

OCTOBER 2021
(Includes Revisions to July 2021 Version in
Response to August 12, 2021 DDW Comments)



City of Healdsburg

Engineering Report Addendum

Production, Distribution and Use of Recycled Water for Non-Dairy Livestock Watering

For compliance with:
State of California Water Resources Control Board
Water Reclamation Requirements for Recycled Water Use
(Order WQ 2016-0068-DDW) and
California Water Recycling Criteria
(CCR Title 22, Chapter 3, Article 7, Section 60323)

Prepared by:
CITY OF HEALDSBURG
AND LARRY WALKER ASSOCIATES

Professional Certification

The document entitled “City of Healdsburg Engineering Report Addendum - Production, Distribution and Use of Recycled Water for Non-Dairy Livestock Watering” revised September 2021, was prepared for the City of Healdsburg under the supervision of Patrick Fuss, Utility Engineering Manager for the City of Healdsburg. Patrick Fuss is a registered engineer in California and experienced in the field of wastewater treatment. The report is based on design documents and information provided by the City of Healdsburg and was prepared in accordance with accepted engineering practices.

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Utility Engineering Manager
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Healdsburg, CA 95448



1.0 Introduction

The City of Healdsburg (City) owns and operates the City of Healdsburg Water Reclamation Facility (WRF). The WRF provides tertiary treatment of municipal wastewater collected within the City and currently operates under Order No. R1-2016-0015 (NPDES Permit No. CA0025135). The current Order includes Waste Discharge Requirements (WDRs) and Water Recycling Requirements (WRRs) for production of disinfected tertiary recycled water that is delivered to authorized recycled water users or discharged to the Basalt Pond (part of the Russian River).

The City operates a recycled water program under the Statewide Water Reclamation Requirements for Recycled Water Use (Order WQ 2016-0068-DDW). The North Coast Regional Water Quality Control Board (Regional Water Board) issued a Notice of Applicability (NOA) and a project-specific Monitoring and Reporting Program (MRP) on July 1, 2016. As part of the City's plans to expand the recycled water system and utilize recycled water for additional uses, the CCR Title 22 Engineering Report was revised in January 2021 and the Notice of Intent (NOI) was revised in May 2021. DDW provided conditional acceptance of the January 2021 Engineering Report on February 25, 2021. The Regional Water Board released a revised NOA and MRP for public comment on July 12, 2021.

This Engineering Report Addendum supplements information provided in the January 2021 Engineering Report to support approval for drinking water consumption by non-dairy livestock (which may include commercial poultry, non-dairy beef cattle, horses, mules, donkeys, non-dairy sheep, non-dairy goats, and swine). As directed by DDW,¹ use of disinfected tertiary recycled water for non-dairy livestock consumption must be in accordance with recommendations provided by the Independent Advisory Panel Committee in 2018.² The Panel's recommendations are summarized below and the City's plans to address the requirements are described in the Engineering Report Addendum.

1. Develop and maintain a targeted source control program that complies with National Pretreatment Program requirements and includes technical based local limits to exclude wastewater inputs from slaughter houses/abattoirs, zoos, and other significant sources of animal wastes, and to exclude concentrated industrial chemicals of concern.
2. Disinfection using approved UV disinfection system that meets the disinfection criteria pursuant to Title 22 for disinfected tertiary recycled water. The UV disinfection in combination with the filtration process must demonstrate 5 log removal of plaque forming units of F-specific bacteriophage MS2 or polio virus.
3. Maintain appropriate amount of chlorine residual in the recycled water distribution system to prevent microbial growth. Recommendation is to maintain 0.2 mg/l of free chlorine or 0.5 mg/l of chloramine residual at the point of use to prevent regrowth of pathogens.

¹ Email from Mir Ali (DDW) to Cathleen Goodwin (Regional Water Board) on June 23, 2021.

² NWRI Independent Advisory Panel for the California Water Resources Control Board, "Using Disinfected Tertiary Recycled Water for Non-Dairy Livestock Watering: A Human and Animal Health Evaluation for the State of California – Independent Advisory Panel Final Report," September 2018.

2.0 Targeted Source Control Program

The WRF receives influent wastewater generated by commercial, industrial, institutional, and residential customers connected to the City’s collection system. The City does not accept waste from any haulers at the WRF. The estimated contribution by category is 30% commercial, 5% industrial, 2% institutional, and 63% residential.

The capacity of the WRF is 1.4 million gallons per day (mgd) (average dry weather treatment capacity) and 4.0 mgd (peak wet weather treatment capacity). Because the capacity is less than 5.0 mgd, the City is not required to implement a pretreatment program based on federal regulations³. The City conducts an Industrial Waste Survey approximately every 5 years to identify influent sources for pollutants of concern and to determine whether any industrial users discharging to the collection system may be subject to federal pretreatment standards. If influent sources are identified, the facilities are added to the Industrial User Permitting Program (discussed below) and requirements may be prescribed to reduce or eliminate the pollutants discharged to the collection system. The most recent Industrial Waste Survey was conducted in 2018 and identified the following types of industrial dischargers: wineries, breweries, distilleries, schools, hotels, restaurants, bakeries, metal fabricators, senior facilities, and one hospital. No concentrated sources of industrial chemicals of concern, slaughter houses, zoos, or other sources of animal waste were identified during the survey.

Based on the survey results, the City determined there were no significant industrial users present to warrant establishment of a pretreatment program or development of technically-based local limits. The impacts of flow and strength from the varied types of industrial users have been relatively minimal and are absorbed by the advanced treatment processes occurring at the facility. A summary of the 2018 Industrial Waste Survey, an updated list of industrial dischargers, and the influent/effluent sampling results were reported to the Regional Water Board on April 4, 2019.

The City conducted concurrent influent and effluent monitoring for California Toxic Rule (CTR) pollutants in 2018. The WRF influent samples had constituents with trace amounts of certain analytes, including disinfection byproducts, but none were above any action limits and none were traceable to an associated industrial user. Most of the same analytes were non-detect or “detected but not quantified” following the wastewater treatment processes as evident in concurrent 2018 effluent sampling and testing. Additional effluent priority pollutant monitoring was conducted on March 10, 2020 and May 14, 2020. The data collected during all of the CTR monitoring events are presented in **Attachment 1** (detected results highlighted).

City Ordinance 763 includes restrictions, limitations, responsibilities, and pretreatment requirements for discharges to the City’s collection system. In particular, Ordinance 763 prohibits discharge to the sewer system of “bones, hair, whole blood, and paunch manure” as well as the discharge of “any waters or wastes containing a toxic or poisonous substance in sufficient quantity to constitute a hazard to humans or animals.” To ensure compliance with NPDES permit requirements and Ordinance 763, the City implements the following industrial

³ 40 CFR, Part 403

user programs which are targeted at specific types of discharges to the sewer system. City Ordinance 763 is provided in **Attachment 2**.

Certified Unified Program Agency (CUPA) Inspection Program

The programs covered under CUPA are designed to minimize the risk to the communities resulting from the storage, use, handling, and disposal of hazardous materials. The inspections carried out under the program frequently uncover practices affecting stormwater runoff. In conjunction with hazardous and toxic materials storage, these inspections also cover situations where there are actual or potential discharges of toxic materials to the sewer system. Where these issues arise, the City's CUPA Program Manager (Fire Marshal) coordinates with the Public Works and Municipal Utilities Departments to prevent such releases and enforce good housekeeping practices.

The CUPA program covers facilities in Healdsburg that store over State threshold limits for hazardous materials, all significant waste generating businesses, and above and underground storage tank facilities. In 2020, there were 165 total businesses within the CUPA program: 137 for storage of hazardous materials, 87 for hazardous waste, 6 aboveground petroleum storage tank facilities, and 10 underground storage tank facilities. Facility inspections occur once every 3 years with underground storage tanks inspected once per year. There were 97 facility inspections conducted during 2020. The remainder of the facilities will be inspected in subsequent years according to the once in 3 year or once per year schedule. A summary of findings from the 2020 inspections are presented in **Attachment 3**.

CUPA inspections include helping businesses electronically report to Environmental Reporting System (CERS). The CUPA has been using Digital Health Database (DHD) for all inspections, reporting to the State and billing. DHD submits completed inspections and data electronically to the State with violations, degree of violation, enforcement, and corrective action dates. DHD has electronic data transfer (EDT) established with the State CERS system.

Healdsburg Fire responds to hazardous materials releases reported to CalOES Warning Center. In 2020, Healdsburg Fire responded to a small wine spill into the storm drain, paint into the storm drain, and minor vehicle accidents. The Fire Marshal is also certified by the California Water Environment Association as an Environmental Compliance Inspector IV. The Fire Marshal works closely with Utilities staff and notifies them of any illicit industrial waste discharges.

Fats, Oils, and Grease (FOG) User Permitting Program

The Municipal Utilities Department inspects and permits all restaurant and food-related businesses within the City, covering both sewer and storm water management practices. The Department's operations staff maintain a file for each business and schedules regular inspections. The inspection frequency varies from quarterly to annually and is adjusted depending on individual compliance histories. This program has been effective at identifying and eliminating discharges of grease and oil to the sewer system. In 2020, the City achieved compliance in all cases by educating business owners and scheduling frequent inspections. No formal enforcement actions were necessary.

Industrial User Permitting Program

The Industrial User Permitting Program, also implemented by the Municipal Utilities Department, addresses users that potentially discharge non-domestic high strength waste and

non-FOG waste, as determined under Ordinance 763. As part of the program, the City issues 5-year Industrial Discharge Permits through a formal application process. This permit system was finalized to reflect the results of the 2018 Industrial Waste Survey. Dischargers are identified through the City's permit application process. Industrial users that have the potential to impact compliance with the NPDES permit or include processes resulting from high levels of compatible pollutants or discharge strengths are required to add pretreatment devices or increase wastewater monitoring requirements. The City inspects facilities at the time of application which is typically triggered by either a building permit, permit renewal, change of ownership or business license application.

Routine inspections occur on a once per year frequency. If issues of concern are identified during the inspections (e.g., violations of Ordinance 763, MS4 permit, defective or broken equipment, or over-capacity interceptor or grease trap), actions are prescribed to reduce or eliminate discharge of pollutants to the collection system which may include discharge monitoring, follow-up inspections, increased pump-out frequency at owner's expense, and installation of pretreatment devices to reduce pollutant concentrations.

If an illicit discharge occurs to the City's collection system, the Fire Department is notified and the Equalization Basins at the WRF are utilized to capture and hold the waste for evaluation and additional treatment if needed. The WRF has two Equalization Basins with a total volume of 9.5 MG (Equalization Pond #1 = 5 MG; Equalization Pond #2 = 4.5 MG). When discharging to the Equalization Basins, recycled water production will be halted. The City will stop recycled water distributions until the City investigates the extent to which the illicit material has permeated in the treatment process including the stored recycled water, and the factors producing non-compliant recycled water have been removed from the systems. Recycled water distribution will remain halted until such time as fully compliant recycled water is available for distribution. The City's Contingency Plan for handling spills in the collection system is provided in **Attachment 4**.

3.0 Recycled Water Disinfection

Wastewater treatment is accomplished by influent screening and grit removal; biological removal of biochemical oxygen demand and nitrogen in aerobic, anoxic, and pre-anoxic basins; membrane bioreactor filtration; and ultraviolet (UV) light disinfection. The combination of membrane filtration and UV disinfection is designed to inactivate and/or remove 99.999 percent of F-specific bacteriophage, MS2, or polio virus (i.e., 5-log removal).

UV disinfection is provided by the Trojan UV3000Plus system to disinfect a peak flow of 4.0 mgd. The UV disinfection system consists of one channel with three UV lamp banks (2 duty and 1 redundant) in series. The Trojan UV3000Plus has been validated and accepted as an alternative treatment technology for use in compliance with Title 22 Recycled Water Criteria. Trojan provided a certificate verifying that the UV equipment installed is identical to the technology used in the validation testing with respect to lamp spacing, type of lamp, quartz sleeve characteristics, and ballasts. A representative from Trojan was at the WRF site to witness the installation and startup of the UV disinfection equipment in June 2008. A Checkpoint Bioassay was conducted on the UV system prior to the distribution of the recycled water in December 2008.

The City uses the required Heraeus lamps at the previously accepted End of Lamp Life (EOLL) factor of 0.98 (or 9000 hours). A recent lamp age study has shown the EOLL for Heraeus lamps is actually 0.91 (or 12,000 hours). The City is implementing the revised EOLL which will increase the useful life of the lamps to 12,000 hours, change the UV dose factor by $0.98/0.91 = 1.076$, and increase the UV dose from 80 to 86 mJ/cm². The current NPDES permit provides operational flexibility to achieve this change immediately and the Regional Water Board will include explicit approval in the reissued NPDES permit.

The UV alarm set point has been changed in SCADA to reflect the minimum UV dose of 86.08 mJ/cm² and revised lamp life hours. The operations plan for UV system has been updated and a copy is provided as **Attachment 5** for DDW review.

4.0 Distribution and Chlorine Residual Control

The City has prepared a new recycled water use permit to address requirements for use of recycled water for non-dairy livestock watering. The new permit is included as **Attachment 6**. A Recycled Water Site Supervisor will be designated for each use site. The City will provide recycled water use signs/stickers to the users, verify air gap connections, and confirm that onsite storage tanks are not connected to any other water supplies. Evidence of the air gap connection will be provided to DDW before recycled water deliveries begin. If the hauling tanker trucks are used for hauling other wastes, the City will explain the tanks must be properly flushed, disinfected, and free from bacteriological contamination between uses.

To ensure compliance with applicable regulations, the permit includes the following requirements:

- Designation of a Recycled Water Site Supervisor. The Site Supervisor will provide a phone number to the City and be reachable 24 hours a day.
- Diligent implementation and maintenance of Best Management Practices (BMPs) to prevent impacts to groundwater or surface waters.
- Recycled water delivered to the storage tanks/water troughs can only be utilized for authorized uses.
- Storage tank(s) receiving recycled must not be directly connected to another source of water supply. A proper air gap connection must be provided at the connection of the storage tank to other source of water supply.
- Recycled water use signs must be posted on the hauling tanker truck(s), storage tank(s), and water trough(s).
- Recycled water must not be allowed to escape the recycled use area(s) in the form of surface runoff.

Recycled water will be obtained at the WRF Fill Station and hauled by tanker trucks to the individual ranch sites. At the ranch sites, the recycled water will be pumped into storage tanks and distributed to the troughs for livestock consumption. The initial sites that have requested recycled water for livestock watering are identified in **Table 1** and the locations are shown in **Figure 1**. The sites are located within a 30 to 40 minute drive from the WRF and identified in callout windows in **Figure 1** to depict the general locations. Additional users and sites may be added to the City's recycled water program in the future and a revised Engineering Report Addendum will be submitted to the Regional Water Board and DDW for approval.

Table 1. List of Recycled Water Users for Livestock Watering

Name	Address	Anticipated Volume of Recycled Water*
Oak Ridge Angus/La Franchi	13530 Highway 218 Knights Valley, CA	3 MG
J-Brand	1294 Chalk Hill Road, Healdsburg, CA	0.3 MG

*Based on 50 gallons per head of cattle per day for 5 months.

The City typically applies a 1 mg/L dose of free chlorine at the WRF. To ensure 0.2 mg/L free chlorine at the "point of delivery" (defined as the trough or the ranch-site storage tank), a much larger dose of free chlorine will be needed to account for chlorine demand in the recycled water

and retention time in the truck prior to off-loading at the ranch site. Applying enough chlorine at the WRF to achieve the required 0.2 mg/L residual at the point of delivery could adversely affect water quality for vineyard irrigation, which is a preponderance of the usage on that branch of the distribution system. As a result, the City and DDW have agreed upon the following approach to ensure chlorine residual control.

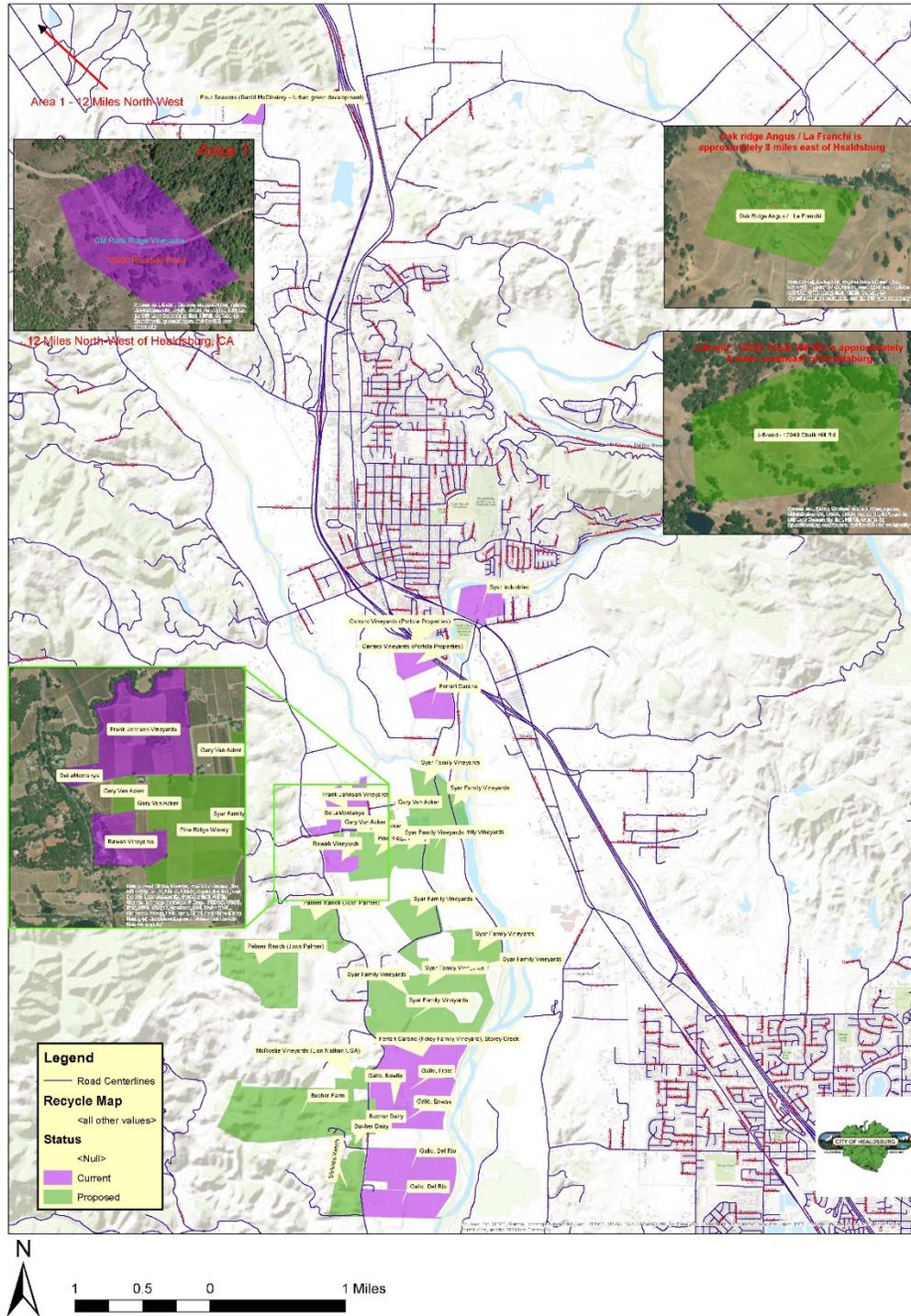
1. City will assist the water truck driver in batching the water delivery truck at the WRF with chlorine. The recycled water chlorine demand can be variable so the concentration applied during fill-up will be determined by the City to achieve at least 0.2 mg/L free chlorine residual at the point of delivery.
2. Before the truck is off-loaded at the ranch site, ranch personnel will measure the chlorine residual in the load. If it is 0.2 mg/L or above, off-load will occur to the trough or storage tank.
3. If the chlorine residual is less than 0.2 mg/L, ranch staff will apply a dose of 5% chlorine solution sufficient to achieve 0.5 mg/L in the truck volume. The 5% chlorine solution will be added through the truck fill hose. The fill hose will be connected to the truck pump and the truck fill line and the pump will be engaged. The truck pump will mix the newly supplied chlorine dose with the truck contents. The truck pump will run for 5 minutes prior to resampling. If the chlorine residual is 0.2 mg/L or above, off-load will occur to the trough or storage tank. If the chlorine residual is less than 0.2 mg/L, the application of 5% chlorine solution with mixing and testing will be repeated as necessary to reach the target residual prior to off-loading.

The City provides recycled water training for self-haulers and commercial haulers when permit applications are submitted and annually thereafter. The training program includes appropriate uses of recycled water, health and safety guidelines, cross-connection prevention, and program rules. For livestock watering, the training program will also include chlorine monitoring and implementation of contingency procedures if the chlorine residual is below 0.2 mg/L at the point of delivery.

City staff conducts inspections of sites supplied by self-haulers and commercial haulers on a representative basis (at least one third are visited each year). For livestock watering, all ranch sites will be inspected within the first month of recycled water deliveries. Storage arrangements, proximity to surface waters of storage tanks/troughs, presence of recycled water notification signs, and possible cross-connections will be identified during each site visit. If there is a potential for spills to reach a surface water, the City will prescribe Best Management Practices (BMPs) for implementation by the user to prevent water quality impacts.

When delivering more than 300 gallons per visit to a particular site or user, commercial haulers act as “Distributors.” The Distributor’s responsibilities include a once per month site inspection to ensure no connections exist between the recycled water and domestic water supply systems, look for evidence of spills and runoff, and evaluate whether stored recycled water is being used within 2 to 4 days. If a commercial hauler reports a potential cross-connection, City staff will visit the site within 24 to 48 hours (depending on the cited problems) and conduct a cross-connection control investigation.

Figure 1. City of Healdsburg Recycled Water Users



ATTACHMENT 1 - 2018 and 2020 California Toxics Rule (CRT) Priority Pollutants Results

- A. December 2018 Influent CRT Results
- B. December 2018 Effluent CRT Results
- C. March 2020 Effluent CRT Results
- D. May 2020 Effluent CRT Results



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11 February 2019

Healdsburg, City of - WW

Attn: Angie Koski

340 Foreman Lane

Healdsburg, CA 95448-0578

RE: Wastewater

Work Order: 18L1301

Enclosed are the results of analyses for samples received by the laboratory on 12/11/18 15:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Leslie M. Quinn For Sheri L. Speaks
Project Manager



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: INF-001 Priority Pollutants	Reported: 02/11/19 16:31
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Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | T: 925-828-6226 | F: 925-828-6309 | ELAP# 2728
Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | T: 916-686-5190 | F: 916-686-5192 | ELAP# 2922
North Bay: 110 Liberty Street | Petaluma, CA 94952 | T: 707-769-3128 | F: 707-769-8093 | ELAP# 2303
San Diego Service Center: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | T: 760-930-2555 | F: 760-930-2510

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
INF-001 - Grab	18L1301-01	Water	12/11/18 08:00	12/11/18 15:35
INF-001 - Composite	18L1301-02	Water	12/11/18 08:00	12/11/18 15:35



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Metals by EPA 200 Series Methods

Analyte	Result	MDL	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit	Units							

INF-001 - Composite (18L1301-02) Water **Sampled: 12/11/18 08:00** **Received: 12/11/18 15:35**

Calcium	37	0.080	1.0	mg/L	1	AL83809	12/14/18 12:30	12/20/18 16:09	EPA 200.7	MAM	
Chromium, hexavalent	ND	0.30	1.0	ug/L	1	AL84111	12/19/18 18:13	12/19/18 18:13	EPA 218.6	SMP	U
Magnesium	23	0.030	1.0	mg/L	1	AL83809	12/14/18 12:30	12/20/18 16:09	EPA 200.7	MAM	
Mercury	0.023	0.020	0.020	ug/L	1	AL83712	12/13/18 09:15	12/13/18 15:39	EPA 245.1	LMR	



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Metals by EPA Method 200.8 ICP/MS

Analyte	Result	MDL	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit									
INF-001 - Composite (18L1301-02) Water Sampled: 12/11/18 08:00 Received: 12/11/18 15:35												
Antimony	0.30	0.20	0.50		ug/L	1	AL83962	12/19/18 13:15	12/21/18 18:37	EPA 200.8	MMY	J
Arsenic	0.65	0.20	0.50		ug/L	1	AL83962	12/19/18 13:15	12/21/18 18:37	EPA 200.8	MMY	
Beryllium	ND	0.050	0.10		ug/L	1	AL83962	12/19/18 13:15	12/21/18 18:37	EPA 200.8	MMY	U
Cadmium	0.11	0.060	0.10		ug/L	1	AL83962	12/19/18 13:15	12/21/18 18:37	EPA 200.8	MMY	
Chromium	2.6	0.50	0.50		ug/L	1	AL83962	12/19/18 13:15	12/21/18 18:37	EPA 200.8	MMY	
Copper	110	0.40	0.50		ug/L	1	AL83962	12/19/18 13:15	12/21/18 18:37	EPA 200.8	MMY	
Lead	1.4	0.060	0.25		ug/L	1	AL83962	12/19/18 13:15	12/21/18 18:37	EPA 200.8	MMY	
Nickel	9.7	0.30	0.50		ug/L	1	AL83962	12/19/18 13:15	12/21/18 18:37	EPA 200.8	MMY	
Selenium	0.55	0.30	2.0		ug/L	1	AL83962	12/19/18 13:15	12/21/18 18:37	EPA 200.8	MMY	J
Silver	0.25	0.050	0.10		ug/L	1	AL83962	12/19/18 13:15	12/21/18 18:37	EPA 200.8	MMY	
Thallium	ND	0.050	0.10		ug/L	1	AL83962	12/19/18 13:15	12/21/18 18:37	EPA 200.8	MMY	U
Zinc	100	2.0	5.0		ug/L	1	AL83962	12/19/18 13:15	12/21/18 18:37	EPA 200.8	MMY	



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Metals by APHA/EPA Methods

Analyte	Result	MDL	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit									

INF-001 - Composite (18L1301-02) Water **Sampled: 12/11/18 08:00** **Received: 12/11/18 15:35**

Chromium, trivalent	2.6	0.50	0.50	ug/L	1	AL83809	12/14/18 12:30	12/27/18 12:46	Calculation	MMY
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Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	MDL	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit									

INF-001 - Composite (18L1301-02) Water **Sampled: 12/11/18 08:00** **Received: 12/11/18 15:35**

Hardness, Total	189	1	5	mg/L	1	AL83809	12/14/18 12:30	12/20/18 16:09	SM2340B	MAM
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Miscellaneous Physical/Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit									

INF-001 - Composite (18L1301-02) Water Sampled: 12/11/18 08:00 Received: 12/11/18 15:35

Cyanide (total)	ND	0.0020	0.0050	mg/L	1	AL84145	12/20/18 11:00	12/20/18 18:32	10-204-00-1-X	SMP		U
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Acrolein by EPA Method 624

Analyte	Result	MDL	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit	Units							

INF-001 - Grab (18L1301-01) Water											Sampled: 12/11/18 08:00	Received: 12/11/18 15:35	R-04
Acrolein	ND	10	25	ug/L	5	AL83770	12/13/18 13:19	12/14/18 00:28	EPA 624	MM	U		
Surrogate: Bromofluorobenzene		113 %	70-130			AL83770	12/13/18 13:19	12/14/18 00:28	EPA 624	MM			
Surrogate: Dibromofluoromethane		101 %	70-130			AL83770	12/13/18 13:19	12/14/18 00:28	EPA 624	MM			
Surrogate: Toluene-d8		102 %	70-130			AL83770	12/13/18 13:19	12/14/18 00:28	EPA 624	MM			



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: INF-001 Priority Pollutants	Reported: 02/11/19 16:31
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2-Chloroethylvinyl Ether by EPA Method 624

Analyte	Result	MDL	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit									

INF-001 - Grab (18L1301-01) Water											Sampled: 12/11/18 08:00	Received: 12/11/18 15:35	R-04
2-Chloroethylvinyl ether	ND	3.5	5.0	ug/L	5	AL83770	12/13/18 13:19	12/14/18 00:28	EPA 624	MM	U		
<i>Surrogate: Bromofluorobenzene</i>		113 %	70-130			AL83770	12/13/18 13:19	12/14/18 00:28	EPA 624	MM			
<i>Surrogate: Dibromofluoromethane</i>		101 %	70-130			AL83770	12/13/18 13:19	12/14/18 00:28	EPA 624	MM			
<i>Surrogate: Toluene-d8</i>		102 %	70-130			AL83770	12/13/18 13:19	12/14/18 00:28	EPA 624	MM			



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: INF-001 Priority Pollutants	Reported: 02/11/19 16:31
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Volatile Organic Compounds by EPA Method 624

Analyte	Result	MDL	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit									
INF-001 - Grab (18L1301-01) Water Sampled: 12/11/18 08:00 Received: 12/11/18 15:35												
												R-04
Acrylonitrile	ND	2.0	10		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
Benzene	ND	1.5	1.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
Bromoform	ND	1.5	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
Carbon tetrachloride	ND	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
Chlorobenzene	ND	1.5	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
Dibromochloromethane	ND	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
Chloroethane	ND	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
Chloroform	9.4	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	
Bromodichloromethane	ND	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
1,1-Dichloroethane	ND	0.50	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
1,2-Dichloroethane	ND	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
1,1-Dichloroethene	ND	1.5	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
1,2-Dichloropropane	ND	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
cis-1,3-Dichloropropene	ND	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
trans-1,3-Dichloropropene	ND	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
Ethylbenzene	ND	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
Bromomethane	ND	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
Chloromethane	ND	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
Methylene chloride	ND	2.5	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
1,1,2,2-Tetrachloroethane	ND	1.5	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
Tetrachloroethene	ND	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
Toluene	3.6	1.5	1.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	
trans-1,2-Dichloroethene	ND	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
1,1,1-Trichloroethane	ND	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
1,1,2-Trichloroethane	ND	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
Trichloroethene	ND	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
Trihalomethanes (total)	9.4	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	
Vinyl chloride	ND	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
1,2-Dichlorobenzene	ND	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
1,3-Dichlorobenzene	ND	2.0	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
1,4-Dichlorobenzene	ND	0.50	2.5		ug/L	5	AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM	U
Surrogate: Bromofluorobenzene		103 %	70-130			AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM		
Surrogate: Dibromofluoromethane		107 %	70-130			AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM		
Surrogate: Toluene-d8		103 %	70-130			AL83697	12/12/18 09:00	12/12/18 15:16	EPA 624	MM		

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: INF-001 Priority Pollutants	Reported: 02/11/19 16:31
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Organochlorine Pesticides and PCBs by EPA Method 608

Analyte	Result	MDL	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit	Units							
INF-001 - Composite (18L1301-02) Water Sampled: 12/11/18 08:00 Received: 12/11/18 15:35 R-06											
Aldrin	ND	0.20	0.20	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	R-01, R-01a, U
alpha-BHC	ND	0.040	0.10	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
beta-BHC	ND	0.040	0.050	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
gamma-BHC (Lindane)	ND	0.040	0.10	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
delta-BHC	ND	0.020	0.050	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
Chlordane (tech)	ND	0.10	0.50	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
4,4'-DDT	ND	0.030	0.10	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
4,4'-DDE	ND	0.040	0.20	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
4,4'-DDD	ND	0.050	0.20	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
Dieldrin	ND	0.050	0.10	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
Endosulfan I	ND	0.040	0.10	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
Endosulfan II	ND	0.050	0.10	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
Endosulfan sulfate	ND	0.030	0.50	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
Endrin	ND	0.080	0.10	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
Endrin aldehyde	ND	0.20	0.20	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	R-01, R-01a, U
Heptachlor	ND	0.050	0.10	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
Heptachlor epoxide	ND	0.090	0.10	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
PCB-1016	ND	0.80	5.0	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
PCB-1221	ND	2.0	5.0	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
PCB-1232	ND	1.0	5.0	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
PCB-1242	ND	0.40	5.0	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
PCB-1248	ND	0.60	5.0	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
PCB-1254	ND	0.40	5.0	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
PCB-1260	ND	0.40	5.0	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
Toxaphene	ND	2.0	5.0	ug/L	10	AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	U
Surrogate: Dibutylchloroendate		71.9 %	63-124			AL83694	12/13/18 13:45	12/15/18 00:45	EPA 608	KMB	

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: INF-001 Priority Pollutants	Reported: 02/11/19 16:31
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Semivolatile Organic Compounds by EPA Method 625

Analyte	Result	MDL	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit	Units							

INF-001 - Composite (18L1301-02) Water **Sampled: 12/11/18 08:00** **Received: 12/11/18 15:35** **R-06**

2-Chlorophenol	ND	14	100	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
2,4-Dichlorophenol	ND	14	100	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
2,4-Dimethylphenol	ND	20	40	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
4,6-Dinitro-2-methylphenol	ND	60	100	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
2,4-Dinitrophenol	ND	100	100	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
2-Nitrophenol	ND	18	200	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
4-Nitrophenol	ND	60	200	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
4-Chloro-3-methylphenol	ND	20	20	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
2-Methylphenol (o-cresol)	ND	12	100	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
Pentachlorophenol	ND	80	100	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
Phenol	11	10	20	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	J
2,4,6-Trichlorophenol	ND	14	200	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
Bis(2-chloroethoxy)methane	ND	8.0	100	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
Bis(2-chloroethyl)ether	ND	6.0	20	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
Bis(2-chloroisopropyl)ether	ND	8.0	40	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
Bis(2-ethylhexyl)phthalate	ND	60	100	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
4-Bromophenyl phenyl ether	ND	8.0	100	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
Butyl benzyl phthalate	ND	12	200	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
2-Chloronaphthalene	ND	12	200	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
4-Chlorophenyl phenyl ether	ND	18	100	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
1,2-Dichlorobenzene	ND	12	40	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
1,3-Dichlorobenzene	ND	12	20	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
1,4-Dichlorobenzene	ND	12	20	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
Diethyl phthalate	ND	6.0	40	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
Dimethyl phthalate	ND	6.0	40	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
Di-n-butyl phthalate	ND	18	200	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
2,4-Dinitrotoluene	ND	4.0	100	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
2,6-Dinitrotoluene	ND	6.0	100	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
Di-n-octyl phthalate	ND	12	200	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
1,2-Diphenylhydrazine	ND	12	20	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
Hexachlorobenzene	ND	18	20	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
Hexachlorobutadiene	ND	16	20	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
Hexachlorocyclopentadiene	ND	80	100	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
Hexachloroethane	ND	12	20	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
Isophorone	ND	6.0	20	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
Nitrobenzene	ND	6.0	20	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U

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Semivolatile Organic Compounds by EPA Method 625

Analyte	Result	MDL	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit	Units							

INF-001 - Composite (18L1301-02) Water **Sampled: 12/11/18 08:00** **Received: 12/11/18 15:35** **R-06**

N-Nitrosodimethylamine	ND	6.0	100	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
N-Nitrosodi-n-propylamine	ND	6.0	100	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
N-Nitrosodiphenylamine	ND	6.0	20	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
1,2,4-Trichlorobenzene	ND	12	100	ug/L	20	AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	U
Surrogate: 2-Fluorobiphenyl		113 %	42-115			AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	
Surrogate: 2-Fluorophenol		36.5 %	21-87			AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	
Surrogate: Nitrobenzene-d5		73.5 %	50-110			AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	
Surrogate: p-Terphenyl-d14		87.5 %	61-134			AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	
Surrogate: Phenol-d6		27.0 %	20-52			AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	
Surrogate: 2,4,6-Tribromophenol		80.0 %	54-135			AL83703	12/13/18 07:00	12/14/18 04:19	EPA 625	NBH	



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Benzidines by EPA Method 625

Analyte	Result	MDL	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit	Units							

INF-001 - Composite (18L1301-02) Water Sampled: 12/11/18 08:00 Received: 12/11/18 15:35

Benzidine	ND	3.0	5.0	ug/L	1	AL83769	12/13/18 13:05	12/17/18 22:43	EPA 625	NBH	U
3,3'-Dichlorobenzidine	ND	3.0	5.0	ug/L	1	AL83769	12/13/18 13:05	12/17/18 22:43	EPA 625	NBH	U
<i>Surrogate: 2-Fluorobiphenyl</i>		97.2 %	60-140			AL83769	12/13/18 13:05	12/17/18 22:43	EPA 625	NBH	
<i>Surrogate: Nitrobenzene-d5</i>		103 %	60-140			AL83769	12/13/18 13:05	12/17/18 22:43	EPA 625	NBH	
<i>Surrogate: p-Terphenyl-d14</i>		86.8 %	61-134			AL83769	12/13/18 13:05	12/17/18 22:43	EPA 625	NBH	



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Semivolatile Organic Compounds by EPA Method 625 SIM

Analyte	Result	MDL	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit									
INF-001 - Composite (18L1301-02) Water Sampled: 12/11/18 08:00 Received: 12/11/18 15:35												
												R-06
Acenaphthene	ND	2.0	2.0		ug/L	10	AL83891	12/13/18 08:00	12/18/18 00:36	EPA 625SIM	NBH	U
Acenaphthylene	ND	2.0	2.0		ug/L	10	AL83891	12/13/18 08:00	12/18/18 00:36	EPA 625SIM	NBH	U
Anthracene	ND	0.90	2.0		ug/L	10	AL83891	12/13/18 08:00	12/18/18 00:36	EPA 625SIM	NBH	U
Benzo (a) anthracene	ND	2.0	2.0		ug/L	10	AL83891	12/13/18 08:00	12/18/18 00:36	EPA 625SIM	NBH	U
Benzo (a) pyrene	ND	2.0	2.0		ug/L	10	AL83891	12/13/18 08:00	12/18/18 00:36	EPA 625SIM	NBH	U
Benzo (b) fluoranthene	ND	2.0	2.0		ug/L	10	AL83891	12/13/18 08:00	12/18/18 00:36	EPA 625SIM	NBH	U
Benzo (g,h,i) perylene	ND	1.0	2.0		ug/L	10	AL83891	12/13/18 08:00	12/18/18 00:36	EPA 625SIM	NBH	U
Benzo (k) fluoranthene	ND	2.0	2.0		ug/L	10	AL83891	12/13/18 08:00	12/18/18 00:36	EPA 625SIM	NBH	U
Chrysene	ND	2.0	2.0		ug/L	10	AL83891	12/13/18 08:00	12/18/18 00:36	EPA 625SIM	NBH	U
Dibenz (a,h) anthracene	ND	1.0	2.0		ug/L	10	AL83891	12/13/18 08:00	12/18/18 00:36	EPA 625SIM	NBH	U
Fluoranthene	ND	0.70	2.0		ug/L	10	AL83891	12/13/18 08:00	12/18/18 00:36	EPA 625SIM	NBH	U
Fluorene	ND	2.0	2.0		ug/L	10	AL83891	12/13/18 08:00	12/18/18 00:36	EPA 625SIM	NBH	U
Indeno (1,2,3-cd) pyrene	ND	0.30	2.0		ug/L	10	AL83891	12/13/18 08:00	12/18/18 00:36	EPA 625SIM	NBH	U
Naphthalene	ND	0.90	2.0		ug/L	10	AL83891	12/13/18 08:00	12/18/18 00:36	EPA 625SIM	NBH	U
Phenanthrene	ND	1.0	2.0		ug/L	10	AL83891	12/13/18 08:00	12/18/18 00:36	EPA 625SIM	NBH	U
Pyrene	ND	2.0	2.0		ug/L	10	AL83891	12/13/18 08:00	12/18/18 00:36	EPA 625SIM	NBH	U
Surrogate: 2-Fluorobiphenyl		79.0 %	34-133				AL83891	12/13/18 08:00	12/18/18 00:36	EPA 625SIM	NBH	
Surrogate: Nitrobenzene-d5		57.5 %	36-131				AL83891	12/13/18 08:00	12/18/18 00:36	EPA 625SIM	NBH	
Surrogate: p-Terphenyl-d14		83.5 %	35-156				AL83891	12/13/18 08:00	12/18/18 00:36	EPA 625SIM	NBH	

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Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83712 - EPA 245.1 Hg Water

Blank (AL83712-BLK1)			Prepared & Analyzed: 12/13/18								
Mercury	ND	0.020	0.020	ug/L							U
LCS (AL83712-BS1)			Prepared & Analyzed: 12/13/18								
Mercury	0.270	0.020	0.020	ug/L	0.250		108	85-115			
Duplicate (AL83712-DUP1)			Source: 18L0504-01			Prepared & Analyzed: 12/13/18					
Mercury	ND	0.020	0.020	ug/L		ND				20	U
Matrix Spike (AL83712-MS1)			Source: 18L0504-01			Prepared & Analyzed: 12/13/18					
Mercury	0.287	0.020	0.020	ug/L	0.250	ND	115	70-130			
Matrix Spike Dup (AL83712-MSD1)			Source: 18L0504-01			Prepared & Analyzed: 12/13/18					
Mercury	0.282	0.020	0.020	ug/L	0.250	ND	113	70-130	1.76	20	

Batch AL83809 - Metals Digest

Blank (AL83809-BLK1)			Prepared: 12/14/18 Analyzed: 12/19/18								
Calcium	ND	0.080	1.0	mg/L							U
Magnesium	ND	0.030	1.0	mg/L							U
LCS (AL83809-BS1)			Prepared: 12/14/18 Analyzed: 12/19/18								
Calcium	8.04	0.080	1.0	mg/L	8.00		100	85-115			
Magnesium	8.06	0.030	1.0	mg/L	8.00		101	85-115			
Duplicate (AL83809-DUP1)			Source: 18L1239-01			Prepared: 12/14/18 Analyzed: 12/19/18					
Calcium	56.6	0.080	1.0	mg/L		56.2			0.604	20	
Magnesium	37.4	0.030	1.0	mg/L		37.3			0.197	20	

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Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83809 - Metals Digest

Matrix Spike (AL83809-MS1)		Source: 18L1239-01			Prepared: 12/14/18 Analyzed: 12/19/18						
Calcium	63.6	0.080	1.0	mg/L	8.00	56.2	92.6	70-130			
Magnesium	45.0	0.030	1.0	mg/L	8.00	37.3	96.6	70-130			
Matrix Spike (AL83809-MS2)		Source: 18L1707-01			Prepared: 12/14/18 Analyzed: 12/19/18						
Calcium	172	0.080	1.0	mg/L	8.00	165	91.6	70-130			
Magnesium	86.2	0.030	1.0	mg/L	8.00	78.6	94.3	70-130			
Matrix Spike Dup (AL83809-MSD1)		Source: 18L1239-01			Prepared: 12/14/18 Analyzed: 12/19/18						
Calcium	64.2	0.080	1.0	mg/L	8.00	56.2	99.4	70-130	0.852	20	
Magnesium	45.5	0.030	1.0	mg/L	8.00	37.3	103	70-130	1.09	20	

Batch AL84111 - General Preparation

Blank (AL84111-BLK1)		Prepared & Analyzed: 12/19/18									
Chromium, hexavalent	ND	0.30	1.0	ug/L							U
LCS (AL84111-BS1)		Prepared & Analyzed: 12/19/18									
Chromium, hexavalent	9.63	0.30	1.0	ug/L	10.0		96.3	90-110			
Duplicate (AL84111-DUP1)		Source: 18L1303-01			Prepared & Analyzed: 12/19/18						
Chromium, hexavalent	ND	0.30	1.0	ug/L		ND				20	U
Matrix Spike (AL84111-MS1)		Source: 18L1303-01			Prepared & Analyzed: 12/19/18						
Chromium, hexavalent	9.51	0.30	1.0	ug/L	10.0	ND	95.1	90-110			
Matrix Spike (AL84111-MS2)		Source: 18L2068-02			Prepared & Analyzed: 12/20/18						
Chromium, hexavalent	9.10	0.30	1.0	ug/L	10.0	ND	91.0	90-110			

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Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL84111 - General Preparation

Matrix Spike Dup (AL84111-MSD1)	Source: 18L1303-01		Prepared & Analyzed: 12/19/18								
Chromium, hexavalent	9.55	0.30	1.0	ug/L	10.0	ND	95.5	90-110	0.378	20	

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Metals by EPA Method 200.8 ICP/MS - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83962 - EPA 200.8

Blank (AL83962-BLK1)

Prepared: 12/19/18 Analyzed: 12/21/18

Antimony	ND	0.20	0.50	ug/L							U
Arsenic	ND	0.20	0.50	ug/L							U
Beryllium	ND	0.050	0.10	ug/L							U
Cadmium	ND	0.060	0.10	ug/L							U
Chromium	ND	0.50	0.50	ug/L							U
Copper	0.620	0.40	0.50	ug/L							
Lead	ND	0.060	0.25	ug/L							U
Nickel	0.435	0.30	0.50	ug/L							J
Selenium	ND	0.30	2.0	ug/L							U
Silver	ND	0.050	0.10	ug/L							U
Thallium	ND	0.050	0.10	ug/L							U
Zinc	3.63	2.0	5.0	ug/L							J

LCS (AL83962-BS1)

Prepared: 12/19/18 Analyzed: 12/21/18

Antimony	20.8	0.20	0.50	ug/L	20.0		104	85-115			
Arsenic	20.7	0.20	0.50	ug/L	20.0		103	85-115			
Beryllium	19.6	0.050	0.10	ug/L	20.0		98.0	85-115			
Cadmium	20.6	0.060	0.10	ug/L	20.0		103	85-115			
Chromium	19.7	0.50	0.50	ug/L	20.0		98.5	85-115			
Copper	21.0	0.40	0.50	ug/L	20.0		105	85-115			
Lead	20.5	0.060	0.25	ug/L	20.0		102	85-115			
Nickel	22.1	0.30	0.50	ug/L	20.0		110	85-115			
Selenium	21.2	0.30	2.0	ug/L	20.0		106	85-115			
Silver	20.4	0.050	0.10	ug/L	20.0		102	85-115			
Thallium	20.3	0.050	0.10	ug/L	20.0		102	85-115			
Zinc	100	2.0	5.0	ug/L	100		100	85-115			

Duplicate (AL83962-DUP1)

Source: 18L1442-01

Prepared: 12/19/18 Analyzed: 12/21/18

Antimony	ND	0.80	2.0	ug/L		ND			20		R-01, U
Arsenic	ND	0.80	2.0	ug/L		0.847			200	20	R-01, U
Beryllium	ND	0.20	0.40	ug/L		ND				20	R-01, U
Cadmium	ND	0.24	0.40	ug/L		ND				20	R-01, U
Chromium	2.80	2.0	2.0	ug/L		3.24			14.3	20	
Copper	3.24	1.6	2.0	ug/L		3.19			1.60	20	
Lead	ND	0.24	1.0	ug/L		ND				20	R-01, U
Nickel	4.17	1.2	2.0	ug/L		4.35			4.31	20	
Selenium	ND	1.2	8.0	ug/L		ND				20	R-01, U

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Metals by EPA Method 200.8 ICP/MS - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83962 - EPA 200.8

Duplicate (AL83962-DUP1)		Source: 18L1442-01			Prepared: 12/19/18 Analyzed: 12/21/18					
Silver	0.292	0.20	0.40	ug/L		ND		200	20	J
Thallium	ND	0.20	0.40	ug/L		ND			20	R-01, U
Zinc	8.53	8.0	20	ug/L		ND		200	20	R-01, J

Matrix Spike (AL83962-MS1)		Source: 18L1442-01			Prepared: 12/19/18 Analyzed: 12/21/18					
Antimony	21.6	0.80	2.0	ug/L	20.0	ND	108	70-130		
Arsenic	21.6	0.80	2.0	ug/L	20.0	0.847	104	70-130		
Beryllium	19.6	0.20	0.40	ug/L	20.0	ND	98.0	70-130		
Cadmium	20.8	0.24	0.40	ug/L	20.0	ND	104	70-130		
Chromium	23.0	2.0	2.0	ug/L	20.0	3.24	98.6	70-130		
Copper	23.1	1.6	2.0	ug/L	20.0	3.19	99.8	70-130		
Lead	20.7	0.24	1.0	ug/L	20.0	ND	103	70-130		
Nickel	28.1	1.2	2.0	ug/L	20.0	4.35	119	70-130		
Selenium	22.1	1.2	8.0	ug/L	20.0	ND	111	70-130		
Silver	21.2	0.20	0.40	ug/L	20.0	ND	106	70-130		
Thallium	20.5	0.20	0.40	ug/L	20.0	ND	103	70-130		
Zinc	106	8.0	20	ug/L	100	ND	106	70-130		

Matrix Spike (AL83962-MS2)		Source: 18L2063-01			Prepared: 12/19/18 Analyzed: 12/21/18					
Antimony	18.8	0.80	2.0	ug/L	20.0	ND	94.1	70-130		
Arsenic	23.4	0.80	2.0	ug/L	20.0	5.19	91.2	70-130		
Beryllium	18.2	0.20	0.40	ug/L	20.0	ND	91.1	70-130		
Cadmium	18.5	0.24	0.40	ug/L	20.0	ND	92.5	70-130		
Chromium	16.9	2.0	2.0	ug/L	20.0	ND	84.7	70-130		
Copper	19.9	1.6	2.0	ug/L	20.0	4.76	75.9	70-130		
Lead	19.0	0.24	1.0	ug/L	20.0	0.283	93.5	70-130		
Selenium	18.4	1.2	8.0	ug/L	20.0	ND	91.9	70-130		
Silver	18.5	0.20	0.40	ug/L	20.0	ND	92.7	70-130		
Thallium	18.7	0.20	0.40	ug/L	20.0	ND	93.4	70-130		
Zinc	92.4	8.0	20	ug/L	100	9.03	83.4	70-130		

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Metals by EPA Method 200.8 ICP/MS - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83962 - EPA 200.8

Matrix Spike Dup (AL83962-MSD1)	Source: 18L1442-01			Prepared: 12/19/18 Analyzed: 12/21/18							
Antimony	20.9	0.80	2.0	ug/L	20.0	ND	104	70-130	3.65	20	
Arsenic	20.4	0.80	2.0	ug/L	20.0	0.847	97.6	70-130	6.03	20	
Beryllium	19.7	0.20	0.40	ug/L	20.0	ND	98.5	70-130	0.565	20	
Cadmium	20.0	0.24	0.40	ug/L	20.0	ND	99.9	70-130	3.78	20	
Chromium	23.0	2.0	2.0	ug/L	20.0	3.24	98.9	70-130	0.237	20	
Copper	21.6	1.6	2.0	ug/L	20.0	3.19	92.2	70-130	6.78	20	
Lead	20.2	0.24	1.0	ug/L	20.0	ND	101	70-130	2.41	20	
Nickel	26.8	1.2	2.0	ug/L	20.0	4.35	112	70-130	4.70	20	
Selenium	22.6	1.2	8.0	ug/L	20.0	ND	113	70-130	2.14	20	
Silver	20.4	0.20	0.40	ug/L	20.0	ND	102	70-130	3.83	20	
Thallium	20.2	0.20	0.40	ug/L	20.0	ND	101	70-130	1.71	20	
Zinc	101	8.0	20	ug/L	100	ND	101	70-130	4.95	20	



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Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83809 - Metals Digest

Blank (AL83809-BLK1)		Prepared: 12/14/18 Analyzed: 12/19/18									
Hardness, Total	ND	1	5	mg/L							U
Duplicate (AL83809-DUP1)		Source: 18L1239-01 Prepared: 12/14/18 Analyzed: 12/19/18									
Hardness, Total	295	1	5	mg/L		294			0.392	20	

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Miscellaneous Physical/Conventional Chemistry Parameters - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL84145 - General Preparation

LCS (AL84145-BS1)		Prepared & Analyzed: 12/20/18									
Cyanide (total)	0.218	0.0020	0.0050	mg/L	0.200		109	85-115			
Duplicate (AL84145-DUP1)		Source: 18L0832-01 Prepared & Analyzed: 12/20/18									
Cyanide (total)	ND	0.0020	0.0050	mg/L		0.00358			200	25	QD-04, U
Matrix Spike (AL84145-MS1)		Source: 18L0832-01 Prepared & Analyzed: 12/20/18									
Cyanide (total)	0.211	0.0020	0.0050	mg/L	0.200	0.00358	103	85-115			
Matrix Spike (AL84145-MS2)		Source: 18L0837-01 Prepared & Analyzed: 12/20/18									
Cyanide (total)	0.228	0.0020	0.0050	mg/L	0.200	ND	114	85-115			
Matrix Spike Dup (AL84145-MSD1)		Source: 18L0832-01 Prepared & Analyzed: 12/20/18									
Cyanide (total)	0.220	0.0020	0.0050	mg/L	0.200	0.00358	108	85-115	4.43	25	

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Acrolein by EPA Method 624 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83770 - VOAs in Water GCMS

Blank (AL83770-BLK1)

Prepared & Analyzed: 12/13/18

Acrolein	ND	2.0	5.0	ug/L							U
Surrogate: Bromofluorobenzene	26.2			ug/L	25.0		105	70-130			
Surrogate: Dibromofluoromethane	23.6			ug/L	25.0		94.6	70-130			
Surrogate: Toluene-d8	23.4			ug/L	25.0		93.5	70-130			

LCS (AL83770-BS1)

Prepared & Analyzed: 12/13/18

Acrolein	46.4	2.0	5.0	ug/L	50.0		92.9	50-150			
Surrogate: Bromofluorobenzene	26.2			ug/L	25.0		105	70-130			
Surrogate: Dibromofluoromethane	24.1			ug/L	25.0		96.5	70-130			
Surrogate: Toluene-d8	25.0			ug/L	25.0		100	70-130			

LCS Dup (AL83770-BSD1)

Prepared & Analyzed: 12/13/18

Acrolein	47.3	2.0	5.0	ug/L	50.0		94.6	50-150	1.90	25	
Surrogate: Bromofluorobenzene	26.9			ug/L	25.0		108	70-130			
Surrogate: Dibromofluoromethane	23.6			ug/L	25.0		94.4	70-130			
Surrogate: Toluene-d8	26.0			ug/L	25.0		104	70-130			



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: INF-001 Priority Pollutants	Reported: 02/11/19 16:31
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2-Chloroethylvinyl Ether by EPA Method 624 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83770 - VOAs in Water GCMS

Blank (AL83770-BLK1)											
											Prepared & Analyzed: 12/13/18
2-Chloroethylvinyl ether	ND	0.70	1.0	ug/L							U
Surrogate: Bromofluorobenzene	26.2			ug/L	25.0		105	70-130			
Surrogate: Dibromofluoromethane	23.6			ug/L	25.0		94.6	70-130			
Surrogate: Toluene-d8	23.4			ug/L	25.0		93.5	70-130			
LCS (AL83770-BS1)											
											Prepared & Analyzed: 12/13/18
2-Chloroethylvinyl ether	23.6	0.70	1.0	ug/L	25.0		94.6	75-130			
Surrogate: Bromofluorobenzene	26.2			ug/L	25.0		105	70-130			
Surrogate: Dibromofluoromethane	24.1			ug/L	25.0		96.5	70-130			
Surrogate: Toluene-d8	25.0			ug/L	25.0		100	70-130			
LCS Dup (AL83770-BSD1)											
											Prepared & Analyzed: 12/13/18
2-Chloroethylvinyl ether	25.5	0.70	1.0	ug/L	25.0		102	75-130	7.49	30	
Surrogate: Bromofluorobenzene	26.9			ug/L	25.0		108	70-130			
Surrogate: Dibromofluoromethane	23.6			ug/L	25.0		94.4	70-130			
Surrogate: Toluene-d8	26.0			ug/L	25.0		104	70-130			

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Volatile Organic Compounds by EPA Method 624 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83697 - VOAs in Water GCMS

Blank (AL83697-BLK1)

Prepared: 12/11/18 Analyzed: 12/12/18

Acrylonitrile	ND	0.40	2.0	ug/L							U
Benzene	ND	0.30	0.30	ug/L							U
Bromoform	ND	0.30	0.50	ug/L							U
Carbon tetrachloride	ND	0.40	0.50	ug/L							U
Chlorobenzene	ND	0.30	0.50	ug/L							U
Dibromochloromethane	ND	0.40	0.50	ug/L							U
Chloroethane	ND	0.40	0.50	ug/L							U
Chloroform	ND	0.40	0.50	ug/L							U
Bromodichloromethane	ND	0.40	0.50	ug/L							U
1,1-Dichloroethane	ND	0.10	0.50	ug/L							U
1,2-Dichloroethane	ND	0.40	0.50	ug/L							U
1,1-Dichloroethene	ND	0.30	0.50	ug/L							U
1,2-Dichloropropane	ND	0.40	0.50	ug/L							U
cis-1,3-Dichloropropene	ND	0.40	0.50	ug/L							U
trans-1,3-Dichloropropene	ND	0.40	0.50	ug/L							U
Ethylbenzene	ND	0.40	0.50	ug/L							U
Bromomethane	ND	0.40	0.50	ug/L							U
Chloromethane	ND	0.40	0.50	ug/L							U
Methylene chloride	ND	0.50	0.50	ug/L							U
1,1,2,2-Tetrachloroethane	ND	0.30	0.50	ug/L							U
Tetrachloroethene	ND	0.40	0.50	ug/L							U
Toluene	ND	0.30	0.30	ug/L							U
trans-1,2-Dichloroethene	ND	0.40	0.50	ug/L							U
1,1,1-Trichloroethane	ND	0.40	0.50	ug/L							U
1,1,2-Trichloroethane	ND	0.40	0.50	ug/L							U
Trichloroethene	ND	0.40	0.50	ug/L							U
Trihalomethanes (total)	ND	0.40	0.50	ug/L							U
Vinyl chloride	ND	0.40	0.50	ug/L							U
1,2-Dichlorobenzene	ND	0.40	0.50	ug/L							U
1,3-Dichlorobenzene	ND	0.40	0.50	ug/L							U
1,4-Dichlorobenzene	ND	0.10	0.50	ug/L							U
Surrogate: Bromofluorobenzene	25.2			ug/L	25.0		101	70-130			
Surrogate: Dibromofluoromethane	23.4			ug/L	25.0		93.4	70-130			
Surrogate: Toluene-d8	25.2			ug/L	25.0		101	70-130			

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Volatile Organic Compounds by EPA Method 624 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83697 - VOAs in Water GCMS

LCS (AL83697-BS1)

Prepared: 12/11/18 Analyzed: 12/12/18

Acrylonitrile	21.8	0.40	2.0	ug/L	20.0		109	70-130			
Benzene	21.0	0.30	0.30	ug/L	20.0		105	82-122			
Bromoform	20.8	0.30	0.50	ug/L	20.0		104	57-156			
Carbon tetrachloride	20.7	0.40	0.50	ug/L	20.0		103	77-134			
Chlorobenzene	21.3	0.30	0.50	ug/L	20.0		107	84-119			
Dibromochloromethane	20.9	0.40	0.50	ug/L	20.0		104	69-133			
Chloroethane	18.1	0.40	0.50	ug/L	20.0		90.6	68-133			
Chloroform	21.5	0.40	0.50	ug/L	20.0		107	81-122			
Bromodichloromethane	20.7	0.40	0.50	ug/L	20.0		104	86-135			
1,1-Dichloroethane	21.6	0.10	0.50	ug/L	20.0		108	81-126			
1,2-Dichloroethane	20.4	0.40	0.50	ug/L	20.0		102	77-117			
1,1-Dichloroethene	21.7	0.30	0.50	ug/L	20.0		108	71-151			
1,2-Dichloropropane	21.6	0.40	0.50	ug/L	20.0		108	82-125			
cis-1,3-Dichloropropene	17.7	0.40	0.50	ug/L	20.0		88.6	68-125			
trans-1,3-Dichloropropene	18.2	0.40	0.50	ug/L	20.0		91.1	67-129			
Ethylbenzene	24.3	0.40	0.50	ug/L	20.0		121	84-124			
Bromomethane	19.4	0.40	0.50	ug/L	20.0		97.2	69-145			
Chloromethane	21.0	0.40	0.50	ug/L	20.0		105	63-129			
Methylene chloride	22.5	0.50	0.50	ug/L	20.0		112	72-132			
1,1,2,2-Tetrachloroethane	20.3	0.30	0.50	ug/L	20.0		101	77-121			
Tetrachloroethene	21.2	0.40	0.50	ug/L	20.0		106	65-133			
Toluene	23.1	0.30	0.30	ug/L	20.0		116	75-134			
trans-1,2-Dichloroethene	21.2	0.40	0.50	ug/L	20.0		106	79-128			
1,1,1-Trichloroethane	21.8	0.40	0.50	ug/L	20.0		109	70-130			
1,1,2-Trichloroethane	21.8	0.40	0.50	ug/L	20.0		109	83-122			
Trichloroethene	22.2	0.40	0.50	ug/L	20.0		111	84-123			
Vinyl chloride	20.4	0.40	0.50	ug/L	20.0		102	70-130			
1,2-Dichlorobenzene	21.1	0.40	0.50	ug/L	20.0		106	84-121			
1,3-Dichlorobenzene	22.0	0.40	0.50	ug/L	20.0		110	80-120			
1,4-Dichlorobenzene	20.0	0.10	0.50	ug/L	20.0		100	84-120			
Surrogate: Bromofluorobenzene	26.3			ug/L	25.0		105	70-130			
Surrogate: Dibromofluoromethane	23.0			ug/L	25.0		92.1	70-130			
Surrogate: Toluene-d8	25.2			ug/L	25.0		101	70-130			

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Volatile Organic Compounds by EPA Method 624 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83697 - VOAs in Water GCMS

LCS Dup (AL83697-BSD1)

Prepared: 12/11/18 Analyzed: 12/12/18

Acrylonitrile	22.1	0.40	2.0	ug/L	20.0		110	70-130	1.46	25	
Benzene	20.3	0.30	0.30	ug/L	20.0		101	82-122	3.20	25	
Bromoform	19.4	0.30	0.50	ug/L	20.0		97.0	57-156	6.77	25	
Carbon tetrachloride	20.4	0.40	0.50	ug/L	20.0		102	77-134	1.02	25	
Chlorobenzene	20.4	0.30	0.50	ug/L	20.0		102	84-119	4.66	25	
Dibromochloromethane	19.8	0.40	0.50	ug/L	20.0		98.9	69-133	5.31	25	
Chloroethane	17.5	0.40	0.50	ug/L	20.0		87.6	68-133	3.42	25	
Chloroform	20.6	0.40	0.50	ug/L	20.0		103	81-122	4.33	25	
Bromodichloromethane	19.9	0.40	0.50	ug/L	20.0		99.3	86-135	4.19	25	
1,1-Dichloroethane	20.8	0.10	0.50	ug/L	20.0		104	81-126	3.82	25	
1,2-Dichloroethane	19.5	0.40	0.50	ug/L	20.0		97.6	77-117	4.41	25	
1,1-Dichloroethene	21.6	0.30	0.50	ug/L	20.0		108	71-151	0.416	25	
1,2-Dichloropropane	20.6	0.40	0.50	ug/L	20.0		103	82-125	4.92	25	
cis-1,3-Dichloropropene	17.7	0.40	0.50	ug/L	20.0		88.6	68-125	0.00	25	
trans-1,3-Dichloropropene	18.0	0.40	0.50	ug/L	20.0		90.0	67-129	1.16	25	
Ethylbenzene	23.0	0.40	0.50	ug/L	20.0		115	84-124	5.46	25	
Bromomethane	18.6	0.40	0.50	ug/L	20.0		92.8	69-145	4.63	25	
Chloromethane	19.1	0.40	0.50	ug/L	20.0		95.6	63-129	9.37	25	
Methylene chloride	21.3	0.50	0.50	ug/L	20.0		107	72-132	5.16	25	
1,1,2,2-Tetrachloroethane	21.1	0.30	0.50	ug/L	20.0		106	77-121	4.01	25	
Tetrachloroethene	20.7	0.40	0.50	ug/L	20.0		103	65-133	2.72	25	
Toluene	21.9	0.30	0.30	ug/L	20.0		109	75-134	5.38	25	
trans-1,2-Dichloroethene	21.1	0.40	0.50	ug/L	20.0		105	79-128	0.756	25	
1,1,1-Trichloroethane	21.4	0.40	0.50	ug/L	20.0		107	70-130	1.85	25	
1,1,2-Trichloroethane	21.2	0.40	0.50	ug/L	20.0		106	83-122	2.93	25	
Trichloroethene	20.8	0.40	0.50	ug/L	20.0		104	84-123	6.53	25	
Vinyl chloride	19.8	0.40	0.50	ug/L	20.0		99.0	70-130	2.89	25	
1,2-Dichlorobenzene	20.6	0.40	0.50	ug/L	20.0		103	84-121	2.35	25	
1,3-Dichlorobenzene	20.9	0.40	0.50	ug/L	20.0		104	80-120	4.95	25	
1,4-Dichlorobenzene	19.9	0.10	0.50	ug/L	20.0		99.4	84-120	0.652	25	
Surrogate: Bromofluorobenzene	26.5			ug/L	25.0		106	70-130			
Surrogate: Dibromofluoromethane	24.1			ug/L	25.0		96.4	70-130			
Surrogate: Toluene-d8	25.6			ug/L	25.0		103	70-130			

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Volatile Organic Compounds by EPA Method 624 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83697 - VOAs in Water GCMS

Matrix Spike (AL83697-MS1)	Source: 18L1344-01			Prepared: 12/11/18		Analyzed: 12/12/18					
Acrylonitrile	35.8	0.40	2.0	ug/L	20.0	ND	179	70-139			QM-05
Benzene	21.9	0.30	0.30	ug/L	20.0	ND	110	58-139			
Bromoform	20.8	0.30	0.50	ug/L	20.0	ND	104	47-165			
Carbon tetrachloride	22.9	0.40	0.50	ug/L	20.0	ND	114	65-153			
Chlorobenzene	21.4	0.30	0.50	ug/L	20.0	ND	107	58-137			
Dibromochloromethane	20.9	0.40	0.50	ug/L	20.0	ND	104	54-157			
Chloroethane	18.1	0.40	0.50	ug/L	20.0	ND	90.4	59-141			
Chloroform	22.9	0.40	0.50	ug/L	20.0	ND	114	68-121			
Bromodichloromethane	20.8	0.40	0.50	ug/L	20.0	ND	104	62-140			
1,1-Dichloroethane	22.5	0.10	0.50	ug/L	20.0	ND	112	71-143			
1,2-Dichloroethane	20.8	0.40	0.50	ug/L	20.0	ND	104	58-133			
1,1-Dichloroethene	23.0	0.30	0.50	ug/L	20.0	ND	115	70-154			
1,2-Dichloropropane	22.0	0.40	0.50	ug/L	20.0	ND	110	41-142			
cis-1,3-Dichloropropene	19.0	0.40	0.50	ug/L	20.0	ND	95.2	67-128			
trans-1,3-Dichloropropene	19.1	0.40	0.50	ug/L	20.0	ND	95.6	40-144			
Ethylbenzene	24.4	0.40	0.50	ug/L	20.0	ND	122	59-147			
Bromomethane	20.9	0.40	0.50	ug/L	20.0	ND	105	30-163			
Chloromethane	25.7	0.40	0.50	ug/L	20.0	ND	128	69-149			
Methylene chloride	22.4	0.50	0.50	ug/L	20.0	ND	112	43-143			
1,1,2,2-Tetrachloroethane	26.1	0.30	0.50	ug/L	20.0	ND	131	73-127			QM-05
Tetrachloroethene	21.8	0.40	0.50	ug/L	20.0	ND	109	49-148			
Toluene	22.9	0.30	0.30	ug/L	20.0	ND	115	59-147			
trans-1,2-Dichloroethene	22.6	0.40	0.50	ug/L	20.0	ND	113	59-151			
1,1,1-Trichloroethane	23.7	0.40	0.50	ug/L	20.0	ND	119	70-130			
1,1,2-Trichloroethane	21.4	0.40	0.50	ug/L	20.0	ND	107	75-136			
Trichloroethene	20.7	0.40	0.50	ug/L	20.0	ND	104	58-140			
Vinyl chloride	25.3	0.40	0.50	ug/L	20.0	ND	127	53-160			
1,2-Dichlorobenzene	22.3	0.40	0.50	ug/L	20.0	ND	112	76-130			
1,3-Dichlorobenzene	23.7	0.40	0.50	ug/L	20.0	ND	118	54-137			
1,4-Dichlorobenzene	20.8	0.10	0.50	ug/L	20.0	ND	104	41-142			
Surrogate: Bromofluorobenzene	27.8			ug/L	25.0		111	70-130			
Surrogate: Dibromofluoromethane	25.1			ug/L	25.0		100	70-130			
Surrogate: Toluene-d8	25.0			ug/L	25.0		99.8	70-130			

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Organochlorine Pesticides and PCBs by EPA Method 608 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83694 - SVOAs in Water GC

Blank (AL83694-BLK1)

Prepared: 12/13/18 Analyzed: 12/14/18

Aldrin	ND	0.0020	0.0050	ug/L							U
alpha-BHC	ND	0.0040	0.010	ug/L							U
beta-BHC	ND	0.0040	0.0050	ug/L							U
gamma-BHC (Lindane)	ND	0.0040	0.010	ug/L							U
delta-BHC	ND	0.0020	0.0050	ug/L							U
Chlordane (tech)	ND	0.010	0.050	ug/L							U
4,4'-DDT	ND	0.0030	0.010	ug/L							U
4,4'-DDE	ND	0.0040	0.020	ug/L							U
4,4'-DDD	ND	0.0050	0.020	ug/L							U
Dieldrin	ND	0.0050	0.010	ug/L							U
Endosulfan I	ND	0.0040	0.010	ug/L							U
Endosulfan II	ND	0.0050	0.010	ug/L							U
Endosulfan sulfate	ND	0.0030	0.050	ug/L							U
Endrin	ND	0.0080	0.010	ug/L							U
Endrin aldehyde	ND	0.0040	0.010	ug/L							U
Heptachlor	ND	0.0050	0.010	ug/L							U
Heptachlor epoxide	ND	0.0090	0.010	ug/L							U
PCB-1016	ND	0.080	0.50	ug/L							U
PCB-1221	ND	0.20	0.50	ug/L							U
PCB-1232	ND	0.10	0.50	ug/L							U
PCB-1242	ND	0.040	0.50	ug/L							U
PCB-1248	ND	0.060	0.50	ug/L							U
PCB-1254	ND	0.040	0.50	ug/L							U
PCB-1260	ND	0.040	0.50	ug/L							U
Toxaphene	ND	0.20	0.50	ug/L							U
Surrogate: Dibutylchlorodate	0.469			ug/L	0.500		93.8	63-124			

LCS (AL83694-BS1)

Prepared: 12/13/18 Analyzed: 12/14/18

Aldrin	0.181	0.0020	0.0050	ug/L	0.240		75.4	43-120			
alpha-BHC	0.196	0.0040	0.010	ug/L	0.240		81.5	71-122			
beta-BHC	0.200	0.0040	0.0050	ug/L	0.240		83.3	65-123			
gamma-BHC (Lindane)	0.203	0.0040	0.010	ug/L	0.240		84.7	59-122			
delta-BHC	0.193	0.0020	0.0050	ug/L	0.240		80.5	78-129			
4,4'-DDT	0.247	0.0030	0.010	ug/L	0.240		103	79-143			
4,4'-DDE	0.193	0.0040	0.020	ug/L	0.240		80.5	78-132			
4,4'-DDD	0.190	0.0050	0.020	ug/L	0.240		79.2	79-132			

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Organochlorine Pesticides and PCBs by EPA Method 608 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83694 - SVOAs in Water GC

LCS (AL83694-BS1)

Prepared: 12/13/18 Analyzed: 12/14/18

Dieldrin	0.199	0.0050	0.010	ug/L	0.240		83.1	80-124			
Endosulfan I	0.200	0.0040	0.010	ug/L	0.240		83.3	71-126			
Endosulfan II	0.207	0.0050	0.010	ug/L	0.240		86.4	80-125			
Endosulfan sulfate	0.194	0.0030	0.050	ug/L	0.240		80.7	80-126			
Endrin	0.187	0.0080	0.010	ug/L	0.240		78.0	74-153			
Endrin aldehyde	0.197	0.0040	0.010	ug/L	0.240		82.0	46-129			
Heptachlor	0.199	0.0050	0.010	ug/L	0.240		82.9	67-120			
Heptachlor epoxide	0.205	0.0090	0.010	ug/L	0.240		85.4	74-120			
Surrogate: Dibutylchlorendate	0.352			ug/L	0.500		70.4	63-124			

LCS Dup (AL83694-BSD1)

Prepared: 12/13/18 Analyzed: 12/14/18

Aldrin	0.190	0.0020	0.0050	ug/L	0.240		79.3	43-120	5.05	20	
alpha-BHC	0.209	0.0040	0.010	ug/L	0.240		87.2	71-122	6.83	20	
beta-BHC	0.219	0.0040	0.0050	ug/L	0.240		91.3	65-123	9.11	20	
gamma-BHC (Lindane)	0.218	0.0040	0.010	ug/L	0.240		90.9	59-122	7.09	20	
delta-BHC	0.212	0.0020	0.0050	ug/L	0.240		88.2	78-129	9.11	20	
4,4'-DDT	0.286	0.0030	0.010	ug/L	0.240		119	79-143	14.5	20	
4,4'-DDE	0.216	0.0040	0.020	ug/L	0.240		90.1	78-132	11.3	20	
4,4'-DDD	0.206	0.0050	0.020	ug/L	0.240		85.9	79-132	8.22	20	
Dieldrin	0.220	0.0050	0.010	ug/L	0.240		91.8	80-124	9.98	20	
Endosulfan I	0.220	0.0040	0.010	ug/L	0.240		91.5	71-126	9.42	20	
Endosulfan II	0.231	0.0050	0.010	ug/L	0.240		96.3	80-125	10.9	20	
Endosulfan sulfate	0.217	0.0030	0.050	ug/L	0.240		90.6	80-126	11.5	20	
Endrin	0.220	0.0080	0.010	ug/L	0.240		91.7	74-153	16.0	20	
Endrin aldehyde	0.195	0.0040	0.010	ug/L	0.240		81.4	46-129	0.750	30	
Heptachlor	0.214	0.0050	0.010	ug/L	0.240		89.2	67-120	7.30	20	
Heptachlor epoxide	0.224	0.0090	0.010	ug/L	0.240		93.5	74-120	9.03	20	
Surrogate: Dibutylchlorendate	0.388			ug/L	0.500		77.6	63-124			



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: INF-001 Priority Pollutants	Reported: 02/11/19 16:31
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Organochlorine Pesticides and PCBs by EPA Method 608 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83694 - SVOAs in Water GC

Matrix Spike (AL83694-MS1)	Source: 18L1288-01			Prepared: 12/13/18 Analyzed: 12/14/18							
Aldrin	0.173	0.0020	0.0050	ug/L	0.240	ND	72.0	42-122			
alpha-BHC	0.183	0.0040	0.010	ug/L	0.240	ND	76.4	64-114			
beta-BHC	0.180	0.0040	0.0050	ug/L	0.240	ND	74.9	67-126			
gamma-BHC (Lindane)	0.196	0.0040	0.010	ug/L	0.240	0.00720	78.8	69-114			
delta-BHC	0.196	0.0020	0.0050	ug/L	0.240	ND	81.7	55-130			
4,4'-DDT	0.273	0.0030	0.010	ug/L	0.240	ND	114	46-146			
4,4'-DDE	0.195	0.0040	0.020	ug/L	0.240	ND	81.3	53-135			
4,4'-DDD	0.187	0.0050	0.020	ug/L	0.240	ND	78.0	57-141			
Dieldrin	0.185	0.0050	0.010	ug/L	0.240	ND	77.1	56-136			
Endosulfan I	0.193	0.0040	0.010	ug/L	0.240	ND	80.5	59-134			
Endosulfan II	0.257	0.0050	0.010	ug/L	0.240	ND	107	53-145			
Endosulfan sulfate	0.204	0.0030	0.050	ug/L	0.240	ND	85.0	56-143			
Endrin	0.220	0.0080	0.010	ug/L	0.240	ND	91.7	53-147			
Endrin aldehyde	0.139	0.0040	0.010	ug/L	0.240	0.0790	25.2	49-146			QM-05
Heptachlor	0.200	0.0050	0.010	ug/L	0.240	0.00760	80.0	34-111			
Heptachlor epoxide	0.199	0.0090	0.010	ug/L	0.240	ND	82.8	55-132			
Surrogate: Dibutylchloroendate	0.365			ug/L	0.500		73.0	63-124			

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: INF-001 Priority Pollutants	Reported: 02/11/19 16:31
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Semivolatile Organic Compounds by EPA Method 625 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83703 - SVOAs in Water GCMS

Blank (AL83703-BLK1)

Prepared & Analyzed: 12/13/18

2-Chlorophenol	ND	0.70	5.0	ug/L							U
2,4-Dichlorophenol	ND	0.70	5.0	ug/L							U
2,4-Dimethylphenol	ND	1.0	2.0	ug/L							U
4,6-Dinitro-2-methylphenol	ND	3.0	5.0	ug/L							U
2,4-Dinitrophenol	ND	5.0	5.0	ug/L							U
2-Nitrophenol	ND	0.90	10	ug/L							U
4-Nitrophenol	ND	3.0	10	ug/L							U
4-Chloro-3-methylphenol	ND	1.0	1.0	ug/L							U
2-Methylphenol (o-cresol)	ND	0.60	5.0	ug/L							U
Pentachlorophenol	ND	4.0	5.0	ug/L							U
Phenol	ND	0.50	1.0	ug/L							U
2,4,6-Trichlorophenol	ND	0.70	10	ug/L							U
Bis(2-chloroethoxy)methane	ND	0.40	5.0	ug/L							U
Bis(2-chloroethyl)ether	ND	0.30	1.0	ug/L							U
Bis(2-chloroisopropyl)ether	ND	0.40	2.0	ug/L							U
Bis(2-ethylhexyl)phthalate	ND	3.0	5.0	ug/L							U
4-Bromophenyl phenyl ether	ND	0.40	5.0	ug/L							U
Butyl benzyl phthalate	ND	0.60	10	ug/L							U
2-Chloronaphthalene	ND	0.60	10	ug/L							U
4-Chlorophenyl phenyl ether	ND	0.90	5.0	ug/L							U
1,3-Dichlorobenzene	ND	0.60	1.0	ug/L							U
1,2-Dichlorobenzene	ND	0.60	2.0	ug/L							U
1,4-Dichlorobenzene	ND	0.60	1.0	ug/L							U
Diethyl phthalate	ND	0.30	2.0	ug/L							U
Dimethyl phthalate	ND	0.30	2.0	ug/L							U
Di-n-butyl phthalate	ND	0.90	10	ug/L							U
2,4-Dinitrotoluene	ND	0.20	5.0	ug/L							U
2,6-Dinitrotoluene	ND	0.30	5.0	ug/L							U
Di-n-octyl phthalate	ND	0.60	10	ug/L							U
1,2-Diphenylhydrazine	ND	0.60	1.0	ug/L							U
Hexachlorobenzene	ND	0.90	1.0	ug/L							U
Hexachlorobutadiene	ND	0.80	1.0	ug/L							U
Hexachlorocyclopentadiene	ND	4.0	5.0	ug/L							U
Hexachloroethane	ND	0.60	1.0	ug/L							U
Isophorone	ND	0.30	1.0	ug/L							U
Nitrobenzene	ND	0.30	1.0	ug/L							U

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: INF-001 Priority Pollutants	Reported: 02/11/19 16:31
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Semivolatile Organic Compounds by EPA Method 625 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83703 - SVOAs in Water GCMS

Blank (AL83703-BLK1)

Prepared & Analyzed: 12/13/18

N-Nitrosodimethylamine	ND	0.30	5.0	ug/L							U
N-Nitrosodi-n-propylamine	ND	0.30	5.0	ug/L							U
N-Nitrosodiphenylamine	ND	0.30	1.0	ug/L							U
1,2,4-Trichlorobenzene	ND	0.60	5.0	ug/L							U
Surrogate: 2-Fluorobiphenyl	37.7			ug/L	40.0		94.2	42-115			
Surrogate: 2-Fluorophenol	14.8			ug/L	40.0		37.1	21-87			
Surrogate: Nitrobenzene-d5	29.1			ug/L	40.0		72.7	50-110			
Surrogate: p-Terphenyl-d14	38.8			ug/L	40.0		97.1	61-134			
Surrogate: Phenol-d6	11.1			ug/L	40.0		27.7	20-52			
Surrogate: 2,4,6-Tribromophenol	35.8			ug/L	40.0		89.6	54-135			

LCS (AL83703-BS1)

Prepared & Analyzed: 12/13/18

2-Chlorophenol	30.6	0.70	5.0	ug/L	40.0		76.4	45-100			
2,4-Dichlorophenol	35.4	0.70	5.0	ug/L	40.0		88.6	67-110			
2,4-Dimethylphenol	31.0	1.0	2.0	ug/L	40.0		77.6	32-119			
4,6-Dinitro-2-methylphenol	48.9	3.0	5.0	ug/L	40.0		122	59-129			
2,4-Dinitrophenol	68.4	5.0	5.0	ug/L	50.0		137	46-149			
2-Nitrophenol	36.8	0.90	10	ug/L	40.0		92.1	44-120			
4-Nitrophenol	20.0	3.0	10	ug/L	40.0		50.0	21-71			
4-Chloro-3-methylphenol	38.2	1.0	1.0	ug/L	40.0		95.5	56-116			
Pentachlorophenol	40.6	4.0	5.0	ug/L	40.0		101	53-145			
2-Methylphenol (o-cresol)	30.2	0.60	5.0	ug/L	40.0		75.5	50-86			
Phenol	16.3	0.50	1.0	ug/L	40.0		40.8	21-51			
2,4,6-Trichlorophenol	42.0	0.70	10	ug/L	40.0		105	68-116			
Bis(2-chloroethoxy)methane	28.3	0.40	5.0	ug/L	40.0		70.7	55-106			
Bis(2-chloroethyl)ether	32.5	0.30	1.0	ug/L	40.0		81.3	40-99			
Bis(2-chloroisopropyl)ether	30.5	0.40	2.0	ug/L	40.0		76.2	36-110			
Bis(2-ethylhexyl)phthalate	30.7	3.0	5.0	ug/L	40.0		76.7	55-152			
4-Bromophenyl phenyl ether	38.4	0.40	5.0	ug/L	40.0		96.1	74-120			
Butyl benzyl phthalate	37.5	0.60	10	ug/L	40.0		93.8	67-152			
2-Chloronaphthalene	26.9	0.60	10	ug/L	40.0		67.2	60-118			
4-Chlorophenyl phenyl ether	37.0	0.90	5.0	ug/L	40.0		92.4	67-115			
1,2-Dichlorobenzene	29.8	0.60	2.0	ug/L	40.0		74.5	35-100			
1,4-Dichlorobenzene	28.2	0.60	1.0	ug/L	40.0		70.6	35-92			
1,3-Dichlorobenzene	29.2	0.60	1.0	ug/L	40.0		73.1	33-100			
Diethyl phthalate	28.6	0.30	2.0	ug/L	40.0		71.5	65-119			
Dimethyl phthalate	30.8	0.30	2.0	ug/L	40.0		76.9	68-121			

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Semivolatile Organic Compounds by EPA Method 625 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83703 - SVOAs in Water GCMS

LCS (AL83703-BS1)

Prepared & Analyzed: 12/13/18

Di-n-butyl phthalate	22.0	0.90	10	ug/L	40.0		54.9	52-129			
2,4-Dinitrotoluene	42.7	0.20	5.0	ug/L	40.0		107	75-120			
2,6-Dinitrotoluene	40.0	0.30	5.0	ug/L	40.0		100	66-120			
Di-n-octyl phthalate	26.9	0.60	10	ug/L	40.0		67.2	55-127			
1,2-Diphenylhydrazine	28.6	0.60	1.0	ug/L	40.0		71.4	61-121			
Hexachlorobenzene	36.5	0.90	1.0	ug/L	40.0		91.4	75-120			
Hexachlorobutadiene	30.6	0.80	1.0	ug/L	40.0		76.4	42-93			
Hexachlorocyclopentadiene	24.1	4.0	5.0	ug/L	40.0		60.2	8-83			
Hexachloroethane	32.1	0.60	1.0	ug/L	40.0		80.3	32-89			
Isophorone	28.2	0.30	1.0	ug/L	40.0		70.6	39-140			
Nitrobenzene	29.8	0.30	1.0	ug/L	40.0		74.6	38-124			
N-Nitrosodimethylamine	21.9	0.30	5.0	ug/L	40.0		54.8	11-111			
N-Nitrosodi-n-propylamine	35.4	0.30	5.0	ug/L	40.0		88.6	58-104			
N-Nitrosodiphenylamine	29.0	0.30	1.0	ug/L	40.0		72.4	68-132			
1,2,4-Trichlorobenzene	30.4	0.60	5.0	ug/L	40.0		76.1	51-96			
Surrogate: 2-Fluorobiphenyl	34.7			ug/L	40.0		86.7	42-115			
Surrogate: 2-Fluorophenol	19.8			ug/L	40.0		49.6	21-87			
Surrogate: Nitrobenzene-d5	31.3			ug/L	40.0		78.2	50-110			
Surrogate: p-Terphenyl-d14	34.9			ug/L	40.0		87.2	61-134			
Surrogate: Phenol-d6	14.7			ug/L	40.0		36.7	20-52			
Surrogate: 2,4,6-Tribromophenol	42.1			ug/L	40.0		105	54-135			

LCS Dup (AL83703-BSD1)

Prepared: 12/13/18 Analyzed: 12/14/18

2-Chlorophenol	18.6	0.70	5.0	ug/L	40.0		46.4	45-100	48.8	25	QL-04
2,4-Dichlorophenol	29.0	0.70	5.0	ug/L	40.0		72.6	67-110	19.8	25	
2,4-Dimethylphenol	23.0	1.0	2.0	ug/L	40.0		57.5	32-119	29.7	25	QL-04
4,6-Dinitro-2-methylphenol	40.8	3.0	5.0	ug/L	40.0		102	59-129	18.0	25	
2,4-Dinitrophenol	54.9	5.0	5.0	ug/L	50.0		110	46-149	21.9	25	
2-Nitrophenol	26.1	0.90	10	ug/L	40.0		65.2	44-120	34.2	25	QL-04
4-Nitrophenol	16.4	3.0	10	ug/L	40.0		40.9	21-71	19.9	25	
4-Chloro-3-methylphenol	32.5	1.0	1.0	ug/L	40.0		81.3	56-116	16.1	25	
Pentachlorophenol	34.2	4.0	5.0	ug/L	40.0		85.6	53-145	16.9	25	
2-Methylphenol (o-cresol)	21.8	0.60	5.0	ug/L	40.0		54.6	50-86	32.2	25	QL-04
Phenol	10.4	0.50	1.0	ug/L	40.0		26.0	21-51	44.3	25	QL-04
2,4,6-Trichlorophenol	36.8	0.70	10	ug/L	40.0		92.0	68-116	13.3	25	
Bis(2-chloroethoxy)methane	23.9	0.40	5.0	ug/L	40.0		59.7	55-106	16.9	25	
Bis(2-chloroethyl)ether	18.1	0.30	1.0	ug/L	40.0		45.3	40-99	56.8	25	QL-04

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Semivolatile Organic Compounds by EPA Method 625 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83703 - SVOAs in Water GCMS

LCS Dup (AL83703-BSD1)

Prepared: 12/13/18 Analyzed: 12/14/18

Bis(2-chloroisopropyl)ether	20.1	0.40	2.0	ug/L	40.0	50.3	36-110	40.9	25	QL-04
Bis(2-ethylhexyl)phthalate	30.9	3.0	5.0	ug/L	40.0	77.2	55-152	0.552	25	
4-Bromophenyl phenyl ether	34.6	0.40	5.0	ug/L	40.0	86.6	74-120	10.4	25	
Butyl benzyl phthalate	35.8	0.60	10	ug/L	40.0	89.6	67-152	4.66	25	
2-Chloronaphthalene	26.3	0.60	10	ug/L	40.0	65.8	60-118	2.11	25	
4-Chlorophenyl phenyl ether	35.6	0.90	5.0	ug/L	40.0	89.1	67-115	3.64	25	
1,3-Dichlorobenzene	13.8	0.60	1.0	ug/L	40.0	34.4	33-100	71.9	25	QL-04
1,4-Dichlorobenzene	14.1	0.60	1.0	ug/L	40.0	35.2	35-92	66.8	25	QL-04
1,2-Dichlorobenzene	15.6	0.60	2.0	ug/L	40.0	38.9	35-100	62.8	25	QL-04
Diethyl phthalate	28.2	0.30	2.0	ug/L	40.0	70.5	65-119	1.44	25	
Dimethyl phthalate	29.4	0.30	2.0	ug/L	40.0	73.6	68-121	4.45	25	
Di-n-butyl phthalate	21.8	0.90	10	ug/L	40.0	54.6	52-129	0.548	25	
2,4-Dinitrotoluene	38.9	0.20	5.0	ug/L	40.0	97.4	75-120	9.23	25	
2,6-Dinitrotoluene	36.5	0.30	5.0	ug/L	40.0	91.2	66-120	9.26	25	
Di-n-octyl phthalate	25.8	0.60	10	ug/L	40.0	64.6	55-127	4.02	25	
1,2-Diphenylhydrazine	27.5	0.60	1.0	ug/L	40.0	68.8	61-121	3.78	25	
Hexachlorobenzene	33.7	0.90	1.0	ug/L	40.0	84.2	75-120	8.09	25	
Hexachlorobutadiene	17.2	0.80	1.0	ug/L	40.0	43.0	42-93	55.9	25	QL-04
Hexachlorocyclopentadiene	15.5	4.0	5.0	ug/L	40.0	38.7	8-83	43.5	25	QL-04
Hexachloroethane	13.4	0.60	1.0	ug/L	40.0	33.4	32-89	82.6	25	QL-04
Isophorone	23.6	0.30	1.0	ug/L	40.0	59.0	39-140	17.8	25	
Nitrobenzene	22.0	0.30	1.0	ug/L	40.0	55.0	38-124	30.2	25	QL-04
N-Nitrosodimethylamine	9.37	0.30	5.0	ug/L	40.0	23.4	11-111	80.2	25	QL-04
N-Nitrosodi-n-propylamine	27.8	0.30	5.0	ug/L	40.0	69.4	58-104	24.2	25	
N-Nitrosodiphenylamine	27.6	0.30	1.0	ug/L	40.0	69.0	68-132	4.85	25	
1,2,4-Trichlorobenzene	20.7	0.60	5.0	ug/L	40.0	51.8	51-96	38.1	25	QL-04
Surrogate: 2-Fluorobiphenyl	34.0			ug/L	40.0	85.0	42-115			
Surrogate: 2-Fluorophenol	9.19			ug/L	40.0	23.0	21-87			
Surrogate: Nitrobenzene-d5	22.3			ug/L	40.0	55.7	50-110			
Surrogate: p-Terphenyl-d14	34.7			ug/L	40.0	86.7	61-134			
Surrogate: Phenol-d6	9.29			ug/L	40.0	23.2	20-52			
Surrogate: 2,4,6-Tribromophenol	37.7			ug/L	40.0	94.3	54-135			

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: INF-001 Priority Pollutants	Reported: 02/11/19 16:31
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Semivolatile Organic Compounds by EPA Method 625 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83703 - SVOAs in Water GCMS

Matrix Spike (AL83703-MS1)	Source: 18L1288-01			Prepared: 12/13/18 Analyzed: 12/14/18							
2-Chlorophenol	23.3	0.70	5.0	ug/L	40.0	ND	58.4	33-115			
2,4-Dichlorophenol	31.9	0.70	5.0	ug/L	40.0	ND	79.8	57-113			
2,4-Dimethylphenol	27.9	1.0	2.0	ug/L	40.0	ND	69.7	32-119			
4,6-Dinitro-2-methylphenol	46.1	3.0	5.0	ug/L	40.0	ND	115	18-164			
2,4-Dinitrophenol	65.0	5.0	5.0	ug/L	50.0	ND	130	46-149			
2-Nitrophenol	30.0	0.90	10	ug/L	40.0	ND	75.1	49-112			
4-Nitrophenol	18.5	3.0	10	ug/L	40.0	ND	46.2	21-110			
4-Chloro-3-methylphenol	34.7	1.0	1.0	ug/L	40.0	ND	86.8	45-125			
Pentachlorophenol	39.8	4.0	5.0	ug/L	40.0	ND	99.6	14-176			
2-Methylphenol (o-cresol)	25.2	0.60	5.0	ug/L	40.0	ND	63.1	50-104			
Phenol	12.9	0.50	1.0	ug/L	40.0	ND	32.3	17-87			
2,4,6-Trichlorophenol	38.4	0.70	10	ug/L	40.0	ND	96.0	69-120			
Bis(2-chloroethoxy)methane	24.9	0.40	5.0	ug/L	40.0	ND	62.4	53-110			
Bis(2-chloroethyl)ether	23.2	0.30	1.0	ug/L	40.0	ND	58.0	25-118			
Bis(2-chloroisopropyl)ether	23.6	0.40	2.0	ug/L	40.0	ND	59.0	36-155			
Bis(2-ethylhexyl)phthalate	24.4	3.0	5.0	ug/L	40.0	ND	61.1	8-158			
4-Bromophenyl phenyl ether	35.0	0.40	5.0	ug/L	40.0	ND	87.5	72-108			
Butyl benzyl phthalate	34.2	0.60	10	ug/L	40.0	ND	85.6	65-135			
2-Chloronaphthalene	25.3	0.60	10	ug/L	40.0	ND	63.2	60-110			
4-Chlorophenyl phenyl ether	34.4	0.90	5.0	ug/L	40.0	ND	85.9	63-112			
1,4-Dichlorobenzene	19.4	0.60	1.0	ug/L	40.0	ND	48.6	35-92			
1,2-Dichlorobenzene	20.8	0.60	2.0	ug/L	40.0	ND	51.9	35-100			
1,3-Dichlorobenzene	19.2	0.60	1.0	ug/L	40.0	ND	48.1	33-100			
Diethyl phthalate	27.3	0.30	2.0	ug/L	40.0	ND	68.4	65-112			
Dimethyl phthalate	28.5	0.30	2.0	ug/L	40.0	ND	71.2	70-111			
Di-n-butyl phthalate	21.2	0.90	10	ug/L	40.0	ND	53.1	52-131			
2,4-Dinitrotoluene	39.9	0.20	5.0	ug/L	40.0	ND	99.8	75-115			
2,6-Dinitrotoluene	36.9	0.30	5.0	ug/L	40.0	ND	92.2	72-119			
Di-n-octyl phthalate	22.0	0.60	10	ug/L	40.0	ND	55.1	55-135			
1,2-Diphenylhydrazine	26.3	0.60	1.0	ug/L	40.0	ND	65.8	56-121			
Hexachlorobenzene	32.3	0.90	1.0	ug/L	40.0	ND	80.8	66-105			
Hexachlorobutadiene	22.0	0.80	1.0	ug/L	40.0	ND	55.1	29-108			
Hexachlorocyclopentadiene	20.6	4.0	5.0	ug/L	40.0	ND	51.5	0-125			
Hexachloroethane	18.2	0.60	1.0	ug/L	40.0	ND	45.5	32-90			
Isophorone	23.8	0.30	1.0	ug/L	40.0	ND	59.6	39-140			
Nitrobenzene	25.3	0.30	1.0	ug/L	40.0	ND	63.2	38-124			

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Semivolatile Organic Compounds by EPA Method 625 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83703 - SVOAs in Water GCMS

Matrix Spike (AL83703-MS1)	Source: 18L1288-01			Prepared: 12/13/18 Analyzed: 12/14/18						
N-Nitrosodimethylamine	13.5	0.30	5.0	ug/L	40.0	ND	33.8	0-184		
N-Nitrosodi-n-propylamine	28.2	0.30	5.0	ug/L	40.0	ND	70.6	49-116		
N-Nitrosodiphenylamine	28.6	0.30	1.0	ug/L	40.0	ND	71.5	0-141		
1,2,4-Trichlorobenzene	24.3	0.60	5.0	ug/L	40.0	ND	60.6	44-101		
Surrogate: 2-Fluorobiphenyl	33.6			ug/L	40.0		84.0	42-115		
Surrogate: 2-Fluorophenol	14.6			ug/L	40.0		36.6	21-87		
Surrogate: Nitrobenzene-d5	28.0			ug/L	40.0		70.0	50-110		
Surrogate: p-Terphenyl-d14	33.2			ug/L	40.0		82.9	61-134		
Surrogate: Phenol-d6	13.2			ug/L	40.0		33.0	20-52		
Surrogate: 2,4,6-Tribromophenol	46.4			ug/L	40.0		116	54-135		

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Benzidines by EPA Method 625 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83769 - SVOAs in Water GCMS

Blank (AL83769-BLK1)

Prepared: 12/13/18 Analyzed: 12/17/18

Benzidine	ND	3.0	5.0	ug/L							U
3,3'-Dichlorobenzidine	ND	3.0	5.0	ug/L							U
Surrogate: 2-Fluorobiphenyl	28.7			ug/L	40.0		71.7	60-140			
Surrogate: Nitrobenzene-d5	28.1			ug/L	40.0		70.2	60-140			
Surrogate: p-Terphenyl-d14	30.5			ug/L	40.0		76.2	61-134			

LCS (AL83769-BS1)

Prepared: 12/13/18 Analyzed: 12/17/18

Benzidine	55.9	3.0	5.0	ug/L	79.4		70.5	60-140			
3,3'-Dichlorobenzidine	63.2	3.0	5.0	ug/L	79.4		79.6	60-140			
Surrogate: 2-Fluorobiphenyl	29.6			ug/L	40.0		73.9	60-140			
Surrogate: Nitrobenzene-d5	29.7			ug/L	40.0		74.2	60-140			
Surrogate: p-Terphenyl-d14	31.0			ug/L	40.0		77.6	61-134			

LCS Dup (AL83769-BSD1)

Prepared: 12/13/18 Analyzed: 12/17/18

Benzidine	56.0	3.0	5.0	ug/L	79.4		70.6	60-140	0.196	25	
3,3'-Dichlorobenzidine	62.0	3.0	5.0	ug/L	79.4		78.1	60-140	1.97	25	
Surrogate: 2-Fluorobiphenyl	26.5			ug/L	40.0		66.3	60-140			
Surrogate: Nitrobenzene-d5	27.7			ug/L	40.0		69.2	60-140			
Surrogate: p-Terphenyl-d14	26.9			ug/L	40.0		67.3	61-134			



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Semivolatile Organic Compounds by EPA Method 625 SIM - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83891 - SVOAs in Water GCMS

Blank (AL83891-BLK1)

Prepared: 12/13/18 Analyzed: 12/17/18

Acenaphthene	ND	0.20	0.20	ug/L							U
Acenaphthylene	ND	0.20	0.20	ug/L							U
Anthracene	ND	0.090	0.20	ug/L							U
Benzo (a) anthracene	ND	0.20	0.20	ug/L							U
Benzo (a) pyrene	ND	0.20	0.20	ug/L							U
Benzo (b) fluoranthene	ND	0.20	0.20	ug/L							U
Benzo (g,h,i) perylene	ND	0.10	0.20	ug/L							U
Benzo (k) fluoranthene	ND	0.20	0.20	ug/L							U
Chrysene	ND	0.20	0.20	ug/L							U
Dibenz (a,h) anthracene	ND	0.10	0.20	ug/L							U
Fluoranthene	ND	0.070	0.20	ug/L							U
Fluorene	ND	0.20	0.20	ug/L							U
Indeno (1,2,3-cd) pyrene	ND	0.030	0.20	ug/L							U
Naphthalene	ND	0.090	0.20	ug/L							U
Phenanthrene	ND	0.10	0.20	ug/L							U
Pyrene	ND	0.20	0.20	ug/L							U
Surrogate: 2-Fluorobiphenyl	30.6			ug/L	40.0		76.5	34-133			
Surrogate: Nitrobenzene-d5	21.9			ug/L	40.0		54.8	36-131			
Surrogate: p-Terphenyl-d14	29.4			ug/L	40.0		73.5	35-156			

LCS (AL83891-BS1)

Prepared: 12/13/18 Analyzed: 12/17/18

Acenaphthene	36.7	0.20	0.20	ug/L	40.0		91.8	49-106			
Acenaphthylene	38.4	0.20	0.20	ug/L	40.0		96.0	69-108			
Anthracene	51.2	0.090	0.20	ug/L	40.0		128	70-130			
Benzo (a) anthracene	37.4	0.20	0.20	ug/L	40.0		93.6	52-105			
Benzo (a) pyrene	35.4	0.20	0.20	ug/L	40.0		88.5	46-102			
Benzo (b) fluoranthene	42.3	0.20	0.20	ug/L	40.0		106	42-112			
Benzo (g,h,i) perylene	37.5	0.10	0.20	ug/L	40.0		93.8	48-96			
Benzo (k) fluoranthene	29.8	0.20	0.20	ug/L	40.0		74.4	44-102			
Chrysene	41.0	0.20	0.20	ug/L	40.0		103	51-105			
Dibenz (a,h) anthracene	37.6	0.10	0.20	ug/L	40.0		94.0	50-100			
Fluoranthene	49.8	0.070	0.20	ug/L	40.0		125	63-130			
Fluorene	43.8	0.20	0.20	ug/L	40.0		110	71-130			
Indeno (1,2,3-cd) pyrene	37.4	0.030	0.20	ug/L	40.0		93.6	49-99			
Naphthalene	27.4	0.090	0.20	ug/L	40.0		68.6	47-107			
Phenanthrene	44.6	0.10	0.20	ug/L	40.0		112	70-130			

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Semivolatile Organic Compounds by EPA Method 625 SIM - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83891 - SVOAs in Water GCMS

LCS (AL83891-BS1)		Prepared: 12/13/18 Analyzed: 12/17/18									
Pyrene	40.8	0.20	0.20	ug/L	40.0		102	59-119			
Surrogate: 2-Fluorobiphenyl	26.3			ug/L	40.0		65.8	34-133			
Surrogate: Nitrobenzene-d5	21.8			ug/L	40.0		54.4	36-131			
Surrogate: p-Terphenyl-d14	34.5			ug/L	40.0		86.3	35-156			

LCS Dup (AL83891-BSD1)		Prepared: 12/13/18 Analyzed: 12/17/18									
Acenaphthene	33.5	0.20	0.20	ug/L	40.0		83.8	49-106	9.11	25	
Acenaphthylene	35.0	0.20	0.20	ug/L	40.0		87.4	69-108	9.35	25	
Anthracene	44.6	0.090	0.20	ug/L	40.0		112	70-130	13.7	25	
Benzo (a) anthracene	33.0	0.20	0.20	ug/L	40.0		82.4	52-105	12.7	25	
Benzo (a) pyrene	32.2	0.20	0.20	ug/L	40.0		80.6	46-102	9.37	25	
Benzo (b) fluoranthene	37.1	0.20	0.20	ug/L	40.0		92.6	42-112	13.1	25	
Benzo (g,h,i) perylene	34.0	0.10	0.20	ug/L	40.0		85.1	48-96	9.78	25	
Benzo (k) fluoranthene	24.5	0.20	0.20	ug/L	40.0		61.3	44-102	19.3	25	
Chrysene	35.2	0.20	0.20	ug/L	40.0		87.9	51-105	15.4	25	
Dibenz (a,h) anthracene	34.6	0.10	0.20	ug/L	40.0		86.4	50-100	8.37	25	
Fluoranthene	42.8	0.070	0.20	ug/L	40.0		107	63-130	15.2	25	
Fluorene	37.1	0.20	0.20	ug/L	40.0		92.8	71-130	16.5	25	
Indeno (1,2,3-cd) pyrene	34.5	0.030	0.20	ug/L	40.0		86.2	49-99	8.29	25	
Naphthalene	19.5	0.090	0.20	ug/L	40.0		48.8	47-107	33.8	25	QL-04
Phenanthrene	35.3	0.10	0.20	ug/L	40.0		88.2	70-130	23.4	25	
Pyrene	35.1	0.20	0.20	ug/L	40.0		87.7	59-119	15.0	25	
Surrogate: 2-Fluorobiphenyl	22.2			ug/L	40.0		55.4	34-133			
Surrogate: Nitrobenzene-d5	15.9			ug/L	40.0		39.7	36-131			
Surrogate: p-Terphenyl-d14	30.4			ug/L	40.0		76.1	35-156			

Matrix Spike (AL83891-MS1)		Source: 18L1288-01		Prepared: 12/13/18 Analyzed: 12/17/18								
Acenaphthene	38.2	0.20	0.20	ug/L	40.0	ND	95.6	49-106				
Acenaphthylene	40.0	0.20	0.20	ug/L	40.0	ND	100	69-108				
Anthracene	47.5	0.090	0.20	ug/L	40.0	ND	119	70-130				
Benzo (a) anthracene	29.9	0.20	0.20	ug/L	40.0	ND	74.8	52-105				
Benzo (a) pyrene	28.1	0.20	0.20	ug/L	40.0	ND	70.2	46-102				
Benzo (b) fluoranthene	31.5	0.20	0.20	ug/L	40.0	ND	78.7	42-112				
Benzo (g,h,i) perylene	28.4	0.10	0.20	ug/L	40.0	ND	71.1	48-96				
Benzo (k) fluoranthene	19.0	0.20	0.20	ug/L	40.0	ND	47.6	44-102				
Chrysene	31.0	0.20	0.20	ug/L	40.0	ND	77.6	51-105				
Dibenz (a,h) anthracene	29.3	0.10	0.20	ug/L	40.0	ND	73.3	50-100				

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Semivolatile Organic Compounds by EPA Method 625 SIM - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83891 - SVOAs in Water GCMS

Matrix Spike (AL83891-MS1)	Source: 18L1288-01			Prepared: 12/13/18 Analyzed: 12/17/18							
Fluoranthene	24.1	0.070	0.20	ug/L	40.0	ND	60.2	63-130			QM-05
Fluorene	48.1	0.20	0.20	ug/L	40.0	ND	120	71-130			
Indeno (1,2,3-cd) pyrene	29.3	0.030	0.20	ug/L	40.0	ND	73.2	49-99			
Naphthalene	19.6	0.090	0.20	ug/L	40.0	ND	49.0	47-107			
Phenanthrene	40.8	0.10	0.20	ug/L	40.0	ND	102	70-130			
Pyrene	33.2	0.20	0.20	ug/L	40.0	ND	83.0	59-119			
Surrogate: 2-Fluorobiphenyl	22.7			ug/L	40.0		56.7	34-133			
Surrogate: Nitrobenzene-d5	18.0			ug/L	40.0		45.0	36-131			
Surrogate: p-Terphenyl-d14	29.6			ug/L	40.0		73.9	35-156			

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Healdsburg, City of - WW
340 Foreman Lane
Healdsburg CA, 95448-0578

Project Manager: Angie Koski
Project: Wastewater
Project Number: INF-001 Priority Pollutants

Reported:
02/11/19 16:31

Notes and Definitions

- J Detected but below the Reporting Limit; therefore, result is an estimated concentration, detected but not quantified (DNQ).
- QD-04 High duplicate RPD, possibly due to matrix interference.
- QL-04 The LCS/LCSD RPD for this analyte was outside of established control limits. Batch accepted based on acceptable recovery for both LCS/LCSD.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
- R-01 The Reporting Limit for this analyte has been raised to account for matrix interference.
- R-01a The Method Detection Limit for this analyte has been raised to account for matrix interference.
- R-04 The Reporting Limits for this analysis are elevated due to sample foaming.
- R-06 The Reporting Limits for this analysis have been raised to account for matrix interference.
- U Analyte included in analysis, but not detected at or above MDL.
- ND Analyte NOT DETECTED at or above the reporting limit
- dry Sample results reported on a dry weight basis
- MDL Method detection limit
- Rec Recovery
- RPD Relative Percent Difference



CERES Analytical Laboratory, Inc.

4919 Windplay Dr. Suite 1, El Dorado Hills, CA 95762



December 26, 2018

Ceres ID: 12505

Alpha Analytical Laboratories, Inc.
208 Mason St.
Ukiah, CA 95482

The following report contains the results for the one aqueous sample received on December 14, 2018. This sample was analyzed for 2,3,7,8-TCDD by EPA method 1613B. Routine turn-around time was provided for this work.

This work was authorized under Alpha Analytical Laboratories' project # 18L1301.

Continuing Calibration Verification (CCV) Requirements

All associated calibration verification standard(s) (CCV) met the acceptance criteria.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,

James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

<u>Ceres Sample ID:</u>	<u>Sample ID</u>	<u>Date Received</u>	<u>Collection Date & Time</u>
12505-001	INF-001-Compsite 18L1301-02	12/14/2018	12/11/2018 8:00

Section II: Data Summary



EPA Method 1613B

Quality Assurance Sample Method Blank	QC Batch #: 1909 Matrix: Aqueous Sample Size: 1.000 L	Date Received: NA Date Extracted: 12/19/2018 ZB-5MS Analysis: 12/20/2018
Project ID: 18L1301		

Analyte	Conc. (pg/L)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	DL= 4.40	1.49	5.00		13C-2378-TCDD	74.9	31-137	
					CRS			
					37Cl4-2378-TCDD	84.2	35-197	
DL - Signifies Non-Detect (ND) at sample specific detection limit. EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure. (a) - Lower control limit - Upper control limit								

Analyst: JMH

Reviewed by: BS



EPA Method 1613B

Quality Assurance Sample Ongoing Precision and Recovery Project ID: 18L1301	QC Batch #: 1909 Matrix: Aqueous Sample Size: 1.000 L	Date Received: NA Date Extracted: 12/19/2018 ZB-5MS Analysis: 12/20/2018
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Analyte	Conc. (ng/mL)	Limits (a)	Labeled Standards	% Rec.	Limits (a)
2,3,7,8-TCDD	12.1	7.3-14.6	13C-2378-TCDD	80	25-141
			CRS		
			37Cl4-2378-TCDD	76.4	37-158
(a) Limits based on method acceptance criteria.					

Analyst: JMH

Reviewed by: BS



EPA Method 1613B

Client Sample ID: INF-001 - Composite 18L1301-02		
Project ID: 18L1301	Ceres Sample ID: 12505-001	Date Received: 12/14/2018
Date Collected: 12/11/2018	QC Batch #: 1909	Date Extracted: 12/19/2018
Time Collected: 8:00	Matrix: Aqueous	ZB-5MS Analysis: 12/20/2018
	Sample Size: 1.023 L	

Analyte	Conc. (pg/L)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	DL= 4.52	1.49	4.89		13C-2378-TCDD	50.2	31-137	
					CRS			
					37Cl4-2378-TCDD	80.2	42-164	
DL - Signifies Non-Detect (ND) at sample specific detection limit. EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure. (a) - Lower control limit - Upper control limit								

Analyst: JMH

Reviewed by: BS

Section VI: Sample Tracking

12505

SUBCONTRACT ORDER
Alpha Analytical Laboratories, Inc.
18L1301

SENDING LABORATORY:

Alpha Analytical Laboratories, Inc.
208 Mason St.
Ukiah, CA 95482
Phone: (707)468-0401
Fax: (707)468-5267
Project Manager: Sheri L. Speaks

RECEIVING LABORATORY:

Ceres Labs
4919 Windplay Dr.
El Dorado Hills, CA 95762
Phone : (916) 932-5011
Fax: (916) 932-5017
Terms: Net 30

Analysis	Due	Expires	Comments
18L1301-02 INF-001 - Composite [Water] Sampled 12/11/18 08:00			

Dioxin 2378 TCDD Aq 1613 12/27/18 12:00 12/11/19 08:00

Containers Supplied:

1L Amber- Unpres. (I) 1L Amber- Unpres. (J)

Report to State

System Name: _____ Employed by: _____
 User ID: _____ Sampler: _____
 System Number: _____


12-12-18

12/14/18 09:55

Released By Date Received By Date

Released By Date Received By Date

Sample Receipt Check List Logged by: *S* (initials)

Ceres ID: <u> 12505 </u>	Date/Time: <u> 12/14/18 09:55 </u>
Client Project ID: <u> 1861301 </u>	Received Temp: <u> 2.2 </u> °C Acceptable: <u> Y </u> / N
Chain of Custody Relinquished by signed?	<u> Y </u> / N
Chain of Custody Received by signed?	<u> Y </u> / N
Custody Seals? Present?	<u> Y </u> / N
Intact?	<u> Y </u> / N
NA:	<u> NA </u>
Unlabeled / Illegible Samples	<u> N/A </u> <u> Y </u> / N
Proper Containers:	<u> Y </u> / N
Preservation Acceptable (Chemical or <u> Temperature </u>)?	<u> Y </u> / N
Drinking Water, Sodium Thiosulfate present? Residual Cl?	<u> Y </u> / N / <u> NA </u> <u> Y </u> / N
Aqueous sample pH: <u> 7.5 </u>	
List COC discrepancies:	<u> 400N 12/14/18 </u>
List Damaged Samples:	<u> 100N 12/14/18 </u>

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery



alpha

Alpha Analytical Laboratories, Inc. email: clientservices@alpha-labs.com
Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

11 February 2019

Healdsburg, City of - WW

Attn: Angie Koski

340 Foreman Lane

Healdsburg, CA 95448-0578

RE: Wastewater

Work Order: 18L1613

Enclosed are the results of analyses for samples received by the laboratory on 12/12/18 15:25. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Leslie M. Quinn For Sheri L. Speaks
Project Manager



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
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Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | T: 925-828-6226 | F: 925-828-6309 | ELAP# 2728
Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | T: 916-686-5190 | F: 916-686-5192 | ELAP# 2922
North Bay: 110 Liberty Street | Petaluma, CA 94952 | T: 707-769-3128 | F: 707-769-8093 | ELAP# 2303
San Diego Service Center: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | T: 760-930-2555 | F: 760-930-2510

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EFF-001 - Grab	18L1613-01	Water	12/12/18 08:35	12/12/18 15:25
EFF-001 - Composite	18L1613-02	Water	12/12/18 08:35	12/12/18 15:25



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
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Metals by EPA 200 Series Methods

Analyte	Result	MDL	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit	Units							
EFF-001 - Grab (18L1613-01) Water Sampled: 12/12/18 08:35 Received: 12/12/18 15:25											
Calcium	30	0.080	1.0	mg/L	1	AL83965	12/18/18 09:00	12/27/18 20:46	EPA 200.7	MAM	
Magnesium	20	0.030	1.0	mg/L	1	AL83965	12/18/18 09:00	12/27/18 20:46	EPA 200.7	MAM	
EFF-001 - Composite (18L1613-02) Water Sampled: 12/12/18 08:35 Received: 12/12/18 15:25											
Chromium, hexavalent	ND	0.30	1.0	ug/L	1	AL84111	12/19/18 22:14	12/19/18 22:14	EPA 218.6	SMP	U
Mercury	ND	0.020	0.020	ug/L	1	AL84127	12/20/18 07:08	12/20/18 14:46	EPA 245.1	LMR	U

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
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Metals by EPA Method 200.8 ICP/MS

Analyte	Result	MDL	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit									
EFF-001 - Composite (18L1613-02) Water Sampled: 12/12/18 08:35 Received: 12/12/18 15:25												
Antimony	0.35	0.20	0.50		ug/L	1	AL83963	12/18/18 11:00	12/21/18 19:13	EPA 200.8	MMY	J
Arsenic	ND	0.20	0.50		ug/L	1	AL83963	12/18/18 11:00	12/21/18 19:13	EPA 200.8	MMY	U
Beryllium	ND	0.050	0.10		ug/L	1	AL83963	12/18/18 11:00	12/21/18 19:13	EPA 200.8	MMY	U
Cadmium	ND	0.060	0.10		ug/L	1	AL83963	12/18/18 11:00	12/21/18 19:13	EPA 200.8	MMY	U
Chromium	ND	0.50	0.50		ug/L	1	AL83963	12/18/18 11:00	12/21/18 19:13	EPA 200.8	MMY	U
Copper	10	0.40	0.50		ug/L	1	AL83963	12/18/18 11:00	12/21/18 19:13	EPA 200.8	MMY	
Lead	0.14	0.060	0.25		ug/L	1	AL83963	12/18/18 11:00	12/21/18 19:13	EPA 200.8	MMY	J
Nickel	2.6	0.30	0.50		ug/L	1	AL83963	12/18/18 11:00	12/21/18 19:13	EPA 200.8	MMY	
Selenium	ND	0.30	2.0		ug/L	1	AL83963	12/18/18 11:00	12/21/18 19:13	EPA 200.8	MMY	U
Silver	ND	0.050	0.10		ug/L	1	AL83963	12/18/18 11:00	12/21/18 19:13	EPA 200.8	MMY	U
Thallium	ND	0.050	0.10		ug/L	1	AL83963	12/18/18 11:00	12/21/18 19:13	EPA 200.8	MMY	U
Zinc	44	2.0	5.0		ug/L	1	AL83963	12/18/18 11:00	12/21/18 19:13	EPA 200.8	MMY	



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
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Metals by APHA/EPA Methods

Analyte	Result	MDL	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit									

EFF-001 - Composite (18L1613-02) Water Sampled: 12/12/18 08:35 Received: 12/12/18 15:25

Chromium, trivalent	ND	0.50	0.50	ug/L	1	AL83963	12/18/18 11:00	12/28/18 14:28	Calculation	MMY	U
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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
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Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	MDL	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit									

EFF-001 - Grab (18L1613-01) Water **Sampled: 12/12/18 08:35** **Received: 12/12/18 15:25**

Hardness, Total	157	1	5	mg/L	1	AL83965	12/18/18 09:00	12/27/18 20:46	SM2340B	MAM		
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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
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Miscellaneous Physical/Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit									

EFF-001 - Composite (18L1613-02) Water Sampled: 12/12/18 08:35 Received: 12/12/18 15:25

Cyanide (total)	ND	0.0020	0.0050	mg/L	1	AL84146	12/20/18 11:00	12/20/18 18:56	10-204-00-1-X	SMP		U
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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
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Acrolein by EPA Method 624

Analyte	Result	MDL	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit	Units							

EFF-001 - Grab (18L1613-01) Water **Sampled: 12/12/18 08:35** **Received: 12/12/18 15:25**

Acrolein	ND	2.0	5.0	ug/L	1	AL83840	12/14/18 10:00	12/14/18 10:35	EPA 624	MM	U
<i>Surrogate: Bromofluorobenzene</i>		103 %	70-130			AL83840	12/14/18 10:00	12/14/18 10:35	EPA 624	MM	
<i>Surrogate: Dibromofluoromethane</i>		130 %	70-130			AL83840	12/14/18 10:00	12/14/18 10:35	EPA 624	MM	
<i>Surrogate: Toluene-d8</i>		108 %	70-130			AL83840	12/14/18 10:00	12/14/18 10:35	EPA 624	MM	



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
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2-Chloroethylvinyl Ether by EPA Method 624

Analyte	Result	MDL	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit									

EFF-001 - Grab (18L1613-01) Water Sampled: 12/12/18 08:35 Received: 12/12/18 15:25

2-Chloroethylvinyl ether	ND	0.70	1.0	ug/L	1	AL83840	12/14/18 10:00	12/14/18 10:35	EPA 624	MM	U
<i>Surrogate: Bromofluorobenzene</i>		103 %	70-130			AL83840	12/14/18 10:00	12/14/18 10:35	EPA 624	MM	
<i>Surrogate: Dibromofluoromethane</i>		130 %	70-130			AL83840	12/14/18 10:00	12/14/18 10:35	EPA 624	MM	
<i>Surrogate: Toluene-d8</i>		108 %	70-130			AL83840	12/14/18 10:00	12/14/18 10:35	EPA 624	MM	



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
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Volatile Organic Compounds by EPA Method 624

Analyte	Result	MDL	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit	Units							

EFF-001 - Grab (18L1613-01) Water Sampled: 12/12/18 08:35 Received: 12/12/18 15:25

Acrylonitrile	ND	0.40	2.0	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
Benzene	ND	0.30	0.30	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
Bromoform	ND	0.30	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
Carbon tetrachloride	ND	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
Chlorobenzene	ND	0.30	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
Dibromochloromethane	ND	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
Chloroethane	ND	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
Chloroform	0.41	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	J
Bromodichloromethane	ND	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
1,1-Dichloroethane	ND	0.10	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
1,2-Dichloroethane	ND	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
1,1-Dichloroethene	ND	0.30	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
1,2-Dichloropropane	ND	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
cis-1,3-Dichloropropene	ND	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
trans-1,3-Dichloropropene	ND	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
Ethylbenzene	ND	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
Bromomethane	ND	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
Chloromethane	ND	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
Methylene chloride	ND	0.50	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
1,1,2,2-Tetrachloroethane	ND	0.30	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
Tetrachloroethene	ND	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
Toluene	ND	0.30	0.30	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
trans-1,2-Dichloroethene	ND	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
1,1,1-Trichloroethane	ND	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
1,1,2-Trichloroethane	ND	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
Trichloroethene	ND	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
Trihalomethanes (total)	0.41	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	J
Vinyl chloride	ND	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
1,2-Dichlorobenzene	ND	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
1,3-Dichlorobenzene	ND	0.40	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
1,4-Dichlorobenzene	ND	0.10	0.50	ug/L	1	AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	U
Surrogate: Bromofluorobenzene		107 %	70-130			AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	
Surrogate: Dibromofluoromethane		98.8 %	70-130			AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	
Surrogate: Toluene-d8		112 %	70-130			AL83983	12/18/18 10:00	12/18/18 17:14	EPA 624	JV	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
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Organochlorine Pesticides and PCBs by EPA Method 608

Analyte	Result	MDL	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit									
EFF-001 - Composite (18L1613-02) Water Sampled: 12/12/18 08:35 Received: 12/12/18 15:25												
Aldrin	ND	0.0020	0.0050		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
alpha-BHC	ND	0.0040	0.010		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
beta-BHC	ND	0.0040	0.0050		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
gamma-BHC (Lindane)	ND	0.0040	0.010		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
delta-BHC	ND	0.0020	0.0050		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
Chlordane (tech)	ND	0.010	0.050		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
4,4'-DDT	ND	0.0030	0.010		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
4,4'-DDE	ND	0.0040	0.020		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
4,4'-DDD	ND	0.0050	0.020		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
Dieldrin	ND	0.0050	0.010		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
Endosulfan I	ND	0.0040	0.010		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
Endosulfan II	ND	0.0050	0.010		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
Endosulfan sulfate	ND	0.0080	0.050		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	R-01a, U
Endrin	ND	0.0080	0.010		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
Endrin aldehyde	ND	0.0040	0.010		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
Heptachlor	ND	0.0050	0.010		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
Heptachlor epoxide	ND	0.0090	0.010		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
PCB-1016	ND	0.080	0.50		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
PCB-1221	ND	0.20	0.50		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
PCB-1232	ND	0.10	0.50		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
PCB-1242	ND	0.040	0.50		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
PCB-1248	ND	0.060	0.50		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
PCB-1254	ND	0.040	0.50		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
PCB-1260	ND	0.040	0.50		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
Toxaphene	ND	0.20	0.50		ug/L	1	AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	U
Surrogate: Dibutylchlorodate		105 %	63-124				AL83892	12/17/18 08:55	12/19/18 22:58	EPA 608	KMB	



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
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Semivolatile Organic Compounds by EPA Method 625

Analyte	Result	MDL	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit									

EFF-001 - Composite (18L1613-02) Water **Sampled: 12/12/18 08:35** **Received: 12/12/18 15:25** **R-06**

2-Chlorophenol	ND	3.5	25	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
2,4-Dichlorophenol	ND	3.5	25	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
2,4-Dimethylphenol	ND	5.0	10	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
4,6-Dinitro-2-methylphenol	ND	15	25	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
2,4-Dinitrophenol	ND	25	25	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
2-Nitrophenol	ND	4.5	50	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
4-Nitrophenol	ND	15	50	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
4-Chloro-3-methylphenol	ND	5.0	5.0	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
2-Methylphenol (o-cresol)	ND	3.0	25	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
Pentachlorophenol	ND	20	25	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
Phenol	ND	2.5	5.0	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
2,4,6-Trichlorophenol	ND	3.5	50	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
Bis(2-chloroethoxy)methane	ND	2.0	25	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
Bis(2-chloroethyl)ether	ND	1.5	5.0	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
Bis(2-chloroisopropyl)ether	ND	2.0	10	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
Bis(2-ethylhexyl)phthalate	ND	15	25	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
4-Bromophenyl phenyl ether	ND	2.0	25	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
Butyl benzyl phthalate	ND	3.0	50	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
2-Chloronaphthalene	ND	3.0	50	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
4-Chlorophenyl phenyl ether	ND	4.5	25	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
1,2-Dichlorobenzene	ND	3.0	10	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
1,3-Dichlorobenzene	ND	3.0	5.0	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
1,4-Dichlorobenzene	ND	3.0	5.0	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
Diethyl phthalate	ND	1.5	10	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
Dimethyl phthalate	ND	1.5	10	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
Di-n-butyl phthalate	ND	4.5	50	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
2,4-Dinitrotoluene	ND	1.0	25	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
2,6-Dinitrotoluene	ND	1.5	25	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
Di-n-octyl phthalate	ND	3.0	50	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
1,2-Diphenylhydrazine	ND	3.0	5.0	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
Hexachlorobenzene	ND	4.5	5.0	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
Hexachlorobutadiene	ND	4.0	5.0	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
Hexachlorocyclopentadiene	ND	20	25	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
Hexachloroethane	ND	3.0	5.0	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
Isophorone	ND	1.5	5.0	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
Nitrobenzene	ND	1.5	5.0	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
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Semivolatile Organic Compounds by EPA Method 625

Analyte	Result	MDL	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit	Units							

EFF-001 - Composite (18L1613-02) Water **Sampled: 12/12/18 08:35** **Received: 12/12/18 15:25** **R-06**

N-Nitrosodimethylamine	ND	1.5	25	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
N-Nitrosodi-n-propylamine	ND	1.5	25	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
N-Nitrosodiphenylamine	ND	1.5	5.0	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
1,2,4-Trichlorobenzene	ND	3.0	25	ug/L	5	AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	U
<i>Surrogate: 2-Fluorobiphenyl</i>		76.9 %	42-115			AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	
<i>Surrogate: 2-Fluorophenol</i>		48.1 %	21-87			AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	
<i>Surrogate: Nitrobenzene-d5</i>		70.8 %	50-110			AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	
<i>Surrogate: p-Terphenyl-d14</i>		73.0 %	61-134			AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	
<i>Surrogate: Phenol-d6</i>		30.8 %	20-52			AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	
<i>Surrogate: 2,4,6-Tribromophenol</i>		91.1 %	54-135			AL83924	12/18/18 07:00	12/26/18 23:14	EPA 625	NBH	



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Benzidines by EPA Method 625

Analyte	Result	MDL	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit	Units							

EFF-001 - Composite (18L1613-02) Water Sampled: 12/12/18 08:35 Received: 12/12/18 15:25

Benzidine	ND	3.0	5.0	ug/L	1	AL83858	12/17/18 07:00	12/27/18 04:25	EPA 625	NBH	U
3,3'-Dichlorobenzidine	ND	3.0	5.0	ug/L	1	AL83858	12/17/18 07:00	12/27/18 04:25	EPA 625	NBH	U
Surrogate: 2-Fluorobiphenyl		92.2 %	42-115			AL83858	12/17/18 07:00	12/27/18 04:25	EPA 625	NBH	
Surrogate: Nitrobenzene-d5		81.1 %	50-110			AL83858	12/17/18 07:00	12/27/18 04:25	EPA 625	NBH	
Surrogate: p-Terphenyl-d14		96.9 %	61-134			AL83858	12/17/18 07:00	12/27/18 04:25	EPA 625	NBH	



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Semivolatile Organic Compounds by EPA Method 625 SIM

Analyte	Result	MDL	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
			Limit									
EFF-001 - Composite (18L1613-02) Water Sampled: 12/12/18 08:35 Received: 12/12/18 15:25												
												R-06
Acenaphthene	ND	1.0	1.0		ug/L	5	AL84367	12/18/18 08:00	12/28/18 09:41	EPA 625SIM	NBH	U
Acenaphthylene	ND	1.0	1.0		ug/L	5	AL84367	12/18/18 08:00	12/28/18 09:41	EPA 625SIM	NBH	U
Anthracene	ND	0.45	1.0		ug/L	5	AL84367	12/18/18 08:00	12/28/18 09:41	EPA 625SIM	NBH	U
Benzo (a) anthracene	ND	1.0	1.0		ug/L	5	AL84367	12/18/18 08:00	12/28/18 09:41	EPA 625SIM	NBH	U
Benzo (a) pyrene	ND	1.0	1.0		ug/L	5	AL84367	12/18/18 08:00	12/28/18 09:41	EPA 625SIM	NBH	U
Benzo (b) fluoranthene	ND	1.0	1.0		ug/L	5	AL84367	12/18/18 08:00	12/28/18 09:41	EPA 625SIM	NBH	U
Benzo (g,h,i) perylene	ND	0.50	1.0		ug/L	5	AL84367	12/18/18 08:00	12/28/18 09:41	EPA 625SIM	NBH	U
Benzo (k) fluoranthene	ND	1.0	1.0		ug/L	5	AL84367	12/18/18 08:00	12/28/18 09:41	EPA 625SIM	NBH	U
Chrysene	ND	1.0	1.0		ug/L	5	AL84367	12/18/18 08:00	12/28/18 09:41	EPA 625SIM	NBH	U
Dibenz (a,h) anthracene	ND	0.50	1.0		ug/L	5	AL84367	12/18/18 08:00	12/28/18 09:41	EPA 625SIM	NBH	U
Fluoranthene	ND	0.35	1.0		ug/L	5	AL84367	12/18/18 08:00	12/28/18 09:41	EPA 625SIM	NBH	U
Fluorene	ND	1.0	1.0		ug/L	5	AL84367	12/18/18 08:00	12/28/18 09:41	EPA 625SIM	NBH	U
Indeno (1,2,3-cd) pyrene	ND	0.15	1.0		ug/L	5	AL84367	12/18/18 08:00	12/28/18 09:41	EPA 625SIM	NBH	U
Naphthalene	ND	0.45	1.0		ug/L	5	AL84367	12/18/18 08:00	12/28/18 09:41	EPA 625SIM	NBH	U
Phenanthrene	ND	0.50	1.0		ug/L	5	AL84367	12/18/18 08:00	12/28/18 09:41	EPA 625SIM	NBH	U
Pyrene	ND	1.0	1.0		ug/L	5	AL84367	12/18/18 08:00	12/28/18 09:41	EPA 625SIM	NBH	U
Surrogate: 2-Fluorobiphenyl		78.5 %	34-133				AL84367	12/18/18 08:00	12/28/18 09:41	EPA 625SIM	NBH	
Surrogate: Nitrobenzene-d5		77.4 %	36-131				AL84367	12/18/18 08:00	12/28/18 09:41	EPA 625SIM	NBH	
Surrogate: p-Terphenyl-d14		91.5 %	35-156				AL84367	12/18/18 08:00	12/28/18 09:41	EPA 625SIM	NBH	



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Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83965 - Metals Digest

Blank (AL83965-BLK1) Prepared: 12/18/18 Analyzed: 12/27/18

Calcium	ND	0.080	1.0	mg/L							U
Magnesium	ND	0.030	1.0	mg/L							U

LCS (AL83965-BS1) Prepared: 12/18/18 Analyzed: 12/27/18

Calcium	8.39	0.080	1.0	mg/L	8.00		105	85-115			
Magnesium	8.42	0.030	1.0	mg/L	8.00		105	85-115			

Duplicate (AL83965-DUP1) Source: 18L1767-03 Prepared: 12/18/18 Analyzed: 12/27/18

Calcium	19.7	0.080	1.0	mg/L		19.3			2.30	20	
Magnesium	16.5	0.030	1.0	mg/L		16.2			1.56	20	

Matrix Spike (AL83965-MS1) Source: 18L1767-03 Prepared: 12/18/18 Analyzed: 12/27/18

Calcium	28.0	0.080	1.0	mg/L	8.00	19.3	109	70-130			
Magnesium	24.7	0.030	1.0	mg/L	8.00	16.2	106	70-130			

Matrix Spike (AL83965-MS2) Source: 18L1305-01 Prepared: 12/18/18 Analyzed: 12/27/18

Calcium	11.2	0.080	1.0	mg/L	8.00	2.43	110	70-130			
Magnesium	9.79	0.030	1.0	mg/L	8.00	0.999	110	70-130			

Matrix Spike Dup (AL83965-MSD1) Source: 18L1767-03 Prepared: 12/18/18 Analyzed: 12/27/18

Calcium	28.4	0.080	1.0	mg/L	8.00	19.3	114	70-130	1.55	20	
Magnesium	24.5	0.030	1.0	mg/L	8.00	16.2	103	70-130	0.862	20	

Batch AL84111 - General Preparation

Blank (AL84111-BLK1) Prepared & Analyzed: 12/19/18

Chromium, hexavalent	ND	0.30	1.0	ug/L							U
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Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL84111 - General Preparation

LCS (AL84111-BS1)					Prepared & Analyzed: 12/19/18						
Chromium, hexavalent	9.63	0.30	1.0	ug/L	10.0		96.3	90-110			
Duplicate (AL84111-DUP1)					Source: 18L1303-01 Prepared & Analyzed: 12/19/18						
Chromium, hexavalent	ND	0.30	1.0	ug/L		ND			20		U
Matrix Spike (AL84111-MS1)					Source: 18L1303-01 Prepared & Analyzed: 12/19/18						
Chromium, hexavalent	9.51	0.30	1.0	ug/L	10.0	ND	95.1	90-110			
Matrix Spike (AL84111-MS2)					Source: 18L2068-02 Prepared & Analyzed: 12/20/18						
Chromium, hexavalent	9.10	0.30	1.0	ug/L	10.0	ND	91.0	90-110			
Matrix Spike Dup (AL84111-MSD1)					Source: 18L1303-01 Prepared & Analyzed: 12/19/18						
Chromium, hexavalent	9.55	0.30	1.0	ug/L	10.0	ND	95.5	90-110	0.378	20	

Batch AL84127 - EPA 245.1 Hg Water

Blank (AL84127-BLK1)					Prepared & Analyzed: 12/20/18						
Mercury	ND	0.020	0.020	ug/L							U
LCS (AL84127-BS1)					Prepared & Analyzed: 12/20/18						
Mercury	0.250	0.020	0.020	ug/L	0.250		100	85-115			
Duplicate (AL84127-DUP1)					Source: 18L1613-02 Prepared & Analyzed: 12/20/18						
Mercury	ND	0.020	0.020	ug/L		ND			20		U
Matrix Spike (AL84127-MS1)					Source: 18L1613-02 Prepared & Analyzed: 12/20/18						
Mercury	0.275	0.020	0.020	ug/L	0.250	ND	110	70-130			

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Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL84127 - EPA 245.1 Hg Water

Matrix Spike Dup (AL84127-MSD1)	Source: 18L1613-02		Prepared & Analyzed: 12/20/18								
Mercury	0.239	0.020	0.020	ug/L	0.250	ND	95.6	70-130	14.0	20	

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Metals by EPA Method 200.8 ICP/MS - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83963 - EPA 200.8

Blank (AL83963-BLK1)

Prepared: 12/18/18 Analyzed: 12/21/18

Antimony	ND	0.20	0.50	ug/L							U
Arsenic	ND	0.20	0.50	ug/L							U
Beryllium	ND	0.050	0.10	ug/L							U
Cadmium	ND	0.060	0.10	ug/L							U
Chromium	ND	0.50	0.50	ug/L							U
Copper	ND	0.40	0.50	ug/L							U
Lead	ND	0.060	0.25	ug/L							U
Nickel	ND	0.30	0.50	ug/L							U
Selenium	ND	0.30	2.0	ug/L							U
Silver	ND	0.050	0.10	ug/L							U
Thallium	ND	0.050	0.10	ug/L							U
Zinc	3.87	2.0	5.0	ug/L							J

LCS (AL83963-BS1)

Prepared: 12/18/18 Analyzed: 12/21/18

Antimony	21.0	0.20	0.50	ug/L	20.0		105	85-115			
Arsenic	20.8	0.20	0.50	ug/L	20.0		104	85-115			
Beryllium	21.3	0.050	0.10	ug/L	20.0		107	85-115			
Cadmium	20.8	0.060	0.10	ug/L	20.0		104	85-115			
Chromium	21.0	0.50	0.50	ug/L	20.0		105	85-115			
Copper	20.4	0.40	0.50	ug/L	20.0		102	85-115			
Lead	20.7	0.060	0.25	ug/L	20.0		103	85-115			
Nickel	20.7	0.30	0.50	ug/L	20.0		103	85-115			
Selenium	20.8	0.30	2.0	ug/L	20.0		104	85-115			
Silver	20.9	0.050	0.10	ug/L	20.0		104	85-115			
Thallium	20.6	0.050	0.10	ug/L	20.0		103	85-115			
Zinc	104	2.0	5.0	ug/L	100		104	85-115			

Duplicate (AL83963-DUP1)

Source: 18L1610-02

Prepared: 12/18/18 Analyzed: 12/21/18

Antimony	ND	0.80	2.0	ug/L		ND			20		U
Arsenic	ND	0.80	2.0	ug/L		ND			20		U
Beryllium	ND	0.20	0.40	ug/L		ND			20		U
Cadmium	ND	0.24	0.40	ug/L		ND			20		U
Chromium	ND	2.0	2.0	ug/L		ND			20		U
Copper	ND	1.6	2.0	ug/L		ND			20		U
Lead	ND	0.24	1.0	ug/L		ND			20		U
Nickel	ND	1.2	2.0	ug/L		ND			20		U
Selenium	ND	1.2	8.0	ug/L		ND			20		U

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Metals by EPA Method 200.8 ICP/MS - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83963 - EPA 200.8

Duplicate (AL83963-DUP1)		Source: 18L1610-02			Prepared: 12/18/18 Analyzed: 12/21/18					
Silver	ND	0.20	0.40	ug/L		ND			20	U
Thallium	ND	0.20	0.40	ug/L		ND			20	U
Zinc	10.2	8.0	20	ug/L		9.96		2.19	20	J

Matrix Spike (AL83963-MS1)		Source: 18L1610-02			Prepared: 12/18/18 Analyzed: 12/21/18					
Antimony	21.9	0.80	2.0	ug/L	20.0	ND	109	70-130		
Arsenic	21.9	0.80	2.0	ug/L	20.0	ND	109	70-130		
Beryllium	21.2	0.20	0.40	ug/L	20.0	ND	106	70-130		
Cadmium	21.1	0.24	0.40	ug/L	20.0	ND	105	70-130		
Chromium	23.6	2.0	2.0	ug/L	20.0	ND	118	70-130		
Copper	22.6	1.6	2.0	ug/L	20.0	ND	113	70-130		
Lead	21.4	0.24	1.0	ug/L	20.0	ND	107	70-130		
Nickel	22.1	1.2	2.0	ug/L	20.0	ND	111	70-130		
Selenium	21.4	1.2	8.0	ug/L	20.0	ND	107	70-130		
Silver	21.3	0.20	0.40	ug/L	20.0	ND	107	70-130		
Thallium	21.7	0.20	0.40	ug/L	20.0	ND	108	70-130		
Zinc	112	8.0	20	ug/L	100	9.96	102	70-130		

Matrix Spike (AL83963-MS2)		Source: 18L1115-01			Prepared: 12/18/18 Analyzed: 12/21/18					
Antimony	21.2	0.80	2.0	ug/L	20.0	ND	106	70-130		
Arsenic	20.4	0.80	2.0	ug/L	20.0	ND	102	70-130		
Beryllium	20.7	0.20	0.40	ug/L	20.0	ND	104	70-130		
Cadmium	20.5	0.24	0.40	ug/L	20.0	ND	102	70-130		
Chromium	21.9	2.0	2.0	ug/L	20.0	ND	109	70-130		
Copper	31.9	1.6	2.0	ug/L	20.0	7.19	123	70-130		
Lead	20.6	0.24	1.0	ug/L	20.0	ND	103	70-130		
Nickel	23.4	1.2	2.0	ug/L	20.0	3.70	98.2	70-130		
Selenium	19.7	1.2	8.0	ug/L	20.0	ND	98.5	70-130		
Silver	20.6	0.20	0.40	ug/L	20.0	ND	103	70-130		
Thallium	20.9	0.20	0.40	ug/L	20.0	ND	104	70-130		
Zinc	112	8.0	20	ug/L	100	14.5	97.3	70-130		

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Metals by EPA Method 200.8 ICP/MS - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83963 - EPA 200.8

Matrix Spike Dup (AL83963-MSD1)	Source: 18L1610-02			Prepared: 12/18/18 Analyzed: 12/21/18							
Antimony	21.8	0.80	2.0	ug/L	20.0	ND	109	70-130	0.281	20	
Arsenic	21.6	0.80	2.0	ug/L	20.0	ND	108	70-130	1.27	20	
Beryllium	22.0	0.20	0.40	ug/L	20.0	ND	110	70-130	3.58	20	
Cadmium	21.5	0.24	0.40	ug/L	20.0	ND	108	70-130	2.02	20	
Chromium	22.8	2.0	2.0	ug/L	20.0	ND	114	70-130	3.39	20	
Copper	21.7	1.6	2.0	ug/L	20.0	ND	108	70-130	4.33	20	
Lead	21.2	0.24	1.0	ug/L	20.0	ND	106	70-130	0.670	20	
Nickel	21.7	1.2	2.0	ug/L	20.0	ND	109	70-130	1.91	20	
Selenium	21.3	1.2	8.0	ug/L	20.0	ND	106	70-130	0.495	20	
Silver	21.3	0.20	0.40	ug/L	20.0	ND	107	70-130	0.0781	20	
Thallium	21.2	0.20	0.40	ug/L	20.0	ND	106	70-130	2.04	20	
Zinc	111	8.0	20	ug/L	100	9.96	101	70-130	0.704	20	



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Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83965 - Metals Digest

Blank (AL83965-BLK1)			Prepared: 12/18/18 Analyzed: 12/27/18								
Hardness, Total	ND	1	5	mg/L							U
Duplicate (AL83965-DUP1)			Source: 18L1767-03 Prepared: 12/18/18 Analyzed: 12/27/18								
Hardness, Total	117	1	5	mg/L		115			1.87	20	

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Miscellaneous Physical/Conventional Chemistry Parameters - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL84146 - General Preparation

Blank (AL84146-BLK1)			Prepared & Analyzed: 12/20/18								
Cyanide (total)	ND	0.0020	0.0050	mg/L							U
Duplicate (AL84146-DUP1)			Source: 18L1613-02 Prepared & Analyzed: 12/20/18								
Cyanide (total)	ND	0.0020	0.0050	mg/L		ND			25		U
Matrix Spike (AL84146-MS1)			Source: 18L1613-02 Prepared & Analyzed: 12/20/18								
Cyanide (total)	0.234	0.0020	0.0050	mg/L	0.200	ND	117	85-115			QM-07
Matrix Spike (AL84146-MS2)			Source: 18L1622-01 Prepared & Analyzed: 12/20/18								
Cyanide (total)	0.231	0.0020	0.0050	mg/L	0.200	ND	116	85-115			QM-07
Matrix Spike Dup (AL84146-MSD1)			Source: 18L1613-02 Prepared & Analyzed: 12/20/18								
Cyanide (total)	0.224	0.0020	0.0050	mg/L	0.200	ND	112	85-115	4.68	25	



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Acrolein by EPA Method 624 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83840 - VOAs in Water GCMS

Blank (AL83840-BLK1)

Prepared: 12/13/18 Analyzed: 12/14/18

Acrolein	ND	2.0	5.0	ug/L							U
Surrogate: Bromofluorobenzene	25.3			ug/L	25.0		101	70-130			
Surrogate: Dibromofluoromethane	22.7			ug/L	25.0		90.8	70-130			
Surrogate: Toluene-d8	24.0			ug/L	25.0		96.0	70-130			

LCS (AL83840-BS1)

Prepared: 12/13/18 Analyzed: 12/14/18

Acrolein	47.7	2.0	5.0	ug/L	50.0		95.5	50-150			
Surrogate: Bromofluorobenzene	25.6			ug/L	25.0		103	70-130			
Surrogate: Dibromofluoromethane	23.0			ug/L	25.0		91.9	70-130			
Surrogate: Toluene-d8	24.7			ug/L	25.0		98.7	70-130			

LCS Dup (AL83840-BSD1)

Prepared: 12/13/18 Analyzed: 12/14/18

Acrolein	47.0	2.0	5.0	ug/L	50.0		93.9	50-150	1.67	25	
Surrogate: Bromofluorobenzene	25.2			ug/L	25.0		101	70-130			
Surrogate: Dibromofluoromethane	22.7			ug/L	25.0		90.8	70-130			
Surrogate: Toluene-d8	24.1			ug/L	25.0		96.4	70-130			



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2-Chloroethylvinyl Ether by EPA Method 624 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83840 - VOAs in Water GCMS

Blank (AL83840-BLK1)											
						Prepared: 12/13/18 Analyzed: 12/14/18					
2-Chloroethylvinyl ether	ND	0.70	1.0	ug/L							U
Surrogate: Bromofluorobenzene	25.3			ug/L	25.0		101	70-130			
Surrogate: Dibromofluoromethane	22.7			ug/L	25.0		90.8	70-130			
Surrogate: Toluene-d8	24.0			ug/L	25.0		96.0	70-130			
LCS (AL83840-BS1)											
						Prepared: 12/13/18 Analyzed: 12/14/18					
2-Chloroethylvinyl ether	22.3	0.70	1.0	ug/L	25.0		89.0	75-130			
Surrogate: Bromofluorobenzene	25.6			ug/L	25.0		103	70-130			
Surrogate: Dibromofluoromethane	23.0			ug/L	25.0		91.9	70-130			
Surrogate: Toluene-d8	24.7			ug/L	25.0		98.7	70-130			
LCS Dup (AL83840-BSD1)											
						Prepared: 12/13/18 Analyzed: 12/14/18					
2-Chloroethylvinyl ether	23.6	0.70	1.0	ug/L	25.0		94.2	75-130	5.67	30	
Surrogate: Bromofluorobenzene	25.2			ug/L	25.0		101	70-130			
Surrogate: Dibromofluoromethane	22.7			ug/L	25.0		90.8	70-130			
Surrogate: Toluene-d8	24.1			ug/L	25.0		96.4	70-130			

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Volatile Organic Compounds by EPA Method 624 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83983 - VOAs in Water GCMS

Blank (AL83983-BLK1)

Prepared & Analyzed: 12/17/18

Acrylonitrile	ND	0.40	2.0	ug/L							U
Benzene	ND	0.30	0.30	ug/L							U
Bromoform	ND	0.30	0.50	ug/L							U
Carbon tetrachloride	ND	0.40	0.50	ug/L							U
Chlorobenzene	ND	0.30	0.50	ug/L							U
Dibromochloromethane	ND	0.40	0.50	ug/L							U
Chloroethane	ND	0.40	0.50	ug/L							U
Chloroform	ND	0.40	0.50	ug/L							U
Bromodichloromethane	ND	0.40	0.50	ug/L							U
1,1-Dichloroethane	ND	0.10	0.50	ug/L							U
1,2-Dichloroethane	ND	0.40	0.50	ug/L							U
1,1-Dichloroethene	ND	0.30	0.50	ug/L							U
1,2-Dichloropropane	ND	0.40	0.50	ug/L							U
cis-1,3-Dichloropropene	ND	0.40	0.50	ug/L							U
trans-1,3-Dichloropropene	ND	0.40	0.50	ug/L							U
Ethylbenzene	ND	0.40	0.50	ug/L							U
Bromomethane	ND	0.40	0.50	ug/L							U
Chloromethane	ND	0.40	0.50	ug/L							U
Methylene chloride	ND	0.50	0.50	ug/L							U
1,1,2,2-Tetrachloroethane	ND	0.30	0.50	ug/L							U
Tetrachloroethene	ND	0.40	0.50	ug/L							U
Toluene	ND	0.30	0.30	ug/L							U
trans-1,2-Dichloroethene	ND	0.40	0.50	ug/L							U
1,1,1-Trichloroethane	ND	0.40	0.50	ug/L							U
1,1,2-Trichloroethane	ND	0.40	0.50	ug/L							U
Trichloroethene	ND	0.40	0.50	ug/L							U
Trihalomethanes (total)	ND	0.40	0.50	ug/L							U
Vinyl chloride	ND	0.40	0.50	ug/L							U
1,2-Dichlorobenzene	ND	0.40	0.50	ug/L							U
1,3-Dichlorobenzene	ND	0.40	0.50	ug/L							U
1,4-Dichlorobenzene	ND	0.10	0.50	ug/L							U
Surrogate: Bromofluorobenzene	27.0			ug/L	25.0		108	70-130			
Surrogate: Dibromofluoromethane	24.8			ug/L	25.0		99.1	70-130			
Surrogate: Toluene-d8	28.2			ug/L	25.0		113	70-130			

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Volatile Organic Compounds by EPA Method 624 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83983 - VOAs in Water GCMS

LCS (AL83983-BS1)

Prepared & Analyzed: 12/17/18

Acrylonitrile	20.6	0.40	2.0	ug/L	20.0		103	70-130			
Benzene	20.8	0.30	0.30	ug/L	20.0		104	82-122			
Bromoform	20.4	0.30	0.50	ug/L	20.0		102	57-156			
Carbon tetrachloride	20.5	0.40	0.50	ug/L	20.0		102	77-134			
Chlorobenzene	20.4	0.30	0.50	ug/L	20.0		102	84-119			
Dibromochloromethane	19.5	0.40	0.50	ug/L	20.0		97.3	69-133			
Chloroethane	22.8	0.40	0.50	ug/L	20.0		114	68-133			
Chloroform	20.9	0.40	0.50	ug/L	20.0		105	81-122			
Bromodichloromethane	19.3	0.40	0.50	ug/L	20.0		96.5	86-135			
1,1-Dichloroethane	21.0	0.10	0.50	ug/L	20.0		105	81-126			
1,2-Dichloroethane	19.7	0.40	0.50	ug/L	20.0		98.7	77-117			
1,1-Dichloroethene	21.3	0.30	0.50	ug/L	20.0		106	71-151			
1,2-Dichloropropane	20.7	0.40	0.50	ug/L	20.0		104	82-125			
cis-1,3-Dichloropropene	19.7	0.40	0.50	ug/L	20.0		98.6	68-125			
trans-1,3-Dichloropropene	20.7	0.40	0.50	ug/L	20.0		104	67-129			
Ethylbenzene	21.7	0.40	0.50	ug/L	20.0		108	84-124			
Bromomethane	18.5	0.40	0.50	ug/L	20.0		92.3	69-145			
Chloromethane	22.6	0.40	0.50	ug/L	20.0		113	63-129			
Methylene chloride	21.9	0.50	0.50	ug/L	20.0		109	72-132			
1,1,2,2-Tetrachloroethane	21.2	0.30	0.50	ug/L	20.0		106	77-121			
Tetrachloroethene	20.3	0.40	0.50	ug/L	20.0		102	65-133			
Toluene	21.4	0.30	0.30	ug/L	20.0		107	75-134			
trans-1,2-Dichloroethene	20.3	0.40	0.50	ug/L	20.0		101	79-128			
1,1,1-Trichloroethane	24.7	0.40	0.50	ug/L	20.0		123	70-130			
1,1,2-Trichloroethane	21.4	0.40	0.50	ug/L	20.0		107	83-122			
Trichloroethene	22.4	0.40	0.50	ug/L	20.0		112	84-123			
Vinyl chloride	24.4	0.40	0.50	ug/L	20.0		122	70-130			
1,2-Dichlorobenzene	20.6	0.40	0.50	ug/L	20.0		103	84-121			
1,3-Dichlorobenzene	20.7	0.40	0.50	ug/L	20.0		103	80-120			
1,4-Dichlorobenzene	19.5	0.10	0.50	ug/L	20.0		97.7	84-120			
Surrogate: Bromofluorobenzene	28.4			ug/L	25.0		113	70-130			
Surrogate: Dibromofluoromethane	26.1			ug/L	25.0		104	70-130			
Surrogate: Toluene-d8	27.4			ug/L	25.0		110	70-130			

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
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Volatile Organic Compounds by EPA Method 624 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83983 - VOAs in Water GCMS

LCS Dup (AL83983-BSD1)

Prepared & Analyzed: 12/17/18

Acrylonitrile	22.1	0.40	2.0	ug/L	20.0	111	70-130	7.02	25	
Benzene	20.4	0.30	0.30	ug/L	20.0	102	82-122	1.65	25	
Bromoform	21.1	0.30	0.50	ug/L	20.0	106	57-156	3.52	25	
Carbon tetrachloride	21.1	0.40	0.50	ug/L	20.0	105	77-134	2.94	25	
Chlorobenzene	20.2	0.30	0.50	ug/L	20.0	101	84-119	0.836	25	
Dibromochloromethane	20.5	0.40	0.50	ug/L	20.0	102	69-133	5.11	25	
Chloroethane	22.0	0.40	0.50	ug/L	20.0	110	68-133	3.44	25	
Chloroform	20.6	0.40	0.50	ug/L	20.0	103	81-122	1.49	25	
Bromodichloromethane	19.8	0.40	0.50	ug/L	20.0	98.8	86-135	2.30	25	
1,1-Dichloroethane	20.7	0.10	0.50	ug/L	20.0	103	81-126	1.73	25	
1,2-Dichloroethane	19.4	0.40	0.50	ug/L	20.0	97.0	77-117	1.69	25	
1,1-Dichloroethene	20.2	0.30	0.50	ug/L	20.0	101	71-151	5.06	25	
1,2-Dichloropropane	20.7	0.40	0.50	ug/L	20.0	103	82-125	0.145	25	
cis-1,3-Dichloropropene	20.4	0.40	0.50	ug/L	20.0	102	68-125	3.24	25	
trans-1,3-Dichloropropene	22.3	0.40	0.50	ug/L	20.0	111	67-129	7.40	25	
Ethylbenzene	21.4	0.40	0.50	ug/L	20.0	107	84-124	1.16	25	
Bromomethane	18.3	0.40	0.50	ug/L	20.0	91.6	69-145	0.707	25	
Chloromethane	22.4	0.40	0.50	ug/L	20.0	112	63-129	0.622	25	
Methylene chloride	19.2	0.50	0.50	ug/L	20.0	96.2	72-132	12.8	25	
1,1,2,2-Tetrachloroethane	21.1	0.30	0.50	ug/L	20.0	106	77-121	0.425	25	
Tetrachloroethene	20.2	0.40	0.50	ug/L	20.0	101	65-133	0.939	25	
Toluene	21.1	0.30	0.30	ug/L	20.0	106	75-134	1.27	25	
trans-1,2-Dichloroethene	20.2	0.40	0.50	ug/L	20.0	101	79-128	0.197	25	
1,1,1-Trichloroethane	25.7	0.40	0.50	ug/L	20.0	128	70-130	3.93	25	
1,1,2-Trichloroethane	21.2	0.40	0.50	ug/L	20.0	106	83-122	0.939	25	
Trichloroethene	22.0	0.40	0.50	ug/L	20.0	110	84-123	2.07	25	
Vinyl chloride	23.6	0.40	0.50	ug/L	20.0	118	70-130	3.16	25	
1,2-Dichlorobenzene	20.5	0.40	0.50	ug/L	20.0	103	84-121	0.292	25	
1,3-Dichlorobenzene	20.6	0.40	0.50	ug/L	20.0	103	80-120	0.582	25	
1,4-Dichlorobenzene	19.8	0.10	0.50	ug/L	20.0	99.0	84-120	1.37	25	
Surrogate: Bromofluorobenzene	28.1			ug/L	25.0	112	70-130			
Surrogate: Dibromofluoromethane	26.1			ug/L	25.0	104	70-130			
Surrogate: Toluene-d8	27.0			ug/L	25.0	108	70-130			

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
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Volatile Organic Compounds by EPA Method 624 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83983 - VOAs in Water GCMS

Matrix Spike (AL83983-MS1)	Source: 18L1868-01			Prepared: 12/17/18 Analyzed: 12/18/18						
Acrylonitrile	25.2	0.40	2.0	ug/L	20.0	ND	126	70-139		
Benzene	21.4	0.30	0.30	ug/L	20.0	ND	107	58-139		
Bromoform	20.2	0.30	0.50	ug/L	20.0	ND	101	47-165		
Carbon tetrachloride	20.8	0.40	0.50	ug/L	20.0	ND	104	65-153		
Chlorobenzene	20.3	0.30	0.50	ug/L	20.0	ND	102	58-137		
Dibromochloromethane	19.2	0.40	0.50	ug/L	20.0	ND	96.0	54-157		
Chloroethane	22.8	0.40	0.50	ug/L	20.0	ND	114	59-141		
Chloroform	21.0	0.40	0.50	ug/L	20.0	ND	105	68-121		
Bromodichloromethane	18.8	0.40	0.50	ug/L	20.0	ND	94.0	62-140		
1,1-Dichloroethane	21.8	0.10	0.50	ug/L	20.0	ND	109	71-143		
1,2-Dichloroethane	20.2	0.40	0.50	ug/L	20.0	ND	101	58-133		
1,1-Dichloroethene	22.9	0.30	0.50	ug/L	20.0	ND	114	70-154		
1,2-Dichloropropane	20.9	0.40	0.50	ug/L	20.0	ND	104	41-142		
cis-1,3-Dichloropropene	19.2	0.40	0.50	ug/L	20.0	ND	96.2	67-128		
trans-1,3-Dichloropropene	20.1	0.40	0.50	ug/L	20.0	ND	101	40-144		
Ethylbenzene	21.9	0.40	0.50	ug/L	20.0	ND	109	59-147		
Bromomethane	17.0	0.40	0.50	ug/L	20.0	ND	85.0	30-163		
Chloromethane	22.2	0.40	0.50	ug/L	20.0	ND	111	69-149		
Methylene chloride	21.4	0.50	0.50	ug/L	20.0	ND	107	43-143		
1,1,2,2-Tetrachloroethane	24.9	0.30	0.50	ug/L	20.0	ND	124	73-127		
Tetrachloroethene	20.8	0.40	0.50	ug/L	20.0	ND	104	49-148		
Toluene	22.0	0.30	0.30	ug/L	20.0	ND	110	59-147		
trans-1,2-Dichloroethene	20.5	0.40	0.50	ug/L	20.0	ND	102	59-151		
1,1,1-Trichloroethane	25.3	0.40	0.50	ug/L	20.0	ND	126	70-130		
1,1,2-Trichloroethane	21.8	0.40	0.50	ug/L	20.0	ND	109	75-136		
Trichloroethene	21.5	0.40	0.50	ug/L	20.0	ND	108	58-140		
Vinyl chloride	24.8	0.40	0.50	ug/L	20.0	ND	124	53-160		
1,2-Dichlorobenzene	19.7	0.40	0.50	ug/L	20.0	ND	98.3	76-130		
1,3-Dichlorobenzene	18.9	0.40	0.50	ug/L	20.0	ND	94.4	54-137		
1,4-Dichlorobenzene	18.6	0.10	0.50	ug/L	20.0	ND	93.2	41-142		
Surrogate: Bromofluorobenzene	28.1			ug/L	25.0		112	70-130		
Surrogate: Dibromofluoromethane	26.0			ug/L	25.0		104	70-130		
Surrogate: Toluene-d8	27.3			ug/L	25.0		109	70-130		

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
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Volatile Organic Compounds by EPA Method 624 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83983 - VOAs in Water GCMS

Matrix Spike (AL83983-MS2)	Source: 18L1869-01			Prepared: 12/17/18 Analyzed: 12/18/18							
Acrylonitrile	20.0	0.40	2.0	ug/L	20.0	ND	100	70-139			
Benzene	18.6	0.30	0.30	ug/L	20.0	ND	92.8	58-139			
Bromoform	17.5	0.30	0.50	ug/L	20.0	ND	87.6	47-165			
Carbon tetrachloride	19.9	0.40	0.50	ug/L	20.0	ND	99.4	65-153			
Chlorobenzene	17.4	0.30	0.50	ug/L	20.0	ND	87.2	58-137			
Dibromochloromethane	16.3	0.40	0.50	ug/L	20.0	ND	81.6	54-157			
Chloroethane	21.7	0.40	0.50	ug/L	20.0	ND	109	59-141			
Chloroform	18.6	0.40	0.50	ug/L	20.0	ND	93.1	68-121			
Bromodichloromethane	16.6	0.40	0.50	ug/L	20.0	ND	83.2	62-140			
1,1-Dichloroethane	19.2	0.10	0.50	ug/L	20.0	ND	95.8	71-143			
1,2-Dichloroethane	16.8	0.40	0.50	ug/L	20.0	ND	84.2	58-133			
1,1-Dichloroethene	19.7	0.30	0.50	ug/L	20.0	ND	98.4	70-154			
1,2-Dichloropropane	17.9	0.40	0.50	ug/L	20.0	ND	89.4	41-142			
cis-1,3-Dichloropropene	15.7	0.40	0.50	ug/L	20.0	ND	78.6	67-128			
trans-1,3-Dichloropropene	17.2	0.40	0.50	ug/L	20.0	ND	86.0	40-144			
Ethylbenzene	19.2	0.40	0.50	ug/L	20.0	ND	95.8	59-147			
Bromomethane	14.5	0.40	0.50	ug/L	20.0	ND	72.4	30-163			
Chloromethane	19.6	0.40	0.50	ug/L	20.0	ND	98.2	69-149			
Methylene chloride	16.5	0.50	0.50	ug/L	20.0	ND	82.7	43-143			
1,1,2,2-Tetrachloroethane	19.2	0.30	0.50	ug/L	20.0	ND	96.1	73-127			
Tetrachloroethene	18.5	0.40	0.50	ug/L	20.0	ND	92.7	49-148			
Toluene	19.1	0.30	0.30	ug/L	20.0	ND	95.4	59-147			
trans-1,2-Dichloroethene	18.8	0.40	0.50	ug/L	20.0	ND	94.2	59-151			
1,1,1-Trichloroethane	23.6	0.40	0.50	ug/L	20.0	ND	118	70-130			
1,1,2-Trichloroethane	17.9	0.40	0.50	ug/L	20.0	ND	89.6	75-136			
Trichloroethene	19.4	0.40	0.50	ug/L	20.0	ND	96.8	58-140			
Vinyl chloride	23.5	0.40	0.50	ug/L	20.0	ND	118	53-160			
1,2-Dichlorobenzene	17.1	0.40	0.50	ug/L	20.0	ND	85.6	76-130			
1,3-Dichlorobenzene	16.9	0.40	0.50	ug/L	20.0	ND	84.4	54-137			
1,4-Dichlorobenzene	16.4	0.10	0.50	ug/L	20.0	ND	82.0	41-142			
Surrogate: Bromofluorobenzene	27.9			ug/L	25.0		112	70-130			
Surrogate: Dibromofluoromethane	26.3			ug/L	25.0		105	70-130			
Surrogate: Toluene-d8	27.2			ug/L	25.0		109	70-130			

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Organochlorine Pesticides and PCBs by EPA Method 608 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83892 - SVOAs in Water GC

Blank (AL83892-BLK1)

Prepared: 12/17/18 Analyzed: 12/19/18

Aldrin	ND	0.0020	0.0050	ug/L							U
alpha-BHC	ND	0.0040	0.010	ug/L							U
beta-BHC	ND	0.0040	0.0050	ug/L							U
gamma-BHC (Lindane)	ND	0.0040	0.010	ug/L							U
delta-BHC	ND	0.0020	0.0050	ug/L							U
Chlordane (tech)	ND	0.010	0.050	ug/L							U
4,4'-DDT	ND	0.0030	0.010	ug/L							U
4,4'-DDE	ND	0.0040	0.020	ug/L							U
4,4'-DDD	ND	0.0050	0.020	ug/L							U
Dieldrin	ND	0.0050	0.010	ug/L							U
Endosulfan I	ND	0.0040	0.010	ug/L							U
Endosulfan II	ND	0.0050	0.010	ug/L							U
Endosulfan sulfate	ND	0.0030	0.050	ug/L							U
Endrin	ND	0.0080	0.010	ug/L							U
Endrin aldehyde	ND	0.0040	0.010	ug/L							U
Heptachlor	ND	0.0050	0.010	ug/L							U
Heptachlor epoxide	ND	0.0090	0.010	ug/L							U
PCB-1016	ND	0.080	0.50	ug/L							U
PCB-1221	ND	0.20	0.50	ug/L							U
PCB-1232	ND	0.10	0.50	ug/L							U
PCB-1242	ND	0.040	0.50	ug/L							U
PCB-1248	ND	0.060	0.50	ug/L							U
PCB-1254	ND	0.040	0.50	ug/L							U
PCB-1260	ND	0.040	0.50	ug/L							U
Toxaphene	ND	0.20	0.50	ug/L							U
Surrogate: Dibutylchlorendate	0.599			ug/L	0.500		120	63-124			

LCS (AL83892-BS1)

Prepared: 12/17/18 Analyzed: 12/19/18

Aldrin	0.183	0.0020	0.0050	ug/L	0.240		76.1	43-120			
alpha-BHC	0.203	0.0040	0.010	ug/L	0.240		84.5	71-122			
beta-BHC	0.210	0.0040	0.0050	ug/L	0.240		87.6	65-123			
gamma-BHC (Lindane)	0.210	0.0040	0.010	ug/L	0.240		87.4	59-122			
delta-BHC	0.214	0.0020	0.0050	ug/L	0.240		89.2	78-129			
4,4'-DDT	0.245	0.0030	0.010	ug/L	0.240		102	79-143			
4,4'-DDE	0.208	0.0040	0.020	ug/L	0.240		86.6	78-132			
4,4'-DDD	0.210	0.0050	0.020	ug/L	0.240		87.6	79-132			

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Organochlorine Pesticides and PCBs by EPA Method 608 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83892 - SVOAs in Water GC

LCS (AL83892-BS1)

Prepared: 12/17/18 Analyzed: 12/19/18

Dieldrin	0.211	0.0050	0.010	ug/L	0.240		88.1	80-124			
Endosulfan I	0.211	0.0040	0.010	ug/L	0.240		88.1	71-126			
Endosulfan II	0.223	0.0050	0.010	ug/L	0.240		93.0	80-125			
Endosulfan sulfate	0.214	0.0030	0.050	ug/L	0.240		89.3	80-126			
Endrin	0.254	0.0080	0.010	ug/L	0.240		106	74-153			
Endrin aldehyde	0.201	0.0040	0.010	ug/L	0.240		83.7	46-129			
Heptachlor	0.203	0.0050	0.010	ug/L	0.240		84.5	67-120			
Heptachlor epoxide	0.216	0.0090	0.010	ug/L	0.240		90.0	74-120			
Surrogate: Dibutylchlorendate	0.563			ug/L	0.500		113	63-124			

LCS Dup (AL83892-BSD1)

Prepared: 12/17/18 Analyzed: 12/19/18

Aldrin	0.170	0.0020	0.0050	ug/L	0.240		70.8	43-120	7.25	20	
alpha-BHC	0.182	0.0040	0.010	ug/L	0.240		75.6	71-122	11.0	20	
beta-BHC	0.194	0.0040	0.0050	ug/L	0.240		80.9	65-123	8.05	20	
gamma-BHC (Lindane)	0.190	0.0040	0.010	ug/L	0.240		79.3	59-122	9.64	20	
delta-BHC	0.201	0.0020	0.0050	ug/L	0.240		83.8	78-129	6.22	20	
4,4'-DDT	0.233	0.0030	0.010	ug/L	0.240		97.2	79-143	4.93	20	
4,4'-DDE	0.195	0.0040	0.020	ug/L	0.240		81.1	78-132	6.52	20	
4,4'-DDD	0.200	0.0050	0.020	ug/L	0.240		83.2	79-132	5.19	20	
Dieldrin	0.198	0.0050	0.010	ug/L	0.240		82.3	80-124	6.71	20	
Endosulfan I	0.196	0.0040	0.010	ug/L	0.240		81.9	71-126	7.36	20	
Endosulfan II	0.211	0.0050	0.010	ug/L	0.240		87.8	80-125	5.75	20	
Endosulfan sulfate	0.207	0.0030	0.050	ug/L	0.240		86.4	80-126	3.25	20	
Endrin	0.225	0.0080	0.010	ug/L	0.240		93.6	74-153	12.4	20	
Endrin aldehyde	0.198	0.0040	0.010	ug/L	0.240		82.6	46-129	1.37	30	
Heptachlor	0.187	0.0050	0.010	ug/L	0.240		78.1	67-120	7.94	20	
Heptachlor epoxide	0.200	0.0090	0.010	ug/L	0.240		83.3	74-120	7.73	20	
Surrogate: Dibutylchlorendate	0.609			ug/L	0.500		122	63-124			



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Semivolatile Organic Compounds by EPA Method 625 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83924 - SVOAs in Water GCMS

Blank (AL83924-BLK1)

Prepared: 12/18/18 Analyzed: 12/26/18

2-Chlorophenol	ND	0.70	5.0	ug/L							U
2,4-Dichlorophenol	ND	0.70	5.0	ug/L							U
2,4-Dimethylphenol	ND	1.0	2.0	ug/L							U
4,6-Dinitro-2-methylphenol	ND	3.0	5.0	ug/L							U
2,4-Dinitrophenol	ND	5.0	5.0	ug/L							U
2-Nitrophenol	ND	0.90	10	ug/L							U
4-Nitrophenol	ND	3.0	10	ug/L							U
4-Chloro-3-methylphenol	ND	1.0	1.0	ug/L							U
Pentachlorophenol	ND	4.0	5.0	ug/L							U
2-Methylphenol (o-cresol)	ND	0.60	5.0	ug/L							U
Phenol	ND	0.50	1.0	ug/L							U
2,4,6-Trichlorophenol	ND	0.70	10	ug/L							U
Bis(2-chloroethoxy)methane	ND	0.40	5.0	ug/L							U
Bis(2-chloroethyl)ether	ND	0.30	1.0	ug/L							U
Bis(2-chloroisopropyl)ether	ND	0.40	2.0	ug/L							U
Bis(2-ethylhexyl)phthalate	ND	3.0	5.0	ug/L							U
4-Bromophenyl phenyl ether	ND	0.40	5.0	ug/L							U
Butyl benzyl phthalate	ND	0.60	10	ug/L							U
2-Chloronaphthalene	ND	0.60	10	ug/L							U
4-Chlorophenyl phenyl ether	ND	0.90	5.0	ug/L							U
1,2-Dichlorobenzene	ND	0.60	2.0	ug/L							U
1,3-Dichlorobenzene	ND	0.60	1.0	ug/L							U
1,4-Dichlorobenzene	ND	0.60	1.0	ug/L							U
Diethyl phthalate	ND	0.30	2.0	ug/L							U
Dimethyl phthalate	ND	0.30	2.0	ug/L							U
Di-n-butyl phthalate	ND	0.90	10	ug/L							U
2,4-Dinitrotoluene	ND	0.20	5.0	ug/L							U
2,6-Dinitrotoluene	ND	0.30	5.0	ug/L							U
Di-n-octyl phthalate	ND	0.60	10	ug/L							U
1,2-Diphenylhydrazine	ND	0.60	1.0	ug/L							U
Hexachlorobenzene	ND	0.90	1.0	ug/L							U
Hexachlorobutadiene	ND	0.80	1.0	ug/L							U
Hexachlorocyclopentadiene	ND	4.0	5.0	ug/L							U
Hexachloroethane	ND	0.60	1.0	ug/L							U
Isophorone	ND	0.30	1.0	ug/L							U
Nitrobenzene	ND	0.30	1.0	ug/L							U

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
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Semivolatile Organic Compounds by EPA Method 625 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83924 - SVOAs in Water GCMS

Blank (AL83924-BLK1)

Prepared: 12/18/18 Analyzed: 12/26/18

N-Nitrosodimethylamine	ND	0.30	5.0	ug/L							U
N-Nitrosodi-n-propylamine	ND	0.30	5.0	ug/L							U
N-Nitrosodiphenylamine	ND	0.30	1.0	ug/L							U
1,2,4-Trichlorobenzene	ND	0.60	5.0	ug/L							U
Surrogate: 2-Fluorobiphenyl	32.6			ug/L	40.0		81.6	42-115			
Surrogate: 2-Fluorophenol	21.6			ug/L	40.0		54.0	21-87			
Surrogate: Nitrobenzene-d5	34.0			ug/L	40.0		85.0	50-110			
Surrogate: p-Terphenyl-d14	37.4			ug/L	40.0		93.4	61-134			
Surrogate: Phenol-d6	15.0			ug/L	40.0		37.4	20-52			
Surrogate: 2,4,6-Tribromophenol	42.8			ug/L	40.0		107	54-135			

LCS (AL83924-BS1)

Prepared: 12/18/18 Analyzed: 12/26/18

2-Chlorophenol	33.4	0.70	5.0	ug/L	40.0		83.6	53-100			
2,4-Dichlorophenol	37.9	0.70	5.0	ug/L	40.0		94.6	67-110			
2,4-Dimethylphenol	25.2	1.0	2.0	ug/L	40.0		62.9	32-119			
4,6-Dinitro-2-methylphenol	41.4	3.0	5.0	ug/L	40.0		103	59-129			
2,4-Dinitrophenol	58.0	5.0	5.0	ug/L	50.0		116	46-158			
2-Nitrophenol	39.6	0.90	10	ug/L	40.0		99.0	44-120			
4-Nitrophenol	18.0	3.0	10	ug/L	40.0		45.1	21-71			
4-Chloro-3-methylphenol	39.1	1.0	1.0	ug/L	40.0		97.8	56-116			
2-Methylphenol (o-cresol)	31.0	0.60	5.0	ug/L	40.0		77.5	50-86			
Pentachlorophenol	42.6	4.0	5.0	ug/L	40.0		106	53-145			
Phenol	16.4	0.50	1.0	ug/L	40.0		41.1	21-51			
2,4,6-Trichlorophenol	41.7	0.70	10	ug/L	40.0		104	68-116			
Bis(2-chloroethoxy)methane	36.4	0.40	5.0	ug/L	40.0		91.0	62-106			
Bis(2-chloroethyl)ether	34.3	0.30	1.0	ug/L	40.0		85.8	40-99			
Bis(2-chloroisopropyl)ether	35.4	0.40	2.0	ug/L	40.0		88.5	36-110			
Bis(2-ethylhexyl)phthalate	34.1	3.0	5.0	ug/L	40.0		85.3	55-152			
4-Bromophenyl phenyl ether	37.8	0.40	5.0	ug/L	40.0		94.6	74-120			
Butyl benzyl phthalate	33.7	0.60	10	ug/L	40.0		84.3	67-152			
2-Chloronaphthalene	36.0	0.60	10	ug/L	40.0		90.0	60-118			
4-Chlorophenyl phenyl ether	38.1	0.90	5.0	ug/L	40.0		95.3	67-115			
1,4-Dichlorobenzene	30.9	0.60	1.0	ug/L	40.0		77.3	40-92			
1,3-Dichlorobenzene	30.0	0.60	1.0	ug/L	40.0		75.0	40-100			
1,2-Dichlorobenzene	31.3	0.60	2.0	ug/L	40.0		78.2	40-100			
Diethyl phthalate	37.9	0.30	2.0	ug/L	40.0		94.6	74-119			
Dimethyl phthalate	37.7	0.30	2.0	ug/L	40.0		94.2	68-121			

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
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Semivolatile Organic Compounds by EPA Method 625 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83924 - SVOAs in Water GCMS

LCS (AL83924-BS1)

Prepared: 12/18/18 Analyzed: 12/26/18

Di-n-butyl phthalate	37.0	0.90	10	ug/L	40.0		92.5	73-129			
2,4-Dinitrotoluene	41.6	0.20	5.0	ug/L	40.0		104	75-120			
2,6-Dinitrotoluene	40.1	0.30	5.0	ug/L	40.0		100	66-120			
Di-n-octyl phthalate	29.3	0.60	10	ug/L	40.0		73.2	71-127			
1,2-Diphenylhydrazine	38.5	0.60	1.0	ug/L	40.0		96.2	61-121			
Hexachlorobenzene	37.4	0.90	1.0	ug/L	40.0		93.6	75-120			
Hexachlorobutadiene	31.4	0.80	1.0	ug/L	40.0		78.4	46-93			
Hexachlorocyclopentadiene	25.2	4.0	5.0	ug/L	40.0		62.9	8-83			
Hexachloroethane	31.5	0.60	1.0	ug/L	40.0		78.6	40-89			
Isophorone	34.8	0.30	1.0	ug/L	40.0		87.0	39-140			
Nitrobenzene	35.2	0.30	1.0	ug/L	40.0		87.9	38-124			
N-Nitrosodimethylamine	23.4	0.30	5.0	ug/L	40.0		58.4	11-111			
N-Nitrosodi-n-propylamine	36.7	0.30	5.0	ug/L	40.0		91.8	58-104			
N-Nitrosodiphenylamine	38.1	0.30	1.0	ug/L	40.0		95.2	72-132			
1,2,4-Trichlorobenzene	31.8	0.60	5.0	ug/L	40.0		79.5	51-96			
Surrogate: 2-Fluorobiphenyl	36.0			ug/L	40.0		90.0	42-115			
Surrogate: 2-Fluorophenol	24.8			ug/L	40.0		62.1	21-87			
Surrogate: Nitrobenzene-d5	38.8			ug/L	40.0		97.0	50-110			
Surrogate: p-Terphenyl-d14	36.9			ug/L	40.0		92.3	61-134			
Surrogate: Phenol-d6	16.1			ug/L	40.0		40.3	20-52			
Surrogate: 2,4,6-Tribromophenol	48.2			ug/L	40.0		120	54-135			

LCS Dup (AL83924-BSD1)

Prepared: 12/18/18 Analyzed: 12/26/18

2-Chlorophenol	31.6	0.70	5.0	ug/L	40.0		79.1	53-100	5.47	25	
2,4-Dichlorophenol	37.4	0.70	5.0	ug/L	40.0		93.4	67-110	1.28	25	
2,4-Dimethylphenol	19.5	1.0	2.0	ug/L	40.0		48.7	32-119	25.4	25	QL-04
4,6-Dinitro-2-methylphenol	47.1	3.0	5.0	ug/L	40.0		118	59-129	13.0	25	
2,4-Dinitrophenol	77.9	5.0	5.0	ug/L	50.0		156	46-158	29.4	25	QL-04
2-Nitrophenol	40.1	0.90	10	ug/L	40.0		100	44-120	1.33	25	
4-Nitrophenol	22.2	3.0	10	ug/L	40.0		55.4	21-71	20.5	25	
4-Chloro-3-methylphenol	40.4	1.0	1.0	ug/L	40.0		101	56-116	3.20	25	
2-Methylphenol (o-cresol)	28.9	0.60	5.0	ug/L	40.0		72.3	50-86	6.97	25	
Pentachlorophenol	46.6	4.0	5.0	ug/L	40.0		117	53-145	9.11	25	
Phenol	15.3	0.50	1.0	ug/L	40.0		38.3	21-51	7.05	25	
2,4,6-Trichlorophenol	43.0	0.70	10	ug/L	40.0		108	68-116	3.11	25	
Bis(2-chloroethoxy)methane	36.4	0.40	5.0	ug/L	40.0		91.0	62-106	0.00	25	
Bis(2-chloroethyl)ether	33.6	0.30	1.0	ug/L	40.0		83.9	40-99	2.30	25	

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
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Semivolatile Organic Compounds by EPA Method 625 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83924 - SVOAs in Water GCMS

LCS Dup (AL83924-BSD1)

Prepared: 12/18/18 Analyzed: 12/26/18

Bis(2-chloroisopropyl)ether	34.9	0.40	2.0	ug/L	40.0		87.3	36-110	1.34	25	
Bis(2-ethylhexyl)phthalate	33.9	3.0	5.0	ug/L	40.0		84.8	55-152	0.676	25	
4-Bromophenyl phenyl ether	36.1	0.40	5.0	ug/L	40.0		90.2	74-120	4.68	25	
Butyl benzyl phthalate	33.3	0.60	10	ug/L	40.0		83.4	67-152	1.13	25	
2-Chloronaphthalene	35.6	0.60	10	ug/L	40.0		89.0	60-118	1.03	25	
4-Chlorophenyl phenyl ether	38.2	0.90	5.0	ug/L	40.0		95.6	67-115	0.314	25	
1,2-Dichlorobenzene	30.7	0.60	2.0	ug/L	40.0		76.7	40-100	1.91	25	
1,3-Dichlorobenzene	29.6	0.60	1.0	ug/L	40.0		74.0	40-100	1.34	25	
1,4-Dichlorobenzene	30.3	0.60	1.0	ug/L	40.0		75.8	40-92	2.06	25	
Diethyl phthalate	38.4	0.30	2.0	ug/L	40.0		95.9	74-119	1.31	25	
Dimethyl phthalate	37.7	0.30	2.0	ug/L	40.0		94.2	68-121	0.0265	25	
Di-n-butyl phthalate	35.5	0.90	10	ug/L	40.0		88.8	73-129	4.05	25	
2,4-Dinitrotoluene	43.8	0.20	5.0	ug/L	40.0		110	75-120	5.08	25	
2,6-Dinitrotoluene	40.9	0.30	5.0	ug/L	40.0		102	66-120	1.95	25	
Di-n-octyl phthalate	29.2	0.60	10	ug/L	40.0		73.0	71-127	0.274	25	
1,2-Diphenylhydrazine	37.6	0.60	1.0	ug/L	40.0		93.9	61-121	2.45	25	
Hexachlorobenzene	35.1	0.90	1.0	ug/L	40.0		87.8	75-120	6.34	25	
Hexachlorobutadiene	30.9	0.80	1.0	ug/L	40.0		77.2	46-93	1.64	25	
Hexachlorocyclopentadiene	27.3	4.0	5.0	ug/L	40.0		68.2	8-83	8.16	25	
Hexachloroethane	31.3	0.60	1.0	ug/L	40.0		78.3	40-89	0.414	25	
Isophorone	34.8	0.30	1.0	ug/L	40.0		87.0	39-140	0.115	25	
Nitrobenzene	34.8	0.30	1.0	ug/L	40.0		87.0	38-124	1.00	25	
N-Nitrosodimethylamine	22.6	0.30	5.0	ug/L	40.0		56.6	11-111	3.26	25	
N-Nitrosodi-n-propylamine	36.7	0.30	5.0	ug/L	40.0		91.8	58-104	0.0545	25	
N-Nitrosodiphenylamine	36.2	0.30	1.0	ug/L	40.0		90.4	72-132	5.12	25	
1,2,4-Trichlorobenzene	31.4	0.60	5.0	ug/L	40.0		78.4	51-96	1.30	25	
Surrogate: 2-Fluorobiphenyl	34.8			ug/L	40.0		86.9	42-115			
Surrogate: 2-Fluorophenol	23.1			ug/L	40.0		57.6	21-87			
Surrogate: Nitrobenzene-d5	38.3			ug/L	40.0		95.8	50-110			
Surrogate: p-Terphenyl-d14	35.9			ug/L	40.0		89.8	61-134			
Surrogate: Phenol-d6	15.4			ug/L	40.0		38.5	20-52			
Surrogate: 2,4,6-Tribromophenol	48.0			ug/L	40.0		120	54-135			

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
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Semivolatile Organic Compounds by EPA Method 625 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83924 - SVOAs in Water GCMS

Matrix Spike (AL83924-MS1)	Source: 18L1616-01			Prepared: 12/18/18 Analyzed: 12/26/18							
2-Chlorophenol	30.6	0.70	5.0	ug/L	40.0	ND	76.6	33-115			
2,4-Dichlorophenol	34.9	0.70	5.0	ug/L	40.0	ND	87.4	57-113			
2,4-Dimethylphenol	24.5	1.0	2.0	ug/L	40.0	ND	61.3	32-119			
4,6-Dinitro-2-methylphenol	45.1	3.0	5.0	ug/L	40.0	ND	113	18-164			
2,4-Dinitrophenol	74.0	5.0	5.0	ug/L	50.0	ND	148	46-158			
2-Nitrophenol	37.4	0.90	10	ug/L	40.0	ND	93.4	49-112			
4-Nitrophenol	19.8	3.0	10	ug/L	40.0	ND	49.5	21-110			
4-Chloro-3-methylphenol	38.5	1.0	1.0	ug/L	40.0	ND	96.3	45-125			
Pentachlorophenol	45.3	4.0	5.0	ug/L	40.0	ND	113	14-176			
2-Methylphenol (o-cresol)	29.3	0.60	5.0	ug/L	40.0	ND	73.3	50-104			
Phenol	16.0	0.50	1.0	ug/L	40.0	ND	40.0	17-87			
2,4,6-Trichlorophenol	39.7	0.70	10	ug/L	40.0	ND	99.2	69-120			
Bis(2-chloroethoxy)methane	34.0	0.40	5.0	ug/L	40.0	ND	84.9	53-110			
Bis(2-chloroethyl)ether	31.7	0.30	1.0	ug/L	40.0	ND	79.3	25-118			
Bis(2-chloroisopropyl)ether	32.6	0.40	2.0	ug/L	40.0	ND	81.5	36-155			
Bis(2-ethylhexyl)phthalate	32.7	3.0	5.0	ug/L	40.0	ND	81.8	8-158			
4-Bromophenyl phenyl ether	32.3	0.40	5.0	ug/L	40.0	ND	80.8	72-108			
Butyl benzyl phthalate	32.3	0.60	10	ug/L	40.0	ND	80.8	65-135			
2-Chloronaphthalene	31.5	0.60	10	ug/L	40.0	ND	78.7	60-110			
4-Chlorophenyl phenyl ether	34.2	0.90	5.0	ug/L	40.0	ND	85.5	63-112			
1,2-Dichlorobenzene	27.7	0.60	2.0	ug/L	40.0	ND	69.3	40-100			
1,4-Dichlorobenzene	27.5	0.60	1.0	ug/L	40.0	ND	68.8	40-92			
1,3-Dichlorobenzene	26.8	0.60	1.0	ug/L	40.0	ND	67.0	40-100			
Diethyl phthalate	36.1	0.30	2.0	ug/L	40.0	ND	90.2	71-112			
Dimethyl phthalate	35.0	0.30	2.0	ug/L	40.0	ND	87.6	70-111			
Di-n-butyl phthalate	34.4	0.90	10	ug/L	40.0	ND	85.9	68-131			
2,4-Dinitrotoluene	40.3	0.20	5.0	ug/L	40.0	ND	101	75-115			
2,6-Dinitrotoluene	37.5	0.30	5.0	ug/L	40.0	ND	93.8	72-119			
Di-n-octyl phthalate	28.2	0.60	10	ug/L	40.0	ND	70.5	68-135			
1,2-Diphenylhydrazine	34.6	0.60	1.0	ug/L	40.0	ND	86.6	56-121			
Hexachlorobenzene	31.7	0.90	1.0	ug/L	40.0	ND	79.4	66-105			
Hexachlorobutadiene	26.5	0.80	1.0	ug/L	40.0	ND	66.2	29-108			
Hexachlorocyclopentadiene	21.8	4.0	5.0	ug/L	40.0	ND	54.4	0-125			
Hexachloroethane	28.5	0.60	1.0	ug/L	40.0	ND	71.2	40-90			
Isophorone	33.1	0.30	1.0	ug/L	40.0	ND	82.8	39-140			
Nitrobenzene	34.0	0.30	1.0	ug/L	40.0	ND	85.0	38-124			

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Semivolatile Organic Compounds by EPA Method 625 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL83924 - SVOAs in Water GCMS

Matrix Spike (AL83924-MS1)	Source: 18L1616-01			Prepared: 12/18/18 Analyzed: 12/26/18						
N-Nitrosodimethylamine	21.2	0.30	5.0	ug/L	40.0	ND	53.0	0-184		
N-Nitrosodi-n-propylamine	34.1	0.30	5.0	ug/L	40.0	ND	85.2	49-116		
N-Nitrosodiphenylamine	32.0	0.30	1.0	ug/L	40.0	ND	79.9	0-141		
1,2,4-Trichlorobenzene	27.6	0.60	5.0	ug/L	40.0	ND	69.0	44-101		
Surrogate: 2-Fluorobiphenyl	34.6			ug/L	40.0		86.5	42-115		
Surrogate: 2-Fluorophenol	25.5			ug/L	40.0		63.7	21-87		
Surrogate: Nitrobenzene-d5	40.0			ug/L	40.0		99.9	50-110		
Surrogate: p-Terphenyl-d14	38.1			ug/L	40.0		95.2	61-134		
Surrogate: Phenol-d6	18.2			ug/L	40.0		45.6	20-52		
Surrogate: 2,4,6-Tribromophenol	50.1			ug/L	40.0		125	54-135		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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 Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
---	--	-----------------------------

Benzidines by EPA Method 625 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch AL83858 - SVOAs in Water GCMS

Blank (AL83858-BLK1)

Prepared: 12/17/18 Analyzed: 12/26/18

Benzidine	ND	3.0	5.0	ug/L							U
3,3'-Dichlorobenzidine	ND	3.0	5.0	ug/L							U
Surrogate: 2-Fluorobiphenyl	29.8			ug/L	40.0		74.4	42-115			
Surrogate: Nitrobenzene-d5	36.9			ug/L	40.0		92.2	50-110			
Surrogate: p-Terphenyl-d14	36.0			ug/L	40.0		90.0	61-134			

LCS (AL83858-BS1)

Prepared: 12/17/18 Analyzed: 12/26/18

Benzidine	82.9	3.0	5.0	ug/L	79.4		104	60-140			
3,3'-Dichlorobenzidine	74.4	3.0	5.0	ug/L	79.4		93.7	60-140			
Surrogate: 2-Fluorobiphenyl	25.8			ug/L	40.0		64.4	42-115			
Surrogate: Nitrobenzene-d5	34.2			ug/L	40.0		85.6	50-110			
Surrogate: p-Terphenyl-d14	32.7			ug/L	40.0		81.6	61-134			

LCS Dup (AL83858-BS1)

Prepared: 12/17/18 Analyzed: 12/26/18

Benzidine	73.0	3.0	5.0	ug/L	79.4		92.0	60-140	12.7	25	
3,3'-Dichlorobenzidine	72.1	3.0	5.0	ug/L	79.4		90.9	60-140	3.10	25	
Surrogate: 2-Fluorobiphenyl	39.6			ug/L	40.0		98.9	42-115			
Surrogate: Nitrobenzene-d5	37.8			ug/L	40.0		94.4	50-110			
Surrogate: p-Terphenyl-d14	30.7			ug/L	40.0		76.8	61-134			



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
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Semivolatile Organic Compounds by EPA Method 625 SIM - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL84367 - SVOAs in Water GCMS

Blank (AL84367-BLK1)

Prepared: 12/18/18 Analyzed: 12/28/18

Acenaphthene	ND	0.20	0.20	ug/L							U
Acenaphthylene	ND	0.20	0.20	ug/L							U
Anthracene	ND	0.090	0.20	ug/L							U
Benzo (a) anthracene	ND	0.20	0.20	ug/L							U
Benzo (a) pyrene	ND	0.20	0.20	ug/L							U
Benzo (b) fluoranthene	ND	0.20	0.20	ug/L							U
Benzo (g,h,i) perylene	ND	0.10	0.20	ug/L							U
Benzo (k) fluoranthene	ND	0.20	0.20	ug/L							U
Chrysene	ND	0.20	0.20	ug/L							U
Dibenz (a,h) anthracene	ND	0.10	0.20	ug/L							U
Fluoranthene	ND	0.070	0.20	ug/L							U
Fluorene	ND	0.20	0.20	ug/L							U
Indeno (1,2,3-cd) pyrene	ND	0.030	0.20	ug/L							U
Naphthalene	ND	0.090	0.20	ug/L							U
Phenanthrene	ND	0.10	0.20	ug/L							U
Pyrene	ND	0.20	0.20	ug/L							U
Surrogate: 2-Fluorobiphenyl	28.6			ug/L	40.0		71.6	34-133			
Surrogate: Nitrobenzene-d5	29.9			ug/L	40.0		74.6	36-131			
Surrogate: p-Terphenyl-d14	43.0			ug/L	40.0		108	35-156			

LCS (AL84367-BS1)

Prepared: 12/18/18 Analyzed: 12/28/18

Acenaphthene	29.3	0.20	0.20	ug/L	40.0		73.2	49-106			
Acenaphthylene	30.9	0.20	0.20	ug/L	40.0		77.2	69-108			
Anthracene	34.7	0.090	0.20	ug/L	40.0		86.8	70-106			
Benzo (a) anthracene	37.7	0.20	0.20	ug/L	40.0		94.2	52-105			
Benzo (a) pyrene	35.7	0.20	0.20	ug/L	40.0		89.2	46-102			
Benzo (b) fluoranthene	43.9	0.20	0.20	ug/L	40.0		110	42-115			
Benzo (g,h,i) perylene	31.6	0.10	0.20	ug/L	40.0		79.0	48-96			
Benzo (k) fluoranthene	36.2	0.20	0.20	ug/L	40.0		90.5	44-102			
Chrysene	33.2	0.20	0.20	ug/L	40.0		82.9	51-102			
Dibenz (a,h) anthracene	31.0	0.10	0.20	ug/L	40.0		77.6	50-100			
Fluoranthene	50.8	0.070	0.20	ug/L	40.0		127	63-135			
Fluorene	32.4	0.20	0.20	ug/L	40.0		81.0	71-105			
Indeno (1,2,3-cd) pyrene	31.0	0.030	0.20	ug/L	40.0		77.6	49-99			
Naphthalene	26.4	0.090	0.20	ug/L	40.0		66.0	47-107			
Phenanthrene	33.9	0.10	0.20	ug/L	40.0		84.7	70-101			

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: Wastewater Project Number: EFF-001 Priority Pollutants	Reported: 02/11/19 16:43
---	--	-----------------------------

Semivolatile Organic Compounds by EPA Method 625 SIM - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AL84367 - SVOAs in Water GCMS

LCS (AL84367-BS1)		Prepared: 12/18/18 Analyzed: 12/28/18									
Pyrene	41.9	0.20	0.20	ug/L	40.0		105	59-119			
Surrogate: 2-Fluorobiphenyl	29.8			ug/L	40.0		74.5	34-133			
Surrogate: Nitrobenzene-d5	40.0			ug/L	40.0		99.9	36-131			
Surrogate: p-Terphenyl-d14	43.8			ug/L	40.0		109	35-156			

LCS Dup (AL84367-BSD1)		Prepared: 12/18/18 Analyzed: 12/28/18									
Acenaphthene	27.9	0.20	0.20	ug/L	40.0		69.6	49-106	4.97	25	
Acenaphthylene	29.5	0.20	0.20	ug/L	40.0		73.8	69-108	4.54	25	
Anthracene	36.0	0.090	0.20	ug/L	40.0		90.1	70-106	3.76	25	
Benzo (a) anthracene	37.1	0.20	0.20	ug/L	40.0		92.7	52-105	1.63	25	
Benzo (a) pyrene	34.4	0.20	0.20	ug/L	40.0		86.1	46-102	3.51	25	
Benzo (b) fluoranthene	45.8	0.20	0.20	ug/L	40.0		115	42-115	4.35	25	
Benzo (g,h,i) perylene	31.4	0.10	0.20	ug/L	40.0		78.4	48-96	0.730	25	
Benzo (k) fluoranthene	35.1	0.20	0.20	ug/L	40.0		87.8	44-102	2.94	25	
Chrysene	32.0	0.20	0.20	ug/L	40.0		80.0	51-102	3.59	25	
Dibenz (a,h) anthracene	31.2	0.10	0.20	ug/L	40.0		78.0	50-100	0.579	25	
Fluoranthene	53.6	0.070	0.20	ug/L	40.0		134	63-135	5.46	25	
Fluorene	30.6	0.20	0.20	ug/L	40.0		76.5	71-105	5.81	25	
Indeno (1,2,3-cd) pyrene	31.5	0.030	0.20	ug/L	40.0		78.7	49-99	1.38	25	
Naphthalene	22.1	0.090	0.20	ug/L	40.0		55.2	47-107	17.8	25	
Phenanthrene	37.0	0.10	0.20	ug/L	40.0		92.4	70-101	8.73	25	
Pyrene	39.6	0.20	0.20	ug/L	40.0		98.9	59-119	5.70	25	
Surrogate: 2-Fluorobiphenyl	29.4			ug/L	40.0		73.4	34-133			
Surrogate: Nitrobenzene-d5	35.8			ug/L	40.0		89.6	36-131			
Surrogate: p-Terphenyl-d14	38.2			ug/L	40.0		95.6	35-156			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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Healdsburg, City of - WW
340 Foreman Lane
Healdsburg CA, 95448-0578

Project Manager: Angie Koski
Project: Wastewater
Project Number: EFF-001 Priority Pollutants

Reported:
02/11/19 16:43

Notes and Definitions

- J Detected but below the Reporting Limit; therefore, result is an estimated concentration, detected but not quantified (DNQ).
- QL-04 The LCS/LCSD RPD for this analyte was outside of established control limits. Batch accepted based on acceptable recovery for both LCS/LCSD.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- R-01a The Method Detection Limit for this analyte has been raised to account for matrix interference.
- R-06 The Reporting Limits for this analysis have been raised to account for matrix interference.
- U Analyte included in analysis, but not detected at or above MDL.
- ND Analyte NOT DETECTED at or above the reporting limit
- dry Sample results reported on a dry weight basis
- MDL Method detection limit
- Rec Recovery
- RPD Relative Percent Difference



CERES Analytical Laboratory, Inc.

4919 Windplay Dr. Suite 1, El Dorado Hills, CA 95762



January 2, 2019

Ceres ID: 12518

Alpha Analytical Laboratories, Inc.
208 Mason St.
Ukiah, CA 95482

The following report contains the results for the one aqueous sample received on December 19, 2018. This sample was analyzed for 2,3,7,8-TCDD by EPA method 1613B. Routine turn-around time was provided for this work.

This work was authorized under Alpha Analytical Laboratories' project # 18L1613.

Continuing Calibration Verification (CCV) Requirements

All associated calibration verification standard(s) (CCV) met the acceptance criteria.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,

James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

<u>Ceres Sample ID:</u>	<u>Sample ID</u>	<u>Date Received</u>	<u>Collection Date & Time</u>
12518-001	EFF-001 - Composite 18L1613-02	12/19/2018	12/12/2018 8:35

Section II: Data Summary



EPA Method 1613B

Quality Assurance Sample Method Blank	QC Batch #: 1911 Matrix: Aqueous Sample Size: 1.000 L	Date Received: NA Date Extracted: 12/28/2018 ZB-5MS Analysis: 12/31/2018
Project ID: 18L1613		

Analyte	Conc. (pg/L)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	DL= 4.34	1.49	5.00		13C-2378-TCDD	80.0	31-137	
					CRS			
					37Cl4-2378-TCDD	88.0	35-197	
DL - Signifies Non-Detect (ND) at sample specific detection limit. EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure. (a) - Lower control limit - Upper control limit								

Analyst: JMH

Reviewed by: BS



EPA Method 1613B

Quality Assurance Sample Ongoing Precision and Recovery Project ID: 18L1613	QC Batch #: 1911 Matrix: Aqueous Sample Size: 1.000 L	Date Received: NA Date Extracted: 12/28/2018 ZB-5MS Analysis: 12/31/2018
---	---	--

Analyte	Conc. (ng/mL)	Limits (a)	Labeled Standards	% Rec.	Limits (a)
2,3,7,8-TCDD	11.1	7.3-14.6	13C-2378-TCDD	84.3	25-141
			CRS		
			37Cl4-2378-TCDD	86.3	37-158
(a) Limits based on method acceptance criteria.					

Analyst: JMH

Reviewed by: BS



EPA Method 1613B

Client Sample ID: EFF-001 - Composite 18L1613-02		
Project ID: 18L1613	Ceres Sample ID: 12518-001	Date Received: 12/19/2018
Date Collected: 12/12/2018	QC Batch #: 1911	Date Extracted: 12/28/2018
Time Collected: 8:35	Matrix: Aqueous	ZB-5MS Analysis: 12/31/2018
	Sample Size: 0.929 L	

Analyte	Conc. (pg/L)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	DL= 4.67	1.49	5.38		13C-2378-TCDD	61.4	31-137	
					CRS			
					37Cl4-2378-TCDD	76.4	42-164	
DL - Signifies Non-Detect (ND) at sample specific detection limit. EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure. (a) - Lower control limit - Upper control limit								

Analyst: JMH

Reviewed by: BS

Section VI: Sample Tracking

SUBCONTRACT ORDER
Alpha Analytical Laboratories, Inc.
18L1613

SENDING LABORATORY:

Alpha Analytical Laboratories, Inc.
208 Mason St.
Ukiah, CA 95482
Phone: (707)468-0401
Fax: (707)468-5267
Project Manager: Sheri L. Speaks

RECEIVING LABORATORY:

Ceres Labs
4919 Windplay Dr.
El Dorado Hills, CA 95762
Phone : (916) 932-5011
Fax: (916) 932-5017
Terms: Net 30

Analysis	Due	Expires	Comments
----------	-----	---------	----------

18L1613-02 EFF-001 - Composite [Water] Sampled 12/12/18 08:35

Dioxin 2378 TCDD Aq 1613	12/28/18 12:00	12/12/19 08:35	
--------------------------	----------------	----------------	--

Containers Supplied:

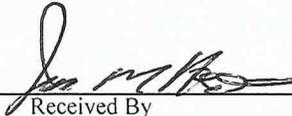
1L Amber- Unpres. (I) 1L Amber- Unpres. (J)

Report to State

System Name: _____ Employed by: _____

User ID: _____ Sampler: _____

System Number: _____

Released By:  Date: 12-13-18
Received By:  Date: 12/19/18 10:15

Released By: _____ Date: _____ Received By: _____ Date: _____

Sample Receipt Check List Logged by: J (initials)

Ceres ID: <u>12518</u>	Date/Time: <u>12/19/18 10:15</u>
Client Project ID: <u>18L1613</u>	Received Temp: <u>1.6</u> °C Acceptable: <input checked="" type="radio"/> Y / <input type="radio"/> N
Chain of Custody Relinquished by signed?	<input checked="" type="radio"/> Y / <input type="radio"/> N
Chain of Custody Received by signed?	<input checked="" type="radio"/> Y / <input type="radio"/> N
Custody Seals? Present?	<input type="radio"/> Y / <input type="radio"/> N
Intact?	<input type="radio"/> Y / <input type="radio"/> N
NA:	<input checked="" type="radio"/> NA
Unlabeled / Illegible Samples	<input type="radio"/> Y / <input checked="" type="radio"/> N
Proper Containers:	<input checked="" type="radio"/> Y / <input type="radio"/> N
Preservation Acceptable (<u>Chemical</u> or <u>Temperature</u>)?	<input checked="" type="radio"/> Y / <input type="radio"/> N
Drinking Water, Sodium Thiosulfate present? Residual Cl?	<input checked="" type="radio"/> Y / <input type="radio"/> N / <input type="radio"/> NA
Aqueous sample pH: <u>7</u>	<input type="radio"/> Y / <input checked="" type="radio"/> N
List COC discrepancies:	J 12/19/18
List Damaged Samples:	J 12/19/18

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery



Corporate Laboratory
208 Mason Street, Ukiah, CA 95482
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clientservices@alpha-labs.com

Bay Area Laboratory
262 Rickenbacker Circle, Livermore, CA 94551
925-828-6226 F) 925-828-6309

Central Valley Laboratory
9090 Union Park Wy., #113, Elk Grove, CA 95624
916-686-5190 F) 916-686-5192

North Bay Area Laboratory
110 Liberty Street, Petaluma, CA 94952
707-769-3128 F) 707-769-8093

Work Order Chain of Custody Record

Lab No. 18L1613 Page of

2.2

Company/Name: City of Healdsburg		Project ID: Wastewater		Signature below authorizes work under terms stated on reverse side.												Analysis Request		Sample Notes		TAT										
Mailing Address: 401 Grove Street Healdsburg, CA 95448		Project No: EFF-001 Priority Pollutants																24 hr <input type="radio"/> 48 hr <input type="radio"/> Lab Approval Required <input type="radio"/> 1 wk <input type="radio"/> 2 wk (standard) <input type="radio"/>		Lab Approval Required For Rush										
Project Contact & Email (Hardcopy or PDF to): Angie Koski akoski@ci.healdsburg.ca.us		PO#																												
Phone/Fax: 707.473.4486		Site Contact:																												
Field Sampler - Print Name & Signature <i>Angie Koski</i>		Sample Collection		Container		Preservative				Matrix				Analysis Request												Sample Notes		TAT		
Sample Identification		Date Time		40ml Vial	Poly	Glass	Sleeve	Other	HCL	HNO3	H2SO4	Other	None	Water	Soil	Other	624 CTR Group List	Priority Pollutant Metals 200.8	Hg 245.1 20ppt	Cr6 218.6, CrIII Calc.	Cyanide 5ppb	Dioxin 2,3,7,8-TCDD	Total Hardness	625 CTR Group List (minus PNA)	625 CTR PNA SIM	608 CTR Pest & PCBs				
EFF-001 - Grab		12/21/18 0935		4	1				X				X	X			X													
EFF-001 - Composite		↓ ↓			3	7			X	X	X	X					X	X	X	X	X	X	X	X	X					
Relinquished by: <i>[Signature]</i>		Received by: <i>David Poma</i>		Date	Time	CDPH Write On EDT Report? Yes <input type="radio"/> No <input type="radio"/>																								
Relinquished by: <i>David Poma</i>		Received by: <i>[Signature]</i>		Date	Time	State System Number: _____																								
Relinquished by:		Received by:		Date	Time	CA Geotracker EDF Report Yes <input type="radio"/> No <input type="radio"/>																								
Relinquished by:		Received by:		Date	Time	Sampling Company Log Code: _____																								
Relinquished by:		Received by:		Date	Time	Global ID: _____ EDF to (Email Address): _____																								
Relinquished by:		Received by:		Date	Time	Travel and Site Time:				Mileage:				Misc. Supplies:																



alpha

Alpha Analytical Laboratories, Inc.

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03 April 2020

Healdsburg, City of - WW

Attn: Angie Koski

340 Foreman Lane

Healdsburg, CA 95448-0578

RE: CTR

Work Order: 20C1207

Enclosed are the results of analyses for samples received by the laboratory on 03/10/20 15:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanette L. Poplin For Sheri L. Speaks

Project Manager



Alpha Analytical Laboratories, Inc. email: clientservices@alpha-labs.com
Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: CTR Project Number: Wastewater	Reported: 04/03/20 08:34
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Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | T: 925-828-6226 | F: 925-828-6309 | ELAP# 2728
Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | T: 916-686-5190 | F: 916-686-5192 | ELAP# 2922
North Bay: 110 Liberty Street | Petaluma, CA 94952 | T: 707-769-3128 | F: 707-769-8093 | ELAP# 2303
San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | T: 760-930-2555 | F: 760-930-2510 | ELAP# 3055

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EFF-001	20C1207-01	Water	03/10/20 07:45	03/10/20 15:50



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: CTR Project Number: Wastewater	Reported: 04/03/20 08:34
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Metals by EPA 200 Series Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20C1207-01) Water Sampled: 03/10/20 07:45 Received: 03/10/20 15:50												
Calcium	31	0.080	1.0	mg/L	1	AC03809	03/13/20 10:50	03/20/20 16:45	EPA 200.7	MAM	1551	
Magnesium	22	0.030	1.0	mg/L	1	AC03809	03/13/20 10:50	03/20/20 16:45	EPA 200.7	MAM	1551	
Mercury	ND	0.020	0.020	ug/L	1	AC03941	03/16/20 06:31	03/16/20 14:37	EPA 245.1	LMR	1551	U



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: CTR Project Number: Wastewater	Reported: 04/03/20 08:34
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Metals by EPA Method 200.8 ICP/MS

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20C1207-01) Water Sampled: 03/10/20 07:45 Received: 03/10/20 15:50												
Antimony	0.46	0.20	0.50	ug/L	1	AC03818	03/13/20 09:45	03/24/20 04:41	EPA 200.8	MB	1551	J
Arsenic	0.99	0.40	0.50	ug/L	1	AC03818	03/13/20 09:45	03/24/20 04:41	EPA 200.8	MB	1551	
Beryllium	ND	0.050	0.10	ug/L	1	AC03818	03/13/20 09:45	03/24/20 04:41	EPA 200.8	MB	1551	U
Cadmium	ND	0.060	0.10	ug/L	1	AC03818	03/13/20 09:45	03/24/20 04:41	EPA 200.8	MB	1551	U
Chromium	ND	0.50	0.50	ug/L	1	AC03818	03/13/20 09:45	03/24/20 04:41	EPA 200.8	MB	1551	U
Copper	8.8	0.40	0.50	ug/L	1	AC03818	03/13/20 09:45	03/24/20 04:41	EPA 200.8	MB	1551	
Lead	0.082	0.060	0.25	ug/L	1	AC03818	03/13/20 09:45	03/24/20 04:41	EPA 200.8	MB	1551	J
Nickel	2.2	0.30	0.50	ug/L	1	AC03818	03/13/20 09:45	03/24/20 04:41	EPA 200.8	MB	1551	
Selenium	0.32	0.30	2.0	ug/L	1	AC03818	03/13/20 09:45	03/24/20 04:41	EPA 200.8	MB	1551	J
Silver	ND	0.050	0.10	ug/L	1	AC03818	03/13/20 09:45	03/24/20 04:41	EPA 200.8	MB	1551	U
Thallium	ND	0.050	0.10	ug/L	1	AC03818	03/13/20 09:45	03/24/20 04:41	EPA 200.8	MB	1551	U
Zinc	38	4.0	5.0	ug/L	1	AC03818	03/13/20 09:45	03/24/20 04:41	EPA 200.8	MB	1551	



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: CTR Project Number: Wastewater	Reported: 04/03/20 08:34
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Metals by APHA/EPA Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20C1207-01) Water Sampled: 03/10/20 07:45 Received: 03/10/20 15:50												
Chromium, hexavalent	ND	0.0050	0.010	mg/L	1	AC04176	03/19/20 06:34	03/19/20 07:15	SM3500-Cr B	JVO	1551	U



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: CTR Project Number: Wastewater	Reported: 04/03/20 08:34
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Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20C1207-01) Water Sampled: 03/10/20 07:45 Received: 03/10/20 15:50												
Hardness, Total	167	1	5	mg/L	1	AC03809	03/13/20 10:50	03/20/20 16:45	SM2340B	MAM	1551	



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: CTR Project Number: Wastewater	Reported: 04/03/20 08:34
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Miscellaneous Physical/Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20C1207-01) Water Sampled: 03/10/20 07:45 Received: 03/10/20 15:50												
Cyanide (total)	0.0052	0.0020	0.0030	mg/L	1	AC04399	03/23/20 09:00	03/23/20 14:38	10-204-00-1X	EV	1551	



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Acrolein by EPA Method 624.1

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20C1207-01) Water Sampled: 03/10/20 07:45 Received: 03/10/20 15:50												
Acrolein	ND	2.0	5.0	ug/L	1	AC03800	03/12/20 15:00	03/12/20 20:15	EPA 624.1	JV	1551	U
Surrogate: Bromofluorobenzene		109 %	70-130			AC03800	03/12/20 15:00	03/12/20 20:15	EPA 624.1	JV	1551	
Surrogate: Dibromofluoromethane		99.5 %	70-130			AC03800	03/12/20 15:00	03/12/20 20:15	EPA 624.1	JV	1551	
Surrogate: Toluene-d8		106 %	70-130			AC03800	03/12/20 15:00	03/12/20 20:15	EPA 624.1	JV	1551	



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2-Chloroethylvinyl Ether by EPA Method 624.1

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20C1207-01) Water Sampled: 03/10/20 07:45 Received: 03/10/20 15:50												
2-Chloroethylvinyl ether	ND	0.70	1.0	ug/L	1	AC03800	03/12/20 15:00	03/12/20 20:15	EPA 624.1	JV	1551	U
<i>Surrogate: Bromofluorobenzene</i>		109 %	70-130			AC03800	03/12/20 15:00	03/12/20 20:15	EPA 624.1	JV	1551	
<i>Surrogate: Dibromofluoromethane</i>		99.5 %	70-130			AC03800	03/12/20 15:00	03/12/20 20:15	EPA 624.1	JV	1551	
<i>Surrogate: Toluene-d8</i>		106 %	70-130			AC03800	03/12/20 15:00	03/12/20 20:15	EPA 624.1	JV	1551	



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: CTR Project Number: Wastewater	Reported: 04/03/20 08:34
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Volatile Organic Compounds by EPA Method 624.1

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20C1207-01) Water Sampled: 03/10/20 07:45 Received: 03/10/20 15:50												
Acrylonitrile	ND	0.40	2.0	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
Benzene	ND	0.30	0.30	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
Bromoform	ND	0.30	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
Carbon tetrachloride	ND	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
Chlorobenzene	ND	0.30	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
Dibromochloromethane	ND	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
Chloroethane	ND	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
Chloroform	0.40	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	J
Bromodichloromethane	ND	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
1,1-Dichloroethane	ND	0.30	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
1,2-Dichloroethane	ND	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
1,1-Dichloroethene	ND	0.30	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
1,2-Dichloropropane	ND	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
cis-1,3-Dichloropropene	ND	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
trans-1,3-Dichloropropene	ND	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
Ethylbenzene	ND	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
Bromomethane	ND	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
Chloromethane	ND	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
Methylene chloride	ND	0.50	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
1,1,2,2-Tetrachloroethane	ND	0.30	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
Tetrachloroethene	ND	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
Toluene	ND	0.30	0.30	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
trans-1,2-Dichloroethene	ND	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
1,1,1-Trichloroethane	ND	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
1,1,2-Trichloroethane	ND	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
Trichloroethene	ND	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
Trihalomethanes (total)	0.40	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	J
Vinyl chloride	ND	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
1,2-Dichlorobenzene	ND	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
1,3-Dichlorobenzene	ND	0.40	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
1,4-Dichlorobenzene	ND	0.10	0.50	ug/L	1	AC03882	03/13/20 16:00	03/14/20 05:03	EPA 624.1	JV	1551	U
<i>Surrogate: Bromofluorobenzene</i>		<i>113 %</i>	<i>70-130</i>			<i>AC03882</i>	<i>03/13/20 16:00</i>	<i>03/14/20 05:03</i>	<i>EPA 624.1</i>	<i>JV</i>	<i>1551</i>	
<i>Surrogate: Dibromofluoromethane</i>		<i>94.8 %</i>	<i>70-130</i>			<i>AC03882</i>	<i>03/13/20 16:00</i>	<i>03/14/20 05:03</i>	<i>EPA 624.1</i>	<i>JV</i>	<i>1551</i>	
<i>Surrogate: Toluene-d8</i>		<i>108 %</i>	<i>70-130</i>			<i>AC03882</i>	<i>03/13/20 16:00</i>	<i>03/14/20 05:03</i>	<i>EPA 624.1</i>	<i>JV</i>	<i>1551</i>	

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: CTR Project Number: Wastewater	Reported: 04/03/20 08:34
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Organochlorine Pesticides and PCBs by EPA Method 608.3

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20C1207-01) Water Sampled: 03/10/20 07:45 Received: 03/10/20 15:50												
Aldrin	ND	0.0020	0.0050	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
alpha-BHC	ND	0.0040	0.010	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
beta-BHC	ND	0.0040	0.0050	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
gamma-BHC (Lindane)	ND	0.0040	0.010	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
delta-BHC	ND	0.0020	0.0050	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
Chlordane (tech)	ND	0.010	0.050	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
4,4'-DDT	ND	0.0030	0.010	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
4,4'-DDE	ND	0.0040	0.020	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
4,4'-DDD	ND	0.0050	0.020	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
Dieldrin	ND	0.0050	0.010	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
Endosulfan I	ND	0.0040	0.010	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
Endosulfan II	ND	0.0050	0.010	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
Endosulfan sulfate	ND	0.0030	0.050	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
Endrin	ND	0.0080	0.010	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
Endrin aldehyde	ND	0.0040	0.010	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
Heptachlor	ND	0.0050	0.010	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
Heptachlor epoxide	ND	0.0090	0.010	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
PCB-1016	ND	0.080	0.50	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
PCB-1221	ND	0.20	0.50	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
PCB-1232	ND	0.10	0.50	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
PCB-1242	ND	0.040	0.50	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
PCB-1248	ND	0.060	0.50	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
PCB-1254	ND	0.040	0.50	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
PCB-1260	ND	0.040	0.50	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
Toxaphene	ND	0.20	0.50	ug/L	1	AC03944	03/16/20 06:49	03/28/20 03:57	EPA 608.3	MCB	1551	U
<i>Surrogate: Dibutylchloredate</i>		<i>89.0 %</i>	<i>10-147</i>			<i>AC03944</i>	<i>03/16/20 06:49</i>	<i>03/28/20 03:57</i>	<i>EPA 608.3</i>	<i>MCB</i>	<i>1551</i>	



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: CTR Project Number: Wastewater	Reported: 04/03/20 08:34
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Semivolatile Organic Compounds by EPA Method 625.1

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20C1207-01) Water Sampled: 03/10/20 07:45 Received: 03/10/20 15:50												
2-Chlorophenol	ND	0.70	5.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
2,4-Dichlorophenol	ND	0.70	5.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
2,4-Dimethylphenol	ND	1.0	2.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
4,6-Dinitro-2-methylphenol	ND	3.0	5.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
2,4-Dinitrophenol	ND	5.0	5.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
2-Nitrophenol	ND	0.90	10	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
4-Nitrophenol	ND	3.0	10	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
4-Chloro-3-methylphenol	ND	1.0	1.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
2-Methylphenol (o-cresol)	ND	0.60	5.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
Pentachlorophenol	ND	4.0	5.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
Phenol	ND	0.50	1.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
2,4,6-Trichlorophenol	ND	0.70	10	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
Bis(2-chloroethoxy)methane	ND	0.90	5.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
Bis(2-chloroethyl)ether	ND	0.90	1.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
Bis(2-chloroisopropyl)ether	ND	1.0	2.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
Bis(2-ethylhexyl)phthalate	ND	3.0	5.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
4-Bromophenyl phenyl ether	ND	1.0	5.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
Butyl benzyl phthalate	ND	0.60	10	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
2-Chloronaphthalene	ND	0.60	10	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
4-Chlorophenyl phenyl ether	ND	0.90	5.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
1,2-Dichlorobenzene	ND	0.60	2.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
1,3-Dichlorobenzene	ND	0.60	1.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
1,4-Dichlorobenzene	ND	0.60	1.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
Diethyl phthalate	ND	0.30	2.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
Dimethyl phthalate	ND	0.80	2.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
Di-n-butyl phthalate	1.4	0.90	10	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	J
2,4-Dinitrotoluene	ND	0.80	5.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
2,6-Dinitrotoluene	ND	0.80	5.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
Di-n-octyl phthalate	ND	0.60	10	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
1,2-Diphenylhydrazine	ND	0.60	1.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
Hexachlorobenzene	ND	0.90	1.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
Hexachlorobutadiene	ND	0.80	1.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
Hexachlorocyclopentadiene	ND	4.0	5.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
Hexachloroethane	ND	0.60	1.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
Isophorone	ND	0.30	1.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
Nitrobenzene	ND	0.90	1.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
N-Nitrosodimethylamine	ND	0.30	5.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: CTR Project Number: Wastewater	Reported: 04/03/20 08:34
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Semivolatile Organic Compounds by EPA Method 625.1

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20C1207-01) Water Sampled: 03/10/20 07:45 Received: 03/10/20 15:50												
N-Nitrosodi-n-propylamine	ND	0.80	5.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
N-Nitrosodiphenylamine	ND	1.0	1.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
1,2,4-Trichlorobenzene	ND	0.60	5.0	ug/L	1	AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	U
Surrogate: 2-Fluorobiphenyl		49.7 %		27-119		AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	
Surrogate: 2-Fluorophenol		31.8 %		7-85		AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	
Surrogate: Nitrobenzene-d5		48.6 %		15-314		AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	
Surrogate: p-Terphenyl-d14		59.5 %		36-141		AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	
Surrogate: Phenol-d6		22.8 %		1-65		AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	
Surrogate: 2,4,6-Tribromophenol		40.8 %		4-168		AC03917	03/16/20 08:00	03/23/20 23:03	EPA 625.1	NBH	1551	



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Benzidines by EPA Method 625.1

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20C1207-01) Water Sampled: 03/10/20 07:45 Received: 03/10/20 15:50												
Benzidine	ND	3.00	5.00	ug/L	1	AC03947	03/16/20 06:59	03/31/20 00:33	EPA 625.1	NBH	1551	U
3,3'-Dichlorobenzidine	ND	2.00	5.00	ug/L	1	AC03947	03/16/20 06:59	03/31/20 00:33	EPA 625.1	NBH	1551	U
Surrogate: 2-Fluorobiphenyl		61.5 %	27-119			AC03947	03/16/20 06:59	03/31/20 00:33	EPA 625.1	NBH	1551	
Surrogate: Nitrobenzene-d5		64.1 %	15-314			AC03947	03/16/20 06:59	03/31/20 00:33	EPA 625.1	NBH	1551	
Surrogate: p-Terphenyl-d14		66.2 %	36-141			AC03947	03/16/20 06:59	03/31/20 00:33	EPA 625.1	NBH	1551	



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Semivolatile Organic Compounds by EPA Method 625.1 SIM

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20C1207-01) Water Sampled: 03/10/20 07:45 Received: 03/10/20 15:50												
Acenaphthene	ND	0.20	0.20	ug/L	1	AC04575	03/16/20 08:00	03/25/20 00:26	EPA 625.1SIM	NBH	1551	U
Acenaphthylene	ND	0.20	0.20	ug/L	1	AC04575	03/16/20 08:00	03/25/20 00:26	EPA 625.1SIM	NBH	1551	U
Anthracene	ND	0.090	0.20	ug/L	1	AC04575	03/16/20 08:00	03/25/20 00:26	EPA 625.1SIM	NBH	1551	U
Benzo (a) anthracene	ND	0.20	0.20	ug/L	1	AC04575	03/16/20 08:00	03/25/20 00:26	EPA 625.1SIM	NBH	1551	U
Benzo (a) pyrene	ND	0.20	0.20	ug/L	1	AC04575	03/16/20 08:00	03/25/20 00:26	EPA 625.1SIM	NBH	1551	U
Benzo (b) fluoranthene	ND	0.20	0.20	ug/L	1	AC04575	03/16/20 08:00	03/25/20 00:26	EPA 625.1SIM	NBH	1551	U
Benzo (g,h,i) perylene	ND	0.10	0.20	ug/L	1	AC04575	03/16/20 08:00	03/25/20 00:26	EPA 625.1SIM	NBH	1551	U
Benzo (k) fluoranthene	ND	0.20	0.20	ug/L	1	AC04575	03/16/20 08:00	03/25/20 00:26	EPA 625.1SIM	NBH	1551	U
Chrysene	ND	0.20	0.20	ug/L	1	AC04575	03/16/20 08:00	03/25/20 00:26	EPA 625.1SIM	NBH	1551	U
Dibenz (a,h) anthracene	ND	0.10	0.20	ug/L	1	AC04575	03/16/20 08:00	03/25/20 00:26	EPA 625.1SIM	NBH	1551	U
Fluoranthene	ND	0.070	0.20	ug/L	1	AC04575	03/16/20 08:00	03/25/20 00:26	EPA 625.1SIM	NBH	1551	U
Fluorene	ND	0.20	0.20	ug/L	1	AC04575	03/16/20 08:00	03/25/20 00:26	EPA 625.1SIM	NBH	1551	U
Indeno (1,2,3-cd) pyrene	ND	0.030	0.20	ug/L	1	AC04575	03/16/20 08:00	03/25/20 00:26	EPA 625.1SIM	NBH	1551	U
Naphthalene	ND	0.090	0.20	ug/L	1	AC04575	03/16/20 08:00	03/25/20 00:26	EPA 625.1SIM	NBH	1551	U
Phenanthrene	ND	0.10	0.20	ug/L	1	AC04575	03/16/20 08:00	03/25/20 00:26	EPA 625.1SIM	NBH	1551	U
Pyrene	ND	0.20	0.20	ug/L	1	AC04575	03/16/20 08:00	03/25/20 00:26	EPA 625.1SIM	NBH	1551	U
Surrogate: 2-Fluorobiphenyl		50.5 %	24-119			AC04575	03/16/20 08:00	03/25/20 00:26	EPA 625.1SIM	NBH	1551	
Surrogate: Nitrobenzene-d5		50.9 %	15-314			AC04575	03/16/20 08:00	03/25/20 00:26	EPA 625.1SIM	NBH	1551	
Surrogate: p-Terphenyl-d14		62.4 %	37-139			AC04575	03/16/20 08:00	03/25/20 00:26	EPA 625.1SIM	NBH	1551	



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Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03809 - Metals Digest

Blank (AC03809-BLK1) Prepared: 03/13/20 Analyzed: 03/20/20

Calcium	ND	0.080	1.0	mg/L							U
Magnesium	ND	0.030	1.0	mg/L							U

LCS (AC03809-BS1) Prepared: 03/13/20 Analyzed: 03/20/20

Calcium	7.77	0.080	1.0	mg/L	8.00		97.1	85-115			
Magnesium	7.91	0.030	1.0	mg/L	8.00		98.8	85-115			

Duplicate (AC03809-DUP1) Source: 20C1328-01 Prepared: 03/13/20 Analyzed: 03/20/20

Calcium	66.0	0.080	1.0	mg/L		66.4			0.548	20	
Magnesium	16.9	0.030	1.0	mg/L		16.6			1.71	20	

Matrix Spike (AC03809-MS1) Source: 20C1328-01 Prepared: 03/13/20 Analyzed: 03/20/20

Calcium	73.2	0.080	1.0	mg/L	8.00	66.4	84.9	70-130			
Magnesium	25.1	0.030	1.0	mg/L	8.00	16.6	106	70-130			

Matrix Spike (AC03809-MS2) Source: 20C1072-06 Prepared: 03/13/20 Analyzed: 03/20/20

Calcium	119	0.080	1.0	mg/L	16.0	99.4	125	70-130			
Magnesium	97.0	0.030	1.0	mg/L	16.0	77.4	123	70-130			

Matrix Spike Dup (AC03809-MSD1) Source: 20C1328-01 Prepared: 03/13/20 Analyzed: 03/20/20

Calcium	76.9	0.080	1.0	mg/L	8.00	66.4	132	70-130	4.98	20	QM-4X
Magnesium	25.4	0.030	1.0	mg/L	8.00	16.6	109	70-130	1.11	20	

Batch AC03941 - EPA 245.1 Hg Water

Blank (AC03941-BLK1) Prepared & Analyzed: 03/16/20

Mercury	ND	0.020	0.020	ug/L							U
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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: CTR Project Number: Wastewater	Reported: 04/03/20 08:34
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Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03941 - EPA 245.1 Hg Water

LCS (AC03941-BS1)											
						Prepared & Analyzed: 03/16/20					
Mercury	0.279	0.020	0.020	ug/L	0.250		112	85-115			
Duplicate (AC03941-DUP1)											
						Source: 20C0918-01 Prepared & Analyzed: 03/16/20					
Mercury	ND	0.020	0.020	ug/L		ND			20		U
Matrix Spike (AC03941-MS1)											
						Source: 20C0918-01 Prepared & Analyzed: 03/16/20					
Mercury	0.288	0.020	0.020	ug/L	0.250	ND	115	70-130			
Matrix Spike Dup (AC03941-MSD1)											
						Source: 20C0918-01 Prepared & Analyzed: 03/16/20					
Mercury	0.299	0.020	0.020	ug/L	0.250	ND	120	70-130	3.75	20	

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Metals by EPA Method 200.8 ICP/MS - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03818 - EPA 200.8

Blank (AC03818-BLK1)

Prepared: 03/13/20 Analyzed: 03/21/20

Antimony	ND	0.20	0.50	ug/L							U
Arsenic	ND	0.40	0.50	ug/L							U
Beryllium	ND	0.050	0.10	ug/L							U
Cadmium	ND	0.060	0.10	ug/L							U
Chromium	ND	0.50	0.50	ug/L							U
Copper	ND	0.40	0.50	ug/L							U
Lead	ND	0.060	0.25	ug/L							U
Nickel	ND	0.30	0.50	ug/L							U
Selenium	ND	0.30	2.0	ug/L							U
Silver	ND	0.050	0.10	ug/L							U
Thallium	ND	0.050	0.10	ug/L							U
Zinc	ND	4.0	5.0	ug/L							U

LCS (AC03818-BS1)

Prepared: 03/13/20 Analyzed: 03/21/20

Antimony	20.3	0.20	0.50	ug/L	20.0		102	85-115			
Arsenic	21.2	0.40	0.50	ug/L	20.0		106	85-115			
Beryllium	21.0	0.050	0.10	ug/L	20.0		105	85-115			
Cadmium	20.3	0.060	0.10	ug/L	20.0		102	85-115			
Chromium	21.2	0.50	0.50	ug/L	20.0		106	85-115			
Copper	20.1	0.40	0.50	ug/L	20.0		101	85-115			
Lead	20.6	0.060	0.25	ug/L	20.0		103	85-115			
Nickel	21.5	0.30	0.50	ug/L	20.0		108	85-115			
Selenium	22.1	0.30	2.0	ug/L	20.0		110	85-115			
Silver	19.9	0.050	0.10	ug/L	20.0		99.7	85-115			
Thallium	20.5	0.050	0.10	ug/L	20.0		103	85-115			
Zinc	106	4.0	5.0	ug/L	100		106	85-115			

Duplicate (AC03818-DUP1)

Source: 20C1328-01

Prepared: 03/13/20 Analyzed: 03/21/20

Antimony	ND	0.80	2.0	ug/L		ND			20		R-01, U
Arsenic	ND	1.6	2.0	ug/L		ND			20		R-01, U
Beryllium	ND	0.20	0.40	ug/L		ND			20		R-01, U
Cadmium	ND	0.24	0.40	ug/L		ND			20		R-01, U
Chromium	ND	2.0	2.0	ug/L		ND			20		R-01, U
Copper	72.0	1.6	2.0	ug/L		83.3			14.6	20	
Lead	1.12	0.24	1.0	ug/L		1.12			0.0650	20	
Nickel	2.36	1.2	2.0	ug/L		2.32			1.53	20	
Selenium	2.27	1.2	8.0	ug/L		2.07			9.13	20	R-01, J

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Metals by EPA Method 200.8 ICP/MS - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03818 - EPA 200.8

Duplicate (AC03818-DUP1)		Source: 20C1328-01			Prepared: 03/13/20 Analyzed: 03/21/20		
Silver	ND	0.20	0.40	ug/L	ND	20	R-01, U
Thallium	ND	0.20	0.40	ug/L	ND	20	R-01, U
Zinc	129	16	20	ug/L	134	3.72	20

Matrix Spike (AC03818-MS1)		Source: 20C1328-01			Prepared: 03/13/20 Analyzed: 03/21/20				
Antimony	20.2	0.80	2.0	ug/L	20.0	ND	101	70-130	
Arsenic	22.4	1.6	2.0	ug/L	20.0	ND	112	70-130	
Beryllium	21.5	0.20	0.40	ug/L	20.0	ND	108	70-130	
Cadmium	19.9	0.24	0.40	ug/L	20.0	ND	99.5	70-130	
Chromium	19.6	2.0	2.0	ug/L	20.0	ND	98.1	70-130	
Copper	89.8	1.6	2.0	ug/L	20.0	83.3	32.4	70-130	QM-01
Lead	20.9	0.24	1.0	ug/L	20.0	1.12	98.9	70-130	
Nickel	22.3	1.2	2.0	ug/L	20.0	2.32	100	70-130	
Selenium	25.0	1.2	8.0	ug/L	20.0	2.07	115	70-130	
Silver	19.2	0.20	0.40	ug/L	20.0	ND	96.2	70-130	
Thallium	19.6	0.20	0.40	ug/L	20.0	ND	98.2	70-130	
Zinc	229	16	20	ug/L	100	134	95.9	70-130	

Matrix Spike (AC03818-MS2)		Source: 20C1065-01			Prepared: 03/13/20 Analyzed: 03/21/20			
Antimony	19.8	0.80	2.0	ug/L	20.0	ND	99.2	70-130
Arsenic	21.7	1.6	2.0	ug/L	20.0	ND	109	70-130
Beryllium	19.8	0.20	0.40	ug/L	20.0	ND	98.8	70-130
Cadmium	19.4	0.24	0.40	ug/L	20.0	ND	96.8	70-130
Chromium	19.1	2.0	2.0	ug/L	20.0	ND	95.6	70-130
Copper	21.6	1.6	2.0	ug/L	20.0	2.94	93.5	70-130
Lead	19.7	0.24	1.0	ug/L	20.0	ND	98.3	70-130
Nickel	20.4	1.2	2.0	ug/L	20.0	ND	102	70-130
Selenium	22.6	1.2	8.0	ug/L	20.0	ND	113	70-130
Silver	18.8	0.20	0.40	ug/L	20.0	ND	94.1	70-130
Thallium	19.6	0.20	0.40	ug/L	20.0	ND	97.8	70-130
Zinc	106	16	20	ug/L	100	ND	106	70-130

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Metals by EPA Method 200.8 ICP/MS - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03818 - EPA 200.8

Matrix Spike Dup (AC03818-MSD1)	Source: 20C1328-01			Prepared: 03/13/20 Analyzed: 03/21/20							
Antimony	20.3	0.80	2.0	ug/L	20.0	ND	101	70-130	0.379	20	
Arsenic	22.8	1.6	2.0	ug/L	20.0	ND	114	70-130	1.60	20	
Beryllium	20.0	0.20	0.40	ug/L	20.0	ND	100	70-130	7.26	20	
Cadmium	19.8	0.24	0.40	ug/L	20.0	ND	98.8	70-130	0.718	20	
Chromium	19.6	2.0	2.0	ug/L	20.0	ND	98.0	70-130	0.119	20	
Copper	89.8	1.6	2.0	ug/L	20.0	83.3	32.3	70-130	0.0237	20	QM-01
Lead	20.6	0.24	1.0	ug/L	20.0	1.12	97.5	70-130	1.36	20	
Nickel	22.1	1.2	2.0	ug/L	20.0	2.32	98.7	70-130	1.29	20	
Selenium	23.4	1.2	8.0	ug/L	20.0	2.07	107	70-130	6.70	20	
Silver	19.1	0.20	0.40	ug/L	20.0	ND	95.3	70-130	0.990	20	
Thallium	19.5	0.20	0.40	ug/L	20.0	ND	97.3	70-130	0.884	20	
Zinc	229	16	20	ug/L	100	134	95.9	70-130	0.0197	20	



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Metals by APHA/EPA Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AC04176 - SM3500 Cr6 Water											
Blank (AC04176-BLK1)					Prepared & Analyzed: 03/19/20						
Chromium, hexavalent	ND	0.0050	0.010	mg/L							U
LCS (AC04176-BS1)					Prepared & Analyzed: 03/19/20						
Chromium, hexavalent	0.104	0.0050	0.010	mg/L	0.100		104	80-120			
Duplicate (AC04176-DUP1)					Source: 20C1207-01 Prepared & Analyzed: 03/19/20						
Chromium, hexavalent	ND	0.0050	0.010	mg/L		ND				20	U
Matrix Spike (AC04176-MS1)					Source: 20C1207-01 Prepared & Analyzed: 03/19/20						
Chromium, hexavalent	0.115	0.0050	0.010	mg/L	0.111	ND	104	65-125			
Matrix Spike Dup (AC04176-MSD1)					Source: 20C1207-01 Prepared & Analyzed: 03/19/20						
Chromium, hexavalent	0.111	0.0050	0.010	mg/L	0.111	ND	99.7	65-125	4.03	20	

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Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03809 - Metals Digest

Blank (AC03809-BLK1)		Prepared: 03/13/20 Analyzed: 03/20/20									
Hardness, Total	ND	1	5	mg/L							U
Duplicate (AC03809-DUP1)		Source: 20C1328-01 Prepared: 03/13/20 Analyzed: 03/20/20									
Hardness, Total	235	1	5	mg/L		234			0.118	20	

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Miscellaneous Physical/Conventional Chemistry Parameters - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AC04399 - General Preparation											
Blank (AC04399-BLK1)					Prepared & Analyzed: 03/23/20						
Cyanide (total)	ND	0.0020	0.0030	mg/L							U
LCS (AC04399-BS1)					Prepared & Analyzed: 03/23/20						
Cyanide (total)	0.212	0.0020	0.0030	mg/L	0.200		106	85-115			
Duplicate (AC04399-DUP1)					Source: 20C1289-07 Prepared & Analyzed: 03/23/20						
Cyanide (total)	ND	0.0020	0.0030	mg/L		ND				25	U
Matrix Spike (AC04399-MS1)					Source: 20C1289-07 Prepared & Analyzed: 03/23/20						
Cyanide (total)	0.218	0.0020	0.0030	mg/L	0.200	ND	109	85-115			
Matrix Spike (AC04399-MS2)					Source: 20C1578-01 Prepared & Analyzed: 03/23/20						
Cyanide (total)	0.204	0.0020	0.0030	mg/L	0.200	ND	102	85-115			
Matrix Spike Dup (AC04399-MSD1)					Source: 20C1289-07 Prepared & Analyzed: 03/23/20						
Cyanide (total)	0.215	0.0020	0.0030	mg/L	0.200	ND	107	85-115	1.70	25	

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Acrolein by EPA Method 624.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03800 - VOAs in Water GCMS

Blank (AC03800-BLK1)

Prepared & Analyzed: 03/12/20

Acrolein	ND	2.0	5.0	ug/L							U
Surrogate: Bromofluorobenzene	26.1			ug/L	25.0		104	70-130			
Surrogate: Dibromofluoromethane	25.7			ug/L	25.0		103	70-130			
Surrogate: Toluene-d8	25.7			ug/L	25.0		103	70-130			

LCS (AC03800-BS1)

Prepared & Analyzed: 03/12/20

Acrolein	33.0	2.0	5.0	ug/L	50.0		66.1	60-140			
Surrogate: Bromofluorobenzene	26.5			ug/L	25.0		106	70-130			
Surrogate: Dibromofluoromethane	26.2			ug/L	25.0		105	70-130			
Surrogate: Toluene-d8	27.0			ug/L	25.0		108	70-130			

LCS Dup (AC03800-BSD1)

Prepared & Analyzed: 03/12/20

Acrolein	36.5	2.0	5.0	ug/L	50.0		73.0	60-140	9.92	25	
Surrogate: Bromofluorobenzene	28.4			ug/L	25.0		114	70-130			
Surrogate: Dibromofluoromethane	28.8			ug/L	25.0		115	70-130			
Surrogate: Toluene-d8	27.5			ug/L	25.0		110	70-130			

Matrix Spike (AC03800-MS1)

Source: 20C1309-01

Prepared: 03/12/20 Analyzed: 03/13/20

Acrolein	37.0	2.0	5.0	ug/L	50.0	ND	74.0	40-160			
Surrogate: Bromofluorobenzene	27.4			ug/L	25.0		109	70-130			
Surrogate: Dibromofluoromethane	27.5			ug/L	25.0		110	70-130			
Surrogate: Toluene-d8	26.2			ug/L	25.0		105	70-130			

Matrix Spike Dup (AC03800-MSD1)

Source: 20C1309-01

Prepared: 03/12/20 Analyzed: 03/13/20

Acrolein	38.1	2.0	5.0	ug/L	50.0	ND	76.2	40-160	2.88	60	
Surrogate: Bromofluorobenzene	27.2			ug/L	25.0		109	70-130			
Surrogate: Dibromofluoromethane	27.0			ug/L	25.0		108	70-130			
Surrogate: Toluene-d8	27.5			ug/L	25.0		110	70-130			



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2-Chloroethylvinyl Ether by EPA Method 624.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03800 - VOAs in Water GCMS

Blank (AC03800-BLK1)											
											Prepared & Analyzed: 03/12/20
2-Chloroethylvinyl ether	ND	0.70	1.0	ug/L							U
Surrogate: Bromofluorobenzene	26.1			ug/L	25.0		104	70-130			
Surrogate: Dibromofluoromethane	25.7			ug/L	25.0		103	70-130			
Surrogate: Toluene-d8	25.7			ug/L	25.0		103	70-130			

LCS (AC03800-BS1)											
											Prepared & Analyzed: 03/12/20
2-Chloroethylvinyl ether	29.4	0.70	1.0	ug/L	25.0		117	3-225			
Surrogate: Bromofluorobenzene	26.5			ug/L	25.0		106	70-130			
Surrogate: Dibromofluoromethane	26.2			ug/L	25.0		105	70-130			
Surrogate: Toluene-d8	27.0			ug/L	25.0		108	70-130			

LCS Dup (AC03800-BSD1)											
											Prepared & Analyzed: 03/12/20
2-Chloroethylvinyl ether	24.5	0.70	1.0	ug/L	25.0		98.1	3-225	18.0	30	
Surrogate: Bromofluorobenzene	28.4			ug/L	25.0		114	70-130			
Surrogate: Dibromofluoromethane	28.8			ug/L	25.0		115	70-130			
Surrogate: Toluene-d8	27.5			ug/L	25.0		110	70-130			

Matrix Spike (AC03800-MS1)											
			Source: 20C1309-01	Prepared: 03/12/20 Analyzed: 03/13/20							
2-Chloroethylvinyl ether	28.7	0.70	1.0	ug/L	25.0	ND	115	3-305			
Surrogate: Bromofluorobenzene	27.4			ug/L	25.0		109	70-130			
Surrogate: Dibromofluoromethane	27.5			ug/L	25.0		110	70-130			
Surrogate: Toluene-d8	26.2			ug/L	25.0		105	70-130			

Matrix Spike Dup (AC03800-MSD1)											
			Source: 20C1309-01	Prepared: 03/12/20 Analyzed: 03/13/20							
2-Chloroethylvinyl ether	24.6	0.70	1.0	ug/L	25.0	ND	98.6	3-305	15.2	71	
Surrogate: Bromofluorobenzene	27.2			ug/L	25.0		109	70-130			
Surrogate: Dibromofluoromethane	27.0			ug/L	25.0		108	70-130			
Surrogate: Toluene-d8	27.5			ug/L	25.0		110	70-130			

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Volatile Organic Compounds by EPA Method 624.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03882 - VOAs in Water GCMS

Blank (AC03882-BLK1)

Prepared & Analyzed: 03/13/20

Acrylonitrile	ND	0.40	2.0	ug/L							U
Benzene	ND	0.30	0.30	ug/L							U
Bromoform	ND	0.30	0.50	ug/L							U
Carbon tetrachloride	ND	0.40	0.50	ug/L							U
Chlorobenzene	ND	0.30	0.50	ug/L							U
Dibromochloromethane	ND	0.40	0.50	ug/L							U
Chloroethane	ND	0.40	0.50	ug/L							U
Chloroform	ND	0.40	0.50	ug/L							U
Bromodichloromethane	ND	0.40	0.50	ug/L							U
1,1-Dichloroethane	ND	0.30	0.50	ug/L							U
1,2-Dichloroethane	ND	0.40	0.50	ug/L							U
1,1-Dichloroethene	ND	0.30	0.50	ug/L							U
1,2-Dichloropropane	ND	0.40	0.50	ug/L							U
cis-1,3-Dichloropropene	ND	0.40	0.50	ug/L							U
trans-1,3-Dichloropropene	ND	0.40	0.50	ug/L							U
Ethylbenzene	ND	0.40	0.50	ug/L							U
Bromomethane	ND	0.40	0.50	ug/L							U
Chloromethane	ND	0.40	0.50	ug/L							U
Methylene chloride	ND	0.50	0.50	ug/L							U
1,1,2,2-Tetrachloroethane	ND	0.30	0.50	ug/L							U
Tetrachloroethene	ND	0.40	0.50	ug/L							U
Toluene	ND	0.30	0.30	ug/L							U
trans-1,2-Dichloroethene	ND	0.40	0.50	ug/L							U
1,1,1-Trichloroethane	ND	0.40	0.50	ug/L							U
1,1,2-Trichloroethane	ND	0.40	0.50	ug/L							U
Trichloroethene	ND	0.40	0.50	ug/L							U
Vinyl chloride	ND	0.40	0.50	ug/L							U
Trihalomethanes (total)	ND	0.40	0.50	ug/L							U
1,2-Dichlorobenzene	ND	0.40	0.50	ug/L							U
1,3-Dichlorobenzene	ND	0.40	0.50	ug/L							U
1,4-Dichlorobenzene	ND	0.10	0.50	ug/L							U
Surrogate: Bromofluorobenzene	28.8			ug/L	25.0		115	70-130			
Surrogate: Dibromofluoromethane	23.8			ug/L	25.0		95.1	70-130			
Surrogate: Toluene-d8	26.8			ug/L	25.0		107	70-130			

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Volatile Organic Compounds by EPA Method 624.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03882 - VOAs in Water GCMS

LCS (AC03882-BS1)

Prepared & Analyzed: 03/13/20

Acrylonitrile	20.2	0.40	2.0	ug/L	20.0		101	60-140			
Benzene	20.3	0.30	0.30	ug/L	20.0		102	65-135			
Bromoform	21.3	0.30	0.50	ug/L	20.0		107	70-130			
Carbon tetrachloride	23.9	0.40	0.50	ug/L	20.0		120	70-130			
Chlorobenzene	19.8	0.30	0.50	ug/L	20.0		99.2	65-135			
Dibromochloromethane	20.8	0.40	0.50	ug/L	20.0		104	70-135			
Chloroethane	16.9	0.40	0.50	ug/L	20.0		84.3	40-160			
Chloroform	20.9	0.40	0.50	ug/L	20.0		104	70-135			
Bromodichloromethane	19.8	0.40	0.50	ug/L	20.0		99.1	65-135			
1,1-Dichloroethane	20.5	0.30	0.50	ug/L	20.0		103	70-130			
1,2-Dichloroethane	18.0	0.40	0.50	ug/L	20.0		89.8	70-130			
1,1-Dichloroethene	17.7	0.30	0.50	ug/L	20.0		88.7	50-150			
1,2-Dichloropropane	19.2	0.40	0.50	ug/L	20.0		96.2	35-165			
cis-1,3-Dichloropropene	19.1	0.40	0.50	ug/L	20.0		95.6	25-175			
trans-1,3-Dichloropropene	19.4	0.40	0.50	ug/L	20.0		96.8	50-150			
Ethylbenzene	22.2	0.40	0.50	ug/L	20.0		111	60-140			
Bromomethane	16.1	0.40	0.50	ug/L	20.0		80.5	15-185			
Chloromethane	22.0	0.40	0.50	ug/L	20.0		110	2-205			
Methylene chloride	19.6	0.50	0.50	ug/L	20.0		97.8	60-140			
1,1,2,2-Tetrachloroethane	20.9	0.30	0.50	ug/L	20.0		105	60-140			
Tetrachloroethene	19.8	0.40	0.50	ug/L	20.0		99.0	70-130			
Toluene	21.3	0.30	0.30	ug/L	20.0		107	70-130			
trans-1,2-Dichloroethene	20.3	0.40	0.50	ug/L	20.0		102	70-130			
1,1,1-Trichloroethane	23.1	0.40	0.50	ug/L	20.0		115	70-130			
1,1,2-Trichloroethane	20.1	0.40	0.50	ug/L	20.0		101	70-130			
Trichloroethene	20.3	0.40	0.50	ug/L	20.0		102	65-135			
Vinyl chloride	16.7	0.40	0.50	ug/L	20.0		83.4	5-195			
1,2-Dichlorobenzene	19.9	0.40	0.50	ug/L	20.0		99.4	65-135			
1,3-Dichlorobenzene	19.4	0.40	0.50	ug/L	20.0		96.8	70-130			
1,4-Dichlorobenzene	19.1	0.10	0.50	ug/L	20.0		95.4	65-135			
Surrogate: Bromofluorobenzene	28.0			ug/L	25.0		112	70-130			
Surrogate: Dibromofluoromethane	25.0			ug/L	25.0		100	70-130			
Surrogate: Toluene-d8	25.8			ug/L	25.0		103	70-130			

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Volatile Organic Compounds by EPA Method 624.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03882 - VOAs in Water GCMS

LCS Dup (AC03882-BSD1)

Prepared & Analyzed: 03/13/20

Acrylonitrile	20.1	0.40	2.0	ug/L	20.0		100	60-140	0.794	25	
Benzene	20.3	0.30	0.30	ug/L	20.0		101	65-135	0.246	25	
Bromoform	22.2	0.30	0.50	ug/L	20.0		111	70-130	4.18	25	
Carbon tetrachloride	24.0	0.40	0.50	ug/L	20.0		120	70-130	0.209	25	
Chlorobenzene	20.1	0.30	0.50	ug/L	20.0		100	65-135	1.05	25	
Dibromochloromethane	21.7	0.40	0.50	ug/L	20.0		109	70-135	4.09	25	
Chloroethane	16.3	0.40	0.50	ug/L	20.0		81.7	40-160	3.13	25	
Chloroform	20.8	0.40	0.50	ug/L	20.0		104	70-135	0.144	25	
Bromodichloromethane	19.6	0.40	0.50	ug/L	20.0		97.9	65-135	1.22	25	
1,1-Dichloroethane	20.6	0.30	0.50	ug/L	20.0		103	70-130	0.389	25	
1,2-Dichloroethane	18.0	0.40	0.50	ug/L	20.0		89.9	70-130	0.0556	25	
1,1-Dichloroethene	17.6	0.30	0.50	ug/L	20.0		87.8	50-150	0.963	25	
1,2-Dichloropropane	19.3	0.40	0.50	ug/L	20.0		96.3	35-165	0.0519	25	
cis-1,3-Dichloropropene	19.6	0.40	0.50	ug/L	20.0		98.1	25-175	2.63	25	
trans-1,3-Dichloropropene	19.9	0.40	0.50	ug/L	20.0		99.5	50-150	2.80	25	
Ethylbenzene	22.1	0.40	0.50	ug/L	20.0		110	60-140	0.271	25	
Bromomethane	16.1	0.40	0.50	ug/L	20.0		80.4	15-185	0.0621	25	
Chloromethane	21.4	0.40	0.50	ug/L	20.0		107	2-205	2.67	25	
Methylene chloride	19.3	0.50	0.50	ug/L	20.0		96.4	60-140	1.44	25	
1,1,2,2-Tetrachloroethane	21.2	0.30	0.50	ug/L	20.0		106	60-140	1.14	25	
Tetrachloroethene	19.6	0.40	0.50	ug/L	20.0		98.0	70-130	0.914	25	
Toluene	21.2	0.30	0.30	ug/L	20.0		106	70-130	0.470	25	
trans-1,2-Dichloroethene	20.1	0.40	0.50	ug/L	20.0		100	70-130	1.24	25	
1,1,1-Trichloroethane	23.0	0.40	0.50	ug/L	20.0		115	70-130	0.521	25	
1,1,2-Trichloroethane	20.5	0.40	0.50	ug/L	20.0		103	70-130	1.87	25	
Trichloroethene	20.1	0.40	0.50	ug/L	20.0		101	65-135	0.891	25	
Vinyl chloride	16.2	0.40	0.50	ug/L	20.0		81.2	5-195	2.67	25	
1,2-Dichlorobenzene	20.2	0.40	0.50	ug/L	20.0		101	65-135	1.55	25	
1,3-Dichlorobenzene	19.6	0.40	0.50	ug/L	20.0		98.0	70-130	1.18	25	
1,4-Dichlorobenzene	19.3	0.10	0.50	ug/L	20.0		96.4	65-135	1.09	25	
Surrogate: Bromofluorobenzene	28.8			ug/L	25.0		115	70-130			
Surrogate: Dibromofluoromethane	25.7			ug/L	25.0		103	70-130			
Surrogate: Toluene-d8	27.0			ug/L	25.0		108	70-130			

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: CTR Project Number: Wastewater	Reported: 04/03/20 08:34
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Volatile Organic Compounds by EPA Method 624.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03882 - VOAs in Water GCMS

Matrix Spike (AC03882-MS1)	Source: 20C1101-02			Prepared: 03/13/20 Analyzed: 03/14/20						
Acrylonitrile	19.4	0.40	2.0	ug/L	20.0	ND	97.2	40-160		
Benzene	22.3	0.30	0.30	ug/L	20.0	ND	111	37-151		
Bromoform	21.4	0.30	0.50	ug/L	20.0	ND	107	45-169		
Carbon tetrachloride	26.0	0.40	0.50	ug/L	20.0	ND	130	70-140		
Chlorobenzene	21.6	0.30	0.50	ug/L	20.0	ND	108	37-160		
Dibromochloromethane	21.6	0.40	0.50	ug/L	20.0	ND	108	53-149		
Chloroethane	15.3	0.40	0.50	ug/L	20.0	ND	76.6	14-230		
Chloroform	22.4	0.40	0.50	ug/L	20.0	ND	112	51-138		
Bromodichloromethane	20.7	0.40	0.50	ug/L	20.0	ND	104	35-155		
1,1-Dichloroethane	22.4	0.30	0.50	ug/L	20.0	ND	112	59-155		
1,2-Dichloroethane	19.1	0.40	0.50	ug/L	20.0	ND	95.7	49-155		
1,1-Dichloroethene	18.8	0.30	0.50	ug/L	20.0	ND	94.2	2-234		
1,2-Dichloropropane	20.9	0.40	0.50	ug/L	20.0	ND	104	2-210		
cis-1,3-Dichloropropene	20.0	0.40	0.50	ug/L	20.0	ND	100	2-227		
trans-1,3-Dichloropropene	20.0	0.40	0.50	ug/L	20.0	ND	99.9	17-183		
Ethylbenzene	24.2	0.40	0.50	ug/L	20.0	ND	121	37-162		
Bromomethane	15.4	0.40	0.50	ug/L	20.0	ND	76.8	2-242		
Chloromethane	19.2	0.40	0.50	ug/L	20.0	ND	95.8	2-273		
Methylene chloride	18.9	0.50	0.50	ug/L	20.0	ND	94.3	2-221		
1,1,2,2-Tetrachloroethane	21.0	0.30	0.50	ug/L	20.0	ND	105	46-157		
Tetrachloroethene	22.5	0.40	0.50	ug/L	20.0	ND	113	64-148		
Toluene	23.8	0.30	0.30	ug/L	20.0	ND	119	47-150		
trans-1,2-Dichloroethene	22.1	0.40	0.50	ug/L	20.0	ND	110	54-156		
1,1,1-Trichloroethane	24.5	0.40	0.50	ug/L	20.0	ND	122	52-162		
1,1,2-Trichloroethane	21.1	0.40	0.50	ug/L	20.0	ND	105	52-150		
Trichloroethene	23.1	0.40	0.50	ug/L	20.0	ND	116	70-157		
Vinyl chloride	15.4	0.40	0.50	ug/L	20.0	ND	77.1	2-251		
1,2-Dichlorobenzene	21.4	0.40	0.50	ug/L	20.0	ND	107	18-190		
1,3-Dichlorobenzene	21.2	0.40	0.50	ug/L	20.0	ND	106	59-156		
1,4-Dichlorobenzene	20.8	0.10	0.50	ug/L	20.0	ND	104	18-190		
Surrogate: Bromofluorobenzene	28.5			ug/L	25.0		114	70-130		
Surrogate: Dibromofluoromethane	25.3			ug/L	25.0		101	70-130		
Surrogate: Toluene-d8	26.4			ug/L	25.0		106	70-130		

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Volatile Organic Compounds by EPA Method 624.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03882 - VOAs in Water GCMS

Matrix Spike Dup (AC03882-MSD1)	Source: 20C1101-02			Prepared: 03/13/20 Analyzed: 03/14/20							
Acrylonitrile	18.6	0.40	2.0	ug/L	20.0	ND	93.0	40-160	4.31	60	
Benzene	22.1	0.30	0.30	ug/L	20.0	ND	110	37-151	0.903	61	
Bromoform	22.2	0.30	0.50	ug/L	20.0	ND	111	45-169	3.94	42	
Carbon tetrachloride	25.5	0.40	0.50	ug/L	20.0	ND	127	70-140	1.79	41	
Chlorobenzene	21.7	0.30	0.50	ug/L	20.0	ND	109	37-160	0.462	53	
Dibromochloromethane	22.4	0.40	0.50	ug/L	20.0	ND	112	53-149	3.82	50	
Chloroethane	15.1	0.40	0.50	ug/L	20.0	ND	75.7	14-230	1.25	78	
Chloroform	22.3	0.40	0.50	ug/L	20.0	ND	111	51-138	0.314	54	
Bromodichloromethane	21.0	0.40	0.50	ug/L	20.0	ND	105	35-155	1.29	56	
1,1-Dichloroethane	22.2	0.30	0.50	ug/L	20.0	ND	111	59-155	0.538	40	
1,2-Dichloroethane	18.9	0.40	0.50	ug/L	20.0	ND	94.3	49-155	1.47	49	
1,1-Dichloroethene	18.6	0.30	0.50	ug/L	20.0	ND	93.0	2-234	1.18	32	
1,2-Dichloropropane	20.9	0.40	0.50	ug/L	20.0	ND	104	2-210	0.192	55	
cis-1,3-Dichloropropene	20.5	0.40	0.50	ug/L	20.0	ND	103	2-227	2.37	58	
trans-1,3-Dichloropropene	20.7	0.40	0.50	ug/L	20.0	ND	103	17-183	3.44	86	
Ethylbenzene	24.4	0.40	0.50	ug/L	20.0	ND	122	37-162	0.947	63	
Bromomethane	15.0	0.40	0.50	ug/L	20.0	ND	74.9	2-242	2.44	61	
Chloromethane	18.8	0.40	0.50	ug/L	20.0	ND	93.8	2-273	2.00	60	
Methylene chloride	18.2	0.50	0.50	ug/L	20.0	ND	91.0	2-221	3.56	28	
1,1,2,2-Tetrachloroethane	21.1	0.30	0.50	ug/L	20.0	ND	105	46-157	0.142	61	
Tetrachloroethene	22.9	0.40	0.50	ug/L	20.0	ND	115	64-148	1.85	39	
Toluene	23.7	0.30	0.30	ug/L	20.0	ND	119	47-150	0.126	41	
trans-1,2-Dichloroethene	21.9	0.40	0.50	ug/L	20.0	ND	110	54-156	0.636	45	
1,1,1-Trichloroethane	25.0	0.40	0.50	ug/L	20.0	ND	125	52-162	2.18	36	
1,1,2-Trichloroethane	21.5	0.40	0.50	ug/L	20.0	ND	108	52-150	2.25	45	
Trichloroethene	23.0	0.40	0.50	ug/L	20.0	ND	115	70-157	0.217	48	
Vinyl chloride	15.8	0.40	0.50	ug/L	20.0	ND	79.2	2-251	2.75	66	
1,2-Dichlorobenzene	21.2	0.40	0.50	ug/L	20.0	ND	106	18-190	0.752	57	
1,3-Dichlorobenzene	21.2	0.40	0.50	ug/L	20.0	ND	106	59-156	0.00	43	
1,4-Dichlorobenzene	20.6	0.10	0.50	ug/L	20.0	ND	103	18-190	1.01	57	
Surrogate: Bromofluorobenzene	28.8			ug/L	25.0		115	70-130			
Surrogate: Dibromofluoromethane	25.2			ug/L	25.0		101	70-130			
Surrogate: Toluene-d8	27.1			ug/L	25.0		109	70-130			

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Organochlorine Pesticides and PCBs by EPA Method 608.3 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03944 - SVOAs in Water GC

Blank (AC03944-BLK1)

Prepared: 03/16/20 Analyzed: 03/28/20

Aldrin	ND	0.0020	0.0050	ug/L							U
alpha-BHC	ND	0.0040	0.010	ug/L							U
beta-BHC	ND	0.0040	0.0050	ug/L							U
gamma-BHC (Lindane)	ND	0.0040	0.010	ug/L							U
delta-BHC	ND	0.0020	0.0050	ug/L							U
Chlordane (tech)	ND	0.010	0.050	ug/L							U
4,4'-DDT	ND	0.0030	0.010	ug/L							U
4,4'-DDE	ND	0.0040	0.020	ug/L							U
4,4'-DDD	ND	0.0050	0.020	ug/L							U
Dieldrin	ND	0.0050	0.010	ug/L							U
Endosulfan I	ND	0.0040	0.010	ug/L							U
Endosulfan II	ND	0.0050	0.010	ug/L							U
Endosulfan sulfate	ND	0.0030	0.050	ug/L							U
Endrin	ND	0.0080	0.010	ug/L							U
Endrin aldehyde	ND	0.0040	0.010	ug/L							U
Heptachlor	ND	0.0050	0.010	ug/L							U
Heptachlor epoxide	ND	0.0090	0.010	ug/L							U
PCB-1016	ND	0.080	0.50	ug/L							U
PCB-1221	ND	0.20	0.50	ug/L							U
PCB-1232	ND	0.10	0.50	ug/L							U
PCB-1242	ND	0.040	0.50	ug/L							U
PCB-1248	ND	0.060	0.50	ug/L							U
PCB-1254	ND	0.040	0.50	ug/L							U
PCB-1260	ND	0.040	0.50	ug/L							U
Toxaphene	ND	0.20	0.50	ug/L							U
Surrogate: Dibutylchlorendate	0.344			ug/L	0.498		69.1	10-147			

LCS (AC03944-BS1)

Prepared: 03/16/20 Analyzed: 03/28/20

Aldrin	0.207	0.0020	0.0050	ug/L	0.240		86.3	42-140			
alpha-BHC	0.204	0.0040	0.010	ug/L	0.240		85.2	37-140			
beta-BHC	0.227	0.0040	0.0050	ug/L	0.240		94.5	17-147			
gamma-BHC (Lindane)	0.215	0.0040	0.010	ug/L	0.240		89.5	32-140			
delta-BHC	0.247	0.0020	0.0050	ug/L	0.240		103	19-140			
4,4'-DDT	0.248	0.0030	0.010	ug/L	0.240		104	31-141			
4,4'-DDE	0.235	0.0040	0.020	ug/L	0.240		98.0	30-145			
4,4'-DDD	0.236	0.0050	0.020	ug/L	0.240		98.5	25-160			

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Organochlorine Pesticides and PCBs by EPA Method 608.3 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03944 - SVOAs in Water GC

LCS (AC03944-BS1)

Prepared: 03/16/20 Analyzed: 03/28/20

Dieldrin	0.241	0.0050	0.010	ug/L	0.240		100	36-146			
Endosulfan I	0.240	0.0040	0.010	ug/L	0.240		100	45-153			
Endosulfan II	0.281	0.0050	0.010	ug/L	0.240		117	0-202			
Endosulfan sulfate	0.264	0.0030	0.050	ug/L	0.240		110	26-144			
Endrin	0.281	0.0080	0.010	ug/L	0.240		117	30-147			
Endrin aldehyde	0.256	0.0040	0.010	ug/L	0.240		107	45-140			
Heptachlor	0.214	0.0050	0.010	ug/L	0.240		89.3	34-140			
Heptachlor epoxide	0.241	0.0090	0.010	ug/L	0.240		100	37-142			
Surrogate: Dibutylchlorendate	0.395			ug/L	0.498		79.4	10-147			

LCS (AC03944-BS2)

Prepared: 03/16/20 Analyzed: 03/28/20

Chlordane (tech)	4.50	0.010	0.050	ug/L	4.80		93.9	0-200			
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Matrix Spike (AC03944-MS1)

Source: 20C1207-01

Prepared: 03/16/20 Analyzed: 03/28/20

Aldrin	0.228	0.0020	0.0050	ug/L	0.240	ND	95.1	42-140			
alpha-BHC	0.225	0.0040	0.010	ug/L	0.240	ND	93.7	37-140			
beta-BHC	0.261	0.0040	0.0050	ug/L	0.240	ND	109	17-147			
gamma-BHC (Lindane)	0.233	0.0040	0.010	ug/L	0.240	ND	97.1	32-140			
delta-BHC	0.261	0.0020	0.0050	ug/L	0.240	ND	109	19-140			
4,4'-DDT	0.265	0.0030	0.010	ug/L	0.240	ND	110	25-160			
4,4'-DDE	0.250	0.0040	0.020	ug/L	0.240	ND	104	30-145			
4,4'-DDD	0.263	0.0050	0.020	ug/L	0.240	ND	110	31-141			
Dieldrin	0.238	0.0050	0.010	ug/L	0.240	ND	99.0	36-146			
Endosulfan I	0.250	0.0040	0.010	ug/L	0.240	ND	104	45-153			
Endosulfan II	0.317	0.0050	0.010	ug/L	0.240	ND	132	2-202			
Endosulfan sulfate	0.273	0.0030	0.050	ug/L	0.240	ND	114	26-144			
Endrin	0.269	0.0080	0.010	ug/L	0.240	ND	112	30-147			
Endrin aldehyde	0.275	0.0040	0.010	ug/L	0.240	ND	115	45-140			
Heptachlor	0.236	0.0050	0.010	ug/L	0.240	ND	98.2	34-140			
Heptachlor epoxide	0.257	0.0090	0.010	ug/L	0.240	ND	107	37-142			
Surrogate: Dibutylchlorendate	0.422			ug/L	0.498		84.7	10-147			



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Organochlorine Pesticides and PCBs by EPA Method 608.3 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03944 - SVOAs in Water GC

Matrix Spike Dup (AC03944-MSD1)	Source: 20C1207-01			Prepared: 03/16/20 Analyzed: 03/28/20							
Aldrin	0.193	0.0020	0.0050	ug/L	0.240	ND	80.3	42-140	16.9	35	
alpha-BHC	0.193	0.0040	0.010	ug/L	0.240	ND	80.5	37-140	15.2	36	
beta-BHC	0.209	0.0040	0.0050	ug/L	0.240	ND	86.9	17-147	22.1	44	
gamma-BHC (Lindane)	0.202	0.0040	0.010	ug/L	0.240	ND	84.1	32-140	14.3	39	
delta-BHC	0.225	0.0020	0.0050	ug/L	0.240	ND	93.6	19-140	15.0	52	
4,4'-DDT	0.228	0.0030	0.010	ug/L	0.240	ND	95.2	25-160	14.8	42	
4,4'-DDE	0.217	0.0040	0.020	ug/L	0.240	ND	90.3	30-145	14.2	35	
4,4'-DDD	0.233	0.0050	0.020	ug/L	0.240	ND	97.1	31-141	12.2	39	
Dieldrin	0.212	0.0050	0.010	ug/L	0.240	ND	88.4	36-146	11.3	49	
Endosulfan I	0.218	0.0040	0.010	ug/L	0.240	ND	90.7	45-153	14.0	28	
Endosulfan II	0.275	0.0050	0.010	ug/L	0.240	ND	115	2-202	14.0	53	
Endosulfan sulfate	0.237	0.0030	0.050	ug/L	0.240	ND	98.9	26-144	13.9	38	
Endrin	0.272	0.0080	0.010	ug/L	0.240	ND	113	30-147	0.977	48	
Endrin aldehyde	0.236	0.0040	0.010	ug/L	0.240	ND	98.5	45-140	15.3	35	
Heptachlor	0.197	0.0050	0.010	ug/L	0.240	ND	82.1	34-140	17.8	43	
Heptachlor epoxide	0.226	0.0090	0.010	ug/L	0.240	ND	94.2	37-142	13.0	36	
Surrogate: Dibutylchloroendate	0.364			ug/L	0.498		73.1	10-147			

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Semivolatile Organic Compounds by EPA Method 625.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03917 - SVOAs in Water GCMS

Blank (AC03917-BLK1)

Prepared: 03/16/20 Analyzed: 03/23/20

2-Chlorophenol	ND	0.70	5.0	ug/L							U
2,4-Dichlorophenol	ND	0.70	5.0	ug/L							U
2,4-Dimethylphenol	ND	1.0	2.0	ug/L							U
4,6-Dinitro-2-methylphenol	ND	3.0	5.0	ug/L							U
2,4-Dinitrophenol	ND	5.0	5.0	ug/L							U
2-Nitrophenol	ND	0.90	10	ug/L							U
4-Nitrophenol	ND	3.0	10	ug/L							U
4-Chloro-3-methylphenol	ND	1.0	1.0	ug/L							U
Pentachlorophenol	ND	4.0	5.0	ug/L							U
2-Methylphenol (o-cresol)	ND	0.60	5.0	ug/L							U
Phenol	ND	0.50	1.0	ug/L							U
2,4,6-Trichlorophenol	ND	0.70	10	ug/L							U
Bis(2-chloroethoxy)methane	ND	0.90	5.0	ug/L							U
Bis(2-chloroethyl)ether	ND	0.90	1.0	ug/L							U
Bis(2-chloroisopropyl)ether	ND	1.0	2.0	ug/L							U
Bis(2-ethylhexyl)phthalate	ND	3.0	5.0	ug/L							U
4-Bromophenyl phenyl ether	ND	1.0	5.0	ug/L							U
Butyl benzyl phthalate	ND	0.60	10	ug/L							U
2-Chloronaphthalene	ND	0.60	10	ug/L							U
4-Chlorophenyl phenyl ether	ND	0.90	5.0	ug/L							U
1,4-Dichlorobenzene	ND	0.60	1.0	ug/L							U
1,3-Dichlorobenzene	ND	0.60	1.0	ug/L							U
1,2-Dichlorobenzene	ND	0.60	2.0	ug/L							U
Diethyl phthalate	0.460	0.30	2.0	ug/L							J
Dimethyl phthalate	ND	0.80	2.0	ug/L							U
Di-n-butyl phthalate	1.99	0.90	10	ug/L							J
2,4-Dinitrotoluene	ND	0.80	5.0	ug/L							U
2,6-Dinitrotoluene	ND	0.80	5.0	ug/L							U
Di-n-octyl phthalate	ND	0.60	10	ug/L							U
1,2-Diphenylhydrazine	ND	0.60	1.0	ug/L							U
Hexachlorobenzene	ND	0.90	1.0	ug/L							U
Hexachlorobutadiene	ND	0.80	1.0	ug/L							U
Hexachlorocyclopentadiene	ND	4.0	5.0	ug/L							U
Hexachloroethane	ND	0.60	1.0	ug/L							U
Isophorone	ND	0.30	1.0	ug/L							U
Nitrobenzene	ND	0.90	1.0	ug/L							U

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: CTR Project Number: Wastewater	Reported: 04/03/20 08:34
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Semivolatile Organic Compounds by EPA Method 625.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03917 - SVOAs in Water GCMS

Blank (AC03917-BLK1)

Prepared: 03/16/20 Analyzed: 03/23/20

N-Nitrosodimethylamine	ND	0.30	5.0	ug/L							U
N-Nitrosodi-n-propylamine	ND	0.80	5.0	ug/L							U
N-Nitrosodiphenylamine	ND	1.0	1.0	ug/L							U
1,2,4-Trichlorobenzene	ND	0.60	5.0	ug/L							U
Surrogate: 2-Fluorobiphenyl	24.2			ug/L	40.0		60.6	27-119			
Surrogate: 2-Fluorophenol	16.1			ug/L	40.0		40.2	7-85			
Surrogate: Nitrobenzene-d5	22.1			ug/L	40.0		55.4	15-314			
Surrogate: p-Terphenyl-d14	34.0			ug/L	40.0		85.0	36-141			
Surrogate: Phenol-d6	11.3			ug/L	40.0		28.2	1-65			
Surrogate: 2,4,6-Tribromophenol	35.0			ug/L	40.0		87.5	4-168			

LCS (AC03917-BS1)

Prepared: 03/16/20 Analyzed: 03/23/20

2-Chlorophenol	24.2	0.70	5.0	ug/L	40.0		60.4	36-120			
2,4-Dichlorophenol	27.1	0.70	5.0	ug/L	40.0		67.6	53-122			
2,4-Dimethylphenol	41.8	1.0	2.0	ug/L	50.0		83.5	42-120			
4,6-Dinitro-2-methylphenol	30.7	3.0	5.0	ug/L	40.0		76.8	53-130			
2,4-Dinitrophenol	29.4	5.0	5.0	ug/L	40.0		73.5	10-173			
2-Nitrophenol	26.4	0.90	10	ug/L	40.0		66.1	45-167			
4-Nitrophenol	15.6	3.0	10	ug/L	40.0		39.1	13-129			
4-Chloro-3-methylphenol	34.9	1.0	1.0	ug/L	40.0		87.3	41-128			
Pentachlorophenol	41.5	4.0	5.0	ug/L	40.0		104	38-152			
2-Methylphenol (o-cresol)	22.3	0.60	5.0	ug/L	40.0		55.8	36-102			
Phenol	14.5	0.50	1.0	ug/L	40.0		36.2	17-120			
2,4,6-Trichlorophenol	31.9	0.70	10	ug/L	40.0		79.7	52-129			
Bis(2-chloroethoxy)methane	30.1	0.90	5.0	ug/L	40.0		75.2	49-165			
Bis(2-chloroethyl)ether	24.5	0.90	1.0	ug/L	40.0		61.3	43-126			
Bis(2-chloroisopropyl)ether	33.3	1.0	2.0	ug/L	40.0		83.2	63-139			
Bis(2-ethylhexyl)phthalate	40.1	3.0	5.0	ug/L	40.0		100	29-137			
4-Bromophenyl phenyl ether	31.4	1.0	5.0	ug/L	40.0		78.5	65-120			
Butyl benzyl phthalate	26.8	0.60	10	ug/L	40.0		67.0	2-140			
2-Chloronaphthalene	42.1	0.60	10	ug/L	40.0		105	65-120			
4-Chlorophenyl phenyl ether	27.4	0.90	5.0	ug/L	40.0		68.4	38-145			
1,2-Dichlorobenzene	20.8	0.60	2.0	ug/L	40.0		51.9	33-93			
1,3-Dichlorobenzene	20.2	0.60	1.0	ug/L	40.0		50.5	31-92			
1,4-Dichlorobenzene	20.4	0.60	1.0	ug/L	40.0		51.0	32-91			
Diethyl phthalate	27.7	0.30	2.0	ug/L	40.0		69.2	2-120			
Dimethyl phthalate	18.6	0.80	2.0	ug/L	40.0		46.6	2-120			

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Semivolatile Organic Compounds by EPA Method 625.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03917 - SVOAs in Water GCMS

LCS (AC03917-BS1)

Prepared: 03/16/20 Analyzed: 03/23/20

Di-n-butyl phthalate	39.1	0.90	10	ug/L	40.0		97.8	8-120			
2,4-Dinitrotoluene	30.2	0.80	5.0	ug/L	40.0		75.4	48-127			
2,6-Dinitrotoluene	31.2	0.80	5.0	ug/L	40.0		78.1	68-137			
Di-n-octyl phthalate	26.0	0.60	10	ug/L	40.0		65.1	19-132			
1,2-Diphenylhydrazine	35.1	0.60	1.0	ug/L	40.0		87.8	52-115			
Hexachlorobenzene	33.1	0.90	1.0	ug/L	40.0		82.7	8-142			
Hexachlorobutadiene	21.3	0.80	1.0	ug/L	40.0		53.4	38-120			
Hexachlorocyclopentadiene	11.5	4.0	5.0	ug/L	40.0		28.8	16-93			
Hexachloroethane	42.1	0.60	1.0	ug/L	40.0		105	55-120			
Isophorone	31.0	0.30	1.0	ug/L	40.0		77.6	47-180			
Nitrobenzene	25.4	0.90	1.0	ug/L	40.0		63.5	54-158			
N-Nitrosodimethylamine	22.4	0.30	5.0	ug/L	40.0		55.9	19-81			
N-Nitrosodi-n-propylamine	28.5	0.80	5.0	ug/L	40.0		71.2	14-198			
N-Nitrosodiphenylamine	34.5	1.0	1.0	ug/L	40.0		86.2	54-111			
1,2,4-Trichlorobenzene	27.0	0.60	5.0	ug/L	40.0		67.4	57-130			
Surrogate: 2-Fluorobiphenyl	52.3			ug/L	80.0		65.4	27-119			
Surrogate: 2-Fluorophenol	36.7			ug/L	80.0		45.8	7-85			
Surrogate: Nitrobenzene-d5	51.3			ug/L	80.0		64.2	15-314			
Surrogate: p-Terphenyl-d14	71.7			ug/L	80.0		89.6	36-141			
Surrogate: Phenol-d6	25.9			ug/L	80.0		32.3	1-65			
Surrogate: 2,4,6-Tribromophenol	80.3			ug/L	80.0		100	4-168			

Matrix Spike (AC03917-MS1)

Source: 20C1080-01

Prepared: 03/16/20 Analyzed: 03/23/20

2-Chlorophenol	28.7	0.70	5.0	ug/L	40.0	ND	71.8	23-134			
2,4-Dichlorophenol	31.7	0.70	5.0	ug/L	40.0	ND	79.4	39-135			
2,4-Dimethylphenol	8.99	1.0	2.0	ug/L	50.0	ND	18.0	32-120			
4,6-Dinitro-2-methylphenol	39.6	3.0	5.0	ug/L	40.0	ND	99.0	7-181			
2,4-Dinitrophenol	44.3	5.0	5.0	ug/L	40.0	ND	111	10-191			
2-Nitrophenol	35.6	0.90	10	ug/L	40.0	ND	89.1	29-182			
4-Nitrophenol	21.2	3.0	10	ug/L	40.0	ND	53.1	7-132			
4-Chloro-3-methylphenol	40.6	1.0	1.0	ug/L	40.0	ND	101	22-147			
Pentachlorophenol	47.9	4.0	5.0	ug/L	40.0	ND	120	14-176			
2-Methylphenol (o-cresol)	24.1	0.60	5.0	ug/L	40.0	ND	60.2	9-124			
Phenol	14.1	0.50	1.0	ug/L	40.0	ND	35.2	5-120			
2,4,6-Trichlorophenol	39.1	0.70	10	ug/L	40.0	ND	97.7	37-144			
Bis(2-chloroethoxy)methane	31.5	0.90	5.0	ug/L	40.0	ND	78.6	33-184			
Bis(2-chloroethyl)ether	27.5	0.90	1.0	ug/L	40.0	ND	68.6	12-158			

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Semivolatile Organic Compounds by EPA Method 625.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03917 - SVOAs in Water GCMS

Matrix Spike (AC03917-MS1)	Source: 20C1080-01			Prepared: 03/16/20		Analyzed: 03/23/20		
Bis(2-chloroisopropyl)ether	27.1	1.0	2.0	ug/L	40.0	ND	67.7	36-166
Bis(2-ethylhexyl)phthalate	50.6	3.0	5.0	ug/L	40.0	ND	126	8-158
4-Bromophenyl phenyl ether	35.8	1.0	5.0	ug/L	40.0	ND	89.6	53-127
Butyl benzyl phthalate	41.0	0.60	10	ug/L	40.0	ND	103	2-152
2-Chloronaphthalene	25.1	0.60	10	ug/L	40.0	ND	62.6	60-120
4-Chlorophenyl phenyl ether	35.8	0.90	5.0	ug/L	40.0	ND	89.4	25-158
1,4-Dichlorobenzene	20.4	0.60	1.0	ug/L	40.0	ND	51.0	3-105
1,3-Dichlorobenzene	21.2	0.60	1.0	ug/L	40.0	ND	53.1	1-106
1,2-Dichlorobenzene	22.0	0.60	2.0	ug/L	40.0	ND	55.0	7-104
Diethyl phthalate	44.3	0.30	2.0	ug/L	40.0	ND	111	2-120
Dimethyl phthalate	31.9	0.80	2.0	ug/L	40.0	ND	79.7	2-120
Di-n-butyl phthalate	49.7	0.90	10	ug/L	40.0	1.58	120	1-120
2,4-Dinitrotoluene	43.0	0.80	5.0	ug/L	40.0	ND	108	39-139
2,6-Dinitrotoluene	40.9	0.80	5.0	ug/L	40.0	ND	102	50-158
Di-n-octyl phthalate	43.8	0.60	10	ug/L	40.0	ND	110	4-146
1,2-Diphenylhydrazine	37.6	0.60	1.0	ug/L	40.0	ND	94.0	39-116
Hexachlorobenzene	36.2	0.90	1.0	ug/L	40.0	ND	90.4	2-152
Hexachlorobutadiene	22.5	0.80	1.0	ug/L	40.0	ND	56.3	24-120
Hexachlorocyclopentadiene	11.7	4.0	5.0	ug/L	40.0	ND	29.2	10-93
Hexachloroethane	21.5	0.60	1.0	ug/L	40.0	ND	53.8	40-120
Isophorone	35.1	0.30	1.0	ug/L	40.0	ND	87.7	21-196
Nitrobenzene	28.0	0.90	1.0	ug/L	40.0	ND	70.0	35-180
N-Nitrosodimethylamine	17.1	0.30	5.0	ug/L	40.0	ND	42.8	10-84
N-Nitrosodi-n-propylamine	32.3	0.80	5.0	ug/L	40.0	ND	80.8	2-230
N-Nitrosodiphenylamine	37.9	1.0	1.0	ug/L	40.0	ND	94.8	40-115
1,2,4-Trichlorobenzene	22.8	0.60	5.0	ug/L	40.0	ND	57.1	44-142
Surrogate: 2-Fluorobiphenyl	24.9			ug/L	40.0		62.2	27-119
Surrogate: 2-Fluorophenol	16.3			ug/L	40.0		40.8	7-85
Surrogate: Nitrobenzene-d5	28.0			ug/L	40.0		70.0	15-314
Surrogate: p-Terphenyl-d14	38.5			ug/L	40.0		96.2	36-141
Surrogate: Phenol-d6	11.6			ug/L	40.0		29.0	1-65
Surrogate: 2,4,6-Tribromophenol	41.1			ug/L	40.0		103	4-168

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Semivolatile Organic Compounds by EPA Method 625.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03917 - SVOAs in Water GCMS

Matrix Spike Dup (AC03917-MSD1)	Source: 20C1080-01			Prepared: 03/16/20 Analyzed: 03/23/20							
2-Chlorophenol	30.5	0.70	5.0	ug/L	40.0	ND	76.3	23-134	6.04	61	
2,4-Dichlorophenol	33.6	0.70	5.0	ug/L	40.0	ND	84.0	39-135	5.69	50	
2,4-Dimethylphenol	15.1	1.0	2.0	ug/L	50.0	ND	30.2	32-120	50.7	58	
4,6-Dinitro-2-methylphenol	44.8	3.0	5.0	ug/L	40.0	ND	112	7-181	12.5	203	
2,4-Dinitrophenol	46.2	5.0	5.0	ug/L	40.0	ND	115	10-191	4.09	132	
2-Nitrophenol	36.9	0.90	10	ug/L	40.0	ND	92.2	29-182	3.39	55	
4-Nitrophenol	18.2	3.0	10	ug/L	40.0	ND	45.6	7-132	15.2	131	
4-Chloro-3-methylphenol	43.5	1.0	1.0	ug/L	40.0	ND	109	22-147	6.97	73	
Pentachlorophenol	57.0	4.0	5.0	ug/L	40.0	ND	142	14-176	17.3	86	
2-Methylphenol (o-cresol)	30.4	0.60	5.0	ug/L	40.0	ND	76.1	9-124	23.4	28	
Phenol	16.1	0.50	1.0	ug/L	40.0	ND	40.3	5-120	13.6	64	
2,4,6-Trichlorophenol	42.3	0.70	10	ug/L	40.0	ND	106	37-144	7.89	58	
Bis(2-chloroethoxy)methane	34.1	0.90	5.0	ug/L	40.0	ND	85.2	33-184	8.02	54	
Bis(2-chloroethyl)ether	32.2	0.90	1.0	ug/L	40.0	ND	80.6	12-158	16.0	108	
Bis(2-chloroisopropyl)ether	33.6	1.0	2.0	ug/L	40.0	ND	84.0	36-166	21.5	76	
Bis(2-ethylhexyl)phthalate	51.9	3.0	5.0	ug/L	40.0	ND	130	8-158	2.62	82	
4-Bromophenyl phenyl ether	38.9	1.0	5.0	ug/L	40.0	ND	97.3	53-127	8.24	43	
Butyl benzyl phthalate	34.2	0.60	10	ug/L	40.0	ND	85.6	2-152	18.0	60	
2-Chloronaphthalene	27.9	0.60	10	ug/L	40.0	ND	69.8	60-120	10.8	24	
4-Chlorophenyl phenyl ether	33.3	0.90	5.0	ug/L	40.0	ND	83.2	25-158	7.15	61	
1,4-Dichlorobenzene	22.8	0.60	1.0	ug/L	40.0	ND	57.0	3-105	11.1	42	
1,2-Dichlorobenzene	24.1	0.60	2.0	ug/L	40.0	ND	60.4	7-104	9.32	41	
1,3-Dichlorobenzene	22.7	0.60	1.0	ug/L	40.0	ND	56.8	1-106	6.69	41	
Diethyl phthalate	33.7	0.30	2.0	ug/L	40.0	ND	84.2	2-120	27.3	100	
Dimethyl phthalate	24.7	0.80	2.0	ug/L	40.0	ND	61.7	2-120	25.5	183	
Di-n-butyl phthalate	44.6	0.90	10	ug/L	40.0	1.58	108	1-120	10.8	47	
2,4-Dinitrotoluene	38.8	0.80	5.0	ug/L	40.0	ND	96.9	39-139	10.3	42	
2,6-Dinitrotoluene	40.3	0.80	5.0	ug/L	40.0	ND	101	50-158	1.55	48	
Di-n-octyl phthalate	35.2	0.60	10	ug/L	40.0	ND	88.0	4-146	21.8	69	
1,2-Diphenylhydrazine	42.5	0.60	1.0	ug/L	40.0	ND	106	39-116	12.2	25	
Hexachlorobenzene	38.7	0.90	1.0	ug/L	40.0	ND	96.7	2-152	6.68	55	
Hexachlorobutadiene	22.7	0.80	1.0	ug/L	40.0	ND	56.8	24-120	0.929	62	
Hexachlorocyclopentadiene	13.4	4.0	5.0	ug/L	40.0	ND	33.6	10-93	14.0	55	
Hexachloroethane	23.4	0.60	1.0	ug/L	40.0	ND	58.5	40-120	8.46	52	
Isophorone	38.4	0.30	1.0	ug/L	40.0	ND	96.0	21-196	9.04	93	
Nitrobenzene	28.2	0.90	1.0	ug/L	40.0	ND	70.4	35-180	0.641	62	

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Semivolatile Organic Compounds by EPA Method 625.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03917 - SVOAs in Water GCMS

Matrix Spike Dup (AC03917-MSD1)	Source: 20C1080-01		Prepared: 03/16/20		Analyzed: 03/23/20					
N-Nitrosodimethylamine	17.0	0.30	5.0	ug/L	40.0	ND	42.4	10-84	0.998	59
N-Nitrosodi-n-propylamine	43.4	0.80	5.0	ug/L	40.0	ND	108	2-230	29.2	87
N-Nitrosodiphenylamine	41.4	1.0	1.0	ug/L	40.0	ND	103	40-115	8.71	25
1,2,4-Trichlorobenzene	22.6	0.60	5.0	ug/L	40.0	ND	56.6	44-142	0.879	50
Surrogate: 2-Fluorobiphenyl	27.3			ug/L	40.0		68.2	27-119		
Surrogate: 2-Fluorophenol	16.2			ug/L	40.0		40.4	7-85		
Surrogate: Nitrobenzene-d5	26.2			ug/L	40.0		65.6	15-314		
Surrogate: p-Terphenyl-d14	37.4			ug/L	40.0		93.6	36-141		
Surrogate: Phenol-d6	12.7			ug/L	40.0		31.7	1-65		
Surrogate: 2,4,6-Tribromophenol	46.7			ug/L	40.0		117	4-168		

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Benzidines by EPA Method 625.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC03947 - SVOAs in Water GCMS

Blank (AC03947-BLK1)

Prepared: 03/16/20 Analyzed: 03/30/20

Benzidine	ND	3.00	5.00	ug/L							U
3,3'-Dichlorobenzidine	ND	2.00	5.00	ug/L							U
Surrogate: 2-Fluorobiphenyl	29.0			ug/L	40.0		72.5	27-119			
Surrogate: Nitrobenzene-d5	28.0			ug/L	40.0		70.0	15-314			
Surrogate: p-Terphenyl-d14	32.6			ug/L	40.0		81.4	36-141			

LCS (AC03947-BS1)

Prepared: 03/16/20 Analyzed: 03/30/20

Benzidine	10.6	3.00	5.00	ug/L	79.4		13.3	12-151			
3,3'-Dichlorobenzidine	45.8	2.00	5.00	ug/L	79.4		57.7	8-120			
Surrogate: 2-Fluorobiphenyl	21.9			ug/L	40.0		54.8	27-119			
Surrogate: Nitrobenzene-d5	22.2			ug/L	40.0		55.6	15-314			
Surrogate: p-Terphenyl-d14	26.4			ug/L	40.0		66.1	36-141			

Matrix Spike (AC03947-MS1)

Source: 20C1080-03

Prepared: 03/16/20 Analyzed: 03/30/20

Benzidine	9.71	3.00	5.00	ug/L	79.4	ND	12.2	4-262			
3,3'-Dichlorobenzidine	53.1	2.00	5.00	ug/L	79.4	ND	66.9	4-262			
Surrogate: 2-Fluorobiphenyl	30.1			ug/L	40.0		75.2	27-119			
Surrogate: Nitrobenzene-d5	30.6			ug/L	40.0		76.6	15-314			
Surrogate: p-Terphenyl-d14	29.4			ug/L	40.0		73.5	36-141			

Matrix Spike Dup (AC03947-MSD1)

Source: 20C1080-03

Prepared: 03/16/20 Analyzed: 03/30/20

Benzidine	9.90	3.00	5.00	ug/L	79.4	ND	12.5	4-262	1.94	108	
3,3'-Dichlorobenzidine	53.5	2.00	5.00	ug/L	79.4	ND	67.4	4-262	0.675	108	
Surrogate: 2-Fluorobiphenyl	30.8			ug/L	40.0		77.0	27-119			
Surrogate: Nitrobenzene-d5	30.5			ug/L	40.0		76.3	15-314			
Surrogate: p-Terphenyl-d14	28.7			ug/L	40.0		71.8	36-141			



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: CTR Project Number: Wastewater	Reported: 04/03/20 08:34
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Semivolatile Organic Compounds by EPA Method 625.1 SIM - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC04575 - SVOAs in Water GCMS

Blank (AC04575-BLK1)

Prepared: 03/16/20 Analyzed: 03/24/20

Acenaphthene	ND	0.20	0.20	ug/L							U
Acenaphthylene	ND	0.20	0.20	ug/L							U
Anthracene	ND	0.090	0.20	ug/L							U
Benzo (a) anthracene	ND	0.20	0.20	ug/L							U
Benzo (a) pyrene	ND	0.20	0.20	ug/L							U
Benzo (b) fluoranthene	ND	0.20	0.20	ug/L							U
Benzo (g,h,i) perylene	ND	0.10	0.20	ug/L							U
Benzo (k) fluoranthene	ND	0.20	0.20	ug/L							U
Chrysene	ND	0.20	0.20	ug/L							U
Dibenz (a,h) anthracene	ND	0.10	0.20	ug/L							U
Fluoranthene	ND	0.070	0.20	ug/L							U
Fluorene	ND	0.20	0.20	ug/L							U
Indeno (1,2,3-cd) pyrene	ND	0.030	0.20	ug/L							U
Naphthalene	ND	0.090	0.20	ug/L							U
Phenanthrene	ND	0.10	0.20	ug/L							U
Pyrene	ND	0.20	0.20	ug/L							U
Surrogate: 2-Fluorobiphenyl	22.2			ug/L	40.0		55.6	24-119			
Surrogate: Nitrobenzene-d5	23.2			ug/L	40.0		58.0	15-314			
Surrogate: p-Terphenyl-d14	35.6			ug/L	40.0		89.0	37-139			

LCS (AC04575-BS1)

Prepared: 03/16/20 Analyzed: 03/24/20

Acenaphthene	27.3	0.20	0.20	ug/L	40.0		68.2	60-132			
Acenaphthylene	29.4	0.20	0.20	ug/L	40.0		73.4	54-126			
Anthracene	36.0	0.090	0.20	ug/L	40.0		90.0	43-120			
Benzo (a) anthracene	33.6	0.20	0.20	ug/L	40.0		84.1	42-133			
Benzo (a) pyrene	35.4	0.20	0.20	ug/L	40.0		88.6	32-148			
Benzo (b) fluoranthene	36.9	0.20	0.20	ug/L	40.0		92.3	42-140			
Benzo (g,h,i) perylene	39.0	0.10	0.20	ug/L	40.0		97.6	2-195			
Benzo (k) fluoranthene	37.8	0.20	0.20	ug/L	40.0		94.5	25-146			
Chrysene	34.8	0.20	0.20	ug/L	40.0		86.9	44-140			
Dibenz (a,h) anthracene	38.9	0.10	0.20	ug/L	40.0		97.4	2-200			
Fluoranthene	36.8	0.070	0.20	ug/L	40.0		92.1	43-121			
Fluorene	30.2	0.20	0.20	ug/L	40.0		75.5	70-120			
Indeno (1,2,3-cd) pyrene	38.2	0.030	0.20	ug/L	40.0		95.6	2-151			
Naphthalene	27.6	0.090	0.20	ug/L	40.0		69.0	36-120			
Phenanthrene	31.1	0.10	0.20	ug/L	40.0		77.6	65-120			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: CTR Project Number: Wastewater	Reported: 04/03/20 08:34
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Semivolatile Organic Compounds by EPA Method 625.1 SIM - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC04575 - SVOAs in Water GCMS

LCS (AC04575-BS1)

Prepared: 03/16/20 Analyzed: 03/24/20

Pyrene	33.8	0.20	0.20	ug/L	40.0		84.4	70-120			
Surrogate: 2-Fluorobiphenyl	55.1			ug/L	80.0		68.9	24-119			
Surrogate: Nitrobenzene-d5	56.7			ug/L	80.0		70.8	15-314			
Surrogate: p-Terphenyl-d14	70.4			ug/L	80.0		87.9	37-139			

Matrix Spike (AC04575-MS1)

Source: 20C1080-01

Prepared: 03/16/20 Analyzed: 03/24/20

Acenaphthene	30.8	0.20	0.20	ug/L	40.0	ND	77.1	47-145			
Acenaphthylene	32.0	0.20	0.20	ug/L	40.0	ND	80.0	33-145			
Anthracene	39.4	0.090	0.20	ug/L	40.0	ND	98.4	27-133			
Benzo (a) anthracene	37.6	0.20	0.20	ug/L	40.0	ND	93.9	33-143			
Benzo (a) pyrene	40.8	0.20	0.20	ug/L	40.0	ND	102	17-163			
Benzo (b) fluoranthene	38.6	0.20	0.20	ug/L	40.0	ND	96.4	24-159			
Benzo (g,h,i) perylene	45.9	0.10	0.20	ug/L	40.0	ND	115	2-219			
Benzo (k) fluoranthene	40.7	0.20	0.20	ug/L	40.0	ND	102	11-162			
Chrysene	38.1	0.20	0.20	ug/L	40.0	ND	95.2	17-168			
Dibenz (a,h) anthracene	51.1	0.10	0.20	ug/L	40.0	ND	128	2-227			
Fluoranthene	44.5	0.070	0.20	ug/L	40.0	ND	111	26-137			
Fluorene	37.7	0.20	0.20	ug/L	40.0	ND	94.3	59-121			
Indeno (1,2,3-cd) pyrene	48.9	0.030	0.20	ug/L	40.0	ND	122	2-171			
Naphthalene	21.0	0.090	0.20	ug/L	40.0	ND	52.4	21-133			
Phenanthrene	39.4	0.10	0.20	ug/L	40.0	ND	98.4	54-120			
Pyrene	39.3	0.20	0.20	ug/L	40.0	ND	98.3	52-120			
Surrogate: 2-Fluorobiphenyl	27.2			ug/L	40.0		67.9	24-119			
Surrogate: Nitrobenzene-d5	25.9			ug/L	40.0		64.8	15-314			
Surrogate: p-Terphenyl-d14	39.0			ug/L	40.0		97.6	37-139			

Matrix Spike Dup (AC04575-MSD1)

Source: 20C1080-01

Prepared: 03/16/20 Analyzed: 03/24/20

Acenaphthene	32.6	0.20	0.20	ug/L	40.0	ND	81.4	47-145	5.52	48
Acenaphthylene	33.1	0.20	0.20	ug/L	40.0	ND	82.6	33-145	3.29	74
Anthracene	43.4	0.090	0.20	ug/L	40.0	ND	108	27-133	9.64	66
Benzo (a) anthracene	38.5	0.20	0.20	ug/L	40.0	ND	96.2	33-143	2.34	53
Benzo (a) pyrene	37.0	0.20	0.20	ug/L	40.0	ND	92.6	17-163	9.69	72
Benzo (b) fluoranthene	36.7	0.20	0.20	ug/L	40.0	ND	91.8	24-159	4.89	71
Benzo (g,h,i) perylene	43.6	0.10	0.20	ug/L	40.0	ND	109	2-219	5.07	97
Benzo (k) fluoranthene	38.9	0.20	0.20	ug/L	40.0	ND	97.4	11-162	4.49	63
Chrysene	38.5	0.20	0.20	ug/L	40.0	ND	96.2	17-168	1.04	87
Dibenz (a,h) anthracene	45.6	0.10	0.20	ug/L	40.0	ND	114	2-227	11.5	126

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Angie Koski Project: CTR Project Number: Wastewater	Reported: 04/03/20 08:34
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Semivolatile Organic Compounds by EPA Method 625.1 SIM - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AC04575 - SVOAs in Water GCMS

Matrix Spike Dup (AC04575-MSD1)	Source: 20C1080-01			Prepared: 03/16/20 Analyzed: 03/24/20						
Fluoranthene	51.6	0.070	0.20	ug/L	40.0	ND	129	26-137	14.8	66
Fluorene	40.0	0.20	0.20	ug/L	40.0	ND	100	59-121	5.87	38
Indeno (1,2,3-cd) pyrene	44.4	0.030	0.20	ug/L	40.0	ND	111	2-171	9.58	99
Naphthalene	24.8	0.090	0.20	ug/L	40.0	ND	62.1	21-133	17.0	65
Phenanthrene	38.5	0.10	0.20	ug/L	40.0	ND	96.2	54-120	2.26	39
Pyrene	39.6	0.20	0.20	ug/L	40.0	ND	99.0	52-120	0.710	49
Surrogate: 2-Fluorobiphenyl	25.8			ug/L	40.0		64.5	24-119		
Surrogate: Nitrobenzene-d5	32.9			ug/L	40.0		82.3	15-314		
Surrogate: p-Terphenyl-d14	37.0			ug/L	40.0		92.5	37-139		



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Healdsburg, City of - WW
340 Foreman Lane
Healdsburg CA, 95448-0578

Project Manager: Angie Koski
Project: CTR
Project Number: Wastewater

Reported:
04/03/20 08:34

Notes and Definitions

- J Detected but below the Reporting Limit; therefore, result is an estimated concentration, detected but not quantified (DNQ).
- QM-01 The spike recovery for this QC sample is outside of established control limits possibly due to a sample matrix interference.
- QM-4X The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
- R-01 The Reporting Limit for this analyte has been raised to account for matrix interference.
- U Analyte included in analysis, but not detected at or above MDL.
- ND Analyte NOT DETECTED at or above the reporting limit
- dry Sample results reported on a dry weight basis
- MDL Method detection limit
- Rec Recovery
- RPD Relative Percent Difference



CERES Analytical Laboratory, Inc.

4919 Windplay Dr. Suite 1, El Dorado Hills, CA 95762



March 26, 2020

Ceres ID: 13407

Alpha Analytical Laboratories, Inc.
208 Mason St.
Ukiah, CA 95482

The following report contains the results for the one aqueous sample received on March 12, 2020. This sample was analyzed for 2,3,7,8-TCDD by EPA method 1613B. Routine turn-around time was provided for this work.

This work was authorized under Alpha Analytical Laboratories' project # 20C1207.

Continuing Calibration Verification (CCV) Requirements

All associated calibration verification standard(s) (CCV) met the acceptance criteria.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,

James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

<u>Ceres Sample ID:</u>	<u>Sample ID</u>	<u>Date Received</u>	<u>Collection Date & Time</u>
13407-001	EFF-001	3/12/2020	3/10/2020 7:45
	20C1207-01		

Section II: Data Summary



EPA Method 1613B

Quality Assurance Sample Method Blank	QC Batch #: 2152 Matrix: Aqueous Sample Size: 1.000 L	Date Received: NA Date Extracted: 3/23/2020 ZB-5MS Analysis: 3/25/2020
Project ID: 20C1207		

Analyte	Conc. (pg/L)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	DL= 3.63	0.772	5.00		13C-2378-TCDD	73.5	31-137	
					CRS			
					37Cl4-2378-TCDD	57.7	35-197	
DL - Signifies Non-Detect (ND) at sample specific detection limit. EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure. (a) - Lower control limit - Upper control limit								

Analyst: JMH

Reviewed by: BS



EPA Method 1613B

Quality Assurance Sample Ongoing Precision and Recovery Project ID: 20C1207	QC Batch #: 2152 Matrix: Aqueous Sample Size: 1.000 L	Date Received: NA Date Extracted: 3/23/2020 ZB-5MS Analysis: 3/25/2020
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Analyte	Conc. (ng/mL)	Limits (a)	Labeled Standards	% Rec.	Limits (a)
2,3,7,8-TCDD	9.65	7.3-14.6	13C-2378-TCDD	85.1	25-141
			CRS		
			37Cl4-2378-TCDD	81.9	37-158
(a) Limits based on method acceptance criteria.					

Analyst: JMH

Reviewed by: BS



EPA Method 1613B

Client Sample ID: EFF-001 20C1207-01		
Project ID: 20C1207	Ceres Sample ID: 13407-001	Date Received: 3/12/2020
Date Collected: 3/10/2020	QC Batch #: 2152	Date Extracted: 3/23/2020
Time Collected: 7:45	Matrix: Aqueous	ZB-5MS Analysis: 3/25/2020
	Sample Size: 0.998 L	

Analyte	Conc. (pg/L)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	DL= 4.30	0.772	5.01		13C-2378-TCDD	79.8	31-137	
					CRS			
					37Cl4-2378-TCDD	119	42-164	
DL - Signifies Non-Detect (ND) at sample specific detection limit. EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure. (a) - Lower control limit - Upper control limit								

Analyst: JMH

Reviewed by: BS

Section VI: Sample Tracking

Sample Receipt Check List Logged by: J (initials)

Ceres ID: <u>13407</u>	Date/Time: <u>3/12/20 11:43</u>
Client Project ID: <u>20C 1207</u>	Received Temp: <u>1.8</u> °C Acceptable: <u>Y</u> / N
Chain of Custody Relinquished by signed?	<u>Y</u> / N
Chain of Custody Received by signed?	<u>Y</u> / N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	<u>NA</u>
Unlabeled / Illegible Samples	Y / <u>N</u>
Proper Containers:	<u>Y</u> / N
Preservation Acceptable (Chemical or <u>Temperature</u>)?	<u>Y</u> / N
Drinking Water, Sodium Thiosulfate present? Residual Cl?	Y / <u>N</u> / NA Y / <u>N</u>
Aqueous sample pH: <u>7</u>	
List COC discrepancies:	J 3/12/20
List Damaged Samples:	J 3/12/20

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery



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04 June 2020

Healdsburg, City of - WW
Attn: Allen Roseberry
340 Foreman Lane
Healdsburg, CA 95448-0578
RE: CTR
Work Order: 20E1708

Enclosed are the results of analyses for samples received by the laboratory on 05/14/20 14:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanette L. Poplin For Sheri L. Speaks
Project Manager



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Allen Roseberry Project: CTR Project Number: CTR Waste Water	Reported: 06/04/20 15:49
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Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | T: 916-686-5190 | F: 916-686-5192 | ELAP# 2922
North Bay: 110 Liberty Street | Petaluma, CA 94952 | T: 707-769-3128 | F: 707-769-8093 | ELAP# 2303
San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | T: 760-930-2555 | F: 760-930-2510 | ELAP# 3055

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EFF-001	20E1708-01	Water	05/14/20 08:10	05/14/20 14:45



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Allen Roseberry Project: CTR Project Number: CTR Waste Water	Reported: 06/04/20 15:49
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Metals by EPA 200 Series Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20E1708-01) Water Sampled: 05/14/20 08:10 Received: 05/14/20 14:45												
Calcium	34	0.080	1.0	mg/L	1	AE03771	05/20/20 08:30	05/26/20 15:18	EPA 200.7	LRN	1551	
Magnesium	21	0.030	1.0	mg/L	1	AE03771	05/20/20 08:30	05/26/20 15:18	EPA 200.7	LRN	1551	
Mercury	ND	0.020	0.020	ug/L	1	AE04030	05/26/20 08:28	05/26/20 13:30	EPA 245.1	LMR	1551	U



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Allen Roseberry Project: CTR Project Number: CTR Waste Water	Reported: 06/04/20 15:49
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Metals by EPA Method 200.8 ICP/MS

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20E1708-01) Water Sampled: 05/14/20 08:10 Received: 05/14/20 14:45												
Antimony	0.38	0.20	0.50	ug/L	1	AE03669	05/18/20 11:20	05/20/20 23:07	EPA 200.8	MB	1551	J
Arsenic	1.0	0.40	0.50	ug/L	1	AE03669	05/18/20 11:20	05/20/20 23:07	EPA 200.8	MB	1551	
Beryllium	ND	0.050	0.10	ug/L	1	AE03669	05/18/20 11:20	05/20/20 23:07	EPA 200.8	MB	1551	U
Cadmium	ND	0.060	0.10	ug/L	1	AE03669	05/18/20 11:20	05/20/20 23:07	EPA 200.8	MB	1551	U
Chromium	ND	0.50	0.50	ug/L	1	AE03669	05/18/20 11:20	05/20/20 23:07	EPA 200.8	MB	1551	U
Copper	6.6	0.40	0.50	ug/L	1	AE03669	05/18/20 11:20	05/20/20 23:07	EPA 200.8	MB	1551	
Lead	0.083	0.060	0.25	ug/L	1	AE03669	05/18/20 11:20	05/20/20 23:07	EPA 200.8	MB	1551	J
Nickel	2.7	0.30	0.50	ug/L	1	AE03669	05/18/20 11:20	05/20/20 23:07	EPA 200.8	MB	1551	
Selenium	ND	0.30	2.0	ug/L	1	AE03669	05/18/20 11:20	05/20/20 23:07	EPA 200.8	MB	1551	U
Silver	ND	0.050	0.10	ug/L	1	AE03669	05/18/20 11:20	05/20/20 23:07	EPA 200.8	MB	1551	U
Thallium	ND	0.050	0.10	ug/L	1	AE03669	05/18/20 11:20	05/20/20 23:07	EPA 200.8	MB	1551	U
Zinc	31	4.0	5.0	ug/L	1	AE03669	05/18/20 11:20	05/20/20 23:07	EPA 200.8	MB	1551	



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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Allen Roseberry Project: CTR Project Number: CTR Waste Water	Reported: 06/04/20 15:49
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Metals by APHA/EPA Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20E1708-01) Water Sampled: 05/14/20 08:10 Received: 05/14/20 14:45												
Chromium, hexavalent	ND	0.0050	0.010	mg/L	1	AE03713	05/18/20 09:10	05/19/20 12:37	SM3500-Cr B	JMH	1551	U



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Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20E1708-01) Water Sampled: 05/14/20 08:10 Received: 05/14/20 14:45												
Hardness, Total	173	1	5	mg/L	1	AE03771	05/20/20 08:30	05/26/20 15:18	SM2340B	LRN	1551	



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Miscellaneous Physical/Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20E1708-01) Water Sampled: 05/14/20 08:10 Received: 05/14/20 14:45												
Cyanide (total)	0.0035	0.0020	0.0030	mg/L	1	AE03880	05/21/20 08:30	05/21/20 14:08	10-204-00-1X	EV	1551	



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Acrolein by EPA Method 624.1

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20E1708-01) Water Sampled: 05/14/20 08:10 Received: 05/14/20 14:45												
Acrolein	ND	0.90	5.0	ug/L	1	AE03506	05/14/20 15:00	05/15/20 11:13	EPA 624.1	JV	1551	U
Surrogate: Bromofluorobenzene		107 %	70-130			AE03506	05/14/20 15:00	05/15/20 11:13	EPA 624.1	JV	1551	
Surrogate: Dibromofluoromethane		110 %	70-130			AE03506	05/14/20 15:00	05/15/20 11:13	EPA 624.1	JV	1551	
Surrogate: Toluene-d8		99.2 %	70-130			AE03506	05/14/20 15:00	05/15/20 11:13	EPA 624.1	JV	1551	



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2-Chloroethylvinyl Ether by EPA Method 624.1

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20E1708-01) Water Sampled: 05/14/20 08:10 Received: 05/14/20 14:45												
2-Chloroethylvinyl ether	ND	0.70	1.0	ug/L	1	AE03506	05/14/20 15:00	05/15/20 11:13	EPA 624.1	JV	1551	U
<i>Surrogate: Bromofluorobenzene</i>		107 %	70-130			AE03506	05/14/20 15:00	05/15/20 11:13	EPA 624.1	JV	1551	
<i>Surrogate: Dibromofluoromethane</i>		110 %	70-130			AE03506	05/14/20 15:00	05/15/20 11:13	EPA 624.1	JV	1551	
<i>Surrogate: Toluene-d8</i>		99.2 %	70-130			AE03506	05/14/20 15:00	05/15/20 11:13	EPA 624.1	JV	1551	

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Volatile Organic Compounds by EPA Method 624.1

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20E1708-01) Water Sampled: 05/14/20 08:10 Received: 05/14/20 14:45												
Acrylonitrile	ND	0.40	2.0	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
Benzene	ND	0.30	0.30	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
Bromoform	ND	0.30	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
Carbon tetrachloride	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
Chlorobenzene	ND	0.30	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
Dibromochloromethane	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
Chloroethane	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
Chloroform	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
Bromodichloromethane	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
1,1-Dichloroethane	ND	0.30	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
1,2-Dichloroethane	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
1,1-Dichloroethene	ND	0.30	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
1,2-Dichloropropane	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
cis-1,3-Dichloropropene	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
trans-1,3-Dichloropropene	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
Ethylbenzene	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
Bromomethane	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
Chloromethane	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
Methylene chloride	ND	0.50	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
1,1,2,2-Tetrachloroethane	ND	0.30	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
Tetrachloroethene	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
Toluene	ND	0.30	0.30	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
trans-1,2-Dichloroethene	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
1,1,1-Trichloroethane	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
1,1,2-Trichloroethane	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
Trichloroethene	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
Trihalomethanes (total)	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
Vinyl chloride	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
1,2-Dichlorobenzene	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
1,3-Dichlorobenzene	ND	0.40	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
1,4-Dichlorobenzene	ND	0.10	0.50	ug/L	1	AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	U
Surrogate: Bromofluorobenzene		116 %	70-130			AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	
Surrogate: Dibromofluoromethane		114 %	70-130			AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	
Surrogate: Toluene-d8		118 %	70-130			AE03902	05/21/20 09:00	05/21/20 11:25	EPA 624.1	JV	1551	

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Organochlorine Pesticides and PCBs by EPA Method 608.3

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20E1708-01) Water Sampled: 05/14/20 08:10 Received: 05/14/20 14:45												
Aldrin	ND	0.0020	0.0050	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
alpha-BHC	ND	0.0040	0.010	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
beta-BHC	ND	0.0040	0.0050	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
gamma-BHC (Lindane)	ND	0.0040	0.010	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
delta-BHC	ND	0.0020	0.0050	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
Chlordane (tech)	ND	0.010	0.050	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
4,4'-DDT	ND	0.0030	0.010	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
4,4'-DDE	ND	0.0040	0.020	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
4,4'-DDD	ND	0.0050	0.020	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
Dieldrin	ND	0.0050	0.010	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
Endosulfan I	ND	0.0040	0.010	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
Endosulfan II	ND	0.0050	0.010	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
Endosulfan sulfate	ND	0.0030	0.050	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
Endrin	ND	0.0080	0.010	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
Endrin aldehyde	ND	0.0040	0.010	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
Heptachlor	ND	0.0050	0.010	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
Heptachlor epoxide	ND	0.0090	0.010	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
PCB-1016	ND	0.080	0.50	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
PCB-1221	ND	0.20	0.50	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
PCB-1232	ND	0.10	0.50	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
PCB-1242	ND	0.040	0.50	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
PCB-1248	ND	0.060	0.50	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
PCB-1254	ND	0.040	0.50	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
PCB-1260	ND	0.040	0.50	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
Toxaphene	ND	0.20	0.50	ug/L	1	AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	U
Surrogate: Dibutylchloroendate			87.6 %	10-147		AE03786	05/20/20 07:00	06/01/20 22:19	EPA 608.3	MCB	1551	



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Semivolatile Organic Compounds by EPA Method 625.1

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20E1708-01) Water Sampled: 05/14/20 08:10 Received: 05/14/20 14:45												
2-Chlorophenol	ND	0.70	5.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
2,4-Dichlorophenol	ND	0.70	5.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
2,4-Dimethylphenol	ND	1.0	2.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
4,6-Dinitro-2-methylphenol	ND	3.0	5.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
2,4-Dinitrophenol	ND	5.0	5.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
2-Nitrophenol	ND	0.90	10	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
4-Nitrophenol	ND	3.0	10	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
4-Chloro-3-methylphenol	ND	1.0	1.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
2-Methylphenol (o-cresol)	ND	0.60	5.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
Pentachlorophenol	ND	4.0	5.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
Phenol	ND	0.50	1.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
2,4,6-Trichlorophenol	ND	0.70	10	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
Bis(2-chloroethoxy)methane	ND	0.90	5.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
Bis(2-chloroethyl)ether	ND	0.90	1.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
Bis(2-chloroisopropyl)ether	ND	1.0	2.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
Bis(2-ethylhexyl)phthalate	ND	3.0	5.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
4-Bromophenyl phenyl ether	ND	1.0	5.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
Butyl benzyl phthalate	ND	0.60	10	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
2-Chloronaphthalene	ND	0.60	10	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
4-Chlorophenyl phenyl ether	ND	0.90	5.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
1,2-Dichlorobenzene	ND	0.60	2.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
1,3-Dichlorobenzene	ND	0.60	1.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
1,4-Dichlorobenzene	ND	0.60	1.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
Diethyl phthalate	ND	0.30	2.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
Dimethyl phthalate	ND	0.80	2.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
Di-n-butyl phthalate	2.4	0.90	10	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	J
2,4-Dinitrotoluene	ND	0.80	5.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
2,6-Dinitrotoluene	ND	0.80	5.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
Di-n-octyl phthalate	ND	0.60	10	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
1,2-Diphenylhydrazine	ND	0.60	1.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
Hexachlorobenzene	ND	0.90	1.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
Hexachlorobutadiene	ND	0.80	1.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
Hexachlorocyclopentadiene	ND	4.0	5.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
Hexachloroethane	ND	0.60	1.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
Isophorone	ND	0.30	1.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
Nitrobenzene	ND	0.90	1.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
N-Nitrosodimethylamine	ND	0.30	5.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Allen Roseberry Project: CTR Project Number: CTR Waste Water	Reported: 06/04/20 15:49
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Semivolatile Organic Compounds by EPA Method 625.1

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20E1708-01) Water Sampled: 05/14/20 08:10 Received: 05/14/20 14:45												
N-Nitrosodi-n-propylamine	ND	0.80	5.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
N-Nitrosodiphenylamine	ND	1.0	1.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
1,2,4-Trichlorobenzene	ND	0.60	5.0	ug/L	1	AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	U
Surrogate: 2-Fluorobiphenyl		79.3 %		27-119		AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	
Surrogate: 2-Fluorophenol		51.6 %		7-85		AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	
Surrogate: Nitrobenzene-d5		73.2 %		15-314		AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	
Surrogate: p-Terphenyl-d14		91.0 %		36-141		AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	
Surrogate: Phenol-d6		40.8 %		1-65		AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	
Surrogate: 2,4,6-Tribromophenol		114 %		4-168		AE03785	05/20/20 08:00	05/27/20 23:47	EPA 625.1	NBH	1551	



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Benzidines by EPA Method 625.1

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20E1708-01) Water Sampled: 05/14/20 08:10 Received: 05/14/20 14:45												
Benzidine	ND	3.00	5.00	ug/L	1	AE03679	05/19/20 08:00	05/28/20 04:12	EPA 625.1	NBH	1551	U
3,3'-Dichlorobenzidine	ND	2.00	5.00	ug/L	1	AE03679	05/19/20 08:00	05/28/20 04:12	EPA 625.1	NBH	1551	U
<i>Surrogate: 2-Fluorobiphenyl</i>		69.3 %	27-119			AE03679	05/19/20 08:00	05/28/20 04:12	EPA 625.1	NBH	1551	
<i>Surrogate: Nitrobenzene-d5</i>		68.3 %	15-314			AE03679	05/19/20 08:00	05/28/20 04:12	EPA 625.1	NBH	1551	
<i>Surrogate: p-Terphenyl-d14</i>		75.1 %	36-141			AE03679	05/19/20 08:00	05/28/20 04:12	EPA 625.1	NBH	1551	



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Semivolatile Organic Compounds by EPA Method 625.1 SIM

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP#	Notes
EFF-001 (20E1708-01) Water Sampled: 05/14/20 08:10 Received: 05/14/20 14:45												
Acenaphthene	ND	0.20	0.20	ug/L	1	AE04182	05/20/20 08:00	05/29/20 05:58	EPA 625.1SIM	NBH	1551	U
Acenaphthylene	ND	0.20	0.20	ug/L	1	AE04182	05/20/20 08:00	05/29/20 05:58	EPA 625.1SIM	NBH	1551	U
Anthracene	ND	0.090	0.20	ug/L	1	AE04182	05/20/20 08:00	05/29/20 05:58	EPA 625.1SIM	NBH	1551	U
Benzo (a) anthracene	ND	0.20	0.20	ug/L	1	AE04182	05/20/20 08:00	05/29/20 05:58	EPA 625.1SIM	NBH	1551	U
Benzo (a) pyrene	ND	0.20	0.20	ug/L	1	AE04182	05/20/20 08:00	05/29/20 05:58	EPA 625.1SIM	NBH	1551	U
Benzo (b) fluoranthene	ND	0.20	0.20	ug/L	1	AE04182	05/20/20 08:00	05/29/20 05:58	EPA 625.1SIM	NBH	1551	U
Benzo (g,h,i) perylene	ND	0.10	0.20	ug/L	1	AE04182	05/20/20 08:00	05/29/20 05:58	EPA 625.1SIM	NBH	1551	U
Benzo (k) fluoranthene	ND	0.20	0.20	ug/L	1	AE04182	05/20/20 08:00	05/29/20 05:58	EPA 625.1SIM	NBH	1551	U
Chrysene	ND	0.20	0.20	ug/L	1	AE04182	05/20/20 08:00	05/29/20 05:58	EPA 625.1SIM	NBH	1551	U
Dibenz (a,h) anthracene	ND	0.10	0.20	ug/L	1	AE04182	05/20/20 08:00	05/29/20 05:58	EPA 625.1SIM	NBH	1551	U
Fluoranthene	ND	0.070	0.20	ug/L	1	AE04182	05/20/20 08:00	05/29/20 05:58	EPA 625.1SIM	NBH	1551	U
Fluorene	ND	0.20	0.20	ug/L	1	AE04182	05/20/20 08:00	05/29/20 05:58	EPA 625.1SIM	NBH	1551	U
Indeno (1,2,3-cd) pyrene	ND	0.030	0.20	ug/L	1	AE04182	05/20/20 08:00	05/29/20 05:58	EPA 625.1SIM	NBH	1551	U
Naphthalene	ND	0.090	0.20	ug/L	1	AE04182	05/20/20 08:00	05/29/20 05:58	EPA 625.1SIM	NBH	1551	U
Phenanthrene	ND	0.10	0.20	ug/L	1	AE04182	05/20/20 08:00	05/29/20 05:58	EPA 625.1SIM	NBH	1551	U
Pyrene	ND	0.20	0.20	ug/L	1	AE04182	05/20/20 08:00	05/29/20 05:58	EPA 625.1SIM	NBH	1551	U
Surrogate: 2-Fluorobiphenyl		83.4 %	24-119			AE04182	05/20/20 08:00	05/29/20 05:58	EPA 625.1SIM	NBH	1551	
Surrogate: Nitrobenzene-d5		70.2 %	15-314			AE04182	05/20/20 08:00	05/29/20 05:58	EPA 625.1SIM	NBH	1551	
Surrogate: p-Terphenyl-d14		85.3 %	37-139			AE04182	05/20/20 08:00	05/29/20 05:58	EPA 625.1SIM	NBH	1551	



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Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03771 - Metals Digest

Blank (AE03771-BLK1) Prepared: 05/20/20 Analyzed: 05/22/20

Calcium	ND	0.080	1.0	mg/L							U
Magnesium	ND	0.030	1.0	mg/L							U

LCS (AE03771-BS1) Prepared: 05/20/20 Analyzed: 05/22/20

Calcium	8.03	0.080	1.0	mg/L	8.00		100	85-115			
Magnesium	8.08	0.030	1.0	mg/L	8.00		101	85-115			

Duplicate (AE03771-DUP1) Source: 20E1605-01 Prepared: 05/20/20 Analyzed: 05/22/20

Calcium	3.28	0.080	1.0	mg/L		3.28			0.0779	20	
Magnesium	0.432	0.030	1.0	mg/L		0.434			0.577	20	J

Matrix Spike (AE03771-MS1) Source: 20E1605-01 Prepared: 05/20/20 Analyzed: 05/22/20

Calcium	10.6	0.080	1.0	mg/L	8.00	3.28	91.4	70-130			
Magnesium	8.01	0.030	1.0	mg/L	8.00	0.434	94.7	70-130			

Matrix Spike (AE03771-MS2) Source: 20E1619-02 Prepared: 05/20/20 Analyzed: 05/22/20

Calcium	28.7	0.080	1.0	mg/L	8.00	21.2	93.8	70-130			
Magnesium	20.6	0.030	1.0	mg/L	8.00	12.7	99.2	70-130			

Matrix Spike Dup (AE03771-MSD1) Source: 20E1605-01 Prepared: 05/20/20 Analyzed: 05/22/20

Calcium	11.0	0.080	1.0	mg/L	8.00	3.28	96.0	70-130	3.36	20	
Magnesium	7.99	0.030	1.0	mg/L	8.00	0.434	94.4	70-130	0.302	20	

Batch AE04030 - EPA 245.1 Hg Water

Blank (AE04030-BLK1) Prepared & Analyzed: 05/26/20

Mercury	ND	0.020	0.020	ug/L							U
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Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE04030 - EPA 245.1 Hg Water

LCS (AE04030-BS1)		Prepared & Analyzed: 05/26/20									
Mercury	0.252	0.020	0.020	ug/L	0.250		101	85-115			
Duplicate (AE04030-DUP1)		Source: 20E1708-01		Prepared & Analyzed: 05/26/20							
Mercury	ND	0.020	0.020	ug/L		ND				20	U
Matrix Spike (AE04030-MS1)		Source: 20E1708-01		Prepared & Analyzed: 05/26/20							
Mercury	0.257	0.020	0.020	ug/L	0.250	ND	103	70-130			
Matrix Spike (AE04030-MS2)		Source: 20E1360-03		Prepared & Analyzed: 05/26/20							
Mercury	0.263	0.020	0.020	ug/L	0.250	ND	105	70-130			
Matrix Spike Dup (AE04030-MSD1)		Source: 20E1708-01		Prepared & Analyzed: 05/26/20							
Mercury	0.263	0.020	0.020	ug/L	0.250	ND	105	70-130	2.31	20	

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Metals by EPA Method 200.8 ICP/MS - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03669 - EPA 200.8

Blank (AE03669-BLK1)

Prepared: 05/18/20 Analyzed: 05/20/20

Antimony	ND	0.20	0.50	ug/L							U
Arsenic	ND	0.40	0.50	ug/L							U
Beryllium	ND	0.050	0.10	ug/L							U
Cadmium	ND	0.060	0.10	ug/L							U
Chromium	ND	0.50	0.50	ug/L							U
Copper	ND	0.40	0.50	ug/L							U
Lead	ND	0.060	0.25	ug/L							U
Nickel	ND	0.30	0.50	ug/L							U
Selenium	ND	0.30	2.0	ug/L							U
Silver	ND	0.050	0.10	ug/L							U
Thallium	ND	0.050	0.10	ug/L							U
Zinc	ND	4.0	5.0	ug/L							U

LCS (AE03669-BS1)

Prepared: 05/18/20 Analyzed: 05/20/20

Antimony	21.2	0.20	0.50	ug/L	20.0		106	85-115			
Arsenic	21.3	0.40	0.50	ug/L	20.0		107	85-115			
Beryllium	20.6	0.050	0.10	ug/L	20.0		103	85-115			
Cadmium	21.3	0.060	0.10	ug/L	20.0		106	85-115			
Chromium	20.0	0.50	0.50	ug/L	20.0		100	85-115			
Copper	20.3	0.40	0.50	ug/L	20.0		102	85-115			
Lead	21.2	0.060	0.25	ug/L	20.0		106	85-115			
Nickel	20.4	0.30	0.50	ug/L	20.0		102	85-115			
Selenium	21.9	0.30	2.0	ug/L	20.0		110	85-115			
Silver	20.7	0.050	0.10	ug/L	20.0		104	85-115			
Thallium	21.1	0.050	0.10	ug/L	20.0		106	85-115			
Zinc	104	4.0	5.0	ug/L	100		104	85-115			

Duplicate (AE03669-DUP1)

Source: 20E1687-01

Prepared: 05/18/20 Analyzed: 05/20/20

Antimony	ND	0.80	2.0	ug/L		ND			20		R-01, U
Arsenic	ND	1.6	2.0	ug/L		ND			20		R-01, U
Beryllium	ND	0.20	0.40	ug/L		ND			20		R-01, U
Cadmium	ND	0.24	0.40	ug/L		ND			20		R-01, U
Chromium	ND	2.0	2.0	ug/L		ND			20		R-01, U
Copper	7.82	1.6	2.0	ug/L		7.69			1.73	20	
Lead	ND	0.24	1.0	ug/L		ND				20	R-01, U
Nickel	1.98	1.2	2.0	ug/L		2.12			6.93	20	R-01, J
Selenium	ND	1.2	8.0	ug/L		ND				20	R-01, U

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Metals by EPA Method 200.8 ICP/MS - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03669 - EPA 200.8

Duplicate (AE03669-DUP1)		Source: 20E1687-01			Prepared: 05/18/20 Analyzed: 05/20/20					
Silver	0.294	0.20	0.40	ug/L		ND		200	20	R-01, J
Thallium	ND	0.20	0.40	ug/L		ND			20	R-01, U
Zinc	ND	16	20	ug/L		ND			20	R-01, U

Matrix Spike (AE03669-MS1)		Source: 20E1687-01			Prepared: 05/18/20 Analyzed: 05/20/20					
Antimony	21.4	0.80	2.0	ug/L	20.0	ND	107	70-130		
Arsenic	22.3	1.6	2.0	ug/L	20.0	ND	112	70-130		
Beryllium	20.2	0.20	0.40	ug/L	20.0	ND	101	70-130		
Cadmium	20.2	0.24	0.40	ug/L	20.0	ND	101	70-130		
Chromium	19.6	2.0	2.0	ug/L	20.0	ND	98.1	70-130		
Copper	27.2	1.6	2.0	ug/L	20.0	7.69	97.4	70-130		
Lead	21.0	0.24	1.0	ug/L	20.0	ND	105	70-130		
Nickel	21.6	1.2	2.0	ug/L	20.0	2.12	97.6	70-130		
Selenium	21.2	1.2	8.0	ug/L	20.0	ND	106	70-130		
Silver	20.9	0.20	0.40	ug/L	20.0	ND	105	70-130		
Thallium	20.7	0.20	0.40	ug/L	20.0	ND	104	70-130		
Zinc	110	16	20	ug/L	100	ND	110	70-130		

Matrix Spike (AE03669-MS2)		Source: 20E1687-02			Prepared: 05/18/20 Analyzed: 05/20/20					
Antimony	21.0	0.80	2.0	ug/L	20.0	ND	105	70-130		
Arsenic	22.2	1.6	2.0	ug/L	20.0	ND	111	70-130		
Beryllium	20.0	0.20	0.40	ug/L	20.0	ND	99.9	70-130		
Cadmium	20.6	0.24	0.40	ug/L	20.0	ND	103	70-130		
Chromium	18.9	2.0	2.0	ug/L	20.0	ND	94.5	70-130		
Copper	30.9	1.6	2.0	ug/L	20.0	11.5	97.1	70-130		
Lead	20.9	0.24	1.0	ug/L	20.0	ND	104	70-130		
Nickel	21.4	1.2	2.0	ug/L	20.0	1.97	97.0	70-130		
Selenium	21.1	1.2	8.0	ug/L	20.0	ND	105	70-130		
Silver	20.4	0.20	0.40	ug/L	20.0	ND	102	70-130		
Thallium	20.9	0.20	0.40	ug/L	20.0	ND	104	70-130		
Zinc	108	16	20	ug/L	100	ND	108	70-130		

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Metals by EPA Method 200.8 ICP/MS - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03669 - EPA 200.8

Matrix Spike Dup (AE03669-MSD1)	Source: 20E1687-01			Prepared: 05/18/20 Analyzed: 05/20/20							
Antimony	21.3	0.80	2.0	ug/L	20.0	ND	106	70-130	0.389	20	
Arsenic	22.7	1.6	2.0	ug/L	20.0	ND	114	70-130	1.70	20	
Beryllium	20.0	0.20	0.40	ug/L	20.0	ND	100	70-130	1.09	20	
Cadmium	20.7	0.24	0.40	ug/L	20.0	ND	104	70-130	2.64	20	
Chromium	19.6	2.0	2.0	ug/L	20.0	ND	97.8	70-130	0.362	20	
Copper	27.1	1.6	2.0	ug/L	20.0	7.69	97.1	70-130	0.239	20	
Lead	21.3	0.24	1.0	ug/L	20.0	ND	107	70-130	1.38	20	
Nickel	21.3	1.2	2.0	ug/L	20.0	2.12	95.9	70-130	1.50	20	
Selenium	21.5	1.2	8.0	ug/L	20.0	ND	107	70-130	1.15	20	
Silver	20.6	0.20	0.40	ug/L	20.0	ND	103	70-130	1.58	20	
Thallium	21.3	0.20	0.40	ug/L	20.0	ND	106	70-130	2.71	20	
Zinc	111	16	20	ug/L	100	ND	111	70-130	0.998	20	



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Metals by APHA/EPA Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AE03713 - SM3500 Cr6 Water											
Blank (AE03713-BLK1)					Prepared: 05/18/20 Analyzed: 05/19/20						
Chromium, hexavalent	ND	0.0050	0.010	mg/L							U
LCS (AE03713-BS1)					Prepared: 05/18/20 Analyzed: 05/19/20						
Chromium, hexavalent	0.0988	0.0050	0.010	mg/L	0.100		98.8	80-120			
Duplicate (AE03713-DUP1)					Source: 20E0720-01 Prepared: 05/18/20 Analyzed: 05/19/20						
Chromium, hexavalent	ND	0.0050	0.010	mg/L		ND			20		U
Matrix Spike (AE03713-MS1)					Source: 20E0720-01 Prepared: 05/18/20 Analyzed: 05/19/20						
Chromium, hexavalent	0.105	0.0050	0.010	mg/L	0.100	ND	105	65-125			
Matrix Spike Dup (AE03713-MSD1)					Source: 20E0720-01 Prepared: 05/18/20 Analyzed: 05/19/20						
Chromium, hexavalent	0.104	0.0050	0.010	mg/L	0.100	ND	104	65-125	1.05	20	

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Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03771 - Metals Digest

Blank (AE03771-BLK1)			Prepared: 05/20/20 Analyzed: 05/26/20								
Hardness, Total	ND	1	5	mg/L							U
Duplicate (AE03771-DUP1)			Source: 20E1605-01 Prepared: 05/20/20 Analyzed: 05/26/20								
Hardness, Total	10	1	5	mg/L		10			0.0456	20	

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Miscellaneous Physical/Conventional Chemistry Parameters - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03880 - General Preparation

Blank (AE03880-BLK1)			Prepared & Analyzed: 05/21/20								
Cyanide (total)	ND	0.0020	0.0030	mg/L							U
LCS (AE03880-BS1)			Prepared & Analyzed: 05/21/20								
Cyanide (total)	0.178	0.0020	0.0030	mg/L	0.200		89.0	85-115			
Duplicate (AE03880-DUP1)			Source: 20E1605-02			Prepared & Analyzed: 05/21/20					
Cyanide (total)	ND	0.0020	0.0030	mg/L		ND				25	U
Matrix Spike (AE03880-MS1)			Source: 20E1605-02			Prepared & Analyzed: 05/21/20					
Cyanide (total)	0.171	0.0020	0.0030	mg/L	0.200	ND	85.7	85-115			
Matrix Spike (AE03880-MS2)			Source: 20E1682-01			Prepared & Analyzed: 05/21/20					
Cyanide (total)	0.203	0.0020	0.0030	mg/L	0.200	ND	101	85-115			
Matrix Spike Dup (AE03880-MSD1)			Source: 20E1605-02			Prepared & Analyzed: 05/21/20					
Cyanide (total)	0.173	0.0020	0.0030	mg/L	0.200	ND	86.4	85-115	0.744	25	



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Acrolein by EPA Method 624.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03506 - VOAs in Water GCMS

Blank (AE03506-BLK1)

Prepared & Analyzed: 05/14/20

Acrolein	ND	0.90	5.0	ug/L							U
Surrogate: Bromofluorobenzene	27.9			ug/L	25.0		112	70-130			
Surrogate: Dibromofluoromethane	26.2			ug/L	25.0		105	70-130			
Surrogate: Toluene-d8	25.7			ug/L	25.0		103	70-130			

LCS (AE03506-BS1)

Prepared & Analyzed: 05/14/20

Acrolein	53.4	0.90	5.0	ug/L	50.0		107	60-140			
Surrogate: Bromofluorobenzene	25.7			ug/L	25.0		103	70-130			
Surrogate: Dibromofluoromethane	24.8			ug/L	25.0		99.1	70-130			
Surrogate: Toluene-d8	24.3			ug/L	25.0		97.3	70-130			

LCS Dup (AE03506-BSD1)

Prepared & Analyzed: 05/14/20

Acrolein	52.7	0.90	5.0	ug/L	50.0		105	60-140	1.23	25	
Surrogate: Bromofluorobenzene	25.9			ug/L	25.0		104	70-130			
Surrogate: Dibromofluoromethane	25.0			ug/L	25.0		99.9	70-130			
Surrogate: Toluene-d8	24.7			ug/L	25.0		98.8	70-130			

Matrix Spike (AE03506-MS1)

Source: 20E1283-01

Prepared: 05/14/20 Analyzed: 05/15/20

Acrolein	7.62	0.90	5.0	ug/L	50.0	ND	15.2	40-160			QM-05
Surrogate: Bromofluorobenzene	27.2			ug/L	25.0		109	70-130			
Surrogate: Dibromofluoromethane	27.4			ug/L	25.0		109	70-130			
Surrogate: Toluene-d8	25.3			ug/L	25.0		101	70-130			

Matrix Spike Dup (AE03506-MSD1)

Source: 20E1283-01

Prepared: 05/14/20 Analyzed: 05/15/20

Acrolein	8.51	0.90	5.0	ug/L	50.0	ND	17.0	40-160	11.0	60	QM-05
Surrogate: Bromofluorobenzene	24.2			ug/L	25.0		96.9	70-130			
Surrogate: Dibromofluoromethane	24.5			ug/L	25.0		97.9	70-130			
Surrogate: Toluene-d8	23.8			ug/L	25.0		95.0	70-130			

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2-Chloroethylvinyl Ether by EPA Method 624.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03506 - VOAs in Water GCMS

Blank (AE03506-BLK1)											
										Prepared & Analyzed: 05/14/20	
2-Chloroethylvinyl ether	ND	0.70	1.0	ug/L							U
Surrogate: Bromofluorobenzene	27.9			ug/L	25.0		112	70-130			
Surrogate: Dibromofluoromethane	26.2			ug/L	25.0		105	70-130			
Surrogate: Toluene-d8	25.7			ug/L	25.0		103	70-130			

LCS (AE03506-BS1)											
										Prepared & Analyzed: 05/14/20	
2-Chloroethylvinyl ether	24.0	0.70	1.0	ug/L	25.0		96.0	3-225			
Surrogate: Bromofluorobenzene	25.7			ug/L	25.0		103	70-130			
Surrogate: Dibromofluoromethane	24.8			ug/L	25.0		99.1	70-130			
Surrogate: Toluene-d8	24.3			ug/L	25.0		97.3	70-130			

LCS Dup (AE03506-BSD1)											
										Prepared & Analyzed: 05/14/20	
2-Chloroethylvinyl ether	23.7	0.70	1.0	ug/L	25.0		94.7	3-225	1.30	30	
Surrogate: Bromofluorobenzene	25.9			ug/L	25.0		104	70-130			
Surrogate: Dibromofluoromethane	25.0			ug/L	25.0		99.9	70-130			
Surrogate: Toluene-d8	24.7			ug/L	25.0		98.8	70-130			

Matrix Spike (AE03506-MS1)											
			Source: 20E1283-01		Prepared: 05/14/20 Analyzed: 05/15/20						
2-Chloroethylvinyl ether	24.6	0.70	1.0	ug/L	25.0	ND	98.5	3-305			
Surrogate: Bromofluorobenzene	27.2			ug/L	25.0		109	70-130			
Surrogate: Dibromofluoromethane	27.4			ug/L	25.0		109	70-130			
Surrogate: Toluene-d8	25.3			ug/L	25.0		101	70-130			

Matrix Spike Dup (AE03506-MSD1)											
			Source: 20E1283-01		Prepared: 05/14/20 Analyzed: 05/15/20						
2-Chloroethylvinyl ether	23.5	0.70	1.0	ug/L	25.0	ND	93.9	3-305	4.78	71	
Surrogate: Bromofluorobenzene	24.2			ug/L	25.0		96.9	70-130			
Surrogate: Dibromofluoromethane	24.5			ug/L	25.0		97.9	70-130			
Surrogate: Toluene-d8	23.8			ug/L	25.0		95.0	70-130			

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Volatile Organic Compounds by EPA Method 624.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03902 - VOAs in Water GCMS

Blank (AE03902-BLK1)

Prepared & Analyzed: 05/20/20

Acrylonitrile	ND	0.40	2.0	ug/L							U
Benzene	ND	0.30	0.30	ug/L							U
Bromoform	ND	0.30	0.50	ug/L							U
Carbon tetrachloride	ND	0.40	0.50	ug/L							U
Chlorobenzene	ND	0.30	0.50	ug/L							U
Dibromochloromethane	ND	0.40	0.50	ug/L							U
Chloroethane	ND	0.40	0.50	ug/L							U
Chloroform	ND	0.40	0.50	ug/L							U
Bromodichloromethane	ND	0.40	0.50	ug/L							U
1,1-Dichloroethane	ND	0.30	0.50	ug/L							U
1,2-Dichloroethane	ND	0.40	0.50	ug/L							U
1,1-Dichloroethene	ND	0.30	0.50	ug/L							U
1,2-Dichloropropane	ND	0.40	0.50	ug/L							U
cis-1,3-Dichloropropene	ND	0.40	0.50	ug/L							U
trans-1,3-Dichloropropene	ND	0.40	0.50	ug/L							U
Ethylbenzene	ND	0.40	0.50	ug/L							U
Bromomethane	ND	0.40	0.50	ug/L							U
Chloromethane	ND	0.40	0.50	ug/L							U
Methylene chloride	ND	0.50	0.50	ug/L							U
1,1,2,2-Tetrachloroethane	ND	0.30	0.50	ug/L							U
Tetrachloroethene	ND	0.40	0.50	ug/L							U
Toluene	ND	0.30	0.30	ug/L							U
trans-1,2-Dichloroethene	ND	0.40	0.50	ug/L							U
1,1,1-Trichloroethane	ND	0.40	0.50	ug/L							U
1,1,2-Trichloroethane	ND	0.40	0.50	ug/L							U
Trichloroethene	ND	0.40	0.50	ug/L							U
Trihalomethanes (total)	ND	0.40	0.50	ug/L							U
Vinyl chloride	ND	0.40	0.50	ug/L							U
1,2-Dichlorobenzene	ND	0.40	0.50	ug/L							U
1,3-Dichlorobenzene	ND	0.40	0.50	ug/L							U
1,4-Dichlorobenzene	ND	0.10	0.50	ug/L							U
Surrogate: Bromofluorobenzene	31.2			ug/L	25.0		125	70-130			
Surrogate: Dibromofluoromethane	28.0			ug/L	25.0		112	70-130			
Surrogate: Toluene-d8	29.9			ug/L	25.0		119	70-130			

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Volatile Organic Compounds by EPA Method 624.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03902 - VOAs in Water GCMS

LCS (AE03902-BS1)

Prepared & Analyzed: 05/20/20

Acrylonitrile	20.3	0.40	2.0	ug/L	20.0		102	60-140			
Benzene	20.1	0.30	0.30	ug/L	20.0		100	65-135			
Bromoform	21.2	0.30	0.50	ug/L	20.0		106	70-130			
Carbon tetrachloride	19.9	0.40	0.50	ug/L	20.0		99.4	70-130			
Chlorobenzene	21.1	0.30	0.50	ug/L	20.0		106	65-135			
Dibromochloromethane	22.3	0.40	0.50	ug/L	20.0		112	70-135			
Chloroethane	17.1	0.40	0.50	ug/L	20.0		85.4	40-160			
Chloroform	20.1	0.40	0.50	ug/L	20.0		100	70-135			
Bromodichloromethane	19.9	0.40	0.50	ug/L	20.0		99.6	65-135			
1,1-Dichloroethane	19.9	0.30	0.50	ug/L	20.0		99.5	70-130			
1,2-Dichloroethane	18.4	0.40	0.50	ug/L	20.0		91.8	70-130			
1,1-Dichloroethene	18.9	0.30	0.50	ug/L	20.0		94.3	50-150			
1,2-Dichloropropane	18.9	0.40	0.50	ug/L	20.0		94.5	35-165			
cis-1,3-Dichloropropene	20.8	0.40	0.50	ug/L	20.0		104	25-175			
trans-1,3-Dichloropropene	22.3	0.40	0.50	ug/L	20.0		112	50-150			
Ethylbenzene	21.9	0.40	0.50	ug/L	20.0		110	60-140			
Bromomethane	18.7	0.40	0.50	ug/L	20.0		93.6	15-185			
Chloromethane	18.0	0.40	0.50	ug/L	20.0		90.0	2-205			
Methylene chloride	20.2	0.50	0.50	ug/L	20.0		101	60-140			
1,1,2,2-Tetrachloroethane	21.2	0.30	0.50	ug/L	20.0		106	60-140			
Tetrachloroethene	22.2	0.40	0.50	ug/L	20.0		111	70-130			
Toluene	21.8	0.30	0.30	ug/L	20.0		109	70-130			
trans-1,2-Dichloroethene	19.8	0.40	0.50	ug/L	20.0		99.1	70-130			
1,1,1-Trichloroethane	20.2	0.40	0.50	ug/L	20.0		101	70-130			
1,1,2-Trichloroethane	22.2	0.40	0.50	ug/L	20.0		111	70-130			
Trichloroethene	20.2	0.40	0.50	ug/L	20.0		101	65-135			
Vinyl chloride	18.1	0.40	0.50	ug/L	20.0		90.4	5-195			
1,2-Dichlorobenzene	20.7	0.40	0.50	ug/L	20.0		104	65-135			
1,3-Dichlorobenzene	21.2	0.40	0.50	ug/L	20.0		106	70-130			
1,4-Dichlorobenzene	19.4	0.10	0.50	ug/L	20.0		97.2	65-135			
Surrogate: Bromofluorobenzene	30.0			ug/L	25.0		120	70-130			
Surrogate: Dibromofluoromethane	27.1			ug/L	25.0		108	70-130			
Surrogate: Toluene-d8	28.7			ug/L	25.0		115	70-130			

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Volatile Organic Compounds by EPA Method 624.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03902 - VOAs in Water GCMS

LCS Dup (AE03902-BSD1)

Prepared & Analyzed: 05/20/20

Acrylonitrile	21.6	0.40	2.0	ug/L	20.0		108	60-140	5.82	25	
Benzene	20.4	0.30	0.30	ug/L	20.0		102	65-135	1.48	25	
Bromoform	21.0	0.30	0.50	ug/L	20.0		105	70-130	0.711	25	
Carbon tetrachloride	19.8	0.40	0.50	ug/L	20.0		98.8	70-130	0.555	25	
Chlorobenzene	21.4	0.30	0.50	ug/L	20.0		107	65-135	1.41	25	
Dibromochloromethane	22.3	0.40	0.50	ug/L	20.0		111	70-135	0.134	25	
Chloroethane	18.6	0.40	0.50	ug/L	20.0		93.0	40-160	8.63	25	
Chloroform	20.1	0.40	0.50	ug/L	20.0		101	70-135	0.149	25	
Bromodichloromethane	19.2	0.40	0.50	ug/L	20.0		95.9	65-135	3.79	25	
1,1-Dichloroethane	20.1	0.30	0.50	ug/L	20.0		100	70-130	0.801	25	
1,2-Dichloroethane	18.0	0.40	0.50	ug/L	20.0		89.8	70-130	2.20	25	
1,1-Dichloroethene	19.4	0.30	0.50	ug/L	20.0		97.0	50-150	2.82	25	
1,2-Dichloropropane	20.3	0.40	0.50	ug/L	20.0		101	35-165	7.09	25	
cis-1,3-Dichloropropene	21.1	0.40	0.50	ug/L	20.0		105	25-175	1.43	25	
trans-1,3-Dichloropropene	21.9	0.40	0.50	ug/L	20.0		110	50-150	1.85	25	
Ethylbenzene	22.1	0.40	0.50	ug/L	20.0		110	60-140	0.591	25	
Bromomethane	20.2	0.40	0.50	ug/L	20.0		101	15-185	7.45	25	
Chloromethane	19.5	0.40	0.50	ug/L	20.0		97.6	2-205	8.15	25	
Methylene chloride	20.0	0.50	0.50	ug/L	20.0		99.8	60-140	1.34	25	
1,1,2,2-Tetrachloroethane	20.6	0.30	0.50	ug/L	20.0		103	60-140	2.97	25	
Tetrachloroethene	21.4	0.40	0.50	ug/L	20.0		107	70-130	3.80	25	
Toluene	22.0	0.30	0.30	ug/L	20.0		110	70-130	0.684	25	
trans-1,2-Dichloroethene	20.1	0.40	0.50	ug/L	20.0		101	70-130	1.55	25	
1,1,1-Trichloroethane	20.5	0.40	0.50	ug/L	20.0		102	70-130	1.43	25	
1,1,2-Trichloroethane	22.2	0.40	0.50	ug/L	20.0		111	70-130	0.0901	25	
Trichloroethene	20.0	0.40	0.50	ug/L	20.0		100	65-135	0.597	25	
Vinyl chloride	19.5	0.40	0.50	ug/L	20.0		97.4	5-195	7.40	25	
1,2-Dichlorobenzene	20.5	0.40	0.50	ug/L	20.0		102	65-135	1.12	25	
1,3-Dichlorobenzene	21.4	0.40	0.50	ug/L	20.0		107	70-130	1.08	25	
1,4-Dichlorobenzene	19.9	0.10	0.50	ug/L	20.0		99.4	65-135	2.34	25	
Surrogate: Bromofluorobenzene	29.8			ug/L	25.0		119	70-130			
Surrogate: Dibromofluoromethane	26.6			ug/L	25.0		107	70-130			
Surrogate: Toluene-d8	28.9			ug/L	25.0		116	70-130			

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Volatile Organic Compounds by EPA Method 624.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03902 - VOAs in Water GCMS

Matrix Spike (AE03902-MS1)	Source: 20E1356-01			Prepared: 05/20/20 Analyzed: 05/21/20						
Acrylonitrile	16.2	0.40	2.0	ug/L	20.0	ND	81.2	40-160		
Benzene	21.5	0.30	0.30	ug/L	20.0	ND	107	37-151		
Bromoform	21.7	0.30	0.50	ug/L	20.0	ND	109	45-169		
Carbon tetrachloride	22.2	0.40	0.50	ug/L	20.0	ND	111	70-140		
Chlorobenzene	23.2	0.30	0.50	ug/L	20.0	ND	116	37-160		
Dibromochloromethane	24.3	0.40	0.50	ug/L	20.0	ND	122	53-149		
Chloroethane	ND	0.40	0.50	ug/L	20.0	ND		14-230		QM-05, U
Chloroform	39.0	0.40	0.50	ug/L	20.0	20.2	93.5	51-138		
Bromodichloromethane	21.6	0.40	0.50	ug/L	20.0	0.760	104	35-155		
1,1-Dichloroethane	19.8	0.30	0.50	ug/L	20.0	ND	99.1	59-155		
1,2-Dichloroethane	17.6	0.40	0.50	ug/L	20.0	ND	88.2	49-155		
1,1-Dichloroethene	21.0	0.30	0.50	ug/L	20.0	ND	105	2-234		
1,2-Dichloropropane	21.4	0.40	0.50	ug/L	20.0	ND	107	2-210		
cis-1,3-Dichloropropene	22.0	0.40	0.50	ug/L	20.0	ND	110	2-227		
trans-1,3-Dichloropropene	24.4	0.40	0.50	ug/L	20.0	ND	122	17-183		
Ethylbenzene	23.8	0.40	0.50	ug/L	20.0	ND	119	37-162		
Bromomethane	16.1	0.40	0.50	ug/L	20.0	ND	80.4	2-242		
Chloromethane	ND	0.40	0.50	ug/L	20.0	ND		2-273		QM-05, U
Methylene chloride	18.1	0.50	0.50	ug/L	20.0	ND	90.4	2-221		
1,1,2,2-Tetrachloroethane	19.4	0.30	0.50	ug/L	20.0	ND	97.0	46-157		
Tetrachloroethene	25.2	0.40	0.50	ug/L	20.0	ND	126	64-148		
Toluene	27.7	0.30	0.30	ug/L	20.0	2.62	126	47-150		
trans-1,2-Dichloroethene	20.2	0.40	0.50	ug/L	20.0	ND	101	54-156		
1,1,1-Trichloroethane	22.3	0.40	0.50	ug/L	20.0	ND	112	52-162		
1,1,2-Trichloroethane	22.9	0.40	0.50	ug/L	20.0	ND	114	52-150		
Trichloroethene	22.2	0.40	0.50	ug/L	20.0	ND	111	70-157		
Vinyl chloride	15.1	0.40	0.50	ug/L	20.0	ND	75.6	2-251		
1,2-Dichlorobenzene	21.3	0.40	0.50	ug/L	20.0	ND	106	18-190		
1,3-Dichlorobenzene	21.6	0.40	0.50	ug/L	20.0	ND	108	59-156		
1,4-Dichlorobenzene	20.8	0.10	0.50	ug/L	20.0	ND	104	18-190		
Surrogate: Bromofluorobenzene	29.4			ug/L	25.0		117	70-130		
Surrogate: Dibromofluoromethane	25.4			ug/L	25.0		102	70-130		
Surrogate: Toluene-d8	29.2			ug/L	25.0		117	70-130		

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Allen Roseberry Project: CTR Project Number: CTR Waste Water	Reported: 06/04/20 15:49
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Volatile Organic Compounds by EPA Method 624.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03902 - VOAs in Water GCMS

Matrix Spike Dup (AE03902-MSD1)	Source: 20E1356-01			Prepared: 05/20/20 Analyzed: 05/21/20							
Acrylonitrile	15.0	0.40	2.0	ug/L	20.0	ND	74.8	40-160	8.14	60	
Benzene	21.4	0.30	0.30	ug/L	20.0	ND	107	37-151	0.186	61	
Bromoform	22.6	0.30	0.50	ug/L	20.0	ND	113	45-169	3.88	42	
Carbon tetrachloride	22.7	0.40	0.50	ug/L	20.0	ND	113	70-140	1.92	41	
Chlorobenzene	23.6	0.30	0.50	ug/L	20.0	ND	118	37-160	1.45	53	
Dibromochloromethane	24.7	0.40	0.50	ug/L	20.0	ND	124	53-149	1.75	50	
Chloroethane	ND	0.40	0.50	ug/L	20.0	ND		14-230		78	QM-05, U
Chloroform	37.5	0.40	0.50	ug/L	20.0	20.2	86.2	51-138	3.85	54	
Bromodichloromethane	21.6	0.40	0.50	ug/L	20.0	0.760	104	35-155	0.0926	56	
1,1-Dichloroethane	19.1	0.30	0.50	ug/L	20.0	ND	95.3	59-155	3.91	40	
1,2-Dichloroethane	16.9	0.40	0.50	ug/L	20.0	ND	84.3	49-155	4.52	49	
1,1-Dichloroethene	20.3	0.30	0.50	ug/L	20.0	ND	101	2-234	3.49	32	
1,2-Dichloropropane	20.7	0.40	0.50	ug/L	20.0	ND	104	2-210	2.90	55	
cis-1,3-Dichloropropene	21.4	0.40	0.50	ug/L	20.0	ND	107	2-227	3.23	58	
trans-1,3-Dichloropropene	23.2	0.40	0.50	ug/L	20.0	ND	116	17-183	5.00	86	
Ethylbenzene	24.2	0.40	0.50	ug/L	20.0	ND	121	37-162	1.46	63	
Bromomethane	14.3	0.40	0.50	ug/L	20.0	ND	71.6	2-242	11.5	61	
Chloromethane	ND	0.40	0.50	ug/L	20.0	ND		2-273		60	QM-05, U
Methylene chloride	17.1	0.50	0.50	ug/L	20.0	ND	85.4	2-221	5.74	28	
1,1,2,2-Tetrachloroethane	19.3	0.30	0.50	ug/L	20.0	ND	96.4	46-157	0.724	61	
Tetrachloroethene	25.6	0.40	0.50	ug/L	20.0	ND	128	64-148	1.61	39	
Toluene	27.7	0.30	0.30	ug/L	20.0	2.62	126	47-150	0.00	41	
trans-1,2-Dichloroethene	20.0	0.40	0.50	ug/L	20.0	ND	100	54-156	1.24	45	
1,1,1-Trichloroethane	22.1	0.40	0.50	ug/L	20.0	ND	110	52-162	1.13	36	
1,1,2-Trichloroethane	23.7	0.40	0.50	ug/L	20.0	ND	119	52-150	3.52	45	
Trichloroethene	22.6	0.40	0.50	ug/L	20.0	ND	113	70-157	1.83	48	
Vinyl chloride	13.1	0.40	0.50	ug/L	20.0	ND	65.6	2-251	14.1	66	
1,2-Dichlorobenzene	21.2	0.40	0.50	ug/L	20.0	ND	106	18-190	0.613	57	
1,3-Dichlorobenzene	21.8	0.40	0.50	ug/L	20.0	ND	109	59-156	0.877	43	
1,4-Dichlorobenzene	20.7	0.10	0.50	ug/L	20.0	ND	104	18-190	0.482	57	
Surrogate: Bromofluorobenzene	29.1			ug/L	25.0		117	70-130			
Surrogate: Dibromofluoromethane	24.1			ug/L	25.0		96.6	70-130			
Surrogate: Toluene-d8	29.2			ug/L	25.0		117	70-130			

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Organochlorine Pesticides and PCBs by EPA Method 608.3 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03786 - SVOAs in Water GC

Blank (AE03786-BLK1)

Prepared: 05/20/20 Analyzed: 06/01/20

Aldrin	ND	0.0020	0.0050	ug/L							U
alpha-BHC	ND	0.0040	0.010	ug/L							U
beta-BHC	ND	0.0040	0.0050	ug/L							U
gamma-BHC (Lindane)	ND	0.0040	0.010	ug/L							U
delta-BHC	ND	0.0020	0.0050	ug/L							U
Chlordane (tech)	ND	0.010	0.050	ug/L							U
4,4'-DDT	ND	0.0030	0.010	ug/L							U
4,4'-DDE	ND	0.0040	0.020	ug/L							U
4,4'-DDD	ND	0.0050	0.020	ug/L							U
Dieldrin	ND	0.0050	0.010	ug/L							U
Endosulfan I	ND	0.0040	0.010	ug/L							U
Endosulfan II	ND	0.0050	0.010	ug/L							U
Endosulfan sulfate	ND	0.0030	0.050	ug/L							U
Endrin	ND	0.0080	0.010	ug/L							U
Endrin aldehyde	ND	0.0040	0.010	ug/L							U
Heptachlor	ND	0.0050	0.010	ug/L							U
Heptachlor epoxide	ND	0.0090	0.010	ug/L							U
PCB-1016	ND	0.080	0.50	ug/L							U
PCB-1221	ND	0.20	0.50	ug/L							U
PCB-1232	ND	0.10	0.50	ug/L							U
PCB-1242	ND	0.040	0.50	ug/L							U
PCB-1248	ND	0.060	0.50	ug/L							U
PCB-1254	ND	0.040	0.50	ug/L							U
PCB-1260	ND	0.040	0.50	ug/L							U
Toxaphene	ND	0.20	0.50	ug/L							U
Surrogate: Dibutylchlorodate	0.461			ug/L	0.554		83.3	10-147			

LCS (AE03786-BS1)

Prepared: 05/20/20 Analyzed: 06/01/20

Aldrin	0.205	0.0020	0.0050	ug/L	0.240		85.3	42-140			
alpha-BHC	0.207	0.0040	0.010	ug/L	0.240		86.1	37-140			
beta-BHC	0.224	0.0040	0.0050	ug/L	0.240		93.2	17-147			
gamma-BHC (Lindane)	0.218	0.0040	0.010	ug/L	0.240		90.7	32-140			
delta-BHC	0.224	0.0020	0.0050	ug/L	0.240		93.4	19-140			
4,4'-DDT	0.200	0.0030	0.010	ug/L	0.240		83.5	31-141			
4,4'-DDE	0.209	0.0040	0.020	ug/L	0.240		87.3	30-145			
4,4'-DDD	0.202	0.0050	0.020	ug/L	0.240		84.0	25-160			

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Organochlorine Pesticides and PCBs by EPA Method 608.3 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03786 - SVOAs in Water GC

LCS (AE03786-BS1)		Prepared: 05/20/20 Analyzed: 06/01/20									
Dieldrin	0.221	0.0050	0.010	ug/L	0.240		91.9	36-146			
Endosulfan I	0.221	0.0040	0.010	ug/L	0.240		92.1	45-153			
Endosulfan II	0.217	0.0050	0.010	ug/L	0.240		90.2	0-202			
Endosulfan sulfate	0.222	0.0030	0.050	ug/L	0.240		92.7	26-144			
Endrin	0.240	0.0080	0.010	ug/L	0.240		100	30-147			
Endrin aldehyde	0.213	0.0040	0.010	ug/L	0.240		88.7	45-140			
Heptachlor	0.208	0.0050	0.010	ug/L	0.240		86.8	34-140			
Heptachlor epoxide	0.226	0.0090	0.010	ug/L	0.240		94.3	37-142			
Surrogate: Dibutylchloroendate	0.436			ug/L	0.554		78.7	10-147			

LCS (AE03786-BS2)		Prepared: 05/20/20 Analyzed: 06/01/20									
Chlordane (tech)	4.52	0.010	0.050	ug/L	4.80		94.2	45-140			

Matrix Spike (AE03786-MS1)		Source: 20E1708-01		Prepared: 05/20/20 Analyzed: 06/01/20								
Aldrin	0.206	0.0020	0.0050	ug/L	0.240	ND	85.8	42-140				
alpha-BHC	0.211	0.0040	0.010	ug/L	0.240	ND	88.1	37-140				
beta-BHC	0.231	0.0040	0.0050	ug/L	0.240	ND	96.1	17-147				
gamma-BHC (Lindane)	0.209	0.0040	0.010	ug/L	0.240	ND	87.1	32-140				
delta-BHC	0.241	0.0020	0.0050	ug/L	0.240	ND	101	19-140				
4,4'-DDT	0.234	0.0030	0.010	ug/L	0.240	ND	97.7	25-160				
4,4'-DDE	0.224	0.0040	0.020	ug/L	0.240	ND	93.2	30-145				
4,4'-DDD	0.206	0.0050	0.020	ug/L	0.240	ND	85.9	31-141				
Dieldrin	0.221	0.0050	0.010	ug/L	0.240	ND	92.1	36-146				
Endosulfan I	0.229	0.0040	0.010	ug/L	0.240	ND	95.5	45-153				
Endosulfan II	0.253	0.0050	0.010	ug/L	0.240	ND	105	2-202				
Endosulfan sulfate	0.258	0.0030	0.050	ug/L	0.240	ND	107	26-144				
Endrin	0.265	0.0080	0.010	ug/L	0.240	ND	111	30-147				
Endrin aldehyde	0.236	0.0040	0.010	ug/L	0.240	ND	98.3	45-140				
Heptachlor	0.209	0.0050	0.010	ug/L	0.240	ND	87.0	34-140				
Heptachlor epoxide	0.232	0.0090	0.010	ug/L	0.240	ND	96.6	37-142				
Surrogate: Dibutylchloroendate	0.480			ug/L	0.554		86.7	10-147				

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Organochlorine Pesticides and PCBs by EPA Method 608.3 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03786 - SVOAs in Water GC

Matrix Spike Dup (AE03786-MSD1)	Source: 20E1708-01			Prepared: 05/20/20 Analyzed: 06/01/20						
Aldrin	0.225	0.0020	0.0050	ug/L	0.240	ND	93.7	42-140	8.78	35
alpha-BHC	0.218	0.0040	0.010	ug/L	0.240	ND	90.6	37-140	2.82	36
beta-BHC	0.218	0.0040	0.0050	ug/L	0.240	ND	90.7	17-147	5.78	44
gamma-BHC (Lindane)	0.215	0.0040	0.010	ug/L	0.240	ND	89.6	32-140	2.78	39
delta-BHC	0.248	0.0020	0.0050	ug/L	0.240	ND	103	19-140	2.60	52
4,4'-DDT	0.247	0.0030	0.010	ug/L	0.240	ND	103	25-160	5.29	42
4,4'-DDE	0.233	0.0040	0.020	ug/L	0.240	ND	97.2	30-145	4.21	35
4,4'-DDD	0.218	0.0050	0.020	ug/L	0.240	ND	91.0	31-141	5.79	39
Dieldrin	0.217	0.0050	0.010	ug/L	0.240	ND	90.5	36-146	1.71	49
Endosulfan I	0.235	0.0040	0.010	ug/L	0.240	ND	97.8	45-153	2.39	28
Endosulfan II	0.259	0.0050	0.010	ug/L	0.240	ND	108	2-202	2.49	53
Endosulfan sulfate	0.246	0.0030	0.050	ug/L	0.240	ND	102	26-144	4.82	38
Endrin	0.271	0.0080	0.010	ug/L	0.240	ND	113	30-147	2.18	48
Endrin aldehyde	0.248	0.0040	0.010	ug/L	0.240	ND	103	45-140	4.80	35
Heptachlor	0.226	0.0050	0.010	ug/L	0.240	ND	94.4	34-140	8.12	43
Heptachlor epoxide	0.237	0.0090	0.010	ug/L	0.240	ND	98.6	37-142	2.08	36
Surrogate: Dibutylchloroendate	0.500			ug/L	0.554		90.3	10-147		

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Semivolatile Organic Compounds by EPA Method 625.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03785 - SVOAs in Water GCMS

Blank (AE03785-BLK1)

Prepared: 05/20/20 Analyzed: 05/27/20

2-Chlorophenol	ND	0.70	5.0	ug/L							U
2,4-Dichlorophenol	ND	0.70	5.0	ug/L							U
2,4-Dimethylphenol	ND	1.0	2.0	ug/L							U
4,6-Dinitro-2-methylphenol	ND	3.0	5.0	ug/L							U
2,4-Dinitrophenol	ND	5.0	5.0	ug/L							U
2-Nitrophenol	ND	0.90	10	ug/L							U
4-Nitrophenol	ND	3.0	10	ug/L							U
4-Chloro-3-methylphenol	ND	1.0	1.0	ug/L							U
Pentachlorophenol	ND	4.0	5.0	ug/L							U
2-Methylphenol (o-cresol)	ND	0.60	5.0	ug/L							U
Phenol	ND	0.50	1.0	ug/L							U
2,4,6-Trichlorophenol	ND	0.70	10	ug/L							U
Bis(2-chloroethoxy)methane	ND	0.90	5.0	ug/L							U
Bis(2-chloroethyl)ether	ND	0.90	1.0	ug/L							U
Bis(2-chloroisopropyl)ether	ND	1.0	2.0	ug/L							U
Bis(2-ethylhexyl)phthalate	ND	3.0	5.0	ug/L							U
4-Bromophenyl phenyl ether	ND	1.0	5.0	ug/L							U
Butyl benzyl phthalate	ND	0.60	10	ug/L							U
2-Chloronaphthalene	ND	0.60	10	ug/L							U
4-Chlorophenyl phenyl ether	ND	0.90	5.0	ug/L							U
1,3-Dichlorobenzene	ND	0.60	1.0	ug/L							U
1,4-Dichlorobenzene	ND	0.60	1.0	ug/L							U
1,2-Dichlorobenzene	ND	0.60	2.0	ug/L							U
Diethyl phthalate	0.330	0.30	2.0	ug/L							J
Dimethyl phthalate	ND	0.80	2.0	ug/L							U
Di-n-butyl phthalate	2.47	0.90	10	ug/L							J
2,4-Dinitrotoluene	ND	0.80	5.0	ug/L							U
2,6-Dinitrotoluene	ND	0.80	5.0	ug/L							U
Di-n-octyl phthalate	ND	0.60	10	ug/L							U
1,2-Diphenylhydrazine	ND	0.60	1.0	ug/L							U
Hexachlorobenzene	ND	0.90	1.0	ug/L							U
Hexachlorobutadiene	ND	0.80	1.0	ug/L							U
Hexachlorocyclopentadiene	ND	4.0	5.0	ug/L							U
Hexachloroethane	ND	0.60	1.0	ug/L							U
Isophorone	ND	0.30	1.0	ug/L							U
Nitrobenzene	ND	0.90	1.0	ug/L							U

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Semivolatile Organic Compounds by EPA Method 625.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03785 - SVOAs in Water GCMS

Blank (AE03785-BLK1)

Prepared: 05/20/20 Analyzed: 05/27/20

N-Nitrosodimethylamine	ND	0.30	5.0	ug/L							U
N-Nitrosodi-n-propylamine	ND	0.80	5.0	ug/L							U
N-Nitrosodiphenylamine	ND	1.0	1.0	ug/L							U
1,2,4-Trichlorobenzene	ND	0.60	5.0	ug/L							U
Surrogate: 2-Fluorobiphenyl	37.4			ug/L	40.0		93.5	27-119			
Surrogate: 2-Fluorophenol	15.8			ug/L	40.0		39.6	7-85			
Surrogate: Nitrobenzene-d5	31.3			ug/L	40.0		78.4	15-314			
Surrogate: p-Terphenyl-d14	37.1			ug/L	40.0		92.8	36-141			
Surrogate: Phenol-d6	12.1			ug/L	40.0		30.2	1-65			
Surrogate: 2,4,6-Tribromophenol	34.0			ug/L	40.0		85.0	4-168			

LCS (AE03785-BS1)

Prepared: 05/20/20 Analyzed: 05/27/20

2-Chlorophenol	25.2	0.70	5.0	ug/L	40.0		62.9	36-120			
2,4-Dichlorophenol	28.3	0.70	5.0	ug/L	40.0		70.7	53-122			
2,4-Dimethylphenol	35.5	1.0	2.0	ug/L	50.0		70.9	42-120			
4,6-Dinitro-2-methylphenol	28.6	3.0	5.0	ug/L	40.0		71.6	53-130			
2,4-Dinitrophenol	15.4	5.0	5.0	ug/L	40.0		38.5	10-173			
2-Nitrophenol	29.2	0.90	10	ug/L	40.0		73.1	45-167			
4-Nitrophenol	8.70	3.0	10	ug/L	40.0		21.8	13-129			J
4-Chloro-3-methylphenol	28.8	1.0	1.0	ug/L	40.0		72.1	41-128			
Pentachlorophenol	25.4	4.0	5.0	ug/L	40.0		63.6	38-152			
2-Methylphenol (o-cresol)	26.5	0.60	5.0	ug/L	40.0		66.2	36-102			
Phenol	12.7	0.50	1.0	ug/L	40.0		31.7	17-120			
2,4,6-Trichlorophenol	24.9	0.70	10	ug/L	40.0		62.2	52-129			
Bis(2-chloroethoxy)methane	33.6	0.90	5.0	ug/L	40.0		84.0	49-165			
Bis(2-chloroethyl)ether	31.3	0.90	1.0	ug/L	40.0		78.2	43-126			
Bis(2-chloroisopropyl)ether	30.4	1.0	2.0	ug/L	40.0		76.0	63-139			
Bis(2-ethylhexyl)phthalate	33.9	3.0	5.0	ug/L	40.0		84.8	29-137			
4-Bromophenyl phenyl ether	36.2	1.0	5.0	ug/L	40.0		90.4	65-120			
Butyl benzyl phthalate	25.7	0.60	10	ug/L	40.0		64.2	2-140			
2-Chloronaphthalene	31.2	0.60	10	ug/L	40.0		77.9	65-120			
4-Chlorophenyl phenyl ether	31.2	0.90	5.0	ug/L	40.0		77.9	38-145			
1,4-Dichlorobenzene	27.9	0.60	1.0	ug/L	40.0		69.7	32-91			
1,3-Dichlorobenzene	27.3	0.60	1.0	ug/L	40.0		68.2	31-92			
1,2-Dichlorobenzene	27.2	0.60	2.0	ug/L	40.0		68.1	33-93			
Diethyl phthalate	27.6	0.30	2.0	ug/L	40.0		68.9	2-120			
Dimethyl phthalate	18.1	0.80	2.0	ug/L	40.0		45.2	2-120			

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Allen Roseberry Project: CTR Project Number: CTR Waste Water	Reported: 06/04/20 15:49
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Semivolatile Organic Compounds by EPA Method 625.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03785 - SVOAs in Water GCMS

LCS (AE03785-BS1)		Prepared: 05/20/20 Analyzed: 05/27/20									
Di-n-butyl phthalate	38.7	0.90	10	ug/L	40.0		96.8	8-120			
2,4-Dinitrotoluene	29.0	0.80	5.0	ug/L	40.0		72.4	48-127			
2,6-Dinitrotoluene	30.7	0.80	5.0	ug/L	40.0		76.7	68-137			
Di-n-octyl phthalate	23.3	0.60	10	ug/L	40.0		58.3	19-132			
1,2-Diphenylhydrazine	35.2	0.60	1.0	ug/L	40.0		88.1	52-115			
Hexachlorobenzene	35.7	0.90	1.0	ug/L	40.0		89.3	8-142			
Hexachlorobutadiene	29.9	0.80	1.0	ug/L	40.0		74.7	38-120			
Hexachlorocyclopentadiene	19.6	4.0	5.0	ug/L	40.0		48.9	16-93			
Hexachloroethane	26.7	0.60	1.0	ug/L	40.0		66.8	55-120			
Isophorone	32.1	0.30	1.0	ug/L	40.0		80.2	47-180			
Nitrobenzene	32.3	0.90	1.0	ug/L	40.0		80.8	54-158			
N-Nitrosodimethylamine	22.9	0.30	5.0	ug/L	40.0		57.2	19-81			
N-Nitrosodi-n-propylamine	31.4	0.80	5.0	ug/L	40.0		78.5	14-198			
N-Nitrosodiphenylamine	33.4	1.0	1.0	ug/L	40.0		83.6	54-111			
1,2,4-Trichlorobenzene	29.6	0.60	5.0	ug/L	40.0		74.0	57-130			
Surrogate: 2-Fluorobiphenyl	36.8			ug/L	40.0		91.9	27-119			
Surrogate: 2-Fluorophenol	15.7			ug/L	40.0		39.2	7-85			
Surrogate: Nitrobenzene-d5	36.6			ug/L	40.0		91.4	15-314			
Surrogate: p-Terphenyl-d14	41.6			ug/L	40.0		104	36-141			
Surrogate: Phenol-d6	12.7			ug/L	40.0		31.7	1-65			
Surrogate: 2,4,6-Tribromophenol	34.3			ug/L	40.0		85.8	4-168			

Matrix Spike (AE03785-MS1)		Source: 20E1699-01		Prepared: 05/20/20 Analyzed: 05/27/20							
2-Chlorophenol	31.5	0.70	5.0	ug/L	40.0	ND	78.7	23-134			
2,4-Dichlorophenol	36.0	0.70	5.0	ug/L	40.0	ND	90.0	39-135			
2,4-Dimethylphenol	41.0	1.0	2.0	ug/L	50.0	ND	82.0	32-120			
4,6-Dinitro-2-methylphenol	30.0	3.0	5.0	ug/L	40.0	ND	75.1	7-181			
2,4-Dinitrophenol	23.5	5.0	5.0	ug/L	40.0	ND	58.8	10-191			
2-Nitrophenol	40.2	0.90	10	ug/L	40.0	ND	100	29-182			
4-Nitrophenol	16.9	3.0	10	ug/L	40.0	ND	42.2	7-132			
4-Chloro-3-methylphenol	34.2	1.0	1.0	ug/L	40.0	ND	85.6	22-147			
Pentachlorophenol	24.6	4.0	5.0	ug/L	40.0	ND	61.4	14-176			
2-Methylphenol (o-cresol)	30.3	0.60	5.0	ug/L	40.0	ND	75.8	9-124			
Phenol	15.5	0.50	1.0	ug/L	40.0	ND	38.7	5-120			
2,4,6-Trichlorophenol	39.6	0.70	10	ug/L	40.0	ND	98.9	37-144			
Bis(2-chloroethoxy)methane	32.7	0.90	5.0	ug/L	40.0	ND	81.7	33-184			
Bis(2-chloroethyl)ether	30.6	0.90	1.0	ug/L	40.0	ND	76.4	12-158			

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Semivolatile Organic Compounds by EPA Method 625.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03785 - SVOAs in Water GCMS

Matrix Spike (AE03785-MS1)	Source: 20E1699-01			Prepared: 05/20/20 Analyzed: 05/27/20						
Bis(2-chloroisopropyl)ether	28.8	1.0	2.0	ug/L	40.0	ND	72.1	36-166		
Bis(2-ethylhexyl)phthalate	24.9	3.0	5.0	ug/L	40.0	ND	62.2	8-158		
4-Bromophenyl phenyl ether	33.7	1.0	5.0	ug/L	40.0	ND	84.3	53-127		
Butyl benzyl phthalate	27.9	0.60	10	ug/L	40.0	ND	69.8	2-152		
2-Chloronaphthalene	29.9	0.60	10	ug/L	40.0	ND	74.8	60-120		
4-Chlorophenyl phenyl ether	31.3	0.90	5.0	ug/L	40.0	ND	78.2	25-158		
1,2-Dichlorobenzene	26.1	0.60	2.0	ug/L	40.0	ND	65.3	7-104		
1,3-Dichlorobenzene	25.8	0.60	1.0	ug/L	40.0	ND	64.4	1-106		
1,4-Dichlorobenzene	25.8	0.60	1.0	ug/L	40.0	ND	64.4	3-105		
Diethyl phthalate	35.2	0.30	2.0	ug/L	40.0	0.460	86.8	2-120		
Dimethyl phthalate	25.7	0.80	2.0	ug/L	40.0	ND	64.3	2-120		
Di-n-butyl phthalate	42.2	0.90	10	ug/L	40.0	2.80	98.5	1-120		
2,4-Dinitrotoluene	37.4	0.80	5.0	ug/L	40.0	ND	93.6	39-139		
2,6-Dinitrotoluene	37.8	0.80	5.0	ug/L	40.0	ND	94.4	50-158		
Di-n-octyl phthalate	24.8	0.60	10	ug/L	40.0	ND	61.9	4-146		
1,2-Diphenylhydrazine	36.0	0.60	1.0	ug/L	40.0	ND	90.0	39-116		
Hexachlorobenzene	29.8	0.90	1.0	ug/L	40.0	ND	74.4	2-152		
Hexachlorobutadiene	26.6	0.80	1.0	ug/L	40.0	ND	66.6	24-120		
Hexachlorocyclopentadiene	20.2	4.0	5.0	ug/L	40.0	ND	50.6	10-93		
Hexachloroethane	24.6	0.60	1.0	ug/L	40.0	ND	61.6	40-120		
Isophorone	33.0	0.30	1.0	ug/L	40.0	ND	82.4	21-196		
Nitrobenzene	31.2	0.90	1.0	ug/L	40.0	ND	78.1	35-180		
N-Nitrosodimethylamine	22.9	0.30	5.0	ug/L	40.0	ND	57.3	10-84		
N-Nitrosodi-n-propylamine	32.4	0.80	5.0	ug/L	40.0	ND	81.0	2-230		
N-Nitrosodiphenylamine	36.7	1.0	1.0	ug/L	40.0	ND	91.8	40-115		
1,2,4-Trichlorobenzene	26.3	0.60	5.0	ug/L	40.0	ND	65.7	44-142		
Surrogate: 2-Fluorobiphenyl	31.5			ug/L	40.0		78.7	27-119		
Surrogate: 2-Fluorophenol	20.5			ug/L	40.0		51.4	7-85		
Surrogate: Nitrobenzene-d5	30.9			ug/L	40.0		77.3	15-314		
Surrogate: p-Terphenyl-d14	25.0			ug/L	40.0		62.6	36-141		
Surrogate: Phenol-d6	15.3			ug/L	40.0		38.2	1-65		
Surrogate: 2,4,6-Tribromophenol	43.7			ug/L	40.0		109	4-168		

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Allen Roseberry Project: CTR Project Number: CTR Waste Water	Reported: 06/04/20 15:49
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Semivolatile Organic Compounds by EPA Method 625.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03785 - SVOAs in Water GCMS

Matrix Spike Dup (AE03785-MSD1)	Source: 20E1699-01			Prepared: 05/20/20 Analyzed: 05/27/20							
2-Chlorophenol	29.6	0.70	5.0	ug/L	40.0	ND	74.0	23-134	6.22	61	
2,4-Dichlorophenol	37.3	0.70	5.0	ug/L	40.0	ND	93.2	39-135	3.41	50	
2,4-Dimethylphenol	40.1	1.0	2.0	ug/L	50.0	ND	80.2	32-120	2.15	58	
4,6-Dinitro-2-methylphenol	33.8	3.0	5.0	ug/L	40.0	ND	84.4	7-181	11.7	203	
2,4-Dinitrophenol	27.4	5.0	5.0	ug/L	40.0	ND	68.5	10-191	15.2	132	
2-Nitrophenol	42.0	0.90	10	ug/L	40.0	ND	105	29-182	4.38	55	
4-Nitrophenol	18.0	3.0	10	ug/L	40.0	ND	45.0	7-132	6.42	131	
4-Chloro-3-methylphenol	34.9	1.0	1.0	ug/L	40.0	ND	87.2	22-147	1.85	73	
2-Methylphenol (o-cresol)	28.4	0.60	5.0	ug/L	40.0	ND	70.9	9-124	6.61	28	
Pentachlorophenol	31.5	4.0	5.0	ug/L	40.0	ND	78.7	14-176	24.7	86	
Phenol	14.8	0.50	1.0	ug/L	40.0	ND	37.0	5-120	4.56	64	
2,4,6-Trichlorophenol	41.1	0.70	10	ug/L	40.0	ND	103	37-144	3.79	58	
Bis(2-chloroethoxy)methane	35.0	0.90	5.0	ug/L	40.0	ND	87.6	33-184	6.91	54	
Bis(2-chloroethyl)ether	29.9	0.90	1.0	ug/L	40.0	ND	74.8	12-158	2.08	108	
Bis(2-chloroisopropyl)ether	28.9	1.0	2.0	ug/L	40.0	ND	72.3	36-166	0.277	76	
Bis(2-ethylhexyl)phthalate	22.1	3.0	5.0	ug/L	40.0	ND	55.3	8-158	11.7	82	
4-Bromophenyl phenyl ether	34.6	1.0	5.0	ug/L	40.0	ND	86.5	53-127	2.61	43	
Butyl benzyl phthalate	30.1	0.60	10	ug/L	40.0	ND	75.3	2-152	7.48	60	
2-Chloronaphthalene	31.7	0.60	10	ug/L	40.0	ND	79.2	60-120	5.75	24	
4-Chlorophenyl phenyl ether	33.2	0.90	5.0	ug/L	40.0	ND	83.0	25-158	5.86	61	
1,4-Dichlorobenzene	25.1	0.60	1.0	ug/L	40.0	ND	62.8	3-105	2.60	42	
1,3-Dichlorobenzene	24.8	0.60	1.0	ug/L	40.0	ND	62.1	1-106	3.60	41	
1,2-Dichlorobenzene	25.7	0.60	2.0	ug/L	40.0	ND	64.2	7-104	1.66	41	
Diethyl phthalate	36.5	0.30	2.0	ug/L	40.0	0.460	90.2	2-120	3.77	100	
Dimethyl phthalate	24.5	0.80	2.0	ug/L	40.0	ND	61.3	2-120	4.78	183	
Di-n-butyl phthalate	45.4	0.90	10	ug/L	40.0	2.80	107	1-120	7.39	47	
2,4-Dinitrotoluene	42.7	0.80	5.0	ug/L	40.0	ND	107	39-139	13.1	42	
2,6-Dinitrotoluene	40.9	0.80	5.0	ug/L	40.0	ND	102	50-158	8.03	48	
Di-n-octyl phthalate	27.2	0.60	10	ug/L	40.0	ND	68.0	4-146	9.28	69	
1,2-Diphenylhydrazine	35.8	0.60	1.0	ug/L	40.0	ND	89.6	39-116	0.473	25	
Hexachlorobenzene	30.6	0.90	1.0	ug/L	40.0	ND	76.6	2-152	2.91	55	
Hexachlorobutadiene	27.1	0.80	1.0	ug/L	40.0	ND	67.7	24-120	1.60	62	
Hexachlorocyclopentadiene	18.7	4.0	5.0	ug/L	40.0	ND	46.8	10-93	7.75	55	
Hexachloroethane	23.7	0.60	1.0	ug/L	40.0	ND	59.3	40-120	3.89	52	
Isophorone	35.4	0.30	1.0	ug/L	40.0	ND	88.4	21-196	6.94	93	
Nitrobenzene	33.2	0.90	1.0	ug/L	40.0	ND	83.1	35-180	6.17	62	

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Semivolatile Organic Compounds by EPA Method 625.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03785 - SVOAs in Water GCMS

Matrix Spike Dup (AE03785-MSD1)	Source: 20E1699-01		Prepared: 05/20/20		Analyzed: 05/27/20					
N-Nitrosodimethylamine	20.0	0.30	5.0	ug/L	40.0	ND	50.0	10-84	13.6	59
N-Nitrosodi-n-propylamine	33.1	0.80	5.0	ug/L	40.0	ND	82.8	2-230	2.23	87
N-Nitrosodiphenylamine	37.0	1.0	1.0	ug/L	40.0	ND	92.6	40-115	0.949	25
1,2,4-Trichlorobenzene	27.9	0.60	5.0	ug/L	40.0	ND	69.7	44-142	5.95	50
Surrogate: 2-Fluorobiphenyl	33.1			ug/L	40.0		82.7	27-119		
Surrogate: 2-Fluorophenol	19.2			ug/L	40.0		48.0	7-85		
Surrogate: Nitrobenzene-d5	32.8			ug/L	40.0		82.0	15-314		
Surrogate: p-Terphenyl-d14	27.5			ug/L	40.0		68.7	36-141		
Surrogate: Phenol-d6	15.0			ug/L	40.0		37.4	1-65		
Surrogate: 2,4,6-Tribromophenol	43.0			ug/L	40.0		108	4-168		

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Benzidines by EPA Method 625.1 - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE03679 - SVOAs in Water GCMS

Blank (AE03679-BLK1)		Prepared: 05/19/20 Analyzed: 05/27/20									
Benzidine	ND	3.00	5.00	ug/L							U
3,3'-Dichlorobenzidine	ND	2.00	5.00	ug/L							U
Surrogate: 2-Fluorobiphenyl	28.9			ug/L	40.0		72.3	27-119			
Surrogate: Nitrobenzene-d5	23.2			ug/L	40.0		58.0	15-314			
Surrogate: p-Terphenyl-d14	30.5			ug/L	40.0		76.2	36-141			

LCS (AE03679-BS1)		Prepared: 05/19/20 Analyzed: 05/27/20									
Benzidine	12.5	3.00	5.00	ug/L	99.6		12.5	12-151			
3,3'-Dichlorobenzidine	66.6	2.00	5.00	ug/L	99.6		66.8	8-120			
Surrogate: 2-Fluorobiphenyl	22.0			ug/L	40.0		55.0	27-119			
Surrogate: Nitrobenzene-d5	32.6			ug/L	40.0		81.6	15-314			
Surrogate: p-Terphenyl-d14	37.2			ug/L	40.0		93.1	36-141			

Matrix Spike (AE03679-MS1)		Source: 20E1708-01		Prepared: 05/19/20 Analyzed: 05/27/20								
Benzidine	11.5	3.00	5.00	ug/L	99.6	ND	11.6	4-262				
3,3'-Dichlorobenzidine	64.8	2.00	5.00	ug/L	99.6	ND	65.0	4-262				
Surrogate: 2-Fluorobiphenyl	27.8			ug/L	40.0		69.6	27-119				
Surrogate: Nitrobenzene-d5	31.9			ug/L	40.0		79.7	15-314				
Surrogate: p-Terphenyl-d14	21.8			ug/L	40.0		54.5	36-141				

Matrix Spike Dup (AE03679-MSD1)		Source: 20E1708-01		Prepared: 05/19/20 Analyzed: 05/27/20								
Benzidine	11.4	3.00	5.00	ug/L	99.6	ND	11.5	4-262	0.785	108		
3,3'-Dichlorobenzidine	57.1	2.00	5.00	ug/L	99.6	ND	57.3	4-262	12.6	108		
Surrogate: 2-Fluorobiphenyl	21.0			ug/L	40.0		52.6	27-119				
Surrogate: Nitrobenzene-d5	25.1			ug/L	40.0		62.7	15-314				
Surrogate: p-Terphenyl-d14	18.1			ug/L	40.0		45.3	36-141				

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 Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Allen Roseberry Project: CTR Project Number: CTR Waste Water	Reported: 06/04/20 15:49
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Semivolatile Organic Compounds by EPA Method 625.1 SIM - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE04182 - SVOAs in Water GCMS

Blank (AE04182-BLK1)

Prepared: 05/20/20 Analyzed: 05/29/20

Acenaphthene	ND	0.20	0.20	ug/L							U
Acenaphthylene	ND	0.20	0.20	ug/L							U
Anthracene	ND	0.090	0.20	ug/L							U
Benzo (a) anthracene	ND	0.20	0.20	ug/L							U
Benzo (a) pyrene	ND	0.20	0.20	ug/L							U
Benzo (b) fluoranthene	ND	0.20	0.20	ug/L							U
Benzo (g,h,i) perylene	ND	0.10	0.20	ug/L							U
Benzo (k) fluoranthene	ND	0.20	0.20	ug/L							U
Chrysene	ND	0.20	0.20	ug/L							U
Dibenz (a,h) anthracene	ND	0.10	0.20	ug/L							U
Fluoranthene	ND	0.070	0.20	ug/L							U
Fluorene	ND	0.20	0.20	ug/L							U
Indeno (1,2,3-cd) pyrene	ND	0.030	0.20	ug/L							U
Naphthalene	ND	0.090	0.20	ug/L							U
Phenanthrene	ND	0.10	0.20	ug/L							U
Pyrene	ND	0.20	0.20	ug/L							U
Surrogate: 2-Fluorobiphenyl	40.0			ug/L	40.0		99.9	24-119			
Surrogate: Nitrobenzene-d5	23.0			ug/L	40.0		57.4	15-314			
Surrogate: p-Terphenyl-d14	39.3			ug/L	40.0		98.3	37-139			

LCS (AE04182-BS1)

Prepared: 05/20/20 Analyzed: 05/29/20

Acenaphthene	37.6	0.20	0.20	ug/L	40.0		94.1	60-132			
Acenaphthylene	37.9	0.20	0.20	ug/L	40.0		94.7	54-126			
Anthracene	41.3	0.090	0.20	ug/L	40.0		103	43-120			
Benzo (a) anthracene	40.0	0.20	0.20	ug/L	40.0		100	42-133			
Benzo (a) pyrene	42.4	0.20	0.20	ug/L	40.0		106	32-148			
Benzo (b) fluoranthene	40.7	0.20	0.20	ug/L	40.0		102	42-140			
Benzo (g,h,i) perylene	41.4	0.10	0.20	ug/L	40.0		103	2-195			
Benzo (k) fluoranthene	38.1	0.20	0.20	ug/L	40.0		95.4	25-146			
Chrysene	37.8	0.20	0.20	ug/L	40.0		94.6	44-140			
Dibenz (a,h) anthracene	41.3	0.10	0.20	ug/L	40.0		103	2-200			
Fluoranthene	44.7	0.070	0.20	ug/L	40.0		112	43-121			
Fluorene	38.6	0.20	0.20	ug/L	40.0		96.4	70-120			
Indeno (1,2,3-cd) pyrene	41.2	0.030	0.20	ug/L	40.0		103	2-151			
Naphthalene	34.2	0.090	0.20	ug/L	40.0		85.6	36-120			
Phenanthrene	34.4	0.10	0.20	ug/L	40.0		86.1	65-120			

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Allen Roseberry Project: CTR Project Number: CTR Waste Water	Reported: 06/04/20 15:49
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Semivolatile Organic Compounds by EPA Method 625.1 SIM - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE04182 - SVOAs in Water GCMS

LCS (AE04182-BS1)

Prepared: 05/20/20 Analyzed: 05/29/20

Pyrene	39.8	0.20	0.20	ug/L	40.0		99.5	70-120			
Surrogate: 2-Fluorobiphenyl	46.0			ug/L	40.0		115	24-119			
Surrogate: Nitrobenzene-d5	43.6			ug/L	40.0		109	15-314			
Surrogate: p-Terphenyl-d14	45.7			ug/L	40.0		114	37-139			

Matrix Spike (AE04182-MS1)

Source: 20E1699-01

Prepared: 05/20/20 Analyzed: 05/29/20

Acenaphthene	37.8	0.20	0.20	ug/L	40.0	ND	94.5	47-145			
Acenaphthylene	37.9	0.20	0.20	ug/L	40.0	ND	94.7	33-145			
Anthracene	40.4	0.090	0.20	ug/L	40.0	ND	101	27-133			
Benzo (a) anthracene	28.6	0.20	0.20	ug/L	40.0	ND	71.4	33-143			
Benzo (a) pyrene	27.6	0.20	0.20	ug/L	40.0	ND	69.0	17-163			
Benzo (b) fluoranthene	25.8	0.20	0.20	ug/L	40.0	ND	64.4	24-159			
Benzo (g,h,i) perylene	25.4	0.10	0.20	ug/L	40.0	ND	63.5	2-219			
Benzo (k) fluoranthene	26.5	0.20	0.20	ug/L	40.0	ND	66.2	11-162			
Chrysene	30.4	0.20	0.20	ug/L	40.0	ND	76.1	17-168			
Dibenz (a,h) anthracene	24.2	0.10	0.20	ug/L	40.0	ND	60.4	2-227			
Fluoranthene	44.3	0.070	0.20	ug/L	40.0	ND	111	26-137			
Fluorene	39.8	0.20	0.20	ug/L	40.0	ND	99.5	59-121			
Indeno (1,2,3-cd) pyrene	24.5	0.030	0.20	ug/L	40.0	ND	61.4	2-171			
Naphthalene	26.0	0.090	0.20	ug/L	40.0	ND	65.0	21-133			
Phenanthrene	33.2	0.10	0.20	ug/L	40.0	ND	83.1	54-120			
Pyrene	36.7	0.20	0.20	ug/L	40.0	ND	91.8	52-120			
Surrogate: 2-Fluorobiphenyl	39.9			ug/L	40.0		99.7	24-119			
Surrogate: Nitrobenzene-d5	27.8			ug/L	40.0		69.5	15-314			
Surrogate: p-Terphenyl-d14	26.6			ug/L	40.0		66.4	37-139			

Matrix Spike Dup (AE04182-MSD1)

Source: 20E1699-01

Prepared: 05/20/20 Analyzed: 05/29/20

Acenaphthene	39.3	0.20	0.20	ug/L	40.0	ND	98.2	47-145	3.84	48	
Acenaphthylene	36.5	0.20	0.20	ug/L	40.0	ND	91.2	33-145	3.79	74	
Anthracene	40.5	0.090	0.20	ug/L	40.0	ND	101	27-133	0.445	66	
Benzo (a) anthracene	32.1	0.20	0.20	ug/L	40.0	ND	80.3	33-143	11.8	53	
Benzo (a) pyrene	29.6	0.20	0.20	ug/L	40.0	ND	74.1	17-163	7.09	72	
Benzo (b) fluoranthene	27.6	0.20	0.20	ug/L	40.0	ND	68.9	24-159	6.75	71	
Benzo (g,h,i) perylene	25.4	0.10	0.20	ug/L	40.0	ND	63.4	2-219	0.158	97	
Benzo (k) fluoranthene	27.1	0.20	0.20	ug/L	40.0	ND	67.7	11-162	2.24	63	
Chrysene	31.5	0.20	0.20	ug/L	40.0	ND	78.8	17-168	3.42	87	
Dibenz (a,h) anthracene	24.9	0.10	0.20	ug/L	40.0	ND	62.2	2-227	2.86	126	

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Healdsburg, City of - WW 340 Foreman Lane Healdsburg CA, 95448-0578	Project Manager: Allen Roseberry Project: CTR Project Number: CTR Waste Water	Reported: 06/04/20 15:49
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Semivolatile Organic Compounds by EPA Method 625.1 SIM - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AE04182 - SVOAs in Water GCMS

Matrix Spike Dup (AE04182-MSD1)	Source: 20E1699-01			Prepared: 05/20/20 Analyzed: 05/29/20						
Fluoranthene	41.6	0.070	0.20	ug/L	40.0	ND	104	26-137	6.33	66
Fluorene	40.0	0.20	0.20	ug/L	40.0	ND	100	59-121	0.576	38
Indeno (1,2,3-cd) pyrene	25.2	0.030	0.20	ug/L	40.0	ND	63.0	2-171	2.65	99
Naphthalene	32.2	0.090	0.20	ug/L	40.0	ND	80.4	21-133	21.1	65
Phenanthrene	30.3	0.10	0.20	ug/L	40.0	ND	75.6	54-120	9.39	39
Pyrene	44.8	0.20	0.20	ug/L	40.0	ND	112	52-120	19.8	49
Surrogate: 2-Fluorobiphenyl	39.4			ug/L	40.0		98.4	24-119		
Surrogate: Nitrobenzene-d5	39.2			ug/L	40.0		98.0	15-314		
Surrogate: p-Terphenyl-d14	31.9			ug/L	40.0		79.6	37-139		



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Healdsburg, City of - WW
340 Foreman Lane
Healdsburg CA, 95448-0578

Project Manager: Allen Roseberry
Project: CTR
Project Number: CTR Waste Water

Reported:
06/04/20 15:49

Notes and Definitions

- J Detected but below the Reporting Limit; therefore, result is an estimated concentration, detected but not quantified (DNQ).
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
- R-01 The Reporting Limit for this analyte has been raised to account for matrix interference.
- U Analyte included in analysis, but not detected at or above MDL.
- ND Analyte NOT DETECTED at or above the reporting limit
- dry Sample results reported on a dry weight basis
- MDL Method detection limit
- Rec Recovery
- RPD Relative Percent Difference



CERES Analytical Laboratory, Inc.

4919 Windplay Dr. Suite 1, El Dorado Hills, CA 95762



May 28, 2020

Ceres ID: 13608

Alpha Analytical Laboratories, Inc.
208 Mason St.
Ukiah, CA 95482

The following report contains the results for the one aqueous sample received on May 21, 2020. This sample was analyzed for 2,3,7,8-TCDD by EPA method 1613B. Routine turn-around time was provided for this work.

This work was authorized under Alpha Analytical Laboratories' project # 20E1708.

Continuing Calibration Verification (CCV) Requirements

All associated calibration verification standard(s) (CCV) met the acceptance criteria.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,

James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

<u>Ceres Sample ID:</u>	<u>Sample ID</u>	<u>Date Received</u>	<u>Collection Date & Time</u>
13608-001	EFF-001	5/21/2020	5/14/2020 8:10
	20E1708-01		

Section II: Data Summary



EPA Method 1613B

Quality Assurance Sample Method Blank	QC Batch #: 2187 Matrix: Aqueous Sample Size: 1.000 L	Date Received: NA Date Extracted: 5/26/2020 ZB-5MS Analysis: 5/28/2020
Project ID: 20E1708		

Analyte	Conc. (pg/L)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	DL= 4.62	0.772	5.00		13C-2378-TCDD	84.4	31-137	
					CRS			
					37Cl4-2378-TCDD	79.5	35-197	
DL - Signifies Non-Detect (ND) at sample specific detection limit. EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure. (a) - Lower control limit - Upper control limit								

Analyst: JMH

Reviewed by: BS



EPA Method 1613B

Quality Assurance Sample Ongoing Precision and Recovery Project ID: 20E1708	QC Batch #: 2187 Matrix: Aqueous Sample Size: 1.000 L	Date Received: NA Date Extracted: 5/26/2020 ZB-5MS Analysis: 5/28/2020
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Analyte	Conc. (ng/mL)	Limits (a)	Labeled Standards	% Rec.	Limits (a)
2,3,7,8-TCDD	7.86	7.3-14.6	13C-2378-TCDD	86.5	25-141
			CRS		
			37Cl4-2378-TCDD	85.6	37-158
(a) Limits based on method acceptance criteria.					

Analyst: JMH

Reviewed by: BS



EPA Method 1613B

Client Sample ID: EFF-001 20E1708-01		
Project ID: 20E1708	Ceres Sample ID: 13608-001	Date Received: 5/21/2020
Date Collected: 5/14/2020	QC Batch #: 2187	Date Extracted: 5/26/2020
Time Collected: 8:10	Matrix: Aqueous	ZB-5MS Analysis: 5/28/2020
	Sample Size: 1.016 L	

Analyte	Conc. (pg/L)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	DL= 2.22	0.772	4.92		13C-2378-TCDD	74.8	31-137	
					CRS			
					37Cl4-2378-TCDD	79.1	42-164	
DL - Signifies Non-Detect (ND) at sample specific detection limit. EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure. (a) - Lower control limit - Upper control limit								

Analyst: JMH

Reviewed by: BS

Section VI: Sample Tracking

SUBCONTRACT ORDER
Alpha Analytical Laboratories, Inc.
20E1708

*2 file checks
MCS*

SENDING LABORATORY:

Alpha Analytical Laboratories, Inc.
208 Mason St.
Ukiah, CA 95482
Phone: (707)468-0401
Fax: (707)468-5267
Project Manager: Sheri L. Speaks

RECEIVING LABORATORY:

Ceres Labs
4919 Windplay Dr.
El Dorado Hills, CA 95762
Phone : (916) 932-5011
Fax: (916) 932-5017
Terms: Net 30

Please return

Analysis	Due	Expires	Comments
20E1708-01 EFF-001 [Water] Sampled 05/14/20 08:10			

Dioxin 2378 TCDD Aq 1613 05/29/20 12:00 05/14/21 08:10

Containers Supplied:

1L Amber- Unpres. (N) 1L Amber- Unpres. (O)

Report to State

System Name: _____ Employed by: _____

User ID: _____ Sampler: _____

System Number: _____

+ MDLS & RLS

[Signature] _____ *5-18-20* _____ *Delia Heath* _____ *5/21/20* _____
Released By Date Received By Date

Released By Date Received By Date

Sample Receipt Check List Logged by: Y00ATN (initials)

Ceres ID: <u>13608</u>	Date/Time: <u>5/21/20 10:15</u>
Client Project ID: <u>20E1708</u>	Received Temp: <u>14.3</u> °C Acceptable: Y/ <input checked="" type="radio"/> N
Chain of Custody Relinquished by signed?	<input checked="" type="radio"/> Y / N
Chain of Custody Received by signed?	<input checked="" type="radio"/> Y / N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	<input checked="" type="radio"/> NA
Unlabeled / Illegible Samples	Y/ <input checked="" type="radio"/> N
Proper Containers:	<input checked="" type="radio"/> Y / N
Preservation Acceptable (Chemical or Temperature)?	<input checked="" type="radio"/> Y / N
Drinking Water, Sodium Thiosulfate present? Residual Cl?	Y / N / <input checked="" type="radio"/> NA Y / <input checked="" type="radio"/> N
Aqueous sample pH: <u>7</u>	
List COC discrepancies:	<u>Y00ATN 5/24/20</u>
List Damaged Samples:	<u>Y00ATN 5/21/20</u>

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery

ATTACHMENT 2 – Ordinance 763 (Sewer Use Ordinance)

CITY OF HEALDSBURG

ORDINANCE NO. 763

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF HEALDSBURG AMENDING THE CITY CODE BY ADDING A NEW CHAPTER 15, SECTIONS 15-60 THROUGH 15-111 BEING ARTICLE IV, "SEWER SYSTEM"

The City Council of the City of Healdsburg does ordain as follows:

SECTION 1. Chapter 15, "Public Utilities", Article I In General, Article II Electrical Service and Article III Water System, repealed by Ordinance No. 721 are re-adopted as they existed at time of adoption of said ordinance.

SECTION 2. Article IV, Sewer System, is added thereto to read as follows:

ARTICLE IV SEWER SYSTEM

Section 15-60. Intent and Purpose

It is the purpose of this ordinance:

1. To prevent waste discharges from adversely affecting the sewer system, the operation of the treatment facilities, the quality of effluent from the treatment plant, or the quality of the receiving water through regulation and control of the quality and quantity of waste discharged to the City's sewer system by any discharger.
2. To comply with all State and Federal regulations in connection with the discharge of sewage waste.
3. To provide an equitable distribution of the City's cost for acquisition, construction, reconstruction, maintenance, and operation of the City's system.
4. To provide for the adoption, by resolution, of regulations to further promote and effect the above enumerated purposes.

Section 15-61. Prohibited Substances

No person shall discharge any substance causing the City not to comply with any State or Federal regulation of sewage discharge, nor any substance not amenable to treatment in the sewage system, or any substance which might tend to harm or adversely affect the sewer system, or any substance or combination of substances prohibited in regulations adopted under this ordinance by the City Council.

Section 15-62. Abatement of Nonconforming Wastewater Discharge

1. Any wastewater discharge not in compliance with the provisions of this ordinance or regulations adopted hereunder is deemed to be a nuisance.
2. In the event the City Engineer determines that any discharge into the sewer system presents an imminent hazard to the health and safety of the users of the system or to the maintenance and operation of the system itself, he shall order such discharge terminated. If such discharge is not terminated immediately, the City Engineer shall take such steps as are necessary to shut off the flow of said discharge into the sewer system including disconnection of the user, if necessary.

3. All other violations of the provisions of this ordinance or of any regulations adopted pursuant thereto shall be nuisances within the meaning of Chapter 32 of the Municipal Code and shall be abated accordingly.

4. All costs of abatement shall be borne by the user.

Section 15-63. Damage to System

As a condition of the use of the City's sewer system, a discharger who discharges or causes the discharge of prohibited substances which cause damage to the City's treatment processes, or any other damages resulting in costs to the City shall be liable to the City for all damage occasioned thereby, regardless of faults.

Section 15-64. Sewer Service Required

No person owning or occupying or having under his control, any premises situated or being within one hundred fifty (150) feet of a public sewer in the City, shall construct or maintain or suffer to be or remain upon such premises in the City, any privy, vault or cesspool or any sink, drain, or similar contrivance, except as in the manner provided in this ordinance.

Section 15-65. Sewer Charges and Regulations

1. Persons making connections to sewers and using the same shall pay such fees and abide by regulations not inconsistent with this ordinance and Chapter 17A Healdsburg City Code or as the City Council shall, from time to time, adopt by Resolution.

2. No person shall construct a building sewer, or a lateral sewer, or make any connection with any public sewer without first obtaining a written permit from the City and paying all fees and complying with all requirements and conditions required by regulations to be adopted under this ordinance by the City Council.

3. Any person discharging anything except domestic sewage into the sewer system at the time this ordinance takes effect shall submit an application to the Office of the City Engineer within two months after this ordinance takes effect and shall not discharge nondomestic sewage waste into the sewer system after nine (9) months from the date of adoption of this ordinance without a permit therefore.

Section 15-66. Premises not to be Offensive

No person shall suffer or permit any premises belonging to or occupied by him or under his control, located in the City, or any cellar, vault, privy, cesspool, sewer or private drain thereon or therein, to become nauseous, foul or offensive or prejudicial to the public health or public comfort.

Section 15-67. Separation of Storm Drainage and Sewage

No person, firm or corporation shall allow or permit any sewage of any kind from his premises to enter any of the storm drains of the City, whether by surface drainage, pipes, or other means, nor shall storm drainage, that is, run off from precipitation be permitted to enter into the sewage system.

Section 15-68. Supervision of Sewer Connections

All connections with any public sewer in the City of Healdsburg, and all repairs thereof, including excavating and laying pipe from sewer to property line, shall be made or caused to be made under the direct supervision of the City, but at the cost and expense of person, firm or corporation desiring the same to be done.

Section 15-69. Excavation in Street

Whenever it is necessary to excavate from property line to sewers in public streets in the City, such excavation shall be made by the person, firm or corporation making application and all work shall be installed by an appropriately licensed contractor.

Section 15-70. Permit for Excavation and Installation

When any excavation for a sewer connection will be located in the streets of the City, the applicant for such permit shall apply to the City Engineer for an encroachment permit, and pay such fees as established from time to time by the city council.

Section 15-71. Adoption of Regulations

The City Council shall adopt, by Resolution, such regulations from time to time as it shall deem fit setting forth construction requirements for sewers, materials for sewers, charges for connection, sewer use charges, materials prohibited to be discharged, regulation of sewage system, discharge and construction permits and the like.

Section 15-72. Sewer charges -- Rate schedule

The city council shall fix the rates to be charged for sewer service by the city, by resolution, and in so doing, shall distinguish the different classes of service made available and fix rates appropriate to each class of service. Rates shall be fixed and revised from time to time with the objective that the City Sewer System shall be operated on a sound economic basis as a revenue-producing enterprise.

Section 15-73. Same -- Collection procedure

The charges fixed by section 15-72 for any premises shall be collected with the charges and rates for electricity and water services furnished by the city to such premises. The charges fixed by section 15-72 shall be billed upon the same bill as is prepared for charges for electricity service and water services and shall be due and payable monthly at the same time that such charges for electricity and water services are due and payable. The total amount due shall be paid as a unit and all of the provisions of this chapter pertaining to the collection of charges for electricity service and water service shall apply to the collection of any such total amounts.

Section 15-74. Same -- Discontinuance of service for failure to pay

In the event that any person shall fail to pay any charge provided by section 15-72 when the same becomes due, the city may, in addition to any other remedies it has, cut off any of such services and facilities referred to in this article, and shall not resume the same until all delinquent charges together with any charges necessitated by resumption of such services and facilities have been fully paid.

Section 15-75. Same -- to be lien upon premises

Each charge or rental levied pursuant to this article on property within the city shall be a lien upon the corresponding lot, land or premises served by a connection to the city sewer system.

Section 15-76. Lateral Permits

No person shall construct a building sewer, lateral sewer or make a connection with any public sewer without first obtaining a permit from the City and paying all fees and connection charges required under Chapter 17A Healdsburg Municipal Code.

Section 15-77. Public Sewer Construction Permits

No person shall uncover, use, alter, disturb, construct, extend, or connect to any public sewer without first obtaining a written permit from the City and paying all fees and connection charges and furnishing security and evidence of insurance as may be required in accordance with Chapter 17A of the Healdsburg Municipal Code. The provision of this section requiring permit shall not apply to contractors constructing sewers under contracts with the City.

Section 15-78. Plans, Profiles and Specifications Required

The application for a Public Sewer Construction Permit shall be accompanied by complete plans, profiles and specifications, complying with all applicable ordinances, rules and regulations of the City, prepared by a Registered Civil Engineer in the State of California showing all details of the proposed work based on an accurate survey of the ground. The application, together with the plan, profiles and specifications shall be examined by the City Engineer who shall approve them as filed or require them to be modified as he deems necessary for proper installation. After approval by the City Engineer, a permit shall be issued upon the payment of all connection charges, fees and furnishing bonds as required by the City. The permit shall prescribe such terms and conditions as the City Engineer finds necessary in the public interest.

Section 15-79. Public Sewer Construction

Prior to the issuance of a permit for public sewer construction, the applicant shall enter into a development agreement in accordance with Section 17A 5(c) of Chapter 17A of the Healdsburg Municipal Code.

Section 15-80. Subdivisions

The requirements of these regulations shall be fully complied with before any final subdivision map shall be approved by the Council. The final subdivision map shall provide for the dedication of easements or rights of way in which public sewer lines are to be constructed.

Section 15-81. Compliance with Permit

After approval of the application, evidenced by the issuance of a permit, no change shall be made in the location of the sewer, the grade, materials, or other details from those described in the permit or as shown on the plans and specifications for which the permit was issued except with written permission from the City Engineer.

Section 15-82. Time Limit on Permits

If work under a permit be not commenced within six (6) months from the date of issuance of if after partial completion, the work be discontinued for a period of one (1) year, the permit shall thereupon become void and no further work shall be done until a new permit shall have been secured. New connection, engineering and inspection fees shall be paid upon the issuance of said new permit.

Section 15-83. Agreement

The applicant's signature on an application for any permit shall constitute an agreement to comply with such permit and all of the provisions, terms and requirements of this and other ordinances, rules and regulations of the City, and with the plans and specifications he had filed with his applications, if any, together with such corrections or modifications as may be made or permitted by the City, if any. Such agreement shall be binding upon the applicant and may be altered only by the City upon the written request for the alteration from the applicant.

Section 15-84. Design and Construction Standards

Minimum standards for the design and construction of sewers shall be in accordance with the design standards of the City, as adopted by resolution of the city council. The City Engineer may permit modifications or may require higher standards where unusual conditions are encountered.

Section 15-85. Compliance with Local Regulations

Any person constructing a sewer within a street shall comply with all state, county or City laws, ordinances, rules and regulations pertaining to the cutting of pavement opening, barricading, lighting and protecting of trenches, backfilling and repaving thereof and shall obtain all permits and pay all fees required by the department having jurisdiction prior to the issuance of a permit by the City.

Section 15-86. Easements or Rights of Way

In the event an easement is required for the extension of the public sewer, the applicant shall procure and have accepted by the Council a proper easement or grant of right of way sufficient to allow the laying, maintenance, and replacement of such extension or connection. Said width shall be determined by the City Engineer.

Section 15-87. Grade Stakes

Grade and line stakes shall be set by a Registered Civil Engineer in the State of California prior to the start of work on any public sewer construction. The contractor shall be responsible for accurately transferring grades to grade bars and sewer invert.

Section 15-88. Persons Authorized to Perform Work

Only properly licensed contractors shall be authorized to perform the work of public sewer construction. All terms and conditions of the permit issued by the City to the applicant shall be binding on the contractor. The requirements of this section shall apply to lateral sewers installed concurrently with public sewer construction.

Section 15-89. Protection of Excavation

The applicant shall maintain such barriers, lights and signs as are necessary to give warning to the public at all times that a sewer is under construction and of each dangerous condition to be encountered as a result thereof. He shall also likewise protect the public in the use of the sidewalk against any such conditions in connection with the construction of the sewer, streets, sidewalks, parkways, and other property damaged in the course of the work shall be reconstructed in a manner satisfactory to the City.

Section 15-90. As-Built Drawings

"As-built" drawings showing the actual location of all mains, structures, "Tees" and laterals shall be filed with the City before final acceptance of the work.

Section 15-91. Completion of Sewer Required

Before any acceptance of any sewer line by the City and prior to the admission of any sewage into the system, the sewer line shall be tested and shall be complete in full compliance with all requirements of the City Standards and to the satisfaction of the City Engineer.

Section 15-92. All Work to be Inspected

All lateral and main sewer construction work shall be inspected by the City Engineer to insure compliance with all requirements of the City. No lateral sewer shall be covered at any point until it has been inspected and passed for acceptance. No sewer shall be connected to the public sewage collection system until the work covered by the permit has been completed, inspected and approved by the City Engineer.

Section 15-93. Notification

It shall be the duty of the person doing the work authorized by permit to notify the office of the City Engineer that said work is ready for inspection. Such notification shall be given not less than twenty-four (24) hours before the work is to be inspected. It shall be the duty of the person doing the work to make sure that the work will stand the tests required by the City before giving the above notification.

Section 15-94. Condemned Work

When any work has been inspected and the work condemned and no certification of satisfactory completion given, a written notice to that effect shall be given instructing the owner of the premises, or the agent of such owner, to repair or replace the sewer or other work authorized by the permit, in accordance with the ordinance, rules and regulations of the City.

Section 15-95. All Costs Paid by Owner

All costs and expenses incident to the installation and connection of any sewer or other work for which a permit has been issued shall be borne by the owner. The owner shall indemnify the City from any loss or damage that may directly or indirectly be occasioned by the work.

Section 15-96. Liability

The City and its officers, agents and employees shall not be answerable for any liability or injury or death to any person or damage to any property arising during or growing out of the performance of any work by any such applicant. The applicant shall be answerable for, and shall save the City and its officers, agents and employees harmless from any liability imposed by law upon the City or its officers, agents or employees, fees and interest incurred in defending same or in seeking to enforce this provision. Applicant shall be solely liable for any defects in the performance of his work or any failure which may develop therein.

Section 15-97. Industrial Waste Discharge Permits

No person intending to discharge anything except domestic sewage shall make a connection to the sewer system without first applying to and receiving from the office of the City Engineer a permit therefore. This permit shall be in addition to all other permits required by the City.

Applicants for an Industrial Wastewater Discharge Permit shall complete the City's application form available at the office of the City Engineer.

Upon receipt of all required information, the application shall be evaluated by the City Engineer, against the requirements of Article V, with all other applicable provisions of this ordinance, and as to the capacity of the city's wastewater facilities to convey, treat, and dispose of the wastewater.

The application shall be approved if the applicant has furnished all requested information, complied with all applicable requirements of this ordinance and the City Engineer determines that adequate, unallocated capacity exists in the city's facilities to convey, treat and dispose of the wastewater. When properly signed by the City Engineer, the application form shall constitute a valid Industrial Wastewater Discharge Permit. A copy of the signed permit will be returned to the applicant.

The Industrial Wastewater Discharge Permit may require pretreatment of industrial wastewaters before discharge, restriction of peak flow discharges may include conditions such, but not limited to, discharge of certain wastewater only to specified sewers of the City; relocation of point of discharge, prohibition of discharge of certain wastewater components, restriction of discharge to certain hours of the day, payment of additional charges to defray increased costs of the City created by the wastewater discharge and such other conditions as may be required to effectuate the purpose of this ordinance.

A permit for Industrial Wastewater Discharge is not transferable without the prior written consent of the City Engineer.

No persons shall discharge industrial wastewaters in excess of the quantity or quality limitations set by the Industrial Wastewater Discharge Permit. Any person desiring to discharge wastewaters or use facilities which are not in conformance with the Industrial Wastewater Permit should apply to the City Engineer for an amended permit.

Sec. 15-98. Change of Industrial Wastewater Permit Restrictions

The City Engineer may change the restrictions or conditions of an Industrial Wastewater Discharge Permit from time to time as circumstances may require. The City Engineer shall allow an industrial discharger a reasonable period of time to comply with any changes in the Industrial Wastewater Permit required by the City Engineer or regulatory agencies of the state and federal governments.

Sec. 15-99. Suspension of Permit for Industrial Wastewater Discharge

The City Engineer may suspend an Industrial Wastewater Discharge Permit for a period of not to exceed forty-five days when such suspension is necessary in order to stop a discharge which presents an imminent hazard to the public health, safety or welfare, to the local environment or to the City's sewerage system.

Any discharger notified of a suspension of his Industrial Wastewater Permit shall immediately cease and desist the discharge of all industrial wastewater to the sewerage system. In the event of a failure of the discharger to comply voluntarily with the suspension order, the City Engineer shall take such steps as are reasonably necessary to insure compliance.

Any suspended discharger may file with the City Engineer a request for Council hearing in which event the City Council shall meet within 14 days of the receipt by the City Engineer of such request. The Council shall hold a hearing on the suspension and shall either confirm or revoke the action of the City Engineer. Reasonable notice of the hearing shall be given to the suspended discharger in the manner provided for below. At this hearing, the suspended discharger may appear personally or through counsel.

The City Engineer shall reinstate the Industrial Wastewater Permit upon proof of satisfactory compliance with all discharge requirements of the City.

Sec. 15-100. Revocation of Permit for Industrial Wastewater Discharge

The City Council may revoke an Industrial Wastewater Discharge Permit upon a finding that the discharger has violated any provision of the Sewer Use Ordinance. No revocation shall be ordered until a hearing on the question has been held by the City Council. At this hearing, the discharger may appear personally or through counsel. Notice of the hearing shall be given to the discharger in the manner provided below.

Any discharger whose Industrial Wastewater Permit has been revoked shall immediately stop all discharge of any liquid-carried wastes covered by the permit to any public sewer that is tributary to a sewer or sewerage system of the City. The City Engineer may disconnect or permanently block from such public sewer the industrial connection sewer of any discharger whose permit has been revoked if such action is necessary to insure compliance with the order of revocation.

Before any further discharge of industrial wastewater may be made by the discharger, he must apply for a new Industrial Wastewater Discharge Permit, pay all charges that would be required upon initial application together with all delinquent fees, charges and penalties and such other sums as the discharger may owe to the City. Costs incurred by the City in revoking the permit and disconnecting the industrial connection sewer shall be paid for by the discharger before issuance of a new Industrial Wastewater Discharge Permit.

Sec. 15-101. Notice

The City Engineer shall notify any person found to be in violation of the Sewer Use Ordinance, or requirement of a permit issued hereunder before the City Engineer takes any action to implement suspension or revocation. The City Engineer shall take no action until the elapse of ten (10) days from the date notice is given.

Unless otherwise provided herein, any notice required to be given by the City Engineer shall be in writing and served in person or by registered or certified mail. If served by mail, the notice shall be sent to the last address known to the City Engineer. Where the address is unknown, service may be made upon the owner of record of the property involved.

Notice shall be deemed to have been given at the time of deposit, postage prepaid, in a facility serviced by the United States Postal Service.

Sec. 15-102. Connections Outside the City Limits

The City Council may, if a health hazard exists, or if the Council finds it in the best interest of the City, and system capacity is adequate, authorize a permit to connect to the City sewer for properties outside the City.

The applicant shall first enter into a contract in writing whereby he shall bind himself, his heirs, successors and assigns to abide by all ordinances, rules and regulations in regard to the manner in which such sewer shall be used, the manner of connecting therewith, and the plumbing and drainage in connection therewith and also shall agree to pay all fees required for securing the permit; annexation, development connection fees and monthly sewer service charges in the amount set by the City for the privilege of using such sewer.

Sec. 15-103. Prohibited Wastes

No person shall discharge, cause or permit to be discharged into any public sewer the following wastes:

1. Any liquid or water having a temperature higher than 150 degrees fahrenheit.
2. Any water or waste containing floatable grease, oil, fat or ether-soluble matter in excess of 50 parts per million, or dispersed nonfloatable grease, oil, fat or ether-soluble matter other than soap, in excess of 500 parts per million.
3. Any gasoline, flammable or explosive liquid, solid or gas.
4. Any garbage, except garbage shredded to 1/4-inch maximum size from individual dwelling units. In no event will industrial commercial or institutional sewer systems qualify for the exception.
5. Any ashes, bones, hair, whole blood, cinders, and mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, paunch manure, or any other solids or viscous substances capable of causing obstruction to the flow in sewers or other interference with the proper operation of the sewage works.
6. Any waters or wastes having a pH lower than 6.0 or higher than 9.0 or having any other corrosive property capable of causing damage or hazard to structures, equipment and personnel of the sewage works.
7. Any waters or wastes containing a toxic or poisonous substance in sufficient quantity to injure or interfere with any sewage treatment process, constitute a hazard to humans or animals, or create any hazard in the receiving waters of the Plant.
8. Any waters or wastes containing suspended solids or dissolved matter of such character and quantity that unusual attention or exposure is required to handle such materials at the Plant.
9. Any septic tank sludge, except at an authorized location with a valid disposal permit.
10. Any waters or wastes containing more than 0.1 milligrams per liter or dissolved sulfides.
11. Any radioactive waste in an amount greater than recommended by local or state public health agencies.
12. Any other solid or liquid which is determined by the City Engineer to be detrimental to the sewer system or treatment plant
13. Any water added for the purpose of diluting wastes which would otherwise exceed applicable maximum concentration limitations.

14. Any water or wastes containing any of the following toxic substances exceeding the concentrations listed:

<u>Toxicants</u>	<u>Maximum Allowable Concentration</u> (mg/1)
Aluminum	5.0
Ammonia (as nitrogen)	20.0
Antimony	5.0
Arsenic; arsenicals	0.5
Barium	5.0
Beryllium	1.0
Bromine, chlorine and iodine (total)	10.0
Boron	1.0
Cadmium	0.02
Total identifiable chlorinated hydrocarbons	0.002 (trace)
Chromium (total)	0.01
Cobalt	0.5
Copper	0.5
Cyanides	0.1
Fatty Acids	5.0
Flourides	2.0
Formaldehydes	5.0
Iron	5.0
Lead	0.5
Manganese	1.0
Mercury	0.001
Phenol and derivatives	0.5
Nickel	0.2
Selenium	5.0
Silver	0.05
Zinc	1.0

15. Any water or wastes having a median toxicity limit (TLM) lower than twenty-five percent (25%) as determined by a 96 hour bioassay.
16. Any waters or wastes containing algicides, fungicides, antibiotics, insecticides, strong oxidizing agents or strong reducing agents.
17. Any noxious or malodorous gas or substances capable of creating a public nuisance either by itself or by interaction with other substances.
18. Any wastes requiring an excessive quantity of chlorine or other chemical compound used for disinfection purposes.
19. Any waste producing excessive discoloration or wastewater or treatment plant effluent.
20. Any garbage, cheese, fruit, vegetable, fish, animal or other solid material from any food processing plant, industrial plant, or retail grocery store, unless the discharge has been shredded to 1/4 inch maximum size, and does not contain more than five percent (5%) solid material by weight (dry basis).
21. Any water or wastes containing recognizable portions of the human anatomy.
22. Any unusual volume of flow or concentration of waste, from a commercial or industrial course, of any constituent or in quantity of flow that exceeds for any period of duration longer than fifteen (15) minutes that is five (5) times the average 24 hour concentration or flow during normal operation.

23. Any water or waste containing substances which are not amenable to treatment or which cause the treatment plant effluent to fail to meet the discharge requirements established by the State Water Resources Control Board, the California Regional Water Quality Board, or any other state or regulatory agency.

Sec. 15-104. Pretreatment of Wastewaters

A wastewater pretreatment system or device may be required by the City Engineer to treat flow prior to discharge to the sewer when it is necessary to restrict or prevent the discharge to the sewer of certain waste constituents not in compliance with Section 501: Prohibited Wastes, to distribute more equally over a longer time period any peak discharges of waste waters or to accomplish any pretreatment result required by the City Engineer. All pretreatment systems or devices shall be approved by the City Engineer but such approval shall not absolve the discharger of the responsibility of meeting any effluent limitation required by the City. All pretreatment systems judged by the City Engineer to require engineering design shall have plans prepared and signed by an engineer of suitable discipline licensed in the State of California.

This ordinance refers to and enforces the pretreatment standards published in the Federal Register by the EPA pursuant to Section 107(b) of the Federal Water Pollution Control Act Amendments of 1972:

Normally, a gravity separation interceptor, equalizing tank, neutralization chamber and control manhole will be required, respectively, to remove prohibited settleable and floatable solids, to equalize wastewater streams varying greatly in quantity and/or quality, to neutralize low or high pH flow and to facilitate inspection, flow measurement and sampling.

Floor drains from commercial or manufacturing buildings, warehouses or multi-use structures shall not discharge directly to the sewer, but shall first discharge to a gravity separation interceptor.

Grease, oil, and sand interceptors shall be provided by the waste discharger when, in the opinion of the City Engineer, they are necessary for the proper handling of liquid wastes containing grease in excessive amounts, or any flammable wastes, sand, or other harmful ingredients. All interceptors shall be of a type and capacity approved by the City Engineer, and shall be so located as to be readily and easily accessible for cleaning and inspection.

No person shall discharge, cause, allow or permit to be discharged into the sanitary sewer system of the City, or any part thereof, any garbage, or any fruit, vegetable, animal, fish, or other solid industrial wastes resulting from the processing, packaging or canning of fruits, vegetables, fish, or other foods or products, unless such wastes have first been passed through screens having openings not exceeding 1/32nd of an inch in dimension. The City Engineer, by written permit, may authorize the discharge into the sanitary sewer system of such wastes if they are first passed through screens having larger openings if the City Engineer is satisfied that such larger openings will provide screening efficiency and effectiveness equal to or better than that provided by the above specified openings of 1/32nd of an inch in dimension. Each person who shall discharge, cause, allow or permit to be discharged into the sanitary sewer system of the City or any part thereof, any such wastes, shall install and maintain in good operating order, screens as above specified and appurtenances thereto, including, but not limited to, all necessary conveyors and elevators, all in sufficient quantity and of sufficient size and quality to continuously and effectively

screen not less than 100 percent of the peak hydraulic and solids loading imposed on such screens and appurtenances during any processing period. Sufficient additional screens and appurtenances shall be provided by each person who discharge such wastes into the sanitary sewer system in order to provide standby facilities.

No person shall discharge, cause, or allow or permit to be discharged into the sanitary sewer system or any part thereof, any other industrial wastes unless such wastes have first been passed through screens having openings not exceeding three-quarters (3/4) of an inch in dimension; provided that the City Engineer, by written permit, may authorize the discharge of such wastes in the sewer system if they are first passed through screens having larger openings, if the City Engineer is satisfied that such larger openings will provide screening efficiency and effectiveness equal to or better than that provided by the smaller openings.

No one shall discharge any screened wastes into the sanitary sewer system, or any part of the system, unless and until he has obtained from the City Engineer a permit to do so. The City Engineer shall require such person to provide to the City Engineer a report prepared by a registered engineer which shows, to the satisfaction of the City Engineer, that such wastes can be processed successfully by the physical and biological processing units of the treatment plant and carried through the sewer collection system.

Sec. 15-105. General

The design and construction of all sewers, connections to sewers, pretreatment facilities and appurtenances which are directly or indirectly connected to the City sewer and wastewater treatment system shall be in accordance with all State laws, City ordinances, city standard drawings, specifications and regulations as may be adopted from time to time by resolution of the city council, and in accordance with generally accepted engineering practice. Any public works to be constructed shall be designed by an engineer licensed to practice in California.

Separate sewer service connections are required for each separate building whether or not such building is on the same or a different lot or parcel of land.

Exceptions may be made upon appeal to the City Engineer or Council, where several single family, multi-family, commercial or industrial units are constructed within several buildings on the same parcel of land, where it is agreed that such land can be adequately served by a single private sewer main.

If the land is later divided; then separate laterals shall be provided for each building or several buildings on each separate parcel of land or for each air space unit unless the private sewer main has been legally made the responsibility of the property or unit owner(s). Such property owner or owners association will be responsible for construction, reconstruction, maintenance and repair, of the private sewer main.

In the case of the exception, a private sewer main may be placed in the proposed development with laterals to each building.

Such private sewer main shall be connected to the city sewer main at a single location, and a manhole or clean out shall be provided on the private main at or near the point of connection with the city sewer system, normally near the property line. All such private sewer mains and all such laterals thereto shall be installed at the expense of the property owner or developer. The

property owner will be responsible for construction, reconstruction, maintenance and repair. (For private sewer mains, the property owner or owners association shall apply for, and be responsible for a single billing for the service.)

Where such connections preexist these regulations, they must be permitted until sale of the parcel, at which time a separate lateral sewer shall be provided for the sold parcel.

Old lateral sewers may be used in connection with new buildings only when they are found, upon examination and test by the City Engineer, to meet all requirements of this ordinance and the City Standards.

In all buildings in which any building sewer is too low to permit gravity flow to the public sewer, sanitary sewage carried by such building sewer shall be lifted by artificial means, approved by the Building Official and discharged to the public sewer at the expense of the owner. Adequate antibackflow devices shall be installed by the applicant.

The connection of the building sewer into the public sewer shall be made at the lateral or "T" branch, if such lateral "T" branch is available at a suitable location. Where no properly located "T" branch is available, a neat hole may be cut into the public sewer to receive the building or lateral sewer, with entry in the downstream direction at an angle of forty-five (45) degrees. A wye saddle shall be used for the connection and in no case shall the pipe protrude inside the main sewer. A smooth, neat joint shall be made, and the connection made secure and watertight, including by encasement in concrete, if so determined by the engineer. The connection to the public sewer shall be made in the presence of the City Engineer and under his supervision and direction. Any cutting of public mains shall be done only by city personnel, cost borne by applicant. Any damage to the public sewer shall be repaired at the cost of the applicant to the satisfaction of the City Engineer.

All excavations for a lateral sewer installation shall be adequately guarded with barricades or lights so as to protect the public from hazard. Streets, sidewalks, parkways and other property damaged in the course of the work shall be restored in a manner satisfactory to the City Engineer.

All domestic or sanitary wastewaters from rest rooms, showers, drinking fountains, etc., shall be kept separate from all industrial wastewaters until the industrial wastewaters have passed through any required pretreatment system or device. A control manhole of a design approved by the City Engineer shall be furnished and installed by certain designated industrial wastewater dischargers to facilitate inspection, sampling and flow measurements by personnel of the City. This control manhole shall be located off the industrial premise or if within the plant fence, a special locked gate provided, with keys to the gate lock given to the City. Unrestricted access to this control manhole shall be available to authorized personnel of the City at all times. The control manhole may be used as a junction manhole for domestic sewage and industrial wastes provided the junction occurs downstream of the sampling or flow measuring point.

Each discharger shall provide protection from accidental discharge of prohibited materials or other wastes regulated by this ordinance. Where necessary, or as directed by the City Engineer, retention basins, dikes, storage tanks or other devices designed to eliminate, neutralize, offset or otherwise negate the effects of prohibited materials or waste discharges in violation of this ordinance shall be installed.

Lateral sewers shall be maintained by the owner of the property served from the building being served up to the front property line providing a cleanout accessible to maintenance forces is available. If not available the owner shall maintain the lateral to its connection to the public main.

All lateral sewers shall be tested by means approved by the City Engineer, in the presence of the City Engineer. All lines showing excessive leakage shall be repaired or replaced at the expense of the person doing the work and shall be done at the direction and to the satisfaction of the City Engineer.

Sec. 15-106. Technical Requirements

The following technical provisions shall be used in the design of sewers connected to or a part of the City sewage system. For facilities for which specific requirements are not provided, the City Engineer shall determine the design parameters.

1. Sizing of all sewers shall be based upon a complete drainage study of the present proposal as well as all existing and potential up-stream contributing areas. Minimum main size is 6 inch diameter.
2. Sewers shall be designed to handle a per capita average flow of 100 gallons per day for residential areas.
3. Commercial and industrial areas will require the design of sewers to handle the quantities discharged as determined by the applicant's engineer with the approval of the City Engineer.
4. Design of the sewer lines will be based upon peak flows in accordance with the standard practice adopted by the American Society of Civil Engineers in their manual on Engineering Practice No. 37 latest revision.
5. All sewers shall be designed to flow two-thirds full under peak design conditions.
6. The minimum size of a lateral sewer shall be four inch diameter. The minimum slope of a 4" lateral sewer shall be a minimum 0.5 foot per 100 feet. The minimum slope of a 6" lateral sewer shall be a minimum of 0.25 foot per 100 feet. The minimum cover shall be twenty-four inches unless a variance from these standards is given in writing by the City Engineer.
7. Sewer slopes shall be sufficient to maintain a velocity of two feet per second.
8. All materials for sewer mains and laterals shall be as shown in City standard drawings, and specifications, or as approved in writing by the City Engineer.
9. Manholes shall be used to make all turns.
10. Manholes on straight sewer lines shall be placed a maximum of 400 feet center to center.
11. Sewer mains in curved streets shall be on a minimum 200 foot radius. Manholes between tangents shall not be more than 5 feet from the street center line.
12. Manhole covers in undeveloped areas will be set one foot above existing grade.
13. All manhole stubs shall be shown on the plans by size.

14. Clean-out or manhole shall be used on dead-end lines.
15. The location of all sewer mains shall be designated by the City Engineer.
16. All sewer laterals shall be extended to the property line and shall be a minimum 4 inch diameter but in no case shall the sewer lateral on public property be smaller than the lateral on private property.
17. The lateral invert at the curblines shall be 3 feet below the curb flowline grade, unless lot grades dictate a greater depth.
18. Lift stations shall be avoided where possible. However, it is recognized that they may have to be used and the following design requirements are to be adhered to in their design:
 - A. Pumps or ejector units shall be provided in duplicate arranged for positive priming.
 - B. Capacity shall be provided to handle ultimate peak flow from the tributary area. When the tributary area exceeds 300 acres the capacity shall be provided to handle the peak ultimate flow with the largest pump out of service. Staged installation of pumps is allowed providing space is provided for future installation.
 - C. Access shall be provided to the site for removal and repair of equipment.
 - D. A means of dewatering force mains shall be provided.
 - E. An overflow device will be provided if possible as approved by the City Engineer.
 - F. Forcemains shall be designed so as to be able to pass the peak flows without excessive pressures, and the materials shall be corrosive resistant to the type of sewage being delivered through them. Force mains shall be designed as to obtain a minimum of 3 feet per second velocity during the pumping period.
19. New sewers shall have a maximum allowable infiltration/exfiltration rate of 200 gallons per day per inch diameter of sewer per mile.

Sec. 15-107. Wastewater Sampling

Periodic measurements of flow rates, flow volume, COD, BOD, grease and non filterable residue for use in determining the annual industrial wastewater treatment surcharge and such measurements of other constituents believed necessary for the City Engineer shall be made by all industrial wastewater dischargers, unless specifically relieved of such obligation by the City Engineer. All sampling, analyses and flow measurements of industrial wastewaters shall be performed by a state certified independent laboratory or by a laboratory of the industrial discharger approved by the City Engineer. If performed by City's personnel, an appropriate charge shall be paid by the discharger requesting the tests. Prior to submittal to the City of data developed in the laboratory of an industrial discharger, the results shall be verified by a responsible administrative official of the industrial discharger under the penalty of perjury.

All wastewater analyses shall be conducted in accordance with the appropriate procedure contained in "Standard Methods". If no appropriate procedure is contained therein, the standard procedure of the industry or a procedure judged satisfactory by the City Engineer shall be used to measure wastewater constituents. Any independent laboratory or discharger performing tests shall furnish any required test data or information on the test methods or equipment used, if requested to do so by the City Engineer.

All dischargers making periodic measurements shall furnish and install at the control manhole or other appropriate location a calibrated flume, weir, flow meter, or similar device approved by the City Engineer and suitable to measure the industrial wastewater flow rate and total volume. A flow indicating, recording and totalizing register may be required by the City Engineer. In lieu of wastewater flow measurements, the City Engineer may accept records of water usage and adjust the flow volumes by suitable factors to determine peak and average flow rates for the specific industrial wastewater discharge.

The sampling, analysis and flow measurement procedures, equipment and results shall be subject at any time to inspection by the City. Sampling and flow measurement facilities shall be such as to provide safe access to authorized personnel.

Those industrial wastewater dischargers required by the City Engineer to make periodic measurements of industrial wastewater flows and constituents shall annually make the minimum number of such measurements required. The minimum requirement for such periodic measurements shall be at least one 24 hour measurement per year. Representative samples of the industrial wastewater shall be obtained at least once per hour over the 24 hour period, properly refrigerated, composited according to measured flow rates during the twenty-four hours and analyzed for the specific wastewater constituents. Discharges required to sample on only a few days per year shall sample during the period of highest wastewater flow and wastewater constituent discharges. Industrial plants with large fluctuations in quantity or quality of wastewater may be required to provide continuous sampling and analyses for every working day. When required by the City Engineer, dischargers shall install and maintain in proper order, automatic flow-proportional sampling equipment and/or automatic analysis and recording equipment.

Measurements to verify the quantities of waste flows and waste constituents reported by industrial dischargers will be conducted on a random basis by personnel of the City.

Sec. 15-108. Accidental Discharges

Dischargers shall notify the City Engineer immediately when accidental discharges of wastes in violation of this ordinance occur so that counter-measures may be taken by the City to minimize damage to the sewer system treatment plant, treatment processes and the receiving waters. Such notification will not relieve dischargers of liability for any expense, loss or damage to the sewer system, treatment plant, or treatment process, or for any fines imposed on the City on account thereof by any state or federal regulatory agencies.

In the event of accidental discharge in violation of this ordinance, the discharger shall furnish the City Engineer, within 15 days of the date of occurrence, a detailed written statement describing the causes of the accidental discharge and the measures being taken to prevent future occurrence.

In order that employees of dischargers be more fully informed of City requirements, copies of these regulations (displaying this section) shall be permanently posted on bulletin boards of dischargers together with such other industrial wastes information and notices which may be furnished by the City from time to time directed toward more effective water pollution control.

Sewer connections within the discharger's plumbing or drainage system shall be appropriately labeled to warn operating personnel against discharge of any substance in violation of this ordinance.

Sec. 15-109. Right of Entry

The City Engineer and other duly authorized employees of the City bearing proper credentials and identification, shall be permitted to enter all properties served by the City for the purposes of inspection, observation, measurement, sampling and testing in accordance with the provisions of this ordinance.

Sec. 15-110. Damage Caused by Prohibited Wastewater Discharge

Any industrial wastewater discharger who discharges or causes the discharge of prohibited wastewaters which cause damage to City facilities, detrimental effects on treatment processes or any other damages resulting in costs to the City shall be liable to the City for all damage occasioned thereby.

Sec. 15-111. Definitions

The definitions given in this part shall be used in the interpretation of this ordinance, the issuance of permits, the making of charges for service and all other operations of this ordinance unless another meaning for the word is apparent from the context.

Applicant - "Applicant" shall mean the person or his authorized agent making application for a permit for a sewer or plumbing installation and shall be the owner of premises to be served by the sewer for which a permit is requested.

BOD or Biochemical Oxygen Demand - "BOD" or "biochemical oxygen demand" shall mean the measure of decomposable organic material in domestic or industrial wastewaters as represented by the oxygen utilized over a period of five days at 20 degrees Centigrade and as determined by the appropriate procedure in "Standard Methods".

Building - "Building" shall mean any structure used for human habitation, business or commercial activity, industry, recreation, public use, or other purpose containing sanitary facilities.

Building Sewer - "Building sewer" shall mean that portion of any sewer beginning at the plumbing or drainage outlet of any building and extending to the property line.

Chlorine Demand - "Chlorine demand" shall mean the difference between the amount of chlorine added to a wastewater sample and the amount remaining at the end of a 30 minute period as determined by the procedures given "Standard Methods".

City Engineer - "City Engineer" shall mean the City Engineer of Healdsburg or his duly authorized deputy or agent.

City - "City" shall mean the City of Healdsburg.

City Council - "City Council" shall mean the governing body of the "City".

COD or Chemical Oxygen Demand - "COD" or "chemical oxygen demand" shall mean the measure of chemically decomposable material in domestic or industrial wastewater as represented by the oxygen utilized as determined by the appropriate procedure described in "Standard Methods".

Commercial Owner - "Commercial owner" shall mean any owner who is not a residential owner, industrial owner or institutional owner.

Contractor - "Contractor" shall mean an individual, firm, corporation, partnership or association duly licensed by the State of California to perform the type of work to be done under this permit.

Discharger - "Discharger" shall mean any person that discharges or causes a discharge to a public sewer.

Domestic Wastewater - "Domestic wastewater" shall mean the water-carried wastes produced from noncommercial or non-industrial activities and which result from normal human living processes.

Dwelling Unit - "Dwelling unit" shall mean any single family dwelling of one or more rooms having one or more plumbing fixtures suitable for residential occupancy by any number of persons living together as a single family, including single family dwelling units, and each group of rooms constituting a dwelling unit for a single family in any multiple dwelling structure.

Effluent - "Effluent" shall mean the liquid outflow of any facility designed to treat, convey or retain wastewater.

Family - "Family" shall mean any one or more persons comprising a single family unit.

Filtrable Residue - "Filtrable residue" shall mean the solid matter in solution in the wastewater and shall be obtained by evaporation of a sample from which all suspended matter or "non-filtrable residue" has been removed by filtration as determined by the procedures in "Standard Methods".

Formula - "Formula" shall mean the Industrial Wastewater Treatment Surcharge Formula.

Garbage - "Garbage" shall mean or include kitchen and table refuse, offal, swill, and every accumulation of animal, vegetable, and other matter that attends the preparation, consumption, decay or dealing in the storage or meats, fish, birds, fruits, or vegetables and all broken or discarded crockery, bottles and tin vessels. Dead animals, swill, offal and other salvable waste matter having a value shall not be included within the meaning of the word garbage.

Gravity Separation Interceptor - "Gravity separation interceptor" shall mean any facility designed, constructed and operated for the purpose of removing and retaining dangerous, deleterious or prohibited constituents from wastewater by differential gravity separation before discharge to the public sewer.

Industrial Connection Sewer - "Industrial connection sewer" shall mean the sewer connecting the building sewer or building waste drainage system to the public sewer for the purpose of conveying industrial wastewater.

Industrial Owner - "Industrial owner" shall mean any owner on whose premises any manufacturing or processing activity for profit is engaged in, including the manufacturing or processing of agricultural products, animals, poultry, goods, wares or other products or materials.

Industrial Wastewater - "Industrial wastewater" shall mean all water carried wastes and wastewater of the community excluding domestic wastewater and uncontaminated water, and shall include all wastewater from any producing, manufacturing, processing, institutional, commercial, agricultural, or other operation where the wastewater discharged includes significant quantities of wastes of non-human origin.

Inspector - "Inspector" shall mean a person authorized by the City Engineer to inspect wastewater generation, conveyance, processing and disposal facilities.

Institutional Owner - "Institutional owner" shall mean any owner, public or non-profit school, church, hospital, lodge, club, fire department, library, memorial building or other public or non-profit activity.

Lateral Sewer - "Lateral sewer" shall mean the sewer from the main sewer to the property line.

Local Sewering Agency - "Local sewerage agency" shall mean the City of Healdsburg or other public agency legally authorized to construct, maintain and operate a system of lateral or collecting sewers.

Main Sewer - "Main sewer" shall mean a public sewer designed to accommodate more than one lateral sewer.

Multiple Lodging Structure - "Multiple lodging structure" shall mean any two or more lodging units in any single building or structure or group of buildings or structures, including any rooming house, hotel or motel, bed and breakfast.

Non-filtrable Residue - "Non-filtrable residue" shall mean that portion of the "total residue", of any wastewater sample, that is retained by a filter when a sample is passed through a filter, as determined by the appropriate procedure described in "Standard Methods".

Ordinance - "Ordinance" shall mean, unless otherwise specified, the Sewer Use Ordinance.

Outside Sewer - "Outside sewer" shall mean a sanitary sewer beyond the City Limits not subject to the control or jurisdiction of the City.

Peak Flow Rate - "Peak flow rate" shall mean the average rate at which wastewater is discharged to a public sewer during the highest 30 minute flow period in the preceding twelve months.

Permit - "Permit" shall mean any written authorization required pursuant to this or any other regulation of the City for the installation of any sewage works.

Person - "Person" shall mean any individual, partnership, committee, association, corporation, public agency, and any other organization or group of persons, public or private.

Plant - "Plant" shall mean the Wastewater Treatment Plant of the City of Healdsburg.

Premises - "Premises" shall mean any lot, or any piece or parcel of land comprising two or more lots or record in one ownership, or any building or other structure or any part of any building or structure used or useful for human habitation or gathering or for carrying on a business or occupation or any commercial or industrial activity.

Public Improvement Standards - "Public improvements standards" shall mean the minimum standards for public works construction in the City of Healdsburg and on file in the office of the City Engineer.

Public Sewer - "Public sewer" shall mean a sewer lying within a street and which is under the jurisdiction of the City or other public agencies.

Radioactive Material - "Radioactive material" shall mean material containing chemical elements that spontaneously change their atomic structure by emitting any particles, rays or energy forms.

Residential Owner - "Residential owner" shall mean any owner whose premises are used solely for residential purposes by any one or more persons.

Sanitary Sewer - "Sanitary sewer" shall mean a sewer which carries sewage and to which storm, surface, and groundwaters are not intentionally admitted.

Section - "Section" shall mean a section of this ordinance.

Sewage - "Sewage" shall mean water and water-carried wastes, including industrial sewage and industrial wastes disposed of or disposable through plumbing outlets and carried through and ultimately disposed of by the municipal sewage disposal system.

Sewer - "Sewer" shall mean a pipe or conduit for carrying sewage.

Sewer Service - "Sewer service" shall mean the service and facilities for collection, treatment and disposal of sewage furnished or available to premises by the sewer system.

Sewerage System - "Sewerage system" shall mean a network of wastewater collection, conveyance, treatment and disposal facilities interconnected by sewers, and owned by the City.

Shall and May - "Shall" is mandatory and "may" is permissive.

Single Family Dwelling - "Single family dwelling" shall mean one dwelling unit in a single structure.

Solid Wastes - "Solid wastes" shall mean the nonliquid carried wastes normally considered to be suitable for disposal with refuse at sanitary landfill refuse disposal site.

Standard Methods - "Standard Methods" shall mean the current edition of Standard Methods for the Examination of Water and Wastewater as published by the American Public Health Association.

Storm Drain - "Storm drain" shall mean a conduit which carries storm and surface or groundwaters and drainage, but excludes sewage and polluted industrial wastes.

Street - "Street" shall mean any public highway, road, street, avenue, alley, way, easement, or right of way in the City.

Total Residue - "Total residue" is the material left in a vessel after evaporation of a sample of water, as determined by the appropriate procedure described in "Standard Methods".

Trade Secrets - "Trade secrets" shall include but shall not be limited to any formula, plan, pattern, process, tool, mechanism, compound, procedure, production data, or compilation of information which is not patented, which is known only to certain individuals within a commercial concern who are using it to fabricate, produce, or compound an article of trade or a service having a commercial value, and which gives its user an opportunity to obtain a business advantage over competitors who do not know or use it.

Trunk Sewer - "Trunk sewer" shall mean a sewer constructed, maintained, and operated by the City that conveys wastewater to the City's treatment facilities and into which lateral and collecting sewers discharge.

Uncontaminated Water - "Uncontaminated water" shall mean any wasted water of the community not contaminated or polluted with wastewater and which is suitable or could readily be made suitable for discharge to the municipal storm water drainage system.

User - "User" shall mean discharger.

Wastewater - "Wastewater" shall mean the water-carried wastes of the community derived from human or industrial sources including domestic wastewater and industrial wastewater. Rainwater, groundwater or drainage or uncontaminated water is not wastewater.

SECTION 3. This ordinance will take effect in accordance with provisions of law.

Introduced in the City Council of the City of Healdsburg on the 3rd day of December, 1984, and passed and adopted by the City Council on the 17th day of December, 1984, by the following roll call vote:

AYES: (4) Councilmembers: Collins, Foppiano, Proctor, and Mayor Rose

NOES: (0) Councilmembers: None

ABSENT: (1) Councilmembers: Haviland

APPROVED:

ATTEST:



Robert Rose, Mayor



Jean McMellon, City Clerk

I, JEAN McMELLON, City Clerk of the City of Healdsburg, do hereby certify that the foregoing Ordinance No. 763 is a full, true and correct copy of an ordinance duly passed and approved by the City Council of Said City, and the same has been published according to law.



City Clerk

ATTACHMENT 3 – 2020 Industrial Inspection Findings

Attachment 3 - Facility CUPA Inspections - 2020 Findings

CERS ID	Facility ID	Facility Name	Address	Inspection Type	Date	Purpose	Inspector	District
10134970	49-002-600050	Max Process Equipment, LLC	1420 Healdsburg Ave. Healdsburg, CA 95448	Hazardous Waste Generator SQG	12/22/2020	Routine	Linda Collister	Healdsburg FD
10134970	49-002-600050	Max Process Equipment, LLC	1420 Healdsburg Ave. Healdsburg, CA 95448	HMBP	12/22/2020	Routine	Linda Collister	Healdsburg FD
10112770	49-002-600017	AT&T California - TD124	247 East St Healdsburg, CA 95448	Hazardous Waste Generator SQG	12/11/2020	Routine	Linda Collister	Healdsburg FD
10112770	49-002-600017	AT&T California - TD124	247 East St Healdsburg, CA 95448	Stormwater	12/11/2020	Routine	Linda Collister	Healdsburg FD
10112770	49-002-600017	AT&T California - TD124	247 East St Healdsburg, CA 95448	HMBP	12/11/2020	Routine	Linda Collister	Healdsburg FD
10112770	49-002-600017	AT&T California - TD124	247 East St Healdsburg, CA 95448	UST DW	12/11/2020	Routine	Linda Collister	Healdsburg FD
10121974	49-002-600036	Big O Tires #76	1115 Healdsburg Ave. Healdsburg, CA 95448	Stormwater	12/10/2020	Routine	Linda Collister	Healdsburg FD
10810675	49-002-600567	Haus Beverage	1337 Grove St Ste D Healdsburg, CA 95448	Stormwater	12/10/2020	Routine	Linda Collister	Healdsburg FD
10121974	49-002-600036	Big O Tires #76	1115 Healdsburg Ave. Healdsburg, CA 95448	HMBP	12/10/2020	Routine	Linda Collister	Healdsburg FD
10121974	49-002-600036	Big O Tires #76	1115 Healdsburg Ave. Healdsburg, CA 95448	Hazardous Waste Generator SQG	12/10/2020	Routine	Linda Collister	Healdsburg FD
10810675	49-002-600567	Haus Beverage	1337 Grove St Ste D Healdsburg, CA 95448	HMBP	12/10/2020	Routine	Linda Collister	Healdsburg FD
10595665	49-002-600189	aaction rents	1427 grove st healdsburg, CA 95448	Hazardous Waste Generator SQG	12/8/2020	Routine	Linda Collister	Healdsburg FD
10112749	49-002-600034	Redwood Auto Body, Inc.	200 Kennedy Lane Healdsburg, CA 95448	Stormwater	12/8/2020	Routine	Linda Collister	Healdsburg FD
10595665	49-002-600189	aaction rents	1427 grove st healdsburg, CA 95448	Stormwater	12/8/2020	Routine	Linda Collister	Healdsburg FD
10127587	49-002-600093	Healdsburg Aviation	1500 Lytton Springs Road Healdsburg, CA 95448	HMBP	12/8/2020	Routine	Linda Collister	Healdsburg FD
10112749	49-002-600034	Redwood Auto Body, Inc.	200 Kennedy Lane Healdsburg, CA 95448	Hazardous Waste Generator SQG	12/8/2020	Routine	Linda Collister	Healdsburg FD
10127587	49-002-600093	Healdsburg Aviation	1500 Lytton Springs Road Healdsburg, CA 95448	Hazardous Waste Generator SQG	12/8/2020	Routine	Linda Collister	Healdsburg FD
10112749	49-002-600034	Redwood Auto Body, Inc.	200 Kennedy Lane Healdsburg, CA 95448	HMBP	12/8/2020	Routine	Linda Collister	Healdsburg FD
10595665	49-002-600189	aaction rents	1427 grove st healdsburg, CA 95448	HMBP	12/8/2020	Routine	Linda Collister	Healdsburg FD
10445419	49-002-600055	City of Healdsburg Fitch WaterTreatment	750 Heron Dr Healdsburg, CA 95448	HMBP	12/1/2020	Routine	Linda Collister	Healdsburg FD
10690384	49-002-600481	Gold Bloom Fine Jewelry Design	328 Center St Healdsburg, CA 95448	Hazardous Waste Generator SQG	11/30/2020	Routine	Linda Collister	Healdsburg FD
10112929	49-002-600384	City of Healdsburg Badger Substation	780 Heron Drive Healdsburg, CA 95448	HMBP	11/24/2020	Routine	Linda Collister	Healdsburg FD
10133794	49-002-600016	JERRY'S VALERO	186 Dry Creek Healdsburg, CA 95448	Hazardous Waste Generator SQG	11/18/2020	Routine	Linda Collister	Healdsburg FD
10133794	49-002-600016	JERRY'S VALERO	186 Dry Creek Healdsburg, CA 95448	Stormwater	11/18/2020	Routine	Linda Collister	Healdsburg FD
10133794	49-002-600016	JERRY'S VALERO	186 Dry Creek Healdsburg, CA 95448	HMBP	11/18/2020	Routine	Linda Collister	Healdsburg FD
10133794	49-002-600016	JERRY'S VALERO	186 Dry Creek Healdsburg, CA 95448	UST DW	11/18/2020	Routine	Linda Collister	Healdsburg FD
10858345	49-002-600584	Campo Fina Restaurant	330 Healdsburg Ave Healdsburg, CA 95448	HMBP	11/18/2020	Routine	Linda Collister	Healdsburg FD
10615009	49-002-600395	h2 hotel	219 Healdsburg Ave Healdsburg, CA 95448	HMBP	11/2/2020	Routine	Linda Collister	Healdsburg FD
10835272	49-002-600558	Harmon Guest House	227 Healdsburg Ave Healdsburg, CA 95448	HMBP	11/2/2020	Routine	Linda Collister	Healdsburg FD
10615012	49-002-600461	Hotel Healdsburg	25 Matheson St Healdsburg, CA 95448	HMBP	11/2/2020	Routine	Linda Collister	Healdsburg FD
10401493	49-002-600388	Willi's Seafood & Raw Bar	403 Healdsburg Ave Healdsburg, CA 95448	HMBP	10/30/2020	Routine	Linda Collister	Healdsburg FD
10122994	49-002-600351	HEALDSBURG GAS MART, INC	1281 HEALDSBURG AVE. HEALDSBURG, CA 95448	HMBP	10/27/2020	Routine	Linda Collister	Healdsburg FD
10112884	49-002-600115	HEALDSBURG DISTRICT HOSPITAL	1375 UNIVERSITY AVE HEALDSBURG, CA 95448	Hazardous Waste Generator SQG	10/27/2020	Routine	Linda Collister	Healdsburg FD
10112884	49-002-600115	HEALDSBURG DISTRICT HOSPITAL	1375 UNIVERSITY AVE HEALDSBURG, CA 95448	UST DW	10/27/2020	Routine	Linda Collister	Healdsburg FD
10122994	49-002-600351	HEALDSBURG GAS MART, INC	1281 HEALDSBURG AVE. HEALDSBURG, CA 95448	UST DW	10/27/2020	Routine	Linda Collister	Healdsburg FD
10122994	49-002-600351	HEALDSBURG GAS MART, INC	1281 HEALDSBURG AVE. HEALDSBURG, CA 95448	Hazardous Waste Generator SQG	10/27/2020	Routine	Linda Collister	Healdsburg FD
10122994	49-002-600351	HEALDSBURG GAS MART, INC	1281 HEALDSBURG AVE. HEALDSBURG, CA 95448	Stormwater	10/27/2020	Routine	Linda Collister	Healdsburg FD
10112884	49-002-600115	HEALDSBURG DISTRICT HOSPITAL	1375 UNIVERSITY AVE HEALDSBURG, CA 95448	HMBP	10/27/2020	Routine	Linda Collister	Healdsburg FD
10197550	49-002-600285	Healdsburg High School	1024 Prince Ave Healdsburg, CA 95448	HMBP	10/20/2020	Routine	Linda Collister	Healdsburg FD
10636666	49-002-600046	HUSD Transportation Yard	13557 Healdsburg Ave Healdsburg, CA 95448	Stormwater	10/20/2020	Routine	Linda Collister	Healdsburg FD
10197550	49-002-600285	Healdsburg High School	1024 Prince Ave Healdsburg, CA 95448	Stormwater	10/20/2020	Routine	Linda Collister	Healdsburg FD

10197550	49-002-600285	Healdsburg High School	1024 Prince Ave Healdsburg, CA 95448	Hazardous Waste Generator SQG	10/20/2020	Routine	Linda Collister	Healdsburg FD
10636666	49-002-600046	HUSD Transportation Yard	13557 Healdsburg Ave Healdsburg, CA 95448	Hazardous Waste Generator SQG	10/20/2020	Routine	Linda Collister	Healdsburg FD
10636666	49-002-600046	HUSD Transportation Yard	13557 Healdsburg Ave Healdsburg, CA 95448	HMBP	10/20/2020	Routine	Linda Collister	Healdsburg FD
10117264	49-002-600027	Zimmerman Fuel	1329 Grove Street Healdsburg, CA 95448	Stormwater	10/6/2020	Routine	Linda Collister	Healdsburg FD
10117264	49-002-600027	Zimmerman Fuel	1329 Grove Street Healdsburg, CA 95448	Hazardous Waste Generator SQG	10/6/2020	Routine	Linda Collister	Healdsburg FD
10117264	49-002-600027	Zimmerman Fuel	1329 Grove Street Healdsburg, CA 95448	UST DW	10/6/2020	Routine	Linda Collister	Healdsburg FD
10117264	49-002-600027	Zimmerman Fuel	1329 Grove Street Healdsburg, CA 95448	HMBP	10/6/2020	Routine	Linda Collister	Healdsburg FD
10112902	49-002-600083	W.C. Sanderson Ford/Mercury	453 Healdsburg Ave Healdsburg, CA 95448	Hazardous Waste Generator SQG	9/21/2020	Routine	Linda Collister	Healdsburg FD
10112902	49-002-600083	W.C. Sanderson Ford/Mercury	453 Healdsburg Ave Healdsburg, CA 95448	Stormwater	9/21/2020	Routine	Linda Collister	Healdsburg FD
10112902	49-002-600083	W.C. Sanderson Ford/Mercury	453 Healdsburg Ave Healdsburg, CA 95448	HMBP	9/21/2020	Routine	Linda Collister	Healdsburg FD
10126363	49-002-600116	City of Healdsburg Corporation Yard	550 Westside Road Healdsburg, CA 95448	Hazardous Waste Generator SQG	9/16/2020	Routine	Linda Collister	Healdsburg FD
10126363	49-002-600116	City of Healdsburg Corporation Yard	550 Westside Road Healdsburg, CA 95448	HMBP	9/16/2020	Routine	Linda Collister	Healdsburg FD
10126363	49-002-600116	City of Healdsburg Corporation Yard	550 Westside Road Healdsburg, CA 95448	APSA Tier II	9/16/2020	Routine	Linda Collister	Healdsburg FD
10112710	49-002-600220	Max Machinery, Inc.	33A Healdsburg Avenue Healdsburg, CA 95448	Hazardous Waste Generator SQG	9/9/2020	Routine	Linda Collister	Healdsburg FD
10112716	49-002-600079	Silveira Pontiac-Buick-GMC, Inc	985 Healdsburg Ave Healdsburg, CA 95448	Hazardous Waste Generator SQG	9/9/2020	Routine	Linda Collister	Healdsburg FD
10112716	49-002-600079	Silveira Pontiac-Buick-GMC, Inc	985 Healdsburg Ave Healdsburg, CA 95448	HMBP	9/9/2020	Routine	Linda Collister	Healdsburg FD
10112716	49-002-600079	Silveira Pontiac-Buick-GMC, Inc	985 Healdsburg Ave Healdsburg, CA 95448	Stormwater	9/9/2020	Routine	Linda Collister	Healdsburg FD
10112716	49-002-600079	Silveira Pontiac-Buick-GMC, Inc	985 Healdsburg Ave Healdsburg, CA 95448	APSA Tier I	9/9/2020	Routine	Linda Collister	Healdsburg FD
10488220	49-002-600044	Capital Lumber	13480 Healdsburg Ave Healdsburg, CA 95448	HMBP	9/9/2020	Routine	Linda Collister	Healdsburg FD
10112710	49-002-600220	Max Machinery, Inc.	33A Healdsburg Avenue Healdsburg, CA 95448	HMBP	9/9/2020	Routine	Linda Collister	Healdsburg FD
10169957	49-002-600195	Chris Zootis Performance Center	21 Palm Ave Healdsburg, CA 95448	Hazardous Waste Generator SQG	9/4/2020	Routine	Linda Collister	Healdsburg FD
10169957	49-002-600195	Chris Zootis Performance Center	21 Palm Ave Healdsburg, CA 95448	Stormwater	9/4/2020	Routine	Linda Collister	Healdsburg FD
10169957	49-002-600195	Chris Zootis Performance Center	21 Palm Ave Healdsburg, CA 95448	HMBP	9/4/2020	Routine	Linda Collister	Healdsburg FD
10159581	49-002-600258	Healdsburg Pool Service	14 Healdsburg Ave Ste A Healdsburg, CA 95448	HMBP	9/4/2020	Routine	Linda Collister	Healdsburg FD
10159581	49-002-600258	Healdsburg Pool Service	14 Healdsburg Ave Ste A Healdsburg, CA 95448	Stormwater	9/4/2020	Routine	Linda Collister	Healdsburg FD
10112788	49-002-600047	SYAR Industries - Healdsburg Facility	13666 healdsburg ave healdsburg, CA 95448	APSA Tier II	9/3/2020	Routine	Linda Collister	Healdsburg FD
10112788	49-002-600047	SYAR Industries - Healdsburg Facility	13666 healdsburg ave healdsburg, CA 95448	Hazardous Waste Generator SQG	9/3/2020	Routine	Linda Collister	Healdsburg FD
10112788	49-002-600047	SYAR Industries - Healdsburg Facility	13666 healdsburg ave healdsburg, CA 95448	HMBP	9/3/2020	Routine	Linda Collister	Healdsburg FD
10112788	49-002-600047	SYAR Industries - Healdsburg Facility	13666 healdsburg ave healdsburg, CA 95448	Stormwater	9/3/2020	Routine	Linda Collister	Healdsburg FD
10129438	49-002-600307	Dry Creek Water Treatment	550 Westside Rd Healdsburg, CA 95448	HMBP	9/2/2020	Routine	Linda Collister	Healdsburg FD
10120300	49-002-600208	Santa Rosa Lead Products, LLC	33 South University Street Healdsburg, CA 95448	Hazardous Waste Generator SQG	9/2/2020	Routine	Linda Collister	Healdsburg FD
10120300	49-002-600208	Santa Rosa Lead Products, LLC	33 South University Street Healdsburg, CA 95448	Stormwater	9/2/2020	Routine	Linda Collister	Healdsburg FD
10492477	49-002-600496	Blanchard Family Wines	109 W North St Healdsburg, CA 95448	Stormwater	9/2/2020	Routine	Linda Collister	Healdsburg FD
10120300	49-002-600208	Santa Rosa Lead Products, LLC	33 South University Street Healdsburg, CA 95448	HMBP	9/2/2020	Routine	Linda Collister	Healdsburg FD
10492477	49-002-600496	Blanchard Family Wines	109 W North St Healdsburg, CA 95448	HMBP	9/2/2020	Routine	Linda Collister	Healdsburg FD
10729276	49-002-600387	Healdsburg Door and Sash	1464 Grove St # C Healdsburg, CA 95448	HMBP	9/1/2020	Routine	Linda Collister	Healdsburg FD
10729276	49-002-600387	Healdsburg Door and Sash	1464 Grove St # C Healdsburg, CA 95448	Stormwater	9/1/2020	Routine	Linda Collister	Healdsburg FD
10112908	49-002-600235	Cats4u	13503 Healdsburg Ave Healdsburg, CA 95448	Stormwater	9/1/2020	Routine	Linda Collister	Healdsburg FD
10112908	49-002-600235	Cats4u	13503 Healdsburg Ave Healdsburg, CA 95448	APSA Tier I	9/1/2020	Routine	Linda Collister	Healdsburg FD
10112908	49-002-600235	Cats4u	13503 Healdsburg Ave Healdsburg, CA 95448	Hazardous Waste Generator SQG	9/1/2020	Routine	Linda Collister	Healdsburg FD
10665700	49-002-600280	Selby Winery	498 Moore Ln Healdsburg, CA 95448	HMBP	9/1/2020	Routine	Linda Collister	Healdsburg FD
10112908	49-002-600235	Cats4u	13503 Healdsburg Ave Healdsburg, CA 95448	HMBP	9/1/2020	Routine	Linda Collister	Healdsburg FD

10112848	49-002-600056	healdsburg transmission	40 mill st healdsburg, CA 95448	Hazardous Waste Generator SQG	8/31/2020	Routine	Linda Collister	Healdsburg FD
10752373		Groundwater Pump & Well	160 Grant Ave Ste D Healdsburg, CA 95448	HMBP	8/31/2020	Routine	Linda Collister	Healdsburg FD
10454362	49-002-600397	Central Valley Builders Supply	160 Grant Ave Ste B Healdsburg, CA 95448	HMBP	8/31/2020	Routine	Linda Collister	Healdsburg FD
10112848	49-002-600056	healdsburg transmission	40 mill st healdsburg, CA 95448	Stormwater	8/31/2020	Routine	Linda Collister	Healdsburg FD
10112848	49-002-600056	healdsburg transmission	40 mill st healdsburg, CA 95448	HMBP	8/31/2020	Routine	Linda Collister	Healdsburg FD
10120927	49-002-600422	carl's jr.	1037 vine street healdsburg, CA 95488	HMBP	8/31/2020	Routine	Linda Collister	Healdsburg FD
10109587	49-002-600527	OAKMOUND CEMETERY	601 Piper St Healdsburg, CA 95448	Hazardous Waste Generator SQG	8/14/2020	Routine	Linda Collister	Healdsburg FD
10109587	49-002-600527	OAKMOUND CEMETERY	601 Piper St Healdsburg, CA 95448	HMBP	8/14/2020	Routine	Linda Collister	Healdsburg FD
10125466	49-002-600418	AutoHouse Healdsburg	1401 A Grove Healdsburg, CA 95448	Stormwater	8/13/2020	Routine	Linda Collister	Healdsburg FD
10403557	49-002-600423	Manzanita Creek Winery	1441 A, B & D Grove Street Healdsburg, CA 95448	HMBP	8/13/2020	Routine	Linda Collister	Healdsburg FD
10125466	49-002-600418	AutoHouse Healdsburg	1401 A Grove Healdsburg, CA 95448	Hazardous Waste Generator SQG	8/13/2020	Routine	Linda Collister	Healdsburg FD
10117960	49-002-600273	Waterbury's Outdoor Power Equipment, Inc.	1448 Grove St., Healdsburg, CA 95448	Hazardous Waste Generator SQG	8/13/2020	Routine	Linda Collister	Healdsburg FD
10112755	49-002-600470	Trust Winery, LTD	1500 Grove Street Healdsburg, CA 95448	Stormwater	8/11/2020	Routine	Linda Collister	Healdsburg FD
10112755	49-002-600470	Trust Winery, LTD	1500 Grove Street Healdsburg, CA 95448	HMBP	8/11/2020	Routine	Linda Collister	Healdsburg FD
10484812	49-002-600243	Village Smith	1446 Grove St # A, Healdsburg, CA 95448	Hazardous Waste Generator SQG	8/11/2020	Routine	Linda Collister	Healdsburg FD
10484812	49-002-600243	Village Smith	1446 Grove St # A, Healdsburg, CA 95448	Stormwater	8/11/2020	Routine	Linda Collister	Healdsburg FD
10120276	49-002-600417	cycleworks	1401 b grove st healdsburg, CA 95448	Hazardous Waste Generator SQG	8/11/2020	Routine	Linda Collister	Healdsburg FD
10120276	49-002-600417	cycleworks	1401 b grove st healdsburg, CA 95448	Stormwater	8/11/2020	Routine	Linda Collister	Healdsburg FD
10112935	49-002-600366	Rotten Robbie #63	535 Healdsburg Ave Healdsburg, CA 95448	HMBP	7/30/2020	Routine	Linda Collister	Healdsburg FD
10112935	49-002-600366	Rotten Robbie #63	535 Healdsburg Ave Healdsburg, CA 95448	Hazardous Waste Generator SQG	7/30/2020	Routine	Linda Collister	Healdsburg FD
10112935	49-002-600366	Rotten Robbie #63	535 Healdsburg Ave Healdsburg, CA 95448	Stormwater	7/30/2020	Routine	Linda Collister	Healdsburg FD
10112935	49-002-600366	Rotten Robbie #63	535 Healdsburg Ave Healdsburg, CA 95448	UST DW	7/30/2020	Routine	Linda Collister	Healdsburg FD
10112806	49-002-600245	General Dynamics OTS Healdsburg - Grove	511 Grove Street Healdsburg, CA 95448	HMBP	6/12/2020	Routine	Linda Collister	Healdsburg FD
10112806	49-002-600245	General Dynamics OTS Healdsburg - Grove	511 Grove Street Healdsburg, CA 95448	Hazardous Waste Generator SQG	6/12/2020	Routine	Linda Collister	Healdsburg FD
10399522	49-002-600561	Healdsburg Chevron & Carwash	1496 Healdsburg Ave Healdsburg, CA 95448	Stormwater	5/28/2020	Routine	Linda Collister	Healdsburg FD
10399522	49-002-600561	Healdsburg Chevron & Carwash	1496 Healdsburg Ave Healdsburg, CA 95448	Hazardous Waste Generator SQG	5/28/2020	Routine	Linda Collister	Healdsburg FD
10399522	49-002-600561	Healdsburg Chevron & Carwash	1496 Healdsburg Ave Healdsburg, CA 95448	HMBP	5/28/2020	Routine	Linda Collister	Healdsburg FD
10399522	49-002-600561	Healdsburg Chevron & Carwash	1496 Healdsburg Ave Healdsburg, CA 95448	UST DW	5/28/2020	Routine	Linda Collister	Healdsburg FD
10112680	49-002-600236	Fast Lane Gas #2	111 Healdsburg Ave Healdsburg, CA 95448	UST DW	4/14/2020	Routine	Linda Collister	Healdsburg FD
10112773	49-002-600508	Flyers # 476	1221 Healdsburg Ave Healdsburg, CA 95448	UST DW	2/13/2020	Routine	Ruben Mandujano	Healdsburg FD
10112785	49-002-600098	Healdsburg Airport	1500 Lytton Springs Rd Healdsburg, CA 95448	HMBP	2/4/2020	Routine	Linda Collister	Healdsburg FD
10112785	49-002-600098	Healdsburg Airport	1500 Lytton Springs Rd Healdsburg, CA 95448	UST DW	2/4/2020	Routine	Linda Collister	Healdsburg FD
10112785	49-002-600098	Healdsburg Airport	1500 Lytton Springs Rd Healdsburg, CA 95448	Hazardous Waste Generator SQG	2/4/2020	Routine	Linda Collister	Healdsburg FD
10112785	49-002-600098	Healdsburg Airport	1500 Lytton Springs Rd Healdsburg, CA 95448	Stormwater	2/4/2020	Routine	Linda Collister	Healdsburg FD
10632283	49-002-600483	Black Iron Inc	160 Suite A Grant Ave Healdsburg, CA 95448	HMBP	1/14/2020	Routine	Linda Collister	Healdsburg FD
10772248	49-002-600553	Wilson Utility Construction - Healdsburg Yard	13604 Healdsburg Avenue Healdsburg, CA 95448	HMBP	1/14/2020	Routine	Linda Collister	Healdsburg FD
10120882	49-002-600025	Capricorn Automotive	30 Mill Street Suite E Healdsburg, CA 95448	Hazardous Waste Generator SQG	1/14/2020	Routine	Linda Collister	Healdsburg FD
10772248	49-002-600553	Wilson Utility Construction - Healdsburg Yard	13604 Healdsburg Avenue Healdsburg, CA 95448	Stormwater	1/14/2020	Routine	Linda Collister	Healdsburg FD
10120882	49-002-600025	Capricorn Automotive	30 Mill Street Suite E Healdsburg, CA 95448	HMBP	1/14/2020	Routine	Linda Collister	Healdsburg FD
10632283	49-002-600483	Black Iron Inc	160 Suite A Grant Ave Healdsburg, CA 95448	Stormwater	1/14/2020	Routine	Linda Collister	Healdsburg FD
10454266	49-002-600377	Nick Barbieri Trucking, LLC	13604 Healdsburg Ave Healdsburg, CA 95448	HMBP	1/14/2020	Routine	Linda Collister	Healdsburg FD
10454266	49-002-600377	Nick Barbieri Trucking, LLC	13604 Healdsburg Ave Healdsburg, CA 95448	Stormwater	1/14/2020	Routine	Linda Collister	Healdsburg FD

10120882	49-002-600025	Capricorn Automotive	30 Mill Street Suite E Healdsburg, CA 95448	Stormwater	1/14/2020	Routine	Linda Collister	Healdsburg FD
10122709	49-002-600230	Bells Ambulance	503 Powell Ave Healdsburg, CA 95448	Hazardous Waste Generator SQG	1/10/2020	Routine	Linda Collister	Healdsburg FD
10122709	49-002-600230	Bells Ambulance	503 Powell Ave Healdsburg, CA 95448	HMBP	1/10/2020	Routine	Linda Collister	Healdsburg FD

ATTACHMENT 4 – Sewer Spill Response Plan

City of Healdsburg

Sewer System Spill Response Plan



Prepared by:

The City of Healdsburg Public Works Department
Operations & Maintenance
Phone: 707-431-3346
February 2011

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Spill Notification and Response Procedures

A spill, as defined by the State Water Quality Resources Control Board, is any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into surface waters or drainage channels that is not permitted or authorized by a regulatory agency. A spill also includes unauthorized discharge to land that poses a public health threat.

In the event of an actual or potential spill, overflow, or bypass in the sewer collection system or at the treatment facility, the following spill notification and response procedures should be followed.

The person taking the report of the event (usually the Police Dispatcher, Community Development Center (CDC) or Public Works Department office staff), is to:

1. Collect and record the following critical data:

- Caller's name and contact information.
- Location of the spill. What is occurring? How long have they observed it (what time did it start)? Do they know how it happened? How did they notice it?
- Is the spill running into a creek, river, storm drain, or other surface water?

2. Notify and provide the reported information to the following people immediately.

Notification shall first be made by telephone (on-call cellular telephone first, then home or work - depending on the time of day, day of the week, etc). The first person notified is the Public Works First Responder (defined as the first person on scene). If no response is received within five (5) minutes of initial call, then call the next on call person (there are three people on call at all times) or call the Supervisor or Foreman. All required contact phone numbers can be found in the Public Works contact list (please see attached).

There are three Public Works on-call employees: one Utility Worker, one Utility Operator – Water, and one Utility Operator- Wastewater. One of these employees can be reached 24-hours per day through their City cell phone. If unable to contact any of the on-call staff, contact:

- Utility Maintenance Foreman, Wastewater Foreman and/or Water Foreman

or

- Public Works Maintenance Supervisor

If the caller indicates that surface waters (i.e. creek, storm drain inlet, storm drain, river etc) are threatened, or if the spill or overflow has reach surface waters or that private property has been damaged; the First Responder shall verify this once upon arriving on-site. The Foreman and/or Maintenance Supervisor must be notified immediately by the First Responder. The Foreman or Maintenance Supervisor will notify the Deputy PW Director & Public Works Director if needed.

3. In the event that additional assistance is needed to handle the event, the other on-call Public Works personnel shall be notified as requested by the First Responder. All additional responding employees are to provide assistance as directed by First Responder or Foreman/ Maintenance Supervisor, as applicable.

Responding Personnel

In the event of a spill, the **First Responder** shall:

1. Assess the situation and call for additional personnel and equipment to respond as necessary. If the spill volume or other circumstances surrounding the spill are determined to be from a source other than the City's public utility system (i.e. hazardous materials etc), the Police Dispatcher shall be informed so that the Healdsburg Fire Department can be called to respond and control the event, which shall be turned over to the Fire Department upon their arrival.
2. Assemble a team of Public Works personnel that will take appropriate actions, such as securing additional equipment, clearing the line blockage, containment, cleanup, and mitigation of the spill. Vehicle and pedestrian traffic shall be re-directed around the spill area by public safety officers, and/or traffic barricades and cones.
3. Notify a Foreman or the Maintenance Supervisor immediately if surface waters are impacted or private property is damaged by the event. The Foreman or Maintenance Supervisor will contact the Deputy PW Director & Public Works Director if needed.
4. Investigate and note blockage and/or spill details, including location(s), cause, duration, flow rate and volume of spill. Provide this information to Foreman or the Maintenance Supervisor.
5. Document the spill site with pictures, and document any unusual conditions that have caused or contributed to the spill.
6. As soon as possible, but not later than 2-hours after becoming aware of the unauthorized discharge, contact the California Emergency Management Agency (CAL-EMA), who will provide a control number for the spill for future reference. CAL-EMA- 800-852-7550 (24-hour number).
7. As soon as possible but not later than 2-hours of becoming aware of the unauthorized discharge, contact the County Environmental Health Division, (707-565-6565) during working hours, or REDCOM (707-568-5992) after work hours.
8. As soon as possible but not later than 2-hours after becoming aware of the unauthorized discharge, contact the Regional Water Quality Control Board must be contacted (707-576-2220, after hours pager 707-323-4945.)
9. Within 24-hours of becoming aware of the unauthorized discharge, complete the "Certification of Discharge Notification" form and fax the form to 707-523-0135
10. Within 5- business days of the event, submit a written report to the RWQCB with the information described in Table 3 and the Spill Response Form.

Response Team

To protect receiving waters, the **response team** must:

- Stop the overflow/spill;
- Divert spill away from receiving waters/storm drains;
- Contain the overflow/spill;
- Clean up and mitigate the overflow/spill;
- Set up traffic control (if needed);
- Take pictures of incident, and if possible photograph the cause of the spill;
- Collect receiving water samples (see directions below) if receiving waters are contaminated or suspected to be contaminated
- Contact CAL-EMA, RWQCB, County Environmental Health Division and the Foreman/Maintenance Supervisor, who will contact the Public Works Director if necessary;
- Within 24-hours complete and fax the Certification of Discharge Notification form to the RWQCB; and
- Video the line (if possible and necessary) within a week of the spill

Sampling: Spill kits are located at the PW O&M Warehouse and one at the Water Reclamation Facility. The spill kits contain specific directions for sampling. Samples should be taken immediately upstream and downstream of the spill, as well as from the spill itself. The on-call Wastewater Operator is called to analyze the samples. The samples should be analyzed for the following constituents at each location: Biological Oxygen demand (BOD, 5-day), Total Suspended Solids (TSS), Ammonia (NH₃N), Nitrate (NO₃N), Total and Fecal coliform, pH, Dissolved Oxygen, and chlorine residual.

Note: Dissolved oxygen, pH, Cl₂ residual are analyzed by Public Works staff.

Responsibilities

The **First Responder** will arrive on scene, assess the situation, and determine if more personnel crews are needed to assist with the situation. Once other Public Works personnel arrive, if needed, the First Responder should assign tasks such as mitigation efforts, traffic control, sampling etc.

The First Responder will also:

- Immediately report any Sanitary Sewer Overflows (SSO) by telephone to CAL-EMA, RWQCB & Environmental Health.
- Call the Foreman or Maintenance Supervisor, collect samples, and complete a spill response form and submit the form to their Foreman/Supervisor. The Foreman/Supervisor will fax the Certification of Discharge Notification Form to the RWQCB with 24-hours. The Foreman/Supervisor will submit the form to the RWQCB within 5-days of the event.

The **Foreman**, **Maintenance Supervisor**, and/or **Public Works Director**, will:

1. Ensure spill notification and response procedures are followed.
2. Investigate the spill in sufficient detail to determine the cause, extent, and required follow-up.
3. The following people will be notified:

City Management – The Deputy PW Director or the Public Works Director, will notify the City Manager, of any major collection system spill, a spill impacting surface waters or damaging private property, any chemical release, or any major discharge permit violation.

Redwood Empire Municipal Insurance Fund (REMIF) – If private property is damaged, the on-call REMIF personnel shall be notified as soon as possible by the Foreman, Supervisor or Public Works Director.

Others - If the incident involves a threat to public waterways, in addition to the mandatory notification to CAL-EMA, RWQCB & County Environmental Health Division, the Foreman, Supervisor or Public Works Director will notify as appropriate:

- California Department of Fish and Game
- Department of Public Health
- Sonoma County Water Agency

Details of the Spill

Information to be provided verbally to CAL-EMA & RWQCB includes:

- Name and contact information of caller
- Date, time the spill was discovered and specific location of SSO occurrence
- Estimated volume in gallons (total amount recovered and amount entering a surface water, rate of flow, and spill duration)
- Whether or not the spill entered a surface water
- Cause of spill
- CAL-EMA control number (provide to the RWQCB)
- Detailed description of cleanup actions taken and corrective action
- Responding agencies (Healdsburg Public Works, HFD, HPD etc)
- Whether or not samples were taken
- Information provided in verbal notification
- Other agencies notified by phone
- Disposal of contaminants (trash, WRF etc)

Please see that attached Table 3: Spill Response Form

Contact Phone Numbers

<u>Name/Radio</u>	<u>Work#</u>	<u>Home#</u>	<u>Cell#</u>
DeWayne Burgess/52	431-3485	479-6774	362-6147
Terry Conway/40	431-3365	894-9122	480-6084
Jarrod Dericco/69	431-3485	888-8035	799-2623
Brian Diamantini/49	473-4495	431-0246	799-2624
Victor Halverson/68	431-3485	433-9278	480-0482
David Hambly/45	473-4479	431-8918	217-2531
Charlie Jurecek/97	431-3345	433-3653	217-9205
Ryan Kirchner/44	431-3570	541-643-0901	217-8189
Jaime Licea//58	431-3485	433-2699	293-0762
Rich McMahon/53	431-3435	217-2201	481-4347
Bob Millar/63	431-3349	537-1826	481-8532
Al Ochoa/61	431-3569	837-8837	217-6768
Allen Roseberry/ 54	431-3331	578-7460	696-3164
Rob Scates/47	473-4479	546-1099	236-0970
Claire Simpson/65	473-4479	542-3438	696-3161
Suzanne Stephensen/60	431-3575	874-2537	484-6236
Eddie Uribe/50	473-4479	478-7432	481-4606
Jorge Valencia/57	431-3331	799-2692	362-0122
Greg Way/66	431-3485	217-5882	953-7276
Mike Kirn/95	431-3333	209-723-9386	559-493-8829

Foreman:

**Wastewater Utility Foreman-
Water Utility Foreman-
Maintenance Utility Foreman-**

**Brian Diamantini
Allen Roseberry
Jaime Licea**

**Deputy Public Works Director
Public Works Director-**

Mike Kirn

Spill Notification Procedures Contact Information

(Outside Agencies)

California Emergency Management Agency (CAL-EMA)

State	1(800) 852-7550 (24-hour)
Local	565-1152
FAX	565-1172

Regional Water Quality Control Board (RWQCB) - North Coast Region

General #	576-2220
Kathryn Goodwin	576-2687 (Sewer overflows)
Mona Dougherty	570-3761 (Storm water)
After-hours pager	323-4945
Fax	523-0135

Sonoma County Environmental Health Division

Local #	565-6565
After hours	568-5992 (REDCOM)

CA Department of Fish and Game

Local	944-5500
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Department of Public Health – Office of Drinking Water, Santa Rosa District

Office	576-2145
Marianne Watada	576-2076

Sonoma County Water Agency

Operations	523-1070
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Town of Windsor

Operations	838-1000 (24-hours)
Mike Cave, Water Systems Sup.	217-8623 (cell)
	838-5329 (desk)
Richard Bartlett, PW Manager	301-0838 (cell)
	838-5309 (desk)

Redwood Empire Municipal Insurance Fund (REMIF)

Main office -	938-2388
Fax	539-7691

Ed Chascho (cell)	548-2165
Ed Chascho (home)	584-7990

Healdsburg Fire Department	431-3360
Healdsburg Police Department	431-3377

Table 1: Spill Reporting Fact Sheet

Required Communication	Agency to Contact (all are required)	Time Requirements	Contact Method
1. Notification	California Emergency Management Agency (CAL-EMA)	As soon as possible, but not later than 2-hours after becoming aware of the unauthorized discharge	Telephone- (800) 852-7550 CAL-EMA will provide a control number for future reference to the spill
	Sonoma County Environmental Health Division	As soon as possible, but not later than 2-hours after becoming aware of the unauthorized discharge	Telephone – 707-565-6565 Environmental Health After hours – REDCOM 568-5992
	Regional Water Quality Control Board	As soon as possible, but not later than 2-hours after becoming aware of the unauthorized discharge	RWQCB Kathryn Goodwin Office: 576-2687 After hours: 323 -4945 (on call staff member)
2. Certification Discharge Notification	Regional Water Quality Control Board	As soon as possible, but not later than 24-hours after becoming aware of the unauthorized discharge- Fax the form to: 523-0135	Fax the form to RWQCB Kathryn Goodwin Fax # 707-523-0135.
3. Reporting	Regional Water Quality Control Board	Within 5 business days, submit a written report to your Regional Board	Fax or hand deliver Hand delivery & date stamp a copy for our files or Fax: 523-0135. Keep fax confirmation & fall up with a phone call 576-2220

Table 2: Spill Responsibilities Flow Chart

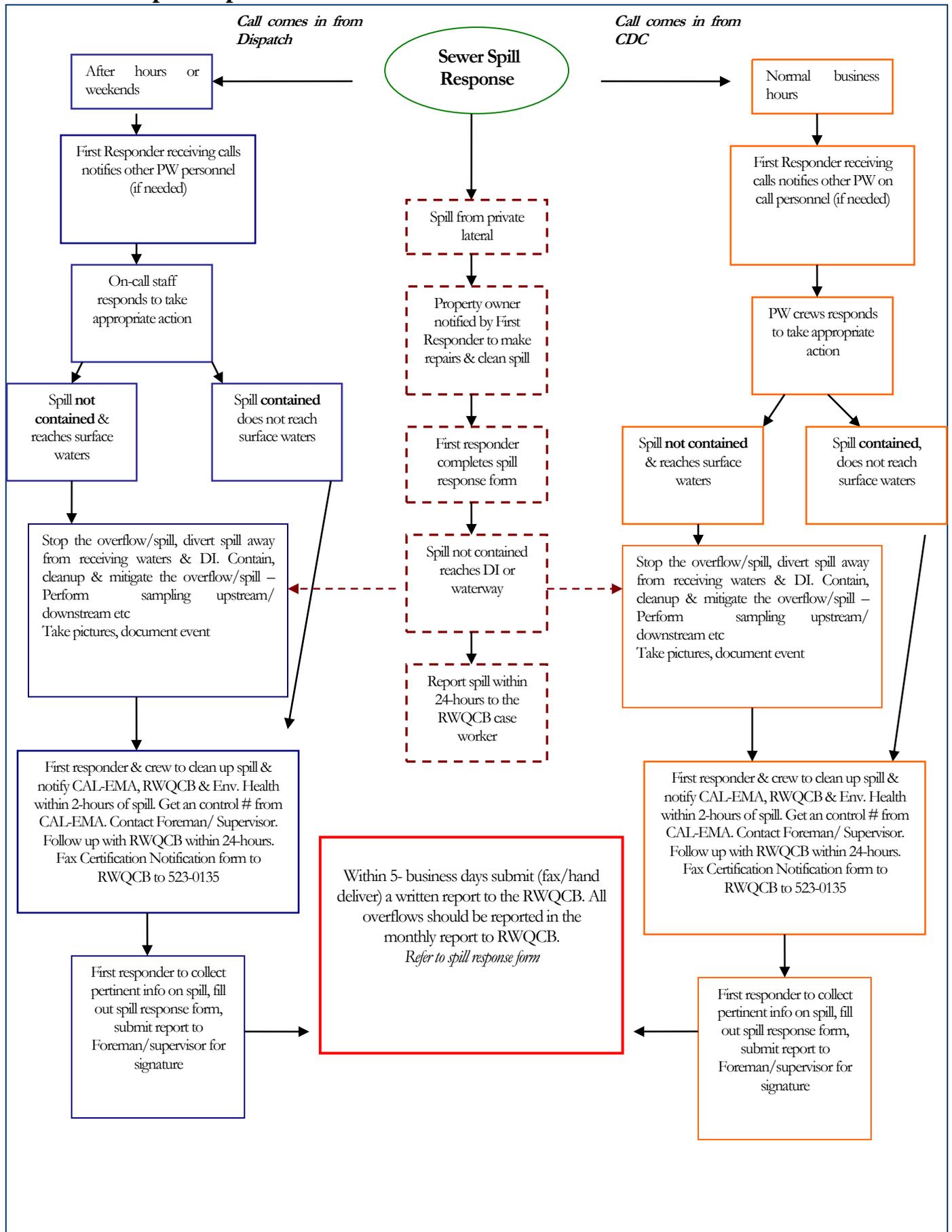


Table 3: Spill Response Form

SANITARY SEWER OVERFLOW REPORT FORM

First Responder:	Date:	Time Reported:
Time Arrived on Scene:	When was the spill first observed?	
Name of Reporting Party:	Contact Information (Phone Number):	
Specific Location of spill:		
Description (sewage, potable water, other):		
Estimated Volume in gallons:	Estimated Flow (if continuous):	
Downstream Impact (surface waters, storm drains, private property, etc):		
Estimated Amount of spill recovered and/or contained:		
Disposal of Contaminants (where):		
Were Samples Taken (Yes or No)?		
Notification within two hours (who & when):		
CA Emergency Management Agency (CAL-EMA): 800-852-7550	Name & Time	Control #
RWQCB 707-576-2220 or pager- 707-323-4945	- Name & Time	
County Environmental Health Division 707-565-6565 or REDCOM 707-568-5992	Name & Time:	
Additional Information, including corrective action taken		

Continued

SANITARY SEWER OVERFLOW REPORT FORM

ADDITIONAL IN-HOUSE CHECK LIST FOR REPORTING INFORMATION

Time called by dispatch	
Location of spill	
First unit on scene (i.e. Vac-con , Harben, HPD, HFD etc)	
Next unit on scene	
Blockage was cleared at what time?	
All contaminants were recovered at what time?	
Units released at what time?	
Disposal of contaminants?	
Picture documentation?	
CONTACTS	
<input type="checkbox"/> CAL-EMA	Name: Control #
<input type="checkbox"/> Environmental Health	Name: Date/Time
<input type="checkbox"/> RWQCB	Name: Date/Time
<input type="checkbox"/> SCWA	Name: Date/Time
<input type="checkbox"/> Supervisor/Foreman	Name: Date/Time
<input type="checkbox"/> REMIF	Name: Date/Time
<input type="checkbox"/> Department of Fish & Game	Name: Date/Time

CERTIFICATION OF DISCHARGE NOTIFICATION

To: North Coast Regional Water Quality Control Board

Fax #: 707-523-0135

From:

Date:

Subject:

The City of Healdsburg hereby certifies that after becoming aware of a discharge the State Office of Emergency Services (OES), Regional Water Quality Control Board, and the County of Environmental Health have been notified within the required two-hour period. Please check one of the following that apply:

- Category 1- All discharges of sewage resulting from a failure in the enrollee's sanitary sewer system that:
 - equal or exceed 1000 gallons or
 - result in a discharge to a drainage change and/or surface water; or
 - discharge to storm drain that was not fully captured & returned to the sanitary sewer system

- Category 2-All other discharges of sewage resulting from a failure in the Enrollee's sanitary sewer system

- Private Lateral Sewage discharges- Sewage discharges that are caused by blockages or other problems within a privately owned lateral.

Date/Time when CITY OF HEALDSBURG was notified of discharge:	
Discharge Location:	
<input type="checkbox"/> Notified Office of Emergency Services:	
OES Control # :	
Name of contacted person:	
Date :	Time:
<input type="checkbox"/> Notified County Environmental Health	
Name of contacted person:	
Date :	Time:
<input type="checkbox"/> Regional Water Quality Control Board	
Name of contacted person	
Date:	Time:
Fax sent by:	Phone Number:
Date:	Time:

FAX TO NORTH COAST RWQCB NO LATER THAT 24 HOURS AFTER DISCHARGE

Signature _____

ATTACHMENT 5 – UV Operations Plan (2021 Update)



Water Reclamation Facility UV Disinfection Operations Plan Update 2021

Prepared in compliance with Title 22 Engineering Report Addendum and Update

Rob Scates, Water & Wastewater Operations Superintendent
Patrick Fuss, Water & Wastewater Principal Engineer
David Hambly, Wastewater Operations Foreman

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1 SYSTEM OVERVIEW

1.1 System Components

The TrojanUV3000Plus™ is made up of several components:

- System Control Center (SCC)
- Power Distribution Center (PDC)
- UV Modules
- UV Sensor
- Water Level Control
- ActiClean™ Cleaning System and Hydraulic Systems Center (HSC)
- On-line UV Transmittance Controller and Sensor
- Water Level Sensor

System Control Center (SCC)

The SCC is an enclosure that contains all of the hardware required for central control of the system. It includes a PLC, the Operator Interface, input/output connections and communication hardware. The SCC is also equipped with an extensive alarm reporting system to ensure fast and accurate diagnosing of system process and maintenance alarms.

Power Distribution Center (PDC)

The PDC powers each bank of modules and typically spans the width of the channel. In some installations, a double-sided PDC services two banks in series.

The PDC distributes power from the main electrical service out to the modules in the bank. It contains the communication and control equipment for the bank(s) of lamps.

UV Modules

The UV lamps are mounted in modules installed in open channels. The lamps are enclosed in quartz sleeves, which are positioned horizontally and parallel to the direction of flow. A bank or reactor is made up of modules that are placed in parallel positions and spaced 3, 3.5 or 4 inches (76, 89 or 102 mm) apart, depending on the system design. The number of lamps and lamp spacing in a UV module depends on effluent quality and flow rate. Systems are available in 4, 6, or 8 lamp modules. The module/bank configuration is determined by Trojan Technologies Inc. and is based on relevant information collected from the site.

UV Sensor

The patented UV Sensor measures the UV intensity within each bank of modules. As only one UV Sensor is required per bank of lamps, the sensor is located in the center module of the bank's lamps. If an odd number of modules are used, the UV Sensor is located within the middle module. If there is an even number of modules the UV Sensor is located in one of the two middle modules.

The UV Sensor incorporates a radiant collector that gathers light from adjacent lamps. The light is funneled to the photosensitive material and is converted into an analog signal displayed in milliwatts per square centimeter at the Operator Interface at the SCC.

Water Level Control

A weir is used to maintain the appropriate water level over the lamps at all flows. Maintaining control of the water level ensures uniform UV exposure and protects the system by keeping the lamps submerged.

ActiClean™ Cleaning System (ACS) and Hydraulic Systems Center (HSC)

If the ACS is used, a magnetically coupled submersible wiper drive is supplied on each UV module. This patented design drives a wiper carriage assembly with attached wiper canisters along the UV modules. The wiper canisters surround each quartz lamp sleeve and are filled with a Trojan approved cleaning agent. Cleaning takes place when the cleaning fluid in the wiper canisters contacts the lamp sleeves between two wiper seals.

Cleaning is achieved mechanically with the scraping action of the wiper seals and chemically by the chemical reaction between the cleaning agent and the build-up on the sleeves. The cleaning takes place while the lamps are submersed and while the lamps are operating.

All the lamp sleeves within the bank are cleaned simultaneously. The frequency of cleaning is adjustable at the Operator Interface in the SCC.

The ACS is hydraulically actuated using the HSC, which is a stainless steel enclosure located in close proximity to the UV channel as shown or attached directly to the PDC (not shown). The HSC contains the pump, valves, and reservoir for the ACS. The HSC pumps hydraulic fluid to manifolds resting below the PDC(s). Extend and retract hoses from each module are plugged into the manifold to complete the hydraulic loop. The fluid is used to extend and retract the magnetically coupled wiper drive on each module.

Water Level Sensor

Another feature is the standard Low Water Level Sensor or an optional High/Low Water Level Sensor. These sensors are positioned down stream of the UV system banks and will trigger and display an alarm at the SCC when these water level conditions are detected.

The standard Low Water Level Sensor will shutdown the UV system when it detects a low water event.

On-line UV Transmittance Controller and Sensor

The Hach SC100 Controller and UVAS sc Sensor sample and measure the percent of UV transmittance (%T) in the effluent. The results are communicated to the SCC from the SC100 Controller and are used to adjust the UV dose in conjunction with flow signals and lamp age.

1.2 Operations Overview

Control System Overview

The TrojanUV3000Plus™ is designed to operate automatically. Each system is custom sized and programmed to meet site-specific objectives.

The operation of the TrojanUV3000Plus™ is managed at the SCC by its PLC controller, which continuously monitors and controls the system's functions. The controller is the brain of the TrojanUV3000Plus™ control system and communicates with the Operator Interface, PDC and HSC. Custom electronics, pressure switches and water level sensor provide the controller with the necessary system parameters.

The Operator Interface allows complete control and monitoring of the TrojanUV3000Plus™.

The TrojanUV3000Plus™ operates using an automatic dose paced control system, to maintain an adequate UV dosage for the effluent flow conditions while conserving power.

The power to the UV lamps is automatically adjusted in response to analog inputs from the flow meter and optional UVT. If the UVT is not used, a single representative UV transmittance value can be manually input. These inputs are continually monitored in the SCC and the corresponding power setting is adjusted (i.e., turned up/down or on/off) in response to changes in flow or effluent quality. The SCC acts as the brain of the system as it receives input from all of the system monitoring devices and enables the lamps to respond accordingly.

A level control device is positioned just downstream of the reactor to maintain water over the lamps at all flows.

Each module bank uses a Communications Control Board (CCB), which controls and monitors the lamp, ballast and bank status. The CCB is located within the PDC. All communications to and from the PDC travel to the CPU module in the SCC through a RS485 serial link. The SCC polls each CCB in sequence to continually update the status of modules and ballasts. The messages are decoded by the controller and then checked for errors prior to displaying the data on the Status screen.

The input/output card in the SCC receives two analog signals that indicate:

- flow from the plant effluent flow meter, and
- percent Transmittance (%T) from the optional UV Transmittance Controller and Sensor.

These analog signals are communicated to the SCC via wires connected to the two analog inputs on the input/output (I/O) card in the SCC.

Alarm History and Alarm Summary screens provide the operator with an indication of system faults as they occur.

An auto answer modem located in the SCC permits off-site Trojan personnel to monitor system performance and assist in diagnosing faults.

ActiClean™ Cleaning System

The frequency of ActiClean™ cleaning is set by the operator and then implemented by the SCC.

Cleaning frequency is adjusted depending on the fouling rate and may be programmed to operate as frequently as once per hour. The recommended cleaning schedule in typical conditions is once every 24 hours.

The cleaning system can also be manually controlled using the Wiper Selector switches located on the HSC.

All modules in a bank are cleaned simultaneously. Each module is fitted with a patented magnetically coupled wiper drive and one wiping canister per lamp. Hydraulic fluid within the rod pushes the internal piston of the wiper drive to extend or retract depending on the direction of flow.

During a cleaning sequence, the solenoid opens and distributes hydraulic fluid from the HSC to the manifold underneath the PDC which then distributes fluid to each module via the hydraulic extend line. To retract the wiper drive, the solenoid switches and the direction of hydraulic fluid flow is reversed.

Healdsburg WRF UV Disinfection Dosage Calculation

$$\text{Dose} = (\text{CF}) * (\text{FF}) * (\text{EOLL}) * 10^{-4.63 - (0.7 * \log \text{Flow}) + (2.91 * \log \text{UVT}) + (1.09 * \log \text{P})}$$

Where:

- I. Dose = Delivered UV dose per bank (milliJoules/cm²)
- II. CF = (-0.003*UVT) + 1.075, Correction Factor to the 2005 bioassay
- III. FF = 0.95, Fouling Factor based on cleaning frequency of once every 24 hours
- IV. EOLL = 0.91, End Of Lamp Life factor for Heraeus lamp
- V. UVT = % UV transmittance at 254 nanometers (%)
- VI. Flow = Flow rate in gallons per minute per lamp (GPM/lamp) calculated as GPM divided by the number of lamps in one bank (64)
- VII. P = Percent power (%)

UV Diversion Activation Contingency Plan

The following are Critical Alarms:

- High combined turbidity > 0.40 NTU
- Low UV Dose <87 mJ/cm²
- Hydraulic MAX FLOW exceeded
- Insufficient number of UV banks available
- UVT signal fault
- Flow signal fault
- Low Water Level Shutdown
- Low UVT <65%

Any time one of these conditions triggers an effluent diversion gate closure, the cause must be investigated on-site. Please do not reset an effluent diversion gate closure from the SCADA laptop until you physically verify the condition that caused the closure has been addressed and is indeed cleared. The effluent diversion gate is our safeguard against permit violations and fines. In most cases this will allow us to keep insufficiently treated effluent from leaving the plant. Any time effluent is being diverted to the Equalization Pond (EQ), levels must be monitored in the NPW basin, EQ, and pond 1.

Here are some ways to address the critical alarms and resume normal plant operations:

- **High combined turbidity > 0.40 NTU**

Verify the individual tank turbidimeters have not had a corresponding NTU spike. If one or more tanks have had a spike, that tank should have automatically gone to recirculation mode and not continued to discharge. If while in recirculation, a tank continues to have turbidity problems, it can be taken offline and another available tank can be put online. If no individual tank turbidimeter has spiked, check the combined turbidimeter for bulb function, errors, or algae in the cup and clean the turbidimeter. Whatever the cause, the combined turbidimeter must be reading correctly and functioning normally before opening the effluent diversion gate.

- **Low UV Dose <87 mJ/cm²**

UV Diversion Activation Contingency Plan

Check that all UV banks are available, in auto remote, and are healthy, both at the HMI and each HOA switch. Check that there are not too many lamps burned out in each rack of all banks. If there is a technical problem with the lead bank, the other two will automatically start, but that bank should be taken out of lead. Two banks in operation should be enough to handle our maximum flows. But if only one bank is available, the flows will need to be cut back by taking tanks offline and possibly diverting influent at the head works. The dose should be well above 87 mJ/cm^2 and stable before opening the effluent diversion gate. The UV dosing set point is 99 mJ/cm^2 . The alarm can be cleared at the HMI.

- **Hydraulic MAX FLOW exceeded**

The maximum NPDES permitted peak wet weather flow limit for sufficiently treated effluent is 4.0 MGD. The PLC is set so that if 5 tanks are online and running, the maximum flow rate is 555 GPM, or 4.0 MGD rate. If this alarm causes an effluent diversion gate closure, it is likely because one or more tanks are in manual run mode. It is the operator's responsibility to ensure the maximum allowable flow for which the plant is certified is not exceeded while running in manual mode. In most cases, it is recommended that an operator run as many processes as possible in automatic. Another possibility for exceeding maximum flow is a problem with the combined flow meter. An operator can cycle the power or reset the head, but it is likely an Instrumentation Technician needs to get involved to correct a flow meter error. Alarm can be cleared at SCADA. The flow meter must be reliable before opening the effluent diversion gate.

- **Insufficient number of UV banks available**

Check that all UV banks are available, in auto remote, and are healthy, both at the HMI and each HOA switch. One bank might be sufficient for low flows in the summer, but if flows spike, and two banks are required, this alarm might show up. Verify that if a bank is down for maintenance, it is not in the lead. Once there are enough available banks, check that the bulbs are lit on the HMI display – don't look in the channel to see if the bulbs are lit! Alarm can be cleared at the HMI and then the effluent diversion gate can be opened.

- **UVT signal fault**

UV Diversion Activation Contingency Plan

Check the Hach SC100 head for power and that wiring connections are tight. Check the UVT probe and verify it is operating and responsive. One way to do this is to run a manual wiper cycle from the SC100. Cycle the power to the probe to see if it will reset. If the alarm will not clear at the HMI, an Instrumentation Technician will need to get involved to correct the error. If a tech is not available, divert influent at the head works to keep the aeration basins level from getting too high. If the signal has been restored, it will display on the HMI; the alarm can be cleared and the effluent diversion gate can be opened.

- **Flow signal fault**

It is likely there is a problem with the combined flow meter. An operator can cycle the power or reset the head, but it is likely an Instrumentation Technician needs to get involved to correct a flow meter error. Alarm can be cleared at SCADA. The flow meter must be reliable before opening the effluent diversion gate.

- **Low Water Level Shutdown**

This alarm might come in if the level over the UV racks drops due to effluent use at the membrane tanks. For example, the filtrate pump runs backwards to fill the tank, and when there is not enough filtrate, it will draw water out of the header. This problem can be corrected by having sufficient filtrate to both fill the tank and have enough to flow through the UV station. When everything is running in automatic, this problem will be avoided, as the process to fill the tank is inhibited until filtrate flow is adequate. One caution with having a tank fill inhibited is there is a risk of the membranes being exposed to air too long and causing irreversible damage by drying out. Once the UV racks are again submerged, the alarm can be cleared at the HMI and the effluent diversion gate can be opened.

- **Low UVT <65%**

Recent experience has shown that actual low UVT is caused by treating influent pumped from the equalization pond after it has sat too long in the pond and developed algae. It is important in the summer to treat EQ as

UV Diversion Activation Contingency Plan

soon as practical so it does not grow algae. If the EQ pump is running, shut it down and continue processing water diverted back to EQ until the UVT value is above 65% and rising according to the trend screen. This might take some time, so keep an eye on the level in EQ pond, but if necessary can overflow to pond 1, both of which are HDPE lined. Also, check the level continually in the NPW basin. If it can be projected by trends that the basin is going to go dry, connect the well jumper to the head works to supplement process water. Slow water use on as many processes as possible to conserve NPW. Some places where water can be limited are the scum sprayers in the feed channel, stopping the centrifuge if it is running, and slowing the flow to the sprayers at the drum screen. Once UVT starts to improve and is above 65%, the alarm can be cleared at the HMI and the effluent diversion gate can be opened.

ATTACHMENT 6 – Recycled Water Use Permit - Non-Dairy Livestock

RECYCLED WATER PROGRAM APPLICATION & PERMIT NON_DAIRY LIVESTOCK WATERING

CITY OF HEALDSBURG MUNICIPAL UTILITIES DEPARTMENT

401 GROVE STREET
HEALDSBURG, CA 95448-4723
PHONE (707) 431-3346
FAX (707) 431-3140
Visit us at www.healdsburg.gov



APPLICATION

*****SECTION TO BE COMPLETED BY APPLICANT*****

USER INFORMATION:

User's Name (individual): _____

Name of Company: _____

Mailing Address: _____

City/State/ZIP Code: _____

Office Phone: _____ Fax: _____

Primary Contact: _____ Title: _____

Site Supervisor (if applicable): _____

Cell Phone or Other Phone: _____

Email: _____

TRUCK INFORMATION:

Provide the following information for the truck(s) for which a permit is requested. City staff must inspect each truck to determine that it is equipped with the necessary air gap before decal issuance.

Hauling Company Name	License Plate Number	Capacity of Tank or Storage Containers	Vehicle Equipped with Air Gap?	Decals Affixed?

Hauler needs to complete Recycled Water Trucking Program use permit, which is in addition to the Recycled Water for Non-dairy Livestock Watering Permit.

**RECYCLED WATER PROGRAM APPLICATION & PERMIT
NON_DAIRY LIVESTOCK WATERING**

RECYCLED WATER INFORMATION (CHECK ALL THAT APPLIES):

Use of Recycled Water (check all that apply): COMMERCIAL POULTRY NON-DAIRY CATTLE

HORSES MULES DONKEYS NON-DAIRY SHEEP NON-DAIRY GOATS SWINE

Other: _____

Location of Use

Address: _____

City/State/ZIP Code: _____

Container to receive recycled water upon arrival:

Storage Tank (volume) : _____gallons

(onsite storage tanks shall are not be connected to any other water supplies without proper air-gap connection)

Watering Trough (volume) : _____gallons

RECYCLED WATER PROGRAM APPLICATION & PERMIT NON_DAIRY LIVESTOCK WATERING

AGREEMENT:

1. Term This Agreement shall become effective on the date first above written and shall remain in effect from _____, __ 20__ to _____, -20__, delivery period, unless otherwise terminated in accordance with Section 13, below.
2. Quality of Recycled Water The quality of the Recycled Water delivered pursuant to this Agreement shall substantially comply with the quality criteria established by the Order, although the Recycled Water's quality may vary within those criteria. City shall test the Recycled Water as required in the Order to ensure that it substantially complies with the quality criteria set forth in the Order. The results of this testing program shall be available to User for its review upon request at any time during City's normal business hours. The results of said tests shall be maintained at City's WRF and may be reviewed or a copy obtained by User by telephoning City. An annual report of the test values shall be sent by mail to User in accordance with the reporting requirements established in the Order.
3. Delivery Quantities The City will deliver Recycled Water to the Meter Stations for pick up by the Users delivery truck. Up to 3,000 gallons may be delivered to the hauling truck for any given load. City will assist the user in chlorine application to the load for livestock watering use as described in Item 11.
4. Delivery of Recycled Water
 - A. City will deliver the Recycled Water to the City's User's hauler through the Meter Station.
 - B. The hauler will deliver the recycled water to the User.
 - C. User will monitor chlorine residual prior to offloading the water from the truck. See item 11. Site supervisor shall document the chlorine residual for each load offloaded for reporting to the City.
 - D. Users tanks and/or Troughs receiving recycled water shall have Recycled Water labels/stickers applied to them. The labels / stickers will be provided by the City.
5. Designation of Site Supervisor
 - A. User shall designate an individual as User's Site Supervisor who shall be User's coordinator and direct contact person between City and User. User agrees that the Site Supervisor shall be responsible for the proper operation of User's Recycled Water System, implementing the requirements of the Order and this Agreement relative to the onsite use of Recycled Water, monitoring of User's Recycled Water System for prevention of potential hazards, and coordination with City and the regulatory agencies, when necessary. City shall assist in the training of User's Site Supervisor. User shall notify City of the name, position and phone number of User's Site Supervisor at least 30 days prior to startup of User's Recycled Water System and shall promptly inform City of any change of designated Site Supervisor and/or contact information during the term of this Agreement.

RECYCLED WATER PROGRAM APPLICATION & PERMIT NON_DAIRY LIVESTOCK WATERING

- B. The Site Supervisor shall be responsible for the avoidance of cross-connections during the installation, operation and maintenance of the User's pipeline and equipment. The Site Supervisor shall attend a training course, conducted by the City, specific to Recycled Water use, the Order, and prevention of cross-connections.
- C. The Site Supervisor shall communicate no less frequently than quarterly to inform the City of any system modifications, system irregularities, and to verify employee training. Unusual occurrences which cause or threaten to cause any violation of this Agreement shall be promptly communicated to the City.

6. Compliance with the Order.

- A. City and User shall comply with all provisions and requirements of the Order, as it may subsequently be amended. User acknowledges to City that User is aware that the water delivered pursuant to this Agreement is Recycled Water to be used for only specified and limited uses, with chlorine residual verified described as in Section 11 , below. User has received a copy of the Order. User is familiar with and understands all of the provisions and requirements contained in the Order, and, in particular the requirements for recycled water use associated with non-dairy livestock watering, and hereby agrees that those provisions and requirements are reasonable. User covenants and warrants that it shall comply with all the provisions and requirements of the Order and this Agreement in the purchase and use of Recycled Water.
- B. User also shall comply with all of the additional provisions and requirements established by the City, in the delivery and use of the Recycled Water, which are set forth in the City's Recycled Water Engineering Report, as further described in Exhibit "A", as well as the Engineering Report Addendum on the Production, Distribution and Use of Recycled Water for Non-Dairy Livestock Watering. Exhibit "B", attached hereto and incorporated herein by this reference.
- C. The City shall have responsibility to conduct all training required under such Training Programs required in the Order. User agrees to provide all relevant information necessary for the preparation of such reports in a timely manner, and to participate in Training Programs.

7. Availability of Recycled Water; Interruption of Service.

- A. Recycled Water piping and equipment at the User's location shall be provided, replaced and repaired as necessary by User, at User's discretion, provided that all such equipment shall be subject to inspection and repairs as provided in Section 4C above. User shall complete all work and shall be responsible for all costs of construction, operation and maintenance of all other modifications and improvements on User's property, which are not the responsibility of the City. Such other modifications include marking and signing required by the Order, e.g.:
 - Placing of appropriate signs, to be provided by the City, on the site perimeter that notifies User employees and the public of the use of Recycled Water on the site.

RECYCLED WATER PROGRAM APPLICATION & PERMIT NON_DAIRY LIVESTOCK WATERING

- Marking all solenoid valve boxes on the User's Recycled Water System by placing an appropriate purple lag on the existing valve box lid, or by replacing with a new purple lid.
 - User acknowledges and understands that the City's delivery of Recycled Water is subject to the Order and the waste discharge requirements imposed by the Regional Board and that the City does not intend to deliver Recycled Water to User outside the Delivery Periods absent additional authorization from the Regional Board.
- B. User agrees to cooperate with City, at City's request, in the establishment of reasonable and mutually agreeable delivery schedules for the Recycled Water. User recognizes that the requests of various users may overload the capacity of City's WRF and delivery system and that City therefore may need to reduce the rates at which Recycled Water is delivered to the various users from time to time. In the event that the City reduces User's requested rate of delivery, City shall use reasonable efforts to restore the requested rate of delivery as soon as feasible and provide User with that amount of water it would have received had its rate of delivery not been reduced.
- C. City shall use reasonable efforts to ensure that service to User is provided Recycled Water consistent with the established delivery schedules, and User shall use its best efforts to accept Recycled Water as provided herein. However, both parties acknowledge that City's supply and delivery of Recycled Water and User's ability to take delivery of said water may occasionally be interrupted or curtailed due to causes outside of its control, including, but not limited to:
- acts of God
 - power failures
 - accident
 - fire
 - strikes, riots, war
 - facility failure, facility repairs/improvements
 - actions or decisions by a governmental agency
 - any condition outside of a party's control.
- D. Neither party shall be liable to the other for damages arising out of interruption or curtailment of service for these reasons. Insofar as feasible, the party whose performance hereunder is affected by such condition shall give the other party at least 72 hours advance notice of a temporary discontinuance or reduction in its delivery (in the case of City) or in its acceptance (in the case of User) of Recycled Water, except in the case of emergency, in which case notice need not be given. In the event of such discontinuance or reduction, the parties shall deliver or accept, as appropriate, upon resumption of service and as nearly as may be feasible, the quantity of Recycled Water that would have been delivered or accepted in the absence of such discontinuance or reduction.
8. Measurement of Delivered Recycled Water. All Recycled Water delivered pursuant to this Agreement shall be measured by the City at the Meter Station(s) or other appropriate facilities. City shall own, inspect, operate, maintain, repair and replace the measuring equipment. All determinations relative to the measuring of Recycled Water shall be made by the City. Upon

RECYCLED WATER PROGRAM APPLICATION & PERMIT NON_DAIRY LIVESTOCK WATERING

request by User, the accuracy of a measurement shall be investigated by the City and any error appearing therein shall be adjusted. User may inspect such measuring equipment for the purpose of determining the accuracy thereof.

9. Monitoring Reports. User shall conduct and report on the recycled water system as follows:

Parameter to Monitor	Monitoring Frequency	Reporting Frequency to City
Chlorine Residual	Each delivery	Monthly
Visual inspection of facilities for leaks, odors, run off	Weekly	Monthly
Cross Connection Control Testing	Annually	Annually
Water Usage	Daily	Monthly

Movement of Recycled Water off-site by spray or runoff shall be fully reported by User in such reports, which shall also state what corrective action(s) were taken to prevent such movement from recurring.

10. Record Drawings: Within 30 days of execution of this Agreement, User shall provide City with record drawings showing the complete User's Recycled Water System. Following any onsite modifications and changes to User's Recycled Water System and/or User's potable water systems, User shall provide City with record drawings showing the complete Recycled Water irrigation system and modifications and changes made by User on the Property. User shall provide City with record drawings each time User modifies or changes User's Recycled Water System on the site during the term of this Agreement. The record drawings shall clearly show the locations of all pipelines, controllers, valves, fountains, buildings, structures, property boundaries, agriculture wells, domestic (drinking) wells, and any other features known or considered to be pertinent to or affected by the onsite use of Recycled Water.

11. Use of Recycled Water for Livestock Watering:

The City typically applies a 1 mg/L dose of free chlorine at the WRF. To ensure 0.2 mg/L free chlorine at the "point of delivery" (defined as the trough or the ranch-site storage tank), a larger dose of free chlorine will be needed to account for chlorine demand in the recycled water and retention time in the truck prior to off-loading at the ranch site.

The following approach will be used to ensure chlorine residual control:

- A.. City will assist the water truck driver in batching the water delivery truck at the WRF with chlorine. The recycled water chlorine demand can be variable so the concentration applied during fill-up will be determined by the City to achieve at least 0.2 mg/L free chlorine residual at the point of delivery.
- B. Before the truck is off-loaded at the ranch site, ranch personnel will measure the chlorine residual in the load. If it is 0.2 mg/L or above, off-load will occur to the trough or storage tank.
- C. If the chlorine residual is less than 0.2 mg/L, ranch staff will contact the City. City will advise ranch staff on the dose of 5% chlorine solution (i.e., household unscented bleach) sufficient to achieve 0.5 mg/L in the truck volume. The 5% chlorine solution will be added through the

RECYCLED WATER PROGRAM APPLICATION & PERMIT NON_DAIRY LIVESTOCK WATERING

truck fill hose. The fill hose will be connected to the truck pump and the truck fill line and the pump will be engaged. The truck pump will mix the newly supplied chlorine dose with the truck contents. The truck pump will run for 5 minutes prior to resampling. If the chlorine residual is 0.2 mg/L or above, off-load will occur to the trough or storage tank. If the chlorine residual is less than 0.2 mg/L, the application of 5% chlorine solution with mixing and testing will be repeated as necessary to reach the target residual prior to off-loading.

12. Permission to Enter: User hereby grants City, acting through its duly authorized employees, agents, or representatives, reasonable access to User's property for any necessary work associated with this Agreement, including, but not limited to, meter reading, monitoring of Recycled Water use by User, and/or repair of City-owned Meter Station equipment.

13. Termination.
 - A Notice: Should one party breach any of the terms and conditions in this Agreement, written notice of such breach shall be given to the breaching party by the other party. If reasonable steps toward correcting the breaching conditions are not taken within 5 days from such notice, the other party may, in addition to any remedies provided in this Agreement and/or by law, terminate this Agreement on 30 days' written notice to the breaching party.

 - B. Termination: Notwithstanding subsections (A) above, City may terminate this Agreement immediately if:
 - 1 City, at its sole determination, is or will be unable to deliver properly and adequately treated recycled water to User for any reason whatsoever for a period greater than 30 days.
 - 2 The RWQCB changes City's discharge requirements for irrigation and City determines that it cannot reasonably meet any of the new RWQCB requirements.
 - 3 City is ordered to cease delivery of recycled water to User by a governmental authority of competent jurisdiction.

14. Specific Performance of Agreement. User understands and acknowledges that City is not permitted to discharge recycled water during certain times of the year, and will rely on delivery of recycled wastewater to User (and others) to comply with this requirement. Therefore, City is relying on a good-faith performance of User in accepting and using recycled wastewater in accordance with the Order and this Agreement. If User, as reasonably determined by City, fails to accept and dispose of the recycled wastewater as agreed herein, City will suffer irreparable harm and will not be adequately compensated by money damages for said harm. User and City agree that City may obtain an injunction compelling specific performance of this Agreement together with such other relief as may be allowed by law. In addition to any other remedy available at law, including without limitation, an order for specific performance or a prohibition injunction, City shall be entitled to terminate this Agreement, in its sole discretion and without notice, in the event of a default or material breach of this Agreement by User. Default events shall include, but not be limited to, cessation by User of recycled water use without cause, material violations of the terms and conditions of this Agreement, or actions by User which results directly or indirectly in enforcement actions against the City or User by regulatory agencies.

**RECYCLED WATER PROGRAM APPLICATION & PERMIT
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- 15. Hold Harmless and Indemnification. Each party hereto agrees to protect, indemnify, defend and hold harmless the other party and its directors, officers, employees, agents, successors, and assigns from and against any and all actual and potential claims, liabilities, damages, losses, fines, penalties, judgments, awards, costs and expenses (including without limitation reasonable attorneys' fees and costs and all foreseeable, unforeseeable and consequential damages) assessed against, resulting to, imposed upon or incurred by said other party by reason of the first party's breach of any provisions of this Agreement or the Order. This indemnification shall survive the termination of this Agreement.

- 16. Notices. Any notice, action, or demand by either party to the other in connection with this Agreement shall be deemed to have been fully given or made when such notice, action, or demand is written and deposited in a sealed envelope postage prepaid, and addressed as designated below. Either party may change its address by giving the other party written notice of its new address.

City: City of Healdsburg

User: _____

Attn: Rob Scates
Water/Wastewater
Superintendent
401 Grove Street

Healdsburg, CA 95448

- 17. Entire Agreement. This Agreement shall constitute the entire agreement between the parties relating to the rights granted and obligations assumed in this Agreement. Any oral representations or modifications concerning this Agreement shall be of no force and effect unless contained in a subsequent written modification signed by both parties.

- 18. Amendments. This Agreement may not be amended except by a written instrument that is signed by both parties.

- 19. Interpretation. This Agreement shall be construed, interpreted, and applied according to the laws of the State of California.

- 20. Successors. This Agreement shall be binding upon and inure to the benefit of the respective successors and assigns of the parties; provided that User has complied with paragraph 9 hereof.

- 21. Attorneys' Fees. If either party commences an action at law or in equity, arbitration or other proceeding against the other party to enforce or interpret this Agreement, the prevailing party shall be entitled to recover from the losing party reasonable attorneys' fees and costs of such proceeding, in addition to any other amounts which may be awarded.

- 22. Severability. If any clause or provision of the Agreement is or becomes illegal, invalid, or

**RECYCLED WATER PROGRAM APPLICATION & PERMIT
NON_DAIRY LIVESTOCK WATERING**

unenforceable because of present or future laws, or any rules or regulations of any governmental body or entity, effective during its term, the intention of the parties is that the remaining parts of this Agreement shall remain in full force and effect if the fundamental purpose of the Agreement is not destroyed.

- 23. Intentionally Omitted.
- 24. Exhibits to this Agreement. Exhibits A, and B are incorporated into this Agreement by this reference in their entirety. They shall be available for inspection in the Clerk's Office, 401 Grove Street, Healdsburg, California 95448, during regular business hours.
- 25. Third-Party Beneficiaries. This Agreement shall not create any right or interest in any non-party or in any member of the public as a third party beneficiary.

CERTIFICATION:

I certify that I am an authorized agent for the User cited in this application and that I have authority to bind the User to the requirements of this permit and program. I hereby certify under penalty of perjury that the information provided in this permit application and in any attachment is true and accurate to the best of my knowledge. I also certify that I have read, understand, and agree to abide by all of the City Recycled Water Non-dairy Livestock Watering Program Permit and Guideline conditions, and applicable recycled water use rules and regulations set forth by the Regional Water Quality Control Board and California State Water Resources Control Board.

Company: _____

Print Name of User: _____

Signature of User: _____

Date: _____

Title: _____

PERMIT

*****SECTION TO BE COMPLETED BY CITY STAFF*****

Permit Number: _____ **Effective Date of Permit:** _____

AUTHORIZATION:

User is authorized to use recycled in accordance with City's Recycled Water Permit, Guidelines and applicable recycled water use requirements and restrictions set forth by the Regional Water Quality Control Board and California State Water Resources Control Board.

Authorized City Staff Printed Name: _____

Authorized City Staff Signature: _____ Date: _____

RECYCLED WATER PROGRAM APPLICATION & PERMIT

NON_DAIRY LIVESTOCK WATERING

NO ENTITLEMENT TO WATER/SUPPLY SUBJECT TO AVAILABILITY:

This Permit does not entitle User to any quantity of recycled water. Supply of recycled water to User is subject to availability as determined by the City and to any federal, state or local requirements which limit supply or availability. To the extent, recycled water is available; supply shall be on a first-come, first-served basis. Entities with Recycled Water Agreements with the City shall have priority over User in supply of recycled water.

PERMIT NON-TRANSFERABLE:

This permit is issued only to User as specified above. It may not be transferred to any other entity or person.

RECYCLED WATER USE GUIDELINES AND REGIONAL WATER QUALITY CONTROL BOARD REQUIREMENTS:

The City Recycled Water Truck Program Guidelines (“Guidelines”) which contain requirements and restrictions for storage, transportation and use of recycled water, are attached to this Permit. Regional Water Quality Control Board and California State Water Resources Control Board and Title 22 requirements (“Regional Board/SWRCB Recycled Water Requirements”) are also attached to this Permit. User agrees to abide by all of the requirements and restrictions contained in the Guidelines and the Regional Board/SWRCB Recycled Water Requirements.

User has identified the person responsible for implementing worker/public protection requirements specified in the Guidelines and the Regional Board/SWRCB Recycled Water Requirements at each site (e.g., that humans are not to drink recycled water or use it for preparing food, etc.)

In the event there is a recycled water spill, questions on compliance requirements, or User notices a use not in accordance with requirements stated herein, User shall contact the City of Healdsburg Municipal Utilities Department and report the incident immediately (707-431-3346 or 707-431-7000)

RECYCLED WATER QUALITY

The City of Healdsburg’s Water Reclamation Facility supplies clean, safe recycled water that has been through an advanced treatment process that includes biological nutrient removal, membrane bio-reactor microfiltration, and ultra-violet disinfection. Recycled water treated to these levels meets the rigorous and protective standards set by the California State Water Resources Control Board.

RECYCLED WATER HANDLING AND USE REQUIREMENTS, PROHIBITIONS AND BEST MANAGEMENT PRACTICES

1. Recycled water users should apply hand sanitizer or wash their hands with soap and potable water after working with recycled water.
2. Recycled water shall not be applied in areas where the public would be inadvertently exposed to recycled water.
3. Do **not** drink recycled water or use it for food preparation. Additionally, the truck driver must notify

RECYCLED WATER PROGRAM APPLICATION & PERMIT NON_DAIRY LIVESTOCK WATERING

workers and/or the public when recycled water is used at a site and tell them that they are not to drink recycled water or use it for food preparation.

4. Precautions should be taken to avoid food coming into contact with recycled water while the use site is still wet.
5. Truck drivers should be equipped with an adequate first aid kit. Cuts or abrasions should be promptly washed, disinfected and bandaged.
6. Recycled water shall not be allowed to spray onto external drinking water fountains or faucets used for potable water.
7. Recycled water shall not be applied where it could contact or enter passing vehicles, buildings, areas where food is handled or eaten, or storm drains.
8. Recycled water users shall take adequate measures to prevent overspray, ponding, or run off of recycled water from the authorized recycled water use area(s) or at the designated filling stations.
9. Recycled water shall not be allowed to escape from the designated filling stations as surface flow that would either pond and/or enter waters of the State.
10. Recycled water shall not be applied on water-saturated or frozen ground or during periods of precipitation such that runoff is induced or ponding is created.
11. Recycled water shall not be applied on slopes if runoff cannot be controlled.
12. All unused recycled water shall be returned to a Wastewater Treatment Facility or upon City approval, discharged into the sewage conveyance system for proper disposal.
13. There shall be no irrigation or impoundment of recycled water within a minimum of 50 feet of any domestic (drinking water) well.
14. Recycled water shall not be applied into State waters, within 25 feet of State waters containing standing or flowing water, nor in a manner that could result in uncontrolled runoff into State water.
15. Vehicles used for transportation and distribution of recycled water must have watertight valves and fittings, and must not leak.
16. Recycled water storage/hauling tanks must be clean of all substances to prevent contamination with residue. A truck or tank that has contained material from a septic tank, cesspool, or hazardous waste shall not be used to convey recycled water. Storage tanks cannot have prior use of carrying substances that are hazardous, within the meaning of federal or state of California definitions of hazardous or toxic materials, wastes or substances or poison.
17. Truck storage tanks for the storage and transport of recycled water must comply with all Federal, State of California, County and City requirements for the storage and transport of water that is to be reused.
18. Recycled water must not be introduced into any permanent piping system and no connection shall be made between the tank truck and any part of a potable water system.

RECYCLED WATER PROGRAM APPLICATION & PERMIT NON_DAIRY LIVESTOCK WATERING

19. User must comply with all requirements and restrictions specified by the Regional Water Quality Control Board, California Division of Drinking Water, and the California State Water Resources Control Board.
20. The treatment, storage, distribution, or reuse of recycled water shall not create a nuisance as defined in Section 13050(m) of the California Water Code.

QUESTIONS ABOUT PERMITS AND PROGRAM OPERATION

Rob Scates

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