Prepared for:

CAPITAL CITY BANK
1301 Metropolitan Boulevard
Tallahassee, Florida 32308

VOLUNTARY REMEDIATION PROGRAM
PROGRESS REPORT #7
Grantville Mill
41 Industrial Way
Grantville, Georgia 30220

Prepared by:

400 Northridge Road, Suite 400
Sandy Springs, Georgia 30350
Tel: 404-315-9113

January 2019

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Kirk J. Kessler, P.G.
Senior Principal

January 2019

EPS

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EPS

PROFESSIONAL GEOLOGIST CERTIFICATION

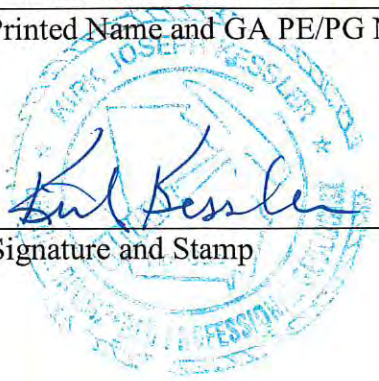
"I certify under penalty of law that this report and all attachments were prepared by me or under my direct supervision in accordance with the Voluntary Remediation Program Act (O.C.G.A. Section 12-8-101, et seq.). I am a professional engineer/professional geologist who is registered with the Georgia State Board of Registration for Professional Engineers and Land Surveyors/Georgia State Board of Registration for Professional Geologists, and I have the necessary experience and am in charge of the investigation and remediation of this release of regulated substances.

Furthermore, to document my direct oversight of the Voluntary Remediation Plan development, implementation of corrective action, and long-term monitoring, I have attached a monthly summary of hours invoiced and description of services provided by me to the Voluntary Remediation Program participant since the previous submittal to the Georgia Environmental Protection Division.

The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Kirk Kessler GA000685
Printed Name and GA PE/PG Number

01/21/19
Date



Signature and Stamp

1 INTRODUCTION

1.1 Overview

This Voluntary Remediation Program (VRP) Progress Report #7 is submitted on behalf of Capital City Bank (CCB) for the Grantville Mill site comprised of two parcels as listed on the Hazardous Site Inventory (HSI), Site Number 10912. The Grantville Mill Voluntary Investigation and Remediation Plan (VIRP) (EPS, 2015) was approved by the Georgia Environmental Protection Division (EPD) on July 22, 2015 (EPD, 2015). This Progress Report summarizes the activities performed during the current reporting period including: (1) on-Site assessment for soil-bound arsenic, (2) refinement of the groundwater volatile organic compound (VOC) plume with respect to off-Site property, (3) an update to the soil risk assessment, and (4) planned activities for the next reporting period.

1.2 Site Location and Description

The CCB property is located in the City of Grantville, Georgia in Coweta County (Figure 1). The CCB property is listed as Coweta Country Parcel ID G050008008, totals 13.48 acres, and has the physical address of 41 Industrial Way, Grantville, Georgia. The other parcel comprising HSI Site Number 10912, Coweta County Parcel ID G050008008A, is owned by Breakaway Atlanta Partners, LLC (acquired in 2015) and was brought into the VRP as an additional qualifying property (Figure 2). Together these two property parcels constitute the "Site".

The Property was first developed in the early 1900s as a cotton mill to make uniforms and canvas during World War I. The mill later became West Point Peppermill's Grantville Mill, operating into the early 1980s when the mill was closed. Since that time, buildings within the facility have been leased to various companies. One of the former tenants, Tropic Formals, Ltd. (Tropic Formals), operated a formals clothing business in one of the former mill buildings at the southwest portion of the mill complex between 1980 and 1993. Tropic Formals was previously listed as an RCRA handler of tetrachloroethene (PCE) for dry cleaning until it changed its registration status to a non-waste generator on December 31, 1993. The Site is listed on the basis of a documented PCE release to groundwater. The property is currently unoccupied.

Properties bordering the Site and their land use are shown in Figure 2 and include:

- to the Northeast - wooded vacant land;
- to the East - CSX rail line and Grantville City Cemetery;
- to the South and Southwest - residences; and
- to the West and Northwest - residences and a City park complex.

2 VRP PROJECT MANAGEMENT

2.1 Professional Geologist Oversight

This Progress Report includes a certification by Kirk Kessler, the Professional Geologist (PG) specified in the VRP application. Appendix A contains a monthly summary of hours invoiced by the PG.

2.2 Milestone Schedule

The milestone schedule is included in Appendix B.

3 RECENTLY COMPLETED ACTIVITIES

3.1 Overview

This section discusses soil and groundwater sampling activities completed during the current reporting period and a comprehensive overview for each constituent tested (*i.e.*, PCE and arsenic).

3.2 On-Site Soil Assessment

3.2.1 Overview

Prior soil testing performed within and adjacent to the machinery area (former) identified arsenic above the residential and non-residential Risk Reduction Standard (RRS). Prior soil testing delineated shallow soil-bound arsenic to the residential RRS with two exceptions northwest of sample locations SS-1 and S-22. Additional soil testing was performed during the current reporting period at locations S-30 and S-31 to complete soil delineation at these two locations. The sampling was performed on September 13, 2018.

3.2.2 Sample Locations

Sample locations are shown on Figure 3.

3.2.3 Sample Collection

Soil was collected with a hand auger at prescribed depths consistent with prior sampling activity and included soil samples from 0 to 1 feet below ground surface (ft-bgs), 1 to 2 ft-bgs and 2 to 4 ft-bgs. A representative soil sample was collected from the hand auger bucket at each depth with a stainless-steel spoon and sealed in a 4-ounce glass jar provided by the laboratory. The hand auger bucket and sampling spoon were decontaminated between each sample. All samples were placed on ice following collection and submitted for testing by EPA Method 6010. The soil samples were analyzed by Analytical Environmental Services, Inc. in Atlanta, Georgia. The laboratory report is provided in Appendix C.

3.2.4 Soil testing Results

The set of depth-specific soil samples collected at S-30 and S-31 were tested as needed to complete delineation to the arsenic residential RRS (20 milligrams per kilogram [mg/kg]). Only the 0-1 ft-bgs samples required testing with both samples reporting arsenic below the analytical detection limit (ranging from 4.39 to 4.72 mg/kg). No additional soil samples required testing and

delineation to the residential RRS is complete[1]. A summary of soil testing data for arsenic is provided in Table 1. Updated figures illustrating the complete delineation of arsenic in soil are provided (see Figures 4a to 4c).

3.3 Off-Site Groundwater Assessment

3.3.1 New Monitoring Well

One additional groundwater monitoring well was installed during the current reporting period as described in VRP Progress Report #5 (Figure 14) to refine the horizontal extent of the VOC plume adjacent to off-Site residential properties. Monitoring well MW-19 was installed northwest of MW-8 and north of MW-17 to a depth of 49 ft-bgs where auger refusal was encountered at top of rock (Figure 5). A boring log for MW-19 is provided in Appendix D.

3.3.2 Groundwater Sampling

MW-19 was sampled twice, once on September 13, 2018 and again on October 16, 2018 to verify initial testing results. Field forms are provided in Appendix E. MW-19 was sampled following low-flow/low stress purging and sampling protocols to reflect the mobile or dissolved organic constituents transported in the subsurface under ambient conditions and prevent alteration of the groundwater condition from sampling operations. Groundwater samples were tested for VOCs with EPA Method SW8260B. Laboratory analytical reports are provided in Appendix C.

3.3.3 Groundwater Results

One VOC, PCE is reported in groundwater for both sampling events. PCE was reported at 15 micrograms per liter (µg/L) for the September 13, 2018 sampling event and 8.1 µg/L for the October 16, 2018 sampling event. An update to the groundwater PCE plume based on the most recent measurement for each monitoring well is provide in Figure 5.

3.3.4 Groundwater Delineation Status

Following the two testing events for MW-19, the delineation of the VOC plume to the Maximum Contaminant Level of 5 µg/L is reasonably established to occur immediately west of MW-19. This finding is consistent with other lines of evidence outlined in the Conceptual Site Model (CSM) presented in VRP Progress Report #5. Specifically, the VOC plume alignment and scale (*i.e.*, narrow width) is supported by the area potentiometric surface and extrapolated groundwater flow path. These two features of the CSM predict groundwater will align northeast along the drainage valley that follows the Site's northern border, and secondly, VOCs attributed to the Site are non-detect in monitoring well distant from the centerline of the drainage valley as observed through

[1] Two soil samples below 1 ft-bgs slightly exceed the residential RRS of 20 mg/kg, sample SS-26 at 21.3 mg/kg (1-2 ft-bgs) and sample SS-28 at 21.1 mg/kg (2-4 ft-bgs) as presented in VRP Progress Report #5. Due to the sample depth no further assessment was performed to residential criteria.

testing of monitoring wells in the drainage valley periphery (*e.g.*, MW-4, MW-7, MW-9, MW-13, MW-15 and MW-18). Furthermore, no VOCs are detected to the west or north of the 5 µg/L delineation boundary as supported through testing results for MW-1, MW-7 and MW-15.

4 RISK ASSESSMENT UPDATE

4.1 Site Status

All on-Site structures are currently unoccupied, and the Site is secured with fencing and locked gates.

4.2 Arsenic Exposure Domain and Risk

4.2.1 Exposure Domain and Units

The occurrence of arsenic above the residential or non-residential RRS is reported for soil within and immediately adjacent to the former machinery area (*i.e.,* soil from within the interior of the former machinery area and soil exterior to the former machinery area). Due to the limited scale of the two areas, two exposure domains (ED) are proposed for the assessment of arsenic in soil, (1) the interior machine shop surface soil, and (2) exterior soil encompassing the current assessment area (an area of approximately 100 ft by 100 ft) (Figure 6). The single interior soil sample reporting arsenic above the non-residential RRS will be removed as part of the Site remedial action plan (as provided in VRP Progress Report #5) that includes removal of machinery area surface soil to dispose of visually observed residue. As remedial action will remove the lone interior soil sample above the arsenic RRS, no evaluation of arsenic exposure is required for the interior machine shop soil ED

As proposed, the extent of the exterior soil assessment area will serve as the second ED for the arsenic risk assessment. The exterior soil condition is well characterized with arsenic delineated in the horizontal and vertical direction, and secondly, a statistically valid data set is available to evaluate the ED in vertical exposure intervals applicable to potential surface and subsurface soil exposure (*i.e*., 0 to 1 ft-bgs, 1 to 2 ft-bgs and 2 to 4 ft-bgs). The vertical intervals for the exterior soil ED adapt the recommended intervals provided in Comment #2 of the EPD's comment letter dated June 29, 2018 (EPD, 2018), which also corresponds to the previously enacted soil sampling strategy for the ED.

4.2.2 Arsenic Exposure Concentration

The 95% Upper Confidence Limit (95%UCL) for the mean of arsenic in each depth interval of the exterior soil ED was computed with the U.S. Environmental Protection Agency's ProUCL Software package (Version 5.1). As recommended in EPD's June 29, 2018 comment letter (EPD, 2018), the 95UCL is based on the Kaplan-Meier (KM) estimate of the mean. The 95%UCL was calculated using the ProUCL algorithm to incorporate non-detect values. The input file and output file for the ProUCL software package are provided in Appendix F.

As summarized below, the 95%UCL for all three vertical intervals within the exterior soil ED are below the non-residential RRS for arsenic (38 mg/kg). As proposed in VRP Progress Report #5 the Site will remain commercial or light industrial. Therefore, exterior soil with respect to arsenic is in compliance with the numerical standard for the proposed ED and the EPD recommended vertical soil intervals (EPD, 2018).

Exterior Soil Domain ProUCL Results

Exposure Depth (feet)	Samples	Detects	% Detection	Mean (mg/kg)	Median (mg/kg)	95% KM(t) UCL (mg/kg)	95% KM UCL Bootstrap (mg/kg)
<1	25	11	44%	18.6	5.1	28.1*	28.6
1-2	30	20	67%	21.9	10.5	28.6*	28.5
2-4	18	8	44%	9.9	5.1	13.0*	12.9

95% KM(t) UCL: Upper Confidence Limit (UCL) based upon Kaplan-Meier (KM) estimates using the Student's t-distribution critical value.
* ProUCL 5.1 recommended UCL.

5 PLANNED ACTIVITIES FOR NEXT REPORTING PERIOD

EPS will finalize the remediation design for *in situ* chemical oxidation (ISCO) of the PCE release area as provided in VRP Progress Report #5 (EPS, 2018) including logistics, well placement and design, and ISCO media injection parameters (*i.e.*, oxidant mass and volume per injection location).

6 REFERENCES

EPS (2015). Voluntary Investigation and Remediation Plan, Grantville Mill, Grantville, Georgia. (Dated: March 26, 2015).

EPD (2015). HSI Site Number 10912, Voluntary Investigation and Remediation Plan Approval Letter, (Dated July 22, 2015).

EPD (2018). Semi-Annual VRP Progress Report No.5, Grantville Mill Property, HSI#10912, 41 Industrial Way, Grantville, Coweta County (Dated June 29, 2018).

TABLES

Table 1

Summary of Soil Testing Results for HSRA Regulated Substances: Metals

Location/ Sample Depth (feet)	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
S-1								
0.5	95.5	245	6.15	15.7	1,130	0.22	<4.93	<2.47
1	<3.57	36.8	<1.78	41.8	15.8	<0.0981	<3.57	<1.78
S-2								
0.5	9.47	103	<2.5	8.91	126	0.0934	<5	<2.5
1	<4.92	38.7	<2.46	54.3	13.7	<0.13	<4.92	<2.46
S-3								
0.5	28.5			17.7	79.7			
1	33.6			14.9	60.2			
1.5	28							
4	<5.37							
S-4								
0.5	71.7			13	24.6			
1	83.6			22.9	30.2			
1.5	46.4							
4	9.87							
S-5								
0.5	8.51			48.5	42.4			
1	7			31.3	12.3			
S-6								
0.5	<6.2			33.8	23.4			
1	<6.28			63.1	28.2			
S-7								
0.5	22.2							
1	26.2							
2	7.15							
S-8								
0.5	<3.84							
1	45.5							
2	29.9							
4	41.16							
S-13								
0.5	<4.4							
1	13.5							
1.5	5.71							
S-14								
0.5	36.9							
1	22.3							
2	67							
4	20.7							
S-15								
0.5	<3.98							
1	<4.14							
2	24.7							
4	<4.72							
S-16								
0.5	<4.22							
1	<4.03							
3	16							

<: Result less then detection limit, detection limit provided.

Table 1

Summary of Soil Testing Results for HSRA Regulated Substances: Metals

Location/ Sample Depth (feet)	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
S-17								
0.5	<5.64							
1	52.9							
4	<4.51							
S-18								
0.5	<5.06							
1	<5.72							
3	<4.78							
S-20								
0.5	<4.92							
1	<5.26							
3	<5.62							
S-22								
0.5	101							
2	15.2							
4	18.5							
S-23								
0.5	<4.73							
2	<4.5							
4	<4.76							
S-24								
0.5	5.14							
2	<5.6							
4	<4.46							
S-25								
0.5	<4.98							
2	<3.2							
4	<4.43							
S-26								
0.5	<5							
2	21.3							
4	4.61							
S-27								
0.5	10.6							
2	68							
4	<3.44							
S-28								
0.5	<4.08							
2	5.43							
4	<4.06							
S-29								
0.5	8.14							
2	7.47							
4	21.1							
S-30								
0	<4.39							
S-31								
0	<4.72							

<: Result less then detection limit, detection limit provided.

FIGURES

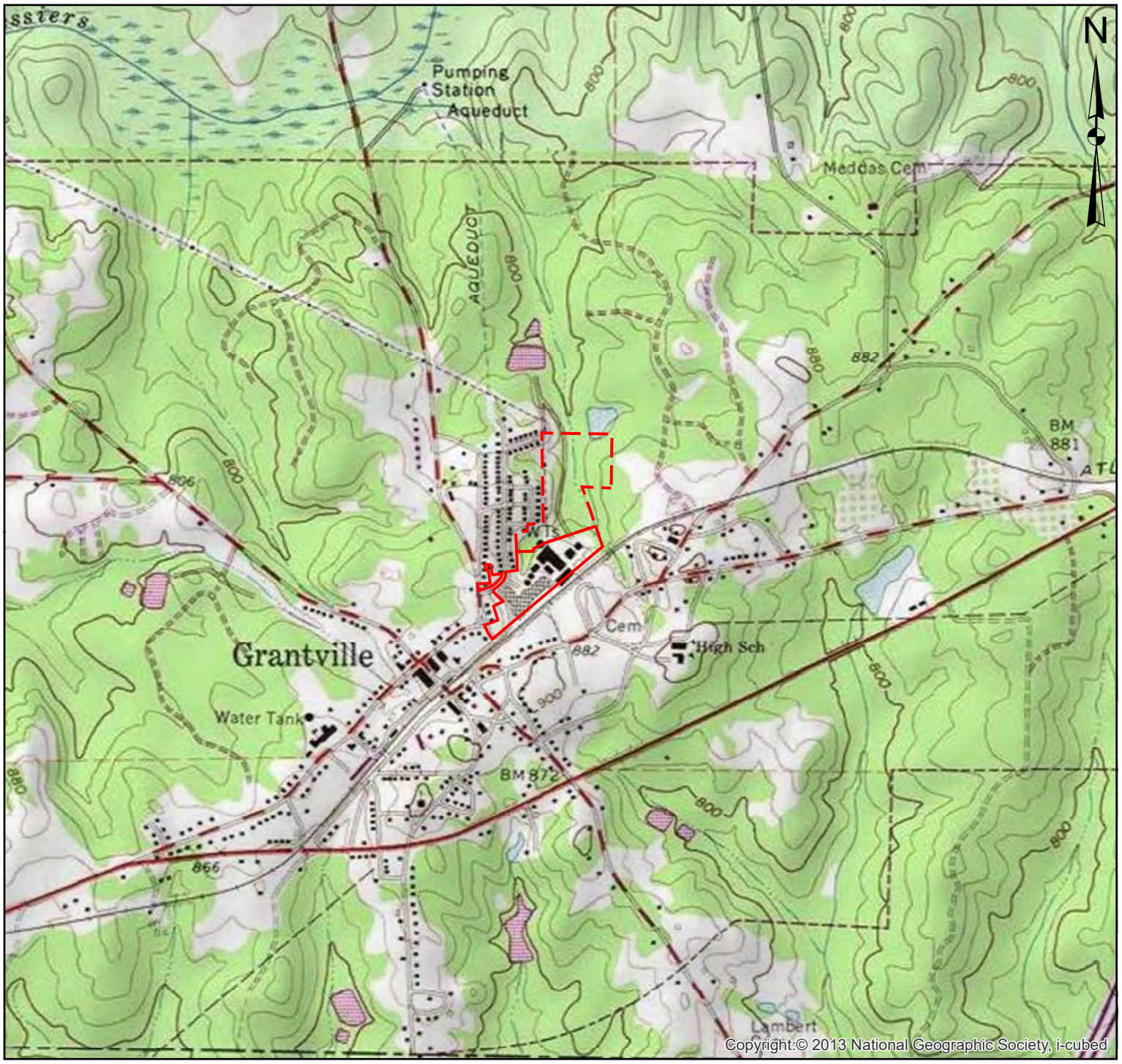


Figure 1
Site Location

Grantville Mill
Grantville, Georgia

Figure Narrative
Figure depicts Site location and regional topographic features.

Notes
Data obtained from the U.S. Geologic Society.

Legend

Property Information

- Capital City Bank Parcel
- Breakaway Atlanta Partners, LLC Parcel

0 750 1,500
Feet

Figure 2

VRP Properties, Adjacent Land Use and Ownership

Grantville Mill
Grantville, Georgia

Figure Narrative

Figure depicts land parcel ownership, parcel number, and land use of abutting properties to the Site.

Notes

Data obtained from the Coweta County Georgraphic Information System.

Legend

Land Use

- Forested/Unoccupied
- Commercial/Industrial
- Residential
- Rail Road

VRP Property Status

- VRP Enrolled Property

0 175 350
Feet

Environmental Planning Specialists, Inc.

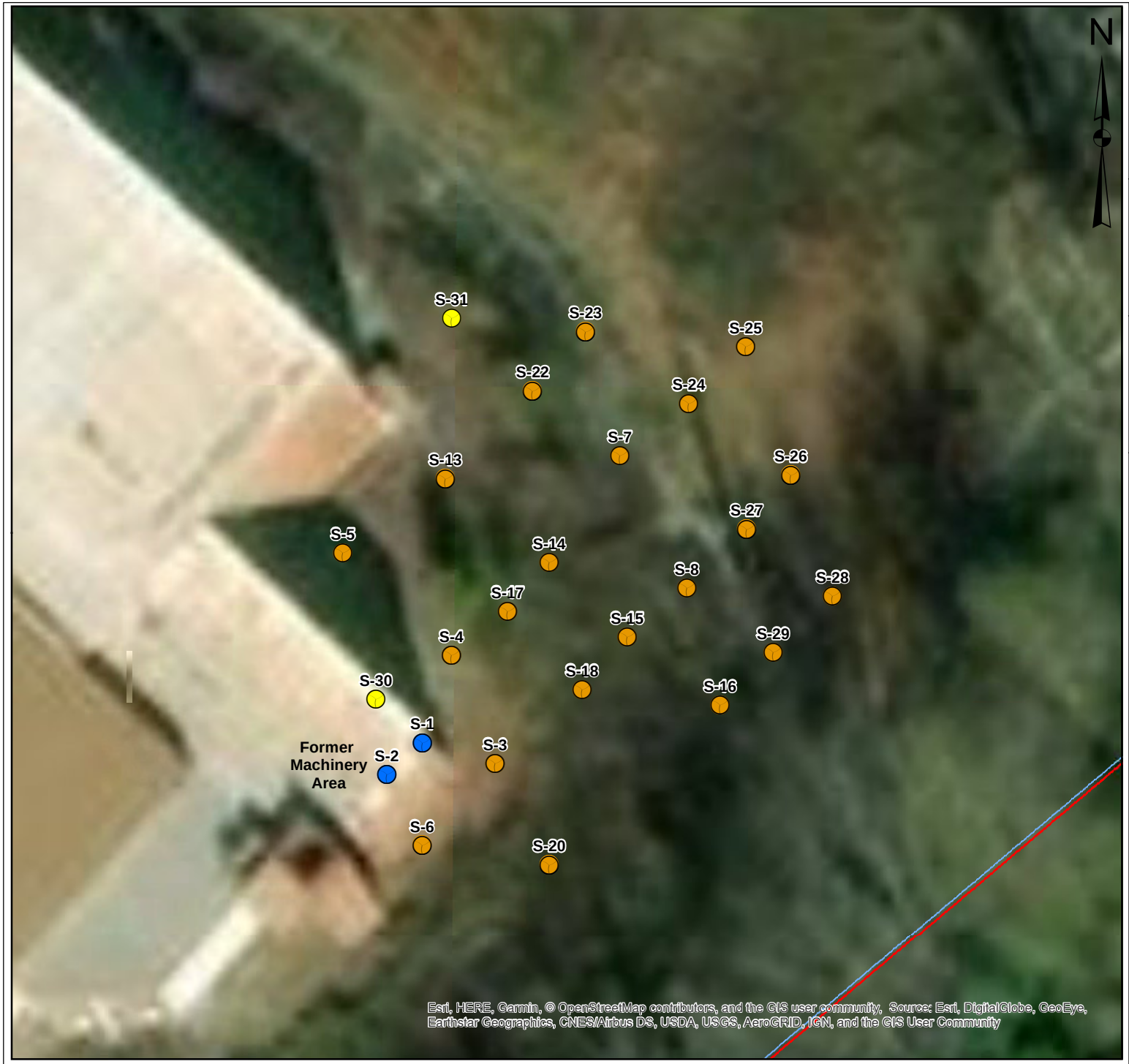


Figure 3

Soil Sampling:
Arsenic Testing Locations

Grantville Mill
Grantville, Georgia

Figure Narrative

Figure depicts soil sample locations for arsenic testing.

Notes

Legend

Property Information

Capital City Bank Parcel

Arsenic Test Location by Year

- 2017
- 2018
- 2019

0 15 30
Feet

Environmental Planning Specialists, Inc.

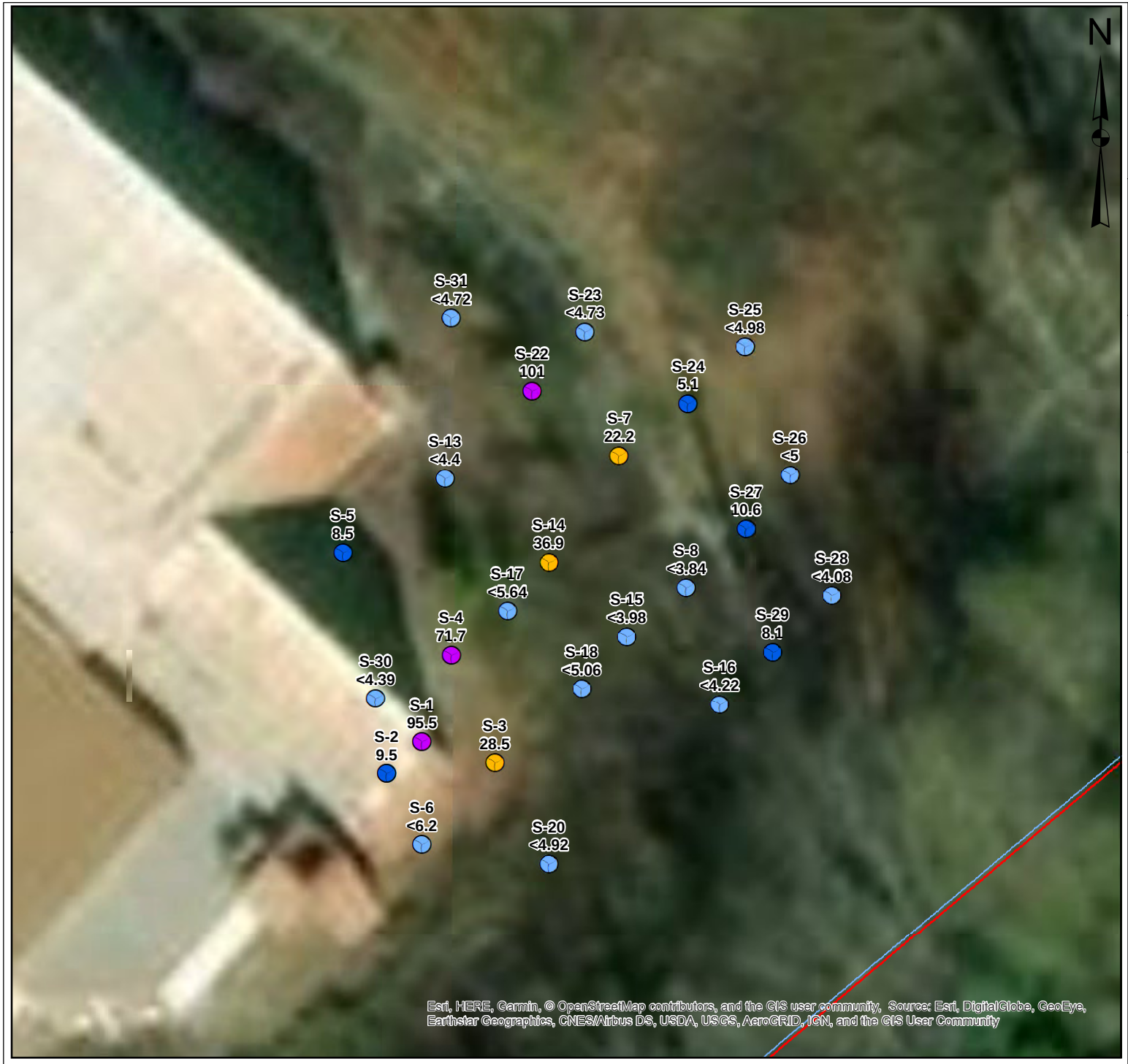


Figure 4a

Arsenic Soil Delineation:
Machinery Area, 0-1 ft-bgs

Grantville Mill
Grantville, Georgia

Figure Narrative

Figure depicts soil test results for Arsenic.

Notes

RRS: Risk Reduction Standard
Res: Residential
nRes: non-Residential
<: non-detect, detection limit listed
ft-bgs: feet below ground surface

Legend

Property Information

- Capital City Bank Parcel
- Off-Site Parcels

Arsenic <1 ft-bgs

- Non-detect
- < Res RRS (20 mg/kg)
- > Res RRS
- > nRes RRS (38 mg/kg)

0 15 30
Feet

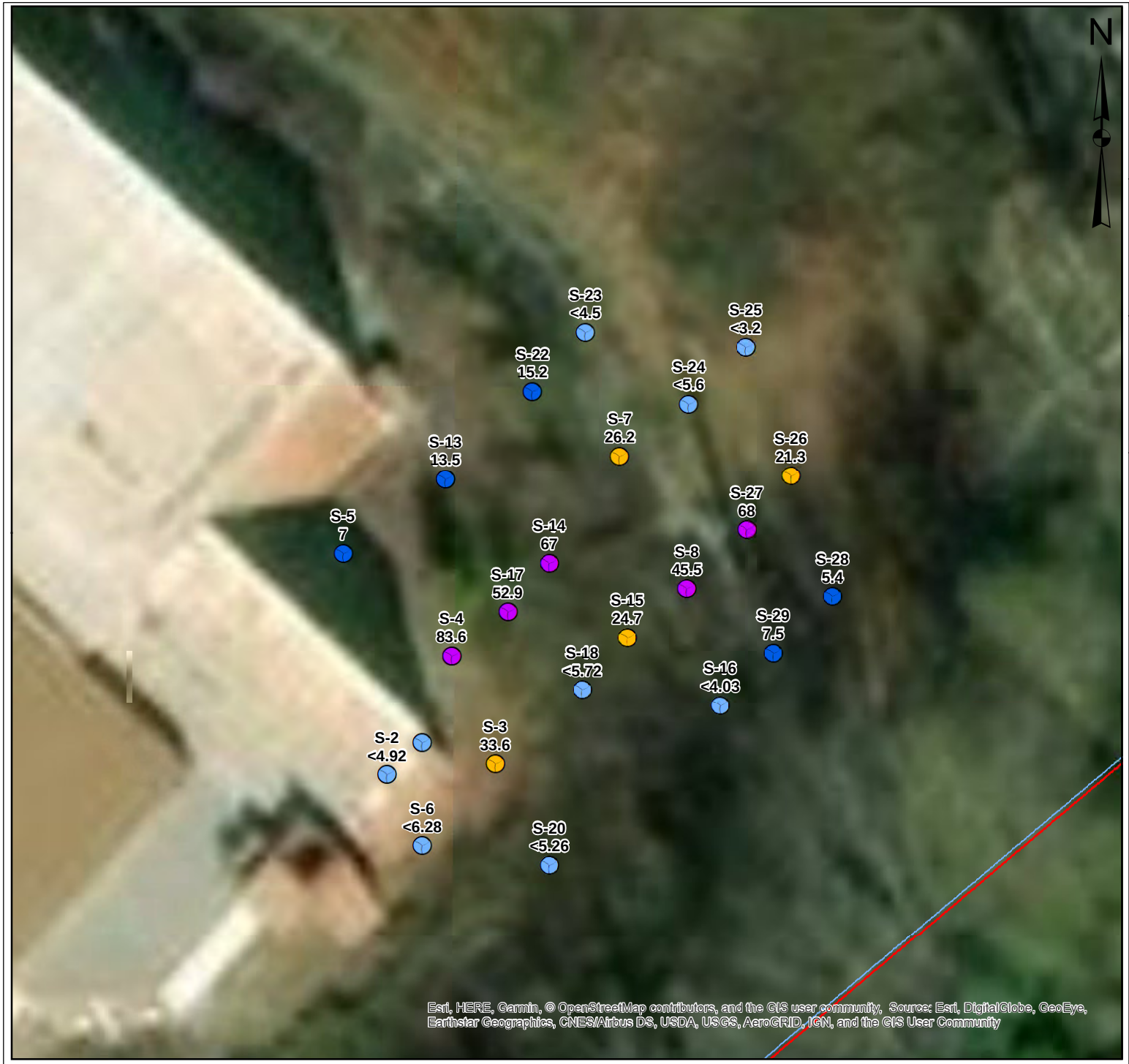


Figure 4b

Arsenic Soil Delineation:
Machinery Area, 1-2 ft-bgs

Grantville Mill
Grantville, Georgia

Figure Narrative

Figure depicts soil test results for Arsenic.

Notes

RRS: Risk Reduction Standard
Res: Residential
nRes: non-Residential
<: non-detect, detection limit listed
ft-bgs: feet below ground surface

Legend

Property Information

- Capital City Bank Parcel
- Off-Site Parcels

Arsenic 1-2 ft-bgs

- Non-detect
- < Res RRS (20 mg/kg)
- > Res RRS
- > nRes RRS (38 mg/kg)

0 15 30
Feet

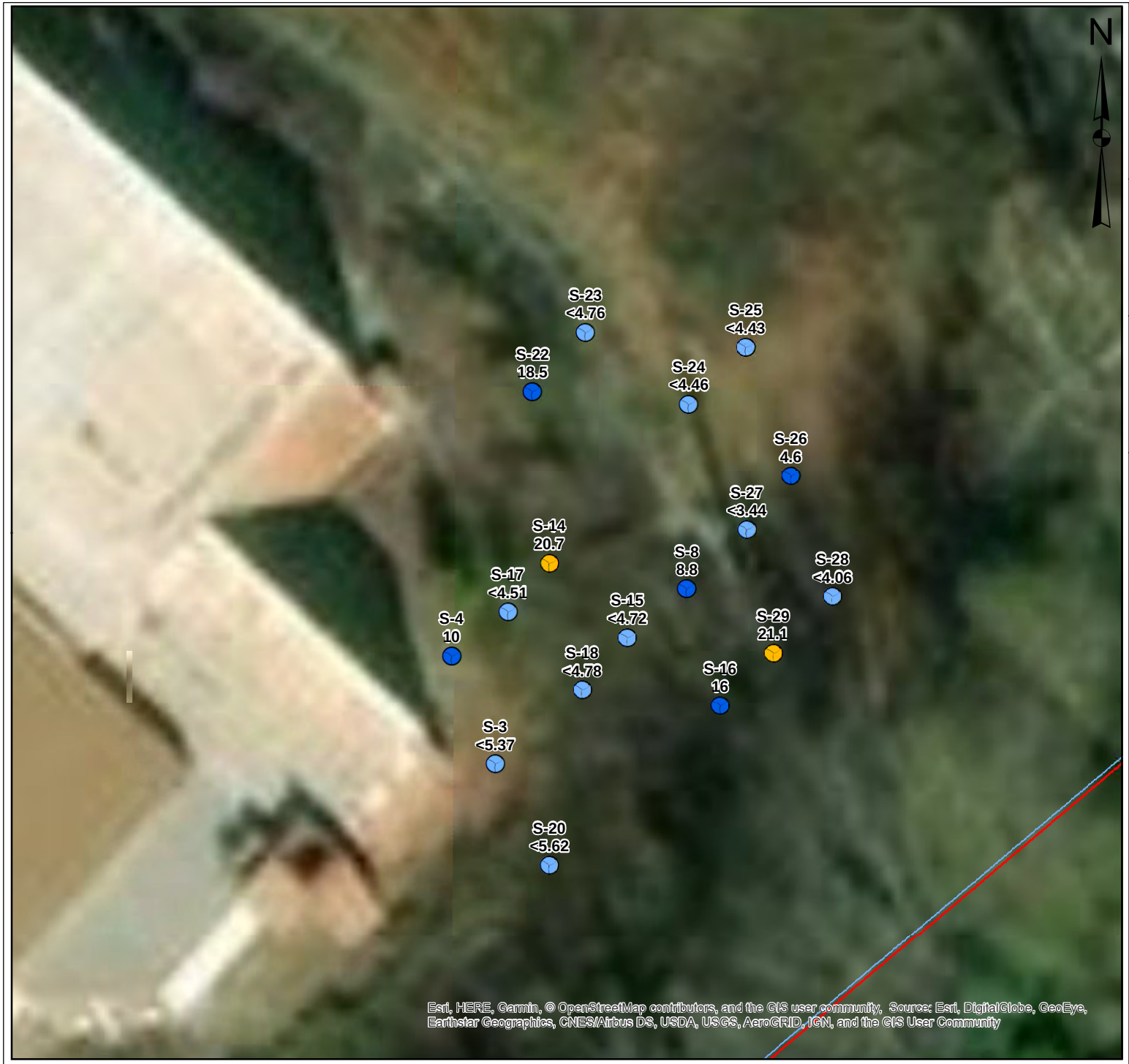


Figure 4c

Arsenic Soil Delineation:
Machinery Area, 2-4 ft-bgs

Grantville Mill
Grantville, Georgia

Figure Narrative

Figure depicts soil test results for Arsenic.

Notes

RRS: Risk Reduction Standard
Res: Residential
nRes: non-Residential
<: non-detect, detection limit listed
ft-bgs: feet below ground surface

Legend

Property Information

- Capital City Bank Parcel
- Off-Site Parcels

Arsenic 2-4 ft-bgs

- Non-detect
- < Res RRS (20 mg/kg)
- > Res RRS
- > nRes RRS (38 mg/kg)

0 15 30
Feet

Figure 5
Groundwater Results Summary

Grantville Mill
Grantville, Georgia

Figure Narrative

Figure depicts the current delineation status of groundwater VOCs. New location MW-19 highlighted green.

Notes

Units: µg/L
PCE: Tetrachloroethene
TCE: Trichloroethene
cis-DCE: cis-1,2-Dichloroethene
ND: Non-detect

Legend

Property Information

- Capital City Bank Parcel
- Breakaway Atlanta Partners, LLC Parcel

Current VOC Delineation

- Non-detect VOC
- VOC Detected
- Inferred 5 µg/L (MCL) Plume Boundary
- Off-site parcel intersects or reasonably intersects VOC plume

0 100 200
Feet

Environmental Planning Specialists, Inc.

Figure 6
Arsenic Soil Exposure Domains

Grantville Mill
Grantville, Georgia

Figure Narrative
Figure depicts proposed soil exposure domains.

Notes

Legend

Property Information
Capital City Bank Parcel

Soil Sample
Arsenic Test Location

Exposure Domain
Exterior Soil
Interior Soil

0 15 30
Feet

APPENDIX A
Professional Geologist Summary of Hours

Appendix A
Professional Geologist Hours
Period: August 2018 through January 2019

Period	Hours
August 2018	1
September 2018	0
October 2018	1
November 2018	1.5
December 2018	0
January 2019	2
Total:	5.5

APPENDIX B
Milestone Schedule

Appendix B
Project Milestone Schedule
Grantville Mill, GA HSI Site

			Year 1		Year 2		Year 3		Year 4		Year 5	
			6mo	12mo	18mo	24mo	30mo	36mo	42mo	48mo	54mo	60mo
ID	**Task Name**		Jan-2016	Jul-16	Jan-2017	Jul-17	Jan-2018	Jul-18	Jan-2019	Jul-19	Jan-2020	Jul-20
1	VIRP Approval (July 22, 2015)											
2	Semi-Annual Progress Reports											
3	Source Area Investigation / Soil Delineation											
4	On-site Horizontal Groundwater Delineation											
5	Off-site Horizontal Groundwater Delineation (if necessary)						Additional delineation performed		Additional delineation performed			
6	Vertical Groundwater Delineation (if necessary)											
7	Updated CSM, Final Remediation Plan, and Cost Estimate											
8	Remedial Activities											
9	Compliance Status Report											

Period Complete

Pending Activity

EPS

APPENDIX C
Laboratory Analytical Reports

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

September 25, 2018

Aaron Williams
Environmental Planning Specialists, Inc.

400 Northridge Rd
Sandy Springs GA 30350

RE: Grantville Mill

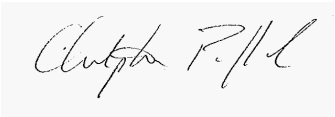
Dear Aaron Williams: Order No: 1809C43

Analytical Environmental Services, Inc. received 2 samples on September 14, 2018 12:10 pm for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES's accreditations are as follows:
-NELAP/State of Florida Laboratory ID E87582 for analysis of Non-Potable Water, Solid & Chemical Materials, Air & Emissions Volatile Organics, and Drinking Water Microbiology & Metals, effective 07/01/18-06/30/19.
State of Georgia, Department of Natural Resources ID #800 for analysis of Drinking Water Metals, effective 07/01/18-06/30/19 and Total Coliforms/ E. coli, effective 04/25/17-04/24/20.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Metals, PCM Asbestos, Gravimetric), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 11/01/19.
These results relate only to the items tested. This report may only be reproduced in full.

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

Sincerely,



Chris Pafford

Project Manager

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CHAIN OF CUSTODY

Work Order: 1809C43

Date: 9-13-18 Page 1 of 1

COMPANY: EPS	ADDRESS: 400 Northridge Rd Ste 400 Sandy Springs, GA 30350
PHONE: 404-315-9113	EMAIL: awilliams@enviplanning.com
SAMPLED BY: Joe Terry	SIGNATURE: Joe Terry

#	SAMPLE ID	SAMPLED: DATE	SAMPLED: TIME	GRAB	COMPOSITE	MATRIX (see codes)	ANALYSIS REQUESTED: TCLP VOC	ANALYSIS REQUESTED: VOC	PRESERVATION (see codes)	REMARKS	Number of Containers
1	18256-TCLP	9-13-18	1440		X	SO	4				4
2	18256-Drum	9-13-18	1500		X	GW		2			2
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											

Visit our website www.aesatlanta.com for downloadable COCs and to log in to your AESAccess account.

RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
1. Joe Terry	9-14-18/1210	1. Monique Albritton	9/14/2018 12:10pm
2.		2.	
3.		3.	

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD
OUT: / / VIA:
IN: / / VIA:
client FedEx UPS US mail courier
other: _____

PROJECT INFORMATION
PROJECT NAME: Grantville Mill
PROJECT #:
SITE ADDRESS: Grantville, GA
SEND REPORT TO: Aaron Williams awilliams@enviplanning.com
INVOICE TO (IF DIFFERENT FROM ABOVE):
QUOTE #:_____ PO#:_____

RECEIPT
Total # of Containers

Turnaround Time (TAT) Request
- [x] Standard
- [ ] 2 Business Day Rush
- [ ] Next Business Day Rush
- [ ] Same-Day Rush (auth req.)
- [x] Other EDD

STATE PROGRAM (if any): _____
E-mail? ☐ Fax? ☐
DATA PACKAGE: I ○ II ○ III ○ IV ○

Submission of samples to the laboratory constitutes acceptance of AES's Terms & Conditions. Client assumes sole responsibility for damage or loss of samples before we accept them. Samples received after 3PM or on Saturday are considered as received the following business day. If no TAT is marked on COC, AES will proceed with standard TAT. Samples are disposed of 30 days after completion of report unless other arrangements are made.

7.11.18_CO

Matrix Codes: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water ST=Stormwater WW = Waste Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify)

Preservative Codes: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc **Date:** 25-Sep-18

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	18256-TCLP
Project Name:	Grantville Mill	**Collection Date:**	9/13/2018 2:40:00 PM
Lab ID:	1809C43-001	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
VOLATILES, TCLP SW1311/8260B				**(SW5030B)**				
1,1-Dichloroethene	BRL	0.10		mg/L	267446	20	09/20/2018 15:46	CC
1,2-Dichloroethane	BRL	0.10		mg/L	267446	20	09/20/2018 15:46	CC
2-Butanone	BRL	0.20		mg/L	267446	20	09/20/2018 15:46	CC
Benzene	BRL	0.10		mg/L	267446	20	09/20/2018 15:46	CC
Carbon tetrachloride	BRL	0.10		mg/L	267446	20	09/20/2018 15:46	CC
Chlorobenzene	BRL	0.10		mg/L	267446	20	09/20/2018 15:46	CC
Chloroform	BRL	0.10		mg/L	267446	20	09/20/2018 15:46	CC
Tetrachloroethene	BRL	0.10		mg/L	267446	20	09/20/2018 15:46	CC
Trichloroethene	BRL	0.10		mg/L	267446	20	09/20/2018 15:46	CC
Vinyl chloride	BRL	0.040		mg/L	267446	20	09/20/2018 15:46	CC
Surr: 4-Bromofluorobenzene	70	64.3-123		%REC	267446	20	09/20/2018 15:46	CC
Surr: Dibromofluoromethane	102	71.7-127		%REC	267446	20	09/20/2018 15:46	CC
Surr: Toluene-d8	77.7	75.1-118		%REC	267446	20	09/20/2018 15:46	CC

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 25-Sep-18

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	18256-DRUM
Project Name:	Grantville Mill	**Collection Date:**	9/13/2018 3:00:00 PM
Lab ID:	1809C43-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
1,1,2-Trichloroethane	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
1,1-Dichloroethane	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
1,1-Dichloroethene	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
1,2-Dibromoethane	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
1,2-Dichlorobenzene	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
1,2-Dichloroethane	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
1,2-Dichloropropane	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
1,3-Dichlorobenzene	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
1,4-Dichlorobenzene	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
2-Butanone	BRL	50		ug/L	267544	1	09/22/2018 23:42	JE
2-Hexanone	BRL	10		ug/L	267544	1	09/22/2018 23:42	JE
4-Methyl-2-pentanone	BRL	10		ug/L	267544	1	09/22/2018 23:42	JE
Acetone	BRL	50		ug/L	267544	1	09/22/2018 23:42	JE
Benzene	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Bromodichloromethane	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Bromoform	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Bromomethane	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Carbon disulfide	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Carbon tetrachloride	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Chlorobenzene	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Chloroethane	BRL	10		ug/L	267544	1	09/22/2018 23:42	JE
Chloroform	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Chloromethane	BRL	10		ug/L	267544	1	09/22/2018 23:42	JE
cis-1,2-Dichloroethene	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
cis-1,3-Dichloropropene	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Cyclohexane	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Dibromochloromethane	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Dichlorodifluoromethane	BRL	10		ug/L	267544	1	09/22/2018 23:42	JE
Ethylbenzene	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Freon-113	BRL	10		ug/L	267544	1	09/22/2018 23:42	JE
Isopropylbenzene	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
m,p-Xylene	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Methyl acetate	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Methyl tert-butyl ether	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Methylcyclohexane	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Methylene chloride	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
o-Xylene	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 25-Sep-18

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	18256-DRUM
Project Name:	Grantville Mill	**Collection Date:**	9/13/2018 3:00:00 PM
Lab ID:	1809C43-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Tetrachloroethene	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Toluene	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
trans-1,2-Dichloroethene	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
trans-1,3-Dichloropropene	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Trichloroethene	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Trichlorofluoromethane	BRL	5.0		ug/L	267544	1	09/22/2018 23:42	JE
Vinyl chloride	BRL	2.0		ug/L	267544	1	09/22/2018 23:42	JE
Surr: 4-Bromofluorobenzene	96.7	68-127		%REC	267544	1	09/22/2018 23:42	JE
Surr: Dibromofluoromethane	99.1	84.4-122		%REC	267544	1	09/22/2018 23:42	JE
Surr: Toluene-d8	98.6	80.1-116		%REC	267544	1	09/22/2018 23:42	JE

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Clear Save as

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

SAMPLE/COOLER RECEIPT CHECKLIST

1. Client Name: **Environmental Planning Specialists, Inc.** AES Work Order Number: **1809C43**

2. Carrier: FedEx ☐ UPS ☐ USPS ☐ Client ■ Courier ☐ Other _____

		Yes	No	N/A	Details	Comments
3.	Shipping container/cooler received in good condition?	●	○	○	damaged ☐ leaking ☐ other ☐	
4.	Custody seals present on shipping container?	●	○	○		
5.	Custody seals intact on shipping container?	●	○	○		
6.	Temperature blanks present?	○	●	○		
7.	Cooler temperature(s) within limits of 0-6°C? [See item 13 and 14 for temperature recordings.]	●	○	○	Cooling initiated for recently collected samples / ice present ☐	
8.	Chain of Custody (COC) present?	●	○	○		
9.	Chain of Custody signed, dated, and timed when relinquished and received?	●	○	○		
10.	Sampler name and/or signature on COC?	●	○	○		
11.	Were all samples received within holding time?	●	○	○		
12.	TAT marked on the COC?	●	○	○	If no TAT indicated, proceeded with standard TAT per Terms & Conditions. ☐	

13. Cooler 1 Temperature 3.6 °C Cooler 2 Temperature _____ °C Cooler 3 Temperature _____ °C Cooler 4 Temperature _____ °C

14. Cooler 5 Temperature _____ °C Cooler 6 Temperature _____ °C Cooler 7 Temperature _____ °C Cooler 8 Temperature _____ °C

15. Comments: _____

I certify that I have completed sections 1-15 (dated initials). TD 9/14/18

		Yes	No	N/A	Details	Comments
16.	Were sample containers intact upon receipt?	●	○	○		
17.	Custody seals present on sample containers?	○	●	○		
18.	Custody seals intact on sample containers?	○	○	●		
19.	Do sample container labels match the COC?	●	○	○	incomplete info ☐ illegible ☐ no label ☐ other ☐	
20.	Are analyses requested indicated on the COC?	●	○	○		
21.	Were all of the samples listed on the COC received?	●	○	○	samples received but not listed on COC ☐ samples listed on COC not received ☐	
22.	Was the sample collection date/time noted?	●	○	○		
23.	Did we receive sufficient sample volume for indicated analyses?	●	○	○		
24.	Were samples received in appropriate containers?	●	○	○		
25.	Were VOA samples received without headspace (< 1/4" bubble)?	○	○	●		
26.	Were trip blanks submitted?	○	○	●	listed on COC ☐ not listed on COC ☐	

27. Comments: _____

I certify that I have completed sections 16-27 (dated initials). AB 9/14/18

This section only applies to samples where pH can be checked at Sample Receipt.

		Yes	No	N/A	Details	Comments
28.	Have containers needing chemical preservation been checked? *	○	○	●		
29.	Containers meet preservation guidelines?	○	○	●		
30.	Was pH adjusted at Sample Receipt?	○	○	●		

* Note: Certain analyses require chemical preservation but must be checked in the laboratory and not upon Sample Receipt such as Coliforms, VOCs and Oil & Grease/TPH.

I certify that I have completed sections 28-30 (dated initials). AB 9/14/18

Checklist 6.9.17 Rev 2

Locked

Client: Environmental Planning Specialists, Inc.
Project Name: Grantville Mill
Workorder: 1809C43

ANALYTICAL QC SUMMARY REPORT

BatchID: 267446

Sample ID: **MB-267446** Client ID: Units: **mg/L** Prep Date: **09/19/2018** Run No: **380414**
SampleType: **MBLK** TestCode: **VOLATILES, TCLP SW1311/8260B** BatchID: **267446** Analysis Date: **09/19/2018** Seq No: **8479007**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	BRL	0.10									
1,2-Dichloroethane	BRL	0.10									
2-Butanone	BRL	0.20									
Benzene	BRL	0.10									
Carbon tetrachloride	BRL	0.10									
Chlorobenzene	BRL	0.10									
Chloroform	BRL	0.10									
Tetrachloroethene	BRL	0.10									
Trichloroethene	BRL	0.10									
Vinyl chloride	BRL	0.040									
Surr: 4-Bromofluorobenzene	0.7812	0	1.000		78.1	64.3	123				
Surr: Dibromofluoromethane	1.102	0	1.000		110	71.7	127				
Surr: Toluene-d8	0.8632	0	1.000		86.3	75.1	118				

Sample ID: **LCS-267446** Client ID: Units: **mg/L** Prep Date: **09/19/2018** Run No: **380414**
SampleType: **LCS** TestCode: **VOLATILES, TCLP SW1311/8260B** BatchID: **267446** Analysis Date: **09/19/2018** Seq No: **8479005**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	0.7812	0.10	1.000		78.1	57.5	135				
1,2-Dichloroethane	0.9040	0.10	1.000		90.4	66.7	134				
2-Butanone	2.198	0.20	2.000		110	60.7	139				
Benzene	0.9482	0.10	1.000		94.8	73.2	132				
Carbon tetrachloride	1.191	0.10	1.000		119	63.5	139				
Chlorobenzene	1.080	0.10	1.000		108	76.3	129				
Chloroform	0.7524	0.10	1.000		75.2	64.9	127				
Tetrachloroethene	1.278	0.10	1.000		128	73.1	135				
Trichloroethene	1.031	0.10	1.000		103	75.1	132				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Grantville Mill
Workorder: 1809C43

ANALYTICAL QC SUMMARY REPORT

BatchID: 267446

Sample ID: **LCS-267446** Client ID: Units: **mg/L** Prep Date: **09/19/2018** Run No: **380414**
SampleType: **LCS** TestCode: **VOLATILES, TCLP SW1311/8260B** BatchID: **267446** Analysis Date: **09/19/2018** Seq No: **8479005**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Vinyl chloride	0.7360	0.040	1.000		73.6	55.3	135				
Surr: 4-Bromofluorobenzene	0.9124	0	1.000		91.2	64.3	123				
Surr: Dibromofluoromethane	1.051	0	1.000		105	71.7	127				
Surr: Toluene-d8	0.8906	0	1.000		89.1	75.1	118				

Sample ID: **1809C05-002AMS** Client ID: Units: **mg/L** Prep Date: **09/19/2018** Run No: **380415**
SampleType: **MS** TestCode: **VOLATILES, TCLP SW1311/8260B** BatchID: **267446** Analysis Date: **09/20/2018** Seq No: **8481187**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	0.8048	0.10	1.000		80.5	62.2	135				
1,2-Dichloroethane	0.9096	0.10	1.000		91.0	65.1	132				
2-Butanone	1.776	0.20	2.000		88.8	56.4	142				
Benzene	0.9030	0.10	1.000		90.3	71.7	132				
Carbon tetrachloride	1.124	0.10	1.000		112	66.1	138				
Chlorobenzene	0.9570	0.10	1.000		95.7	72	125				
Chloroform	0.6792	0.10	1.000		67.9	60.8	130				
Tetrachloroethene	1.054	0.10	1.000		105	72.8	137				
Trichloroethene	0.9160	0.10	1.000		91.6	71.5	132				
Vinyl chloride	0.8128	0.040	1.000		81.3	60.3	135				
Surr: 4-Bromofluorobenzene	0.9090	0	1.000		90.9	64.3	123				
Surr: Dibromofluoromethane	1.132	0	1.000		113	71.7	127				
Surr: Toluene-d8	0.9188	0	1.000		91.9	75.1	118				

Sample ID: **1809C05-002ADUP** Client ID: Units: **mg/L** Prep Date: **09/19/2018** Run No: **380414**
SampleType: **DUP** TestCode: **VOLATILES, TCLP SW1311/8260B** BatchID: **267446** Analysis Date: **09/20/2018** Seq No: **8479016**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	BRL	0.10						0	0	30	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Grantville Mill
Workorder: 1809C43

ANALYTICAL QC SUMMARY REPORT

BatchID: 267446

Sample ID: **1809C05-002ADUP** Client ID: Units: **mg/L** Prep Date: **09/19/2018** Run No: **380414**
SampleType: **DUP** TestCode: **VOLATILES, TCLP SW1311/8260B** BatchID: **267446** Analysis Date: **09/20/2018** Seq No: **8479016**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,2-Dichloroethane	BRL	0.10						0	0	30	
2-Butanone	BRL	0.20						0	0	30	
Benzene	BRL	0.10						0	0	30	
Carbon tetrachloride	BRL	0.10						0	0	30	
Chlorobenzene	BRL	0.10						0	0	30	
Chloroform	BRL	0.10						0	0	30	
Tetrachloroethene	BRL	0.10						0	0	30	
Trichloroethene	BRL	0.10						0	0	30	
Vinyl chloride	BRL	0.040						0	0	30	
Surr: 4-Bromofluorobenzene	0.7866	0	1.000		78.7	64.3	123	0.7454	0	0	
Surr: Dibromofluoromethane	1.103	0	1.000		110	71.7	127	1.056	0	0	
Surr: Toluene-d8	0.8594	0	1.000		85.9	75.1	118	0.8292	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Grantville Mill
Workorder: 1809C43

ANALYTICAL QC SUMMARY REPORT

BatchID: 267544

Sample ID: **MB-267544** Client ID: Units: **ug/L** Prep Date: **09/21/2018** Run No: **380616**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **267544** Analysis Date: **09/21/2018** Seq No: **8483389**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0									
1,1,2,2-Tetrachloroethane	BRL	5.0									
1,1,2-Trichloroethane	BRL	5.0									
1,1-Dichloroethane	BRL	5.0									
1,1-Dichloroethene	BRL	5.0									
1,2,4-Trichlorobenzene	BRL	5.0									
1,2-Dibromo-3-chloropropane	BRL	5.0									
1,2-Dibromoethane	BRL	5.0									
1,2-Dichlorobenzene	BRL	5.0									
1,2-Dichloroethane	BRL	5.0									
1,2-Dichloropropane	BRL	5.0									
1,3-Dichlorobenzene	BRL	5.0									
1,4-Dichlorobenzene	BRL	5.0									
2-Butanone	BRL	50									
2-Hexanone	BRL	10									
4-Methyl-2-pentanone	BRL	10									
Acetone	BRL	50									
Benzene	BRL	5.0									
Bromodichloromethane	BRL	5.0									
Bromoform	BRL	5.0									
Bromomethane	BRL	5.0									
Carbon disulfide	BRL	5.0									
Carbon tetrachloride	BRL	5.0									
Chlorobenzene	BRL	5.0									
Chloroethane	BRL	10									
Chloroform	BRL	5.0									
Chloromethane	BRL	10									

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Grantville Mill
Workorder: 1809C43

ANALYTICAL QC SUMMARY REPORT

BatchID: 267544

Sample ID: **MB-267544** Client ID: Units: **ug/L** Prep Date: **09/21/2018** Run No: **380616**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **267544** Analysis Date: **09/21/2018** Seq No: **8483389**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0									
cis-1,3-Dichloropropene	BRL	5.0									
Cyclohexane	BRL	5.0									
Dibromochloromethane	BRL	5.0									
Dichlorodifluoromethane	BRL	10									
Ethylbenzene	BRL	5.0									
Freon-113	BRL	10									
Isopropylbenzene	BRL	5.0									
m,p-Xylene	BRL	5.0									
Methyl acetate	BRL	5.0									
Methyl tert-butyl ether	BRL	5.0									
Methylcyclohexane	BRL	5.0									
Methylene chloride	BRL	5.0									
o-Xylene	BRL	5.0									
Styrene	BRL	5.0									
Tetrachloroethene	BRL	5.0									
Toluene	BRL	5.0									
trans-1,2-Dichloroethene	BRL	5.0									
trans-1,3-Dichloropropene	BRL	5.0									
Trichloroethene	BRL	5.0									
Trichlorofluoromethane	BRL	5.0									
Vinyl chloride	BRL	2.0									
Surr: 4-Bromofluorobenzene	47.79	0	50.00		95.6	68	127				
Surr: Dibromofluoromethane	49.45	0	50.00		98.9	84.4	122				
Surr: Toluene-d8	48.80	0	50.00		97.6	80.1	116				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Grantville Mill
Workorder: 1809C43

ANALYTICAL QC SUMMARY REPORT

BatchID: 267544

Sample ID: **LCS-267544** Client ID: Units: **ug/L** Prep Date: **09/21/2018** Run No: **380616**
SampleType: **LCS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **267544** Analysis Date: **09/21/2018** Seq No: **8483388**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	50.91	5.0	50.00		102	69	136				
Benzene	49.92	5.0	50.00		99.8	73.7	126				
Chlorobenzene	53.29	5.0	50.00		107	73.5	124				
Toluene	49.19	5.0	50.00		98.4	76.8	125				
Trichloroethene	48.34	5.0	50.00		96.7	70.9	124				
Surr: 4-Bromofluorobenzene	48.18	0	50.00		96.4	68	127				
Surr: Dibromofluoromethane	49.28	0	50.00		98.6	84.4	122				
Surr: Toluene-d8	48.74	0	50.00		97.5	80.1	116				

Sample ID: **1809I21-001AMS** Client ID: Units: **ug/L** Prep Date: **09/21/2018** Run No: **380616**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **267544** Analysis Date: **09/21/2018** Seq No: **8483396**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	55.97	5.0	50.00		112	65.7	143				
Benzene	54.38	5.0	50.00		109	66.1	137				
Chlorobenzene	57.36	5.0	50.00		115	70.9	132				
Toluene	53.75	5.0	50.00		108	63.8	141				
Trichloroethene	53.20	5.0	50.00		106	70.6	128				
Surr: 4-Bromofluorobenzene	48.51	0	50.00		97.0	68	127				
Surr: Dibromofluoromethane	48.54	0	50.00		97.1	84.4	122				
Surr: Toluene-d8	48.14	0	50.00		96.3	80.1	116				

Sample ID: **1809I21-001AMSD** Client ID: Units: **ug/L** Prep Date: **09/21/2018** Run No: **380616**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **267544** Analysis Date: **09/21/2018** Seq No: **8483444**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	52.12	5.0	50.00		104	65.7	143	55.97	7.12	17.7	
Benzene	52.96	5.0	50.00		106	66.1	137	54.38	2.65	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Grantville Mill
Workorder: 1809C43

ANALYTICAL QC SUMMARY REPORT

BatchID: 267544

Sample ID: **1809I21-001AMSD** Client ID:
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B**
Units: **ug/L** Prep Date: **09/21/2018** Run No: **380616**
BatchID: **267544** Analysis Date: **09/21/2018** Seq No: **8483444**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	56.81	5.0	50.00		114	70.9	132	57.36	0.963	20	
Toluene	52.61	5.0	50.00		105	63.8	141	53.75	2.14	20	
Trichloroethene	52.48	5.0	50.00		105	70.6	128	53.20	1.36	20	
Surr: 4-Bromofluorobenzene	47.88	0	50.00		95.8	68	127	48.51	0	0	
Surr: Dibromofluoromethane	48.47	0	50.00		96.9	84.4	122	48.54	0	0	
Surr: Toluene-d8	48.74	0	50.00		97.5	80.1	116	48.14	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

October 02, 2018

Aaron Williams
Environmental Planning Specialists, Inc.

400 Northridge Rd
Sandy Springs GA 30350

RE: Grantville - Mill

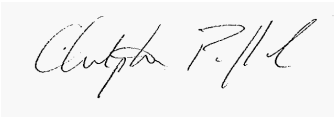
Dear Aaron Williams: Order No: 1809C44

Analytical Environmental Services, Inc. received 4 samples on 9/14/2018 12:10:00 PM
for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES's accreditations are as follows:
-NELAP/State of Florida Laboratory ID E87582 for analysis of Non-Potable Water, Solid & Chemical Materials, Air & Emissions Volatile Organics, and Drinking Water Microbiology & Metals, effective 07/01/18-06/30/19.
State of Georgia, Department of Natural Resources ID #800 for analysis of Drinking Water Metals, effective 07/01/18-06/30/19 and Total Coliforms/ E. coli, effective 04/25/17-04/24/20.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Metals, PCM Asbestos, Gravimetric), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 11/01/19.
These results relate only to the items tested. This report may only be reproduced in full.

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

Sincerely,



Chris Pafford

Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC.
3080 Presidential Drive Atlanta, GA 30340-3704
Phone: (770) 457-8177 / Toll-Free: (800) 972-4889 / Fax: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1809C44

Date: 9-13-18 Page 1 of 2

COMPANY: EPS	ADDRESS: 4100 Northridge Rd, Ste 400 Sandy Springs, GA 30350
PHONE: 404-315-9113	EMAIL: awilliams@enviplanning.com
SAMPLED BY: Joe Terry	SIGNATURE: Joe Terry

#	SAMPLE ID	SAMPLED: DATE	SAMPLED: TIME	GRAB	COMPOSITE	MATRIX (see codes)	PRESERVATION (see codes)	VOCs	Arsenic	REMARKS	Number of Containers
1	18256-MW-19	9.13.18	0910	X		GW	2				2
2	18256-Trip Blank	9.13.18	-	X		DI H_2O	2				2
3	18256-S-30-0-1	9.13.18	1355		X	SO	1				1
4	18256-S-30-1-2	9.13.18	1400		X	SO	1				1
5	18256-S-30-2-4	9.13.18	1405		X	SO	1				1
6	18256-S-31-0-1	9.13.18	1030		X	SO	1				1
7	18256-S-31-1-2	9.13.18	1035		X	SO	1				1
8	18256-S-31-2-4	9.13.18	1040		X	SO	1				1
9	18256-S-32-0-1	9.13.18	1230		X	SO	1				1
10	18256-S-32-1-2	9.13.18	1235		X	SO	1				1
11	18256-S-32-2-4	9.13.18	1240		X	SO	1				1
12	18256-S-33-0-1	9.13.18	1105		X	SO	1				1
13	18256-S-33-1-2	9.13.18	1110		X	SO	1				1
14	18256-S-33-2-4	9.13.18	1115		X	SO	1				1

ANALYSIS REQUESTED

Visit our website www.aesatlanta.com for downloadable COCs and to log in to your AESAccess account.

RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
1. Joe Terry	9-14-18/1210	1. Monweet Abritta	9/14/2018 12:10pm
2.		2.	
3.		3.	

SPECIAL INSTRUCTIONS/COMMENTS: *Please Hold:*
18256-S-30-1-2 18256-S-31-1-2
18256-S-30-2-4 18256-S-31-2-4
pending results of 18256-S-30-0-1 and 18256-S-31-0-1

SHIPMENT METHOD
OUT: / / VIA:
IN: / / VIA:
client FedEx UPS US mail courier
other: _____

PROJECT INFORMATION
PROJECT NAME: Granville Mill
PROJECT #:
SITE ADDRESS: Granville, GA
SEND REPORT TO: Aaron Williams awilliams@enviplanning.com
INVOICE TO (IF DIFFERENT FROM ABOVE):
QUOTE #:_____ PO#:_____

RECEIPT
Total # of Containers

Turnaround Time (TAT) Request
- [X] Standard
- [ ] 2 Business Day Rush
- [ ] Next Business Day Rush
- [ ] Same-Day Rush (auth req.)
- [X] Other EDD

STATE PROGRAM (if any): _____
E-mail? [ ] Fax? [ ]
DATA PACKAGE: I ○ II ○ III ○ IV ○

Submission of samples to the laboratory constitutes acceptance of AES's Terms & Conditions. Client assumes sole responsibility for damage or loss of samples before we accept them. Samples received after 3PM or on Saturday are considered as received the following business day. If no TAT is marked on COC, AES will proceed with standard TAT. Samples are disposed of 30 days after completion of report unless other arrangements are made.

Matrix Codes: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water ST=Stormwater WW = Waste Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify)

Preservative Codes: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

ANALYTICAL ENVIRONMENTAL SERVICES, INC.
3080 Presidential Drive Atlanta, GA 30340-3704
Phone: (770) 457-8177 / Toll-Free: (800) 972-4889 / Fax: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1809C44

Date: 9-13-18 Page 2 of 2

COMPANY: EPS	ADDRESS: 400 Northridge Rd Ste 400 Sandy Springs, GA 30350
PHONE: 404-315-9113	EMAIL: awilliams@envplanning.com
SAMPLED BY: Joe Terry	SIGNATURE: Joe Terry

#	SAMPLE ID	SAMPLED: DATE	SAMPLED: TIME	GRAB	COMPOSITE	MATRIX (see codes)	PRESERVATION (see codes)	ANALYSIS REQUESTED: Arsenic	REMARKS	Number of Containers
1	18256-S-34-0-1	9.13.18	1315		X	SO	1			1
2	18256-S-34-1-2	9.13.18	1320		X	SO	1			1
3	18256-S-34-2-4	9.13.18	1325		X	SO	1			1
4	18256-S-35-0-1	9.13.18	1250		X	SO	1			1
5	18256-S-35-1-2	9.13.18	1255		X	SO	1			1
6	18256-S-35-2-4	9.13.18	1300		X	SO	1			1
7	18256-S-36-0-1	9.13.18	1140		X	SO	1			1
8	18256-S-36-1-2	9.13.18	1145		X	SO	1			1
9	18256-S-36-2-4	9.13.18	1150		X	SO	1			1
10	18256-S-Dup	9.13.18	1200		X	SO	1			1
11										
12										
13										
14										

Visit our website www.aesatlanta.com for downloadable COCs and to log in to your AESAccess account.

RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
1. Joe Terry	9-14-18/1210	1. Monique Abner	9/14/18 12:10pm
2.		2.	
3.		3.	

SPECIAL INSTRUCTIONS/COMMENTS: See note on page 1

SHIPMENT METHOD
OUT: / / VIA:
IN: / / VIA:
client FedEx UPS US mail courier
other: _____

PROJECT INFORMATION
PROJECT NAME: Grantville Mill
PROJECT #:
SITE ADDRESS: Grantville, GA
SEND REPORT TO: Aaron Williams awilliams@envplanning.com
INVOICE TO (IF DIFFERENT FROM ABOVE):
QUOTE #: _____ PO#: _____

RECEIPT
Total # of Containers

Turnaround Time (TAT) Request
- [X] Standard
- [ ] 2 Business Day Rush
- [ ] Next Business Day Rush
- [ ] Same-Day Rush (auth req.)
- [X] Other EDD

STATE PROGRAM (if any): _____
E-mail? ☐ Fax? ☐
DATA PACKAGE: I ○ II ○ III ○ IV ○

Submission of samples to the laboratory constitutes acceptance of AES's Terms & Conditions. Client assumes sole responsibility for damage or loss of samples before we accept them. Samples received after 3PM or on Saturday are considered as received the following business day. If no TAT is marked on COC, AES will proceed with standard TAT. Samples are disposed of 30 days after completion of report unless other arrangements are made.

Matrix Codes: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water ST=Stormwater WW = Waste Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify)

Preservative Codes: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc

Date: 2-Oct-18

Client: Environmental Planning Specialists, Inc.
Project: Grantville - Mill
Lab ID: 1809C44

Case Narrative

At the request of Aaron Williams all soil samples except 1808C44-003A and 6A were placed on hold.

Analytical Environmental Services, Inc **Date:** 2-Oct-18

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	18256-MW-19
Project Name:	Grantville - Mill	**Collection Date:**	9/13/2018 9:10:00 AM
Lab ID:	1809C44-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
1,1,2-Trichloroethane	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
1,1-Dichloroethane	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
1,1-Dichloroethene	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
1,2-Dibromoethane	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
1,2-Dichlorobenzene	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
1,2-Dichloroethane	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
1,2-Dichloropropane	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
1,3-Dichlorobenzene	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
1,4-Dichlorobenzene	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
2-Butanone	BRL	50		ug/L	267544	1	09/23/2018 00:53	JE
2-Hexanone	BRL	10		ug/L	267544	1	09/23/2018 00:53	JE
4-Methyl-2-pentanone	BRL	10		ug/L	267544	1	09/23/2018 00:53	JE
Acetone	BRL	50		ug/L	267544	1	09/23/2018 00:53	JE
Benzene	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Bromodichloromethane	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Bromoform	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Bromomethane	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Carbon disulfide	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Carbon tetrachloride	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Chlorobenzene	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Chloroethane	BRL	10		ug/L	267544	1	09/23/2018 00:53	JE
Chloroform	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Chloromethane	BRL	10		ug/L	267544	1	09/23/2018 00:53	JE
cis-1,2-Dichloroethene	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
cis-1,3-Dichloropropene	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Cyclohexane	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Dibromochloromethane	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Dichlorodifluoromethane	BRL	10		ug/L	267544	1	09/23/2018 00:53	JE
Ethylbenzene	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Freon-113	BRL	10		ug/L	267544	1	09/23/2018 00:53	JE
Isopropylbenzene	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
m,p-Xylene	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Methyl acetate	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Methyl tert-butyl ether	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Methylcyclohexane	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Methylene chloride	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
o-Xylene	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 2-Oct-18

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	18256-MW-19
Project Name:	Grantville - Mill	**Collection Date:**	9/13/2018 9:10:00 AM
Lab ID:	1809C44-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Tetrachloroethene	14	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Toluene	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
trans-1,2-Dichloroethene	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
trans-1,3-Dichloropropene	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Trichloroethene	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Trichlorofluoromethane	BRL	5.0		ug/L	267544	1	09/23/2018 00:53	JE
Vinyl chloride	BRL	2.0		ug/L	267544	1	09/23/2018 00:53	JE
Surr: 4-Bromofluorobenzene	96.3	68-127		%REC	267544	1	09/23/2018 00:53	JE
Surr: Dibromofluoromethane	103	84.4-122		%REC	267544	1	09/23/2018 00:53	JE
Surr: Toluene-d8	98	80.1-116		%REC	267544	1	09/23/2018 00:53	JE

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 2-Oct-18

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	18256-Trip Blank
Project Name:	Grantville - Mill	**Collection Date:**	9/13/2018
Lab ID:	1809C44-002	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
1,1,2-Trichloroethane	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
1,1-Dichloroethane	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
1,1-Dichloroethene	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
1,2-Dibromoethane	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
1,2-Dichlorobenzene	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
1,2-Dichloroethane	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
1,2-Dichloropropane	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
1,3-Dichlorobenzene	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
1,4-Dichlorobenzene	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
2-Butanone	BRL	50		ug/L	267544	1	09/22/2018 17:12	JE
2-Hexanone	BRL	10		ug/L	267544	1	09/22/2018 17:12	JE
4-Methyl-2-pentanone	BRL	10		ug/L	267544	1	09/22/2018 17:12	JE
Acetone	BRL	50		ug/L	267544	1	09/22/2018 17:12	JE
Benzene	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Bromodichloromethane	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Bromoform	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Bromomethane	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Carbon disulfide	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Carbon tetrachloride	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Chlorobenzene	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Chloroethane	BRL	10		ug/L	267544	1	09/22/2018 17:12	JE
Chloroform	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Chloromethane	BRL	10		ug/L	267544	1	09/22/2018 17:12	JE
cis-1,2-Dichloroethene	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
cis-1,3-Dichloropropene	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Cyclohexane	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Dibromochloromethane	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Dichlorodifluoromethane	BRL	10		ug/L	267544	1	09/22/2018 17:12	JE
Ethylbenzene	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Freon-113	BRL	10		ug/L	267544	1	09/22/2018 17:12	JE
Isopropylbenzene	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
m,p-Xylene	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Methyl acetate	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Methyl tert-butyl ether	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Methylcyclohexane	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Methylene chloride	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
o-Xylene	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 2-Oct-18

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	18256-Trip Blank
Project Name:	Grantville - Mill	**Collection Date:**	9/13/2018
Lab ID:	1809C44-002	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Tetrachloroethene	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Toluene	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
trans-1,2-Dichloroethene	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
trans-1,3-Dichloropropene	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Trichloroethene	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Trichlorofluoromethane	BRL	5.0		ug/L	267544	1	09/22/2018 17:12	JE
Vinyl chloride	BRL	2.0		ug/L	267544	1	09/22/2018 17:12	JE
Surr: 4-Bromofluorobenzene	96.1	68-127		%REC	267544	1	09/22/2018 17:12	JE
Surr: Dibromofluoromethane	99.5	84.4-122		%REC	267544	1	09/22/2018 17:12	JE
Surr: Toluene-d8	95.7	80.1-116		%REC	267544	1	09/22/2018 17:12	JE

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 2-Oct-18

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	18256-S-30-0-1
Project Name:	Grantville - Mill	**Collection Date:**	9/13/2018 1:55:00 PM
Lab ID:	1809C44-003	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, TOTAL SW6010D (SW3050B)								
Arsenic	BRL	4.39		mg/Kg-dry	267338	1	09/19/2018 12:00	NS
PERCENT MOISTURE D2216								
Percent Moisture	5.94	0		wt%	R380403	1	09/19/2018 15:00	NN

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 2-Oct-18

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	18256-S-31-0-1
Project Name:	Grantville - Mill	**Collection Date:**	9/13/2018 10:30:00 AM
Lab ID:	1809C44-006	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, TOTAL SW6010D (SW3050B)								
Arsenic	BRL	4.72		mg/Kg-dry	267338	1	09/19/2018 14:39	NS
PERCENT MOISTURE D2216								
Percent Moisture	12.4	0		wt%	R380403	1	09/19/2018 15:00	NN

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

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AES ANALYTICAL ENVIRONMENTAL SERVICES, INC.

SAMPLE/COOLER RECEIPT CHECKLIST

1. Client Name: **Environmental Planning Specialists, Inc.** AES Work Order Number: **1809C44**

2. Carrier: FedEx ☐ UPS ☐ USPS ☐ Client ■ Courier ☐ Other _____

		Yes	No	N/A	Details	Comments
3.	Shipping container/cooler received in good condition?	●	○	○	damaged ☐ leaking ☐ other ☐	
4.	Custody seals present on shipping container?	●	○	○		
5.	Custody seals intact on shipping container?	●	○	○		
6.	Temperature blanks present?	○	●	○		
7.	Cooler temperature(s) within limits of 0-6°C? [See item 13 and 14 for temperature recordings.]	●	○	○	Cooling initiated for recently collected samples / ice present ☐	
8.	Chain of Custody (COC) present?	●	○	○		
9.	Chain of Custody signed, dated, and timed when relinquished and received?	●	○	○		
10.	Sampler name and/or signature on COC?	●	○	○		
11.	Were all samples received within holding time?	●	○	○		
12.	TAT marked on the COC?	●	○	○	If no TAT indicated, proceeded with standard TAT per Terms & Conditions. ☐	

13. Cooler 1 Temperature 5.1 °C Cooler 2 Temperature _____ °C Cooler 3 Temperature _____ °C Cooler 4 Temperature _____ °C

14. Cooler 5 Temperature _____ °C Cooler 6 Temperature _____ °C Cooler 7 Temperature _____ °C Cooler 8 Temperature _____ °C

15. Comments: _____

I certify that I have completed sections 1-15 (dated initials). TD 9/14/18

		Yes	No	N/A	Details	Comments
16.	Were sample containers intact upon receipt?	●	○	○		
17.	Custody seals present on sample containers?	○	●	○		
18.	Custody seals intact on sample containers?	○	○	●		
19.	Do sample container labels match the COC?	●	○	○	incomplete info ☐ illegible ☐ no label ☐ other ☐	
20.	Are analyses requested indicated on the COC?	●	○	○		
21.	Were all of the samples listed on the COC received?	●	○	○	samples received but not listed on COC ☐ samples listed on COC not received ☐	
22.	Was the sample collection date/time noted?	●	○	○		
23.	Did we receive sufficient sample volume for indicated analyses?	●	○	○		
24.	Were samples received in appropriate containers?	●	○	○		
25.	Were VOA samples received without headspace (< 1/4" bubble)?	●	○	○		
26.	Were trip blanks submitted?	●	○	○	listed on COC ■ not listed on COC ☐	

27. Comments: _____

I certify that I have completed sections 16-27 (dated initials). EDM 9/14/18

This section only applies to samples where pH can be checked at Sample Receipt.

		Yes	No	N/A	Details	Comments
28.	Have containers needing chemical preservation been checked? *	○	○	●		
29.	Containers meet preservation guidelines?	○	○	●		
30.	Was pH adjusted at Sample Receipt?	○	○	●		

* Note: Certain analyses require chemical preservation but must be checked in the laboratory and not upon Sample Receipt such as Coliforms, VOCs and Oil & Grease/TPH.

I certify that I have completed sections 28-30 (dated initials). EDM 9/14/18

Checklist 6.9.17 Rev 2

Locked

Client: Environmental Planning Specialists, Inc.
Project Name: Grantville - Mill
Workorder: 1809C44

ANALYTICAL QC SUMMARY REPORT

BatchID: 267338

Sample ID: **MB-267338**	Client ID:			Units: **mg/Kg**	Prep Date: **09/19/2018**	Run No: **380334**
SampleType: **MBLK**	TestCode: **METALS, TOTAL** **SW6010D**			BatchID: **267338**	Analysis Date: **09/19/2018**	Seq No: **8476309**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	5.00									

Sample ID: **LCS-267338**	Client ID:			Units: **mg/Kg**	Prep Date: **09/19/2018**	Run No: **380334**
SampleType: **LCS**	TestCode: **METALS, TOTAL** **SW6010D**			BatchID: **267338**	Analysis Date: **09/19/2018**	Seq No: **8476310**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	46.95	5.00	50.00		93.9	80	120				

Sample ID: **1809C44-003AMS**	Client ID: **18256-S-30-0-1**			Units: **mg/Kg-dry**	Prep Date: **09/19/2018**	Run No: **380334**
SampleType: **MS**	TestCode: **METALS, TOTAL** **SW6010D**			BatchID: **267338**	Analysis Date: **09/19/2018**	Seq No: **8476314**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	39.01	4.39	43.87	2.696	82.8	75	125				

Sample ID: **1809C44-003AMSD**	Client ID: **18256-S-30-0-1**			Units: **mg/Kg-dry**	Prep Date: **09/19/2018**	Run No: **380334**
SampleType: **MSD**	TestCode: **METALS, TOTAL** **SW6010D**			BatchID: **267338**	Analysis Date: **09/19/2018**	Seq No: **8476315**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	41.46	4.39	43.90	2.696	88.3	75	125	39.01	6.11	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Grantville - Mill
Workorder: 1809C44

ANALYTICAL QC SUMMARY REPORT

BatchID: 267544

Sample ID: **MB-267544** Client ID: Units: **ug/L** Prep Date: **09/21/2018** Run No: **380616**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **267544** Analysis Date: **09/21/2018** Seq No: **8483389**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0									
1,1,2,2-Tetrachloroethane	BRL	5.0									
1,1,2-Trichloroethane	BRL	5.0									
1,1-Dichloroethane	BRL	5.0									
1,1-Dichloroethene	BRL	5.0									
1,2,4-Trichlorobenzene	BRL	5.0									
1,2-Dibromo-3-chloropropane	BRL	5.0									
1,2-Dibromoethane	BRL	5.0									
1,2-Dichlorobenzene	BRL	5.0									
1,2-Dichloroethane	BRL	5.0									
1,2-Dichloropropane	BRL	5.0									
1,3-Dichlorobenzene	BRL	5.0									
1,4-Dichlorobenzene	BRL	5.0									
2-Butanone	BRL	50									
2-Hexanone	BRL	10									
4-Methyl-2-pentanone	BRL	10									
Acetone	BRL	50									
Benzene	BRL	5.0									
Bromodichloromethane	BRL	5.0									
Bromoform	BRL	5.0									
Bromomethane	BRL	5.0									
Carbon disulfide	BRL	5.0									
Carbon tetrachloride	BRL	5.0									
Chlorobenzene	BRL	5.0									
Chloroethane	BRL	10									
Chloroform	BRL	5.0									
Chloromethane	BRL	10									

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Grantville - Mill
Workorder: 1809C44

ANALYTICAL QC SUMMARY REPORT

BatchID: 267544

Sample ID: **MB-267544** Client ID: Units: **ug/L** Prep Date: **09/21/2018** Run No: **380616**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **267544** Analysis Date: **09/21/2018** Seq No: **8483389**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0									
cis-1,3-Dichloropropene	BRL	5.0									
Cyclohexane	BRL	5.0									
Dibromochloromethane	BRL	5.0									
Dichlorodifluoromethane	BRL	10									
Ethylbenzene	BRL	5.0									
Freon-113	BRL	10									
Isopropylbenzene	BRL	5.0									
m,p-Xylene	BRL	5.0									
Methyl acetate	BRL	5.0									
Methyl tert-butyl ether	BRL	5.0									
Methylcyclohexane	BRL	5.0									
Methylene chloride	BRL	5.0									
o-Xylene	BRL	5.0									
Styrene	BRL	5.0									
Tetrachloroethene	BRL	5.0									
Toluene	BRL	5.0									
trans-1,2-Dichloroethene	BRL	5.0									
trans-1,3-Dichloropropene	BRL	5.0									
Trichloroethene	BRL	5.0									
Trichlorofluoromethane	BRL	5.0									
Vinyl chloride	BRL	2.0									
Surr: 4-Bromofluorobenzene	47.79	0	50.00		95.6	68	127				
Surr: Dibromofluoromethane	49.45	0	50.00		98.9	84.4	122				
Surr: Toluene-d8	48.80	0	50.00		97.6	80.1	116				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Grantville - Mill
Workorder: 1809C44

ANALYTICAL QC SUMMARY REPORT

BatchID: 267544

Sample ID: **LCS-267544** Client ID: Units: **ug/L** Prep Date: **09/21/2018** Run No: **380616**
SampleType: **LCS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **267544** Analysis Date: **09/21/2018** Seq No: **8483388**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	50.91	5.0	50.00		102	69	136				
Benzene	49.92	5.0	50.00		99.8	73.7	126				
Chlorobenzene	53.29	5.0	50.00		107	73.5	124				
Toluene	49.19	5.0	50.00		98.4	76.8	125				
Trichloroethene	48.34	5.0	50.00		96.7	70.9	124				
Surr: 4-Bromofluorobenzene	48.18	0	50.00		96.4	68	127				
Surr: Dibromofluoromethane	49.28	0	50.00		98.6	84.4	122				
Surr: Toluene-d8	48.74	0	50.00		97.5	80.1	116				

Sample ID: **1809I21-001AMS** Client ID: Units: **ug/L** Prep Date: **09/21/2018** Run No: **380616**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **267544** Analysis Date: **09/21/2018** Seq No: **8483396**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	55.97	5.0	50.00		112	65.7	143				
Benzene	54.38	5.0	50.00		109	66.1	137				
Chlorobenzene	57.36	5.0	50.00		115	70.9	132				
Toluene	53.75	5.0	50.00		108	63.8	141				
Trichloroethene	53.20	5.0	50.00		106	70.6	128				
Surr: 4-Bromofluorobenzene	48.51	0	50.00		97.0	68	127				
Surr: Dibromofluoromethane	48.54	0	50.00		97.1	84.4	122				
Surr: Toluene-d8	48.14	0	50.00		96.3	80.1	116				

Sample ID: **1809I21-001AMSD** Client ID: Units: **ug/L** Prep Date: **09/21/2018** Run No: **380616**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **267544** Analysis Date: **09/21/2018** Seq No: **8483444**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	52.12	5.0	50.00		104	65.7	143	55.97	7.12	17.7	
Benzene	52.96	5.0	50.00		106	66.1	137	54.38	2.65	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Grantville - Mill
Workorder: 1809C44

ANALYTICAL QC SUMMARY REPORT

BatchID: 267544

Sample ID: **1809I21-001AMSD** Client ID:
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B**
Units: **ug/L** Prep Date: **09/21/2018** Run No: **380616**
BatchID: **267544** Analysis Date: **09/21/2018** Seq No: **8483444**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	56.81	5.0	50.00		114	70.9	132	57.36	0.963	20	
Toluene	52.61	5.0	50.00		105	63.8	141	53.75	2.14	20	
Trichloroethene	52.48	5.0	50.00		105	70.6	128	53.20	1.36	20	
Surr: 4-Bromofluorobenzene	47.88	0	50.00		95.8	68	127	48.51	0	0	
Surr: Dibromofluoromethane	48.47	0	50.00		96.9	84.4	122	48.54	0	0	
Surr: Toluene-d8	48.74	0	50.00		97.5	80.1	116	48.14	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

October 24, 2018

Aaron Williams
Environmental Planning Specialists, Inc.

400 Northridge Rd
Sandy Springs GA 30350

RE: Grantville Mill

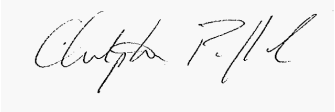
Dear Aaron Williams: Order No: 1810F88

Analytical Environmental Services, Inc. received 4 samples on October 16, 2018 3:10 pm for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES's accreditations are as follows:
-NELAP/State of Florida Laboratory ID E87582 for analysis of Non-Potable Water, Solid & Chemical Materials, Air & Emissions Volatile Organics, and Drinking Water Microbiology & Metals, effective 07/01/18-06/30/19.
State of Georgia, Department of Natural Resources ID #800 for analysis of Drinking Water Metals, effective 07/01/18-06/30/19 and Total Coliforms/ E. coli, effective 04/25/17-04/24/20.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Metals, PCM Asbestos, Gravimetric), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 11/01/19.
These results relate only to the items tested. This report may only be reproduced in full.

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

Sincerely,



Chris Pafford

Project Manager

3080 Presidential Drive • Atlanta, Georgia 30340 • Tel: 770.457.8177 • Fax: 770.457.8188 • Toll Free: 800.972.4889
www.aesatlanta.com

ANALYTICAL ENVIRONMENTAL SERVICES, INC.
3080 Presidential Drive Atlanta, GA 30340-3704
Phone: (770) 457-8177 / Toll-Free: (800) 972-4889 / Fax: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1810F88

Date: 10.16.18 Page 1 of 1

COMPANY: EPS

ADDRESS: 400 Northridge Rd. #400 Sandy Springs, GA 30350

PHONE: 404-315-9113

EMAIL:

SAMPLED BY: Brian McBann, Cameron Lee

SIGNATURE: BM

#	SAMPLE ID	SAMPLED: DATE	SAMPLED: TIME	GRAB	COMPOSITE	MATRIX (see codes)	ANALYSIS REQUESTED: VOC (8260B)	PRESERVATION (see codes): H+I	REMARKS	Number of Containers
1	18289-MW-19	10.16.18	1240	✓		GW	✓	✓		2
2	18289-DUP	10.16.18	1200	✓		GW	✓	✓		2
3	18289-Field Blank	10.16.18	1205	✓		W	✓	✓		2
4	18289-Trip Blank	10.16.18	—			W	✓	✓		2
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										

Visit our website www.aesatlanta.com for downloadable COCs and to log in to your AESAccess account.

RELINQUISHED BY: DATE/TIME:
1. BM 10/16/18 1510
2.
3.

RECEIVED BY: DATE/TIME:
1. M. Hunt 10/16/18 15:10
2.
3.

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD
OUT: / / VIA:
IN: / / VIA:
(client) FedEx UPS US mail courier
other:

PROJECT INFORMATION
PROJECT NAME: Grantville Mill
PROJECT #:
SITE ADDRESS: Grantville, GA
SEND REPORT TO: awilliams@envplanning.com
INVOICE TO (IF DIFFERENT FROM ABOVE):
QUOTE #: PO#:

RECEIPT
Total # of Containers: 8

Turnaround Time (TAT) Request
- [x] Standard
- [ ] 2 Business Day Rush
- [ ] Next Business Day Rush
- [ ] Same-Day Rush (auth req.)
- [ ] Other

STATE PROGRAM (if any):
E-mail? ☐ Fax? ☐
DATA PACKAGE: I ○ II ○ III ○ IV ○

Submission of samples to the laboratory constitutes acceptance of AES's Terms & Conditions. Client assumes sole responsibility for damage or loss of samples before we accept them. Samples received after 3PM or on Saturday are considered as received the following business day. If no TAT is marked on COC, AES will proceed with standard TAT. Samples are disposed of 30 days after completion of report unless other arrangements are made.

Matrix Codes: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water ST=Stormwater WW = Waste Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify)

Preservative Codes: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

7.11.18_CO

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc **Date:** 23-Oct-18

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	18289-MW-19
Project Name:	Grantville Mill	**Collection Date:**	10/16/2018 12:40:00 PM
Lab ID:	1810F88-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
1,1-Dichloroethane	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
1,1-Dichloroethene	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
1,2-Dibromoethane	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
1,2-Dichloroethane	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
1,2-Dichloropropane	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
2-Butanone	BRL	50		ug/L	269088	1	10/20/2018 03:37	NP
2-Hexanone	BRL	10		ug/L	269088	1	10/20/2018 03:37	NP
4-Methyl-2-pentanone	BRL	10		ug/L	269088	1	10/20/2018 03:37	NP
Acetone	BRL	50		ug/L	269088	1	10/20/2018 03:37	NP
Benzene	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Bromodichloromethane	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Bromoform	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Bromomethane	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Carbon disulfide	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Carbon tetrachloride	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Chlorobenzene	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Chloroethane	BRL	10		ug/L	269088	1	10/20/2018 03:37	NP
Chloroform	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Chloromethane	BRL	10		ug/L	269088	1	10/20/2018 03:37	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Cyclohexane	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Dibromochloromethane	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Dichlorodifluoromethane	BRL	10		ug/L	269088	1	10/20/2018 03:37	NP
Ethylbenzene	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Freon-113	BRL	10		ug/L	269088	1	10/20/2018 03:37	NP
Isopropylbenzene	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
m,p-Xylene	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Methyl acetate	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Methylcyclohexane	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Methylene chloride	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
o-Xylene	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-18

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	18289-MW-19
Project Name:	Grantville Mill	**Collection Date:**	10/16/2018 12:40:00 PM
Lab ID:	1810F88-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Tetrachloroethene	8.1	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Toluene	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Trichloroethene	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Trichlorofluoromethane	BRL	5.0		ug/L	269088	1	10/20/2018 03:37	NP
Vinyl chloride	BRL	2.0		ug/L	269088	1	10/20/2018 03:37	NP
Surr: 4-Bromofluorobenzene	90.6	68-127		%REC	269088	1	10/20/2018 03:37	NP
Surr: Dibromofluoromethane	99.2	84.4-122		%REC	269088	1	10/20/2018 03:37	NP
Surr: Toluene-d8	103	80.1-116		%REC	269088	1	10/20/2018 03:37	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-18

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	18289-Dup
Project Name:	Grantville Mill	**Collection Date:**	10/16/2018 12:00:00 PM
Lab ID:	1810F88-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
1,1-Dichloroethane	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
1,1-Dichloroethene	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
1,2-Dibromoethane	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
1,2-Dichloroethane	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
1,2-Dichloropropane	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
2-Butanone	BRL	50		ug/L	269088	1	10/20/2018 04:02	NP
2-Hexanone	BRL	10		ug/L	269088	1	10/20/2018 04:02	NP
4-Methyl-2-pentanone	BRL	10		ug/L	269088	1	10/20/2018 04:02	NP
Acetone	BRL	50		ug/L	269088	1	10/20/2018 04:02	NP
Benzene	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Bromodichloromethane	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Bromoform	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Bromomethane	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Carbon disulfide	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Carbon tetrachloride	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Chlorobenzene	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Chloroethane	BRL	10		ug/L	269088	1	10/20/2018 04:02	NP
Chloroform	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Chloromethane	BRL	10		ug/L	269088	1	10/20/2018 04:02	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Cyclohexane	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Dibromochloromethane	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Dichlorodifluoromethane	BRL	10		ug/L	269088	1	10/20/2018 04:02	NP
Ethylbenzene	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Freon-113	BRL	10		ug/L	269088	1	10/20/2018 04:02	NP
Isopropylbenzene	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
m,p-Xylene	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Methyl acetate	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Methylcyclohexane	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Methylene chloride	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
o-Xylene	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-18

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	18289-Dup
Project Name:	Grantville Mill	**Collection Date:**	10/16/2018 12:00:00 PM
Lab ID:	1810F88-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Tetrachloroethene	8.7	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Toluene	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Trichloroethene	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Trichlorofluoromethane	BRL	5.0		ug/L	269088	1	10/20/2018 04:02	NP
Vinyl chloride	BRL	2.0		ug/L	269088	1	10/20/2018 04:02	NP
Surr: 4-Bromofluorobenzene	94	68-127		%REC	269088	1	10/20/2018 04:02	NP
Surr: Dibromofluoromethane	98.1	84.4-122		%REC	269088	1	10/20/2018 04:02	NP
Surr: Toluene-d8	102	80.1-116		%REC	269088	1	10/20/2018 04:02	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-18

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	18289-Field Blank
Project Name:	Grantville Mill	**Collection Date:**	10/16/2018 12:05:00 PM
Lab ID:	1810F88-003	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
1,1-Dichloroethane	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
1,1-Dichloroethene	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
1,2-Dibromoethane	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
1,2-Dichloroethane	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
1,2-Dichloropropane	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
2-Butanone	BRL	50		ug/L	269088	1	10/20/2018 04:27	NP
2-Hexanone	BRL	10		ug/L	269088	1	10/20/2018 04:27	NP
4-Methyl-2-pentanone	BRL	10		ug/L	269088	1	10/20/2018 04:27	NP
Acetone	BRL	50		ug/L	269088	1	10/20/2018 04:27	NP
Benzene	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Bromodichloromethane	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Bromoform	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Bromomethane	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Carbon disulfide	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Carbon tetrachloride	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Chlorobenzene	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Chloroethane	BRL	10		ug/L	269088	1	10/20/2018 04:27	NP
Chloroform	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Chloromethane	BRL	10		ug/L	269088	1	10/20/2018 04:27	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Cyclohexane	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Dibromochloromethane	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Dichlorodifluoromethane	BRL	10		ug/L	269088	1	10/20/2018 04:27	NP
Ethylbenzene	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Freon-113	BRL	10		ug/L	269088	1	10/20/2018 04:27	NP
Isopropylbenzene	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
m,p-Xylene	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Methyl acetate	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Methylcyclohexane	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Methylene chloride	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
o-Xylene	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-18

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	18289-Field Blank
Project Name:	Grantville Mill	**Collection Date:**	10/16/2018 12:05:00 PM
Lab ID:	1810F88-003	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Tetrachloroethene	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Toluene	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Trichloroethene	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Trichlorofluoromethane	BRL	5.0		ug/L	269088	1	10/20/2018 04:27	NP
Vinyl chloride	BRL	2.0		ug/L	269088	1	10/20/2018 04:27	NP
Surr: 4-Bromofluorobenzene	92.8	68-127		%REC	269088	1	10/20/2018 04:27	NP
Surr: Dibromofluoromethane	97.5	84.4-122		%REC	269088	1	10/20/2018 04:27	NP
Surr: Toluene-d8	102	80.1-116		%REC	269088	1	10/20/2018 04:27	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-18

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	18289-Trip Blank
Project Name:	Grantville Mill	**Collection Date:**	10/16/2018
Lab ID:	1810F88-004	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
1,1-Dichloroethane	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
1,1-Dichloroethene	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
1,2-Dibromoethane	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
1,2-Dichloroethane	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
1,2-Dichloropropane	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
2-Butanone	BRL	50		ug/L	269088	1	10/21/2018 01:48	NP
2-Hexanone	BRL	10		ug/L	269088	1	10/21/2018 01:48	NP
4-Methyl-2-pentanone	BRL	10		ug/L	269088	1	10/21/2018 01:48	NP
Acetone	BRL	50		ug/L	269088	1	10/21/2018 01:48	NP
Benzene	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Bromodichloromethane	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Bromoform	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Bromomethane	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Carbon disulfide	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Carbon tetrachloride	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Chlorobenzene	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Chloroethane	BRL	10		ug/L	269088	1	10/21/2018 01:48	NP
Chloroform	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Chloromethane	BRL	10		ug/L	269088	1	10/21/2018 01:48	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Cyclohexane	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Dibromochloromethane	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Dichlorodifluoromethane	BRL	10		ug/L	269088	1	10/21/2018 01:48	NP
Ethylbenzene	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Freon-113	BRL	10		ug/L	269088	1	10/21/2018 01:48	NP
Isopropylbenzene	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
m,p-Xylene	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Methyl acetate	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Methylcyclohexane	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Methylene chloride	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
o-Xylene	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-18

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	18289-Trip Blank
Project Name:	Grantville Mill	**Collection Date:**	10/16/2018
Lab ID:	1810F88-004	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Tetrachloroethene	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Toluene	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Trichloroethene	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Trichlorofluoromethane	BRL	5.0		ug/L	269088	1	10/21/2018 01:48	NP
Vinyl chloride	BRL	2.0		ug/L	269088	1	10/21/2018 01:48	NP
Surr: 4-Bromofluorobenzene	93.6	68-127		%REC	269088	1	10/21/2018 01:48	NP
Surr: Dibromofluoromethane	98	84.4-122		%REC	269088	1	10/21/2018 01:48	NP
Surr: Toluene-d8	102	80.1-116		%REC	269088	1	10/21/2018 01:48	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Clear Save as

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

SAMPLE/COOLER RECEIPT CHECKLIST

1. Client Name: **Environmental Planning Specialists, Inc.** AES Work Order Number: **1810F88**

2. Carrier: FedEx ☐ UPS ☐ USPS ☐ Client ■ Courier ☐ Other _____

		Yes	No	N/A	Details	Comments
3.	Shipping container/cooler received in good condition?	◉	○	○	damaged ☐ leaking ☐ other ☐	
4.	Custody seals present on shipping container?	○	◉	○		
5.	Custody seals intact on shipping container?	○	○	◉		
6.	Temperature blanks present?	◉	○	○		
7.	Cooler temperature(s) within limits of 0-6°C? [See item 13 and 14 for temperature recordings.]	◉	○	○	Cooling initiated for recently collected samples / ice present ☐	
8.	Chain of Custody (COC) present?	◉	○	○		
9.	Chain of Custody signed, dated, and timed when relinquished and received?	◉	○	○		
10.	Sampler name and/or signature on COC?	◉	○	○		
11.	Were all samples received within holding time?	◉	○	○		
12.	TAT marked on the COC?	◉	○	○	If no TAT indicated, proceeded with standard TAT per Terms & Conditions. ☐	

13. Cooler 1 Temperature 3.1 °C Cooler 2 Temperature _____ °C Cooler 3 Temperature _____ °C Cooler 4 Temperature _____ °C

14. Cooler 5 Temperature _____ °C Cooler 6 Temperature _____ °C Cooler 7 Temperature _____ °C Cooler 8 Temperature _____ °C

15. Comments: _____

I certify that I have completed sections 1-15 (dated initials). KK 10/16/18

		Yes	No	N/A	Details	Comments
16.	Were sample containers intact upon receipt?	◉	○	○		
17.	Custody seals present on sample containers?	○	◉	○		
18.	Custody seals intact on sample containers?	○	○	◉		
19.	Do sample container labels match the COC?	◉	○	○	incomplete info ☐ illegible ☐ no label ☐ other ☐	
20.	Are analyses requested indicated on the COC?	◉	○	○		
21.	Were all of the samples listed on the COC received?	◉	○	○	samples received but not listed on COC ☐ samples listed on COC not received ☐	
22.	Was the sample collection date/time noted?	◉	○	○		
23.	Did we receive sufficient sample volume for indicated analyses?	◉	○	○		
24.	Were samples received in appropriate containers?	◉	○	○		
25.	Were VOA samples received without headspace (< 1/4" bubble)?	◉	○	○		
26.	Were trip blanks submitted?	◉	○	○	listed on COC ■ not listed on COC ☐	

27. Comments: _____

I certify that I have completed sections 16-27 (dated initials). KK 10/16/18

This section only applies to samples where pH can be checked at Sample Receipt.

		Yes	No	N/A	Details	Comments
28.	Have containers needing chemical preservation been checked? *	○	○	◉		
29.	Containers meet preservation guidelines?	○	○	◉		
30.	Was pH adjusted at Sample Receipt?	○	○	◉		

* Note: Certain analyses require chemical preservation but must be checked in the laboratory and not upon Sample Receipt such as Coliforms, VOCs and Oil & Grease/TPH.

I certify that I have completed sections 28-30 (dated initials). KK 10/16/18

Locked

Client: Environmental Planning Specialists, Inc.
Project Name: Grantville Mill
Workorder: 1810F88

ANALYTICAL QC SUMMARY REPORT

BatchID: 269088

Sample ID: **MB-269088** Client ID: Units: **ug/L** Prep Date: **10/19/2018** Run No: **382702**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **269088** Analysis Date: **10/19/2018** Seq No: **8539579**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0									
1,1,2,2-Tetrachloroethane	BRL	5.0									
1,1,2-Trichloroethane	BRL	5.0									
1,1-Dichloroethane	BRL	5.0									
1,1-Dichloroethene	BRL	5.0									
1,2,4-Trichlorobenzene	BRL	5.0									
1,2-Dibromo-3-chloropropane	BRL	5.0									
1,2-Dibromoethane	BRL	5.0									
1,2-Dichlorobenzene	BRL	5.0									
1,2-Dichloroethane	BRL	5.0									
1,2-Dichloropropane	BRL	5.0									
1,3-Dichlorobenzene	BRL	5.0									
1,4-Dichlorobenzene	BRL	5.0									
2-Butanone	BRL	50									
2-Hexanone	BRL	10									
4-Methyl-2-pentanone	BRL	10									
Acetone	BRL	50									
Benzene	BRL	5.0									
Bromodichloromethane	BRL	5.0									
Bromoform	BRL	5.0									
Bromomethane	BRL	5.0									
Carbon disulfide	BRL	5.0									
Carbon tetrachloride	BRL	5.0									
Chlorobenzene	BRL	5.0									
Chloroethane	BRL	10									
Chloroform	BRL	5.0									
Chloromethane	BRL	10									

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Grantville Mill
Workorder: 1810F88

ANALYTICAL QC SUMMARY REPORT

BatchID: 269088

Sample ID: **MB-269088** Client ID: Units: **ug/L** Prep Date: **10/19/2018** Run No: **382702**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **269088** Analysis Date: **10/19/2018** Seq No: **8539579**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0									
cis-1,3-Dichloropropene	BRL	5.0									
Cyclohexane	BRL	5.0									
Dibromochloromethane	BRL	5.0									
Dichlorodifluoromethane	BRL	10									
Ethylbenzene	BRL	5.0									
Freon-113	BRL	10									
Isopropylbenzene	BRL	5.0									
m,p-Xylene	BRL	5.0									
Methyl acetate	BRL	5.0									
Methyl tert-butyl ether	BRL	5.0									
Methylcyclohexane	BRL	5.0									
Methylene chloride	BRL	5.0									
o-Xylene	BRL	5.0									
Styrene	BRL	5.0									
Tetrachloroethene	BRL	5.0									
Toluene	BRL	5.0									
trans-1,2-Dichloroethene	BRL	5.0									
trans-1,3-Dichloropropene	BRL	5.0									
Trichloroethene	BRL	5.0									
Trichlorofluoromethane	BRL	5.0									
Vinyl chloride	BRL	2.0									
Surr: 4-Bromofluorobenzene	46.50	0	50.00		93.0	68	127				
Surr: Dibromofluoromethane	50.92	0	50.00		102	84.4	122				
Surr: Toluene-d8	51.75	0	50.00		104	80.1	116				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Grantville Mill
Workorder: 1810F88

ANALYTICAL QC SUMMARY REPORT

BatchID: 269088

Sample ID: **LCS-269088** Client ID: Units: **ug/L** Prep Date: **10/19/2018** Run No: **382702**
SampleType: **LCS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **269088** Analysis Date: **10/19/2018** Seq No: **8539575**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	56.25	5.0	50.00		112	69	136				
Benzene	55.52	5.0	50.00		111	73.7	126				
Chlorobenzene	56.23	5.0	50.00		112	73.5	124				
Toluene	57.87	5.0	50.00		116	76.8	125				
Trichloroethene	57.70	5.0	50.00		115	70.9	124				
Surr: 4-Bromofluorobenzene	46.27	0	50.00		92.5	68	127				
Surr: Dibromofluoromethane	49.59	0	50.00		99.2	84.4	122				
Surr: Toluene-d8	50.69	0	50.00		101	80.1	116				

Sample ID: **1810I49-005AMS** Client ID: Units: **ug/L** Prep Date: **10/19/2018** Run No: **382771**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **269088** Analysis Date: **10/20/2018** Seq No: **8539743**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	1163	100	1000		116	65.7	143				
Benzene	1095	100	1000		110	66.1	137				
Chlorobenzene	1162	100	1000		116	70.9	132				
Toluene	1182	100	1000		118	63.8	141				
Trichloroethene	1240	100	1000		124	70.6	128				
Surr: 4-Bromofluorobenzene	927.6	0	1000		92.8	68	127				
Surr: Dibromofluoromethane	984.0	0	1000		98.4	84.4	122				
Surr: Toluene-d8	1016	0	1000		102	80.1	116				

Sample ID: **1810I49-005AMSD** Client ID: Units: **ug/L** Prep Date: **10/19/2018** Run No: **382771**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **269088** Analysis Date: **10/20/2018** Seq No: **8539744**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	1097	100	1000		110	65.7	143	1163	5.82	17.7	
Benzene	1093	100	1000		109	66.1	137	1095	0.146	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Grantville Mill
Workorder: 1810F88

ANALYTICAL QC SUMMARY REPORT

BatchID: 269088

Sample ID: **1810I49-005AMSD** Client ID:
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B**
Units: **ug/L** Prep Date: **10/19/2018** Run No: **382771**
BatchID: **269088** Analysis Date: **10/20/2018** Seq No: **8539744**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	1117	100	1000		112	70.9	132	1162	3.98	20	
Toluene	1143	100	1000		114	63.8	141	1182	3.32	20	
Trichloroethene	1143	100	1000		114	70.6	128	1240	8.09	20	
Surr: 4-Bromofluorobenzene	918.6	0	1000		91.9	68	127	927.6	0	0	
Surr: Dibromofluoromethane	995.8	0	1000		99.6	84.4	122	984.0	0	0	
Surr: Toluene-d8	1027	0	1000		103	80.1	116	1016	0	0	

Qualifiers:

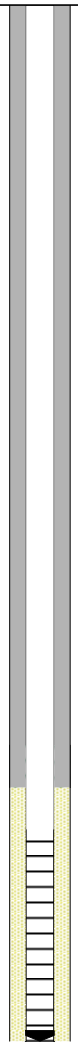
>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

APPENDIX D
Boring Logs

PROJECT: **Grantville Mill**		Log of Boring No. **MW-19**	
SITE LOCATION:	Grantville, GA	TOP OF CASING ELEVATION (ft):	N/A
DRILLING CONTRACTOR:	GeoLab	DATE STARTED: 9/10/2018	DATE FINISHED: 9/10/2018
DRILLING METHOD:	Hollow Stem Auger	TOTAL DEPTH (ft.): 49	SCREEN INTERVAL (ft.): 39-49
DRILLING EQUIPMENT:	Geoprobe	DEPTH TO WATER AT TIME OF BORING (ft.): NM	CASING (ft.): 0-39
SAMPLING METHOD:	N/A	BOREHOLE DIAMETER (In.): 4.25	WELL DIAMETER (In.): 2
LOGGED BY:	Alex Testoff		

Ground Surface Elevation (ft): N/A

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Location	PID Reading	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0				Topsoil	
5			0	Red, orange clay	
10			0		
15			0	Tan, white micaceous sandy clay, fine to medium	
20			0		
25			0	Light brown, white micaceous sandy clay, fine to medium	
30			0		
35			0	Light brown, white, pink micaceous sandy clay, fine to medium	
40			0	Tan, white, pink micaceous sandy clay, fine to medium	
45			0		
50					Hollow stem auger refusal at ~49 ft bgs
55					
60					



EPS

APPENDIX E
Field Forms

EPS

Monitoring Well Sampling Form

EPS Project: Grantville Mill **Date:** September 13, 2018

Well ID: MW-19 **Field Conditions:** p. cloudy, 72°F

Sampling Performed By: J. Terry, B. McGann

Well Construction: stick up **General Condition of Well:** good

Well Labeled: yes **Well Cap:** yes **Well Locked:** yes **Condition of surrounding area:** unimproved (wooded)

Well depth from TOC: 53 Ft **Depth to Water from TOC:** 2.12 ft

Well Diameter (in): 2 **Method of measure:** Water Level Meter

Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 50.88

Volume of water in well (Ht. x (0.04 for 1")(.16 for 2")(.653 for 4")(1.469 for 6"): 8.14 **Three Well Volumes (gal):** 24.4

Purging Method: low flow **Time @ Start of Purge:** 0800

Sample Method: direct / straw **Sample Parameters:** VOCs

Initial Depth of Pump/Tubing: 48 ft (BTOC) **Final Depth of Pump/Tubing:** 48 ft (BTOC) **Purge Rate (gpm):** 0.05

Time	Volume (gal)	Temp (°C)	pH	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW (ft, BTOC)	Comments
0820	1	20.0	5.89	0.084	3.44	1.96	147.1	7.28	
0830	1.5	19.9	5.89	0.083	3.63	1.18	145.2	7.92	
0840	2	19.8	5.89	0.083	3.64	2.17	142.5	8.51	@ 0840 pump rate slowed to 0.03 gal/min
0850	2.3	20.2	5.89	0.083	3.37	1.62	140.7	8.35	
0900	2.6	20.0	5.88	0.083	3.57	0.99	141.2	8.47	
0905	2.75	20.1	5.89	0.083	3.53	1.31	139.5	8.41	

WQ Meter Make/Model/SN: YSI Pro Plus 18E106564

Turbidity Meter Make/Model/SN: LaMotte 2020we 9710-1118

Pump Make/Model: Geopump Peristaltic

Sample ID: 18256-MW-19 Time Collected: 0910 Technician Signature:

EPS

Monitoring Well Sampling Form

EPS Project: Grantville Mill

Date: 10/16/18

Well ID: MW-19

Field Conditions: 78°F, overcast, no wind

Sampling Performed By: B. McGann C. Lee

General Condition of Well: Good

Well Construction: Stick up

Well Labeled: ✓ Well Cap: ✓ Well Locked: ✓

Condition of surrounding area: unimproved surface

Well depth from TOC: 53 ft.

Depth to Water from TOC: 2.79 ft.

Well Diameter (in): 2 in.

Method of measure: Water Level Meter

Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 50.21

Volume of water in well [Ht. x(0.04 for 1")(.16 for 2")(.653 for 4")(1.469 for 6")gal/ft]: 8.03

Three Well Volumes (gal): 24.1

Purging Method: low flow, low volume

Time @ Start of Purge: 1125

Sample Method: direct/straw

Sample Parameters: VOCs

Initial Depth of Pump/Tubing: 48 ft (BTOC)

Final Depth of Pump/Tubing: 48 ft (BTOC)

Time	Volume (gal)	Temp (°C)	pH	ORP (mV)	Cond. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Depth to Water (ft)	Comments
1135	0.5	19.0	5.64	173.6	0.085	2.10	6.05	5.96	0.05 gal/min purge rate
1145	0.8	19.7	5.64	182.5	0.086	8.11	4.99	6.72	
1155	1.1	19.5	5.65	189.2	0.084	0.05	4.87	7.31	@ 1135 pump rate slowed to 0.03 gal/min to prevent further drawdown
1205	1.4	19.4	5.65	193.4	0.084	8.27	4.81	7.92	
1215	1.7	19.6	5.65	196.2	0.084	0.20	4.83	8.28	
1225	2.0	19.5	5.65	198.7	0.084	0.66	4.67	8.50	
1235	2.3	19.5	5.65	201.5	0.084	0.43	4.69	8.59	

Water Quality Meter (Make/Model/SN): YSI ProPlus 18E106564 Turbidimeter: LaMotte 2020we 9835-1018

Pump (Make/Model): Alexis Peristaltic

Sample ID: 18289-MW-19

Time Collected: 1240

Technician Signature:

Also collected 18289-Dup (@1200)

18289-Field Blank (@1205)

EPS

APPENDIX F
ProUCL Software Files

ProUCL Software Data Input File:
Arsenic Soil Data with Non-detect Values

# Samples	As<1	D_As<1	As1-2	D_As1-2	As>2	D_As>2
1	4.39	0	3.57	0	16	1
2	4.72	0	13.5	1	4.78	0
3	95.5	1	22.3	1	5.62	0
4	4.4	0	4.14	0	20.7	1
5	36.9	1	4.03	0	4.72	0
6	3.98	0	52.9	1	4.51	0
7	4.22	0	5.72	0	18.5	1
8	5.64	0	4.92	0	4.76	0
9	5.06	0	5.26	0	4.46	0
10	9.47	1	33.6	1	4.43	0
11	4.92	0	83.6	1	4.61	1
12	101	1	7	1	3.44	0
13	4.73	0	6.28	0	4.06	0
14	5.14	1	26.2	1	21.1	1
15	4.98	0	45.5	1	5.37	0
16	5	0	5.71	1	9.87	1
17	10.6	1	28	1	32.4	1
18	4.08	0	46.4	1	8.76	1
19	8.14	1	67	1		
20	28.5	1	24.7	1		
21	71.7	1	15.2	1		
22	8.51	1	4.5	0		
23	6.2	0	5.6	0		
24	22.2	1	3.2	0		
25	3.84	0	21.3	1		
26			68	1		
27			5.43	1		
28			7.47	1		
29			7.15	1		
30			29.9	1		

All values reported at mg/kg

As<1: data value for soil from 0 to 1 foot

D_As<1: ProUCL detection input identifier, 0=non-detect with detection limit input, 1=detected

As<1-2: data value for soil from 1 to 2 feet

D_As<1-2: ProUCL detection input identifier, 0=non-detect with detection limit input, 1=detected

As>2: data value for soil from 2 to 4 feet

D_As>2: ProUCL detection input identifier, 0=non-detect with detection limit input, 1=detected

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.110/29/2018 8:07:33 AM
From File	As_ProUCL_Input_rev.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Arsenic 0-1 ft-bgs

General Statistics

Total Number of Observations	25	Number of Distinct Observations	25
Number of Detects	11	Number of Non-Detects	14
Number of Distinct Detects	11	Number of Distinct Non-Detects	14
Minimum Detect	5.14	Minimum Non-Detect	3.84
Maximum Detect	101	Maximum Non-Detect	6.2
Variance Detects	1312	Percent Non-Detects	56%
Mean Detects	36.15	SD Detects	36.22
Median Detects	22.2	CV Detects	1.002
Skewness Detects	1.067	Kurtosis Detects	-0.462
Mean of Logged Detects	3.09	SD of Logged Detects	1.07

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.794	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.85	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.22	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.251	Detected Data appear Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	18.06	KM Standard Error of Mean	5.865
KM SD	27.96	95% KM (BCA) UCL	28.64
95% KM (t) UCL	28.1	95% KM (Percentile Bootstrap) UCL	27.84
95% KM (z) UCL	27.71	95% KM Bootstrap t UCL	33.57
90% KM Chebyshev UCL	35.66	95% KM Chebyshev UCL	43.63
97.5% KM Chebyshev UCL	54.69	99% KM Chebyshev UCL	76.42

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.569	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.749	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.229	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.262	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.142	k star (bias corrected MLE)	0.891
Theta hat (MLE)	31.65	Theta star (bias corrected MLE)	40.56
nu hat (MLE)	25.13	nu star (bias corrected)	19.61
Mean (detects)	36.15		

52	**Gamma ROS Statistics using Imputed Non-Detects**											
53	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
54	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
55	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
56	This is especially true when the sample size is small.											
57	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
58					Minimum	0.01				Mean	15.91	
59					Maximum	101				Median	0.01	
60					SD	29.7				CV	1.866	
61					k hat (MLE)	0.187				k star (bias corrected MLE)	0.191	
62					Theta hat (MLE)	85.27				Theta star (bias corrected MLE)	83.36	
63					nu hat (MLE)	9.33				nu star (bias corrected)	9.544	
64					Adjusted Level of Significance (β)	0.0395						
65					Approximate Chi Square Value (9.54, α)	3.659				Adjusted Chi Square Value (9.54, β)	3.413	
66					95% Gamma Approximate UCL (use when n>=50)	41.51				95% Gamma Adjusted UCL (use when n<50)	44.49	
67												
68	**Estimates of Gamma Parameters using KM Estimates**											
69					Mean (KM)	18.06				SD (KM)	27.96	
70					Variance (KM)	781.8				SE of Mean (KM)	5.865	
71					k hat (KM)	0.417				k star (KM)	0.394	
72					nu hat (KM)	20.87				nu star (KM)	19.7	
73					theta hat (KM)	43.28				theta star (KM)	45.85	
74					80% gamma percentile (KM)	29.1				90% gamma percentile (KM)	51.16	
75					95% gamma percentile (KM)	75.45				99% gamma percentile (KM)	136.6	
76												
77	**Gamma Kaplan-Meier (KM) Statistics**											
78					Approximate Chi Square Value (19.70, α)	10.63				Adjusted Chi Square Value (19.70, β)	10.18	
79					95% Gamma Approximate KM-UCL (use when n>=50)	33.48				95% Gamma Adjusted KM-UCL (use when n<50)	34.97	
80												
81	**Lognormal GOF Test on Detected Observations Only**											
82					Shapiro Wilk Test Statistic	0.91				**Shapiro Wilk GOF Test**		
83					5% Shapiro Wilk Critical Value	0.85				Detected Data appear Lognormal at 5% Significance Level		
84					Lilliefors Test Statistic	0.207				**Lilliefors GOF Test**		
85					5% Lilliefors Critical Value	0.251				Detected Data appear Lognormal at 5% Significance Level		
86	**Detected Data appear Lognormal at 5% Significance Level**											
87												
88	**Lognormal ROS Statistics Using Imputed Non-Detects**											
89					Mean in Original Scale	16.49				Mean in Log Scale	1.386	
90					SD in Original Scale	29.38				SD in Log Scale	1.69	
91					95% t UCL (assumes normality of ROS data)	26.55				95% Percentile Bootstrap UCL	27.04	
92					95% BCA Bootstrap UCL	28.91				95% Bootstrap t UCL	34.5	
93					95% H-UCL (Log ROS)	55.47						
94												
95	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
96					KM Mean (logged)	2.115				KM Geo Mean	8.288	
97					KM SD (logged)	1.098				95% Critical H Value (KM-Log)	2.622	
98					KM Standard Error of Mean (logged)	0.23				95% H-UCL (KM -Log)	27.26	
99					KM SD (logged)	1.098				95% Critical H Value (KM-Log)	2.622	
100					KM Standard Error of Mean (logged)	0.23						
101												

102	**DL/2 Statistics**											
103	**DL/2 Normal**						**DL/2 Log-Transformed**					
104				Mean in Original Scale	17.23					Mean in Log Scale	1.836	
105				SD in Original Scale	28.98					SD in Log Scale	1.332	
106				95% t UCL (Assumes normality)	27.15					95% H-Stat UCL	33.91	
107	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
108												
109	**Nonparametric Distribution Free UCL Statistics**											
110	**Detected Data appear Approximate Normal Distributed at 5% Significance Level**											
111												
112	**Suggested UCL to Use**											
113				95% KM (t) UCL	28.1							
114												
115	When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test											
116	When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL											
117												
118	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
119	Recommendations are based upon data size, data distribution, and skewness.											
120	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
121	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
122												
123	**Arsenic 1-2 ft-bgs**											
124												
125	**General Statistics**											
126				Total Number of Observations	30					Number of Distinct Observations	30	
127				Number of Detects	20					Number of Non-Detects	10	
128				Number of Distinct Detects	20					Number of Distinct Non-Detects	10	
129				Minimum Detect	5.43					Minimum Non-Detect	3.2	
130				Maximum Detect	83.6					Maximum Non-Detect	6.28	
131				Variance Detects	534.3					Percent Non-Detects	33.33%	
132				Mean Detects	30.54					SD Detects	23.12	
133				Median Detects	25.45					CV Detects	0.757	
134				Skewness Detects	0.897					Kurtosis Detects	-0.0361	
135				Mean of Logged Detects	3.102					SD of Logged Detects	0.871	
136												
137	**Normal GOF Test on Detects Only**											
138				Shapiro Wilk Test Statistic	0.898		**Shapiro Wilk GOF Test**					
139				5% Shapiro Wilk Critical Value	0.905		Detected Data Not Normal at 5% Significance Level					
140				Lilliefors Test Statistic	0.161		**Lilliefors GOF Test**					
141				5% Lilliefors Critical Value	0.192		Detected Data appear Normal at 5% Significance Level					
142	**Detected Data appear Approximate Normal at 5% Significance Level**											
143												
144	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
145				KM Mean	21.47					KM Standard Error of Mean	4.202	
146				KM SD	22.43					95% KM (BCA) UCL	28.76	
147				95% KM (t) UCL	28.61					95% KM (Percentile Bootstrap) UCL	28.86	
148				95% KM (z) UCL	28.38					95% KM Bootstrap t UCL	30.03	
149				90% KM Chebyshev UCL	34.08					95% KM Chebyshev UCL	39.79	
150				97.5% KM Chebyshev UCL	47.71					99% KM Chebyshev UCL	63.28	
151												

152	**Gamma GOF Tests on Detected Observations Only**											
153				A-D Test Statistic		0.339	**Anderson-Darling GOF Test**					
154				5% A-D Critical Value		0.755	Detected data appear Gamma Distributed at 5% Significance Level					
155				K-S Test Statistic		0.14	**Kolmogorov-Smirnov GOF**					
156				5% K-S Critical Value		0.197	Detected data appear Gamma Distributed at 5% Significance Level					
157	**Detected data appear Gamma Distributed at 5% Significance Level**											
158												
159	**Gamma Statistics on Detected Data Only**											
160				k hat (MLE)		1.724	k star (bias corrected MLE)					1.498
161				Theta hat (MLE)		17.72	Theta star (bias corrected MLE)					20.38
162				nu hat (MLE)		68.94	nu star (bias corrected)					59.93
163				Mean (detects)		30.54						
164												
165	**Gamma ROS Statistics using Imputed Non-Detects**											
166	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
167	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
168	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
169	This is especially true when the sample size is small.											
170	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
171				Minimum		0.01	Mean					20.37
172				Maximum		83.6	Median					10.48
173				SD		23.76	CV					1.167
174				k hat (MLE)		0.281	k star (bias corrected MLE)					0.275
175				Theta hat (MLE)		72.49	Theta star (bias corrected MLE)					74.04
176				nu hat (MLE)		16.86	nu star (bias corrected)					16.5
177				Adjusted Level of Significance (β)		0.041						
178				Approximate Chi Square Value (16.50, α)		8.319	Adjusted Chi Square Value (16.50, β)					7.984
179				95% Gamma Approximate UCL (use when n>=50)		40.4	95% Gamma Adjusted UCL (use when n<50)					42.1
180												
181	**Estimates of Gamma Parameters using KM Estimates**											
182				Mean (KM)		21.47	SD (KM)					22.43
183				Variance (KM)		503.1	SE of Mean (KM)					4.202
184				k hat (KM)		0.916	k star (KM)					0.847
185				nu hat (KM)		54.98	nu star (KM)					50.82
186				theta hat (KM)		23.43	theta star (KM)					25.35
187				80% gamma percentile (KM)		34.97	90% gamma percentile (KM)					51.49
188				95% gamma percentile (KM)		68.24	99% gamma percentile (KM)					107.6
189												
190	**Gamma Kaplan-Meier (KM) Statistics**											
191				Approximate Chi Square Value (50.82, α)		35.45	Adjusted Chi Square Value (50.82, β)					34.71
192				95% Gamma Approximate KM-UCL (use when n>=50)		30.78	95% Gamma Adjusted KM-UCL (use when n<50)					31.44
193												
194	**Lognormal GOF Test on Detected Observations Only**											
195				Shapiro Wilk Test Statistic		0.935	**Shapiro Wilk GOF Test**					
196				5% Shapiro Wilk Critical Value		0.905	Detected Data appear Lognormal at 5% Significance Level					
197				Lilliefors Test Statistic		0.145	**Lilliefors GOF Test**					
198				5% Lilliefors Critical Value		0.192	Detected Data appear Lognormal at 5% Significance Level					
199	**Detected Data appear Lognormal at 5% Significance Level**											
200												

201	**Lognormal ROS Statistics Using Imputed Non-Detects**											
202					Mean in Original Scale	21.39				Mean in Log Scale	2.443	
203					SD in Original Scale	22.87				SD in Log Scale	1.182	
204				95% t UCL (assumes normality of ROS data)		28.49				95% Percentile Bootstrap UCL	28.02	
205					95% BCA Bootstrap UCL	29.45				95% Bootstrap t UCL	30.28	
206					95% H-UCL (Log ROS)	42						
207												
208	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
209					KM Mean (logged)	2.466				KM Geo Mean	11.77	
210					KM SD (logged)	1.138				95% Critical H Value (KM-Log)	2.656	
211					KM Standard Error of Mean (logged)	0.214				95% H-UCL (KM -Log)	39.43	
212					KM SD (logged)	1.138				95% Critical H Value (KM-Log)	2.656	
213					KM Standard Error of Mean (logged)	0.214						
214												
215	**DL/2 Statistics**											
216	**DL/2 Normal**						**DL/2 Log-Transformed**					
217					Mean in Original Scale	21.15				Mean in Log Scale	2.347	
218					SD in Original Scale	23.08				SD in Log Scale	1.3	
219					95% t UCL (Assumes normality)	28.31				95% H-Stat UCL	48.75	
220	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
221												
222	**Nonparametric Distribution Free UCL Statistics**											
223	**Detected Data appear Approximate Normal Distributed at 5% Significance Level**											
224												
225	**Suggested UCL to Use**											
226					95% KM (t) UCL	28.61						
227												
228	When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test											
229	When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL											
230												
231	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
232	Recommendations are based upon data size, data distribution, and skewness.											
233	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
234	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
235												
236	**Arsenic 2-4 ft-bgs**											
237												
238	**General Statistics**											
239					Total Number of Observations	18				Number of Distinct Observations	18	
240					Number of Detects	8				Number of Non-Detects	10	
241					Number of Distinct Detects	8				Number of Distinct Non-Detects	10	
242					Minimum Detect	4.61				Minimum Non-Detect	3.44	
243					Maximum Detect	32.4				Maximum Non-Detect	5.62	
244					Variance Detects	77.3				Percent Non-Detects	55.56%	
245					Mean Detects	16.49				SD Detects	8.792	
246					Median Detects	17.25				CV Detects	0.533	
247					Skewness Detects	0.498				Kurtosis Detects	0.278	
248					Mean of Logged Detects	2.654				SD of Logged Detects	0.62	
249												

250	**Normal GOF Test on Detects Only**											
251					Shapiro Wilk Test Statistic	0.957	**Shapiro Wilk GOF Test**					
252					5% Shapiro Wilk Critical Value	0.818	Detected Data appear Normal at 5% Significance Level					
253					Lilliefors Test Statistic	0.175	**Lilliefors GOF Test**					
254					5% Lilliefors Critical Value	0.283	Detected Data appear Normal at 5% Significance Level					
255	**Detected Data appear Normal at 5% Significance Level**											
256												
257	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
258					KM Mean	9.295	KM Standard Error of Mean	2.133				
259					KM SD	8.459	95% KM (BCA) UCL	13.68				
260					95% KM (t) UCL	13.01	95% KM (Percentile Bootstrap) UCL	12.88				
261					95% KM (z) UCL	12.8	95% KM Bootstrap t UCL	13.21				
262					90% KM Chebyshev UCL	15.69	95% KM Chebyshev UCL	18.59				
263					97.5% KM Chebyshev UCL	22.62	99% KM Chebyshev UCL	30.52				
264												
265	**Gamma GOF Tests on Detected Observations Only**											
266					A-D Test Statistic	0.255	**Anderson-Darling GOF Test**					
267					5% A-D Critical Value	0.72	Detected data appear Gamma Distributed at 5% Significance Level					
268					K-S Test Statistic	0.174	**Kolmogorov-Smirnov GOF**					
269					5% K-S Critical Value	0.296	Detected data appear Gamma Distributed at 5% Significance Level					
270	**Detected data appear Gamma Distributed at 5% Significance Level**											
271												
272	**Gamma Statistics on Detected Data Only**											
273					k hat (MLE)	3.527	k star (bias corrected MLE)	2.288				
274					Theta hat (MLE)	4.676	Theta star (bias corrected MLE)	7.21				
275					nu hat (MLE)	56.43	nu star (bias corrected)	36.6				
276					Mean (detects)	16.49						
277												
278	**Gamma ROS Statistics using Imputed Non-Detects**											
279	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
280	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
281	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
282	This is especially true when the sample size is small.											
283	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
284					Minimum	0.01	Mean	7.336				
285					Maximum	32.4	Median	0.01				
286					SD	10.14	CV	1.383				
287					k hat (MLE)	0.216	k star (bias corrected MLE)	0.217				
288					Theta hat (MLE)	34.01	Theta star (bias corrected MLE)	33.84				
289					nu hat (MLE)	7.765	nu star (bias corrected)	7.805				
290					Adjusted Level of Significance (β)	0.0357						
291					Approximate Chi Square Value (7.80, α)	2.622	Adjusted Chi Square Value (7.80, β)	2.343				
292					95% Gamma Approximate UCL (use when n>=50)	21.83	95% Gamma Adjusted UCL (use when n<50)	24.44				
293												

294	**Estimates of Gamma Parameters using KM Estimates**											
295					Mean (KM)	9.295				SD (KM)	8.459	
296					Variance (KM)	71.56				SE of Mean (KM)	2.133	
297					k hat (KM)	1.207				k star (KM)	1.043	
298					nu hat (KM)	43.47				nu star (KM)	37.56	
299					theta hat (KM)	7.698				theta star (KM)	8.91	
300					80% gamma percentile (KM)	14.91				90% gamma percentile (KM)	21.18	
301					95% gamma percentile (KM)	27.43				99% gamma percentile (KM)	41.91	
302												
303	**Gamma Kaplan-Meier (KM) Statistics**											
304					Approximate Chi Square Value (37.56, α)	24.52				Adjusted Chi Square Value (37.56, β)	23.52	
305					95% Gamma Approximate KM-UCL (use when n>=50)	14.23				95% Gamma Adjusted KM-UCL (use when n<50)	14.85	
306												
307	**Lognormal GOF Test on Detected Observations Only**											
308					Shapiro Wilk Test Statistic	0.945				**Shapiro Wilk GOF Test**		
309					5% Shapiro Wilk Critical Value	0.818				Detected Data appear Lognormal at 5% Significance Level		
310					Lilliefors Test Statistic	0.2				**Lilliefors GOF Test**		
311					5% Lilliefors Critical Value	0.283				Detected Data appear Lognormal at 5% Significance Level		
312	**Detected Data appear Lognormal at 5% Significance Level**											
313												
314	**Lognormal ROS Statistics Using Imputed Non-Detects**											
315					Mean in Original Scale	8.79				Mean in Log Scale	1.714	
316					SD in Original Scale	9.062				SD in Log Scale	0.955	
317					95% t UCL (assumes normality of ROS data)	12.51				95% Percentile Bootstrap UCL	12.38	
318					95% BCA Bootstrap UCL	13.33				95% Bootstrap t UCL	13.58	
319					95% H-UCL (Log ROS)	15.9						
320												
321	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
322					KM Mean (logged)	1.88				KM Geo Mean	6.552	
323					KM SD (logged)	0.796				95% Critical H Value (KM-Log)	2.357	
324					KM Standard Error of Mean (logged)	0.202				95% H-UCL (KM -Log)	14.18	
325					KM SD (logged)	0.796				95% Critical H Value (KM-Log)	2.357	
326					KM Standard Error of Mean (logged)	0.202						
327												
328	**DL/2 Statistics**											
329	**DL/2 Normal**									**DL/2 Log-Transformed**		
330					Mean in Original Scale	8.612				Mean in Log Scale	1.64	
331					SD in Original Scale	9.192				SD in Log Scale	1.02	
332					95% t UCL (Assumes normality)	12.38				95% H-Stat UCL	16.78	
333	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
334												
335	**Nonparametric Distribution Free UCL Statistics**											
336	**Detected Data appear Normal Distributed at 5% Significance Level**											
337												
338	**Suggested UCL to Use**											
339					95% KM (t) UCL	13.01						
340												
341	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
342	Recommendations are based upon data size, data distribution, and skewness.											
343	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
344	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											