PFOS	16	2.8	0.93	0.65	1.1	19
PFDS	0.83	ND	ND	ND	ND	0.9
FOSA	0.13	ND	ND	ND	ND	0.19
NMeFOSAA	0.31	ND	0.029	ND	0.049	0.69
NEtFOSAA	0.84	ND	0.06	ND	0.058	0.68
6:2 FTS	0.048	ND	0.037	ND	ND	ND
10:2 FTS	0.053	ND	ND	ND	ND	0.046
NmeFOSE	0.19	ND	ND	ND	ND	0.24
NetFOSE	0.1	ND	ND	ND	ND	0.13
5:3 FTCA	0.097	ND	ND	ND	0.28	0.25
7:3 FTCA	0.3	0.83	0.12	0.097	0.39	0.54
Totals	34.392	11.99	5.479	3.213	4.303	36.841

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Aimee Matthies
Central Davis Sewer District
2200 S Sunset Dr
Kaysville, Utah 84037

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JOB DESCRIPTION

PFAS, Biosolids

JOB NUMBER

320-107302-1

Eurofins Sacramento
880 Riverside Parkway
West Sacramento CA 95605

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization

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1/4/2024 3:28:22 PM

Authorized for release by
Nathaniel Horner, Project Management Assistant I
Nathaniel.Horner@et.eurofinsus.com
(916)374-4306

Table of Contents

Definitions/Glossary

Client: Central Davis Sewer District
Project/Site: PFAS, Biosolids

Job ID: 320-107302-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 320-107302-1 — Eurofins Sacramento

Receipt
The samples were received on 11/20/2023 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 6.2º C.

Receipt Exceptions
The following samples were received at the laboratory outside the required temperature criteria of 0-6º C: #1ft core (320-107302-1), 2ft core (320-107302-2), 3ft core (320-107302-3), 4ft core (320-107302-4), 5ft core (320-107302-5), Composite core (320-107302-6), Aerobic composite (320-107302-7), Anaerobic compost (320-107302-8) and Anaerobic land application (320-107302-9). Water in the cooler indicated that the ice had melted.

LCMS
Method 537 (modified): The transition mass ratio was outside of the established ratio limit for Perfluoro-n-hexadecanoic acid (PFHxDA) in (CCVL 320-723666/5) associated to this data set. This is indicated by the "R" flag in the raw data. As the flagged data is in control in the low level continuing calibration verification (CCVL), there is no adverse impact to the data.

Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte.

Method 537 (modified): Several Isotope Dilution Analyte (IDA) recoveries are above the method recommended limit for the following sample: #1ft core (320-107302-1) and 2ft core (320-107302-2). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): The low level continuing calibration verification (CCVL) and continuing calibration verification internal standard (CCVIS) associated with batch 320-726520 recovered above the upper control limit for 7:3 FTCA. The samples associated with this CCV were non-detect for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCVIS 320-726520/6) and (CCVL 320-726520/5).

Method 537 (modified): The continuing calibration verification (CCV) associated with batch 320-726563 recovered above the upper control limit for 7:3 FTCA. The samples associated with this CCV were non-detect for the affected analytes; therefore, the data have been reported. The associated samples are impacted: #1ft core (320-107302-1), 2ft core (320-107302-2), (CCV 320-726563/1), (CCV 320-726563/12) and (CCV 320-726563/19).

Method 537 (modified): The laboratory control sample (LCS) for preparation batch 320-723710 and analytical batch 320-725186 recovered outside control limits for the following analyte: 3:3 FTCA. Reanalysis confirms the low recoveries. The recovery is being compared to the laboratory default limits. As additional data points are analyzed, the control limits will be updated to reflect the method performance.

Method 537 (modified): The Isotope Dilution Analyte (IDA) recovery associated with the following samples are below the method recommended limit: 2ft core (320-107302-2), 4ft core (320-107302-4) and Composite core (320-107302-6). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the samples.

Method 537 (modified): Internal standard (ISTD) response for the following sample in analytical batch 320-725186 was outside acceptance criteria: #1ft core (320-107302-1) and 2ft core (320-107302-2). The internal standard is not used to quantitate target analyte; therefore, the data have been reported.

Method 537 (modified): The Isotope Dilution Analyte (IDA) recovery associated with the following samples are below the method recommended limit for 13C-6:2 FTCA and 13C-8:2 FTCA: 3ft core (320-107302-3), 4ft core (320-107302-4) and 5ft core (320-107302-5). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the samples. The samples were reextracted at a dilution, outside of holding time, and both sets of data have been reported.

Method 537 (modified): The laboratory control sample (LCS) for preparation batch 320-723710 and analytical batch 320-725186 recovered outside control limits for the following analytes: 3:3 FTCA. The associated sample(s) was reprepared outside holding time.

Method 537 (modified): Results for sample 2ft core (320-107302-2) were reported from the analysis of a diluted extract due to matrix interference. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

Method 537 (modified): The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit: 2ft core (320-107302-2). The sample was reextracted outside of the holding time with IDA recoveries within

control limits. Both sets of data are reported. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
Method Moisture: The reference method does not list a specific holding time for this procedure; therefore, the laboratory defaults to an in-house holding time of 14 days. The following samples were prepared and/or analyzed outside this time period: #1ft core (320-107302-1), 2ft core (320-107302-2), 3ft core (320-107302-3), 4ft core (320-107302-4), 5ft core (320-107302-5), Composite core (320-107302-6), Aerobic composite (320-107302-7), Anaerobic compost (320-107302-8) and Anaerobic land application (320-107302-9).

Organic Prep
Method SHAKE: Due to the biosolid matrix, the initial volumes used for the following samples deviated from the standard procedure: Aerobic composite (320-107302-7), Anaerobic compost (320-107302-8) and Anaerobic land application (320-107302-9). The reporting limits (RLs) have been adjusted proportionately.

Method SHAKE: The following samples were reprepared outside of preparation holding time due to low isotope dilution analyte (IDA) recoveries: 2ft core (320-107302-2), 3ft core (320-107302-3), 4ft core (320-107302-4) and 5ft core (320-107302-5).
preparation batch 320-727594

Method SHAKE: Due to the low isotope dilution analyte (IDA) recoveries, the initial volumes used for the following samples deviated from the standard procedure: 2ft core (320-107302-2), 3ft core (320-107302-3), 4ft core (320-107302-4) and 5ft core (320-107302-5). The reporting limits (RLs) have been adjusted proportionately.
preparation batch 320-727594

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Central Davis Sewer District
Project/Site: PFAS, Biosolids

Job ID: 320-107302-1

Client Sample ID: #1ft core — Lab Sample ID: 320-107302-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.47		0.20	0.047	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	1.3		0.20	0.042	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.3	B	0.20	0.031	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.66		0.20	0.039	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	4.7		0.20	0.054	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.1		0.20	0.022	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	3.5		0.20	0.049	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	0.47		0.20	0.043	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorododecanoic acid (PFDoA)	0.99		0.20	0.030	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorotridecanoic acid (PFTrDA)	0.11	J	0.20	0.021	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorotetradecanoic acid (PFTeA)	0.29		0.20	0.038	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoro-n-hexadecanoic acid (PFHxDA)	0.074	J	0.20	0.039	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.27		0.20	0.039	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.14	J	0.20	0.029	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	0.12	J	0.20	0.050	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	16		0.20	0.044	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanesulfonic acid (PFDS)	0.83		0.20	0.053	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.13	J	0.20	0.034	ug/Kg	1	☼	537 (modified)	Total/NA
NMeFOSAA	0.31		0.20	0.023	ug/Kg	1	☼	537 (modified)	Total/NA
NEtFOSAA	0.84		0.20	0.049	ug/Kg	1	☼	537 (modified)	Total/NA
6:2 FTS	0.048	J	0.20	0.027	ug/Kg	1	☼	537 (modified)	Total/NA
10:2 FTS	0.053	J	0.20	0.039	ug/Kg	1	☼	537 (modified)	Total/NA
NMeFOSE	0.19	J	0.20	0.048	ug/Kg	1	☼	537 (modified)	Total/NA
NEtFOSE	0.10	J	0.20	0.028	ug/Kg	1	☼	537 (modified)	Total/NA
5:3 FTCA	0.097	J	0.20	0.039	ug/Kg	1	☼	537 (modified)	Total/NA
7:3 FTCA	0.30		0.20	0.042	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: 2ft core — Lab Sample ID: 320-107302-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	1.0	J	2.2	0.45	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.8	J B	2.2	0.34	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.2	J	2.2	0.42	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	4.1		2.2	0.58	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.26	J	2.2	0.24	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.8		2.2	0.47	ug/Kg	10	☼	537 (modified)	Total/NA
7:3 FTCA - RE	0.83	J H B	0.84	0.17	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: 3ft core — Lab Sample ID: 320-107302-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.25		0.20	0.046	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	0.73		0.20	0.041	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.1	B	0.20	0.031	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.49		0.20	0.038	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	0.98		0.20	0.053	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.064	J	0.20	0.022	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	0.20		0.20	0.048	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorododecanoic acid (PFDoA)	0.068	J	0.20	0.030	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.34		0.20	0.038	ug/Kg	1	☼	537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample ID: 3ft core (Continued)

Lab Sample ID: 320-107302-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.081	J	0.20	0.029	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.93		0.20	0.043	ug/Kg	1	☼	537 (modified)	Total/NA
NMeFOSAA	0.029	J	0.20	0.023	ug/Kg	1	☼	537 (modified)	Total/NA
NEtFOSAA	0.060	J	0.20	0.048	ug/Kg	1	☼	537 (modified)	Total/NA
6:2 FTS	0.037	J	0.20	0.027	ug/Kg	1	☼	537 (modified)	Total/NA
7:3 FTCA	0.12	J	0.20	0.041	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: 4ft core

Lab Sample ID: 320-107302-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.16	J	0.22	0.051	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	0.51		0.22	0.046	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	0.62	B	0.22	0.034	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.23		0.22	0.042	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	0.36		0.22	0.059	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.037	J	0.22	0.024	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	0.17	J	0.22	0.053	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorododecanoic acid (PFDoA)	0.055	J	0.22	0.033	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.28		0.22	0.042	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.044	J	0.22	0.032	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.65		0.22	0.048	ug/Kg	1	☼	537 (modified)	Total/NA
7:3 FTCA	0.097	J	0.22	0.046	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: 5ft core

Lab Sample ID: 320-107302-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.14	J	0.23	0.053	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	0.42		0.23	0.047	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	0.56	B	0.23	0.035	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.18	J	0.23	0.043	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	0.34		0.23	0.060	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.071	J	0.23	0.025	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	0.29		0.23	0.055	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorododecanoic acid (PFDoA)	0.088	J	0.23	0.034	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.30		0.23	0.043	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.037	J	0.23	0.033	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.1		0.23	0.049	ug/Kg	1	☼	537 (modified)	Total/NA
NMeFOSAA	0.049	J	0.23	0.026	ug/Kg	1	☼	537 (modified)	Total/NA
NEtFOSAA	0.058	J	0.23	0.055	ug/Kg	1	☼	537 (modified)	Total/NA
5:3 FTCA	0.28		0.23	0.043	ug/Kg	1	☼	537 (modified)	Total/NA
7:3 FTCA	0.39		0.23	0.047	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: Composite core

Lab Sample ID: 320-107302-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.42		0.22	0.050	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	0.96		0.22	0.045	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	0.99	B	0.22	0.034	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.69		0.22	0.041	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	3.2		0.22	0.058	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.1		0.22	0.024	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	4.0		0.22	0.052	ug/Kg	1	☼	537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: Composite core (Continued) — Lab Sample ID: 320-107302-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroundecanoic acid (PFUnA)	0.46		0.22	0.046	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorododecanoic acid (PFDoA)	1.2		0.22	0.033	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorotridecanoic acid (PFTrDA)	0.13	J	0.22	0.023	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorotetradecanoic acid (PFTeA)	0.34		0.22	0.040	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoro-n-hexadecanoic acid (PFHxDA)	0.085	J	0.22	0.041	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.34		0.22	0.041	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.15	J	0.22	0.031	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	0.11	J	0.22	0.053	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	19		0.22	0.047	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanesulfonic acid (PFDS)	0.90		0.22	0.056	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.19	J	0.22	0.036	ug/Kg	1	☼	537 (modified)	Total/NA
NMeFOSAA	0.69		0.22	0.025	ug/Kg	1	☼	537 (modified)	Total/NA
NEtFOSAA	0.68		0.22	0.052	ug/Kg	1	☼	537 (modified)	Total/NA
10:2 FTS	0.046	J	0.22	0.041	ug/Kg	1	☼	537 (modified)	Total/NA
NMeFOSE	0.24		0.22	0.051	ug/Kg	1	☼	537 (modified)	Total/NA
NEtFOSE	0.13	J	0.22	0.030	ug/Kg	1	☼	537 (modified)	Total/NA
5:3 FTCA	0.25		0.22	0.041	ug/Kg	1	☼	537 (modified)	Total/NA
7:3 FTCA	0.54		0.22	0.045	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: Aerobic composite — Lab Sample ID: 320-107302-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	14		1.4	0.33	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	6.8		1.4	0.29	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	20		1.4	0.22	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.8		1.4	0.27	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	6.8		1.4	0.38	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.1	J	1.4	0.16	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	6.2		1.4	0.34	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	0.79	J	1.4	0.30	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorododecanoic acid (PFDoA)	1.9		1.4	0.21	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorotridecanoic acid (PFTrDA)	0.28	J	1.4	0.15	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorotetradecanoic acid (PFTeA)	0.48	J	1.4	0.26	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	12		1.4	0.27	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.47	J	1.4	0.24	ug/Kg	1	☼	537 (modified)	Total/NA
NMeFOSAA	9.2		1.4	0.16	ug/Kg	1	☼	537 (modified)	Total/NA
NEtFOSAA	2.3		1.4	0.34	ug/Kg	1	☼	537 (modified)	Total/NA
6:2 FTS	0.42	J	1.4	0.19	ug/Kg	1	☼	537 (modified)	Total/NA
8:2 FTS	0.68	J	1.4	0.25	ug/Kg	1	☼	537 (modified)	Total/NA
10:2 FTS	0.69	J	1.4	0.27	ug/Kg	1	☼	537 (modified)	Total/NA
NEtFOSE	0.44	J	1.4	0.20	ug/Kg	1	☼	537 (modified)	Total/NA
5:3 FTCA	1.5		1.4	0.27	ug/Kg	1	☼	537 (modified)	Total/NA
7:3 FTCA	2.7		1.4	0.29	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RA2	2.2		1.4	0.31	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: Anaerobic compost — Lab Sample ID: 320-107302-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.59	J	2.0	0.47	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	1.6	J	2.0	0.41	ug/Kg	1	☼	537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample ID: Anaerobic compost (Continued) — Lab Sample ID: 320-107302-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	2.9		2.0	0.31	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.1	J	2.0	0.54	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	0.53	J	2.0	0.49	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorododecanoic acid (PFDoA)	0.42	J I	2.0	0.30	ug/Kg	1	☼	537 (modified)	Total/NA
NMeFOSAA	2.5		2.0	0.23	ug/Kg	1	☼	537 (modified)	Total/NA
NEtFOSAA	0.79	J	2.0	0.49	ug/Kg	1	☼	537 (modified)	Total/NA
NMeFOSE	2.9		2.0	0.48	ug/Kg	1	☼	537 (modified)	Total/NA
NEtFOSE	1.1	J	2.0	0.28	ug/Kg	1	☼	537 (modified)	Total/NA
5:3 FTCA	2.0		2.0	0.38	ug/Kg	1	☼	537 (modified)	Total/NA
7:3 FTCA	2.3		2.0	0.41	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RA2	1.6	J I	2.0	0.43	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: Anaerobic land application — Lab Sample ID: 320-107302-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	1.1	J	5.1	1.0	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	2.4	J I	5.1	0.78	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorododecanoic acid (PFDoA)	0.89	J	5.1	0.76	ug/Kg	1	☼	537 (modified)	Total/NA
NMeFOSAA	6.9		5.1	0.58	ug/Kg	1	☼	537 (modified)	Total/NA
NEtFOSAA	1.8	J	5.1	1.2	ug/Kg	1	☼	537 (modified)	Total/NA
10:2 FTS	0.97	J	5.1	0.96	ug/Kg	1	☼	537 (modified)	Total/NA
NMeFOSE	6.5		5.1	1.2	ug/Kg	1	☼	537 (modified)	Total/NA
NEtFOSE	1.5	J	5.1	0.71	ug/Kg	1	☼	537 (modified)	Total/NA
5:3 FTCA	30		5.1	0.96	ug/Kg	1	☼	537 (modified)	Total/NA
7:3 FTCA	8.4		5.1	1.0	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RA2	3.7	J	5.1	1.1	ug/Kg	1	☼	537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Central Davis Sewer District
Project/Site: PFAS, Biosolids

Job ID: 320-107302-1

Client Sample ID: #1ft core
Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-1
Matrix: Solid
Percent Solids: 89.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.47**		0.20	0.047	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluoropentanoic acid (PFPeA)	**1.3**		0.20	0.042	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluorohexanoic acid (PFHxA)	**1.3**	**B**	0.20	0.031	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluoroheptanoic acid (PFHpA)	**0.66**		0.20	0.039	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluorooctanoic acid (PFOA)	**4.7**		0.20	0.054	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluorononanoic acid (PFNA)	**1.1**		0.20	0.022	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluorodecanoic acid (PFDA)	**3.5**		0.20	0.049	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluoroundecanoic acid (PFUnA)	**0.47**		0.20	0.043	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluorododecanoic acid (PFDoA)	**0.99**		0.20	0.030	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluorotridecanoic acid (PFTrDA)	**0.11**	**J**	0.20	0.021	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluorotetradecanoic acid (PFTeA)	**0.29**		0.20	0.038	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	**0.074**	**J**	0.20	0.039	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		0.20	0.067	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluorobutanesulfonic acid (PFBS)	**0.27**		0.20	0.039	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.20	0.038	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluorohexanesulfonic acid (PFHxS)	**0.14**	**J**	0.20	0.029	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluoroheptanesulfonic acid (PFHpS)	**0.12**	**J**	0.20	0.050	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluorooctanesulfonic acid (PFOS)	**16**		0.20	0.044	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluorononanesulfonic acid (PFNS)	ND		0.20	0.029	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluorodecanesulfonic acid (PFDS)	**0.83**		0.20	0.053	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.20	0.048	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
Perfluorooctanesulfonamide (FOSA)	**0.13**	**J**	0.20	0.034	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
NMeFOSAA	**0.31**		0.20	0.023	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
NEtFOSAA	**0.84**		0.20	0.049	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
4:2 FTS	ND		0.20	0.052	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
6:2 FTS	**0.048**	**J**	0.20	0.027	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
8:2 FTS	ND		0.20	0.036	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
10:2 FTS	**0.053**	**J**	0.20	0.039	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
NEtFOSA	ND		0.20	0.048	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
NMeFOSA	ND		0.20	0.050	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
NMeFOSE	**0.19**	**J**	0.20	0.048	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
NEtFOSE	**0.10**	**J**	0.20	0.028	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
F-53B Major	ND		0.20	0.036	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
HFPO-DA (GenX)	ND		0.20	0.042	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
F-53B Minor	ND		0.20	0.031	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.040	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
3:3 FTCA	ND	*-	0.20	0.042	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
5:3 FTCA	**0.097**	**J**	0.20	0.039	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1

Client Sample ID: #1ft core

Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-1

Matrix: Solid
Percent Solids: 89.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
7:3 FTCA	**0.30**		0.20	0.042	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
PFECHS	ND		0.20	0.045	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1
PFPrS	ND		0.20	0.030	ug/Kg	☼	11/29/23 19:01	12/06/23 12:35	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*113*		*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
13C4 PFBA	*156*	*5+	*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
13C5 PFPeA	*139*		*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
13C2 PFHxA	*139*		*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
13C4 PFHpA	*166*	*5+	*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
13C4 PFOA	*158*	*5+	*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
13C5 PFNA	*158*	*5+	*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
13C2 PFDA	*167*	*5+	*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
13C2 PFUnA	*140*		*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
13C2 PFDoA	*156*	*5+	*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
13C2 PFTeDA	*144*		*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
13C2 PFHxDA	*141*		*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
13C3 PFBS	*124*		*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
18O2 PFHxS	*152*	*5+	*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
13C4 PFOS	*138*		*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
d5-NEtFOSAA	*132*		*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
d3-NMeFOSAA	*127*		*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
M2-4:2 FTS	*124*		*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
M2-6:2 FTS	*130*		*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
M2-8:2 FTS	*141*		*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
d-N-MeFOSA-M	*114*		*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
d-N-EtFOSA-M	*122*		*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
d7-N-MeFOSE-M	*128*	*5+	*10 - 120*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
d9-N-EtFOSE-M	*114*		*10 - 120*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
13C3 HFPO-DA	*167*	*5+	*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
13C-6:2 FTCA	*34*		*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
13C-8:2 FTCA	*37*		*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*
13C2 10:2 FTS	*135*		*25 - 150*	*11/29/23 19:01*	*12/06/23 12:35*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	**10.2**	**H**	0.1	0.1	%			11/30/23 15:55	1
Percent Solids (ASTM D 2216)	**89.8**	**H**	0.1	0.1	%			11/30/23 15:55	1

Client Sample ID: 2ft core

Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-2

Matrix: Solid
Percent Solids: 90.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		2.2	0.51	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
Perfluoropentanoic acid (PFPeA)	**1.0**	**J**	2.2	0.45	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
Perfluorohexanoic acid (PFHxA)	**1.8**	**J B**	2.2	0.34	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
Perfluoroheptanoic acid (PFHpA)	**1.2**	**J**	2.2	0.42	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
Perfluorooctanoic acid (PFOA)	**4.1**		2.2	0.58	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
Perfluorononanoic acid (PFNA)	**0.26**	**J**	2.2	0.24	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10

Client Sample ID: 2ft core
Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-2
Matrix: Solid
Percent Solids: 90.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	ND		2.2	0.53	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
Perfluoroundecanoic acid (PFUnA)	ND		2.2	0.46	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
Perfluorododecanoic acid (PFDoA)	ND		2.2	0.33	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
Perfluorotridecanoic acid (PFTrDA)	ND		2.2	0.23	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
Perfluorotetradecanoic acid (PFTeA)	ND		2.2	0.41	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
Perfluoro-n-hexadecanoic acid (PFHxDA)	ND		2.2	0.42	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
Perfluoro-n-octadecanoic acid (PFODA)	ND		2.2	0.73	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
Perfluorobutanesulfonic acid (PFBS)	ND		2.2	0.42	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
Perfluoropentanesulfonic acid (PFPeS)	ND		2.2	0.41	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
Perfluorohexanesulfonic acid (PFHxS)	ND		2.2	0.32	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.2	0.54	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
Perfluorooctanesulfonic acid (PFOS)	**2.8**		2.2	0.47	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
Perfluorononanesulfonic acid (PFNS)	ND		2.2	0.32	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
Perfluorodecanesulfonic acid (PFDS)	ND		2.2	0.57	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
Perfluorododecanesulfonic acid (PFDoS)	ND		2.2	0.52	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
Perfluorooctanesulfonamide (FOSA)	ND		2.2	0.36	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
NMeFOSAA	ND		2.2	0.25	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
NEtFOSAA	ND		2.2	0.53	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
4:2 FTS	ND		2.2	0.56	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
6:2 FTS	ND		2.2	0.30	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
8:2 FTS	ND		2.2	0.39	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
10:2 FTS	ND		2.2	0.42	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
NEtFOSA	ND		2.2	0.52	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
NMeFOSA	ND		2.2	0.54	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
NMeFOSE	ND		2.2	0.52	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
NEtFOSE	ND		2.2	0.31	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
F-53B Major	ND		2.2	0.39	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
HFPO-DA (GenX)	ND		2.2	0.45	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
F-53B Minor	ND		2.2	0.34	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.2	0.43	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
3:3 FTCA	ND	*-	2.2	0.45	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
5:3 FTCA	ND		2.2	0.42	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
7:3 FTCA	ND		2.2	0.45	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
PFECHS	ND		2.2	0.48	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10
PFPrS	ND		2.2	0.33	ug/Kg	☼	11/29/23 19:01	12/14/23 12:59	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*72*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
13C4 PFBA	*61*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
13C5 PFPeA	*56*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
13C2 PFHxA	*72*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
13C4 PFHpA	*78*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
13C4 PFOA	*82*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
13C5 PFNA	*80*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
13C2 PFDA	*81*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*

Client Sample ID: 2ft core

Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-2

Matrix: Solid
Percent Solids: 90.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFUnA	*81*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
13C2 PFDoA	*83*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
13C2 PFTeDA	*82*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
13C2 PFHxDA	*67*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
13C3 PFBS	*51*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
18O2 PFHxS	*74*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
13C4 PFOS	*69*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
d5-NEtFOSAA	*44*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
d3-NMeFOSAA	*44*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
M2-4:2 FTS	*46*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
M2-6:2 FTS	*57*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
M2-8:2 FTS	*52*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
d-N-MeFOSA-M	*66*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
d-N-EtFOSA-M	*65*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
d7-N-MeFOSE-M	*62*		*10 - 120*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
d9-N-EtFOSE-M	*61*		*10 - 120*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
13C3 HFPO-DA	*72*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
13C-6:2 FTCA	*2*	**5-*	*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
13C-8:2 FTCA	*4*	**5-*	*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*
13C2 10:2 FTS	*45*		*25 - 150*	*11/29/23 19:01*	*12/14/23 12:59*	*10*

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3:3 FTCA	ND	H	0.84	0.17	ug/Kg	☼	12/14/23 09:02	12/24/23 09:41	1
5:3 FTCA	ND	H	0.84	0.16	ug/Kg	☼	12/14/23 09:02	12/24/23 09:41	1
7:3 FTCA	**0.83**	**J H B**	0.84	0.17	ug/Kg	☼	12/14/23 09:02	12/24/23 09:41	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 PFBS	*65*		*25 - 150*	*12/14/23 09:02*	*12/24/23 09:41*	*1*
13C-6:2 FTCA	*25*		*25 - 150*	*12/14/23 09:02*	*12/24/23 09:41*	*1*
13C-8:2 FTCA	*27*		*25 - 150*	*12/14/23 09:02*	*12/24/23 09:41*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	**9.2**	**H**	0.1	0.1	%			11/30/23 15:55	1
Percent Solids (ASTM D 2216)	**90.8**	**H**	0.1	0.1	%			11/30/23 15:55	1

Client Sample ID: 3ft core

Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-3

Matrix: Solid
Percent Solids: 91.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.25**		0.20	0.046	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
Perfluoropentanoic acid (PFPeA)	**0.73**		0.20	0.041	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
Perfluorohexanoic acid (PFHxA)	**1.1**	**B**	0.20	0.031	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
Perfluoroheptanoic acid (PFHpA)	**0.49**		0.20	0.038	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
Perfluorooctanoic acid (PFOA)	**0.98**		0.20	0.053	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
Perfluorononanoic acid (PFNA)	**0.064**	**J**	0.20	0.022	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
Perfluorodecanoic acid (PFDA)	**0.20**		0.20	0.048	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.042	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1

Client: Central Davis Sewer District
Project/Site: PFAS, Biosolids

Job ID: 320-107302-1

Client Sample ID: 3ft core
Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-3
Matrix: Solid
Percent Solids: 91.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanoic acid (PFDoA)	**0.068**	**J**	0.20	0.030	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.20	0.021	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20	0.037	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	ND		0.20	0.038	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		0.20	0.067	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
Perfluorobutanesulfonic acid (PFBS)	**0.34**		0.20	0.038	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.20	0.037	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
Perfluorohexanesulfonic acid (PFHxS)	**0.081**	**J**	0.20	0.029	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.20	0.049	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
Perfluorooctanesulfonic acid (PFOS)	**0.93**		0.20	0.043	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
Perfluorononanesulfonic acid (PFNS)	ND		0.20	0.029	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.20	0.052	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.20	0.047	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
Perfluorooctanesulfonamide (FOSA)	ND		0.20	0.033	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
NMeFOSAA	**0.029**	**J**	0.20	0.023	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
NEtFOSAA	**0.060**	**J**	0.20	0.048	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
4:2 FTS	ND		0.20	0.051	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
6:2 FTS	**0.037**	**J**	0.20	0.027	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
8:2 FTS	ND		0.20	0.035	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
10:2 FTS	ND		0.20	0.038	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
NEtFOSA	ND		0.20	0.047	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
NMeFOSA	ND		0.20	0.049	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
NMeFOSE	ND		0.20	0.047	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
NEtFOSE	ND		0.20	0.028	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
F-53B Major	ND		0.20	0.035	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
HFPO-DA (GenX)	ND		0.20	0.041	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
F-53B Minor	ND		0.20	0.031	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.039	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
3:3 FTCA	ND	*-	0.20	0.041	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
5:3 FTCA	ND		0.20	0.038	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
7:3 FTCA	**0.12**	**J**	0.20	0.041	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
PFECHS	ND		0.20	0.044	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1
PFPrS	ND		0.20	0.030	ug/Kg	☼	11/29/23 19:01	12/06/23 13:06	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*79*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
13C4 PFBA	*98*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
13C5 PFPeA	*92*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
13C2 PFHxA	*84*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
13C4 PFHpA	*102*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
13C4 PFOA	*98*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
13C5 PFNA	*89*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
13C2 PFDA	*93*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*

Client Sample ID: 3ft core

Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-3

Matrix: Solid
Percent Solids: 91.8

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFUnA	*94*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
13C2 PFDoA	*89*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
13C2 PFTeDA	*90*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
13C2 PFHxDA	*94*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
13C3 PFBS	*75*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
18O2 PFHxS	*89*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
13C4 PFOS	*81*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
d5-NEtFOSAA	*77*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
d3-NMeFOSAA	*77*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
M2-4:2 FTS	*82*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
M2-6:2 FTS	*74*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
M2-8:2 FTS	*90*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
d-N-MeFOSA-M	*83*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
d-N-EtFOSA-M	*86*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
d7-N-MeFOSE-M	*83*		*10 - 120*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
d9-N-EtFOSE-M	*83*		*10 - 120*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
13C3 HFPO-DA	*105*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
13C-6:2 FTCA	*7*	**5-*	*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
13C-8:2 FTCA	*9*	**5-*	*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*
13C2 10:2 FTS	*65*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:06*	*1*

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3:3 FTCA	ND	H	0.84	0.17	ug/Kg	☼	12/14/23 09:02	12/24/23 09:52	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 PFBS	*75*		*25 - 150*	*12/14/23 09:02*	*12/24/23 09:52*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	**8.2**	**H**	0.1	0.1	%			11/30/23 15:55	1
Percent Solids (ASTM D 2216)	**91.8**	**H**	0.1	0.1	%			11/30/23 15:55	1

Client Sample ID: 4ft core

Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-4

Matrix: Solid
Percent Solids: 89.3

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.16**	**J**	0.22	0.051	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
Perfluoropentanoic acid (PFPeA)	**0.51**		0.22	0.046	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
Perfluorohexanoic acid (PFHxA)	**0.62**	**B**	0.22	0.034	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
Perfluoroheptanoic acid (PFHpA)	**0.23**		0.22	0.042	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
Perfluorooctanoic acid (PFOA)	**0.36**		0.22	0.059	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
Perfluorononanoic acid (PFNA)	**0.037**	**J**	0.22	0.024	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
Perfluorodecanoic acid (PFDA)	**0.17**	**J**	0.22	0.053	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
Perfluoroundecanoic acid (PFUnA)	ND		0.22	0.047	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
Perfluorododecanoic acid (PFDoA)	**0.055**	**J**	0.22	0.033	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.22	0.023	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.22	0.041	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1

Client: Central Davis Sewer District
Project/Site: PFAS, Biosolids

Job ID: 320-107302-1

Client Sample ID: 4ft core
Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-4
Matrix: Solid
Percent Solids: 89.3

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-n-hexadecanoic acid (PFHxDA)	ND		0.22	0.042	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		0.22	0.073	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
Perfluorobutanesulfonic acid (PFBS)	**0.28**		0.22	0.042	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.22	0.041	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
Perfluorohexanesulfonic acid (PFHxS)	**0.044**	**J**	0.22	0.032	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.22	0.054	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
Perfluorooctanesulfonic acid (PFOS)	**0.65**		0.22	0.048	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
Perfluorononanesulfonic acid (PFNS)	ND		0.22	0.032	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.22	0.058	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.22	0.052	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
Perfluorooctanesulfonamide (FOSA)	ND		0.22	0.037	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
NMeFOSAA	ND		0.22	0.026	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
NEtFOSAA	ND		0.22	0.053	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
4:2 FTS	ND		0.22	0.057	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
6:2 FTS	ND		0.22	0.030	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
8:2 FTS	ND		0.22	0.039	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
10:2 FTS	ND		0.22	0.042	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
NEtFOSA	ND		0.22	0.052	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
NMeFOSA	ND		0.22	0.054	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
NMeFOSE	ND		0.22	0.052	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
NEtFOSE	ND		0.22	0.031	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
F-53B Major	ND		0.22	0.039	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
HFPO-DA (GenX)	ND		0.22	0.046	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
F-53B Minor	ND		0.22	0.034	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.22	0.043	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
3:3 FTCA	ND	*-	0.22	0.046	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
5:3 FTCA	ND		0.22	0.042	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
7:3 FTCA	**0.097**	**J**	0.22	0.046	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
PFECHS	ND		0.22	0.049	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1
PFPrS	ND		0.22	0.033	ug/Kg	☼	11/29/23 19:01	12/06/23 13:16	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*84*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
13C4 PFBA	*103*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
13C5 PFPeA	*98*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
13C2 PFHxA	*98*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
13C4 PFHpA	*102*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
13C4 PFOA	*100*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
13C5 PFNA	*103*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
13C2 PFDA	*97*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
13C2 PFUnA	*100*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
13C2 PFDoA	*99*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
13C2 PFTeDA	*101*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*

Client Sample ID: 4ft core

Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-4

Matrix: Solid
Percent Solids: 89.3

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxDA	*101*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
13C3 PFBS	*86*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
18O2 PFHxS	*95*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
13C4 PFOS	*91*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
d5-NEtFOSAA	*95*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
d3-NMeFOSAA	*90*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
M2-4:2 FTS	*84*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
M2-6:2 FTS	*81*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
M2-8:2 FTS	*93*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
d-N-MeFOSA-M	*83*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
d-N-EtFOSA-M	*87*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
d7-N-MeFOSE-M	*86*		*10 - 120*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
d9-N-EtFOSE-M	*86*		*10 - 120*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
13C3 HFPO-DA	*107*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
13C-6:2 FTCA	*8*	**5-*	*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
13C-8:2 FTCA	*10*	**5-*	*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*
13C2 10:2 FTS	*80*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:16*	*1*

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3:3 FTCA	ND	H	0.83	0.17	ug/Kg	☼	12/14/23 09:02	12/24/23 10:04	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 PFBS	*82*		*25 - 150*	*12/14/23 09:02*	*12/24/23 10:04*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	**10.7**	**H**	0.1	0.1	%			11/30/23 15:55	1
Percent Solids (ASTM D 2216)	**89.3**	**H**	0.1	0.1	%			11/30/23 15:55	1

Client Sample ID: 5ft core

Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-5

Matrix: Solid
Percent Solids: 86.4

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.14**	**J**	0.23	0.053	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
Perfluoropentanoic acid (PFPeA)	**0.42**		0.23	0.047	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
Perfluorohexanoic acid (PFHxA)	**0.56**	**B**	0.23	0.035	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
Perfluoroheptanoic acid (PFHpA)	**0.18**	**J**	0.23	0.043	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
Perfluorooctanoic acid (PFOA)	**0.34**		0.23	0.060	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
Perfluorononanoic acid (PFNA)	**0.071**	**J**	0.23	0.025	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
Perfluorodecanoic acid (PFDA)	**0.29**		0.23	0.055	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
Perfluoroundecanoic acid (PFUnA)	ND		0.23	0.048	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
Perfluorododecanoic acid (PFDoA)	**0.088**	**J**	0.23	0.034	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.23	0.024	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.23	0.042	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	ND		0.23	0.043	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		0.23	0.075	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1

Client: Central Davis Sewer District
Project/Site: PFAS, Biosolids

Job ID: 320-107302-1

Client Sample ID: 5ft core
Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-5
Matrix: Solid
Percent Solids: 86.4

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	**0.30**		0.23	0.043	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.23	0.042	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
Perfluorohexanesulfonic acid (PFHxS)	**0.037**	**J**	0.23	0.033	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.23	0.056	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
Perfluorooctanesulfonic acid (PFOS)	**1.1**		0.23	0.049	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
Perfluorononanesulfonic acid (PFNS)	ND		0.23	0.033	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.23	0.059	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.23	0.054	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
Perfluorooctanesulfonamide (FOSA)	ND		0.23	0.038	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
NMeFOSAA	**0.049**	**J**	0.23	0.026	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
NEtFOSAA	**0.058**	**J**	0.23	0.055	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
4:2 FTS	ND		0.23	0.058	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
6:2 FTS	ND		0.23	0.031	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
8:2 FTS	ND		0.23	0.040	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
10:2 FTS	ND		0.23	0.043	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
NEtFOSA	ND		0.23	0.054	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
NMeFOSA	ND		0.23	0.056	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
NMeFOSE	ND		0.23	0.054	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
NEtFOSE	ND		0.23	0.032	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
F-53B Major	ND		0.23	0.040	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
HFPO-DA (GenX)	ND		0.23	0.047	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
F-53B Minor	ND		0.23	0.035	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.23	0.045	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
3:3 FTCA	ND	*-	0.23	0.047	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
5:3 FTCA	**0.28**		0.23	0.043	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
7:3 FTCA	**0.39**		0.23	0.047	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
PFECHS	ND		0.23	0.050	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1
PFPrS	ND		0.23	0.034	ug/Kg	☼	11/29/23 19:01	12/06/23 13:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*70*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
13C4 PFBA	*78*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
13C5 PFPeA	*72*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
13C2 PFHxA	*72*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
13C4 PFHpA	*83*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
13C4 PFOA	*84*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
13C5 PFNA	*87*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
13C2 PFDA	*82*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
13C2 PFUnA	*72*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
13C2 PFDoA	*83*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
13C2 PFTeDA	*77*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
13C2 PFHxDA	*64*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
13C3 PFBS	*58*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
18O2 PFHxS	*73*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
13C4 PFOS	*68*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*

Client Sample ID: 5ft core

Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-5

Matrix: Solid
Percent Solids: 86.4

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*73*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
d3-NMeFOSAA	*80*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
M2-4:2 FTS	*72*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
M2-6:2 FTS	*71*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
M2-8:2 FTS	*97*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
d-N-MeFOSA-M	*69*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
d-N-EtFOSA-M	*74*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
d7-N-MeFOSE-M	*70*		*10 - 120*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
d9-N-EtFOSE-M	*70*		*10 - 120*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
13C3 HFPO-DA	*84*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
13C-6:2 FTCA	*6*	**5-*	*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
13C-8:2 FTCA	*7*	**5-*	*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*
13C2 10:2 FTS	*63*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:27*	*1*

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3:3 FTCA	ND	H	0.78	0.16	ug/Kg	☼	12/14/23 09:02	12/24/23 10:15	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 PFBS	*77*		*25 - 150*	*12/14/23 09:02*	*12/24/23 10:15*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	**13.6**	**H**	0.1	0.1	%			11/30/23 15:55	1
Percent Solids (ASTM D 2216)	**86.4**	**H**	0.1	0.1	%			11/30/23 15:55	1

Client Sample ID: Composite core

Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-6

Matrix: Solid
Percent Solids: 90.3

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.42**		0.22	0.050	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
Perfluoropentanoic acid (PFPeA)	**0.96**		0.22	0.045	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
Perfluorohexanoic acid (PFHxA)	**0.99**	**B**	0.22	0.034	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
Perfluoroheptanoic acid (PFHpA)	**0.69**		0.22	0.041	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
Perfluorooctanoic acid (PFOA)	**3.2**		0.22	0.058	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
Perfluorononanoic acid (PFNA)	**1.1**		0.22	0.024	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
Perfluorodecanoic acid (PFDA)	**4.0**		0.22	0.052	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
Perfluoroundecanoic acid (PFUnA)	**0.46**		0.22	0.046	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
Perfluorododecanoic acid (PFDoA)	**1.2**		0.22	0.033	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
Perfluorotridecanoic acid (PFTrDA)	**0.13**	**J**	0.22	0.023	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
Perfluorotetradecanoic acid (PFTeA)	**0.34**		0.22	0.040	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	**0.085**	**J**	0.22	0.041	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		0.22	0.072	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
Perfluorobutanesulfonic acid (PFBS)	**0.34**		0.22	0.041	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1

Client Sample ID: Composite core
Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-6
Matrix: Solid
Percent Solids: 90.3

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	ND		0.22	0.040	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
Perfluorohexanesulfonic acid (PFHxS)	**0.15**	**J**	0.22	0.031	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
Perfluoroheptanesulfonic acid (PFHpS)	**0.11**	**J**	0.22	0.053	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
Perfluorooctanesulfonic acid (PFOS)	**19**		0.22	0.047	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
Perfluorononanesulfonic acid (PFNS)	ND		0.22	0.031	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
Perfluorodecanesulfonic acid (PFDS)	**0.90**		0.22	0.056	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.22	0.051	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
Perfluorooctanesulfonamide (FOSA)	**0.19**	**J**	0.22	0.036	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
NMeFOSAA	**0.69**		0.22	0.025	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
NEtFOSAA	**0.68**		0.22	0.052	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
4:2 FTS	ND		0.22	0.055	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
6:2 FTS	ND		0.22	0.029	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
8:2 FTS	ND		0.22	0.038	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
10:2 FTS	**0.046**	**J**	0.22	0.041	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
NEtFOSA	ND		0.22	0.051	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
NMeFOSA	ND		0.22	0.053	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
NMeFOSE	**0.24**		0.22	0.051	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
NEtFOSE	**0.13**	**J**	0.22	0.030	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
F-53B Major	ND		0.22	0.038	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
HFPO-DA (GenX)	ND		0.22	0.045	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
F-53B Minor	ND		0.22	0.034	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.22	0.042	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
3:3 FTCA	ND	*-	0.22	0.045	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
5:3 FTCA	**0.25**		0.22	0.041	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
7:3 FTCA	**0.54**		0.22	0.045	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
PFECHS	ND		0.22	0.048	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1
PFPrS	ND		0.22	0.033	ug/Kg	☼	11/29/23 19:01	12/06/23 13:37	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*72*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:37*	*1*
13C4 PFBA	*77*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:37*	*1*
13C5 PFPeA	*74*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:37*	*1*
13C2 PFHxA	*76*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:37*	*1*
13C4 PFHpA	*89*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:37*	*1*
13C4 PFOA	*88*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:37*	*1*
13C5 PFNA	*81*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:37*	*1*
13C2 PFDA	*79*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:37*	*1*
13C2 PFUnA	*79*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:37*	*1*
13C2 PFDoA	*87*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:37*	*1*
13C2 PFTeDA	*83*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:37*	*1*
13C2 PFHxDA	*74*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:37*	*1*
13C3 PFBS	*68*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:37*	*1*
18O2 PFHxS	*76*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:37*	*1*
13C4 PFOS	*73*		*25 - 150*	*11/29/23 19:01*	*12/06/23 13:37*	*1*

Client Sample ID: Composite core

Lab Sample ID: 320-107302-6
Date Collected: 11/15/23 15:45
Matrix: Solid
Date Received: 11/20/23 09:00
Percent Solids: 90.3

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	81		25 - 150	11/29/23 19:01	12/06/23 13:37	1
d3-NMeFOSAA	69		25 - 150	11/29/23 19:01	12/06/23 13:37	1
M2-4:2 FTS	78		25 - 150	11/29/23 19:01	12/06/23 13:37	1
M2-6:2 FTS	79		25 - 150	11/29/23 19:01	12/06/23 13:37	1
M2-8:2 FTS	78		25 - 150	11/29/23 19:01	12/06/23 13:37	1
d-N-MeFOSA-M	71		25 - 150	11/29/23 19:01	12/06/23 13:37	1
d-N-EtFOSA-M	77		25 - 150	11/29/23 19:01	12/06/23 13:37	1
d7-N-MeFOSE-M	76		10 - 120	11/29/23 19:01	12/06/23 13:37	1
d9-N-EtFOSE-M	77		10 - 120	11/29/23 19:01	12/06/23 13:37	1
13C3 HFPO-DA	89		25 - 150	11/29/23 19:01	12/06/23 13:37	1
13C-6:2 FTCA	20	*5-	25 - 150	11/29/23 19:01	12/06/23 13:37	1
13C-8:2 FTCA	25		25 - 150	11/29/23 19:01	12/06/23 13:37	1
13C2 10:2 FTS	75		25 - 150	11/29/23 19:01	12/06/23 13:37	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	9.7	H	0.1	0.1	%			12/04/23 14:37	1
Percent Solids (ASTM D 2216)	90.3	H	0.1	0.1	%			12/04/23 14:37	1

Client Sample ID: Aerobic composite

Lab Sample ID: 320-107302-7
Date Collected: 11/13/23 08:58
Matrix: Solid
Date Received: 11/20/23 09:00
Percent Solids: 70.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	14		1.4	0.33	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
Perfluoropentanoic acid (PFPeA)	6.8		1.4	0.29	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
Perfluorohexanoic acid (PFHxA)	20		1.4	0.22	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
Perfluoroheptanoic acid (PFHpA)	1.8		1.4	0.27	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
Perfluorooctanoic acid (PFOA)	6.8		1.4	0.38	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
Perfluorononanoic acid (PFNA)	1.1	J	1.4	0.16	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
Perfluorodecanoic acid (PFDA)	6.2		1.4	0.34	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
Perfluoroundecanoic acid (PFUnA)	0.79	J	1.4	0.30	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
Perfluorododecanoic acid (PFDoA)	1.9		1.4	0.21	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
Perfluorotridecanoic acid (PFTrDA)	0.28	J	1.4	0.15	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
Perfluorotetradecanoic acid (PFTeA)	0.48	J	1.4	0.26	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	ND		1.4	0.27	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		1.4	0.47	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
Perfluorobutanesulfonic acid (PFBS)	12		1.4	0.27	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.4	0.26	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.4	0.21	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.4	0.35	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
Perfluorononanesulfonic acid (PFNS)	ND		1.4	0.21	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1

Client Sample ID: Aerobic composite

Date Collected: 11/13/23 08:58
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-7

Matrix: Solid
Percent Solids: 70.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanesulfonic acid (PFDS)	ND		1.4	0.37	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.4	0.34	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
Perfluorooctanesulfonamide (FOSA)	**0.47**	**J**	1.4	0.24	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
NMeFOSAA	**9.2**		1.4	0.16	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
NEtFOSAA	**2.3**		1.4	0.34	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
4:2 FTS	ND		1.4	0.36	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
6:2 FTS	**0.42**	**J**	1.4	0.19	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
8:2 FTS	**0.68**	**J**	1.4	0.25	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
10:2 FTS	**0.69**	**J**	1.4	0.27	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
NEtFOSA	ND		1.4	0.34	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
NMeFOSA	ND		1.4	0.35	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
NMeFOSE	ND		1.4	0.34	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
NEtFOSE	**0.44**	**J**	1.4	0.20	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
F-53B Major	ND		1.4	0.25	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
HFPO-DA (GenX)	ND		1.4	0.29	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
F-53B Minor	ND		1.4	0.22	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.4	0.28	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
5:3 FTCA	**1.5**		1.4	0.27	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
7:3 FTCA	**2.7**		1.4	0.29	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
PFECHS	ND		1.4	0.31	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1
PFPrS	ND		1.4	0.21	ug/Kg	☼	11/27/23 19:00	11/29/23 21:18	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*67*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
13C4 PFBA	*65*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
13C5 PFPeA	*63*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
13C2 PFHxA	*77*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
13C4 PFHpA	*66*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
13C4 PFOA	*77*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
13C5 PFNA	*76*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
13C2 PFDA	*76*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
13C2 PFUnA	*72*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
13C2 PFDoA	*67*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
13C2 PFTeDA	*67*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
13C2 PFHxDA	*73*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
13C3 PFBS	*66*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
18O2 PFHxS	*55*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
13C4 PFOS	*62*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
d5-NEtFOSAA	*71*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
d3-NMeFOSAA	*63*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
M2-4:2 FTS	*83*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
M2-6:2 FTS	*90*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
M2-8:2 FTS	*95*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
d-N-MeFOSA-M	*56*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
d-N-EtFOSA-M	*56*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
d7-N-MeFOSE-M	*66*		*10 - 120*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
d9-N-EtFOSE-M	*63*		*10 - 120*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
13C3 HFPO-DA	*59*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*

Client Sample ID: Aerobic composite

Lab Sample ID: 320-107302-7
Date Collected: 11/13/23 08:58
Matrix: Solid
Date Received: 11/20/23 09:00
Percent Solids: 70.1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-6:2 FTCA	*59*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
13C-8:2 FTCA	*73*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*
13C2 10:2 FTS	*70*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:18*	*1*

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3:3 FTCA	ND		1.4	0.29	ug/Kg	☼	11/27/23 19:00	12/01/23 08:14	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 PFBS	*61*		*25 - 150*	*11/27/23 19:00*	*12/01/23 08:14*	*1*

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - RA2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	**2.2**		1.4	0.31	ug/Kg	☼	11/27/23 19:00	12/31/23 09:38	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOS	*79*		*25 - 150*	*11/27/23 19:00*	*12/31/23 09:38*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	**29.9**	**H**	0.1	0.1	%			12/04/23 14:37	1
Percent Solids (ASTM D 2216)	**70.1**	**H**	0.1	0.1	%			12/04/23 14:37	1

Client Sample ID: Anaerobic compost

Lab Sample ID: 320-107302-8
Date Collected: 11/13/23 08:56
Matrix: Solid
Date Received: 11/20/23 09:00
Percent Solids: 35.3

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.59**	**J**	2.0	0.47	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
Perfluoropentanoic acid (PFPeA)	**1.6**	**J**	2.0	0.41	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
Perfluorohexanoic acid (PFHxA)	**2.9**		2.0	0.31	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.38	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
Perfluorooctanoic acid (PFOA)	**1.1**	**J**	2.0	0.54	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.22	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
Perfluorodecanoic acid (PFDA)	**0.53**	**J**	2.0	0.49	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.42	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
Perfluorododecanoic acid (PFDoA)	**0.42**	**J I**	2.0	0.30	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.0	0.21	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.37	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	ND		2.0	0.38	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		2.0	0.67	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.38	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.37	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.29	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.50	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
Perfluorononanesulfonic acid (PFNS)	ND		2.0	0.29	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.53	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1

Client Sample ID: Anaerobic compost

Date Collected: 11/13/23 08:56
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-8

Matrix: Solid
Percent Solids: 35.3

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanesulfonic acid (PFDoS)	ND		2.0	0.48	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
Perfluorooctanesulfonamide (FOSA)	ND		2.0	0.33	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
NMeFOSAA	**2.5**		2.0	0.23	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
NEtFOSAA	**0.79**	**J**	2.0	0.49	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
4:2 FTS	ND		2.0	0.52	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
6:2 FTS	ND		2.0	0.27	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
8:2 FTS	ND		2.0	0.35	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
10:2 FTS	ND		2.0	0.38	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
NEtFOSA	ND		2.0	0.48	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
NMeFOSA	ND		2.0	0.50	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
NMeFOSE	**2.9**		2.0	0.48	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
NEtFOSE	**1.1**	**J**	2.0	0.28	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
F-53B Major	ND		2.0	0.35	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
HFPO-DA (GenX)	ND		2.0	0.41	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
F-53B Minor	ND		2.0	0.31	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.39	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
5:3 FTCA	**2.0**		2.0	0.38	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
7:3 FTCA	**2.3**		2.0	0.41	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
PFECHS	ND		2.0	0.44	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1
PFPrS	ND		2.0	0.30	ug/Kg	☼	11/27/23 19:00	11/29/23 21:29	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*88*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
13C4 PFBA	*82*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
13C5 PFPeA	*81*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
13C2 PFHxA	*80*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
13C4 PFHpA	*80*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
13C4 PFOA	*86*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
13C5 PFNA	*87*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
13C2 PFDA	*88*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
13C2 PFUnA	*98*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
13C2 PFDoA	*87*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
13C2 PFTeDA	*62*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
13C2 PFHxDA	*90*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
13C3 PFBS	*76*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
18O2 PFHxS	*73*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
13C4 PFOS	*77*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
d5-NEtFOSAA	*84*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
d3-NMeFOSAA	*91*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
M2-4:2 FTS	*87*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
M2-6:2 FTS	*78*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
M2-8:2 FTS	*74*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
d-N-MeFOSA-M	*68*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
d-N-EtFOSA-M	*72*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
d7-N-MeFOSE-M	*72*		*10 - 120*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
d9-N-EtFOSE-M	*81*		*10 - 120*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
13C3 HFPO-DA	*72*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
13C-6:2 FTCA	*76*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*
13C-8:2 FTCA	*72*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:29*	*1*

Client Sample ID: Anaerobic compost

Lab Sample ID: 320-107302-8
Date Collected: 11/13/23 08:56
Matrix: Solid
Date Received: 11/20/23 09:00
Percent Solids: 35.3

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 10:2 FTS	107		25 - 150	11/27/23 19:00	11/29/23 21:29	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3:3 FTCA	ND		2.0	0.41	ug/Kg	☼	11/27/23 19:00	12/01/23 08:24	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	71		25 - 150	11/27/23 19:00	12/01/23 08:24	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - RA2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	1.6	J I	2.0	0.43	ug/Kg	☼	11/27/23 19:00	12/31/23 09:55	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	100		25 - 150	11/27/23 19:00	12/31/23 09:55	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	64.7	H	0.1	0.1	%			12/04/23 14:37	1
Percent Solids (ASTM D 2216)	35.3	H	0.1	0.1	%			12/04/23 14:37	1

Client Sample ID: Anaerobic land application

Lab Sample ID: 320-107302-9
Date Collected: 11/13/23 08:55
Matrix: Solid
Date Received: 11/20/23 09:00
Percent Solids: 17.4

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		5.1	1.2	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
Perfluoropentanoic acid (PFPeA)	1.1	J	5.1	1.0	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
Perfluorohexanoic acid (PFHxA)	2.4	J I	5.1	0.78	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
Perfluoroheptanoic acid (PFHpA)	ND		5.1	0.96	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
Perfluorooctanoic acid (PFOA)	ND		5.1	1.3	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
Perfluorononanoic acid (PFNA)	ND		5.1	0.56	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
Perfluorodecanoic acid (PFDA)	ND		5.1	1.2	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
Perfluoroundecanoic acid (PFUnA)	ND		5.1	1.1	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
Perfluorododecanoic acid (PFDoA)	0.89	J	5.1	0.76	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
Perfluorotridecanoic acid (PFTrDA)	ND		5.1	0.53	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
Perfluorotetradecanoic acid (PFTeA)	ND		5.1	0.94	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	ND		5.1	0.96	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		5.1	1.7	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
Perfluorobutanesulfonic acid (PFBS)	ND		5.1	0.96	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
Perfluoropentanesulfonic acid (PFPeS)	ND		5.1	0.94	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
Perfluorohexanesulfonic acid (PFHxS)	ND		5.1	0.73	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		5.1	1.2	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
Perfluorononanesulfonic acid (PFNS)	ND		5.1	0.73	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
Perfluorodecanesulfonic acid (PFDS)	ND		5.1	1.3	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
Perfluorododecanesulfonic acid (PFDoS)	ND		5.1	1.2	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1

Client Sample ID: Anaerobic land application

Date Collected: 11/13/23 08:55
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-9

Matrix: Solid
Percent Solids: 17.4

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonamide (FOSA)	ND		5.1	0.83	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
NMeFOSAA	**6.9**		5.1	0.58	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
NEtFOSAA	**1.8**	**J**	5.1	1.2	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
4:2 FTS	ND		5.1	1.3	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
6:2 FTS	ND		5.1	0.68	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
8:2 FTS	ND		5.1	0.88	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
10:2 FTS	**0.97**	**J**	5.1	0.96	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
NEtFOSA	ND		5.1	1.2	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
NMeFOSA	ND		5.1	1.2	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
NMeFOSE	**6.5**		5.1	1.2	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
NEtFOSE	**1.5**	**J**	5.1	0.71	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
F-53B Major	ND		5.1	0.88	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
HFPO-DA (GenX)	ND		5.1	1.0	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
F-53B Minor	ND		5.1	0.78	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		5.1	0.99	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
5:3 FTCA	**30**		5.1	0.96	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
7:3 FTCA	**8.4**		5.1	1.0	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
PFECHS	ND		5.1	1.1	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1
PFPrS	ND		5.1	0.76	ug/Kg	☼	11/27/23 19:00	11/29/23 21:39	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*66*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
13C4 PFBA	*56*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
13C5 PFPeA	*82*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
13C2 PFHxA	*85*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
13C4 PFHpA	*83*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
13C4 PFOA	*88*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
13C5 PFNA	*84*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
13C2 PFDA	*58*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
13C2 PFUnA	*97*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
13C2 PFDoA	*76*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
13C2 PFTeDA	*43*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
13C2 PFHxDA	*29*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
13C3 PFBS	*78*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
18O2 PFHxS	*73*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
13C4 PFOS	*72*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
d5-NEtFOSAA	*88*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
d3-NMeFOSAA	*72*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
M2-4:2 FTS	*96*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
M2-6:2 FTS	*94*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
M2-8:2 FTS	*44*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
d-N-MeFOSA-M	*39*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
d-N-EtFOSA-M	*25*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
d7-N-MeFOSE-M	*40*		*10 - 120*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
d9-N-EtFOSE-M	*46*		*10 - 120*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
13C3 HFPO-DA	*73*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
13C-6:2 FTCA	*76*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
13C-8:2 FTCA	*74*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*
13C2 10:2 FTS	*96*		*25 - 150*	*11/27/23 19:00*	*11/29/23 21:39*	*1*

Client Sample Results

Client: Central Davis Sewer District
Project/Site: PFAS, Biosolids

Job ID: 320-107302-1

Client Sample ID: Anaerobic land application

Lab Sample ID: 320-107302-9

Date Collected: 11/13/23 08:55
Matrix: Solid
Date Received: 11/20/23 09:00
Percent Solids: 17.4

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3:3 FTCA	ND		5.1	1.0	ug/Kg	☼	11/27/23 19:00	12/01/23 08:34	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 PFBS	*75*		*25 - 150*	*11/27/23 19:00*	*12/01/23 08:34*	*1*

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - RA2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	3.7	J	5.1	1.1	ug/Kg	☼	11/27/23 19:00	01/03/24 03:13	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOS	*85*		*25 - 150*	*11/27/23 19:00*	*01/03/24 03:13*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	82.6	H	0.1	0.1	%			12/04/23 14:37	1
Percent Solids (ASTM D 2216)	17.4	H	0.1	0.1	%			12/04/23 14:37	1

Isotope Dilution Summary

Client: Central Davis Sewer District
Project/Site: PFAS, Biosolids

Job ID: 320-107302-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)
320-107302-1	#1ft core	113	156 *5+	139	139	166 *5+	158 *5+	158 *5+	167 *5+
320-107302-2	2ft core	72	61	56	72	78	82	80	81
320-107302-2 - RE	2ft core								
320-107302-3	3ft core	79	98	92	84	102	98	89	93
320-107302-3 - RE	3ft core								
320-107302-4	4ft core	84	103	98	98	102	100	103	97
320-107302-4 - RE	4ft core								
320-107302-5	5ft core	70	78	72	72	83	84	87	82
320-107302-5 - RE	5ft core								
320-107302-6	Composite core	72	77	74	76	89	88	81	79
320-107302-7	Aerobic composite	67	65	63	77	66	77	76	76
320-107302-7 - RA	Aerobic composite								
320-107302-7 - RA2	Aerobic composite								
320-107302-8	Anaerobic compost	88	82	81	80	80	86	87	88
320-107302-8 - RA	Anaerobic compost								
320-107302-8 - RA2	Anaerobic compost								
320-107302-9	Anaerobic land application	66	56	82	85	83	88	84	58
320-107302-9 - RA	Anaerobic land application								
320-107302-9 - RA2	Anaerobic land application								
LCS 320-723168/2-A	Lab Control Sample	75	52	78	77	83	83	81	86
LCS 320-723168/2-A - RA	Lab Control Sample								
LCS 320-723710/2-A	Lab Control Sample	90	45	81	87	102	94	92	101
LCS 320-727594/2-A	Lab Control Sample								
MB 320-723168/1-A	Method Blank	85	46	78	80	81	87	84	92
MB 320-723168/1-A - RA	Method Blank								
MB 320-723710/1-A	Method Blank	75	54	84	87	100	99	93	82
MB 320-727594/1-A	Method Blank								

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDoA (25-150)	PFTDA (25-150)	PFHxDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	d5NEFOS (25-150)
320-107302-1	#1ft core	140	156 *5+	144	141	124	152 *5+	138	132
320-107302-2	2ft core	81	83	82	67	51	74	69	44
320-107302-2 - RE	2ft core					65			
320-107302-3	3ft core	94	89	90	94	75	89	81	77
320-107302-3 - RE	3ft core					75			
320-107302-4	4ft core	100	99	101	101	86	95	91	95
320-107302-4 - RE	4ft core					82			
320-107302-5	5ft core	72	83	77	64	58	73	68	73
320-107302-5 - RE	5ft core					77			
320-107302-6	Composite core	79	87	83	74	68	76	73	81
320-107302-7	Aerobic composite	72	67	67	73	66	55	62	71
320-107302-7 - RA	Aerobic composite					61			
320-107302-7 - RA2	Aerobic composite							79	
320-107302-8	Anaerobic compost	98	87	62	90	76	73	77	84
320-107302-8 - RA	Anaerobic compost					71			
320-107302-8 - RA2	Anaerobic compost							100	
320-107302-9	Anaerobic land application	97	76	43	29	78	73	72	88
320-107302-9 - RA	Anaerobic land application					75			
320-107302-9 - RA2	Anaerobic land application							85	

Isotope Dilution Summary

Client: Central Davis Sewer District
Job ID: 320-107302-1
Project/Site: PFAS, Biosolids

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Matrix: Solid
Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDoA (25-150)	PFTDA (25-150)	PFHxDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	d5NEFOS (25-150)
LCS 320-723168/2-A	Lab Control Sample	82	97	92	85	72	69	68	78
LCS 320-723168/2-A - RA	Lab Control Sample					66			
LCS 320-723710/2-A	Lab Control Sample	90	95	97	95	83	100	101	103
LCS 320-727594/2-A	Lab Control Sample					89			
MB 320-723168/1-A	Method Blank	94	91	93	90	73	71	74	87
MB 320-723168/1-A - RA	Method Blank					72			
MB 320-723710/1-A	Method Blank	87	91	80	81	80	88	89	94
MB 320-727594/1-A	Method Blank					85			

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	d3NMFOS (25-150)	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (10-120)	NEFM (10-120)
320-107302-1	#1ft core	127	124	130	141	114	122	128 *5+	114
320-107302-2	2ft core	44	46	57	52	66	65	62	61
320-107302-2 - RE	2ft core								
320-107302-3	3ft core	77	82	74	90	83	86	83	83
320-107302-3 - RE	3ft core								
320-107302-4	4ft core	90	84	81	93	83	87	86	86
320-107302-4 - RE	4ft core								
320-107302-5	5ft core	80	72	71	97	69	74	70	70
320-107302-5 - RE	5ft core								
320-107302-6	Composite core	69	78	79	78	71	77	76	77
320-107302-7	Aerobic composite	63	83	90	95	56	56	66	63
320-107302-7 - RA	Aerobic composite								
320-107302-7 - RA2	Aerobic composite								
320-107302-8	Anaerobic compost	91	87	78	74	68	72	72	81
320-107302-8 - RA	Anaerobic compost								
320-107302-8 - RA2	Anaerobic compost								
320-107302-9	Anaerobic land application	72	96	94	44	39	25	40	46
320-107302-9 - RA	Anaerobic land application								
320-107302-9 - RA2	Anaerobic land application								
LCS 320-723168/2-A	Lab Control Sample	76	56	55	76	70	75	77	82
LCS 320-723168/2-A - RA	Lab Control Sample								
LCS 320-723710/2-A	Lab Control Sample	110	87	81	99	92	93	101	98
LCS 320-727594/2-A	Lab Control Sample								
MB 320-723168/1-A	Method Blank	87	61	59	97	78	83	85	94
MB 320-723168/1-A - RA	Method Blank								
MB 320-723710/1-A	Method Blank	104	83	77	97	80	89	82	75
MB 320-727594/1-A	Method Blank								

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (25-150)	MFHEA (25-150)	MFOEA (25-150)	M102FTS (25-150)				
320-107302-1	#1ft core	167 *5+	34	37	135				
320-107302-2	2ft core	72	2 *5-	4 *5-	45				
320-107302-2 - RE	2ft core		25	27					
320-107302-3	3ft core	105	7 *5-	9 *5-	65				
320-107302-3 - RE	3ft core								
320-107302-4	4ft core	107	8 *5-	10 *5-	80				
320-107302-4 - RE	4ft core								
320-107302-5	5ft core	84	6 *5-	7 *5-	63				

Isotope Dilution Summary

Client: Central Davis Sewer District
Job ID: 320-107302-1
Project/Site: PFAS, Biosolids

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Matrix: Solid
Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (25-150)	MFHEA (25-150)	MFOEA (25-150)	M102FTS (25-150)				
320-107302-5 - RE	5ft core								
320-107302-6	Composite core	89	20 *5-	25	75				
320-107302-7	Aerobic composite	59	59	73	70				
320-107302-7 - RA	Aerobic composite								
320-107302-7 - RA2	Aerobic composite								
320-107302-8	Anaerobic compost	72	76	72	107				
320-107302-8 - RA	Anaerobic compost								
320-107302-8 - RA2	Anaerobic compost								
320-107302-9	Anaerobic land application	73	76	74	96				
320-107302-9 - RA	Anaerobic land application								
320-107302-9 - RA2	Anaerobic land application								
LCS 320-723168/2-A	Lab Control Sample	69	60	60	81				
LCS 320-723168/2-A - RA	Lab Control Sample								
LCS 320-723710/2-A	Lab Control Sample	96	105	85	83				
LCS 320-727594/2-A	Lab Control Sample		75	90					
MB 320-723168/1-A	Method Blank	73	64	60	87				
MB 320-723168/1-A - RA	Method Blank								
MB 320-723710/1-A	Method Blank	93	92	85	69				
MB 320-727594/1-A	Method Blank		69	85					

Surrogate Legend

PFOSA = 13C8 FOSA
PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
PFHxDA = 13C2 PFHxDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
d5NEFOS = d5-NEtFOSAA
d3NMFOS = d3-NMeFOSAA
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
HFPODA = 13C3 HFPO-DA
MFHEA = 13C-6:2 FTCA
MFOEA = 13C-8:2 FTCA
M102FTS = 13C2 10:2 FTS

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-723168/1-A
Matrix: Solid
Analysis Batch: 723666

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 723168

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.20	0.046	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluoropentanoic acid (PFPeA)	ND		0.20	0.041	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.031	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.038	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluorooctanoic acid (PFOA)	ND		0.20	0.053	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.022	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.048	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.042	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.030	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.20	0.021	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20	0.037	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	ND		0.20	0.038	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		0.20	0.066	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.038	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.20	0.037	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.029	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.20	0.049	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.20	0.043	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluorononanesulfonic acid (PFNS)	ND		0.20	0.029	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.20	0.052	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.20	0.047	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
Perfluorooctanesulfonamide (FOSA)	ND		0.20	0.033	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
NMeFOSAA	ND		0.20	0.023	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
NEtFOSAA	ND		0.20	0.048	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
4:2 FTS	ND		0.20	0.051	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
6:2 FTS	ND		0.20	0.027	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
8:2 FTS	ND		0.20	0.035	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
10:2 FTS	ND		0.20	0.038	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
NEtFOSA	ND		0.20	0.047	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
NMeFOSA	ND		0.20	0.049	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
NMeFOSE	ND		0.20	0.047	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
NEtFOSE	ND		0.20	0.028	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
F-53B Major	ND		0.20	0.035	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
HFPO-DA (GenX)	ND		0.20	0.041	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
F-53B Minor	ND		0.20	0.031	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.039	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
5:3 FTCA	ND		0.20	0.038	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
7:3 FTCA	ND		0.20	0.041	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
PFECHS	ND		0.20	0.044	ug/Kg		11/27/23 19:00	11/29/23 20:58	1
PFPrS	ND		0.20	0.030	ug/Kg		11/27/23 19:00	11/29/23 20:58	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*85*		*25 - 150*	*11/27/23 19:00*	*11/29/23 20:58*	*1*
13C4 PFBA	*46*		*25 - 150*	*11/27/23 19:00*	*11/29/23 20:58*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-723168/1-A
Matrix: Solid
Analysis Batch: 723666

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 723168

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	78		25 - 150	11/27/23 19:00	11/29/23 20:58	1
13C2 PFHxA	80		25 - 150	11/27/23 19:00	11/29/23 20:58	1
13C4 PFHpA	81		25 - 150	11/27/23 19:00	11/29/23 20:58	1
13C4 PFOA	87		25 - 150	11/27/23 19:00	11/29/23 20:58	1
13C5 PFNA	84		25 - 150	11/27/23 19:00	11/29/23 20:58	1
13C2 PFDA	92		25 - 150	11/27/23 19:00	11/29/23 20:58	1
13C2 PFUnA	94		25 - 150	11/27/23 19:00	11/29/23 20:58	1
13C2 PFDoA	91		25 - 150	11/27/23 19:00	11/29/23 20:58	1
13C2 PFTeDA	93		25 - 150	11/27/23 19:00	11/29/23 20:58	1
13C2 PFHxDA	90		25 - 150	11/27/23 19:00	11/29/23 20:58	1
13C3 PFBS	73		25 - 150	11/27/23 19:00	11/29/23 20:58	1
18O2 PFHxS	71		25 - 150	11/27/23 19:00	11/29/23 20:58	1
13C4 PFOS	74		25 - 150	11/27/23 19:00	11/29/23 20:58	1
d5-NEtFOSAA	87		25 - 150	11/27/23 19:00	11/29/23 20:58	1
d3-NMeFOSAA	87		25 - 150	11/27/23 19:00	11/29/23 20:58	1
M2-4:2 FTS	61		25 - 150	11/27/23 19:00	11/29/23 20:58	1
M2-6:2 FTS	59		25 - 150	11/27/23 19:00	11/29/23 20:58	1
M2-8:2 FTS	97		25 - 150	11/27/23 19:00	11/29/23 20:58	1
d-N-MeFOSA-M	78		25 - 150	11/27/23 19:00	11/29/23 20:58	1
d-N-EtFOSA-M	83		25 - 150	11/27/23 19:00	11/29/23 20:58	1
d7-N-MeFOSE-M	85		10 - 120	11/27/23 19:00	11/29/23 20:58	1
d9-N-EtFOSE-M	94		10 - 120	11/27/23 19:00	11/29/23 20:58	1
13C3 HFPO-DA	73		25 - 150	11/27/23 19:00	11/29/23 20:58	1
13C-6:2 FTCA	64		25 - 150	11/27/23 19:00	11/29/23 20:58	1
13C-8:2 FTCA	60		25 - 150	11/27/23 19:00	11/29/23 20:58	1
13C2 10:2 FTS	87		25 - 150	11/27/23 19:00	11/29/23 20:58	1

Lab Sample ID: LCS 320-723168/2-A
Matrix: Solid
Analysis Batch: 723666

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 723168

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	2.00	1.96		ug/Kg		98	76 - 136
Perfluoropentanoic acid (PFPeA)	2.00	1.97		ug/Kg		98	69 - 129
Perfluorohexanoic acid (PFHxA)	2.00	2.18		ug/Kg		109	71 - 131
Perfluoroheptanoic acid (PFHpA)	2.00	2.02		ug/Kg		101	71 - 131
Perfluorooctanoic acid (PFOA)	2.00	1.78		ug/Kg		89	72 - 132
Perfluorononanoic acid (PFNA)	2.00	1.96		ug/Kg		98	73 - 133
Perfluorodecanoic acid (PFDA)	2.00	2.06		ug/Kg		103	72 - 132
Perfluoroundecanoic acid (PFUnA)	2.00	2.03		ug/Kg		101	66 - 126
Perfluorododecanoic acid (PFDoA)	2.00	2.09		ug/Kg		104	71 - 131
Perfluorotridecanoic acid (PFTrDA)	2.00	1.84		ug/Kg		92	71 - 131
Perfluorotetradecanoic acid (PFTeA)	2.00	1.67		ug/Kg		83	67 - 127
Perfluoro-n-hexadecanoic acid (PFHxDA)	2.00	2.03		ug/Kg		102	75 - 135

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-723168/2-A
Matrix: Solid
Analysis Batch: 723666

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 723168

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro-n-octadecanoic acid (PFODA)	2.00	2.16		ug/Kg		108	53 - 130
Perfluorobutanesulfonic acid (PFBS)	1.78	1.59		ug/Kg		90	69 - 129
Perfluoropentanesulfonic acid (PFPeS)	1.88	1.74		ug/Kg		92	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	1.82	1.90		ug/Kg		104	62 - 122
Perfluoroheptanesulfonic acid (PFHpS)	1.91	1.83		ug/Kg		96	76 - 136
Perfluorooctanesulfonic acid (PFOS)	1.86	1.97		ug/Kg		106	68 - 141
Perfluorononanesulfonic acid (PFNS)	1.92	2.08		ug/Kg		108	72 - 132
Perfluorodecanesulfonic acid (PFDS)	1.93	1.99		ug/Kg		103	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	1.94	1.91		ug/Kg		99	70 - 130
Perfluorooctanesulfonamide (FOSA)	2.00	2.02		ug/Kg		101	77 - 137
NMeFOSAA	2.00	2.14		ug/Kg		107	72 - 132
NEtFOSAA	2.00	2.14		ug/Kg		107	72 - 132
4:2 FTS	1.88	2.05		ug/Kg		110	68 - 143
6:2 FTS	1.90	2.21		ug/Kg		116	73 - 139
8:2 FTS	1.92	2.26		ug/Kg		118	75 - 135
10:2 FTS	1.93	1.94		ug/Kg		101	69 - 145
NEtFOSA	2.00	1.96		ug/Kg		98	47 - 161
NMeFOSA	2.00	2.15		ug/Kg		108	63 - 148
NMeFOSE	2.00	2.01		ug/Kg		100	43 - 153
NEtFOSE	2.00	1.98		ug/Kg		99	44 - 155
F-53B Major	1.87	1.92		ug/Kg		103	74 - 134
HFPO-DA (GenX)	2.00	1.97		ug/Kg		98	53 - 158
F-53B Minor	1.89	2.03		ug/Kg		108	66 - 136
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.89	2.07		ug/Kg		109	79 - 139
5:3 FTCA	2.00	2.11		ug/Kg		105	50 - 150
7:3 FTCA	2.00	2.28		ug/Kg		114	50 - 150
PFECHS	1.85	1.49		ug/Kg		81	50 - 150
PFPrS	1.84	1.82		ug/Kg		99	50 - 150

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C8 FOSA	*75*		*25 - 150*
13C4 PFBA	*52*		*25 - 150*
13C5 PFPeA	*78*		*25 - 150*
13C2 PFHxA	*77*		*25 - 150*
13C4 PFHpA	*83*		*25 - 150*
13C4 PFOA	*83*		*25 - 150*
13C5 PFNA	*81*		*25 - 150*
13C2 PFDA	*86*		*25 - 150*
13C2 PFUnA	*82*		*25 - 150*
13C2 PFDoA	*97*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-723168/2-A
Matrix: Solid
Analysis Batch: 723666

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 723168

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C2 PFTeDA	92		25 - 150
13C2 PFHxDA	85		25 - 150
13C3 PFBS	72		25 - 150
18O2 PFHxS	69		25 - 150
13C4 PFOS	68		25 - 150
d5-NEtFOSAA	78		25 - 150
d3-NMeFOSAA	76		25 - 150
M2-4:2 FTS	56		25 - 150
M2-6:2 FTS	55		25 - 150
M2-8:2 FTS	76		25 - 150
d-N-MeFOSA-M	70		25 - 150
d-N-EtFOSA-M	75		25 - 150
d7-N-MeFOSE-M	77		10 - 120
d9-N-EtFOSE-M	82		10 - 120
13C3 HFPO-DA	69		25 - 150
13C-6:2 FTCA	60		25 - 150
13C-8:2 FTCA	60		25 - 150
13C2 10:2 FTS	81		25 - 150

Lab Sample ID: MB 320-723710/1-A
Matrix: Solid
Analysis Batch: 725186

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 723710

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.20	0.046	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
Perfluoropentanoic acid (PFPeA)	ND		0.20	0.041	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
Perfluorohexanoic acid (PFHxA)	0.0318	J	0.20	0.031	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.038	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
Perfluorooctanoic acid (PFOA)	ND		0.20	0.053	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.022	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.048	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.042	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.030	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.20	0.021	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20	0.037	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	ND		0.20	0.038	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		0.20	0.066	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.038	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.20	0.037	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.029	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.20	0.049	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.20	0.043	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
Perfluorononanesulfonic acid (PFNS)	ND		0.20	0.029	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.20	0.052	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.20	0.047	ug/Kg		11/29/23 19:01	12/06/23 09:20	1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-723710/1-A
Matrix: Solid
Analysis Batch: 725186

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 723710

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonamide (FOSA)	ND		0.20	0.033	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
NMeFOSAA	ND		0.20	0.023	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
NEtFOSAA	ND		0.20	0.048	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
4:2 FTS	ND		0.20	0.051	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
6:2 FTS	ND		0.20	0.027	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
8:2 FTS	ND		0.20	0.035	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
10:2 FTS	ND		0.20	0.038	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
NEtFOSA	ND		0.20	0.047	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
NMeFOSA	ND		0.20	0.049	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
NMeFOSE	ND		0.20	0.047	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
NEtFOSE	ND		0.20	0.028	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
F-53B Major	ND		0.20	0.035	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
HFPO-DA (GenX)	ND		0.20	0.041	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
F-53B Minor	ND		0.20	0.031	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.20	0.039	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
3:3 FTCA	ND		0.20	0.041	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
5:3 FTCA	ND		0.20	0.038	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
7:3 FTCA	ND		0.20	0.041	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
PFECHS	ND		0.20	0.044	ug/Kg		11/29/23 19:01	12/06/23 09:20	1
PFPrS	ND		0.20	0.030	ug/Kg		11/29/23 19:01	12/06/23 09:20	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*75*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
13C4 PFBA	*54*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
13C5 PFPeA	*84*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
13C2 PFHxA	*87*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
13C4 PFHpA	*100*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
13C4 PFOA	*99*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
13C5 PFNA	*93*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
13C2 PFDA	*82*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
13C2 PFUnA	*87*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
13C2 PFDoA	*91*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
13C2 PFTeDA	*80*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
13C2 PFHxDA	*81*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
13C3 PFBS	*80*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
18O2 PFHxS	*88*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
13C4 PFOS	*89*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
d5-NEtFOSAA	*94*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
d3-NMeFOSAA	*104*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
M2-4:2 FTS	*83*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
M2-6:2 FTS	*77*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
M2-8:2 FTS	*97*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
d-N-MeFOSA-M	*80*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
d-N-EtFOSA-M	*89*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
d7-N-MeFOSE-M	*82*		*10 - 120*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
d9-N-EtFOSE-M	*75*		*10 - 120*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
13C3 HFPO-DA	*93*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*
13C-6:2 FTCA	*92*		*25 - 150*	*11/29/23 19:01*	*12/06/23 09:20*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-723710/1-A
Matrix: Solid
Analysis Batch: 725186

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 723710

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-8:2 FTCA	85		25 - 150	11/29/23 19:01	12/06/23 09:20	1
13C2 10:2 FTS	69		25 - 150	11/29/23 19:01	12/06/23 09:20	1

Lab Sample ID: LCS 320-723710/2-A
Matrix: Solid
Analysis Batch: 725186

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 723710

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	2.00	1.81		ug/Kg		91	76 - 136
Perfluoropentanoic acid (PFPeA)	2.00	1.81		ug/Kg		91	69 - 129
Perfluorohexanoic acid (PFHxA)	2.00	2.15		ug/Kg		107	71 - 131
Perfluoroheptanoic acid (PFHpA)	2.00	1.81		ug/Kg		90	71 - 131
Perfluorooctanoic acid (PFOA)	2.00	1.90		ug/Kg		95	72 - 132
Perfluorononanoic acid (PFNA)	2.00	1.94		ug/Kg		97	73 - 133
Perfluorodecanoic acid (PFDA)	2.00	1.71		ug/Kg		86	72 - 132
Perfluoroundecanoic acid (PFUnA)	2.00	1.85		ug/Kg		93	66 - 126
Perfluorododecanoic acid (PFDoA)	2.00	2.06		ug/Kg		103	71 - 131
Perfluorotridecanoic acid (PFTrDA)	2.00	1.99		ug/Kg		99	71 - 131
Perfluorotetradecanoic acid (PFTeA)	2.00	1.78		ug/Kg		89	67 - 127
Perfluoro-n-hexadecanoic acid (PFHxDA)	2.00	1.99		ug/Kg		100	75 - 135
Perfluoro-n-octadecanoic acid (PFODA)	2.00	1.77		ug/Kg		89	53 - 130
Perfluorobutanesulfonic acid (PFBS)	1.78	1.72		ug/Kg		97	69 - 129
Perfluoropentanesulfonic acid (PFPeS)	1.88	1.95		ug/Kg		104	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	1.82	1.61		ug/Kg		88	62 - 122
Perfluoroheptanesulfonic acid (PFHpS)	1.91	1.60		ug/Kg		84	76 - 136
Perfluorooctanesulfonic acid (PFOS)	1.86	1.70		ug/Kg		91	68 - 141
Perfluorononanesulfonic acid (PFNS)	1.92	1.69		ug/Kg		88	72 - 132
Perfluorodecanesulfonic acid (PFDS)	1.93	1.72		ug/Kg		89	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	1.94	1.71		ug/Kg		88	70 - 130
Perfluorooctanesulfonamide (FOSA)	2.00	1.88		ug/Kg		94	77 - 137
NMeFOSAA	2.00	1.85		ug/Kg		93	72 - 132
NEtFOSAA	2.00	1.90		ug/Kg		95	72 - 132
4:2 FTS	1.88	1.70		ug/Kg		91	68 - 143
6:2 FTS	1.90	1.76		ug/Kg		92	73 - 139
8:2 FTS	1.92	1.83		ug/Kg		96	75 - 135
10:2 FTS	1.93	1.65		ug/Kg		86	69 - 145
NEtFOSA	2.00	1.79		ug/Kg		90	47 - 161
NMeFOSA	2.00	1.87		ug/Kg		94	63 - 148

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-723710/2-A
Matrix: Solid
Analysis Batch: 725186

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 723710

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
NMeFOSE	2.00	1.53		ug/Kg		77	43 - 153
NEtFOSE	2.00	1.81		ug/Kg		91	44 - 155
F-53B Major	1.87	1.54		ug/Kg		82	74 - 134
HFPO-DA (GenX)	2.00	1.75		ug/Kg		88	53 - 158
F-53B Minor	1.89	1.70		ug/Kg		90	66 - 136
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.89	1.69		ug/Kg		89	79 - 139
3:3 FTCA	2.00	0.815	*-	ug/Kg		41	50 - 150
5:3 FTCA	2.00	1.58		ug/Kg		79	50 - 150
7:3 FTCA	2.00	1.89		ug/Kg		95	50 - 150
PFECHS	1.85	1.68		ug/Kg		91	50 - 150
PFPrS	1.84	1.79		ug/Kg		97	50 - 150

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C8 FOSA	*90*		*25 - 150*
13C4 PFBA	*45*		*25 - 150*
13C5 PFPeA	*81*		*25 - 150*
13C2 PFHxA	*87*		*25 - 150*
13C4 PFHpA	*102*		*25 - 150*
13C4 PFOA	*94*		*25 - 150*
13C5 PFNA	*92*		*25 - 150*
13C2 PFDA	*101*		*25 - 150*
13C2 PFUnA	*90*		*25 - 150*
13C2 PFDoA	*95*		*25 - 150*
13C2 PFTeDA	*97*		*25 - 150*
13C2 PFHxDA	*95*		*25 - 150*
13C3 PFBS	*83*		*25 - 150*
18O2 PFHxS	*100*		*25 - 150*
13C4 PFOS	*101*		*25 - 150*
d5-NEtFOSAA	*103*		*25 - 150*
d3-NMeFOSAA	*110*		*25 - 150*
M2-4:2 FTS	*87*		*25 - 150*
M2-6:2 FTS	*81*		*25 - 150*
M2-8:2 FTS	*99*		*25 - 150*
d-N-MeFOSA-M	*92*		*25 - 150*
d-N-EtFOSA-M	*93*		*25 - 150*
d7-N-MeFOSE-M	*101*		*10 - 120*
d9-N-EtFOSE-M	*98*		*10 - 120*
13C3 HFPO-DA	*96*		*25 - 150*
13C-6:2 FTCA	*105*		*25 - 150*
13C-8:2 FTCA	*85*		*25 - 150*
13C2 10:2 FTS	*83*		*25 - 150*

Lab Sample ID: MB 320-727594/1-A
Matrix: Solid
Analysis Batch: 729841

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 727594

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3:3 FTCA	ND		0.20	0.041	ug/Kg		12/14/23 09:02	12/24/23 09:18	1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-727594/1-A
Matrix: Solid
Analysis Batch: 729841

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 727594

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
5:3 FTCA	ND		0.20	0.038	ug/Kg		12/14/23 09:02	12/24/23 09:18	1
7:3 FTCA	0.0486	J	0.20	0.041	ug/Kg		12/14/23 09:02	12/24/23 09:18	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 PFBS	*85*		*25 - 150*	*12/14/23 09:02*	*12/24/23 09:18*	*1*
13C-6:2 FTCA	*69*		*25 - 150*	*12/14/23 09:02*	*12/24/23 09:18*	*1*
13C-8:2 FTCA	*85*		*25 - 150*	*12/14/23 09:02*	*12/24/23 09:18*	*1*

Lab Sample ID: LCS 320-727594/2-A
Matrix: Solid
Analysis Batch: 729841

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 727594

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
3:3 FTCA	2.00	1.75		ug/Kg		88	50 - 150
5:3 FTCA	2.00	2.75		ug/Kg		137	50 - 150
7:3 FTCA	2.00	1.91		ug/Kg		95	50 - 150

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 PFBS	*89*		*25 - 150*
13C-6:2 FTCA	*75*		*25 - 150*
13C-8:2 FTCA	*90*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances - RA

Lab Sample ID: MB 320-723168/1-A
Matrix: Solid
Analysis Batch: 723972

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 723168

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3:3 FTCA - RA	ND		0.20	0.041	ug/Kg		11/27/23 19:00	12/01/23 07:53	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 PFBS - RA	*72*		*25 - 150*	*11/27/23 19:00*	*12/01/23 07:53*	*1*

Lab Sample ID: LCS 320-723168/2-A
Matrix: Solid
Analysis Batch: 723972

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 723168

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
3:3 FTCA - RA	2.00	1.21		ug/Kg		61	50 - 150

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 PFBS - RA	*66*		*25 - 150*

QC Association Summary

Client: Central Davis Sewer District
Project/Site: PFAS, Biosolids

Job ID: 320-107302-1

LCMS

Prep Batch: 723168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-107302-7	Aerobic composite	Total/NA	Solid	SHAKE	
320-107302-7 - RA	Aerobic composite	Total/NA	Solid	SHAKE	
320-107302-7 - RA2	Aerobic composite	Total/NA	Solid	SHAKE	
320-107302-8	Anaerobic compost	Total/NA	Solid	SHAKE	
320-107302-8 - RA	Anaerobic compost	Total/NA	Solid	SHAKE	
320-107302-8 - RA2	Anaerobic compost	Total/NA	Solid	SHAKE	
320-107302-9	Anaerobic land application	Total/NA	Solid	SHAKE	
320-107302-9 - RA	Anaerobic land application	Total/NA	Solid	SHAKE	
320-107302-9 - RA2	Anaerobic land application	Total/NA	Solid	SHAKE	
MB 320-723168/1-A	Method Blank	Total/NA	Solid	SHAKE	
MB 320-723168/1-A - RA	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-723168/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
LCS 320-723168/2-A - RA	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 723666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-107302-7	Aerobic composite	Total/NA	Solid	537 (modified)	723168
320-107302-8	Anaerobic compost	Total/NA	Solid	537 (modified)	723168
320-107302-9	Anaerobic land application	Total/NA	Solid	537 (modified)	723168
MB 320-723168/1-A	Method Blank	Total/NA	Solid	537 (modified)	723168
LCS 320-723168/2-A	Lab Control Sample	Total/NA	Solid	537 (modified)	723168

Prep Batch: 723710

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-107302-1	#1ft core	Total/NA	Solid	SHAKE	
320-107302-2	2ft core	Total/NA	Solid	SHAKE	
320-107302-3	3ft core	Total/NA	Solid	SHAKE	
320-107302-4	4ft core	Total/NA	Solid	SHAKE	
320-107302-5	5ft core	Total/NA	Solid	SHAKE	
320-107302-6	Composite core	Total/NA	Solid	SHAKE	
MB 320-723710/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-723710/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 723972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-107302-7 - RA	Aerobic composite	Total/NA	Solid	537 (modified)	723168
320-107302-8 - RA	Anaerobic compost	Total/NA	Solid	537 (modified)	723168
320-107302-9 - RA	Anaerobic land application	Total/NA	Solid	537 (modified)	723168
MB 320-723168/1-A - RA	Method Blank	Total/NA	Solid	537 (modified)	723168
LCS 320-723168/2-A - RA	Lab Control Sample	Total/NA	Solid	537 (modified)	723168

Analysis Batch: 725186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-107302-1	#1ft core	Total/NA	Solid	537 (modified)	723710
320-107302-3	3ft core	Total/NA	Solid	537 (modified)	723710
320-107302-4	4ft core	Total/NA	Solid	537 (modified)	723710
320-107302-5	5ft core	Total/NA	Solid	537 (modified)	723710
320-107302-6	Composite core	Total/NA	Solid	537 (modified)	723710
MB 320-723710/1-A	Method Blank	Total/NA	Solid	537 (modified)	723710
LCS 320-723710/2-A	Lab Control Sample	Total/NA	Solid	537 (modified)	723710

LCMS

Prep Batch: 727594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-107302-2 - RE	2ft core	Total/NA	Solid	SHAKE	
320-107302-3 - RE	3ft core	Total/NA	Solid	SHAKE	
320-107302-4 - RE	4ft core	Total/NA	Solid	SHAKE	
320-107302-5 - RE	5ft core	Total/NA	Solid	SHAKE	
MB 320-727594/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-727594/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 727716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-107302-2	2ft core	Total/NA	Solid	537 (modified)	723710

Analysis Batch: 729841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-107302-2 - RE	2ft core	Total/NA	Solid	537 (modified)	727594
320-107302-3 - RE	3ft core	Total/NA	Solid	537 (modified)	727594
320-107302-4 - RE	4ft core	Total/NA	Solid	537 (modified)	727594
320-107302-5 - RE	5ft core	Total/NA	Solid	537 (modified)	727594
MB 320-727594/1-A	Method Blank	Total/NA	Solid	537 (modified)	727594
LCS 320-727594/2-A	Lab Control Sample	Total/NA	Solid	537 (modified)	727594

Analysis Batch: 730882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-107302-7 - RA2	Aerobic composite	Total/NA	Solid	537 (modified)	723168
320-107302-8 - RA2	Anaerobic compost	Total/NA	Solid	537 (modified)	723168

Analysis Batch: 731129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-107302-9 - RA2	Anaerobic land application	Total/NA	Solid	537 (modified)	723168

General Chemistry

Analysis Batch: 724028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-107302-1	#1ft core	Total/NA	Solid	D 2216	
320-107302-2	2ft core	Total/NA	Solid	D 2216	
320-107302-3	3ft core	Total/NA	Solid	D 2216	
320-107302-4	4ft core	Total/NA	Solid	D 2216	
320-107302-5	5ft core	Total/NA	Solid	D 2216	

Analysis Batch: 724772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-107302-6	Composite core	Total/NA	Solid	D 2216	
320-107302-7	Aerobic composite	Total/NA	Solid	D 2216	
320-107302-8	Anaerobic compost	Total/NA	Solid	D 2216	
320-107302-9	Anaerobic land application	Total/NA	Solid	D 2216	

Lab Chronicle

Client: Central Davis Sewer District
Project/Site: PFAS, Biosolids

Job ID: 320-107302-1

Client Sample ID: #1ft core
Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			724028	11/30/23 15:55	CFR	EET SAC

Client Sample ID: #1ft core
Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-1
Matrix: Solid
Percent Solids: 89.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.48 g	10.0 mL	723710	11/29/23 19:01	PV	EET SAC
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	725186	12/06/23 12:35	K1S	EET SAC

Client Sample ID: 2ft core
Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			724028	11/30/23 15:55	CFR	EET SAC

Client Sample ID: 2ft core
Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-2
Matrix: Solid
Percent Solids: 90.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.00 g	10.0 mL	723710	11/29/23 19:01	PV	EET SAC
Total/NA	Analysis	537 (modified)		10	1 mL	1 mL	727716	12/14/23 12:59	AP1	EET SAC
Total/NA	Prep	SHAKE	RE		1.31 g	10.0 mL	727594	12/14/23 09:02	EJR	EET SAC
Total/NA	Analysis	537 (modified)	RE	1	1 mL	1 mL	729841	12/24/23 09:41	RS1	EET SAC

Client Sample ID: 3ft core
Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			724028	11/30/23 15:55	CFR	EET SAC

Client Sample ID: 3ft core
Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-3
Matrix: Solid
Percent Solids: 91.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.40 g	10.0 mL	723710	11/29/23 19:01	PV	EET SAC
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	725186	12/06/23 13:06	K1S	EET SAC
Total/NA	Prep	SHAKE	RE		1.29 g	10.0 mL	727594	12/14/23 09:02	EJR	EET SAC
Total/NA	Analysis	537 (modified)	RE	1	1 mL	1 mL	729841	12/24/23 09:52	RS1	EET SAC

Lab Chronicle

Client: Central Davis Sewer District
Project/Site: PFAS, Biosolids

Job ID: 320-107302-1

Client Sample ID: 4ft core
Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			724028	11/30/23 15:55	CFR	EET SAC

Client Sample ID: 4ft core
Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-4
Matrix: Solid
Percent Solids: 89.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.04 g	10.0 mL	723710	11/29/23 19:01	PV	EET SAC
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	725186	12/06/23 13:16	K1S	EET SAC
Total/NA	Prep	SHAKE	RE		1.35 g	10.0 mL	727594	12/14/23 09:02	EJR	EET SAC
Total/NA	Analysis	537 (modified)	RE	1	1 mL	1 mL	729841	12/24/23 10:04	RS1	EET SAC

Client Sample ID: 5ft core
Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			724028	11/30/23 15:55	CFR	EET SAC

Client Sample ID: 5ft core
Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-5
Matrix: Solid
Percent Solids: 86.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.07 g	10.0 mL	723710	11/29/23 19:01	PV	EET SAC
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	725186	12/06/23 13:27	K1S	EET SAC
Total/NA	Prep	SHAKE	RE		1.49 g	10.0 mL	727594	12/14/23 09:02	EJR	EET SAC
Total/NA	Analysis	537 (modified)	RE	1	1 mL	1 mL	729841	12/24/23 10:15	RS1	EET SAC

Client Sample ID: Composite core
Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			724772	12/04/23 14:37	JCB	EET SAC

Client Sample ID: Composite core
Date Collected: 11/15/23 15:45
Date Received: 11/20/23 09:00

Lab Sample ID: 320-107302-6
Matrix: Solid
Percent Solids: 90.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.10 g	10.0 mL	723710	11/29/23 19:01	PV	EET SAC
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	725186	12/06/23 13:37	K1S	EET SAC

Lab Chronicle

Client: Central Davis Sewer District
Project/Site: PFAS, Biosolids

Job ID: 320-107302-1

Client Sample ID: Aerobic composite
Lab Sample ID: 320-107302-7
Date Collected: 11/13/23 08:58
Matrix: Solid
Date Received: 11/20/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			724772	12/04/23 14:37	JCB	EET SAC

Client Sample ID: Aerobic composite
Lab Sample ID: 320-107302-7
Date Collected: 11/13/23 08:58
Matrix: Solid
Date Received: 11/20/23 09:00
Percent Solids: 70.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.00 g	10.0 mL	723168	11/27/23 19:00	PV	EET SAC
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	723666	11/29/23 21:18	C1P	EET SAC
Total/NA	Prep	SHAKE	RA		1.00 g	10.0 mL	723168	11/27/23 19:00	PV	EET SAC
Total/NA	Analysis	537 (modified)	RA	1	1 mL	1 mL	723972	12/01/23 08:14	S1M	EET SAC
Total/NA	Prep	SHAKE	RA2		1.00 g	10.0 mL	723168	11/27/23 19:00	PV	EET SAC
Total/NA	Analysis	537 (modified)	RA2	1			730882	12/31/23 09:38	D1R	EET SAC

Client Sample ID: Anaerobic compost
Lab Sample ID: 320-107302-8
Date Collected: 11/13/23 08:56
Matrix: Solid
Date Received: 11/20/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			724772	12/04/23 14:37	JCB	EET SAC

Client Sample ID: Anaerobic compost
Lab Sample ID: 320-107302-8
Date Collected: 11/13/23 08:56
Matrix: Solid
Date Received: 11/20/23 09:00
Percent Solids: 35.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.40 g	10.0 mL	723168	11/27/23 19:00	PV	EET SAC
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	723666	11/29/23 21:29	C1P	EET SAC
Total/NA	Prep	SHAKE	RA		1.40 g	10.0 mL	723168	11/27/23 19:00	PV	EET SAC
Total/NA	Analysis	537 (modified)	RA	1	1 mL	1 mL	723972	12/01/23 08:24	S1M	EET SAC
Total/NA	Prep	SHAKE	RA2		1.40 g	10.0 mL	723168	11/27/23 19:00	PV	EET SAC
Total/NA	Analysis	537 (modified)	RA2	1			730882	12/31/23 09:55	D1R	EET SAC

Client Sample ID: Anaerobic land application
Lab Sample ID: 320-107302-9
Date Collected: 11/13/23 08:55
Matrix: Solid
Date Received: 11/20/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			724772	12/04/23 14:37	JCB	EET SAC

Lab Chronicle

Client: Central Davis Sewer District
Job ID: 320-107302-1
Project/Site: PFAS, Biosolids

Client Sample ID: Anaerobic land application
Lab Sample ID: 320-107302-9

Date Collected: 11/13/23 08:55
Matrix: Solid
Date Received: 11/20/23 09:00
Percent Solids: 17.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.14 g	10.0 mL	723168	11/27/23 19:00	PV	EET SAC
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	723666	11/29/23 21:39	C1P	EET SAC
Total/NA	Prep	SHAKE	RA		1.14 g	10.0 mL	723168	11/27/23 19:00	PV	EET SAC
Total/NA	Analysis	537 (modified)	RA	1	1 mL	1 mL	723972	12/01/23 08:34	S1M	EET SAC
Total/NA	Prep	SHAKE	RA2		1.14 g	10.0 mL	723168	11/27/23 19:00	PV	EET SAC
Total/NA	Analysis	537 (modified)	RA2	1			731129	01/03/24 03:13	JRB	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Central Davis Sewer District
Job ID: 320-107302-1
Project/Site: PFAS, Biosolids

Laboratory: Eurofins Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Utah	NELAP	CA000442023-16	02-29-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
D 2216		Solid	Percent Moisture
D 2216		Solid	Percent Solids

Method Summary

Client: Central Davis Sewer District
Project/Site: PFAS, Biosolids

Job ID: 320-107302-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	EET SAC
D 2216	Percent Moisture	ASTM	EET SAC
SHAKE	Shake Extraction with Ultrasonic Bath Extraction	SW846	EET SAC

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Central Davis Sewer District
Project/Site: PFAS, Biosolids

Job ID: 320-107302-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-107302-1	#1ft core	Solid	11/15/23 15:45	11/20/23 09:00
320-107302-2	2ft core	Solid	11/15/23 15:45	11/20/23 09:00
320-107302-3	3ft core	Solid	11/15/23 15:45	11/20/23 09:00
320-107302-4	4ft core	Solid	11/15/23 15:45	11/20/23 09:00
320-107302-5	5ft core	Solid	11/15/23 15:45	11/20/23 09:00
320-107302-6	Composite core	Solid	11/15/23 15:45	11/20/23 09:00
320-107302-7	Aerobic composite	Solid	11/13/23 08:58	11/20/23 09:00
320-107302-8	Anaerobic compost	Solid	11/13/23 08:56	11/20/23 09:00
320-107302-9	Anaerobic land application	Solid	11/13/23 08:55	11/20/23 09:00

Chain of Custody Record

704198

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Address: _____

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210

Client Contact	Project Manager: Jill Jones	Site Contact:	Date:	COC No:
Company Name: Central Davis Sewer District	Tel/Email: lab@cdsewer.org	Lab Contact:	Carrier:	____ of ____ COCs
Address: 2200 Sunset Drive	Analysis Turnaround Time			Sampler:
City/State/Zip: Kaysville, UT 84037	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 801-451-2190	TAT if different from Below ____			Walk-in Client:
Fax:	☑ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day			Lab Sampling:
Project Name: CDSD PFAS				Job / SDG No.:
Site:				
PO# 11/16/23 PH				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	PFAS - List of 41	Sample Specific Notes:
#1 ft core	11-15-23	3:45pm	C	soil	1	N	Y		
2 ft core	11-15-23	3:45pm	C	soil	1	N	Y		
3 ft core	11-15-23	3:45pm	C	soil	1	N	Y		
4 ft core	11-15-23	3:45pm	C	soil	1	N	Y		
5 ft core	11-15-23	3:45pm	C	soil	1	N	Y		
Composite core	11-15-23	3:45pm	C	soil	1	N	Y		
Aerobic composite	11-13-23	8:58am	G	solid	1	N	Y		
Anaerobic compost	11-13-23	8:56am	G	solid	1	N	Y		
Anaerobic land application	11-13-23	8:55am	G	solid	1	N	Y		

320-107302 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☑ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 6.2 Corr'd: 6.2 Therm ID No.: 411

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	CDSD	11-17-23 9:20 am	[signature]	EETA	11.20.23 900
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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Sacramento Sample Receiving Notes (SSRN)

Loc: 320
107302

Tracking # : 7741 3935 5590

Job:_____ _____

SO (PO) FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSL / OnTrac / Goldstreak / USPS / Other_____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC.

Therm. ID: 111 Corr. Factor: (+ / -) _____ °C

Ice_____ Wet X Gel _____ Other _____

Cooler Custody Seal: _____

Cooler ID: _____

Temp Observed: 6.2 °C Corrected: 6.2 °C

From: Temp Blank ☑ Sample ☐

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☐	☑	☐
Frozen samples show signs of thaw?	☐	☐	☑

Initials: SP Date: 11-20-23

Unpacking/Labeling The Samples	Yes	No	NA
Containers are not broken or leaking?	☑	☐	☐
Samples compromised/tampered with?	☐	☑	☐
COC is complete w/o discrepancies	☑	☐	☐
Sample custody seal?	☐	☑	☐
Sample containers have legible labels?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☑	☐
Is the Field Sampler's name on COC?	☐	☑	☐
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials: SP Date: 11-20-23

Notes: NO ICE JUST WATER

Trizma Lot #(s): _____

Ammonium Acetate Lot #(s): _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☑	☐	☐
NCM Filed?	☑	☐	☐
Samples received within hold time?	☑	☐	☐
Log Release checked in TALS?	☑	☐	☐

Initials: SP Date: 11-20-23

WR311D

Login Sample Receipt Checklist

Client: Central Davis Sewer District

Job Number: 320-107302-1

Login Number: 107302
List Number: 1
Creator: Pratali, Sandra A

List Source: Eurofins Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	REFER TO SSRN
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	N/A	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	N/A	
COC is filled out in ink and legible.	N/A	
COC is filled out with all pertinent information.	N/A	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	N/A	
Samples are received within Holding Time (excluding tests with immediate HTs)	N/A	
Sample containers have legible labels.	N/A	
Containers are not broken or leaking.	N/A	
Sample collection date/times are provided.	N/A	
Appropriate sample containers are used.	N/A	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

Biosolids Internal Audit Report
Central Davis Sewer District

Audit Conducted by:
Jace Woodrow, Biosolids Coordinator, Lead Operator, Lead Internal Auditor, Central Davis Sewer District
Dan Griffin, Environmental Engineer, Biosolids DEQ, State of Utah
Torrey Hansen, Operator, Central Davis Sewer District
Jake Poulson, Collection Operator, Central Davis Sewer District
Kyle Moyes, Collection Operator, Central Davis Sewer District

References:
National Biosolids Partnership (NBP) Third Party Verification Auditor Guidance
NBP Nation Manual of Good Practice
Central Davis Sewer District Biosolids EMS Manual

September 27, 2023

Introduction:

The purpose of the Central Davis Sewer District's internal audit process is to identify areas of improvement within the Biosolids Environmental Management Systems (EMS) prior to and/ or between third-party audits. The audit was conducted against the standards presented by the National Biosolids Partnership (NBP) through the EMS program. The goal was to collect and review objective evidence that the District's EMS is performing as intended, that the procedures are being performed as documented and that the EMS conforms to the NBP's EMS Elements, the Code of Good Practice, the EMS program objectives, and internal program requirements.

Audit Schedule and Scope:

The internal audit team consisted of Jace Woodrow, Dan Griffin, Torrey Hansen, Jake Poulson, Kyle Moyes.. All titles and professional associations can be referred to on the cover sheet.

The selected documents were reviewed for conformance to the District's Biosolids EMS Manual.
Listed below are documents reviewed:

- CDSD EMS Manual and associated appendices
- NBP EMS Report on Goals and Objectives- reporting year 2023

The audit team conducted document review on Elements 1, 3, 9, 10, 12, and 16 and SOP's 8, 12,15, 16, and 17 from the EMS.

Findings:

Opportunity for improvement

- Element 1: Change wording in the introduction to include land owned by the district on the Westside of West Davis Corridor.
- Element 9: Add treatment train flow diagram to website.
- Element 9: Add website name to the introduction.

- Element 10: Update training videos by creating videos for new equipment or stop referencing videos as training material.
- Element 12: Revise “SOPs” to “SOP’s” throughout element.
- Element 16: State where the completed Audit Corrective Action sheets are stored and can be found.
- SOP 8: Change increment dosing from 0.5 gallons to 1% per ability of instrument.
- SOP 15: Change Operating Requirements number 1 to say “they” instead of “he/she”.
- SOP 16: Rewrite entire SOP due to updated procedures.
- SOP 17: Change shutdown time from 30 minutes to minimum of 10 minutes.

CAR

• Add signs for "Authorized Personnel Only" to the new dewatering building and old dewatering building. Add "Biosolids land application" signs to west chain link fence along the West Davis corridor.
• Add "Critical Control Point" labels and/or signs to replace old or faded signs on Digester building, New Dewatering building, Old Dewatering building, and Solids Loading building.

Conclusion:

Central Davis Sewer District has committed to a tremendous use of time, energy, and manpower towards certification through the National Biosolids Partnership (NBP). The commitment to the EMS by the team at CDSD should be recognized for their dedication. Auditors for this year determined that most of the findings they had were grammatical and/ or wording changes due to out of date procedures. The only actionable changes for the plant were those that included the need for more signs to be posted around the plant at appropriate areas for "Authorized Personnel" and "Biosolids Land Application Site" signage and "Critical Control Point" labels. These findings are minimal and the documents were reviewed and

discussed to ensure details were clearly understood by the team and any needed corrections submitted before adjournment.

RE: 2023 Internal Audit report response. October 20, 2023

Dear Mr. Woodrow and the Internal Audit Team,

Below are the responses to the opportunity for improvement in the order presented in the audit document.

Element 1- *Change wording in the introduction to include land owned by the district on the west side of West Davis Corridor* – Element 1 States biosolids are recycled through direct land application of Class B biosolids on lands owned by the District immediately surrounding the District's WWTP. Management feels this is still an appropriate statement.

Element 1- *Revise wording and punctuation in section 5* – Please provide more direction on this opportunity. Management feels the punctuation and wording is adequate.

Element 9 – *Add treatment train flow diagram to website* – The District's website, under the District Information tab, currently has a Plant Guide Book with information about the plant and a flow diagram. If the Audit Team had something else in mind please let me know.

Element 9 – *Add website name to the introduction.* The District's website name has been added to the Introduction.

Element 10 – *Update training videos by creating videos for new equipment or stop referencing videos as training material* – Management feels videos can provide valuable training even if they are old. Management will investigate making new videos.

Element 12: *Revise "SOPs" to "SOP's" throughout element*. In reviewing Element 12 there are SOP's and SOPs. Since SOP's is possessive and SOPs is plural, all references will be changed to the plural form.

Element 16: *State where the Audit Corrective Action sheets can be found.* The Audit Corrective Action Worksheet is part of Element 16 and is found there.

SOP 8: *Change increment dosing from 0.5 gallons to 1% per ability of instrument.* Management will get with the operator and determine if the change is needed.

SOP 15: *Change Operating Requirements number 1 to say "they" instead of "he/she".* Changes have been made.

SOP 16: *Rewrite entire SOP due to updated procedures.* An updated SOP #16 is being written.

SOP 17: *Change shutdown time from 30 minutes to minimum of 10 minutes.* Change has been made.

Correct Action Report recommendation: *Add signs for "Authorized Personnel Only" and "Biosolids land application" to new fencing and where applicable.*

Add "Critical Control Point" labels and/or signs as needed.

Management evaluated areas last year and determined at that time all areas were labeled. Please provide specific areas where signs are needed.

Your time and efforts during this process is appreciated.

Thank you,

Jill Jones
District Manager

January 31, 2024

Note to File: NBP 3rd Party Reverification Audit

A third-party audit for 2023 couldn't be finalized because the auditor passed away.

2200 South Sunset Drive Kaysville, UT 840371 801-451-2190

RESOLUTION NO. 2024-02-01

A RESOLUTION OF THE BOARD OF TRUSTEES OF THE CENTRAL DAVIS SEWER DISTRICT ADOPTING THE 2023 ANNUAL BIOSOLIDS REPORT FOR THE DISTRICT

WHEREAS, the Central Davis Sewer District is required by its EMS, by its UPDES permit, and by 40 CFR Part 503 to approve the Annual Biosolids Report for 2023; and

WHEREAS, the 2023 Annual Biosolids Report has been distributed to Board members for review prior to the February 08, 2024 Board Meeting.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE CENTRAL DAVIS SEWER DISTRICT AS FOLLOWS:

Section 1. **Approval of the 2023 Biosolids Annual Report.** The Board of Trustees of the Central Davis Sewer District hereby accepts and approves the 2024 Annual Biosolids Report.

Section 2. **Chair Authorized to Sign**. The Board of Trustees of the Central Davis Sewer District hereby authorizes the Chair of the Board of Trustees to sign and execute this resolution on behalf of Central Davis Sewer District.

Section 3. **Effective Date.** This Resolution shall become effective immediately upon its passage.

PASSED AND ADOPTED BY THE BOARD OF TRUSTEES OF THE CENTRAL DAVIS SEWER DISTRICT ON THIS 08th DAY OF February 2024.

CENTRAL DAVIS SEWER DISTRICT

ATTEST:

_____ By:_____

Clerk Chair, Board of Trustees