

SUBURBAN LABORATORIES, Inc.



1950 S. Batavia Ave., Suite 150 Geneva, Illinois 60134
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February 13, 2019

Katie Rosado
Lake County Environmental Laboratory
500 W. Winchester Rd., Unit 103
Libertyville, IL 60048

Workorder: 1902355

TEL: (847) 377-7744
FAX: (847) 984-5623
RE: DPR 503 Sludge

Dear Katie Rosado:

Suburban Laboratories, Inc. received 1 sample(s) on 2/6/2019 for the analyses presented in the following report.

All data for the associated quality control (QC) met EPA, method, or internal laboratory specifications except where noted in the case narrative. If you are comparing these results to external QC specifications or compliance limits and have any questions, please contact us.

This final report of laboratory analysis consists of this cover letter, case narrative, analytical report, dates report, and any accompanying documentation including, but not limited to, chain of custody records, raw data, and letters of explanation or reliance. This report may not be reproduced, except in full, without the prior written approval of Suburban Laboratories, Inc.

If you have any questions regarding these test results, please call me at (708) 544-3260.

Sincerely,

Reid Westfall
Project Manager
(708) 544-3260 ext 217
reid@suburbanlabs.com





Suburban Laboratories, Inc.

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Case Narrative

Client: Lake County Environmental Laboratory

Date: February 13, 2019

Project: DPR 503 Sludge

PO #:

WorkOrder: 1902355

QC Level: LEVEL I

Temperature of samples upon receipt at SLI: 4 C

Chain of Custody #:

General Comments:

- All results reported in wet weight unless otherwise indicated. (dry = Dry Weight)
- Sample results relate only to the analytes of interest tested and to sample as received by the laboratory.
- Environmental compliance sample results meet the requirements of 35 IAC Part 186 unless otherwise indicated.
- Waste water analysis follows the rules set forth in 40 CFR part 136 except where otherwise noted.
- Accreditation by the State of Illinois is not an endorsement or a guarantee of the validity of data generated.
- For more information about the laboratories' scope of accreditation, please contact us at (708) 544-3260 or the Agency at (217) 782-6455.
- All radiological results are reported to the 95% confidence level.

Abbreviations:

- Reporting Limit: The concentration at which an analyte can be routinely detected on a day to day basis, and which also meets regulatory and client needs.
- Quantitation Limit: The lowest concentration at which results can be accurately quantitated.
- J: The analyte was positively identified above our Method Detection Limit and is considered detectable and usable; however, the associated numerical value is the approximate concentration of the analyte in the sample.
- ATC: Automatic Temperature Correction. - TNTC: Too Numerous To Count
- TIC: Tentatively Identified Compound (GCMS library search identification, concentration estimated to nearest internal standard).
- SS (Surrogate Standard): Quality control compound added to the sample by the lab.

Method References:

For a complete list of method references please contact us.

- E: USEPA Reference methods
- SW: USEPA, Test Methods for Evaluating Solid Waste (SW-846)
- M: Standard Methods for the Examination of Water and Wastewater
- USP: Latest version of United States Pharmacopeia

Workorder Specific Comments:

TVS, TS, PMoist, TKN_S, NH3_S:

Sample 1902355-001A: H=Sample received past the holding time for this test.

HG_S:

Sample 1902355-001A: H=Sample received past the holding time for this test. OK to run past hold.



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Laboratory Results

Client ID: Lake County Environmental Laboratory

Report Date: February 13, 2019

Project Name: DPR 503 Sludge

Workorder: 1902355

Client Sample ID: Dryer Sludge

Matrix: SLUDGE

Lab ID: 1902355-001

Date Received: 02/06/2019 9:10 AM

Collection Date: 12/05/2018 11:00 AM

| Parameter | Result | Report MCL | Limit | Qual. | Units | Dilution Factor | Date Analyzed | Batch ID | |
|---------------------------------------|--------|--|--------|-------|-----------|-----------------|---------------------|----------|--|
| METALS BY ICP | | Method: EPA-6010B-Rev 2, Dec-96 | | | | Analyst: mmh | | | |
| Arsenic | 8.19 | 75.0 | 1.12 | | mg/Kg-dry | 1 | 02/13/2019 12:00 PM | 57448 | |
| Cadmium | 0.764 | 85.0 | 0.0728 | | mg/Kg-dry | 1 | 02/13/2019 12:00 PM | 57448 | |
| Chromium | 22.0 | 3,000 | 0.0583 | | mg/Kg-dry | 1 | 02/13/2019 12:00 PM | 57448 | |
| Copper | 456 | 4,300 | 0.146 | | mg/Kg-dry | 1 | 02/13/2019 12:00 PM | 57448 | |
| Lead | 11.7 | 840 | 0.583 | | mg/Kg-dry | 1 | 02/13/2019 12:00 PM | 57448 | |
| Manganese | 644 | | 0.0583 | | mg/Kg-dry | 1 | 02/13/2019 12:00 PM | 57448 | |
| Molybdenum | 8.83 | 75.0 | 0.102 | | mg/Kg-dry | 1 | 02/13/2019 12:00 PM | 57448 | |
| Nickel | 17.1 | 420 | 0.228 | | mg/Kg-dry | 1 | 02/13/2019 12:00 PM | 57448 | |
| Phosphorus | 31,500 | | 2.23 | c | mg/Kg-dry | 1 | 02/13/2019 12:00 PM | 57448 | |
| Potassium | 3,520 | | 2.43 | | mg/Kg-dry | 1 | 02/13/2019 12:00 PM | 57448 | |
| Selenium | 1.92 | 100 | 1.26 | J | mg/Kg-dry | 1 | 02/13/2019 12:00 PM | 57448 | |
| Zinc | 640 | 7,500 | 0.971 | | mg/Kg-dry | 1 | 02/13/2019 12:00 PM | 57448 | |
| MERCURY BY CVAA | | Method: EPA-7471B-Rev 2, Feb-07 | | | | Analyst: dsm | | | |
| Mercury | 0.728 | 57.0 | 0.0205 | H | mg/Kg-dry | 1 | 02/12/2019 12:21 PM | 57463 | |
| AMMONIA, TITRIMETRIC | | Method: SM-4500NH3 E-Rev 18Ed, 1992 | | | | Analyst: CY | | | |
| Nitrogen, Ammonia (As N) | 401 | | 5.13 | H | mg/Kg-dry | 1 | 02/11/2019 7:12 PM | 57457 | |
| PH (IN LABORATORY) <ATC> | | Method: EPA-9045C-Rev 3, Jan-95 | | | | Analyst: amo | | | |
| pH | 5.19 | | 1.00 | | pH Units | 1 | 02/08/2019 4:11 PM | R104957 | |
| PERCENT MOISTURE | | Method: ASTM-D2216-Rev 2005 | | | | Analyst: amo | | | |
| Percent Moisture | 2.4 | | 1.0 | H c | wt% | 1 | 02/07/2019 2:40 PM | R104906 | |
| NITROGEN, TOTAL KJELDAHL (TKN) | | Method: SM-4500NH3 C-Rev 21st Ed, 1997 | | | | Analyst: CY | | | |
| Nitrogen, Kjeldahl, Total | 11,700 | | 105 | H | mg/Kg-dry | 1 | 02/08/2019 4:48 PM | 57408 | |
| TOTAL SOLIDS | | Method: SM-2540G-Rev 1997 | | | | Analyst: amo | | | |
| Percent Solids | 97.6 | | 0.001 | H | wt% | 1 | 02/07/2019 2:40 PM | R104906 | |
| TOTAL VOLATILE SOLIDS | | Method: SM-2540G-Rev 1997 | | | | Analyst: amo | | | |
| Total Volatile Solids | 46.8 | | 0.001 | H c | wt% | 1 | 02/07/2019 2:40 PM | R104906 | |



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|-----------|--------|---------------------|-------|-------|--------------------|---------------|----------|
|-----------|--------|---------------------|-------|-------|--------------------|---------------|----------|



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PREP DATES REPORT

Client: Lake County Environmental Laboratory
Project: DPR 503 Sludge

Report Date: February 13, 2019
Lab Order: 1902355

| Sample ID | Collection Date | Batch ID | Prep Method | Prep Test Name | TCLP Date | Prep Date |
|--------------|----------------------|----------|--------------|------------------------------|-----------|-----------|
| 1902355-001A | 12/5/2018 11:00:00 A | 57457 | NH3PR | AMMONIA, DISTILLATION | | 2/11/2019 |
| | | 57463 | HG_SPR | Mercury Prep for Solids | | 2/11/2019 |
| | | 57448 | 200.2_ICP_PR | SOLID PREP TOTAL METALS: ICP | | 2/11/2019 |
| | | 57408 | TKNSPR | TKN SOLID PREP | | 2/7/2019 |



Qualifiers:

- */X Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- C Value is below Minimum Concentration Limit
- c Analyte not in SLI scope of accreditation
- E Estimated, detected above quantitation range
- G Refer to case narrative page for specific comments
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limit (QL)
- N Tentatively identified compounds
- ND Not Detected at the Reporting Limit
- P Present
- Q Accreditation is not available from Wisconsin
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- T Analyte detected in sample trip blank
- V EPA requires field analysis/filtration. Lab analysis would be considered past hold time.