APPENDIX H

DISPOSAL DOCUMENTATION

Tracking #________

WASTE CHARACTERIZATION REPORT

☒ ***I authorize EQ – The Environmental Quality Company to choose the appropriate facility and method of waste management from the technologies offered at the EQ facilities identified below.***

☐ **Michigan Disposal Waste Treatment Plant** (Stabilization and Treatment)	49350 N. I-94 Service Drive, Belleville, MI 48111 Phone: 800-592-5489 Fax: 800-592-5329	EPA ID # MID 000 724 831
☐ **Wayne Disposal, Inc. Site #2 Landfill** (Hazardous & PCB Waste Landfill)	49350 N. I-94 Service Drive, Belleville, MI 48111 Phone: 800-592-5489 Fax: 800-592-5329	EPA ID # MID 048 090 633
☐ **EQ Detroit, Inc.** (Stabilization, Wastewater Treatment)	1923 Frederick Street, Detroit, MI 48211 Phone: 313-923-0080 Fax: 313-923-3375	EPA ID # MID 980 991 566
☐ **EQ Resource Recovery, Inc.** (Solvent Recycling, Fuel Blending, WW Treatment)	36345 Van Born Road, Romulus, MI 48174 Phone: 866-373-8357 Fax: 734-326-4033	EPA ID # MID 060 975 844
☐ **EQ North Carolina** (Stabilization, Treatment, Labpack Decommissioning)	1005 Investment Blvd, Apex, NC 27502 Phone: 919-363-4700 Fax: 919-363-4714	EPA ID # NCD 982 170 292
☐ **EQ Florida, Inc.** (Drum Consolidation, Labpack Decommissioning)	7202 East 8th Ave, Tampa, FL 33619 Phone: 813-623-5463 Fax: 813-628-0842	EPA ID # FLD 981 932 494
☐ **EQ Transfer & Processing** (Drum Transfer/Universal Waste Handling)	2000 Ferry Street, Detroit, MI 48211 Phone: 313-923-0080 Fax: 313-922-8419	EPA ID # MIK 939 928 313
☐ **EQ Indianapolis** (Drum Transfer/Non-Hazardous Waste Processing)	4000 West 10th Street, Indianapolis, IN 46222 Phone: 317-247-7160 Fax: 317-247-7170	EPA ID # IND 161 049 309
☐ **EQ Atlanta** (Drum Transfer/Non-Hazardous Waste Processing)	5600 Fulton Industrial Blvd SW, Atlanta, GA 30336 Phone: 404-494-3520 Fax: 404-494-3560	EPA ID # GAR 000 039 776
☐ **EQ Augusta, Inc.** (Wastewater Treatment)	3920 Goshen Industrial Blvd, Augusta, GA 30906 Phone: 706-771-9100 Fax: 706-771-9124	EPA ID # GAR 000 011 817

Waste Common Name:

Section 1 – Generator & Customer Information

SIC/NAICS* 454390

Generator EPA ID # NYD013306055

Generator Troy Belting

Facility Address 70 Cohoes Rd.

City Cohoes State NY Zip ______

County Albany

Mailing Address Same

City ______ State ______ Zip ______

Generator Contact Mark Williams

Title Associate Geologist

Phone 518-456-4900 Fax ______

*For a list of NAICS codes, please refer to Section 9 of the EQ Resource Guide.

Internal Use Only: EQ Division ______

EQ Customer No. ______

Invoicing Company West Central Environmental

Address P.O. Box 83

City Rensselaer State NY Zip 12144

Country USA

Invoicing Contact Dana Murphy

Phone 518-272-6891 Fax 518-272-0108

Technical Contact Dana Murphy

Phone 518-272-6891 Fax 518-272-0108

Mobile ______ Pager ______

E-mail jdmurphy@wcecorp.com

Section 2 – Shipping & Packaging Information

2.1) Shipping Volume & Frequency 60 Ton
☒ One Time Only ☐ Year ☐ Quarter ☐ Month

2.2) DOT Shipping Name Hazardous Waste Solid

2.3) Is this waste surcharge exempt? ☐ Yes ☒ No
If yes, please attach a surcharge exemption form, found in Section 2 of the EQ Resource Guide.

2.4) Packaging (check all that apply)
- ☐ Bulk Solid (Yd³ < 2000 lbs/yd³)
- ☒ Bulk Solid (Ton >2000 lbs/yd³)
- ☐ Bulk Liquids (Gallon)
- ☐ Totes, Size ______
- ☐ Cubic Yard Boxes/Bags
- ☐ Drums, Size ______
- ☐ Other (palletized, 5 gal. Pail, etc.) ______

Quoted bulk disposal charges for solid materials will be billed by the cubic yard, if the waste density is less than 2,000lbs./cubic yard. If waste density is greater than 2,000 lbs./cubic yard, then bulk disposal charges will be billed by the ton, regardless of the approved container.

Section 3 – Physical Characteristics

3.1) Color Brown 3.2).Odor NONE

3.3) Does this waste contain any "Potentially Odorous Constituents" as defined in the EQ Resource Guide? (Section 3) ☐ Yes ☒ No

3.4) Physical State at 70°F: ☒ Solid ☐ Dust/Powder ☐ Liquid ☐ Sludge

3.5) What is the pH of this waste? ☐ ≤2 ☐ 2.1-4.9 ☒ 5-10 ☐ 10.1-12.4 ☐ ≥12.5

3.6) What is the flash point of this waste? ☐ <90°F ☐ 90-140°F ☐ 140-199°F ☒ >200°F

3.7) Does this waste contain? (check all that apply) ☐ None ☐ Free Liquids ☐ Oily Residue ☐ Metal Fines

☐ Biodegradable Sorbants ☐ Amines ☐ Ammonia ☐ Water Reactive ☐ Biohazard ☐ Aluminum

☐ Shock Sensitive Waste ☐ Reactive Waste ☐ Radioactive Waste ☐ Explosives ☐ Pyrophoric Waste ☐ Isocyanates

☐ Asbestos – non-friable ☐ Asbestos – friable ☐ Dioxins ☐ Furans

Section 4 – Waste Composition and Generating Process

4.1) Describe the physical composition of the waste (i.e., soil, water, PPE, debris, key chemical compounds, etc.)

Soil 98 to 99 % ____ ____ to ____ %

PPE & Poly 1 to 2 % ____ ____ to ____ %

Total: 100%

4.2) Provide a *detailed* description of the process generating this waste (attach flow diagram if available).

Overflow of Solvent Container from electric Motor Parts Cleaning

Section 5 – Is This Hazardous Waste?

Please refer to Section 5 of the EQ Resource Guide for a list of waste codes

As determined by 40 CFR, Part 261 and State Rules: **Please list applicable waste code(s):**

5.1) Is this an EPA RCRA listed hazardous waste (F, K, P or U)? ☒ Yes ☐ No F001, F002

5.2) Is this an EPA RCRA characteristic hazardous waste (D001-D043)? ☒ Yes ☐ No D039, D040

5.3) Do any State Hazardous Waste Codes apply? ☐ Yes ☒ No

5.4) Is this waste intended for wastewater treatment? ☐ Yes* ☒ No

If you answered 'no' to 5.1, 5.2, and 5.3, please skip to Section 7. *If you answered 'yes' to 5.4, please attach the Waste Characterization Report Addendum found in Section 7 of the EQ Resource Guide.

Section 6 – Hazardous Wastes

6.1) Does this waste exceed Land Disposal Restriction levels? ☒ Yes ☐ No

6.1a) If this waste stream is greater than 50% soil, does it meet the alternative soil treatment standards of 40 CFR 268.49? ☐ Yes ☒ No

6.1b) Does this waste contain greater than 50% debris, by volume? (Debris is greater than 2.5 inches in size.) ☐ Yes ☒ No

6.2) Is the waste an oxidizer (D001)? ☐ Yes ☒ No

6.3) Does this waste contain reactive cyanide ≥ 250 ppm (D003)? ☐ Yes ☒ No

6.4) Does this waste contain reactive sulfide ≥ 500 ppm (D003)? ☐ Yes ☒ No

6.5) Please indicate which constituent concentrations are below or above the regulatory level. Please indicate the basis used in the determination. Either "Below" or "Above" **MUST** be checked for each constituent.

Based On: ☐ **Generator Knowledge** ☒ **Analysis*** ☐ **MSDS***

***Please attach a copy. Analysis or MSDS are required for EQFL Non-hazardous wastes.**

Code		Regulatory Level TCLP (mg/l)	Concentration (if above)
D004	Arsenic	5	☒ Below ☐ Above
D005	Barium	100	☒ Below ☐ Above
D006	Cadmium	1	☒ Below ☐ Above
D007	Chromium	5	☒ Below ☐ Above
D008	Lead	5	☒ Below ☐ Above
D009	Mercury	0.2	☒ Below ☐ Above
D010	Selenium	1	☒ Below ☐ Above
D011	Silver	5	☒ Below ☐ Above
D012	Endrin	0.02	☒ Below ☐ Above
D013	Lindane	0.4	☒ Below ☐ Above
D014	Methoxychlor	10	☒ Below ☐ Above
D015	Toxaphene	0.5	☒ Below ☐ Above
D016	2,4-D	10	☒ Below ☐ Above
D017	2,4,5-TP (Silvex)	1	☒ Below ☐ Above
D018	Benzene	0.5	☒ Below ☐ Above
D019	Carbon Tetrachloride	0.5	☒ Below ☐ Above
D020	Chlordane	0.03	☒ Below ☐ Above
D021	Chlorobenzene	100	☒ Below ☐ Above
D022	Chloroform	6.0	☒ Below ☐ Above
D023	o-Cresol	200	☒ Below ☐ Above
D024	m-Cresol	200	☒ Below ☐ Above
D025	p-Cresol	200	☒ Below ☐ Above
D026	Cresols	200	☒ Below ☐ Above
D027	1,4-Dichlorobenzene	7.5	☒ Below ☐ Above
D028	1,2-Dicholoroethane	0.5	☒ Below ☐ Above
D029	1,1-Dichloroethylene	0.7	☒ Below ☐ Above
D030	2,4-Dinitrotoluene	0.13	☒ Below ☐ Above
D031	Heptachlor	0.008	☒ Below ☐ Above
D032	Hexachlorobenzene	0.13	☒ Below ☐ Above
D033	Hexachlorobutadiene	0.5	☒ Below ☐ Above
D034	Hexachloroethane	3.0	☒ Below ☐ Above
D035	Methyl Ethyl Ketone	200	☒ Below ☐ Above
D036	Nitrobenzene	2	☒ Below ☐ Above
D037	Pentachlorophenol	100	☒ Below ☐ Above
D038	Pyridine	5	☒ Below ☐ Above
D039	Tetrachloroethylene	0.7	☐ Below ☒ Above 21
D040	Trichloroethylene	0.5	☐ Below ☒ Above 8
D041	2,4,5-Trichlorophenol	400	☒ Below ☐ Above
D042	2,4,6-Trichlorophenol	2	☒ Below ☐ Above
D043	Vinyl Chloride	0.2	☒ Below ☐ Above

6.6) If this is a characteristic hazardous waste, does it contain underlying hazardous constituents? ☒ Yes ☐ No

If yes, please list the constituents in Section 11.

Section 7 – Non-Hazardous Wastes

For a complete list of non-hazardous waste codes, please refer to Section 7 of the EQ Resource Guide

Please list applicable waste code: ____________________

7.1) Is this a Michigan non-hazardous liquid industrial waste? ☐ Yes ☒ No
7.2) Is this a Universal waste? ☐ Yes ☒ No
7.3) Is this a Recyclable Commodity? (e.g.: computer monitors, free mercury, etc.) ☐ Yes ☒ No
7.4) Is this waste a recoverable petroleum product? ☐ Yes* ☒ No
7.5) Is this waste used oil as defined by 40 CFR Part 279? ☐ Yes* ☒ No

If you answered 'yes' to questions 7.4 or 7.5 please attach the Waste Characterization Report Addendum found in Section 7 of the EQ Resource Guide.

Section 8 – TSCA Information

8.1) What is the concentration of PCBs in the waste? ☒ None ☐ 0-5 ppm ☐ 6-49 ppm ☐ 50-499 ppm ☐ 500+ ppm
8.2) Does the waste contain PCB contamination from a source with a concentration ≥ 50 ppm? ☐ Yes ☐ No
If you answered "no" to 8.1 and 8.2, please skip to Section 9.
8.3) Has this waste been processed into a non-liquid form? ☐ Yes ☐ No
If yes, what was the concentration of PCBs prior to processing? ☐ N/A ☐ 0-499 ppm ☐ 500+ ppm
8.4) Is the non-liquid PCB waste in the form of soil, rags, debris, or other contaminated media? ☐ Yes ☐ No
8.5) Are you a PCB capacitor manufacturer or a PCB equipment manufacturer? ☐ Yes ☐ No
8.6) Has the PCB Article (e.g., transformer, hydraulic machine, PCB-contaminated electrical equipment) been drained/flushed of all PCBs and decontaminated in accordance with 40 CFR 761.60(b)? ☐ N/A ☐ Yes ☐ No

Section 9 – Clean Air Act Information

NESHAP SIC*		
2812	2836	2875
2813	2841	2879
2816	2842	2891
2819	2843	2892
2821	2844	2893
2822	2851	2895
2823	2861	2899
2824	2865	2911
2833	2869	3312
2834	2873	4953
2835	2874	9511

9.1) Is this waste subject to regulation under 40 CFR, Part 63, Subpart DD or 40 CFR, Part 264, Subpart CC (RCRA)? ☐ Yes ☒ No
(Does the waste contain >500 ppm Volatile Organic Hazardous Air Pollutants – VOHAP's or Volatile Organic Compounds – VOC's?)
For a complete list of VOHAP's, please see Section 11 of the EQ Resource Guide
9.2) Is the site, or waste, subject to any other MACT or NESHAP? ☐ Yes, please specify: ____________ ☒ No
9.3) Does this waste stream contain Benzene? ☐ Yes ☒ No
If you answered "no" to 9.3, please skip to Section 10.
9.4) Does the waste stream come from a facility with one of the SIC/NAICS codes listed under the NESHAP? ☐ Yes ☒ No
9.5) Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) ≥10 Mg/year? ☐ Yes ☒ No
For assistance in calculating the TAB, please see the TAB Worksheet in Section 9 of the EQ Resource Guide.
If you answered "no" to question 9.4 and 9.5, please skip to Section 10.
9.6) Does the waste contain >10% water? ☐ Yes ☐ No
9.7) What is the TAB quantity for your facility? ____________ Mg/Year
9.8) Does the waste contain >1.0 mg/kg total Benzene? ☐ Yes ☐ No
9.9) What is the total Benzene concentration in your waste? ____________ Percent or ________ ppmw.
(Do not use TCLP analytical results. Acceptable laboratory methods include 8020, 8240, 8260, 602 and 624.)
*For a list of NAICS codes, please refer to Section 9 of the EQ Resource Guide.

Section 10 – Fuel Blending Information

10.1) Is this waste intended for fuel blending? ☐ Yes* ☒ No
*If yes, Heat value (BTU/lb.) ________ Chlorine (%) ________ Water (%) ________ Solids (%) ________
10.2) Is this waste intended for reclamation? ☐ Yes ☒ No (5-Gallon Sample required for all reclaim waste streams)

Section 11 – Constituent Information

Please identify your waste constituents from these four categories: ***Underlying Hazardous Constituents (UHC's), Volatile Organic Hazardous Air Pollutants (VOHAP's), Volatile Organic Compounds (VOC's) and Toxic Release Inventory Constituents (TRI)***

Constituent	Concentration	UHC?	Constituent	Concentration	UHC?
Tetrachloroethene	21 ppm	☐ Yes ☒ No			☐ Yes ☐ No
Trichloroethene	8 ppm	☐ Yes ☒ No			☐ Yes ☐ No
1,2 Dichlorethane	8 ppm	☒ Yes ☐ No			☐ Yes ☐ No
		☐ Yes ☐ No			☐ Yes ☐ No
		☐ Yes ☐ No			☐ Yes ☐ No

Please see Section 11 of the EQ Resource Guide for a list of UHC's, VOHAP's and VOC's. For a complete list of TRI constituents, please refer to 40 CFR 372.65.

Section 12 – Certification

I certify that all information (including attachments) is complete and factual and is an accurate representation of the known and suspected hazards, pertaining to the waste described herein. I authorize EQ's Resource Team to add supplemental information to the waste approval file, provided I am contacted and give verbal permission. I authorize EQ's Resource Team to obtain a sample from any waste shipment for purposes of verification and confirmation. I agree that, if EQ approves the waste described herein, all such wastes that are transported, delivered, or tendered to EQ by Generator or on Generator's behalf shall be subject to, and Generator shall be bound by, the attached Standard Terms and Conditions.

Generator Signature [signature] Printed Name Jason W. Smith

Company Troy Belting Title President Date 05/06/2015

The generator's signature MUST appear on the EQ Waste Characterization Report. If the generator has authorized a third party to certify this document, a written notice (on generator letterhead) must accompany this submittal. Although the EQ Resource Team is authorized to make certain modifications to the information provided on this form, the addition or removal of waste codes and waste constituents must be documented by the generator.

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	N Y D 0 1 3 2 0 6 0 5 5
2. Page 1 of	1
3. Emergency Response Phone	518-222-6819
4. Manifest Tracking Number	014576704 JJK

5. Generator's Name and Mailing Address Att: JASON SMITH

TROY BELTING
70 COHOES RD
WATERVLIET NY 12189

Generator's Phone: [illegible]

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name WEST CENTRAL ENVIRONMENTAL CORP. — U.S. EPA ID Number: N Y D 0 0 0 7 0 8 2 7 1

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address

MICHIGAN DISPOSAL
49350 N. I-94 SERVICE DRIVE
BELLEVILLE MI 48111

Facility's Phone: [illegible]

U.S. EPA ID Number: M I D 0 0 0 7 2 4 8 3 1

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. RQ NA3077, HAZARDOUS WASTE SOLID N.O.S. 9, PGIII (D039,D040,F001,F002) ERG 171	001	CM	14	Y	D039 D040 F001 F002 T
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

1)APPROVAL: E151116MDI (F LISTED SOIL) CONFIRMATION # 571290

WCE J/N 54040-5-15

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: DAVID R. BARCOMB — Signature: [signature] — Month 5 Day 19 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Roger Cairns — Signature: [signature] — Month 5 Day 19 Year 15

Transporter 2 Printed/Typed Name: — Signature: — Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number:

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: [illegible] — Signature: — Month [illegible] Day [illegible] Year 15

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

TRANSPORTER'S COPY

Michigan Disposal, Inc.

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

WEST CENTRAL ENVIRONMENTAL CORP.
P. O. BOX 683
GRAND ISLAND, NY 14072

Receipt ID: 545539
EQ Account #: 2396
Manifest / BOL: 014576704JJK
Transporter: WESTCENT
Date: 05/20/2015
Time In: 10:33 AM
Time Out: 11:21 AM

Line	Description / Generator	Qty. Unit
1 - 1	E151116MDI - Hazardous Soil	10.080 TONS
	Hazardous Surcharge Ton	10.080 TONS
	NYD013306055 TROY BELTING	
	Gross: 65,260 **Tare:** 45,100 **Net:** 20,160	
2	Wayne Disposal Host Community Agreement Royalty Fee	10.080 TONS
	NYD013306055 TROY BELTING	
	Gross: 65,260 **Tare:** 45,100 **Net:** 20,160	

NO SALVAGING ON PREMISES

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: N Y D 0 1 3 3 0 6 0 5 5
2. Page 1 of 1
3. Emergency Response Phone: 518-222-8618
4. Manifest Tracking Number: 014576705 JJK

5. Generator's Name and Mailing Address: Att: JASON SMITH
TROY BELTING
70 COHOES RD
WATERVLIET, NY 12189
Generator's Phone: 518 [illegible]

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: WEST CENTRAL ENVIRONMENTAL CORP.
U.S. EPA ID Number: N Y D 0 0 0 7 0 5 2 7 1

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
MICHIGAN DISPOSAL
49350 N. I-94 SERVICE DRIVE
BELLEVILLE MI 48111
Facility's Phone: 800 [illegible]
U.S. EPA ID Number: M I D 0 0 0 7 2 4 8 3 1

GENERATOR

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. RQ NA3077, HAZARDOUS WASTE SOLID N.O.S. 9, PGIII (D039,D040,F001,F002) ERG 171	0 0 1	CM	X 12	Y	D039 D040 F001 F002 T
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1)APPROVAL: E151116MDI (F LISTED SOIL) CONFIRMATION # ~~571290~~ 571291
WCE J/N 54041-5-15

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: DAVID R. BARCCUB
Signature: [signature]
Month: 5 Day: 20 Year: 15

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: RONALD MERZ
Signature: [signature]
Month: 5 Day: 20 Year: 15

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: [illegible]
Signature: [signature]
Month: 05 Day: 22 Year: 15

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

TRANSPORTER'S COPY

Michigan Disposal, Inc.
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

WEST CENTRAL ENVIRONMENTAL CORP.
P. O. BOX 683
GRAND ISLAND, NY 14072

Receipt ID: 545611
EQ Account #: 2396
Manifest / BOL: 014576705JJK
Transporter: WESTCENT
Date: 05/22/2015
Time In: 10:32 AM
Time Out: 11:32 AM

Line	Description / Generator	Qty. Unit
1 - 1	E151116MDI - Hazardous Soil	12.760 TONS
	Hazardous Surcharge Ton	12.760 TONS
	NYD013306055 TROY BELTING	
	Gross: 70,500 **Tare:** 44,980 **Net:** 25,520	
2	Wayne Disposal Host Community Agreement Royalty Fee	12.760 TONS
	NYD013306055 TROY BELTING	
	Gross: 70,500 **Tare:** 44,980 **Net:** 25,520	

NO SALVAGING ON PREMISES

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: N Y D 0 1 3 3 0 6 0 5 5
2. Page 1 of: 1
3. Emergency Response Phone: 518-222-0816
4. Manifest Tracking Number: 014576715 JJK

GENERATOR

5. Generator's Name and Mailing Address: Att: JASON SMITH
TROY BELTING
70 COHOES RD
WATERVLIET NY 12189
Generator's Phone: 518 272 4920

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: WEST CENTRAL ENVIRONMENTAL CORP.
U.S. EPA ID Number: N Y D 0 0 0 7 0 8 2 7 1

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address:
CHEMTRON CORPORATION
35850 SCHNEIDER COURT
AVON OH 44011
Facility's Phone: 440 933-6348
U.S. EPA ID Number: O H D 0 6 6 0 6 0 6 0 9

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ NA3082, HAZARDOUS WASTE, LIQUID N.O.S. (TETRACHLOROETHYLENE, TRICHLOROETHYLENE) 9, PGIII (D039, D040, F001, F002) ERG 171	~~10~~ 11	DM	~~550~~ 605	G	D039 D040 F001 F002
	2. NON-RCRA, NON-DOT REGULATED LIQUID	~~5~~ 4	DM	~~275~~ 220	G	NONE
	3. NON-RCRA, NON-DOT REGULATED SOLID	15	DM	Est. 9,125	P	NONE
	4. RCRA EMPTY STEEL DRUMS	16	DM	Est. 640	P	NONE

14. Special Handling Instructions and Additional Information: 1) APPROVAL:20150604-037 (WELL DEVELOPMENT WATER, HAZ) 2) APPROVAL: 20150605-022 (DECON WATER) 3) APPROVAL:20150604-038 (NON HAZ SOIL BORINGS) 4) APPROVAL:20150604-041 (EMPTY STEEL DRUMS)
WCE J/N 54201-6-15
D97072

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Karen E Smith Treasurer
Signature: Karen E Smith
Month 06 Day 10 Year 2015

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Roger Cairns
Signature: Roger Cairns
Month 6 Day 10 Year 15

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: JOSEPH T KSIAZ
Signature:
Month 06 Day 12 Year 15

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

TRANSPORTER'S COPY

(Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NYD012209855		518-222-8816	014576966 JJK

5. Generator's Name and Mailing Address — Att: JASON SMITH

TROY BELTING
70 COHOES RD
WATERVLIET NY 12189

Generator's Phone:

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: WEST CENTRAL ENVIRONMENTAL CORP — U.S. EPA ID Number: NYD000708271

7. Transporter 2 Company Name: — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: CHEMTRON CORPORATION, 35850 SCHNEIDER COURT, AVON OH 44011 — U.S. EPA ID Number:

Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ NA3082, HAZARDOUS WASTE, LIQUID N.O.S. (TETRACHLOROETHYLENE, TRICHLOROETHYLENE) 9, PGIII (D039, D040, F001, F002) ERG 171	001	DM	020	G	D039 D040 F001 F002
X	2. NA3077, HAZARDOUS WASTE SOLID N.O.S. (CARBON) 9, PGIII (D039, D040, F001, F002) ERG 171	002	DM	EST 800	P	D039 D040 F001 F002
	3. NON-RCRA, NON-DOT REGULATED LIQUID	27 (~~033~~)	DM	1485	G	NONE
	4. ~~RCRA EMPTY STEEL DRUMS~~ (DL)		(DL)		P	(DL)

14. Special Handling Instructions and Additional Information

1)APPROVAL:20150604-037 (WELL DEVELOPMENT WATER, HAZ) 2)APPROVAL: 20151202-005 3) APPROVAL: 20150605-022 (DECON WATER) ~~4) APPROVAL:20150604-041 (EMPTY STEEL DRUMS)~~ (DL)
WCE JN 55396-12-15

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
Karen E. Smith	Karen E. Smith	12	11	15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

	Printed/Typed Name	Signature	Month	Day	Year
Transporter 1	David R. Lindway	D.R. Lindway	12	11	15
Transporter 2					

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year
Joseph T. [illegible]		12	[illegible]	[illegible]

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. TRANSPORTER'S COPY

NON-HAZARDOUS WASTE MANIFEST

type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No. NYD013306055	Manifest Document No. 55396	2. Page 1 of 1

3. Generator's Name and Mailing Address
TROY BELTING
70 COHOES RD
WATERVLIET NY 12189
Att: JASON SMITH
SAME

4. Generator's Phone (518) 272-4920

5. Transporter 1 Company Name	6. US EPA ID Number	A. State Transporter's ID
WEST CENTRAL ENVIRONMENTAL CORP	NYD000708271	B. Transporter 1 Phone 518 272-5904
7. Transporter 2 Company Name	8. US EPA ID Number	C. State Transporter's ID
		D. Transporter 2 Phone
9. Designated Facility Name and Site Address	10. US EPA ID Number	E. State Facility's ID
CHEMTRON CORPORATION 35850 SCHNEIDER COURT AVON OH 44011	OHD066060609	F. Facility's Phone 440 933-6348

11. WASTE DESCRIPTION	12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.
a. NON-RCRA, NON-DOT REGULATED SOLID	10	DM	EST 6400	P
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above
a. APPROVAL:20160804-038 (NON HAZ SOIL BORINGS)
b.
c.
d.

H. Handling Codes for Wastes Listed Above
a.
b.
c.
d.
D135454

15. Special Handling Instructions and Additional Information
1) WCE JN 55396-12-15

Emergency Contact
MARK WILLIAMS
518-222-6818

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name	Signature	Month	Day	Year
KAREN E SMITH	Karen E Smith	12	11	15

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
David R. Lanoway	D.R. Lanoway	12	11	15

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name	Signature	Month	Day	Year
Jason T Yiska		12	15	15

GENERATOR — TRANSPORTER — FACILITY — NON-HAZARDOUS WASTE

APPENDIX I

SUMMARY OF RI CAMP DATA – DETECTIONS

Table

Summary of CAMP Exceedances (2014 and 2015)
Troy Belting and Supply Co., 70 Cohoes Road, Watervliet, NY

Remedial Investigation CAMP Exceedances (2014)							
Date	Upwind APM	Breathing Zone APM	Downwind APM	Upwind PID	Breathing Zone PID	Downwind PID	Breathing Zone 4-Gas Meter
9/22/2014	---	---	(1) 1 Exceedance	---	---	---	---
9/23/2014	---	---	(1) 1 Exceedance	---	---	---	---
9/24/2014	---	---	(1,2) 6 Exceedances	---	---	---	---
9/25/2014	---	---	(1) 2 Exceedances	---	---	---	---
9/26/2014	---	---	(1,2) 2 Exceedances	---	---	---	---
9/29/2014	---	---	(3) 3 Exceedances	---	---	---	---
9/30/2014	---	---	(3) 1 Exceedance	---	---	---	---
10/1/2014	---	---	---	---	---	---	---
10/2/2014	---	---	---	---	---	---	---
10/3/2014	---	---	(1) 2 Exceedances	---	---	---	---
10/6/2014	---	---	(3) 1 Exceedance	---	---	---	---
10/7/2014	---	---	(3) 1Exceedance	---	---	---	---
Supplemental Remedial Investigation CAMP Exceedances (2015)							
9/8/2015	---	---	(1) 2 Exceedances	---	---	---	---
9/9/2015	---	---	(1) 5 Exceedances	---	---	---	---
9/10/2015	---	---	---	---	---	---	---
9/11/2015	---	---	(1) 3 Exceedances	---	---	---	---
9/14/2015	---	---	(1) 1 Exceedance	---	---	---	---
9/15/2015	---	---	(1) 8 Exceedances	---	---	---	---
9/16/2015	---	---	---	---	---	---	---
9/17/2015	---	---	(1) 1 Exceedance	---	---	---	---
9/18/2015	---	---	(1) 4 Exceedances	---	---	---	---
11/9/2015	---	---	---	---	---	---	---

Notes:
(1) Exceedance caused by Cohoes Road traffic.
(2) Exceedance caused by windy conditions picking up dust from parking lot or road.
(3) Exceedance caused by Residential vehicular traffic.
--- = No exceedances.
APM = Air Particulate Meter
PID = Photoionization Detector
4-Gas Meter = Detects hydrogen sulfide, carbon monoxide, combustibles, and monitors oxygen.
CAMP = Community Air Monitoring Program

APPENDIX J

SUMMARY OF ANALYTICAL RESULTS (SURFACE SOIL AND SUBSURFACE SOIL) WITH COMPARISON TO UNRESTRICTED USE SOIL CLEANUP OBJECTIVES

APPENDIX J

Summary of Analytical Results (Surface Soil and Subsurface Soil) with Comparison to Unrestricted Use Soil Cleanup Objectives

The following sections compare analytical results to the Unrestricted Use Soil Cleanup Objectives (UUSCO) from 6 NYCRR Part 375. The comparisons have been included in Appendix J since Troy Belting is a Participant in the BCP. These results will be considered in the remedy selection process.

4.4.1 Surface Soils

Four (4) surface soil samples (SS-1, SS-2, SS-3, and SS-4) were collected at the Site in October 2014 and submitted for laboratory analysis for USEPA TCL VOCs, SVOCs, and PCBs (attached Figure 2 from the RIR). A duplicate surface soil sample (SS-DUP-102414) was collected from the SS-3 location. Four (4) surface soil samples (SS-1, SS-2, SS-3, and SS-4) were also collected at the Site in September 2018 and submitted for laboratory analysis for pesticides and metals (attached Figure 2 from the RIR). A duplicate surface soil sample (DUP-091418SS) was also collected from the SS-3 location.

<u>VOCs</u>

No VOCs were detected at surface soil sample locations SS-1, SS-2, SS-3, and SS-4 (attached Tables 4 and 4-1 from the RIR). Although the duplicate surface soil sample revealed the presence of TCE (0.022 mg/kg) and an estimated presence of PCE (0.0011 mg/kg), the reported concentrations were below the respective UUSCO and Groundwater SCO for TCE (0.47 mg/kg) and PCE (1.3 mg/kg).

<u>SVOCs</u>

No SVOCs detected at surface soil sample locations SS-1, SS-2, SS-3, and corresponding duplicate sample SS-DUP-102414 were above the CSCO (attached Table 4 from the RIR). No SVOCs detected at surface soil sample locations SS-1, SS-3, and SS-DUP-102414 were above the UUSCO while only an estimated 1.7 mg/kg, 1.5 mg/kg, and 0.56 mg/kg of benzo(b)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene, respectively, exceeded the UUSCO for surface soil sample SS-2, which was collected in the northwestern corner of the Site (attached Figure 2 and Table 4 from the RIR). The chrysene in soil result at SS-2 also exceeded the Groundwater SCO.

Surface soil sample SS-4, located in the northeastern corner of the Site, exceeded the UUSCO and Groundwater SCO only for benzo(k)fluoranthene (estimated at 12 mg/kg) and chrysene (25 mg/kg) as depicted in the attached Figure 2 and Table 4 from the RIR. The following SVOCs from SS-4 also slightly exceeded the UUSCO, CSCO, and ISCO provided in 6 NYCRR Subpart 375-6.8(b):

- Benzo(a)anthracene (16 mg/kg)*;
- Benzo(a)pyrene (20 mg/kg); and,
- Benzo(b)fluoranthene (31 mg/kg)*.

*Analytical result also slightly exceeded UUSCO and Groundwater SCO.

The presence of indeno[1,2,3-cd]pyrene (estimated at 9.4 mg/kg) exceeded the UUSCO, CSCO, and Groundwater SCO.

APPENDIX J

Summary of Analytical Results (Surface Soil and Subsurface Soil) with Comparison to Unrestricted Use Soil Cleanup Objectives

PCBs

No PCBs were detected at or above the UUSCO at surface soil sample locations SS-1, SS-2, SS-3, and SS-4 (attached Table 4 from the RIR). The corresponding duplicate surface soil sample (SS-DUP-102414), collected concurrently with SS-3, were non-detect for PCB Aroclors 1016, 1221, 1232, 1242, and 1254. The UUSCO for Total PCBs (0.1 mg/kg) was slightly exceeded due to the presence of PCB Aroclors 1248 (0.077 mg/kg) and 1260 (0.11 mg/kg). The duplicate surface soil sample (SS-DUP-102414) Total PCBs in soil result was below the CSCO, ISCO, and Groundwater SCO.

Pesticides

No pesticides were detected at or above the CSCO, ISCO or Groundwater SCO at surface soil sample locations SS-1, SS-2, SS-3, and SS-4 (attached Table 4 from the RIR). The duplicate surface soil sample (DUP-091418SS) pesticides in soil results were also below the CSCO, ISCO, and Groundwater SCO (attached Table 4 from the RIR). A slight UUSCO exceedance was reported for 4,4'-DDT at surface soil sample locations SS-2 (0.00445 mg/kg) and SS-4 (0.00403 mg/kg).

Inorganics

No TAL metals or total cyanide were detected at concentrations at or above the CSCO, ISCO or Groundwater SCO at surface soil sample locations SS-1, SS-2, SS-3, and SS-4 (attached Table 4 from the RIR). The duplicate surface soil sample (DUP-091418SS) results were also below the CSCO, ISCO or Groundwater SCO (attached Table 4 from the RIR). Slight UUSCO exceedances were reported for arsenic in soil at SS-2 (14.6 mg/kg); copper in soil at SS-1 (75.3 mg/kg), SS-2 (56.4 mg/kg), SS-3 (79.6 mg/kg) and duplicate sample DUP-091418SS (78.4 mg/kg); lead in soil at SS-2 (149 mg/kg) and SS-4 (76.1 mg/kg), and zinc in soil at SS-1 (125 mg/kg), SS-2 (176 mg/kg), SS-3(575 mg/kg), corresponding duplicate sample DUP-091418SS (234 mg/kg) and SS-4 (147 mg/kg). As depicted in the attached Table 4, all inorganic analytes exceeding UUSCOs are within the reported range for Eastern USA Background soils (Shacklette and Boerngen, 1984).

4.4.2 Subsurface Soils

4.4.2.1 Subsurface Soils - IRM (Test Pit Investigation)

Six (6) subsurface soil samples (TP-14-1 (2-3.2'), TP-14-2 (E, 6-6.5'), TP-14-3 (6-6.4'), TP-14-4 (E, 6-6.8'), TP-14-6 (3-4'), and TP-14-7 (4-5')) were collected at the Site on April 23, 2014 (attached Figure 2 from the RIR). These samples were submitted for laboratory analysis for USEPA TCL VOCs.

VOCs

No VOCs were detected at or above the CSCO and ISCO for subsurface soil collected from test pits TP-14-1, TP-14-2 (E), TP-14-3, TP-14-4 (E), TP-14-6, and TP-14-7 (attached Figure 2 and Tables 5a and 5a-1 from the RIR). A COC only table is provided as Table 5a-1 from the RIR (see attached). A slight UUSCO and Groundwater SCO exceedance was reported for acetone at TP-14-4 (E, 6-6.8'). UUSCO and Groundwater SCO exceedances were reported for results for cis-1,2,-DCE (estimated) and VC at TP-14-6 and TP-14-7.

APPENDIX J

Summary of Analytical Results (Surface Soil and Subsurface Soil) with Comparison to Unrestricted Use Soil Cleanup Objectives

Analytical results for subsurface soil collected from the test pit closest to the contaminant source (TP-14-2 (E, 6 - 6.5’) exceeded their respective UUSCO and Groundwater SCO:

- cis-1,2-DCE (12 mg/kg, UUSCO and Groundwater SCO = 0.25 mg/kg);
- PCE (79 mg/kg, UUSCO and Groundwater SCO = 1.3 mg/kg);
- TCE (60 mg/kg, UUSCO and Groundwater SCO = 0.47 mg/kg); and,
- Total Xylenes (estimated 2.9 mg/kg, UUSCO = 0.26 mg/kg and Groundwater SCO = 1.6 mg/kg).

Subsurface soil samples TP-14-4(E), TP-14-6, and TP-14-7 exceeded the Groundwater SCO only for acetone (TP-14-4 only), cis-1,2-DCE, and vinyl chloride (attached Figure 2 and Table 5a from RIR).

4.4.2.2 Subsurface Soils - RI

Seven (7) subsurface soil samples (MW-4D (4-5.25’), MW-6S (6-8’), MW-7S (0.5-2.0’), MW-8S (2-4’), MW-9S (0.5-2’), MW-10D (2-3.3’), and MW-11S (4-5.8’)) were collected at the Site in September/October 2014 and September/November 2015. These samples were submitted for laboratory analysis for USEPA TCL VOCs, SVOCs, PCBs, Pesticides, and Metals (attached Figure 2 from RIR).

VOCs

No VOCs were detected at or above the CSCO or ISCO at subsurface soil sample locations MW-4D, MW-6S, MW-7S, MW-8S, MW-9S, MW-10D, and MW-11S (attached Table 5b from RIR). The only UUSCO and Groundwater SCO exceedance was at MW-7S for benzene (0.4 mg/kg, Groundwater SCO: 0.06 mg/kg) and vinyl chloride (estimated at 0.11 mg/kg, Groundwater SCO: 0.02 mg/kg). A COC only table is provided as Table 5b-1 (see attached).

SVOCs

No SVOCs were detected at or above the UUSCO, CSCO, ISCO or Groundwater SCO at subsurface soil sample locations MW-4D, MW-7S, MW-8S, MW-9S, MW-10D, and MW-11S (attached Table 5b from RIR). The subsurface soil sample collected from 6 to 8 feet below grade at MW-6S, exceeded the UUSCO and Groundwater SCO for benzo(a)anthracene (9.4 mg/kg), benzo(b)fluoranthene (18.0 mg/kg), benzo(k)fluoranthene (estimated at 7.2 mg/kg), and chrysene (14 mg/kg) as summarized in Table 5b (see attached). The following SVOCs from sample MW-6S (6-8’) also exceeded the CSCO:

- Benzo(a)anthracene (9.4 mg/kg: CSCO is 5.6 mg/kg);
- Benzo(a)pyrene (11.0 mg/kg; CSCO is 1 mg/kg);
- Benzo(b)fluoranthene (18.0 mg/kg; CSCO is 5.6 mg/kg); and,
- Indeno(1,2,3-cd)pyrene (estimated at 7.4 mg/kg; CSCO is 5.6 mg/kg).

Benzo(a)pyrene and Benzo(b)fluoranthene results at MW-6S also exceeded the ISCO which are 1.1mg/kg and 11 mg/kg, respectively.

APPENDIX J

Summary of Analytical Results (Surface Soil and Subsurface Soil) with Comparison to Unrestricted Use Soil Cleanup Objectives

PCBs

No PCB Arochlors were detected at or above the method detection limit at subsurface soil sample locations MW-4D, MW-8S, MW-9S, and MW-10D (attached Table 5b from RIR). Total PCBs were not detected at or above the UUSCO, CSCO, ISCO or Groundwater SCO at subsurface soil sample locations MW-4D, MW-6S, MW-7S, MW-8S, MW-9S, MW-10D, and MW-11S (attached Table 5b from RIR).

Pesticides

No pesticides were detected at or above the UUSCO, CSCO, ISCO or Groundwater SCO at subsurface soil sample locations MW-4D, MW-6S, MW-7S, MW-8S, MW-9S, MW-10D, and MW-11S (attached Table 5b from RIR).

Inorganics

No inorganic analytes were detected at or above the CSCO, ISCO or Groundwater SCO at subsurface soil sample locations MW-4D, MW-6S, MW-8S, MW-9S, and MW-11S. UUSCO exceedances were also reported for copper in subsurface soil at MW-7S (100 mg/kg) and MW-10D (estimated at 59.0 mg/kg); lead in subsurface soil at MW-6S (67.1 mg/kg) and MW-7S (180 mg/kg); nickel in subsurface soil at MW-4D (40.4 mg/kg), MW-6S (36.1 mg/kg), MW-8S (34.1 mg/kg), MW-9S (33.5 mg/kg), and MW-10D (36.0 mg/kg); and, zinc in subsurface soil at MW-6S (111 mg/kg) and MW-7S (estimated at 410 mg/kg) (attached Table 5b from RIR). Slight UUSCO, CSCO, ISCO, and Groundwater SCO exceedances were reported for arsenic at MW-7S (20 mg/kg) and MW-10D (19 mg/kg). As depicted in the attached Table 5b, all inorganic analytes exceeding UUSCOs are within the reported range for Eastern USA Background soils (Shacklette and Boerngen, 1984).

Table 2

Summary of Groundwater Elevations
Troy Belting and Supply Company, 70 Cohoes Road, Colonie, New York

Well ID	Northing	Easting	Ground Surface Elevation (Site Datum (Feet))	Measuring Point Elevation (Site Datum)	October 29, 2014 Depth to Groundwater (feet BMP) / [Groundwater Elevation (feet)]	December 16, 2014 Depth to Groundwater (feet BMP) / [Groundwater Elevation (feet)]	January 9, 2015 Depth to Groundwater (feet BMP) / [Groundwater Elevation (feet)]	March 17, 2015 Depth to Groundwater (feet BMP) / [Groundwater Elevation (feet)]
MW-1S	N 42°44' 50.45"	W 73° 42' 07.13"	32.38	32.00	2.45/[29.55]	2.03/[29.97]	3.27/[28.73]	2.67/[29.33]
MW-1D	N 42°44' 50.40"	W 73° 42' 07.10"	32.48	32.35	6.28/[26.07]	3.75/[28.60]	4.28/[28.07]	3.85/[28.50]
MW-2S	N 42°44' 51.72"	W 73° 42' 05.99"	33.26	32.91	2.00/[30.91]	3.16/[29.75]	3.27/[29.64]	3.44/[29.47]
MW-3S	N 42°44' 51.22"	W 73° 42' 03.80"	32.18	31.69	7.81/[23.88]	7.37/[24.32]	7.68/[24.01]	7.29/[24.40]
MW-4S	N 42°44' 51.50"	W 73° 42' 05.02"	30.82	30.63	3.86/[26.77]	3.03/[27.60]	3.01/[27.62]	3.26/[27.37]
MW-4D	N 42°44' 51.50"	W 73° 42' 04.96"	30.62	30.27	3.03/[27.24]	2.01/[28.26]	3.14/[27.13]	2.27/[28.00]
MW-5S	N 42°44' 51.66"	W 73° 42' 05.99"	33.69	33.49	3.45/[30.04]	2.46/[31.03]	---	---
MW-6S	N 42°44' 52.16"	W 73° 42' 04.61"	29.99	29.74	5.75/[23.96]	7.94/[21.80]	4.05/[25.69]	3.71/[26.03]
MW-6D	N 42°44' 52.15"	W 73° 42' 04.54"	29.92	29.57	3.20/[26.37]	2.30/[27.27]	3.45/[26.12]	3.19/[26.38]
MW-6D'	N 42°44' 52.11"	W 73° 42' 04.40"	29.80	29.61	---	---	---	---
MW-7S	N 42°44' 52.13"	W 73° 42' 03.62"	29.85	29.57	---	---	---	---
MW-7D	N 42°44' 52.03"	W 73° 42' 03.59"	29.88	29.65	---	---	---	---
MW-8S	N 42°44' 53.35"	W 73° 42' 03.93"	30.38	30.04	4.44/[25.60]	3.79/[26.25]	4.69/[25.35]	3.88/[26.16]
MW-8D	N 42°44' 53.35"	W 73° 42' 03.98"	30.56	30.37	4.77/[25.60]	2.69/[27.68]	3.35/[27.02]	2.49/[27.88]
MW-9S	N 42°44' 49.62"	W 73° 42' 05.70"	32.13	31.96	3.97/[27.99]	3.02/[28.94]	3.59/[28.37]	3.47/[28.49]
MW-10D	N 42°44' 50.39"	W 73° 42' 04.08"	33.18	32.99	---	---	---	---
MW-11S	N 42°44' 52.96"	W 73° 42' 05.69"	35.3	34.88	---	---	---	---

Notes:
Measuring Point = Top of PVC
BMP = Below Measuring Point
--- = Not Measured

Table 2

Summary of Groundwater Elevations
Troy Belting and Supply Company, 70 Cohoes Road, Colonie, New York

Well ID	April 9, 2015 Depth to Groundwater (feet BMP) / [Groundwater Elevation (feet)]	October 12, 2015 Depth to Groundwater (feet BMP) / [Groundwater Elevation (feet)]	November 10, 2015 Depth to Groundwater (feet BMP) / [Groundwater Elevation (feet)]	November 19, 2015 Depth to Groundwater (feet BMP) / [Groundwater Elevation (feet)]	February 23, 2017 Depth to Groundwater (feet BMP) / [Groundwater Elevation (feet)]
MW-1S	2.23/[29.77]	2.37/[29.63]	2.85/[29.15]	2.91/[29.09]	2.29/[27.96]
MW-1D	3.94/[28.41]	4.20/[28.15]	4.24/[28.11]	4.39/[27.96]	3.98/[28.37]
MW-2S	3.41/[29.50]	3.85/[29.06]	4.15/[28.76]	4.14/[28.77]	3.76/[29.15]
MW-3S	7.51/[24.18]	7.47/[24.22]	7.60/[24.09]	7.50/[24.19]	7.29/[24.40]
MW-4S	3.61/[27.02]	3.55/[27.05]	3.54/[27.09]	3.52/[27.11]	3.01/[27.62]
MW-4D	2.64/[27.63]	2.94/[27.33]	3.20/[27.07]	3.03/[27.24]	2.13/[28.14]
MW-5S	---	---	---	3.70/[29.79]	3.04/[30.45]
MW-6S	3.51/[26.23]	3.66/[26.08]	3.65/[26.09]	3.86/[25.88]	3.34/[26.40]
MW-6D	3.03/[26.54]	2.90/[26.67]	2.84/[26.73]	2.85/[26.72]	2.63/[26.94]
MW-6D'	---	2.49/[27.12]	2.95[26.66]	2.75/[26.86]	2.20/[27.41]
MW-7S	---	5.67/[23.90]	3.20/[26.37]	6.60/[22.97]	5.66/[23.91]
MW-7D	---	5.42/[24.23]	5.50/[24.15]	5.39/[24.26]	5.27/[24.38]
MW-8S	4.16/[25.88]	4.12/[25.92]	4.46/[25.58]	4.28/[25.76]	3.52/[26.52]
MW-8D	2.83/[27.54]	3.02/[27.35]	3.10/[27.27]	3.50/[26.87]	2.22/[28.15]
MW-9S	3.12/[28.84]	3.50/[28.46]	3.75/[28.21]	3.55/[28.41]	3.04/[28.92]
MW-10D	---	6.36/[26.63]	6.19/[26.80]	7.09/[25.90]	5.91/[27.08]
MW-11S	---	---	6.26/[28.62]	5.96/[28.92]	5.67/[29.21]

Notes:
Measuring Point = Top of PVC
BMP = Below Measuring Point
--- = Not Measured

Table 2

Summary of Groundwater Elevations
Troy Belting and Supply Company, 70 Cohoes Road, Colonie, New York

Well ID	May 17, 2017 Depth to Groundwater (feet BMP {Top of PVC}) / [Groundwater Elevation]	September 19, 2017 Depth to Groundwater (feet BMP {Top of PVC}) / [Groundwater Elevation]	December 19, 2017 Depth to Groundwater (feet BMP {Top of PVC}) / [Groundwater Elevation]	March 27, 2018 Depth to Groundwater (feet BMP {Top of PVC}) / [Groundwater Elevation]	June 21, 2018 Depth to Groundwater (feet BMP {Top of PVC}) / [Groundwater Elevation]	September 26, 2018 Depth to Groundwater (feet BMP {Top of PVC}) / [Groundwater Elevation]
MW-1S	2.44/[29.56]	4.71/[27.29]	2.33/[29.67]	2.72 /[29.28]	2.42 /[29.58]	1.89 / [30.11]
MW-1D	3.89/[28.46]	3.16/[29.19]	4.63/[27.72]	4.09 /[28.26]	4.33 /[28.02]	3.71 / [28.64]
MW-2S	3.51/[29.40]	4.34/[28.57]	N/A	3.95 /[28.96]	4.41 /[28.50]	4.11 / [28.80]
MW-3S	7.45/[24.24]	7.68/[24.01]	7.60/[24.09]	7.55/[24.14]	7.62/[24.07]	7.16 / [24.53]
MW-4S	3.30/[27.33]	4.03/[26.60]	3.80/[26.83]	3.53/[27.10]	3.79/[26.84]	3.17 / [27.46]
MW-4D	2.62/[27.65]	3.44/[26.83]	3.32/[26.95]	2.85 /[27.42]	3.34 /[26.93]	2.43 / [27.84]
MW-5S	3.05/[30.44]	4.12/[29.37]	4.51/[28.98]	N/A	4.01/[29.48]	3.27 /[30.22]
MW-6S	3.85/[25.89]	4.36/[25.38]	3.82/[25.92]	4.04 /[25.70]	4.13 /[25.61]	3.59 / [26.15]
MW-6D	2.84[26.73]	3.43[26.14]	3.32/[26.25]	3.12/[26.45]	3.46/[26.11]	2.60 / [26.97]
MW-6D'	2.21/[27.40]	2.97/[26.64]	2.80/[26.81]	2.41/[27.20]	2.68/[26.93]	2.05 / [27.56]
MW-7S	6.44/[23.13]	6.27/[23.30]	6.00/[23.57]	5.86 /[23.71]	6.45 /[23.12]	5.75 / [23.82]
MW-7D	5.49/[24.16]	6.08/[23.57]	5.89/[23.76]	5.74 /[23.91]	5.94 /[23.71]	5.28 / [24.37]
MW-8S	4.21/[25.83]	4.89/[25.15]	4.82/[25.22]	4.48/[25.56]	4.64/[25.40]	3.64 / [26.40]
MW-8D	2.72/[27.65]	3.57/[26.80]	3.43/[26.94]	2.99/[27.38]	3.17/[27.20]	2.66 / [27.71]
MW-9S	2.79/[29.17]	3.57/[28.39]	3.84/[28.12]	3.10/[28.86]	3.27/[28.69]	2.98 / [28.98]
MW-10D	5.89/[27.10]	6.26/[26.73]	6.26/[26.73]	6.11 /[26.88]	6.12 /[26.87]	5.97 / [27.02]
MW-11S	5.72/[29.16]	7.21/[27.67]	7.50/[27.38]	6.04/[28.84]	6.81/[28.07]	6.07 / [28.81]

Notes:
Measuring Point = Top of PVC
BMP = Below Measuring Point
--- = Not Measured

Table 5a

Summary of Analytical Results - Subsurface Soil (Test Pit Investigation - April 23, 2014)
Troy Belting and Supply Company, 70 Cohoes Road, Colonie, New York

Volatile Organic Compounds, mg/kg	Unrestricted SCOs[1]	Commercial SCOs[2]	Industrial SCOs[3]	Protection of Groundwater SCOs[4]	TP-14-1 (2-3.2')	TP-14-2 (E) (6-6.5')	TP-14-3 (6-6.4')	TP-14-4 (E) (6-6.8')	TP-14-6 (3-4')	TP-14-7 (4-5')
1,1,1,2-Tetrachloroethane+	---	---	---	---	NR	NR	NR	NR	NR	NR
1,1,1-Trichloroethane+	0.68	500	1,000	0.68	0.0018 J	0.71 U	0.016	0.00038 U	0.00038 U	0.055
1,1,2,2-Tetrachloroethane+	---	---	---	(0.6)	0.0007 U	0.42 U	0.0008 U	0.00084 U	0.00085 U	0.00087 U
1,1,2-Trichloro-1,2,2-trifluoroethane (FREON-113)+	---	---	---	(6.0)	0.00098 U	1.3 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
1,1,2-Trichloroethane+	---	---	---	---	0.00056 U	0.54 U	0.00064 U	0.00068 U	0.00068 U	0.0007 U
1,1-Dichloroethane+	0.27	240	480	0.27	0.00052 U	0.79 U	0.0027 J	0.002 J	0.0048 J	0.0084
1,1-Dichloroethene+	0.33	500	1,000	0.33	0.00053 U	0.89 U	0.0021 J	0.00064 U	0.0036 J	0.022
1,2,3-Trichloropropane	---	---	---	(0.34)	NR	NR	NR	NR	NR	NR
1,2,4-Trichlorobenzene	---	---	---	(3.4)	0.00026 U	0.97 U	0.0003 U	0.00032 U	0.00032 U	0.00033 U
1,2-Dibromo-3-Chloropropane	---	---	---	---	0.0021 U	2.3 J	0.0025 U	0.0026 U	0.0026 U	0.0027 U
1,2-Dibromoethane+	---	---	---	---	0.00055 U	0.45 U	0.00063 U	0.00067 U	0.00067 U	0.00069 U
1,2-Dichlorobenzene	1.1	500	1,000	1.1	0.00034 U	0.65 U	0.00039 U	0.00041 U	0.00041 U	0.00042 U
1,2-Dichloroethane+	0.02	30	60	0.02	0.00022 U	1 U	0.00025 U	0.00026 U	0.00026 U	0.00027 U
1,2-Dichloropropane+	---	---	---	---	0.0021 U	0.41 U	0.0025 U	0.0026 U	0.0026 U	0.0027 U
1,3-Dichlorobenzene	2.4	280	560	2.4	0.00022 U	0.68 U	0.00025 U	0.00027 U	0.00027 U	0.00028 U
1,4-Dichlorobenzene	1.8	130	250	1.8	0.0006 U	0.36 U	0.00069 U	0.00073 U	0.00074 U	0.00075 U
1,4-Dioxane	0.1	130	250	0.1	NR	NR	NR	NR	NR	NR
2-Butanone (MEK)	0.12	500	1,000	0.12 (0.3)	0.0016 U	7.6 U	0.0018 U	0.035	0.0019 U	0.002 U
2-Hexanone	---	---	---	---	0.0021 U	5.2 U	0.0025 U	0.0026 U	0.0026 U	0.0027 U
4-Methyl-2-pentanone (MIBK)	---	---	---	(1)	0.0014 U	0.82 U	0.0016 U	0.0017 U	0.0017 U	0.0018 U
Acetone	0.05	500	1,000	0.05	0.0036 U	11 U *	0.0052 J	**0.15**	0.0091 J	0.018 J
Benzene	0.06	44	89	0.06	0.00021 U	0.49 U	0.00024 U	0.00025 U	0.00026 U	0.00026 U
Bromodichloromethane	---	---	---	---	0.00057 U	0.51 U	0.00066 U	0.0007 U	0.0007 U	0.00072 U
Bromoform	---	---	---	---	0.0021 U	1.3 U	0.0025 U	0.0026 U	0.0026 U	0.0027 U
Bromomethane	---	---	---	---	0.00039 U	0.56 U	0.00044 U	0.00047 U	0.00047 U	0.00048 U
Carbon disulfide	---	---	---	(2.7)	0.0021 U	1.2 U	0.0025 U	0.0026 U	0.0026 U	0.0027 U
Carbon tetrachloride+	0.76	22	44	0.76	0.00042 U	0.65 U	0.00048 U	0.0005 U	0.00051 U	0.00052 U
Chlorobenzene	1.1	500	1,000	1.1	0.00057 U	0.34 U	0.00065 U	0.00069 U	0.00069 U	0.00071 U
Chloroethane	---	---	---	(1.9)	0.00097 U	0.53 U *	0.0011 U	0.0012 U	0.0012 U	0.0012 U
Chloroform+	0.37	350	700	0.37	0.00027 U	1.8 ⅄U	0.0003 U	0.00032 U	0.00032 U	0.00033 U
Chloromethane+	---	---	---	---	0.00026 U	0.61 U	0.0003 U	0.00031 U	0.00032 U	0.00032 U
cis-1,2-Dichloroethene+	0.25	500	1,000	0.25	0.002 J	**12**	0.12	0.01	**0.92 E**	**3 E**
cis-1,3-Dichloropropene	---	---	---	---	0.00062 U	0.61 U	0.00071 U	0.00075 U	0.00076 U	0.00077 U
Cyclohexane	---	---	---	---	0.0006 U	0.57 U	0.00069 U	0.00073 U	0.00074 U	0.00075 U
Dibromochloromethane	---	---	---	---	0.00055 U	1.2 U	0.00063 U	0.00067 U	0.00067 U	0.00069 U
Dichlorodifluoromethane+	---	---	---	---	0.00035 U	1.1 U	0.00041 U	0.00043 U	0.00043 U	0.00044 U
Ethylbenzene	1	390	780	1.0	0.0003 U	0.74 U	0.00034 U	0.00036 U	0.00036 U	0.0044 J
Isopropylbenzene	---	---	---	(2.3)	0.00065 U	0.38 U	0.00074 U	0.00078 U	0.00079 U	0.0016 J
Methyl Acetate	---	---	---	---	0.0026 U	1.2 U	0.003 U	0.0031 U	0.0032 U	0.0032 U
Methyl tert-butyl ether (MTBE)	0.93	500	1,000	0.93	0.00042 U	0.97 U	0.00048 U	0.00051 U	0.00052 U	0.00053 U
Methylcyclohexane	---	---	---	---	0.00065 U	1.2 U	0.00075 U	0.00079 U	0.0008 U	0.00082 U
Methylene Chloride+	0.05	500	1,000	0.05	0.002 U	0.51 ⅄U	0.0023 U	0.0024 U	0.0024 U	0.0025 U
Styrene	---	---	---	---	0.00021 U	0.62 U	0.00025 U	0.00026 U	0.00026 U	0.00027 U
Tetrachloroethene+	1.3	150	300	1.3	0.0025 J	**79**	0.00066 U	0.0007 U	0.0064	1.2 E
Toluene	0.7	500	1,000	0.7	0.00032 U	0.69 U	0.00037 U	0.00039 U	0.0004 U	0.014
trans-1,2-Dichloroethene+	0.19	500	1,000	0.19	0.00044 U	0.6 U	0.0016 J	0.00054 U	0.014	0.036
trans-1,3-Dichloropropene	---	---	---	---	0.0019 U	0.25 U	0.0022 U	0.0023 U	0.0023 U	0.0024 U
Trichloroethene+	0.47	200	400	0.47	0.059	**60**	0.43 E	0.0018 J	0.34 E	0.0012 U
Trichloromonofluoromethane+	---	---	---	---	0.00041 U	1.2 U	0.00047 U	0.00049 U	0.0005 U	0.00051 U
Vinyl chloride+	0.02	13	27	0.02	0.00052 U	0.86 ⅄U	0.0006 U	0.0011 J	**0.19**	**0.11**
Xylenes, Total	0.26	500	1,000	1.6	0.00072 U	**2.9 J**	0.00083 U	0.00087 U	0.00088 U	0.024

Notes

Bold value indicates exceedance of UUSCO.

Bold/Italicized value indicates exceedance of CSCO.

Highlighted value indicates exceedance of Protection of Groundwater SCO.

⅄ = Laboratory reporting limit does not support the regulatory standard or guidance value.

NR = Not Reported

* = LCS or LCSD exceeds the control limits. ISTD response or retention time is outside control limits.

E = Result exceeded calibration range.

U = The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

1 = Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives (UUSCO)

2 = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Commercial Use (CSCO)

3 = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Industrial Use (ISCO)

4 = Table 375-6.8(b): Protection of Groundwater.

( ) = NY CP-51: New York DEC CP-51 Soil Cleanup Levels Criteria per NY CP-51 Soil Cleanup Levels, dated October 21, 2010.

--- = No regulatory standard or guidance exists for this analyte.

+ = VOC is a chlorinated solvent.

Table 5a - 1

Summary of Analytical Results (COCs Only) - Subsurface Soil (Test Pit Investigation - April 23, 2014)
Troy Belting and Supply Company, 70 Cohoes Road, Colonie, New York

Volatile Organic Compounds, mg/kg	Unrestricted SCOs[1]	Commercial SCOs[2]	Industrial SCOs[3]	Protection of Groundwater SCOs[4]	TP-14-1 (2-3.2')	TP-14-2 (E) (6-6.5')	TP-14-3 (6-6.4')	TP-14-4 (E) (6-6.8')	TP-14-6 (3-4')	TP-14-7 (4-5')
1,1,1,2-Tetrachloroethane+	---	---	---	---	NR	NR	NR	NR	NR	NR
1,1,1-Trichloroethane+	0.68	500	1,000	0.68	0.0018 J	0.71 U	0.016	0.0004 U	0.0004 U	0.055
1,1,2,2-Tetrachloroethane+	---	---	---	(0.6)	0.0007 U	0.42 U	0.0008 U	0.0008 U	0.0009 U	0.00087 U
2-Trichloro-1,2,2-trifluoroethane (FREON-113)+	---	---	---	(6.0)	0.00098 U	1.3 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U
1,1,2-Trichloroethane+	---	---	---	---	0.00056 U	0.54 U	0.0006 U	0.0007 U	0.0007 U	0.0007 U
1,1-Dichloroethane+	0.27	240	480	0.27	0.00052 U	0.79 U	0.0027 J	0.002 J	0.0048 J	0.0084
1,1-Dichloroethene+	0.33	500	1,000	0.33	0.00053 U	0.89 U	0.0021 J	0.0006 U	0.0036 J	0.022
1,2-Dibromoethane+	---	---	---	---	0.00055 U	0.45 U	0.0006 U	0.0007 U	0.0007 U	0.00069 U
1,2-Dichloroethane+	0.02	30	60	0.02	0.00022 U	1 U	0.0003 U	0.0003 U	0.0003 U	0.00027 U
1,2-Dichloropropane+	---	---	---	---	0.0021 U	0.41 U	0.0025 U	0.0026 U	0.0026 U	0.0027 U
Carbon tetrachloride+	0.76	22	44	0.76	0.00042 U	0.65 U	0.0005 U	0.0005 U	0.0005 U	0.00052 U
Chloroform+	0.37	350	700	0.37	0.00027 U	1.8 U	0.0003 U	0.0003 U	0.0003 U	0.00033 U
Chloromethane+	---	---	---	---	0.00026 U	0.61 U	0.0003 U	0.0003 U	0.0003 U	0.00032 U
cis-1,2-Dichloroethene+	0.25	500	1,000	0.25	0.002 J	**12**	0.12	0.01	**0.92 E**	**3 E**
cis-1,3-Dichloropropene+	---	---	---	---	0.00062 U	0.61 U	0.0007 U	0.0008 U	0.0008 U	0.00077 U
Dichlorodifluoromethane+	---	---	---	---	0.00035 U	1.1 U	0.0004 U	0.0004 U	0.0004 U	0.00044 U
Methylene Chloride+	0.05	500	1,000	0.05	0.002 U	0.51 U	0.0023 U	0.0024 U	0.0024 U	0.0025 U
Tetrachloroethene+	1.3	150	300	1.3	0.0025 J	**79**	0.0007 U	0.0007 U	0.0064	1.2 E
trans-1,2-Dichloroethene+	0.19	500	1,000	0.19	0.00044 U	0.6 U	0.0016 J	0.0005 U	0.014	0.036
Trichloroethene+	0.47	200	400	0.47	0.059	**60**	0.43 E	0.0018 J	0.34 E	0.0012 U
Trichlorofluoromethane+	---	---	---	---	0.00041 U	1.2 U	0.0005 U	0.0005 U	0.0005 U	0.00051 U
Vinyl chloride+	0.02	13	27	0.02	0.00052 U	0.86 U	0.0006 U	0.0011 J	**0.19**	**0.11**

Notes

Bold value indicates exceedance of UUSCO.

Bold/Italicized value indicates exceedance of CSCO.

Highlighted value indicates exceedance of Protection of Groundwater SCO.

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* = LCS or LCSD exceeds the control limits. ISTD response or retention time is outside control limits.

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4 = Table 375-6.8(b): Protection of Groundwater.

( ) = NY CP-51: New York DEC CP-51 Soil Cleanup Levels Criteria per NY CP-51 Soil Cleanup Levels, dated October 21, 2010.

--- = No regulatory standard or guidance exists for this analyte.

+ = VOC is a chlorinated solvent.

Table 5b

Summary of Analytical Results - Subsurface Soil (RI)
Troy Belting and Supply Company, 70 Cohoes Road, Colonie, New York

Volatile Organic Compounds, mg/kg	Unrestricted SCOs[1]	Commercial SCOs[2]	Industrial SCOs[3]	Protection of Groundwater SCOs[4]	MW-4D 4.0-5.25'	MW-6S 6.0-8.0'	MW-7S 0.5-2.0'	MW-8S 2.0-4.0'	MW-9S 0.5-2.0'	MW-10D 2.0-3.3'	MW-11S 4.0-5.8'
					9/29/2014	9/29/2014	9/14/2015	10/3/2014	9/23/2014	9/10/2015	11/9/2015
1,1,1,2-Tetrachloroethane+	---	---	---	---	0.00053 U	0.00054 U	NA	0.00053 U	0.00054 U	NA	NA
1,1,1-Trichloroethane+	0.68	500	1,000	0.68	0.00038 U	0.0004 U	0.053 U	0.00038 U	0.00039 U	0.001 U	0.00078 U
1,1,2,2-Tetrachloroethane+	---	---	---	(0.6)	0.00085 U	0.00088 U	0.053 U	0.00086 U	0.00088 U	0.001 J	0.00078 U
1,1,2-Trichloro-1,2,2-trifluoroethane (FREON-113)+	---	---	---	(6.0)	0.0012 U	0.0012 U	1.1 U	0.0012 U	0.0012 U	0.021 U	0.016 U
1,1,2-Trichloroethane+	---	---	---	---	0.00068 U	0.00071 U	0.08 U	0.00069 U	0.0007 U	0.0016 U	0.0012 U
1,1-Dichloroethane+	0.27	240	480	0.27	0.00064 U	0.0016 J	0.08 U	0.00064 U	0.00066 U	0.0016 U	0.0012 U
1,1-Dichloroethene+	0.33	500	1,000	0.33	0.00064 U	0.00067 U	0.053 U	0.00065 U	0.00066 U	0.001 U	0.00078 U
1,2,3-Trichloropropane	---	---	---	(0.34)	0.00054 U	0.00055 U	NA	0.00054 U	0.00055 U	0.0053 J	NA
1,2,3-Trichlorobenzene	---	---	---	---	NA	NA	0.27 U	NA	NA	0.0053 U	0.0039 U
1,2,4-Trichlorobenzene	---	---	---	(3.4)	0.00032 U	0.00033 U	0.27 U	0.00032 U	0.00033 U	0.0053 J	0.0039 U
1,2-Dibromo-3-Chloropropane	---	---	---	---	0.0026 U	0.0027 U	0.27 U	0.0026 U	0.0027 U	0.0053 U	0.0039 U
1,2-Dibromoethane+	---	---	---	---	0.00068 U	0.0007 U	0.21 U	0.00068 U	0.0007 U	0.0042 U	0.0031 U
1,2-Dichlorobenzene	1.1	500	1,000	1.1	0.00041 U	0.00043 U	0.27 U	0.00041 U	0.00042 U	0.0053 J	0.0039 U
1,2-Dichloroethane+	0.02	30	60	0.02	0.00026 U	0.00027 U	0.053 U	0.00026 U	0.00027 U	0.001 U	0.00078 U
1,2-Dichloropropane+	---	---	---	---	0.0026 U	0.0027 U	0.19 U	0.0026 U	0.0027 U	0.0037 U	0.0027 U
1,3-Dichlorobenzene	2.4	280	560	2.4	0.00027 U	0.00028 U	0.27 U	0.00027 U	0.00028 U	0.0053 J	0.0039 U
1,4-Dichlorobenzene	1.8	130	250	1.8	0.00074 U	0.76 U	0.27 U	0.00074 U	0.00076 U	0.0053 J	0.0039 U
1,4-Dioxane	0.1	130	250	0.1	0.023 U	0.024 U	5.30 U	0.023 U	0.024 U *	0.1 U	0.078 U
2-Butanone (MEK)	0.12	500	1,000	0.12 (0.3)	0.0019 U	0.002 U	0.53 U	0.0019 U	0.002 U	0.01 U	0.0078 U
2-Hexanone	---	---	---	---	NA	NA	0.53 J	NA	NA	0.0100 U	0.0078 U
2-Chloro-1,3-butadiene	---	---	---	---	0.0033 U	0.0034 U	NA	0.0033 U	0.0034 U	NA	NA
2-Chloroethyl vinyl ether	---	---	---	---	0.0026 U	0.0027 U	NA	0.0026 U	0.0027 U	NA	NA
4-Methyl-2-pentanone (MIBK)	---	---	---	(1)	0.0017 U	0.0018 U	0.53 J	0.0017 U	0.0018 U	0.01 U	0.0078 U
Acetone	0.05	500	1,000	0.05	0.01100 J	0.0046 U	0.53 U	0.0044 U	0.0046 U	0.0024 U	0.0042 U
Benzene	0.06	44	89	0.06	0.00026 U	0.00027 U	**0.40**	0.00026 U	0.00027 U	0.001 U	0.00078 U
Bromodichloromethane	---	---	---	---	0.00071 U	0.00073 U	0.053 U	0.00071 U	0.00073 U	0.001 U	0.00078 U
Bromoform	---	---	---	---	0.0026 U	0.0027 U	0.210 U	0.0026 U	0.0027 U	0.0042 J	0.0031 U
Bromomethane	---	---	---	---	0.00047 U	0.00049 U	0.110 U	0.00047 U	0.00049 U	0.0021 U	0.0016 U
Carbon disulfide	---	---	---	(2.7)	0.0026 U	0.0027 U	0.53 U	0.0026 U	0.0027 U	0.010 U	0.0078 U
Carbon tetrachloride+	0.76	22	44	0.76	0.00051 U	0.00053 U	0.053 U	0.00051 U	0.00052 U	0.001 U	0.00078 U
Chlorobenzene	1.1	500	1,000	1.1	0.00069 U	0.00072 U	0.053 U	0.0007 U	0.00072 U	0.001 U	0.00078 U
Chloroethane	---	---	---	---	0.0012 U	0.0012 U	0.11 U	0.0012 U	0.0012 U	0.0021 U	0.0016 U
Chloroform+	0.37	350	700	0.37	0.00033 U	0.00034 U	0.08 U	0.00033 U	0.00033 U	0.0016 U	0.0012 U
Chloromethane+	---	---	---	---	0.00032 U	0.00033 U	0.27 U	0.00032 U	0.00033 U	0.0053 U	0.0039 U
cis-1,2-Dichloroethene+	0.25	500	1,000	0.25	0.0008 U	0.058	0.053 U	0.00068 U	0.00069 U	0.0010 U	0.00078 U
cis-1,3-Dichloropropene+	---	---	---	---	0.00076 U	0.00078 U	0.053 U	0.00076 U	0.00078 U	0.001 U	0.00078 U
Cyclohexanone	---	---	---	---	0.019 U	0.02 U	0.081 J	0.019 U	0.02 U	0.021 U	0.016 U
Dibromochloromethane	---	---	---	---	NA	NA	0.053 U	NA	NA	0.0010 U	0.00078 U
Dibromomethane	---	---	---	---	0.00054 U	0.00056 U	NA	0.00054 U	0.00056 U	NA	NA
Dichlorodifluoromethane+	---	---	---	---	0.00043 U	0.00045 U	0.53 U	0.00044 U	0.00045 U	0.01 U	0.00780 U
Ethylbenzene	1.0	390	780	1.0	0.00036 U	0.00038 U	0.053 U	0.00036 U	0.00037 U	0.001 U	0.00078 U

Table 5b

Summary of Analytical Results - Subsurface Soil (RI)
Troy Belting and Supply Company, 70 Cohoes Road, Colonie, New York

Volatile Organic Compounds, mg/kg	Unrestricted SCOs[1]	Commercial SCOs[2]	Industrial SCOs[3]	Protection of Groundwater SCOs[4]	MW-4D 4.0-5.25'	MW-6S 6.0-8.0'	MW-7S 0.5-2.0'	MW-8S 2.0-4.0'	MW-9S 0.5-2.0'	MW-10D 2.0-3.3'	MW-11S 4.0-5.8'
					9/29/2014	9/29/2014	9/14/2015	10/3/2014	9/23/2014	9/10/2015	11/9/2015
Isopropylbenzene	---	---	---	(2.3)	NA	NA	0.053 U	NA	NA	0.0010 J	0.00078 U
Methyl Acetate	---	---	---	---	NA	NA	1.1 U	NA	NA	0.0210 U	0.016 U
Methyl tert butyl ether (MTBE)	0.93	500	1,000	0.93	NA	NA	0.11 U	NA	NA	0.0021 U	0.0016 U
Methyl cyclohexane	---	---	---	---	NA	NA	0.13 J	NA	NA	0.0042 U	0.0031 U
Methylene Chloride+	0.05	500	1,000	0.05	0.0024 U	0.0025 U	0.53 ⅄U	0.0024 U	0.0025 U	0.01 U	0.0078 U
Styrene	---	---	---	---	NR	NR	0.11 U	NR	NR	0.0021 U	0.0016 U
Tetrachloroethene+	1.3	150	300	1.3	0.00071 U	0.00073 U	0.053 U	0.00071 U	0.00073 U	0.001 U	0.00078 U
Toluene	0.7	500	1,000	0.7	0.0004 U	0.00041 U	0.08 U	0.0004 U	0.00041 U	0.0016 U	0.00120 U
trans-1,2-Dichloroethene+	0.19	500	1,000	0.19	0.00054 U	0.00056 U	0.08 U	0.00054 U	0.00056 U	0.0016 U	0.00120 U
trans-1,3-Dichloropropene	---	---	---	---	0.0023 U	0.0024 U	0.053 U	0.0023 U	0.0024 U	0.001 U	0.00078 U
Trichloroethene+	0.47	200	400	0.47	0.0012 U	0.0012 U	0.053 U	0.0012 U	0.0012 U	0.001 U	0.00078 U
Trichloromonofluoromethane+	---	---	---	---	0.0005 U	0.00051 U	0.27 U	0.0005 U	0.00051 U	0.0053 U	0.0039 U
Vinyl chloride+	0.02	13	27	0.02	0.00064 U	0.011	**0.11 J**	0.00064 U	0.00066 U	0.0021 U	0.0016 J
Xylenes, Total	0.26	500	1,000	1.6	0.00088 U	0.00091 U	0.11 U	0.00089 U	0.00091 U	0.00041 J	0.0016 U
Ethyl acetate	---	---	---	---	0.00037 U	0.00038 U	NA	0.00037 U	0.00038 U	NA	NA
Ethyl ether	---	---	---	---	0.0022 U	0.0023 U	NA	0.0022 U	0.0023 U	NA	NA
Ethyl methacrylate	---	---	---	---	0.0018 U	0.0019 U	NA	0.0018 U	0.0019 U	NA	NA
Bromochloromethane	---	---	---	---	NA	NA	0.27 U	NA	NA	0.0053 U	0.0039 U
Acetonitrile	---	---	---	---	0.0064 U	0.0067 U	NA	0.0064 U	0.0066 U	NA	NA
Acrolein	---	---	---	---	0.0083 U	0.0086 U	NA	0.0083 U	0.0086 U	NA	NA
Acrylonitrile	---	---	---	---	0.0047 U	0.0049 U	NA	0.0047 U	0.0049 U	NA	NA
Allyl chloride	---	---	---	---	0.0025 U	0.0026 U	NA	0.0025 U	0.0026 U	NA	NA
Chlorodibromomethane	---	---	---	---	0.00067 U	0.0007 U	NA	0.00068 U	0.00069 U	NA	NA
Iodomethane	---	---	---	---	0.00026 U	0.00026 U	NA	0.00026 U	0.00026 U	NA	NA
Isobutyl alcohol	---	---	---	---	0.043 U	0.044 U	NA	0.043 U	0.044 U	NA	NA
Methacrylonitrile	---	---	---	---	0.0019 U	0.002 U	NA	0.0019 U	0.002 U	NA	NA
Methyl methacrylate	---	---	---	---	0.00038 U	0.0004 U	NA	0.00039 U	0.0004 U	NA	NA
n-Butyl alcohol	---	---	---	---	0.0017 U	0.0018 U	NA	0.0017 U	0.0017 U	NA	NA
Propionitrile	---	---	---	---	0.029 U	0.00003 U	NA	0.03 U	0.03 U	NA	NA

Notes:

All results expressed in milligrams per kilogram (mg/kg) or parts per million (ppm).

Bold value indicates exceedance of UUSCO.

Bold/Italicized value indicates exceedance of CSCO.

Highlighted value indicates exceedance of Table 375-6.8(b): Protection of Groundwater.

U = Compound was not detected at or above the Method Detection Limit (MDL).

J = Result is less than the laboratory reporting limit but greater than or equal to the method detection limit and is an approximate value.

* = LCS or LCSD exceeds the control limits.

D = Deep Monitoring Well

S = Shallow Monitoring Well

⅄ = Laboratory reporting limit does not support the regulatory standard or guidance value.

[1] = Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives (UUSCO)

[2] = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Commercial Use (CSCO)

[3] = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Industrial Use (ISCO)

[4] = Table 375-6.8(b): Protection of Groundwater.

( ) = New York DEC CP-51 Soil Cleanup Levels Criteria per NY CP-51 Soil Cleanup Levels, dated October 21, 2010.

--- = No regulatory standard or guidance value exists for this analyte.

NA = Not Analyzed

NR = Not Reported

\+ = VOC is a chlorinated solvent (cVOC).

Table 5b

Summary of Analytical Results - Subsurface Soil (RI)
Troy Belting and Supply Company, 70 Cohoes Road, Colonie, New York

Semi-Volatile Organic Compounds, mg/kg	Unrestricted SCOs[1]	Commercial SCOs[2]	Industrial SCOs[3]	Protection of Groundwater SCOs[4]	MW-4D 4.0-5.25'	MW-6S 6.0-8.0'	MW-7S 0.5-4.2'	MW-8S 2.0-4.0'	MW-9S 0.5-2.0'	MW-10D 0.0-3.3'	MW-11S 4.0-5.8'
					9/29/2014	9/29/2014	9/14/2015	10/3/2014	9/23/2014	9/10/2015	11/9/2015
1,2,4,5-Tetrachlorobenzene	---	---	---	---	NA	NA	0.19 U	NA	NA	0.17 U	0.18 U
2,3,4,6-Tetrachlorophenol	---	---	---	---	NA	NA	0.19 U	NA	NA	0.17 U	0.18 U
2,4,5-Trichlorophenol	---	---	---	(0.1)	0.05 U	0.05 U	0.19 U	0.048 U	0.041 U	0.17 U	0.18 U
2,4,6-Trichlorophenol	---	---	---	---	0.037 U	0.037 U	0.11 U	0.035 U	0.012 U	0.1 U	0.18 U
2,4-Dichlorophenol	---	---	---	(0.4)	0.019 U	0.02 U	0.17 U	0.019 U	0.0098 U	0.16 U	0.18 U
2,4-Dimethylphenol	---	---	---	---	0.044 U	0.045 U	0.19 U	0.043 U	0.051 U	0.17 U	0.18 U
2,4-Dinitrophenol	---	---	---	(0.2)	0.11 U	0.11 U	0.90 U	0.11 U	0.066 U	0.84 U	0.85 U
2,4-Dinitrotoluene	---	---	---	---	0.038 U	0.038 U	0.19 U	0.036 U	0.029 U	0.17 U	0.18 U
2,6-Dinitrotoluene	---	---	---	(1.0)	0.022 U	0.022 U	0.19 U	0.021 U	0.046 U	0.17 U	0.18 U
2-Chloronaphthalene	---	---	---	---	0.03 U	0.031 U	0.19 U	0.029 U	0.013 U	0.17 U	0.18 U
2-Chlorophenol	---	---	---	---	0.033 U	0.034 U	0.19 U	0.032 U	0.0095 U	0.17 U	0.18 U
2-Methylnaphthalene	---	---	---	(36.4)	0.037 U	0.037 U	0.23 U	0.035 U	0.0023 U	0.21 U	0.21 U
2-Methylphenol	0.33	500	1,000	0.33	0.022 U	0.022 U	0.19 U	0.021 U	0.0058 U	0.17 U	0.18 U
2-Nitroaniline	---	---	---	(0.4)	0.027 U	0.027 U	0.19 U	0.026 U	0.06 U	0.17 U	0.18 U
2-Nitrophenol	---	---	---	(0.3)	0.052 U	0.052 U	0.41 U	0.05 U	0.0086 U	0.38 U	0.38 U
3,3'-Dichlorobenzidine	---	---	---	---	0.22 U	0.22 U	0.19 U	0.21 U	0.16 U	0.17 U	0.18 U
3-Nitroaniline	---	---	---	(0.5)	0.051 U	0.051 U	0.19 U	0.049 U	0.043 U	0.17 U	0.18 U
4,6-Dinitro-2-methylphenol	---	---	---	---	0.18 U	0.19 U	0.49 U	0.18 U	0.065 U	0.45 U	0.46 U
4-Bromophenyl phenyl ether	---	---	---	---	0.026 U	0.026 U	0.19 U	0.025 U	0.06 U	0.17 U	0.18 U
4-Chloro-3-methylphenol	---	---	---	---	0.045 U	0.046 U	NA	0.044 U	0.0077 U	NA	NA
4-Chloroaniline	---	---	---	(0.22)	0.045 U	0.046 U	0.19 U	0.044 U	0.055 U	0.17 U	0.18 U
4-Chlorophenyl phenyl ether	---	---	---	---	0.023 U	0.023 U	0.19 U	0.022 U	0.004 U	0.17 U	0.18 U
4-Methylphenol	0.33	500	1,000	0.33	0.022 U	0.022 U	0.27 U	0.021 U	0.01 U	0.25 U	0.25 U
4-Nitroaniline	---	---	---	---	0.096 U	0.097 U	0.19 U	0.093 U	0.021 U	0.17 U	0.18 U
4-Nitrophenol	---	---	---	(0.1)	0.13 ⅄U	0.13 ⅄U	0.26 ⅄U	0.12 ⅄U	0.045 U	0.24 ⅄U	0.25 ⅄U

Table 5b

Summary of Analytical Results - Subsurface Soil (RI)
Troy Belting and Supply Company, 70 Cohoes Road, Colonie, New York

Semi-Volatile Organic Compounds, mg/kg	Unrestricted SCOs[1]	Commercial SCOs[2]	Industrial SCOs[3]	Protection of Groundwater SCOs[4]	MW-4D 4.0-5.25'	MW-6S 6.0-8.0'	MW-7S 0.5-4.2'	MW-8S 2.0-4.0'	MW-9S 0.5-2.0'	MW-10D 0.0-3.3'	MW-11S 4.0-5.8'
					9/29/2014	9/29/2014	9/14/2015	10/3/2014	9/23/2014	9/10/2015	11/9/2015
Acenaphthene	20	500	1,000	98	0.027 U	0.21	0.15 U	0.026 U	0.0022 U	0.14 U	0.14 U
Acenaphthylene	100	500	1,000	107	0.024 U	0.024 U	0.15 U	0.023 U	0.0015 U	0.14 U	0.14 U
Acetophenone	---	---	---	---	0.025 U	0.025 U	0.19 U	0.024 U	0.0096 U	0.17 U	0.18 U
Anthracene	100	500	1,000	1,000	0.045 U	1.0	0.069 J	0.044 U	0.0048 U	0.1 U	0.10 U
Atrazine	---	---	---	---	0.064 U	0.065 U	0.15 U	0.061 U	0.0083 U	0.14 U	0.14 U
Benzaldehyde	---	---	---	---	0.15 U	0.15 U	0.25 U	0.14 U	0.021 U	0.23 U	0.23 U
Benzo[a]anthracene	1	5.6	11	1	0.038 J	***9.4 DL***	0.27	0.024 J	0.027 J	0.084 J	0.10 U
Benzo[a]pyrene	1	1	1.1	22	0.048 J *	***11 DL***	0.26	0.026 U	0.0045 U	0.09 J	0.14 U
Benzo[b]fluoranthene	1	5.6	11	1.7	0.082 J *	***18 DL***	0.32	0.034 J	0.03 J	0.14	0.10 U
Benzo[g,h,i]perylene	100	500	1,000	1,000	0.019 U *	8.7 J DL	0.16	0.019 U	0.0022 U	0.065 J	0.14 U
Benzo[k]fluoranthene	0.8	56	110	1.7	0.031 J *	**7.2 J DL**	0.12	0.023 U	0.014 J	0.045 J	0.10 U
Biphenyl	---	---	---	---	0.027 U	0.027 U	0.43 U	0.026 U	0.012 U	0.4 U	0.4 U
bis (2-chloroisopropyl) ether	---	---	---	---	0.037 U	0.037 U	0.23 U	0.035 U	0.02 U	0.21 U	0.21 U
Bis(2-chloroethoxy)methane	---	---	---	---	0.039 U	0.039 U	0.2 U	0.038 U	0.01 U	0.19 U	0.19 U
Bis(2-chloroethyl)ether	---	---	---	---	0.024 U	0.024 U	0.17 U	0.023 U	0.016 U	0.16 U	0.16 U
Bis(2-ethylhexyl) phthalate	---	---	---	(435)	0.083 J	0.38	0.19 U	0.15 J	0.06 U	0.23	0.096 J
Butyl benzyl phthalate	---	---	---	(122)	0.03 U	0.08 J	0.19 U	0.029 U	0.05 U	0.17 U	0.18 U
Caprolactam	---	---	---	---	0.055 U	0.056 U	0.19 U	0.053 U	0.081 U	0.17 U	0.18 U
Carbazole	---	---	---	---	0.022 U	1.3	0.19 U	0.021 U	0.0022 U	0.17 U	0.18 U
Chrysene	1	56	110	1	0.046 J	**14 DL**	0.28	0.04 U	0.024 J	0.12	0.10 U
Dibenz(a,h)anthracene	0.33	0.56	1.1	1,000	0.032 U *	0.033 U *	0.041 J	0.031 U	0.0022 U	0.1 U	0.10 U
Dibenzofuran	---	---	---	---	0.022 U	0.11 J	0.19 U	0.021 U	0.0019 U	0.17 U	0.18 U
Diethyl phthalate	---	---	---	(7.1)	0.024 U	0.024 U	0.19 U	0.023 U	0.0057 U	0.17 U	0.18 U
Dimethyl phthalate	---	---	---	(27)	0.022 U	0.022 U	0.19 U	0.021 U	0.0049 U	0.17 U	0.18 U
Di-n-butyl phthalate	---	---	---	(8.1)	0.031 U	0.032 U	0.19 U	0.03 U	0.065 U	0.17 U	0.18 U

Table 5b

Summary of Analytical Results - Subsurface Soil (RI)
Troy Belting and Supply Company, 70 Cohoes Road, Colonie, New York

Semi-Volatile Organic Compounds, mg/kg	Unrestricted SCOs[1]	Commercial SCOs[2]	Industrial SCOs[3]	Protection of Groundwater SCOs[4]	MW-4D 4.0-5.25'	MW-6S 6.0-8.0'	MW-7S 0.5-4.2'	MW-8S 2.0-4.0'	MW-9S 0.5-2.0'	MW-10D 0.0-3.3'	MW-11S 4.0-5.8'
					9/29/2014	9/29/2014	9/14/2015	10/3/2014	9/23/2014	9/10/2015	11/9/2015
Di-n-octyl phthalate	---	---	---	(120)	0.094 J	0.022 U	0.19 U	0.021 U	0.0044 U	0.17 U	0.18 U
Fluoranthene	100	500	1,000	1,000	0.076 J	27 DL	0.53	0.055 J	0.055 J	0.22	0.10 U
Fluorene	30	500	1,000	386	0.022 U	0.28	0.19 U	0.021 U	0.0043 U	0.17 U	0.18 U
Hexachlorobenzene	0.33	6.0	12	3.2 (1.4)	0.025 U	0.025 U	0.11 U	0.024 U	0.0093 U	0.1 U	0.10 U
Hexachlorobutadiene	---	---	---	---	0.027 U	0.027 U	0.19 U	0.026 U	0.0096 U	0.17 U	0.18 U
Hexachlorocyclopentadiene	---	---	---	---	0.025 U	0.025 U	0.54 U	0.024 U	0.057 U	0.5 U	0.50 U
Hexachloroethane	---	---	---	---	0.024 U	0.024 U	0.15 U	0.023 U	0.014 U	0.14 U	0.14 U
Indeno[1,2,3-cd]pyrene	0.5	5.6	11	8.2	0.023 U *	***7.4 J DL***	0.18	0.022 U	0.0052 U	0.072 J	0.14 U
Isophorone	---	---	---	(4.4)	0.039 U	0.039 U	0.17 U	0.038 U	0.0094 U	0.16 U	0.16 U
Naphthalene	12	500	1,000	12	0.024 U	0.024 U	0.19 U	0.023 U	0.0031 U	0.17 U	0.18 U
Nitrobenzene	---	(69)	(140)	(0.17)	0.02 U	0.021 U	0.17 U	0.02 U	0.0083 U	0.16 U	0.16 U
N-Nitrosodi-n-propylamine	---	---	---	---	0.031 U	0.032 U	0.19 U	0.03 U	0.015 U	0.17 U	0.18 U
N-Nitrosodiphenylamine	---	---	---	---	0.15 U	0.15 U	NA	0.14 U	0.01 U	NA	NA
Pentachlorophenol	0.8	6.7	55	0.8	0.18 U	0.19 U	0.15 U	0.18 U	0.064 U	0.14 U	0.14 U
Phenanthrene	100	500	1,000	1,000	0.033 J	9.4 DL	0.24	0.026 U	0.022 J	0.10	0.10 U
Phenol	0.33	500	1,000	0.33	0.028 U	0.028 U	0.19 U	0.027 U	0.02 U	0.17 U	0.18 U
Pyrene	100	500	1,000	1,000	0.061 J	21.0 DL	0.48	0.021 U	0.043 J	0.18	0.10 U
NDPA/DPA	---	---	---	---	NA	NA	0.15 U	NA	NA	0.14 U	0.14 U
p-Chloro-m-cresol	0.33	---	---	---	NA	NA	0.19 U	NA	NA	0.17 U	0.18 U

Notes:

All results expressed in milligrams per kilogram (mg/kg) or parts per million (ppm).
Bold value indicates exceedance of UUSCO.
Bold/Italicized value indicates exceedance of CSCO.
Highlighted value indicates exceedance of Table 375-6.8(b): Protection of Groundwater.
U = Compound was not detected at or above the Method Detection Limit (MDL).
J = Result is less than the laboratory reporting limit but greater than or equal to the method detection limit and is an approximate value.
D = Deep Monitoring Well
S = Shallow Monitoring Well
DL = Indicates a dilution of the sample was required for analysis.
* = LCS or LCSD exceeds the control limits.

[1] = Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives (UUSCO)
[2] = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Commercial Use (CSCO)
[3] = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Industrial Use (ISCO)
[4] = Table 375-6.8(b): Protection of Groundwater.
( ) = NY CP-51: New York DEC CP-51 Soil Cleanup Levels Criteria per NY CP-51 Soil Cleanup Levels, dated October 21, 2010.
--- = No regulatory standard or guidance value exists for this analyte.
NA = Not Analyzed
⅄ = Laboratory reporting limit does not support the regulatory standard or guidance value.

Table 5b

Summary of Analytical Results - Subsurface Soils (RI)
Troy Belting and Supply Company, 70 Cohoes Road, Colonie, New York

Polychlorinated Biphenyls (PCBs), mg/kg	Unrestricted SCOs[1]	Commercial SCOs[2]	Industrial SCOs[3]	Protection of Groundwater SCOs[4]	MW-4D 4.0-5.25' 9/29/2014	MW-6S 6.0-8.0' 9/29/2014	MW-7S 0.5-4.2' 9/14/2015	MW-8S 2.0-4.0' 10/3/2014	MW-9S 0.5-2.0' 9/23/2014	MW-10D 0.0-3.3' 9/10/2015	MW-11S 4.0-5.8' 11/9/2015
Aroclor 1016		---	---	---	0.000041 U	0.00005 U	0.0379 U	0.00004 U	0.00005 U	0.0348 U	0.0354 U
Aroclor 1221	---	---	---	---	0.000041 U	0.00005 U	0.0379 U	0.00004 U	0.00005 U	0.0348 U	0.0354 U
Aroclor 1232	---	---	---	---	0.000041 U	0.00005 U	0.0379 U	0.00004 U	0.00005 U	0.0348 U	0.0354 U
Aroclor 1242	---	---	---	---	0.000041 U	0.00005 U	0.0379 U	0.00004 U	0.00005 U	0.0348 U	0.00669 J
Aroclor 1248	---	---	---	---	0.000041 U	0.00005 U	0.0379 U	0.00004 U	0.00005 U	0.0348 U	0.0354 U
Aroclor 1254	---	---	---	---	0.000097 U	0.00012 U	0.0379 U	0.00010 U	0.00012 U	0.0348 U	0.0354 U
Aroclor 1260	---	---	---	---	0.000097 U	0.00014 J	0.0135 J	0.00010 U	0.00012 U	0.0348 U	0.0354 U
Aroclor 1262	---	---	---	---	NA	NA	0.0379 U	NA	NA	0.0348 U	0.0354 U
Aroclor 1268	---	---	---	---	NA	NA	0.00801 J	NA	NA	0.0348 U	0.0354 U
PCBs, Total	0.1	1	25	3.2	ND	0.00014 J	0.0215 J	ND	ND	0.0348 U	0.00669 J
Organochlorine Pesticides, mg/kg	**Unrestricted SCOs[1]**	**Commercial SCOs[2]**	**Industrial SCOs[3]**	**Protection of Groundwater SCOs[4]**	**MW-4D 4.0-5.25' 9/29/2014**	**MW-6S 6.0-8.0' 9/29/2014**	**MW-7S 0.5-4.2' 9/14/2015**	**MW-8S 2.0-4.0' 10/3/2014**	**MW-9S 0.5-2.0' 9/23/2014**	**MW-10D 0.0-3.3' 9/10/2015**	**MW-11S 4.0-5.8' 11/9/2015**
2,4'-DDD	---	---	---	---	0.059 B	0.062 B	NA	0.0017 J B	0.00033 U	NA	NA
2,4'-DDE	---	---	---	---	0.0033 U	0.0033 U	NA	0.00063 U	0.00034 U	NA	NA
2,4'-DDT	---	---	---	---	0.0038 U	0.0038 U	NA	0.00072 U	0.00039 U	NA	NA
4,4'-DDD	0.0033	92	180	14	0.0042 ⅄U	0.0043 ⅄U	0.00183 U	0.0008 U	0.00043 U	0.00161 U	0.00165 U
4,4'-DDE	0.0033	62	120	17	0.0036 ⅄U	0.0036 ⅄U	0.00183 U	0.00068 U	0.00037 U	0.00161 U	0.00165 U
4,4'-DDT	0.0033	47	94	136	0.0035 ⅄U	0.0035 ⅄U	0.00344 U	0.00067 U	0.00036 U	0.00302 U	0.00309 U
Aldrin	0.005	0.68	1.4	0.19	0.0044 U	0.0046 U	0.00183 U	0.00088 U	0.00047 U	NA	0.00165 U
alpha-BHC	0.02	3.4	6.8	0.02	0.0032 U	0.0033 U	0.00076 U	0.00062 U	0.00033 U	0.00067 U	0.00069 U
beta-BHC	0.036	3	14	0.09	0.0034 U	0.0034 U	0.00183 U	0.00064 U	0.00034 U	0.00161 U	0.00165 U
Chlordane (technical)	0.094	24	47	2.9	0.04 U	0.04 U	0.0149 U	0.0076 U	0.0041 U	0.0131 U	0.0134 U
cis-Chlordane	---	---	---	---	NA	NA	0.00229 U	NA	NA	0.00201 U	0.00206 U
delta-BHC	0.04	500	1,000	0.25	0.0038 U	0.0038 U	0.00183 U	0.00072 U	0.00039 U	0.00161 U	0.00165 U
Dieldrin	0.005	1.4	2.8	0.1	0.0084 ⅄U	0.0085 ⅄U	0.00114 U	0.0016 U	0.00086 U	0.00101 U	0.00103 U
Endosulfan I	2.4	200	920	102	0.0035 U	0.0036 U	0.00183 U	0.00067 U	0.00036 U	0.00161 U	0.00165 U
Endosulfan II	2.4	200	920	102	0.0033 U	0.0034 U	0.00183 U	0.00064 U	0.00034 U	0.00161 U	0.00165 U
Endosulfan sulfate	2.4	200	920	1,000	0.0043 U	0.0044 U	0.00076 U	0.00082 U	0.00044 U	0.00067 U	0.00069 U
Endrin	0.014	89	410	0.06	0.0034 U	0.0035 U	0.00076 U	0.00066 U	0.00035 U	0.00067 U	0.00069 U
Endrin aldehyde	---	---	---	---	0.0039 U	0.0039 U	NA	0.00074 U	0.00040 U	NA	NA
Endrin ketone	---	---	---	---	NA	NA	0.00183 U	NA	NA	0.00161 U	0.00165 U
Heptachlor	0.042	15	29	0.38	0.27 B	0.027 B	0.00092 U	0.0024 J B	0.00033 U	0.00081 U	0.00082 U
Heptachlor epoxide	---	---	---	(0.02)	0.0037 U	0.0037 U	0.00344 U	0.0007 U	0.00038 U	0.00302 U	0.00309 U
gamma-BHC (Lindane)	0.1	9.2	23	0.1	0.0046 U	0.0047 U	0.00076 U	0.00088 U	0.00048 U	0.00067 U	0.00069 U
Methoxychlor	---	---	---	(900)	0.0044 U	0.0045 U	0.00344 U	0.00084 U	0.00045 U	0.00302 U	0.00309 U
Toxaphene	---	---	---	---	0.10 U	0.1100 U	0.03440 U	0.02 U	0.011 U	0.0302 U	0.03090 U
trans-Chlordane	---	---	---	---	NA	NA	0.00229 U	NA	NA	0.00201 U	0.00060 U

Notes:

All results expressed in milligrams per kilogram (mg/kg) or parts per million (ppm).

Bold value indicates exceedance of UUSCO.

Bold/Italicized value indicates exceedance of CSCO.

Highlighted value indicates exceedance of Table 375-6.8(b): Protection of Groundwater.

U = Compound was not detected at or above the Method Detection Limit (MDL).

⅄ = Laboratory reporting limit does not support the regulatory standard or guidance value.

J = Result is less than the laboratory reporting limit but greater than or equal to the method detection limit and is an approximate value.

[1] = Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives (UUSCO)

[2] = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Commercial Use (CSCO)

[3] = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Industrial Use (ISCO)

[4] = Table 375-6.8(b): Protection of Groundwater

( ) = NY CP-51: New York DEC CP-51 Soil Cleanup Levels Criteria per NY CP-51 Soil Cleanup Levels, dated October 21, 2010.

B = Compound was found in the blank and sample.

NA = Not Analyzed

ND = Not Detected

S = Shallow Monitoring Well

D = Deep Monitoring Well

--- = No regulatory standard or guidance value exists for this analyte.

Table 5b

Summary of Analytical Results - Subsurface Soils (RI)
Troy Belting and Supply Company, 70 Cohoes Road, Colonie, New York

	Unrestricted SCOs[1]	Commercial SCOs[2]	Industrial SCOs[3]	Protection of Groundwater SCOs[4]	Published Range of Inorganic Concentrations in Eastern USA Soils[5]	MW-4D 4.0-5.25'	MW-6S 6.0-8.0'	MW-7S 0.5-4.2'	MW-8S 2.0-4.0'	MW-9S 0.5-2.0'	MW-10D 0.0-3.3'	MW-11S 4.0-5.8'
Total Metals and Total Cyanide, mg/kg						9/29/2014	9/29/2014	9/14/2015	10/3/2014	9/23/2014	9/10/2015	11/9/2015
Aluminum, Total	---	---	---	---	0.7 - > 10	18,200	18,400	17,000	16,500	16,000	18,000 J	13.0000
Antimony, Total	---	---	---	---	<1 - 8.8	0.40 U	0.43 U	4.40 U	0.46 J	0.44 U	4.0 J	4.2 U
Arsenic, Total	13	16	16	16	<0.1 - 73	11.9	11.6	***20.0***	9.80	7.90	***19.0***	11.0 J
Barium, Total	350	400	10,000	820	10 - 1,500	100.0	100.0	190.0	87.90	91.50	100.0	140.0
Beryllium, Total	7.2	590	2,700	47	<1 - 7	0.92	0.92	0.84	0.72	0.81	0.77	0.66
Cadmium, Total	2.5	9.3	60	7.5	Not Reported	0.19 J B	0.24 B	0.84 J	0.11 J	0.22	0.80 J	0.85 U
Calcium, Total	---	---	---	---	0.01 - 28	1,230 B	842 B	6,700	1,040 B	1,520 B	1,100 J	660 J
Chromium, Total	30○/1●	1,500○/400●	6,800○/800●	---○/19●	1 - 1,000	19.0	24.7	25.0	23.2	21.4	23.0	18.0
Cobalt, Total	---	---	---	---	<0.3 - 70	22.0	18.1	14.0	15.5	16.5	17.0	16.0
Copper, Total	50	270	10,000	1,720	<1 - 700	49.1	49.4	**100**	41.6	45.0	**59.0 J**	41.0 J
Cyanide, Total	27	27	10,000	40	Not Reported	NA	NA	NA	NA	NA	NA	NA
Iron, Total	---	---	---	---	0.01 - >10	35,800	35,300	33,000	32,700 B	33,300	34,000 J	27,000
Lead, Total	63	1,000	3,900	450	<10 - 300	39.8	**67.1**	**180**	29.5	31.2	8.9	11.0
Magnesium, Total	---	---	---	---	0.005 - 5	7,110 B	6,350 B	6,700 J	7,040	6,160	7,100 J	5,300
Manganese, Total	1,600	10,000	10,000	2,000	<2 - 7,000	1,070 B	853 B	1,500 J	797	597 B	920 J	480 J
Mercury, Total	0.18	2.8	5.7	0.73	0.01 - 3.4	0.026	0.13	0.09 J	0.016 J	0.021	0.03 J	0.08 J
Nickel, Total	30	310	10,000	130	<5 - 700	**40.4**	**36.1**	29.0	**34.1**	**33.5**	**36.0**	26.0
Potassium, Total	---	---	---	---	0.005 - 3.7	1,800	1,780	860	1,440	1,670	710	780
Selenium, Total	3.9	1,500	6,800	4	<0.1 - 3.9	0.77 J	0.93 J	1.80 U	0.42 U	0.92 J	1.6 U	1.7 U
Silver, Total	2	1,500	6,800	8.3	1.7 - 45	0.20 U	0.22 U	0.89 U	0.21 U	0.22 U	0.80 U	0.85 U
Sodium, Total	---	---	---	---	<0.05 - 5.0	45.5 J	93.8	420	36.7 J	1,390	51 J	42 J
Thallium, Total	---	---	---	---	2.2 - 23	0.30 U	0.33 U	1.8 U	0.32 U	0.33 U	1.6 J	0.48 J
Vanadium, Total	---	---	---	---	<7 - 300	30.2	32.7	30.0	29.7	26.6	25.0	19.0
Zinc, Total	109	10,000	10,000	2,480	<5 - 2,900	97.6 B	**111 B**	**410 J**	79.3 B	107	93	77 J

Notes:

All results expressed in milligrams per kilogram (mg/kg) or parts per million (ppm).

Bold value indicates exceedance of UUSCO.

Bold/Italicized value indicates exceedance of CSCO.

Highlighted value indicates exceedance of Table 375-6.8(b): Protection of Groundwater.

Highlighted value indicates exceedance of ISCO and Table 375-6.8(b): Protection of Groundwater.

U = Compound was not detected at or above the Method Detection Limit (MDL).

J = Result is less than the laboratory reporting limit but greater than or equal to the method detection limit and is an approximate value.

○ = Applies to trivalent chromium only.

● = Applies to hexavalent chromium only.

[1] = Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives (UUSCO)

[2] = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Commercial Use (CSCO)

[3] = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Industrial Use (ISCO)

[4] = Table 375-6.8(b): Protection of Groundwater

[5] = Published Range of Inorganic Concentrations in Eastern USA Soils (Shacklette, H.T., and Boerngen, J.G., 1984, U.S. Geological Survey Professional Paper 1270, 105 p.).

( ) = NY CP-51: New York DEC CP-51 Soil Cleanup Levels Criteria per NY CP-51 Soil Cleanup Levels, dated October 21, 2010.

--- = No regulatory standard or guidance value exists for this analyte.

NA = Not Analyzed

Table 5b - 1

Summary of Analytical Results (COCs Only) - Subsurface Soil (RI)
Troy Belting and Supply Company, 70 Cohoes Road, Colonie, New York

Volatile Organic Compounds, mg/kg	Unrestricted SCOs[1]	Commercial SCOs[2]	Industrial SCOs[3]	Protection of Groundwater SCOs[4]	MW-4D 4.0-5.25'	MW-6S 6.0-8.0'	MW-7S 0.5-2.0'	MW-8S 2.0-4.0'	MW-9S 0.5-2.0'	MW-10D 2.0-3.3'	MW-11S 4.0-5.8'
					9/29/2014	9/29/2014	9/14/2015	10/3/2014	9/23/2014	9/10/2015	11/9/2015
1,1,1,2-Tetrachloroethane+	---	---	---	---	0.00053 U	0.00054 U	NA	0.00053 U	0.00054 U	NA	NA
1,1,1-Trichloroethane+	0.68	500	1,000	0.68	0.00038 U	0.0004 U	0.053 U	0.00038 U	0.00039 U	0.001 U	0.00078 U
1,1,2,2-Tetrachloroethane+	---	---	---	(0.6)	0.00085 U	0.00088 U	0.053 U	0.00086 U	0.00088 U	0.001 J	0.00078 U
1,1,2-Trichloro-1,2,2-trifluoroethane (FREON-113)+	---	---	---	(6.0)	0.0012 U	0.0012 U	1.1 U	0.0012 U	0.0012 U	0.021 U	0.016 U
1,1,2-Trichloroethane+	---	---	---	---	0.00068 U	0.00071 U	0.08 U	0.00069 U	0.0007 U	0.0016 U	0.0012 U
1,1-Dichloroethane+	0.27	240	480	0.27	0.00064 U	0.0016 J	0.08 U	0.00064 U	0.00066 U	0.0016 U	0.0012 U
1,1-Dichloroethene+	0.33	500	1,000	0.33	0.00064 U	0.00067 U	0.053 U	0.00065 U	0.00066 U	0.001 U	0.00078 U
1,2-Dibromoethane+	---	---	---	---	0.00068 U	0.0007 U	0.21 U	0.00068 U	0.0007 U	0.0042 U	0.0031 U
1,2-Dichloroethane+	0.02	30	60	0.02	0.00026 U	0.00027 U	0.053 ⅄U	0.00026 U	0.00027 U	0.001 U	0.00078 U
1,2-Dichloropropane+	---	---	---	---	0.0026 U	0.0027 U	0.19 U	0.0026 U	0.0027 U	0.0037 U	0.0027 U
Carbon tetrachloride+	0.76	22	44	0.76	0.00051 U	0.00053 U	0.053 U	0.00051 U	0.00052 U	0.001 U	0.00078 U
Chloroform+	0.37	350	700	0.37	0.00033 U	0.00034 U	0.08 U	0.00033 U	0.00033 U	0.0016 U	0.0012 U
Chloromethane+	---	---	---	---	0.00032 U	0.00033 U	0.27 U	0.00032 U	0.00033 U	0.0053 U	0.0039 U
cis-1,2-Dichloroethene+	0.25	500	1,000	0.25	0.0008 U	0.058	0.053 U	0.00068 U	0.00069 U	0.0010 U	0.00078 U
cis-1,3-Dichloropropene+	---	---	---	---	0.00076 U	0.00078 U	0.053 U	0.00076 U	0.00078 U	0.001 U	0.00078 U
Dichlorodifluoromethane+	---	---	---	---	0.00043 U	0.00045 U	0.53 U	0.00044 U	0.00045 U	0.01 U	0.00780 U
Methylene Chloride+	0.05	500	1,000	0.05	0.0024 U	0.0025 U	0.53 ⅄U	0.0024 U	0.0025 U	0.01 U	0.0078 U
Tetrachloroethene+	1.3	150	300	1.3	0.00071 U	0.00073 U	0.053 U	0.00071 U	0.00073 U	0.001 U	0.00078 U
trans-1,2-Dichloroethene+	0.19	500	1,000	0.19	0.00054 U	0.00056 U	0.08 U	0.00054 U	0.00056 U	0.0016 U	0.00120 U
Trichloroethene+	0.47	200	400	0.47	0.0012 U	0.0012 U	0.053 U	0.0012 U	0.0012 U	0.001 U	0.00078 U
Trichloromonofluoromethane+	---	---	---	---	0.0005 U	0.00051 U	0.27 U	0.0005 U	0.00051 U	0.0053 U	0.0039 U
Vinyl chloride+	0.02	13	27	0.02	0.00064 U	0.011	0.11 J	0.00064 U	0.00066 U	0.0021 U	0.0016 J

Notes:

All results expressed in milligrams per kilogram (mg/kg) or parts per million (ppm).
Bold value indicates exceedance of UUSCO.
Bold/Italicized value indicates exceedance of CSCO.
Highlighted value indicates exceedance of Table 375-6.8(b): Protection of Groundwater.
U = Compound was not detected at or above the Method Detection Limit (MDL).
J = Result is less than the laboratory reporting limit but greater than or equal to the method detection limit and is an approximate value.
D = Deep Monitoring Well
S = Shallow Monitoring Well
+ = VOC is a chlorinated solvent (cVOC).

[1] = Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives (UUSCO)
[2] = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Commercial Use (CSCO)
[3] = Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Industrial Use (ISCO)
[4] = Table 375-6.8(b): Protection of Groundwater.
( ) = NY CP-51: New York DEC CP-51 Soil Cleanup Levels Criteria per NY CP-51 Soil Cleanup Levels, dated October 21, 2010.
--- = No regulatory standard or guidance exists for this analyte.
NA = Not Analyzed
⅄ = Laboratory reporting limit does not support the regulatory standard or guidance value.

LEGEND:

SB-9	SOIL BORING (RJS ENVIRONMENTAL, 2011)
TP-14-5	TEST PIT (STERLING, 2014)
SW/SED-4	SURFACE WATER/SEDIMENT SAMPLE (STERLING, 2014)
MW-6	RI MONITORING WELL (STERLING 2014/2015)
7-SV-IA-OA	SUB-SLAB/INDOOR/OUTDOOR AIR SAMPLE – ONSITE (STERLING 2014–2018)
7-SV-IA-OA	SUB-SLAB/INDOOR/OUTDOOR AIR SAMPLE – OFFSITE (STERLING 2014–2018)
SS-2	SURFACE SOIL SAMPLE (STERLING STERLING 2014)
———	APPROXIMATE PROPERTY BOUNDARY

MAP REFERENCES:

1. BASE MAP: (INCLUDING EXISTING MONITORING WELL LOCATIONS & APPROXIMATE PROPERTY LINE), IS FROM DRAWING ENTITLED "MONITORING WELL SURVEY," BY CORNERSTONE SURVEYING & MAPPING, DECEMBER 17, 2012.
2. FORMER BROOK LOCATION FROM DRAWING ENTITLED "SURVEY OF PARCEL OF LAND," BY KING & DANSKIN, ENGINEERING & SURVEYING, JUNE 3, 1964.
3. *EXISTING SOIL BORING LOCATIONS FROM DRAWING ENTITLED "BORING LOCATION MAP" (WITHIN PHASE II REPORT), BY RJS ENVIRONMENTAL, SEPTEMBER 28, 2011.
4. AERIAL IMAGE FROM NEW YORK STATEWIDE DIGITAL ORTHOIMAGERY PROGRAM, PHOTOGRAPHY CIRCA 2011

STERLING
Sterling Environmental Engineering, P.C.
24 Wade Road • Latham, New York 12110

SAMPLE AND WELL LOCATIONS MAP
TROY BELTING AND SUPPLY CO.
70 COHOES ROAD

TOWN OF COLONIE — ALBANY CO., N.Y.

PROJ. No.: 2011-31	DATE: 6/25/2018	SCALE: 1" = 60'	DWG. NO. 2011-31189	FIGURE 2

Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States

U.S. GEOLOGICAL SURVEY PROFESSIONAL PAPER 1270

Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States

By HANSFORD T. SHACKLETTE *and* JOSEPHINE G. BOERNGEN

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An account of the concentrations of 50 chemical elements in samples of soils and other regoliths

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ELEMENT CONCENTRATIONS IN SOILS AND OTHER SURFICIAL MATERIALS OF THE CONTERMINOUS UNITED STATES

By HANSFORD T. SHACKLETTE and JOSEPHINE G. BOERNGEN

ABSTRACT

Samples of soils or other regoliths, taken at a depth of approximately 20 cm from locations about 80 km apart throughout the conterminous United States, were analyzed for their content of elements. In this manner, 1,318 sampling sites were chosen, and the results of the sample analyses for 50 elements were plotted on maps. The arithmetic and geometric mean, the geometric deviation, and a histogram showing frequencies of analytical values are given for 47 elements.

The lower concentrations of some elements (notably, aluminum, barium, calcium, magnesium, potassium, sodium, and strontium) in most samples of surficial materials from the Eastern United States, and the greater abundance of heavy metals in the same materials of the Western United States, indicates a regional geochemical pattern of the largest scale. The low concentrations of many elements in soils characterize the Atlantic Coastal Plain. Soils of the Pacific Northwest generally have high concentrations of aluminum, cobalt, iron, scandium, and vanadium, but are low in boron. Soils of the Rocky Mountain region tend to have high concentrations of copper, lead, and zinc. High mercury concentrations in surficial materials are characteristic of Gulf Coast sampling sites and the Atlantic coast sites of Connecticut, Massachuetts, and Maine. At the State level, Florida has the most striking geochemical pattern by having soils that are low in the concentrations of most elements considered in this study. Some smaller patterns of element abundance can be noted, but the degree of confidence in the validity of these patterns decreases as the patterns become less extensive.

INTRODUCTION

The abundance of certain elements in soils and other surficial materials is determined not only by the element content of the bedrock or other deposits from which the materials originated, but also by the effects of climatic and biological factors as well as by influences of agricultural and industrial operations that have acted on the materials for various periods of time. The diversity of these factors in a large area is expected to result in a corresponding diversity in the element contents of the surficial materials.

At the beginning of this study (1961), few data were available on the abundance of elements in surficial materials of the United States as a whole. Most of the early reports discussed only the elements that were of economic importance to mining or agriculture in a metallogenic area or State; and the data, for the most part, cannot be evaluated with reference to average, or normal, amounts in undisturbed materials because they were based on samples of deposits expected to have anomalous amounts of certain elements, or were based only on samples from cultivated fields.

We began a sampling program in 1961 that was designed to give estimates of the range of element abundance in surficial materials that were unaltered or very little altered from their natural condition, and in plants that grew on these deposits, throughout the conterminous United States. We believed that analyses of the surficial materials would provide a measure of the total concentrations of the elements that were present at the sampling sites, and that analysis of the plants would give an estimate of the relative concentrations among sites of the elements that existed in a chemical form that was available to plants. Because of the great amount of travel necessary to complete this sampling, we asked geologists and others of the U.S. Geological Survey to assist by collecting samples when traveling to and from their project areas and to contribute appropriate data they may have collected for other purposes. The reponse to this request, together with the samples and data that we had collected, resulted in our obtaining samples of surficial materials and plants from 863 sites. The analyses of surficial materials sampled in this phase of the study were published for 35 elements by plotting element concentrations, in two to five frequency classes, on maps (Shacklette, Hamilton, and others, 1971).

Soon after the publication of the results of this study, interest in environmental matters, particularly in the effects of contamination and industrial pollution, increased greatly. At the same time, technological advances in analytical methods and data processing facilitated measurements of geochemical and other parameters of the environment. In response to the need for background data for concentrations of certain elements of particular environmental concern, the samples of surficial materials that were collected for the first study (Shacklette, Hamilton, and others, 1971) (with some additional samples) were analyzed for other elements, and the results were published in U.S. Geological Survey Circulars: for mercury, Shacklette, Boerngen, and Turner (1971); for lithium and cadmium, by Shacklette, and others (1973); and for selenium, fluorine, and arsenic, Shacklette and others (1974).

The collection of samples for this study continued, as opportunities arose, until autumn 1975, resulting in the sampling of an additional 355 sites that were selected to give a more uniform geographical coverage of the conterminous United States. This sampling continuation is referred to as phase two. These samples were analyzed, and the data were merged with those of the original samples to produce the results given in the present report. In addition, the availability of analytical methods for elements not included in the earlier reports permitted data to be given on these elements in the more recently collected samples.

The collection localities and dates, sample descriptions, and analytical values for each sample in the present report were published by Boerngen and Shacklette (1981). The elemental compositions of only the surficial materials are given in this report; the data on analyses of the plant samples are held in files of the U.S. Geological Survey.

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REVIEW OF LITERATURE

The literature on the chemical analysis of soils and other surficial materials in the United States is extensive and deals largely with specific agricultural problems of regional interest. Many of the papers were written by soil scientists and chemists associated with State agricultural experiment stations and colleges of agriculture, and most reports considered only elements that were known to be nutritive or toxic to plants or animals.

Chemists with the U.S. Department of Agriculture prepared most early reports of element abundance in soils for large areas of the United States. (See Robinson, 1914; Robinson and others, 1917). The 1938 yearbook of agriculture was devoted to reports on soils of the United States; in this book, McMurtrey and Robinson (1938) discussed the importance and abundance of trace elements in soils. Amounts of the major elements in soil samples from a few soil profiles distributed throughout the United States were compiled by the soil scientist C. F. Marbut (1935) to illustrate characteristics of soil units.

The use of soil analysis in geochemical prospecting began in this country in the 1940's, and many reports were published on the element amounts in soils from areas where mineral deposits were known or suspected to occur. Most of these reports included only a few elements in soils from small areas. This early geochemical work was discussed by Webb (1953) and by Hawkes (1957). In succeeding years, as soil analyses became an accepted method of prospecting and as analytical methods were improved, many elements in soils were analyzed; still, the areas studied were commonly small.

An estimate of the amounts of elements in average, or normal, soils is useful in appraising the amounts of elements in a soil sample as related to agricultural, mineral prospecting, environmental quality, and health and disease investigations. Swaine (1955) gave an extensive bibliography of trace-element reports on soils of the world, and he also summarized reports of the average amounts of elements as given by several investigators. The most comprehensive list of average amounts of rare and dispersed elements in soils is that of Vinogradov (1959), who reported the analytical results of extensive studies of soils in the Union of Soviet Socialist Republics, as well as analyses of soils from other countries. He did not state the basis upon which he established the average values; however, these values are presumably the arithmetic means of element amounts in samples from throughout the world. In their discussions of the principles of geochemistry, Goldschmidt (1954) and Rankama and Sahama (1955) reported the amounts of various elements present in soils and in other surficial materials, Hawks and Webb (1962) and, more recently, Brooks (1972), Siegal (1974), Levinson (1974), and Rose and others (1979) gave average amounts of certain elements in soils as useful guides in mineral exploration.

A report on the chemical characteristics of soils was edited by Bear (1964). In this book, the chapter on chemical composition of soils by Jackson (1964) and the chapter on trace elements in soils by Mitchell (1964) gave the ranges in values or the average amounts of some soil elements.

Regional geochemical studies conducted by scientists of the U.S. Geological Survey within the past two decades have been largely directed to the establishment of baseline abundances of elements in surficial materials, including soils. Most of the earlier work investigated these materials that occurred in their natural condition, having little or no alterations that related to human activities, with the objective of establishing normal element concentrations in the materials by which anomalous concentrations, both natural or man induced, could be judged. Some of these studies were conducted in cooperation with medical investigators who were searching for possible relationships of epidemiological patterns to characteristics of the environment. In one study, the geochemical characteristics of both natural and cultivated soils were determined in two areas of Georgia that had contrasting rates of cardiovascular diseases (Shacklette and others, 1970). In an extensive geochemical study of Missouri, also conducted cooperatively with medical researchers, both cultivated and natural soils were sampled. The results were presented for the State as a whole, and for physiographic regions or other subdivisions and smaller areas, as follows: Erdman and others (1976a, 1976b); Tidball (1976, 1983a, 1983b); and Ebens and others (1973). The results of these studies, and of other regional geochemical investigations, were summarized and tabulated by Connor and Shacklette (1975).

Recent regional studies of soil geochemistry by the U.S. Geological Survey related to the development of energy resources in the western part of the United States, including North Dakota, South Dakota, Montana, Wyoming, Colorado, Utah, and New Mexico. These studies established regional geochemical baselines for soils, both in undisturbed areas and in areas that had been altered by mining and related activities. Some of these studies considered the elements in soils both as total concentrations and as concentrations that were available to plants of the region. The results of these studies were published in annual progress reports (U.S. Geological Survey, 1974, 1975, 1976, 1977, and 1978). The data on soils, as well as on other natural materials, in these reports were summarized and tabulated by Ebens and Shacklette (1981). In a study of the elements in fruits and vegetables from 11 areas of commercial production in the United States, and in the soils on which this produce grew, soils were analyzed for 39 elements, as reported by Boerngen and Shacklette (1980) and Shacklette (1980).

The average amounts of elements in soils and other surficial materials of the United States, as determined in the present study, are given in table 1, with the average values or ranges in values that were reported by Vinogradov (1959), Rose and others (1979), Jackson (1964), Mitchell (1964), and Brooks (1972). The averages from the present study given in table 1 are the arithmetic means. Although the averages were computed by the methods described by Miesch (1967), the values obtained are directly comparable with the arithmetic means derived by common computational procedures.

COLLECTION AND ANALYSIS OF GEOCHEMICAL DATA

SAMPLING PLAN

The sampling plan was designed with the emphasis on practicality, in keeping with the expenditures of time and funds available, and its variance from an ideal plan has been recognized from the beginning. Because the collection of most samples was, by necessity, incidental to other duties of the samplers, the instructions for sampling were simplified as much as possible, so that sampling methods would be consistent within the wide range of kinds of sites to be sampled. The samples were

TABLE 1.—*Average or median contents, and range in contents, reported for elements in soils and other surficial materials*

[Data are in parts per million; each average represents arithmetic mean; leaders (—) in figure columns indicate no data available. A, average; M, median. <, less than; >, greater than]

Element	This report: Average	This report: Range	Rose, and others (1979) (elements useful in geochemical prospecting)	Vinogradov (1959) (presumably, averages from worldwide sampling)	Jackson (1964): "Typical",[1] average, or range in values	Mitchell (1964): Range in contents in Scottish surface soils	Brooks (1972): Average or range
Al	72,000	700 - >10,000	—	71,300	10,000 - 60,000	—	—
As	7.2	<0.1 - 97	7.5 (M)	5	—	—	5
B	33	<20 - 300	29 (M)	10	30	—	10
Ba	580	10 - 5,000	300 (M)	—	—	400 - 3,000	500
Be	.92	<1 - 15	0.5 - 4	6	—	<5 - 5	6
Br	.85	<0.5 - 11	—	5	—	—	—
C, total	25,000	600 - 370,000	—	20,000	—	—	—
Ca	24,000	100 - 320,000	—	13,700	7,000	—	—
Ce	75	<150 - 300	—	—	—	—	—
Co	9.1	<3 - 70	10 (M)	8	—	<2 - 80	10
Cr	54	1 - 2,000	6.3 (M)	200	—	5 - 3,000	200
Cu	25	<1 - 700	15 (M)	20	20	<10 - 100	20
F	430	<10 - 3,700	300 (M)	200	—	—	—
Fe	26,000	100 - >100,000	21,000 (M)	38,000	7,000 - 42,000		10,000 - 50,000
Ga	17	<5 - 70	—	30	—	15 - 70	20
Ge	1.2	<0.1 - 2.5	—	1	—	—	5
Hg	.09	<0.01 - 4.6	0.056 (M)	—	—	—	.01
I	1.2	<0.5 - 9.6	—	—	—	—	—
K	15,000	50 - 63,000	11,000 (M)	13,600	400 - 28,000	—	—
La	37	<30 - 200	—	—	—	<30 - 200	—
Li	24	<5 - 140	6.2 (M)	30	—	—	30
Mg	9,000	50 - >100,000	—	6,300	<6,000	—	—
Mn	550	<2 - 7,000	320 (M)	850	—	200 - 5,000	850
Mo	.97	<3 - 15	2.5 (A)	2	—	<1 - 5	2.5
Na	12,000	<500 - 100,000	—	6,300	—	—	—
Nb	11	<10 - 100	15 (A)	—	—	—	15
Nd	46	<70 - 300	—	—	—	—	—
Ni	19	<5 - 700	17 (M)	40	—	10 - 800	40
P	430	<20 - 6,800	300 (M)	800	500	—	—
Pb	19	<10 - 700	17 (M)	—	—	<20 - 80	10
Rb	67	<20 - 210	35 (M)	100	—	—	—
S, total	1,600	<800 - 48,000	100 - 2,000	850	—	—	—
Sb	.66	<1 - 8.8	2 (A)	—	—	—	.5
Sc	8.9	<5 - 50	—	7	—	<3 - 15	—
Se	.39	<0.1 - 4.3	0.31 (M)	.001	—	—	.5
Si	310,000	16,000 - 450,000	—	330,000	—	—	—
Sn	1.3	<0.1 - 10	10 (A)	—	—	—	10
Sr	240	<5 - 3,000	67 (M)	300	—	60 - 700	300
Ti	2,900	70 - 20,000	—	4,600	1,200 - 6,000	—	—
Th	9.4	2.2 - 31	—	—	—	—	13
U	2.7	0.29 - 11	1 (A)	—	—	—	1
V	80	<7 - 500	57 (M)	100	—	20 - 250	100
Y	25	<10 - 200	—	50	—	25 - 100	—
Yb	3.1	<1 - 50	—	—	—	—	—
Zn	60	<5 - 2,900	36 (M)	50	—	—	50
Zr	230	<20 - 2,000	270 (M)	300	—	200 - >1,000	—

[1]Author's usage; generally used to indicate the most commonly occurring value.

collected by U.S. Geological Survey personnel along their routes of travel to areas of other types of field studies or within their project areas.

The locations of the routes that were sampled depended on both the network of roads that existed and the destinations of the samplers. Sampling intensity was kept at a minimum by selecting only one sampling site every 80 km (about 50 miles; selected for convenience because vehicle odometers were calibrated in miles) along the routes. The specific sampling sites were selected, insofar as possible, that had surficial materials that were very little altered from their natural condition and that supported native plants suitable for sampling. In practice, this site selection necessitated sampling away from roadcuts and fills. In some areas, only cultivated fields and plants were available for sampling.

Contamination of the sampling sites by vehicular emissions was seemingly insignificant, even though many sites were within 100 m or less of the roads. Collecting samples at about 20 cm depth, rather than at the upper soil horizons, may have avoided the effects of surface contamination on the samples. However, we had no adequate way of measuring any contamination that may have occurred. (See Cannon and Bowles, 1962.) Many of the sampled routes had only light vehicular traffic, and some were new interstate highways. Routes through congested areas generally were not sampled; therefore, no gross contamination of the samples was expected.

The study areas that were sampled follow: Wisconsin and parts of contiguous States, southeastern Missouri, Georgia, and Kentucky, sampled by Shacklette; Kentucky, sampled by J. J. Connor and R. R. Tidball; Nevada, New Mexico, and Maryland, sampled by H. L. Cannon; various locations in Arizona, Colorado, Montana, New Mexico, Utah, and Wyoming, sampled by F. A. Branson and R. F. Miller; Missouri, sampled by Shacklette, J. A. Erdman, J. R. Keith, and R. R. Tidball; and various locations in Colorado, Idaho, Montana, South Dakota, Utah, and Wyoming, sampled by A. T. Miesch and J. J. Connor. Sampling techniques used in these areas varied according to the primary objectives of the studies being conducted, but generally these techniques were closely similar to the methods used in sampling along the roads.

In general, the sampling within study areas was more intensive than that along the travel routes. To make the sampling intensity of the two sampling programs more nearly equal, only the samples from selected sites in the study areas were used for this report. The selected sites were approximately 80 km apart. Where two or more samples were collected from one site, they were assigned numbers, and one of these samples was randomly chosen for evaluation in this study.

SAMPLING MEDIA

The material sampled at most sites could be termed "soil" because it was a mixture of comminuted rock and organic matter, it supported ordinary land plants, and it doubtless contained a rich microbiota. Some of the sampled deposits, however, were not soils as defined above, but were other kinds of regoliths. The regoliths included desert sands, sand dunes, some loess deposits, and beach and alluvial deposits that contained little or no visible organic matter. In some places the distinctions between soils and other regoliths are vague because the materials of the deposits are transitional between the two. Samples were collected from a few deposits consisting mostly of organic materials that would ordinarily be classified as peat, rather than soil.

To unify sampling techniques, the samplers were asked to collect the samples at a depth of approximately 20 cm below the surface of the deposits. This depth was chosen as our estimate of a depth below the plow zone that would include parts of the zone of illuviation in most well-developed zonal soils, and as a convenient depth for sampling other surficial materials. Where the thickness of the material was less than 20 cm, as in shallow soils over bedrock or in lithosols over large rock fragments, samples were taken of the material that lay just above the rock deposits. About 0.25 liter of this material was collected, put in a kraft paper envelope, and shipped to the U.S. Geological Survey laboratories in Denver, Colo.

CHEMICAL-ANALYSIS PROCEDURES

The soil samples were oven dried in the laboratory and then sifted through a 2-mm sieve. If the soil material would not pass this sieve, the sample was pulverized in a ceramic mill before seiving. Finally, the sifted, minus 2-mm fraction of the sample was used for analysis.

The methods of analysis used for some elements were changed during the course of this study, as new techniques and instruments became available. For most elements, the results published in the first report (Shacklette, Hamilton, and others, 1971) were obtained by use of a semiquantitative six-step emission spectrographic method (Meyers and others, 1961). The methods used for other elements were: EDTA titration for calcium; colorimetric (Ward and others, 1963) for phosphorus and zinc; and flame photometry for potassium. Many of the elements analyzed in the 355 samples collected in phase two of the study were also analyzed by the emission spectrographic method (Neiman, 1976). Other methods were used for the following elements: flame atomic absorption (Huffman and Dinnin, 1976) for mercury, lithium, magnesium, sodium, rubidium, and zinc; flameless atomic absorption (Vaughn, 1967) for mercury; X-ray fluorescence spectrometry (Wahlberg, 1976) for calcium, germanium, iron, potassium, selenium, silver, sulfur, and titanium; combustion (Huffman and Dinnin, 1976) for total carbon; and neutron activation (Millard, 1975, 1976) for thorium and uranium.

DATA PRESENTATION

Summary data for 46 elements are reported in tables 1 and 2. In table 1, the element concentrations found in samples of soil and other surficial materials of this study are compared with those in soils reported in other studies. Arithmetic means are used for the data of this study to make them more readily compared with the data generally reported in the literature. These arithmetic means were derived from the estimated geometric means by using a technique described by Miesch (1967), which is based on methods devised by Cohen (1959) and Sichel (1952). The arithmetic means in table

1, unlike the geometric means shown in table 2, are estimates of geochemical abundance (Miesch, 1967). Arithmetic means are always larger than corresponding geometric means (Miesch, 1967, p. B1) and are estimates of the fractional part of a single specimen that consists of the element of concern rather than of the typical concentration of the element in a suite of samples.

Concentrations of 46 elements in samples of this study are presented in table 2, which gives the determination ratios, geometric-mean concentrations and deviations, and observed ranges in concentrations. The analytical data for most elements as received from the laboratories were transformed into logarithms because of the tendency for elements in natural materials, particularly the trace elements, to have positively skewed

TABLE 2.—*Mean concentrations, deviations, and ranges of elements in samples of soils and other surficial materials in the conterminous United States*

[Means and ranges are reported in parts per million (μg/g), and means and deviations are geometric except as indicated. Ratio, number of samples in which the element was found in measurable concentrations to number of samples analyzed. <, less than; >, greater than]

Element	Conterminous United States			Western United States (west of 96th meridian)					Eastern United States (east of 96th meridian)				
	Mean	Deviation	Estimated arithmetic mean	Ratio	Mean	Deviation	Observed range	Estimated arithmetic mean	Ratio	Mean	Deviation	Observed range	Estimated arithmetic mean
Al, percent	4.7	2.48	7.2	661:770	5.8	2.00	0.5 - >10	7.4	450:477	3.3	2.87	0.7 - >10	5.7
As	5.2	2.23	7.2	728:730	5.5	1.98	<0.10 - 97	7.0	521:527	4.8	2.56	<0.1 - 73	7.4
B	26	1.97	33	506:778	23	1.99	<20 - 300	29	425:541	31	1.88	<20 - 150	38
Ba	440	2.14	580	778:778	580	1.72	70 - 5,000	670	541:541	290	2.35	10 - 1,500	420
Be	.63	2.38	.92	310:778	.68	2.30	<1 - 15	.97	169:525	.55	2.53	<1 - 7	.85
Br	.56	2.50	.85	113:220	.52	2.74	<0.5 - 11	.86	78:128	.62	2.18	<0.5 - 5.3	.85
C, percent	1.6	2.57	2.5	250:250	1.7	2.37	0.16 - 10	2.5	162:162	1.5	2.88	0.06 - 37	2.6
Ca, percent	.92	4.00	2.4	777:777	1.8	3.05	0.06 - 32	3.3	514:514	.34	3.08	0.01 - 28	.63
Ce	63	1.78	75	81:683	65	1.71	<150 - 300	75	70:489	63	1.85	<150 - 300	76
Co	6.7	2.19	9.1	698:778	7.1	1.97	<3 - 50	9.0	403:533	5.9	2.57	<0.3 - 70	9.2
Cr	37	2.37	54	778:778	41	2.19	3 - 2,000	56	541:541	33	2.60	1 - 1,000	52
Cu	17	2.44	25	778:778	21	2.07	2 - 300	27	523:533	13	2.80	<1 - 700	22
F	210	3.34	430	598:610	280	2.52	<10 - 1,900	440	390:435	130	4.19	<10 - 3,700	360
Fe, percent	1.8	2.38	2.6	776:777	2.1	1.95	0.1 - >10	2.6	539:540	1.4	2.87	0.01 - >10	2.5
Ga	13	2.03	17	767:776	16	1.68	<5 - 70	19	431:540	9.3	2.38	<5 - 70	14
Ge	1.2	1.37	1.2	224:224	1.2	1.32	0.58 - 2.5	1.2	130:131	1.1	1.45	<0.1 - 2.0	1.2
Hg	.058	2.52	.089	729:733	.046	2.33	<0.01 - 4.6	.065	534:534	.081	2.52	0.01 - 3.4	.12
I	.75	2.63	1.2	169:246	.79	2.55	<0.5 - 9.6	1.2	90:153	.68	2.81	<0.5 - 7.0	1.2
K, percent[1]	1.5	.79	None	777:777	1.8	.71	0.19 - 6.3	None	537:537	1.2	.75	0.005 - 3.7	--
La	30	1.92	37	462:777	30	1.89	<30 - 200	37	294:516	29	1.98	<30 - 200	37
Li	20	1.85	24	731:731	22	1.58	5 - 130	25	479:527	17	2.16	<5 - 140	22
Mg, percent	.44	3.28	.90	777:778	.74	2.21	0.03 - >10	1.0	528:528	.21	3.55	0.005 - 5	.46
Mn	330	2.77	550	777:777	380	1.98	30 - 5,000	480	537:540	260	3.82	<2 - 7,000	640
Mo	.59	2.72	.97	57:774	.85	2.17	<3 - 7	1.1	32:524	.32	3.93	<3 - 15	.79
Na, percent	.59	3.27	1.2	744:744	.97	1.95	0.05 - 10	1.2	363:449	.25	4.55	<0.05 - 5	.78
Nb	9.3	1.75	11	418:771	8.7	1.82	<10 - 100	10	322:498	10	1.65	<10 - 50	12
Nd	40	1.68	46	120:538	36	1.76	<70 - 300	43	109:332	46	1.58	<70 - 300	51
Ni	13	2.31	19	747:778	15	2.10	<5 - 700	19	443:540	11	2.64	<5 - 700	18
P	260	2.67	430	524:524	320	2.33	40 - 4,500	460	380:382	200	2.95	<20 - 6,800	360
Pb	16	1.86	19	712:778	17	1.80	<10 - 700	20	422:541	14	1.95	<10 - 300	17
Rb	58	1.72	67	221:224	69	1.50	<20 - 210	74	107:131	43	1.94	<20 - 160	53
S, percent	.12	2.04	.16	34:224	.13	2.37	<0.08 - 4.8	.19	20:131	.10	1.34	<0.08 - 0.31	.11
Sb	.48	2.27	.67	35:223	.47	2.15	<1 - 2.6	.62	31:131	.52	2.38	<1 - 8.8	.76
Sc	7.5	1.82	8.9	685:778	8.2	1.74	<5 - 50	9.6	389:526	6.5	1.90	<5 - 30	8.0
Se	.26	2.46	.39	590:733	.23	2.43	<0.1 - 4.3	.34	449:534	.30	2.44	<0.1 - 3.9	.45
Si, percent[1]	31	6.48	None	250:250	30	5.70	15 - 44	None	156:156	34	6.64	1.7 - 45	--
Sn	.89	2.36	1.3	218:224	.90	2.11	<0.1 - 7.4	1.2	123:131	.86	2.81	<0.1 - 10	1.5
Sr	120	3.30	240	778:778	200	2.16	10 - 3,000	270	501:540	53	3.61	<5 - 700	120
Ti, percent	.24	1.89	.29	777:777	.22	1.78	0.05 - 2.0	.26	540:540	.28	2.00	0.007 - 1.5	.35
Th	8.6	1.53	9.4	195:195	9.1	1.49	2.4 - 31	9.8	102:102	7.7	1.58	2.2 - 23	8.6
U	2.3	1.73	2.7	224:224	2.5	1.45	0.68 - 7.9	2.7	130:130	2.1	2.12	0.29 - 11	2.7
V	58	2.25	80	778:778	70	1.95	7 - 500	88	516:541	43	2.51	<7 - 300	66
Y	21	1.78	25	759:778	22	1.66	<10 - 150	25	477:541	20	1.97	<10 - 200	25
Yb	2.6	1.79	3.1	754:764	2.6	1.63	<1 - 20	3.0	452:486	2.6	2.06	<1 - 50	3.3
Zn	48	1.95	60	766:766	55	1.79	10 - 2,100	65	473:482	40	2.11	<5 - 2,900	52
Zr	180	1.91	230	777:778	160	1.77	<20 - 1,500	190	539:541	220	2.01	<20 - 2,000	290

[1]Means are arithmetic, deviations are standard.

frequency distributions. For this reason, the geometric mean is the more proper measure of central tendency for these elements. The frequency distributions for potassium and silicon, on the other hand, are more nearly normal if the data are not transformed to logarithms and the mean is expressed as the arithmetic average.

In geochemical background studies, the magnitude of scatter to be expected around the mean is as important as the mean. In lognormal distributions, the geometric deviation measures this scatter, and this deviation may be used to estimate the range of variation expected for an element in the material being studied. About 68 percent of the samples in a randomly selected suite should fall within the limits M/D and $M \cdot D$, where M represents the geometric mean and D the geometric deviation. About 95 percent should fall between M/D^2 and $M \cdot D^2$, and about 99.7 percent between M/D^3 and $M \cdot D^3$.

The analytical data for some elements include values that are below, or above, the limits of numerical determination, and these values are expressed as less than (<) or greater than (>) a stated value. These data are said to be censored, and for these the mean was computed by using a technique described by Cohen (1959) and applied to geochemical studies by Miesch (1967). This technique requires an adjustment of the summary statistics computed for the noncensored part of the data. The censoring may be so severe in certain sets of data that a reliable adjustment cannot be made; with the data sets used in the present study, however, no such circumstances were encountered. The use of these procedures in censored data to quantify the central tendency may result in estimates of the mean that are lower than the limit of determination. For example, in table 2 the geometric-mean molybdenum concentration in soils from the Eastern United States is estimated to be 0.32 ppm, although the lower limit of determination of the analytical method that was used is 3 ppm. Use of this procedure permits inclusion of the censored values in the calculation of expected mean concentrations.

The determination ratios in table 2—that is, the ratio of the number of samples in which the element was found in measurable concentrations to the total number of samples—permit the number of censored values, if any, to be found that were used in calculating the mean. This number is found by subtracting the left value in the ratio from the right.

The distribution of the sampling sites and the concentrations of elements determined for samples from the sites are presented on maps of the conterminous United States (figs. 1–47). Figure 1 shows the locations of sites where four elements, bismuth, cadmium, praseodymium, and silver, were found in the samples. These elements were determined too uncommonly for reliable mean concentrations to be calculated. Each of the remaining maps (figs. 2–47) gives the locations where an element was found in a sample from a site and the concentration of the element, shown by a symbol that represents a class of values. By examining the tables of frequency for concentration values of the elements, we were able to divide the ranges of reported values for many elements into five classes so that approximately 20 percent of the values fell into each class. The limited range in values for some elements, however, prohibited the use of more than two or three classes to represent the total distribution. Symbols representing the classes were drawn on the maps by an automatic plotter that was guided by computer classification of the data, including the latitude and longitude of the sampling sites. A histogram on each map gives the frequency distribution of the analytical values, and the assignment of analytical values to each class as represented by symbols.

We were able to obtain analyses of 11 more elements for the 355 samples of phase two of this study than for the 963 samples of phase one because of improved analytical methods and services. These elements are antimony, bromine, carbon, germanium, iodine, rubidium, silicon, sulfur, thorium, tin, and uranium. The constraints of resources and time prohibited analysis of the 963 samples of the first phase for these additional elements. Results of analysis of the plant samples that were collected at all soil-sampling sites are not presented in this report.

Some elements were looked for in all samples but were not found. These elements, analyzed by the semiquantitative spectrographic method, and their approximate lower detection limits, in parts per million, are as follows: gold, 20; hafnium, 100; indium, 10; platinum, 30; palladium, 1; rhenium, 30; tantalum, 200; tellurium, 2,000; and thallium, 50. If lanthanum or cerium were found in a sample, the following elements, with their stated lower detection limits, were looked for in the same sample but were not found: dysprosium, 50; erbium, 50; gadolinium, 50; holmium, 20; lutetium, 30; terbium, 300; and thulium, 20.

DISCUSSION OF RESULTS

The data presented in this report may reveal evidence of regional variations in abundances of elements in soils or other regoliths; single values or small clusters of values on the maps may have little significance if considered alone. Apparent differences in values shown between certain sampling routes, such as some of those across the Great Plains and the North Central States where high values for cerium, cobalt, gallium, and lead predominate, suggest the possibility of systematic errors in sampling or in laboratory analysis. Some gross patterns and some of lesser scale, nevertheless, are evident in the compositional variation of regoliths, as shown in figures 2–47.

The lower abundances of some elements (notably aluminum, barium, calcium, magnesium, potassium, sodium, and strontium) in regoliths of the Eastern United States, and the greater abundances of the heavy metals in the same materials of the Western United States indicate a regional pattern of the largest scale. This visual observation of the maps can be substantiated by examining the mean concentrations for these two regions given in table 2. The abundances of these elements differ markedly on either side of a line extending from western Minnesota southward through east-central Texas. This line is generally from the 96th to 97th meridian, and corresponds to the boundary proposed by Marbut (1935, p. 14), which divides soils of the United States into two major groups—the pedalfers that lie to the east, and the pedocals to the west. Marbut (1928) attributed the major differences in chemical and physical qualities of these two major groups to the effects of climate on soils. A line approximating the 96th meridian also separates the Orders, Suborders, and Great Groups of moist-to-wet soils in the Eastern United States from the same categories of dry soils that lie to the west, as mapped by the [U.S.] Soil Conservation Service (1969). As shown in table 2, soils of the Western United States have the highest mean values for all elements considered in this report except for antimony, boron, bromine, mercury, neodymium, selenium, titanium, and zirconium. The differences, however, probably are not significant for these latter elements, except for zirconium.

Superimposed upon this large-scale compositional variation pattern are several features of intermediate scale. Perhaps the most notable of these are the low concentrations of many elements in soils of the Atlantic Coastal Plain. Soils of the Pacific Northwest are high in concentrations of aluminum, cobalt, iron, scandium, and vanadium, but low in boron, and soils of the Rocky Mountain region tend to be high in copper, lead, and zinc.

Several small-scale patterns of compositional variation can be noted, among them the high mercury concentrations in surficial materials from the Gulf Coast of eastern Texas, Louisiana, Mississippi, Alabama, and northwest Florida, and a similar pattern on the Atlantic Coast in Connecticut, Massachusetts, and Maine. High phosphorus values occur in soils along a line extending west across Utah and Nevada to the coast of California, then south-east in California and Arizona. At the State level, Florida shows the most striking pattern by having low soil concentrations of most of the elements considered in this study.

The concentrations of certain elements do not show well-defined patterns of distribution, and the regional concentrations of some other elements cannot be evaluated because they were not present in detectable amounts in most of the samples, or because the sampling density was insufficient. The degree of confidence in regional patterns of element abundance is expected to be in direct proportion to the number of samples analyzed from the region. As the observed patterns become smaller, the probability increases that the characteristics that form the patterns are the results of chance.

Some features of element-abundance patterns probably reflect geologic characteristics of the areas that the soils overlie. Samples from most of the regoliths overlying basic volcanic rocks of Washington and Oregon contained higher than average concentrations of iron and other elements, as mentioned earlier. A few soil samples with high phosphorus content are associated with phosphate deposits in Florida, and a single sample in Michigan with high copper content is known to be of soil that occurs over a copper deposit.

These data do not provide obvious evidences of north-south trends in elemental compositions that might be expected to relate to differences in temperature regimes under which the surficial materials developed. There is, moreover, no consistent evidence of significant differences in element abundances between glaciated and nonglaciated areas (the general area of continental glaciation includes the northern tier of States from Montana to Maine and south in places to about lat 40°N.; see fig. 1).

The world averages of abundance for some elements in soils, as given by Vinogradov (1959) and by others (table 1), do not correspond to the averages of abundance for these elements in the soils of the United States, according to the data presented in this report. The world averages are too low for the concentrations of boron, calcium, cerium, lead, magnesium, potassium, and sodium in United States soils and other surficial materials, and too high for beryllium, chromium, gallium, manganese, nickel, phosphorus, titanium, vanadium, and yttrium.

The stability of values for concentrations of most elements seems to be satisfactory because the addition of analytical values for 355 samples of phase two of the study to values for 963 samples of the first phase did not significantly change the geometric means and deviations of element abundance that were reported earlier (Shacklette, Boerngen, and Turner, 1971; Shacklette, Hamilton, and others, 1971; Shacklette and others, 1973, 1974). Although additional sampling of the same type as reported here might give a clearer picture of small-to-intermediate element-abundance patterns, mean values reported herein most likely would not change significantly.

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ILLUSTRATIONS

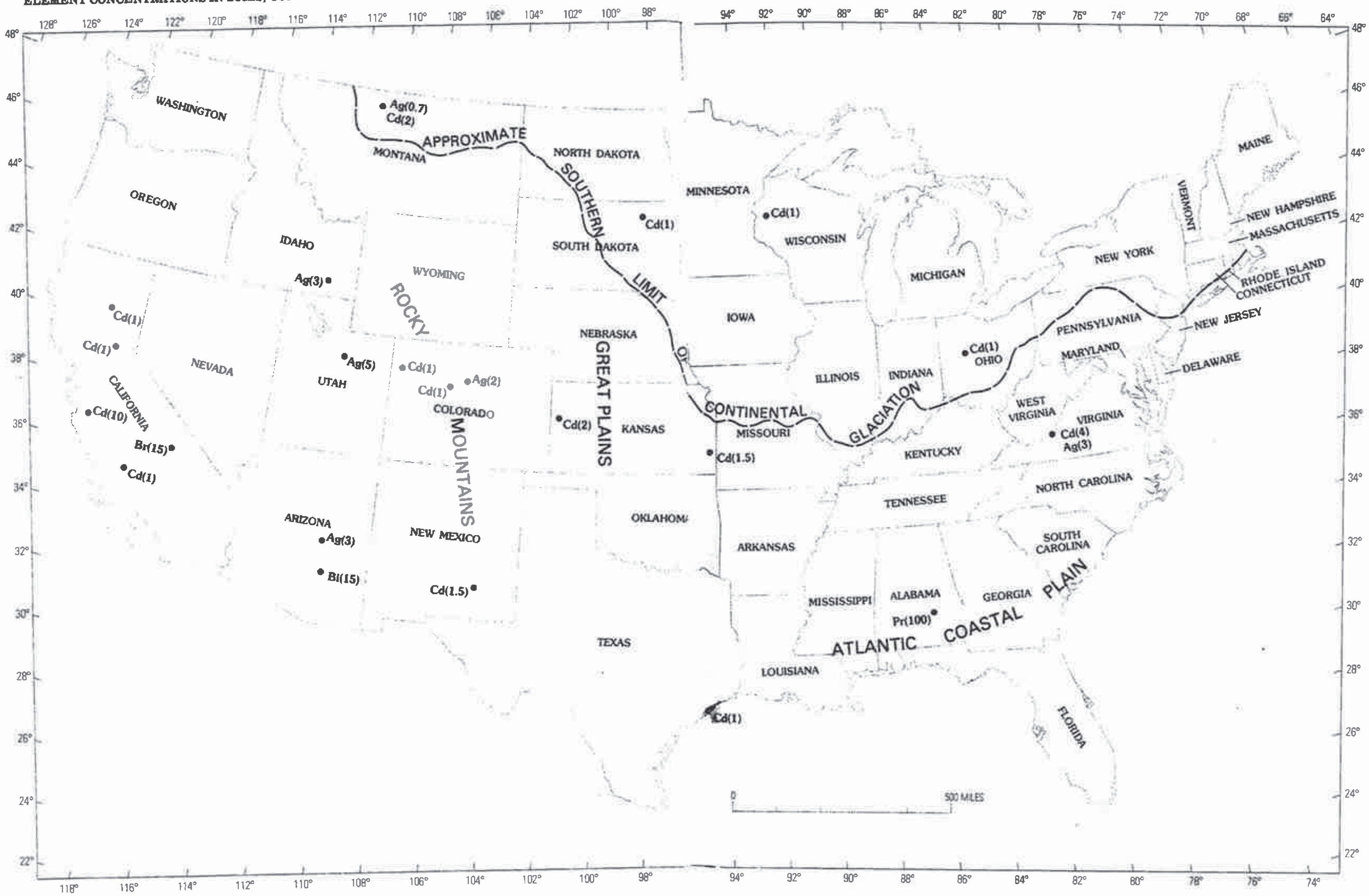

FIGURE 1.—Location of sampling sites in the conterminous United States where elements not commonly detected in surficial deposits were found, and the amounts of the elements present, in parts per million, in parentheses.

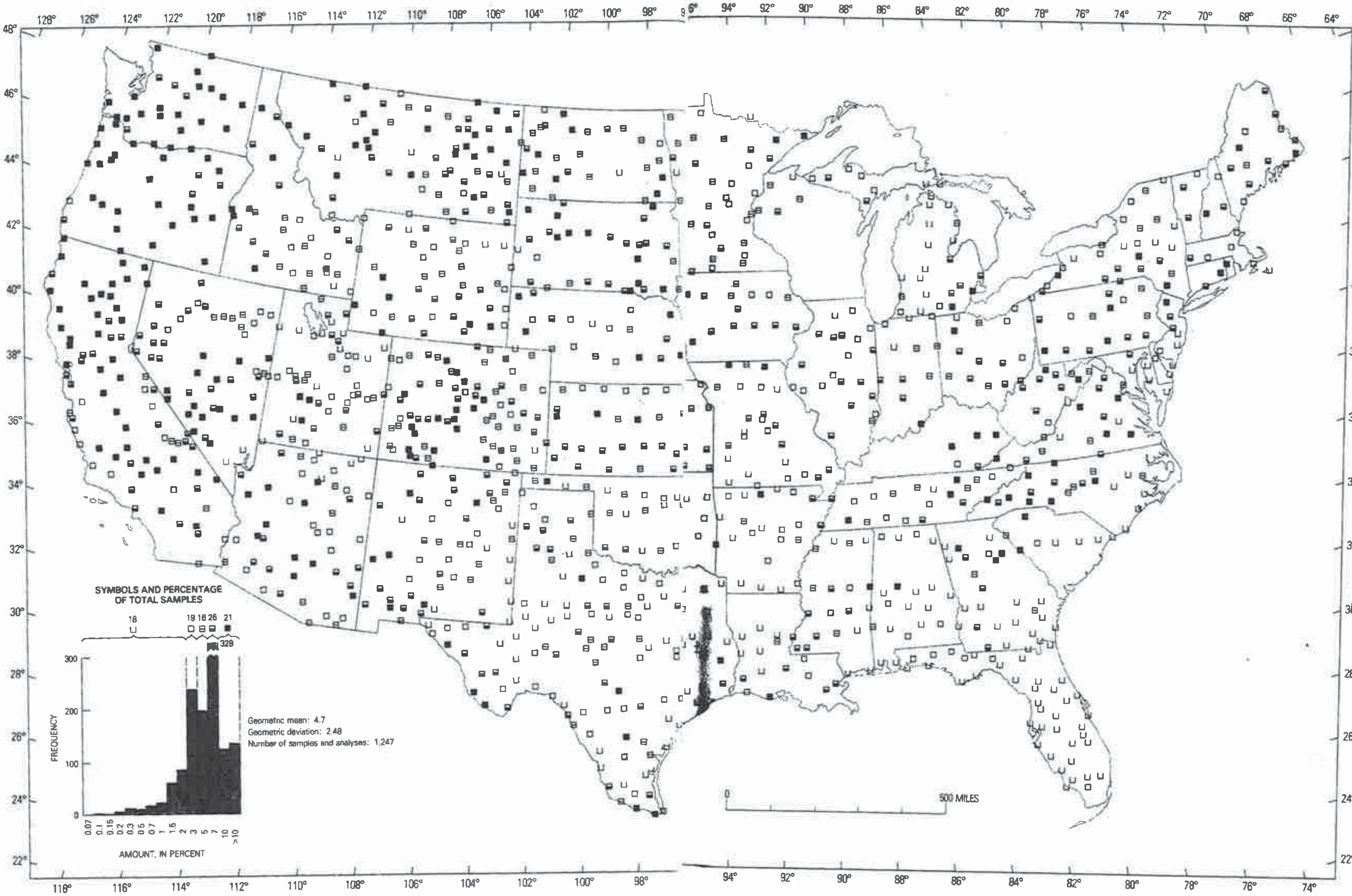

FIGURE 2.—Aluminum content of surficial materials.

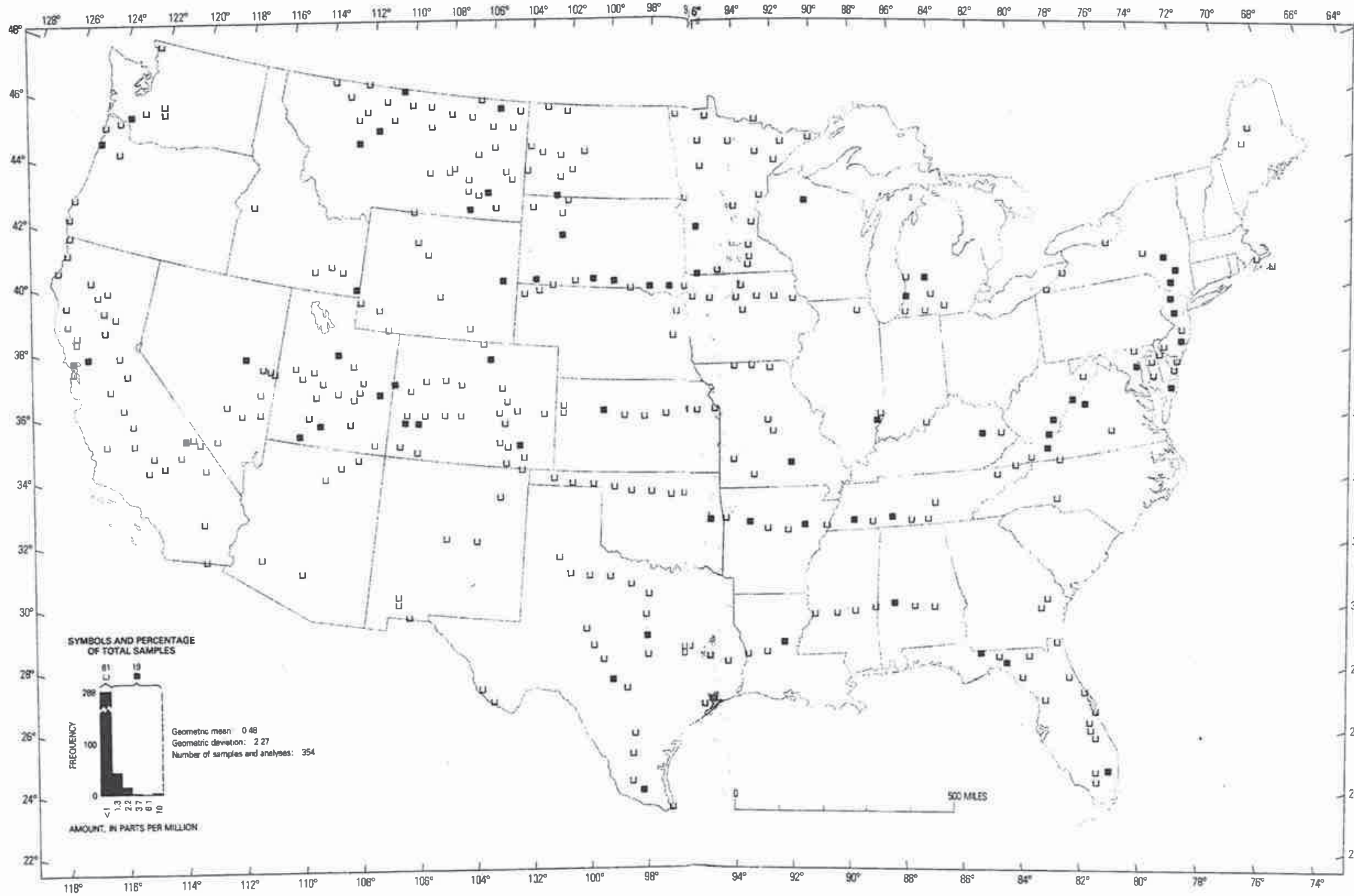

FIGURE 3.—Antimony content of surficial materials.

FIGURE 4.—Arsenic content of surficial materials.

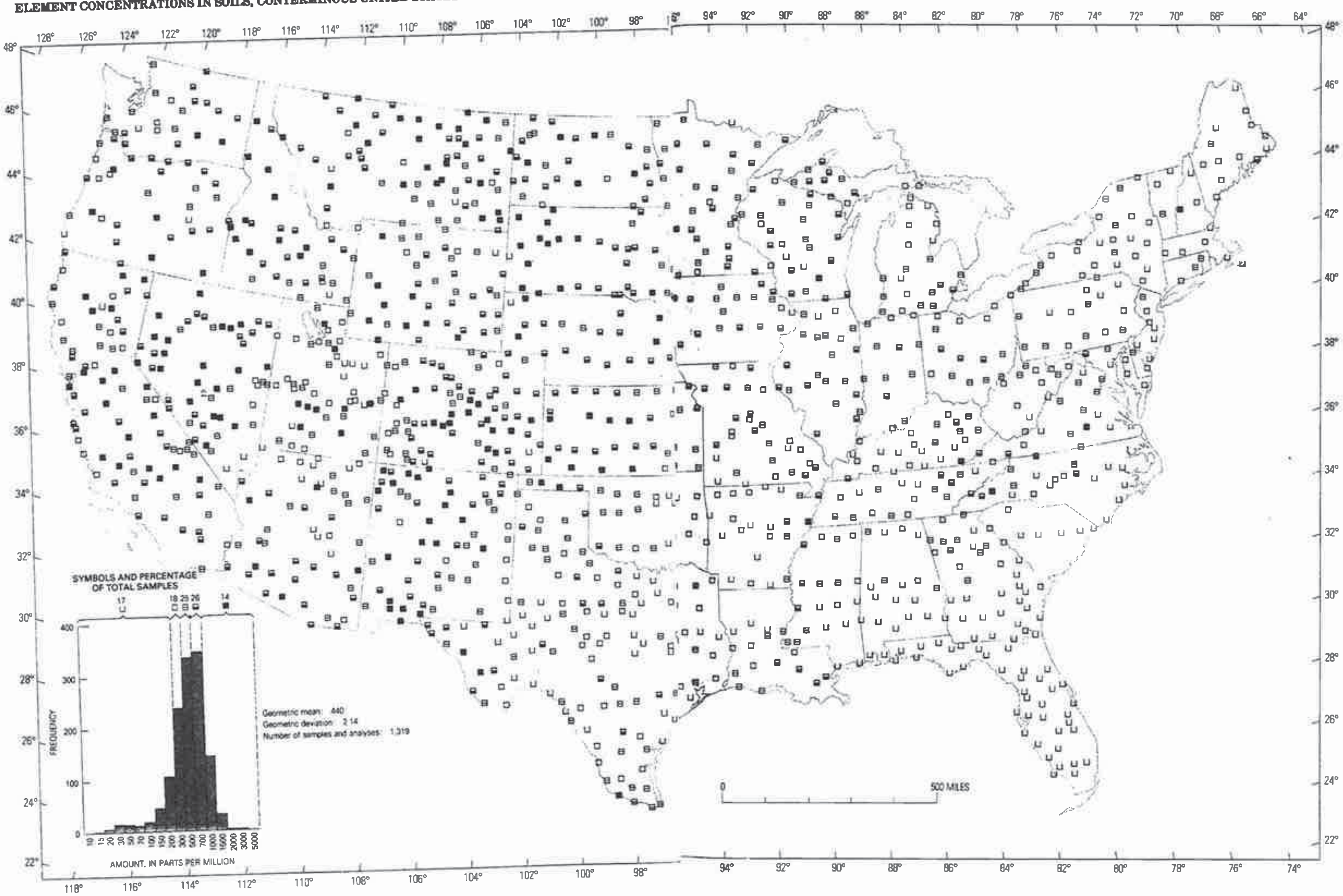

FIGURE 5.—Barium content of surficial materials.

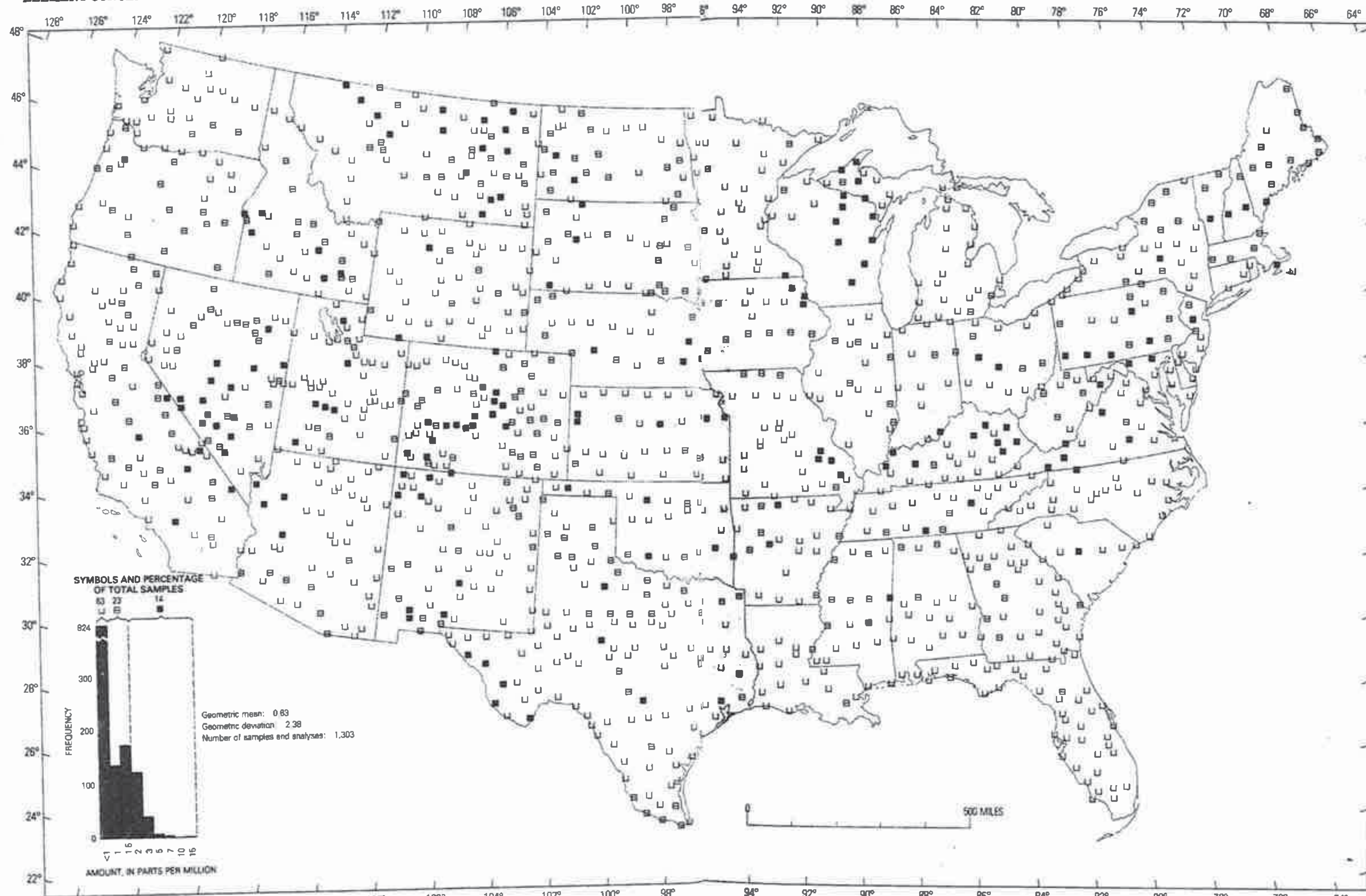

FIGURE 6.—Beryllium content of surficial materials.

FIGURE 7.—Boron content of surficial materials.

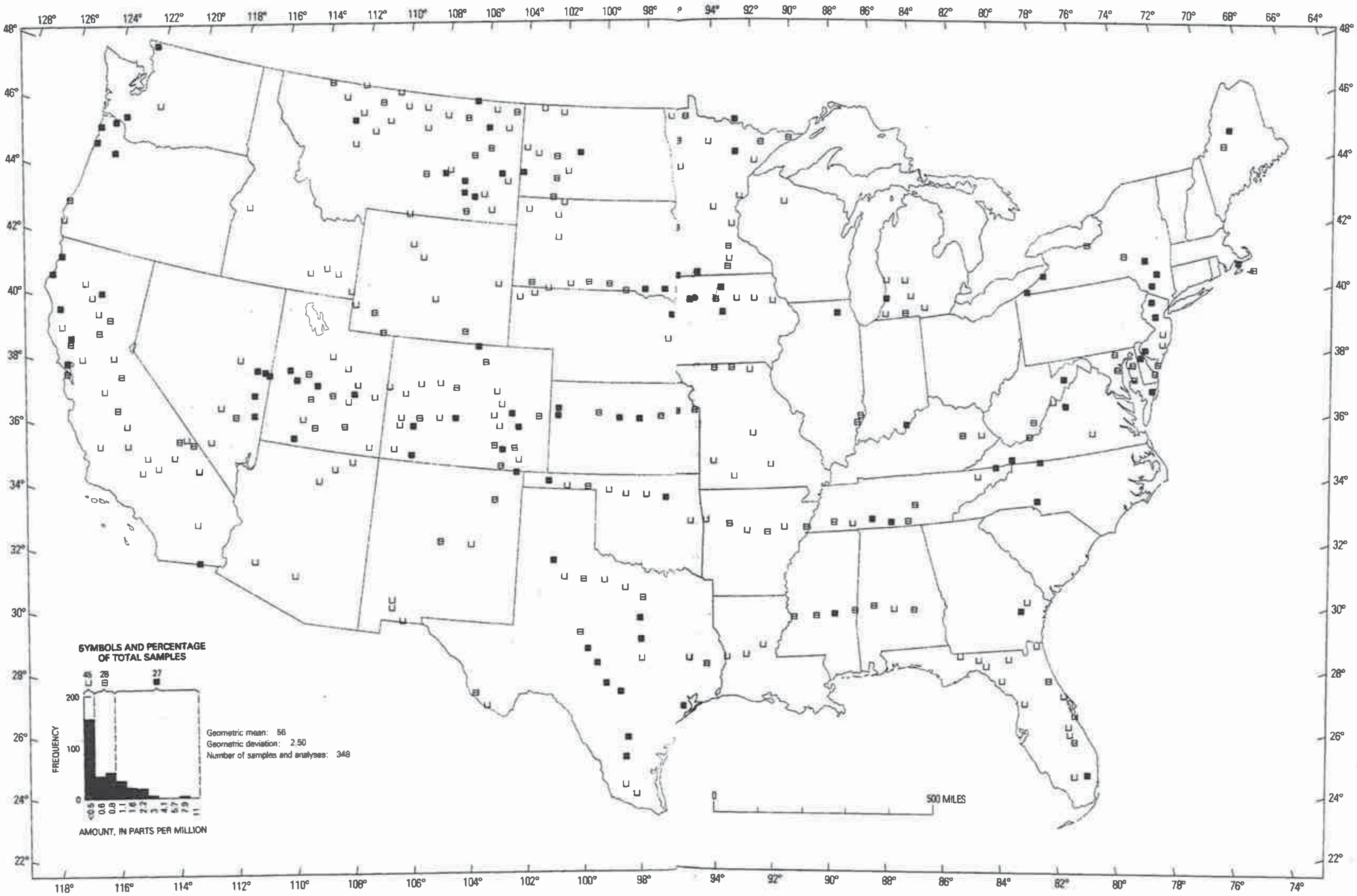

FIGURE 8.—Bromine content of surficial materials.

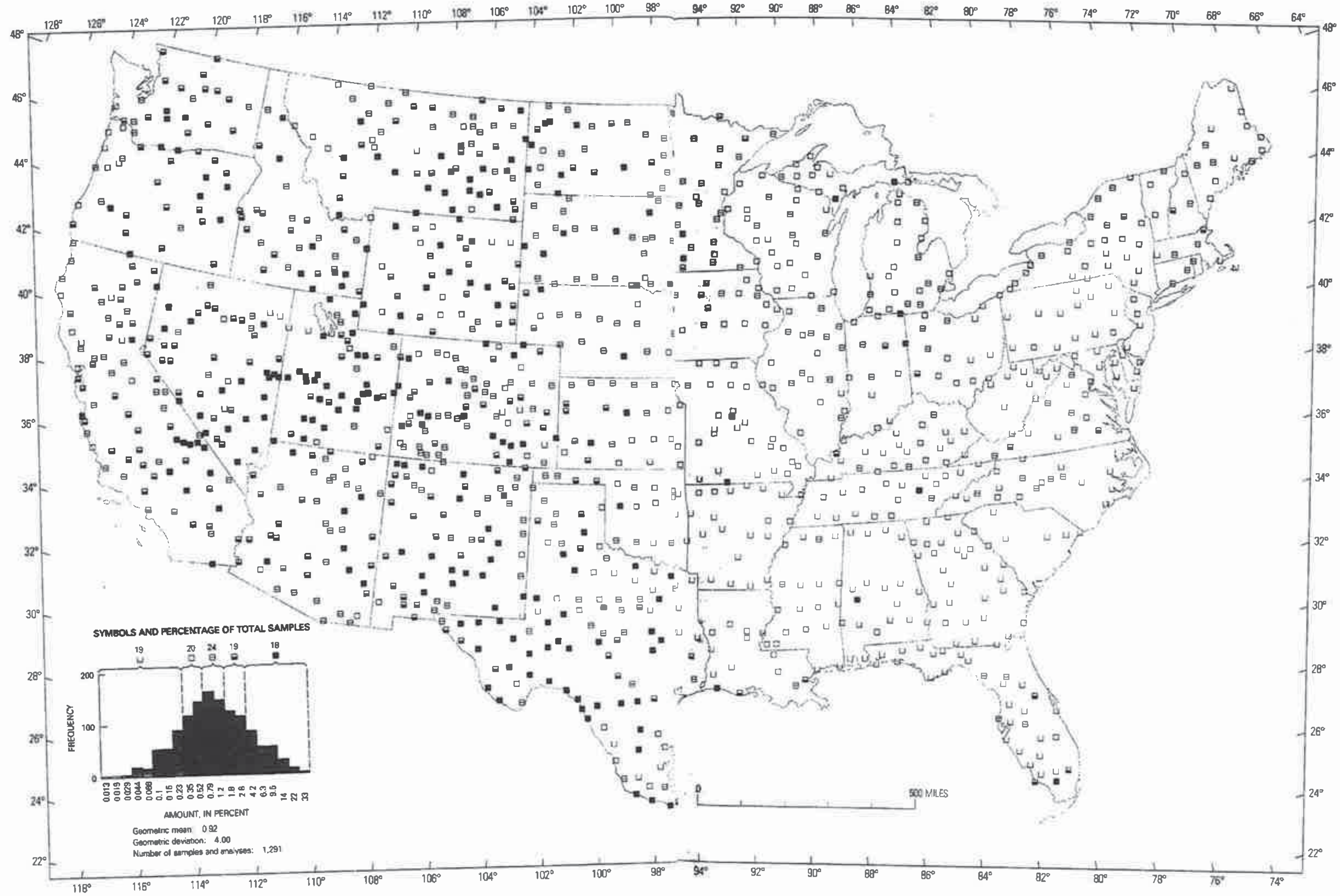

Figure 9.—Calcium content of surficial materials.

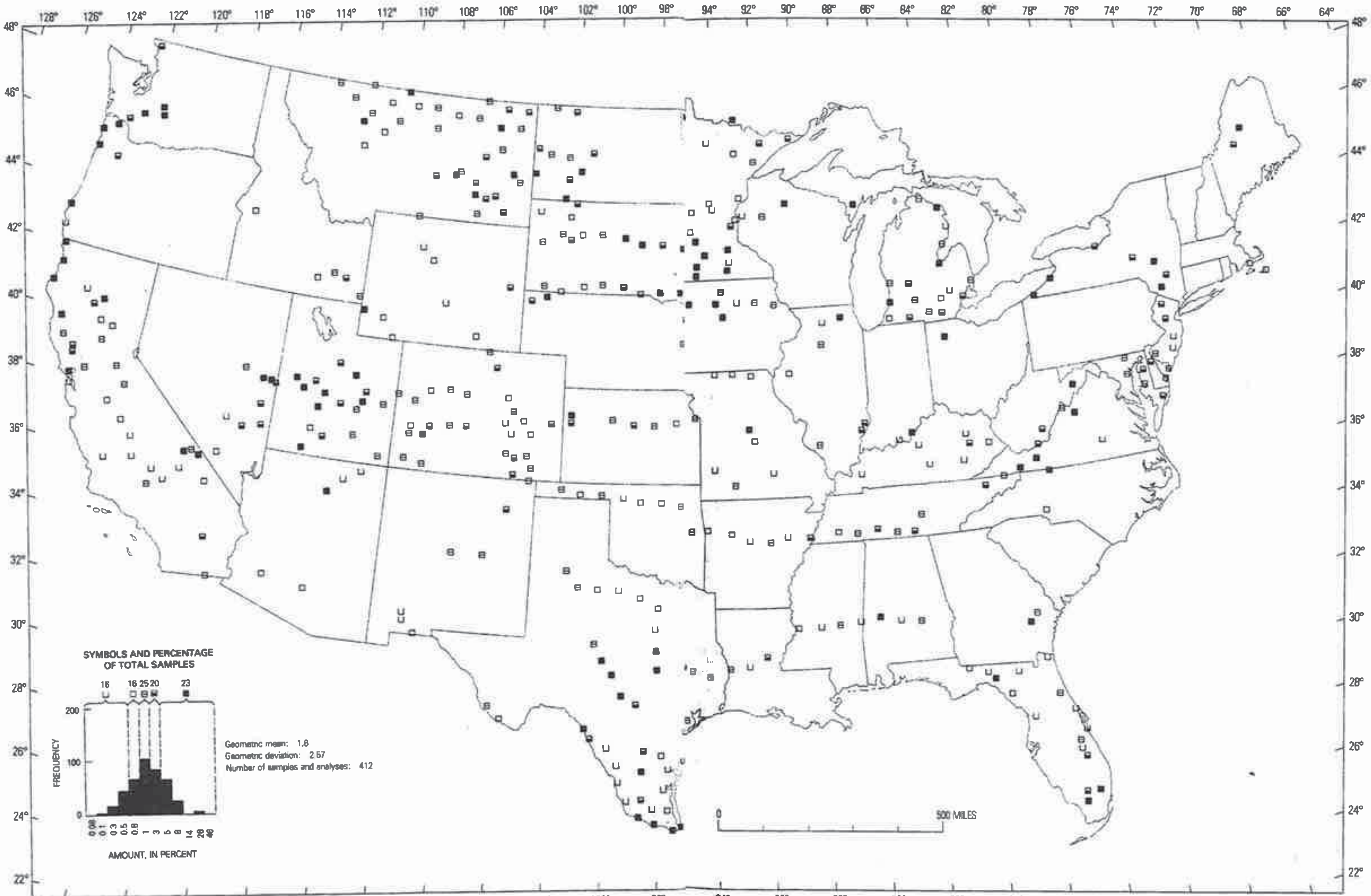

FIGURE 10.—Carbon (total) content of surficial materials.

FIGURE 11.—Cerium content of surficial materials.

FIGURE 12.—Chromium content of surficial materials.

FIGURE 18.—Cobalt content of surficial materials.

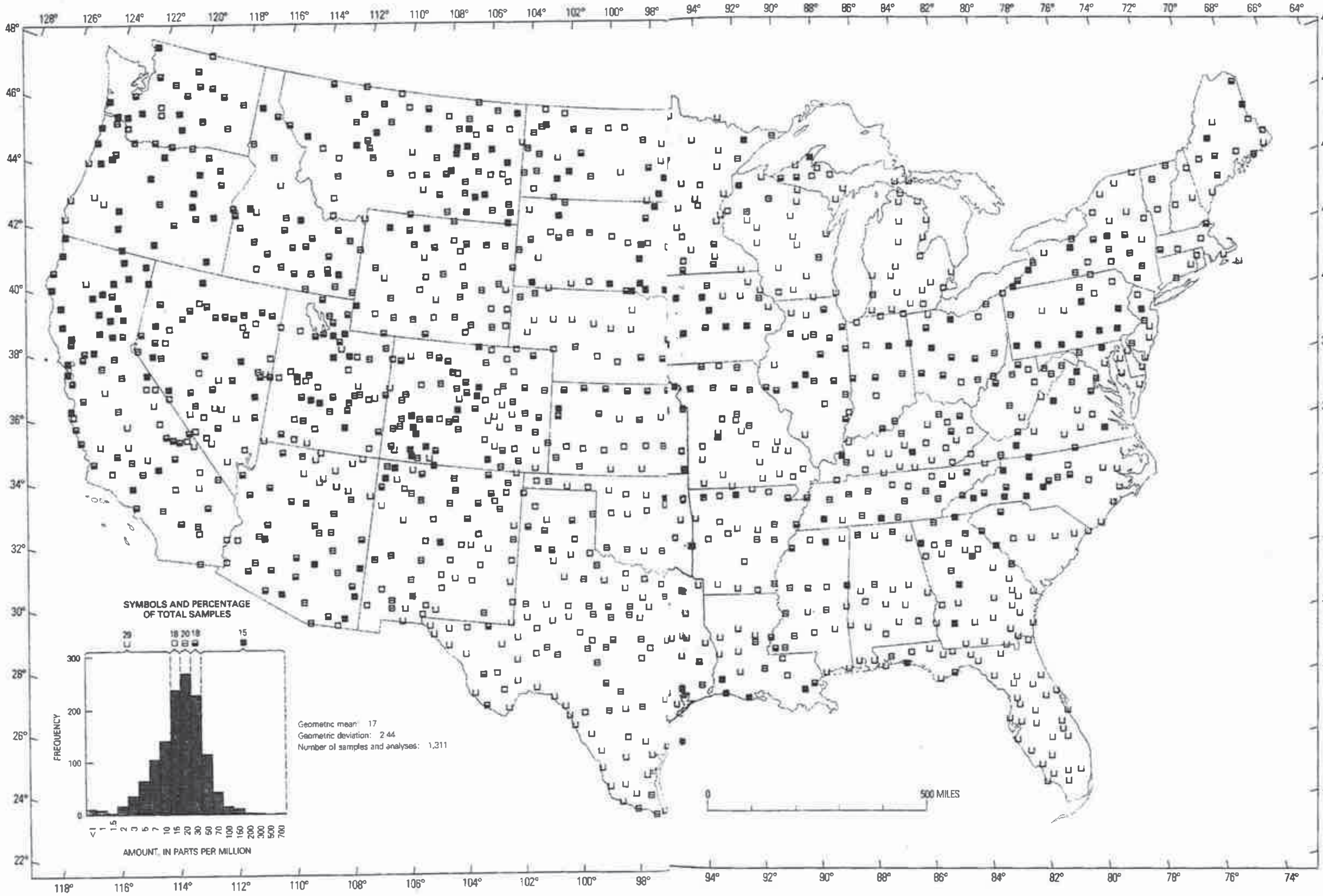

FIGURE 14.—Copper content of surficial materials.

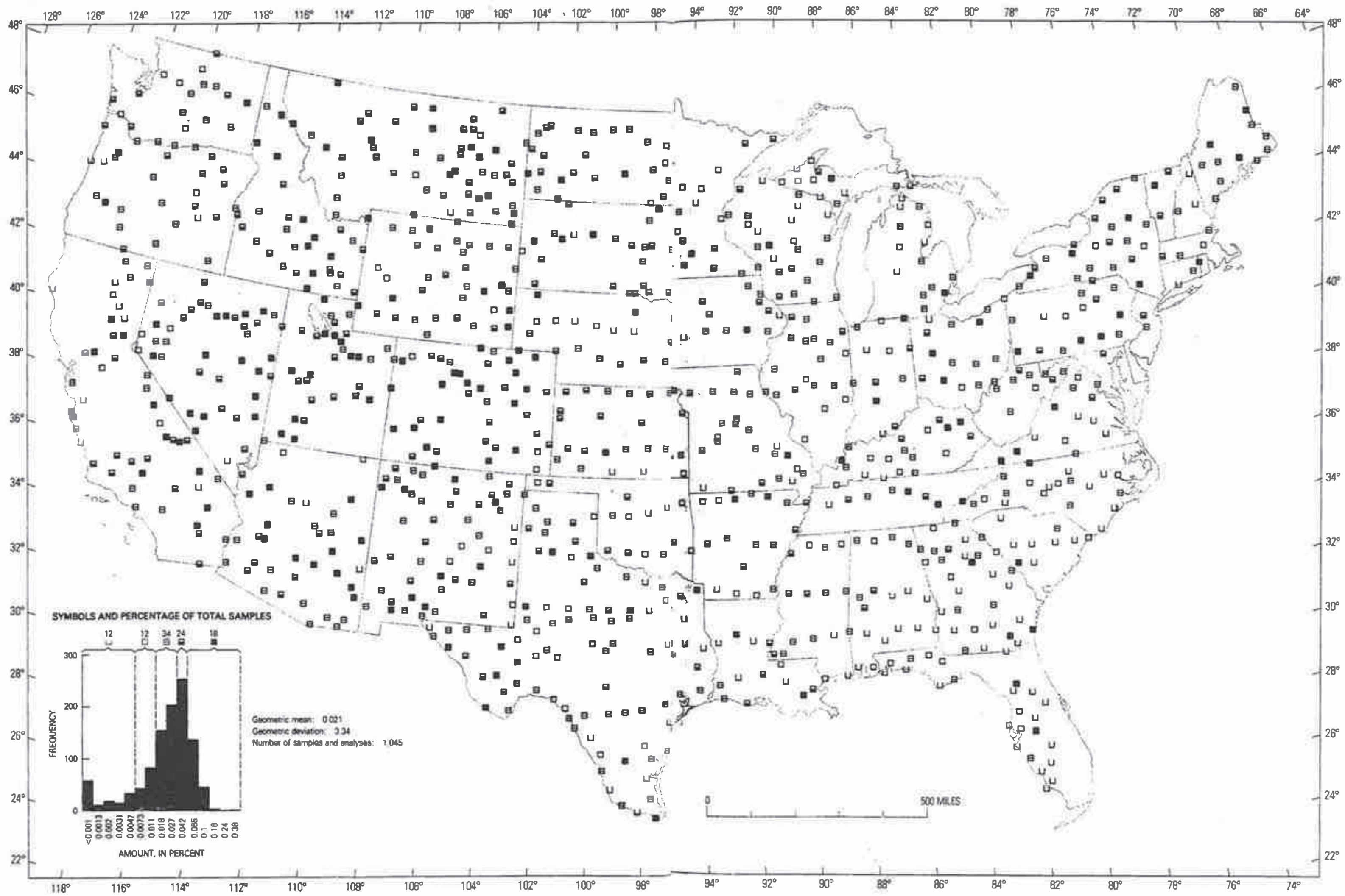

FIGURE 15.—Fluorine content of surficial materials.

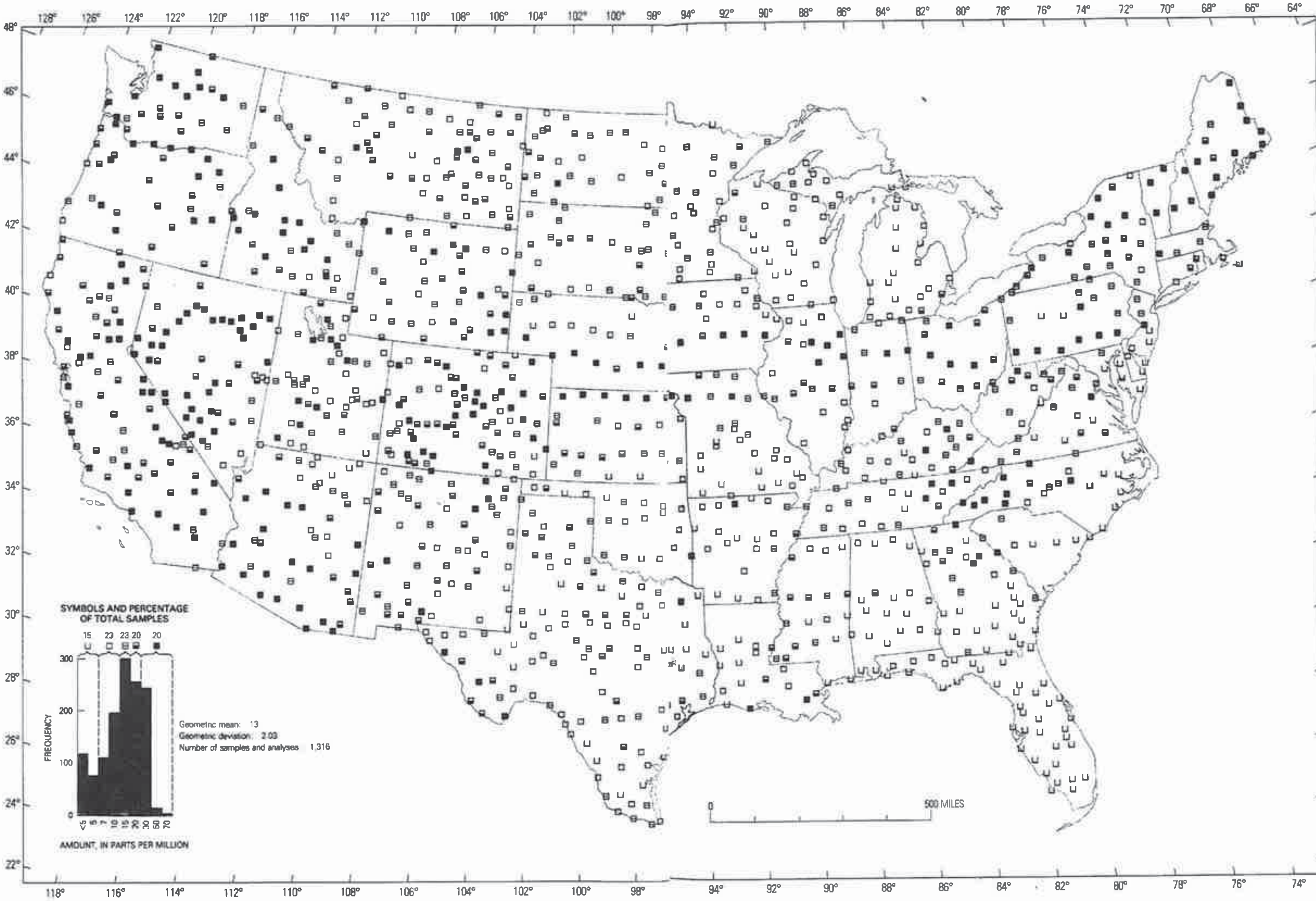

FIGURE 16.—Gallium content of surficial materials.

FIGURE 17.—Germanium content of surficial materials.

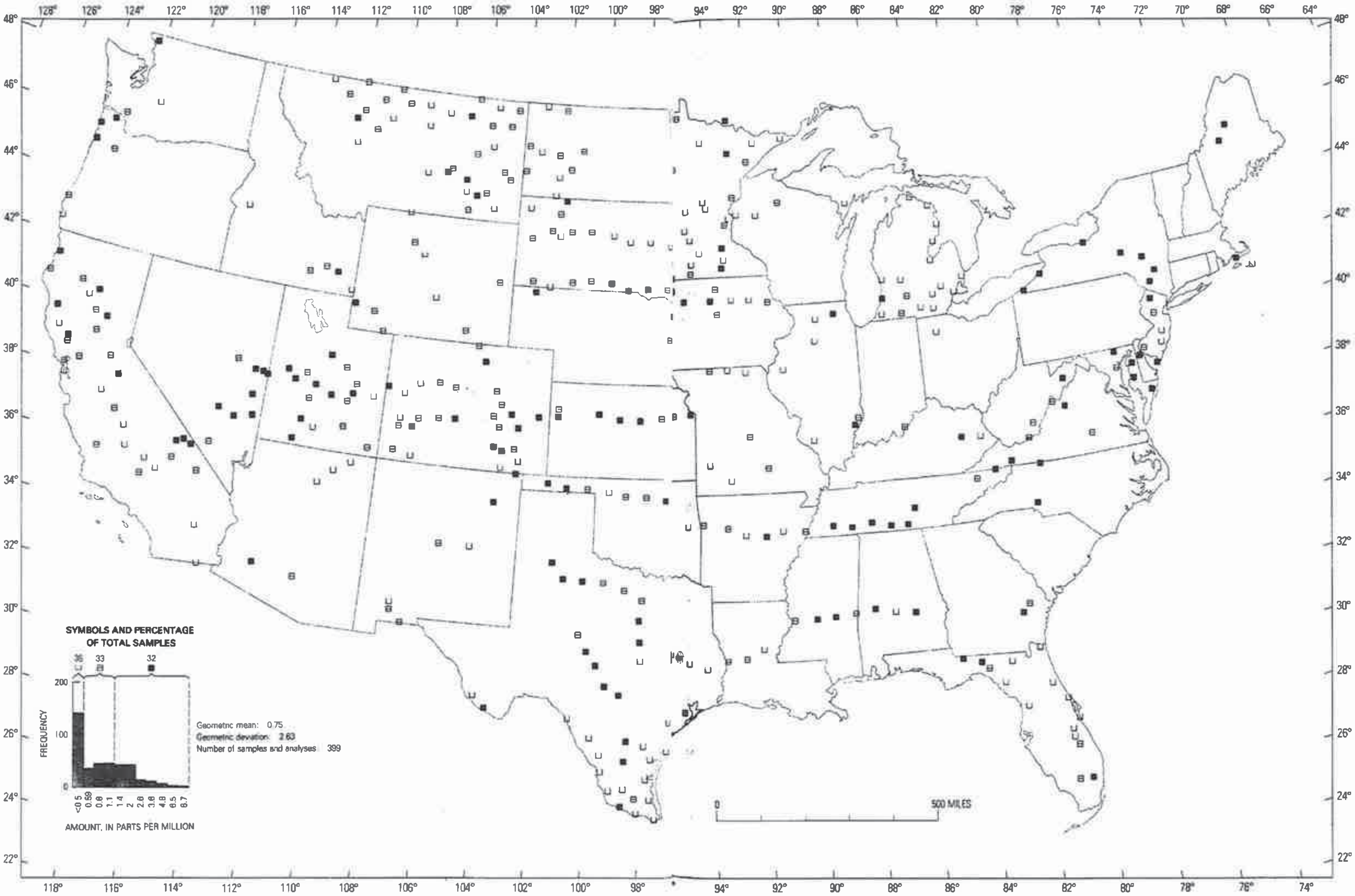

FIGURE 18.—Iodine content of surficial materials.

FIGURE 19.—Iron content of surficial materials.

FIGURE 20.—Lanthanum content of surficial materials.

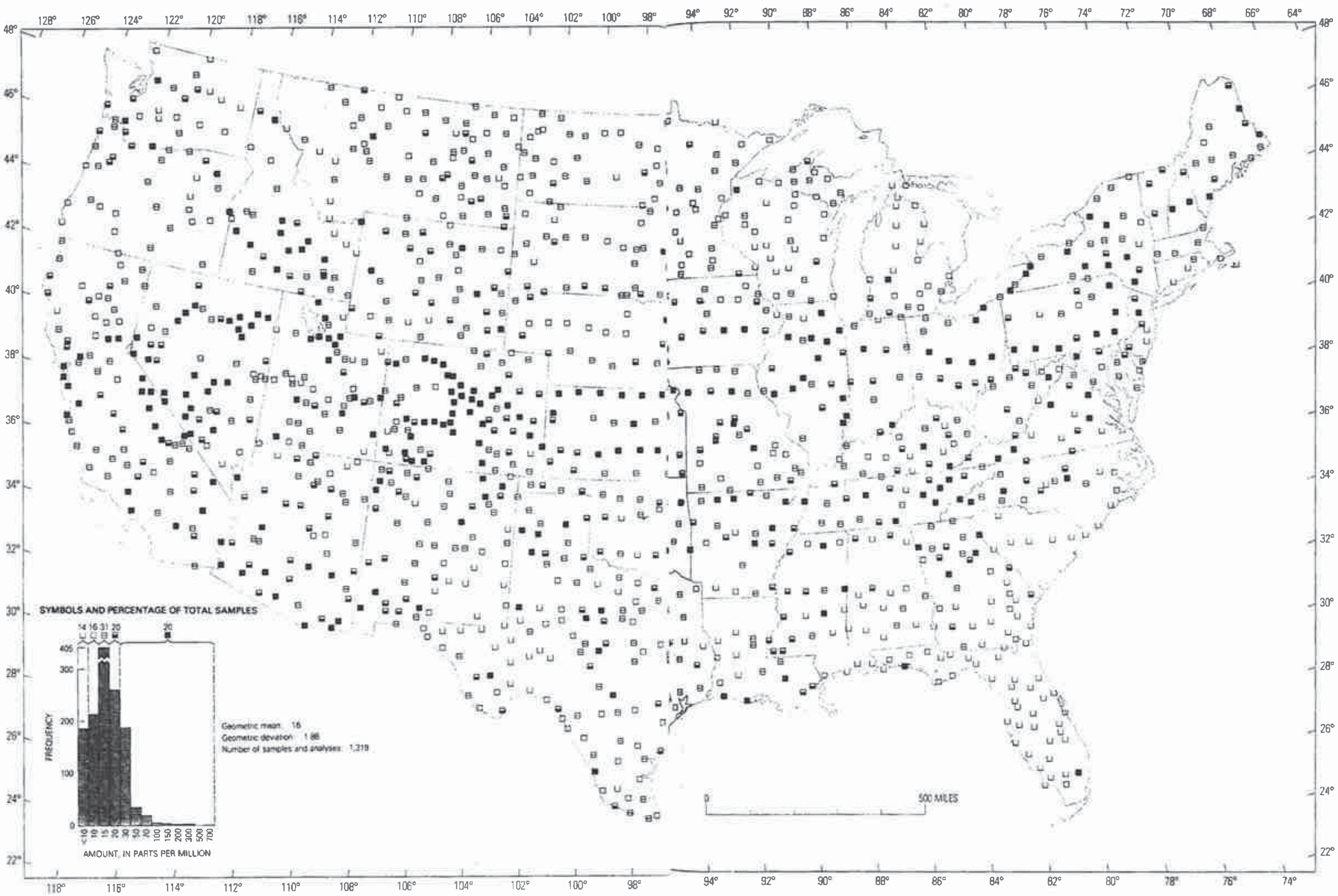

FIGURE 21.—Lead content of surficial materials.

FIGURE 22.—Lithium content of surficial materials.

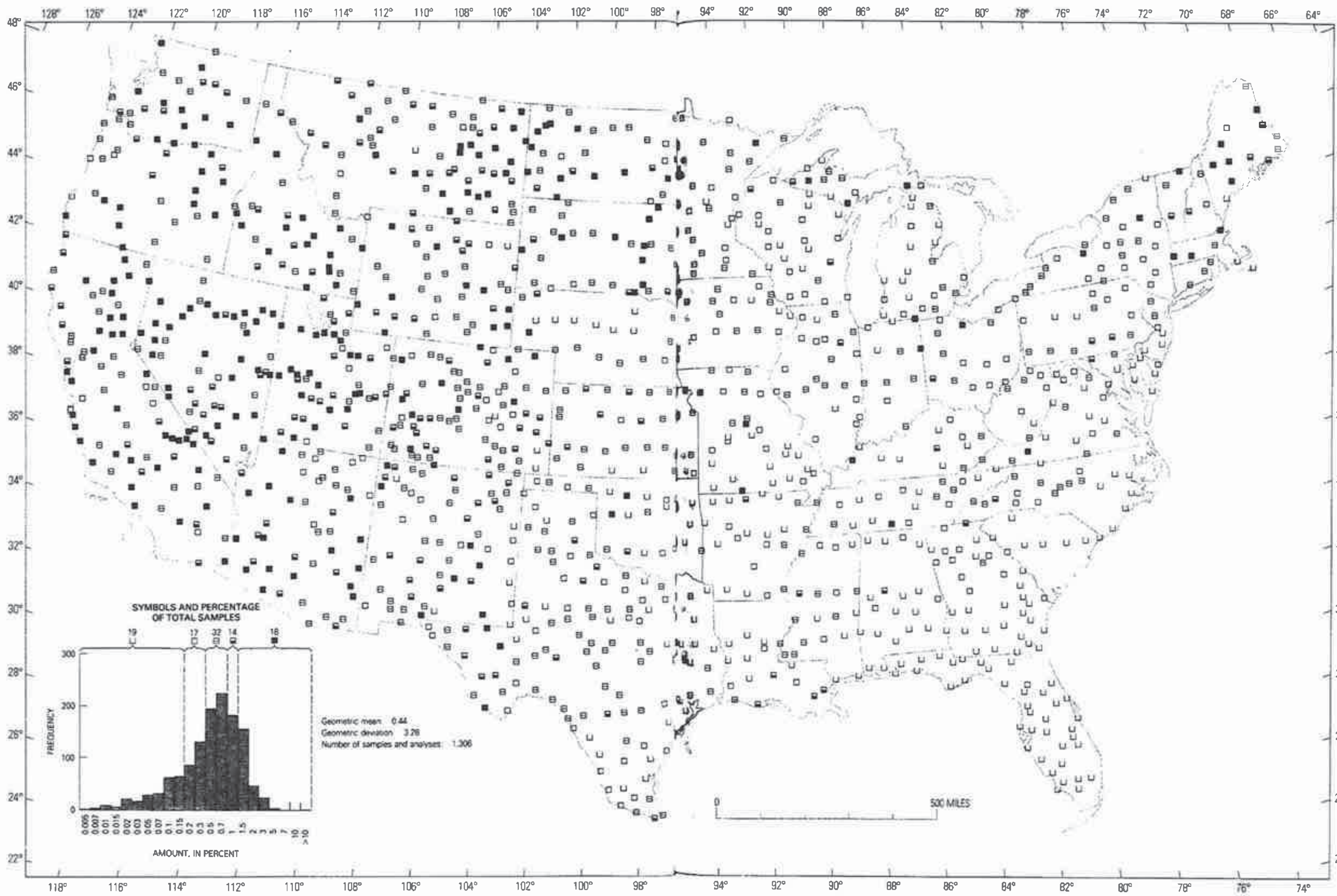

FIGURE 23.—Magnesium content of surficial materials.

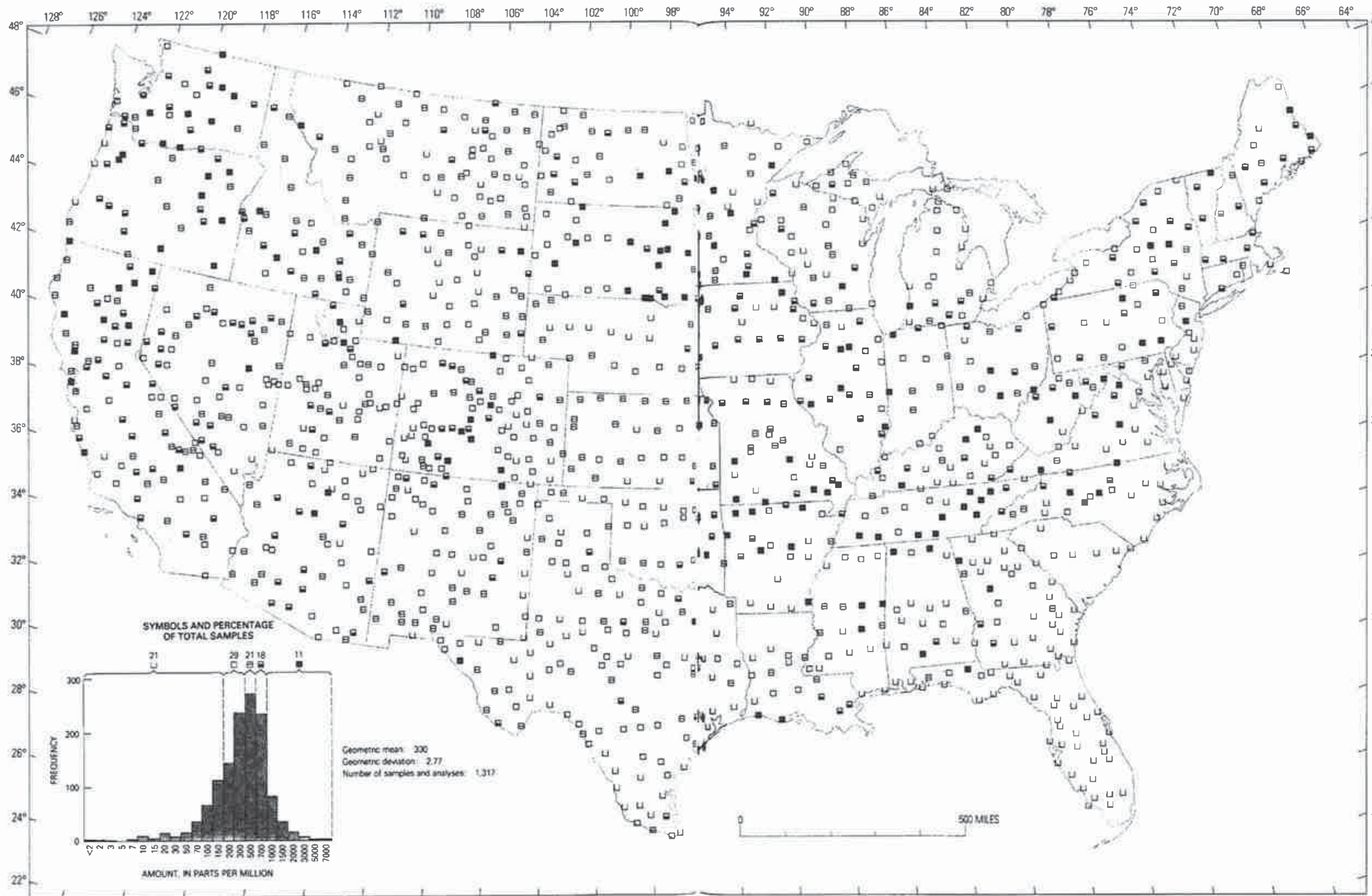

FIGURE 24.—Manganese content of surficial materials.

FIGURE 25.—Mercury content of surficial materials.

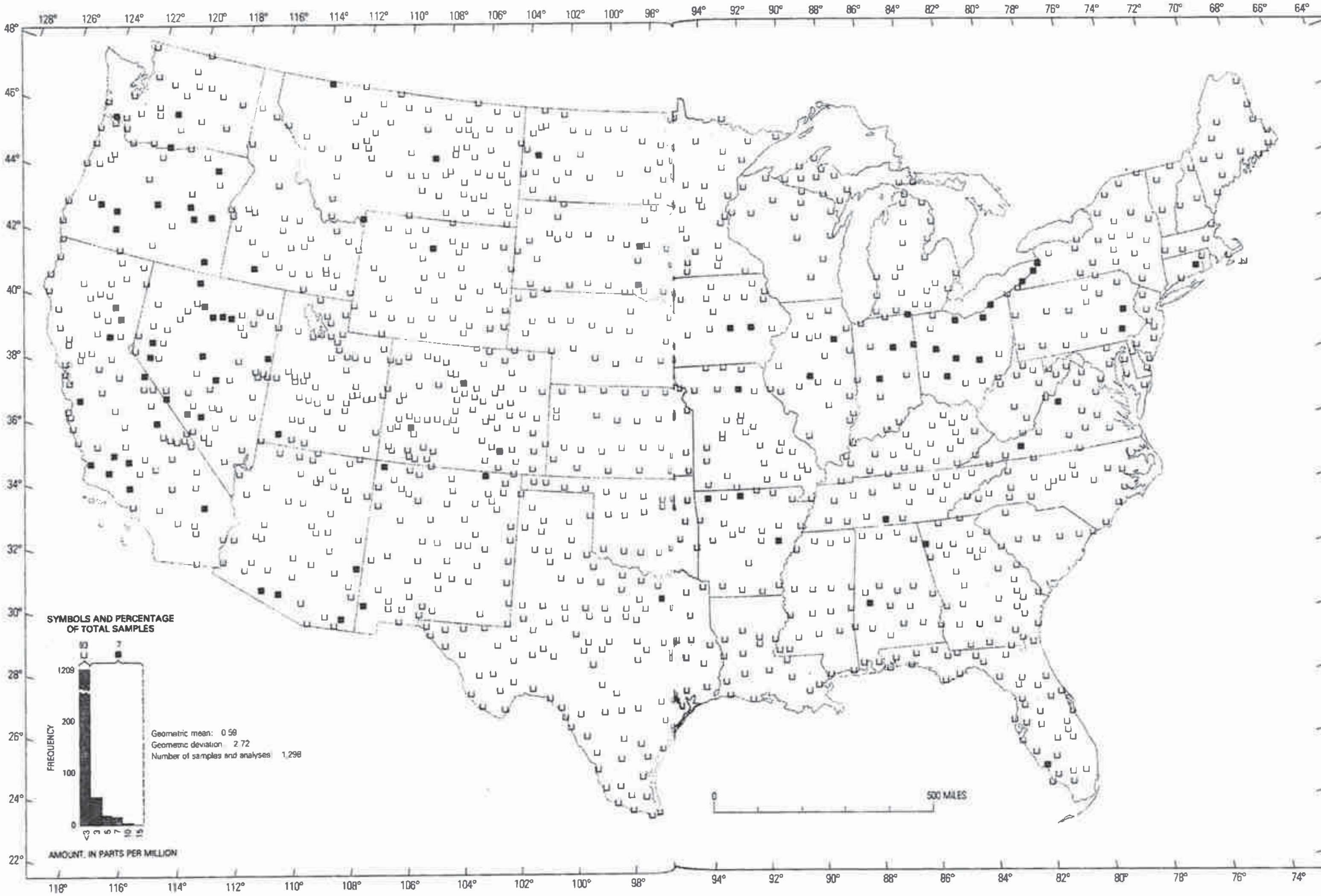

FIGURE 26.—Molybdenum content of surficial materials.

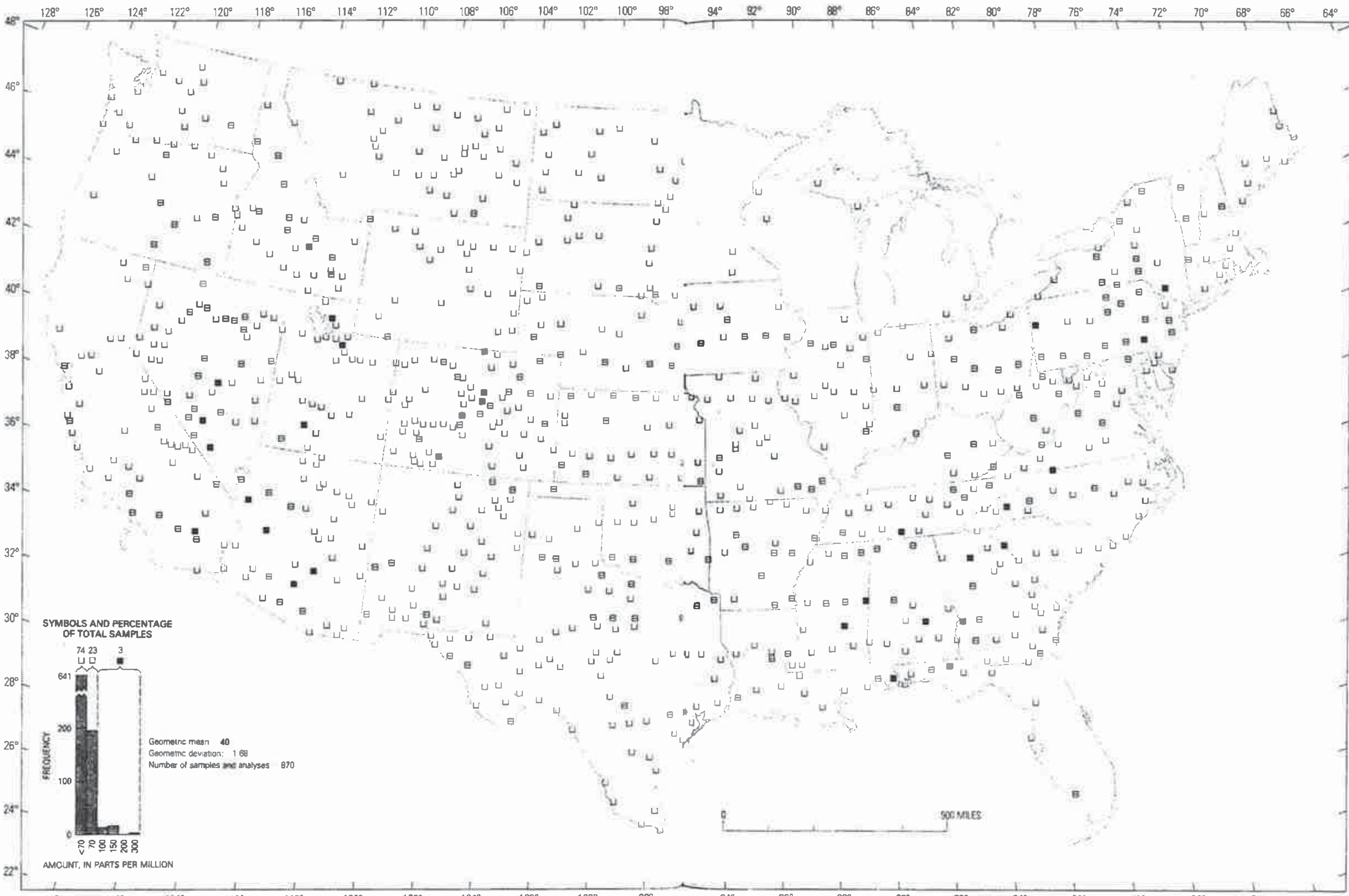

FIGURE 27.—Neodymium content of surficial materials.

FIGURE 28.—Nickel content of surficial materials.

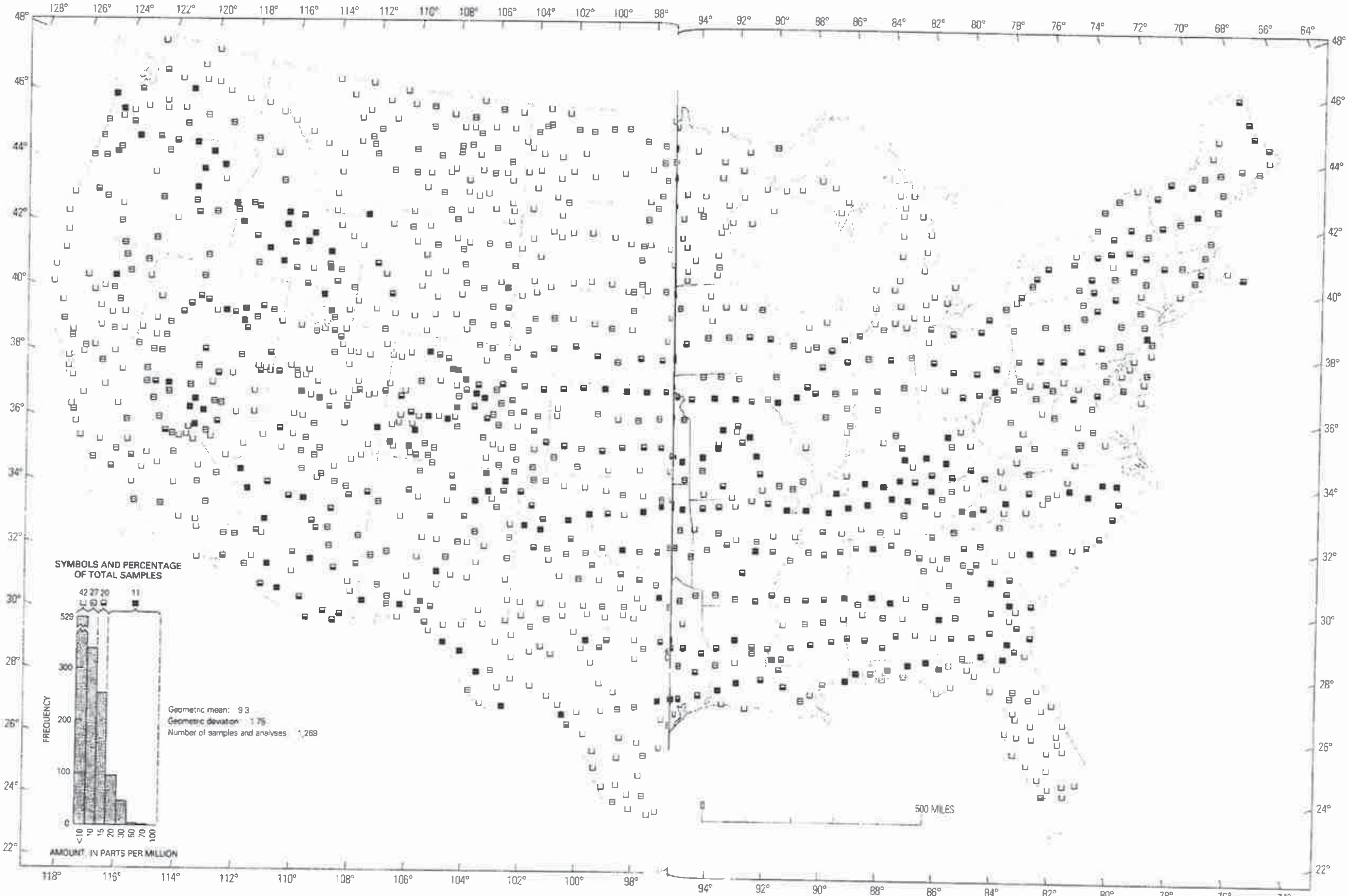

FIGURE 29.—Niobium content of surficial materials.

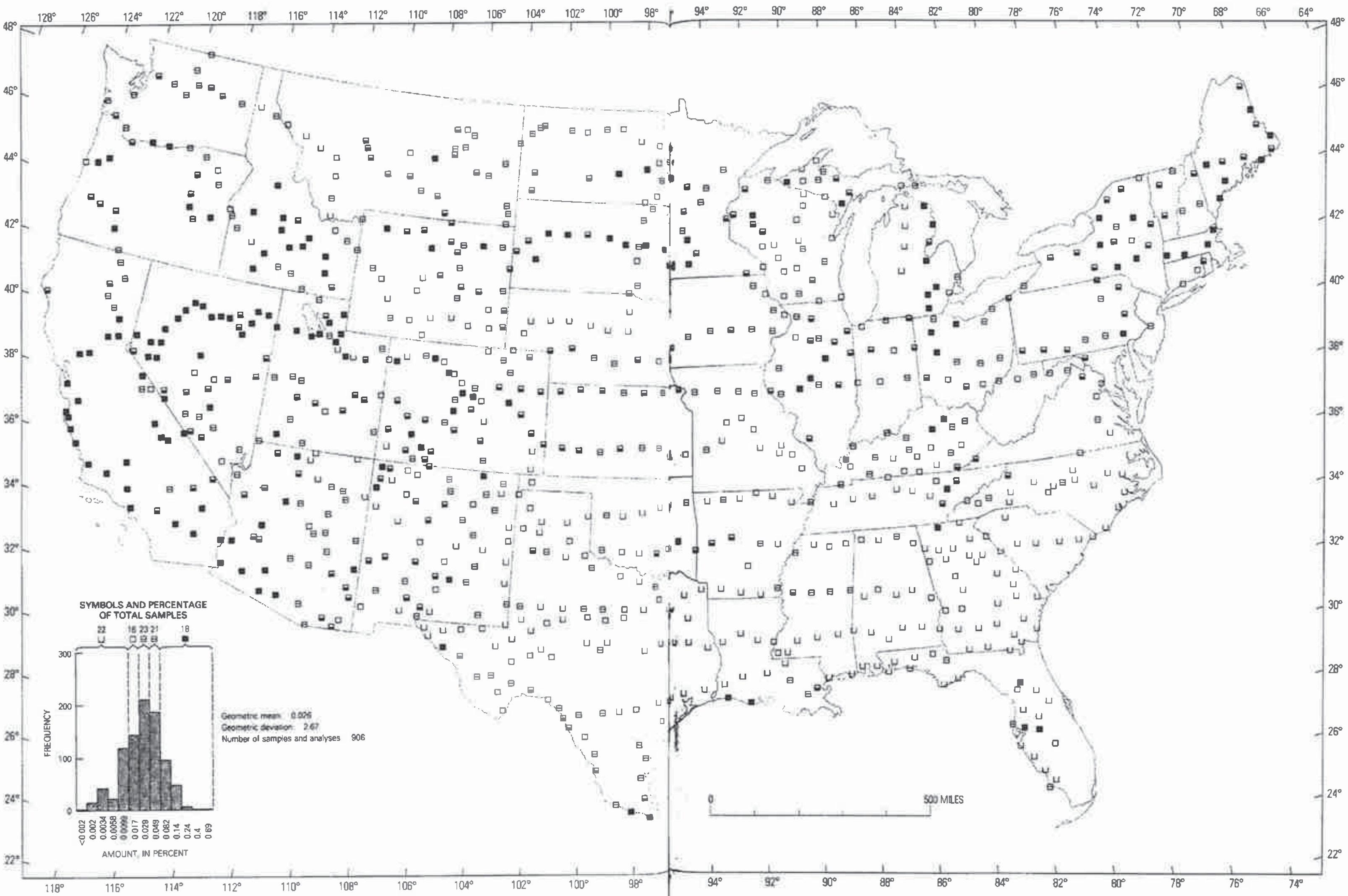

FIGURE 30.—Phosphorus content of surficial materials.

FIGURE 31.—Potassium content of surficial materials.

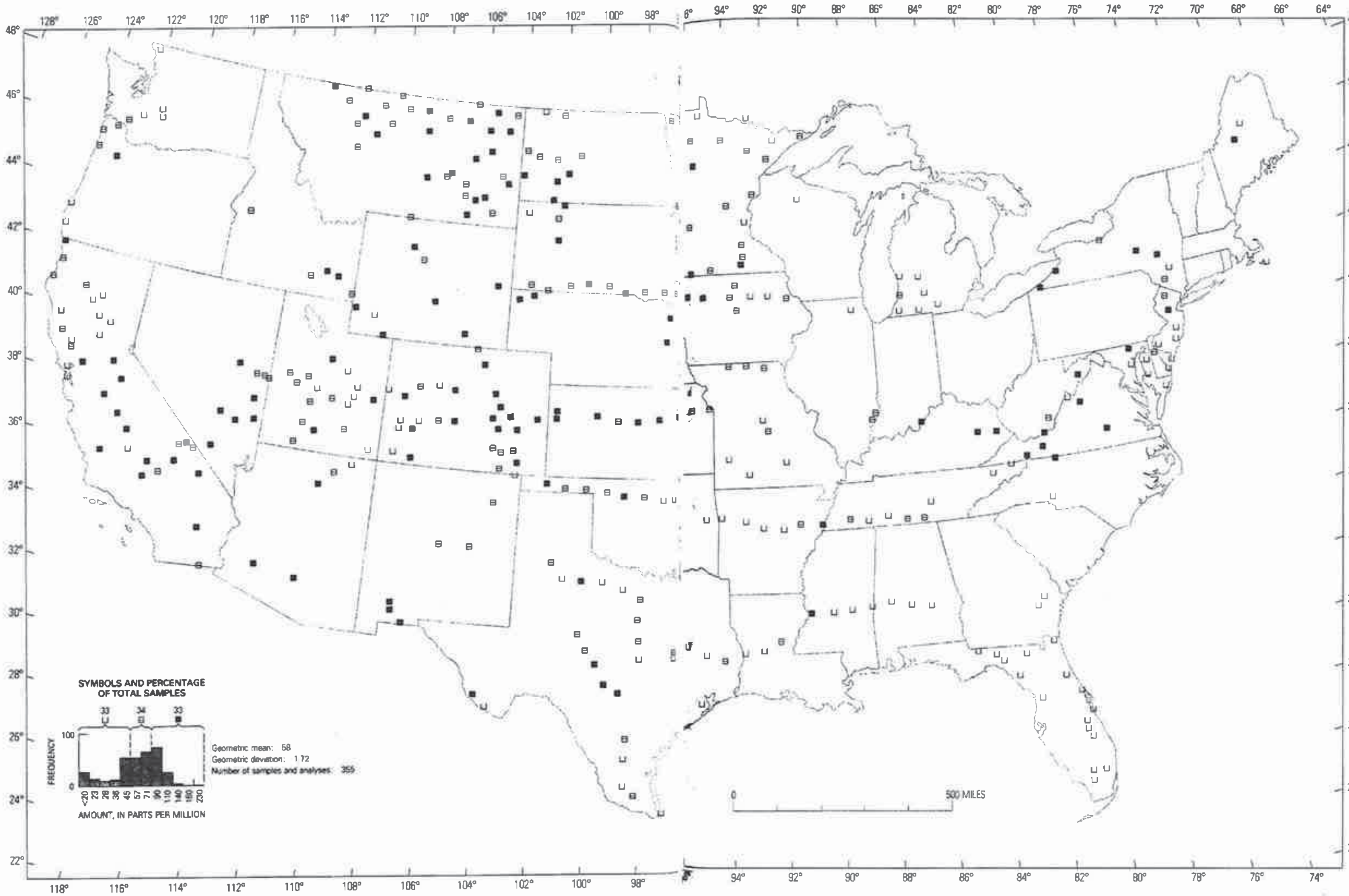

FIGURE 32.—Rubidium content of surficial materials.

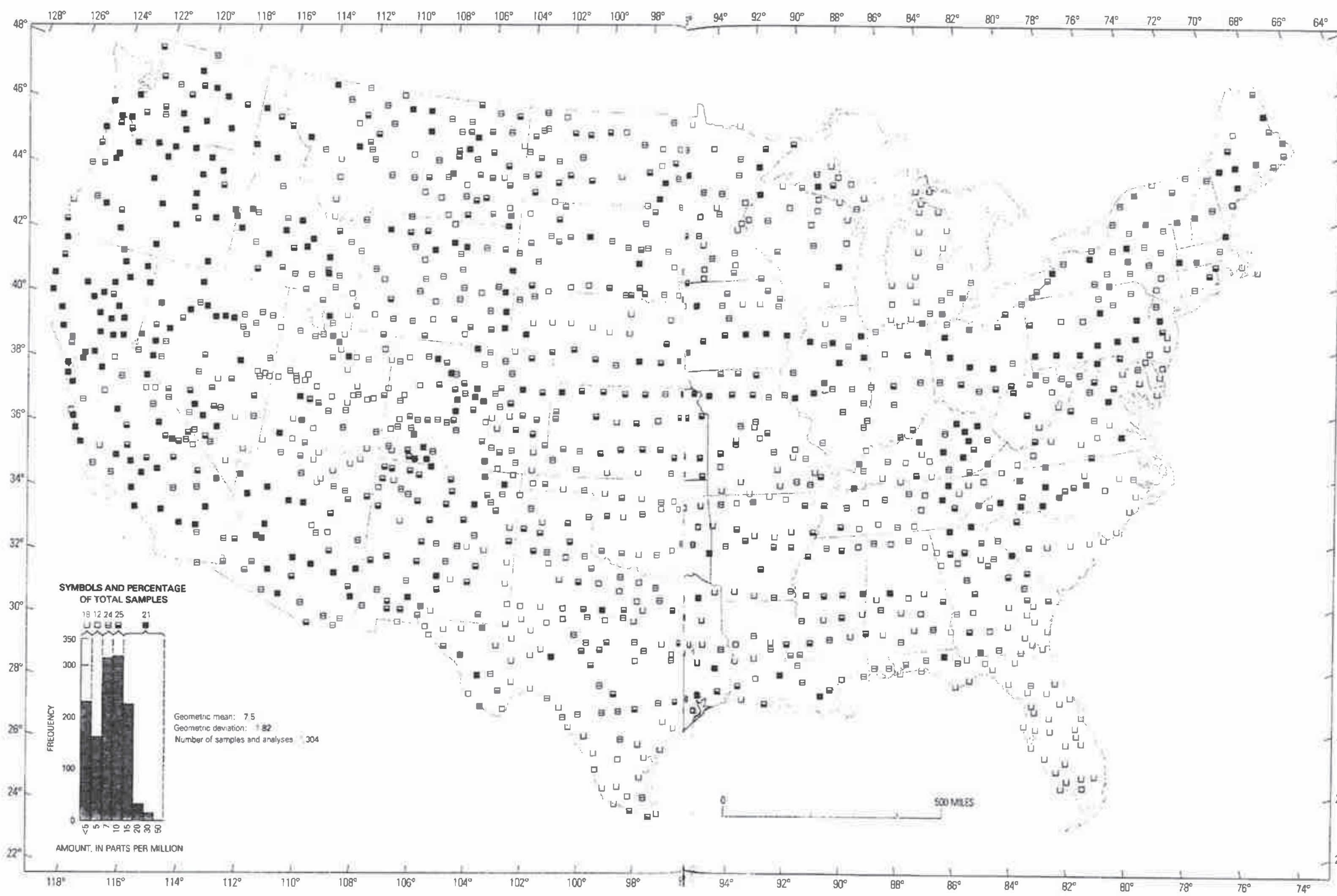

FIGURE 33.—Scandium content of surficial materials.

FIGURE 34.—Selenium content of surficial materials.

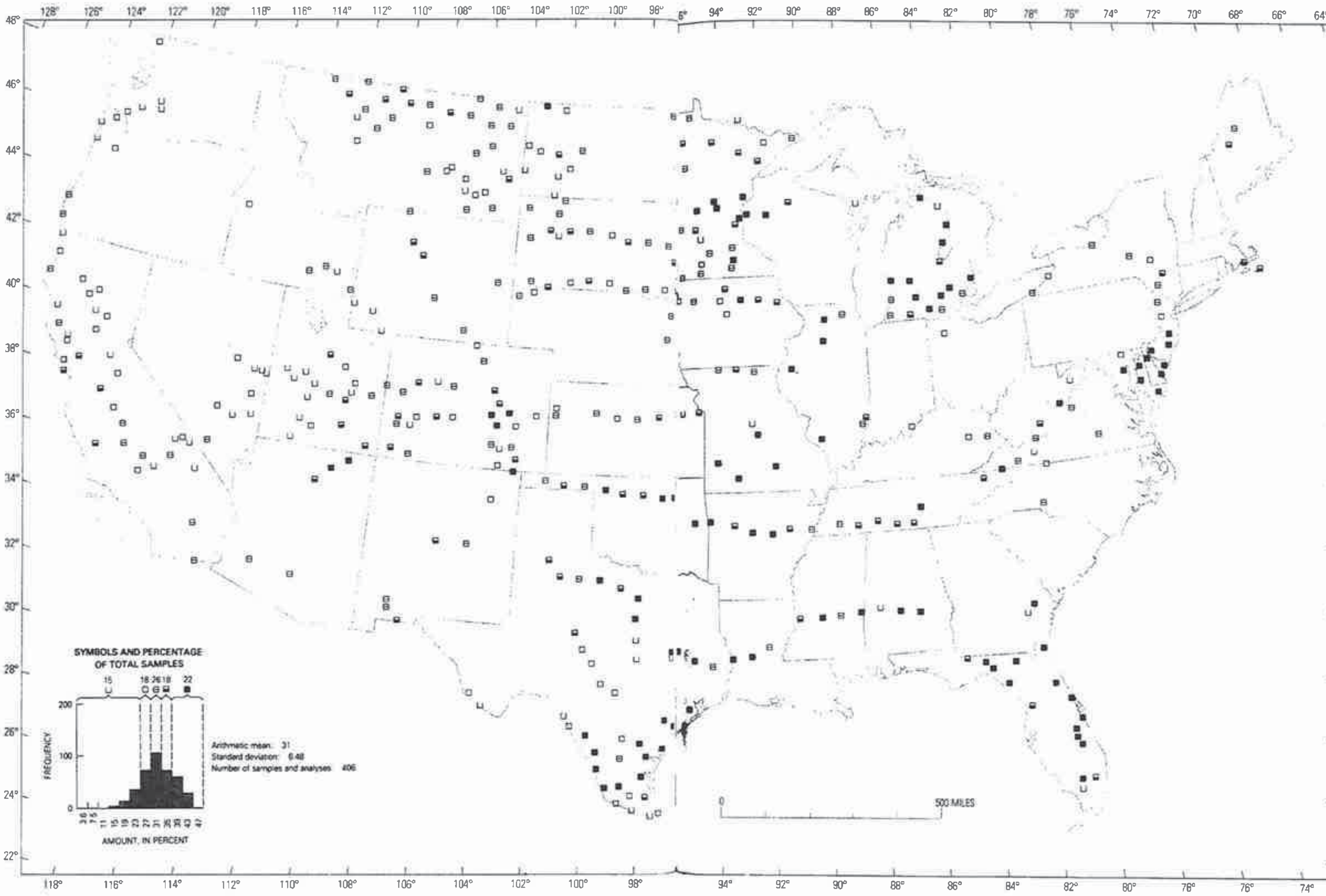

Figure 35.—Silicon content of surficial materials.

FIGURE 36.—Sodium content of surficial materials.

Figure 37.—Strontium content of surficial materials.

FIGURE 38.—Sulfur content of surficial materials.

FIGURE 39.—Thorium content of surficial materials.

FIGURE 40.—Tin content of surficial materials.

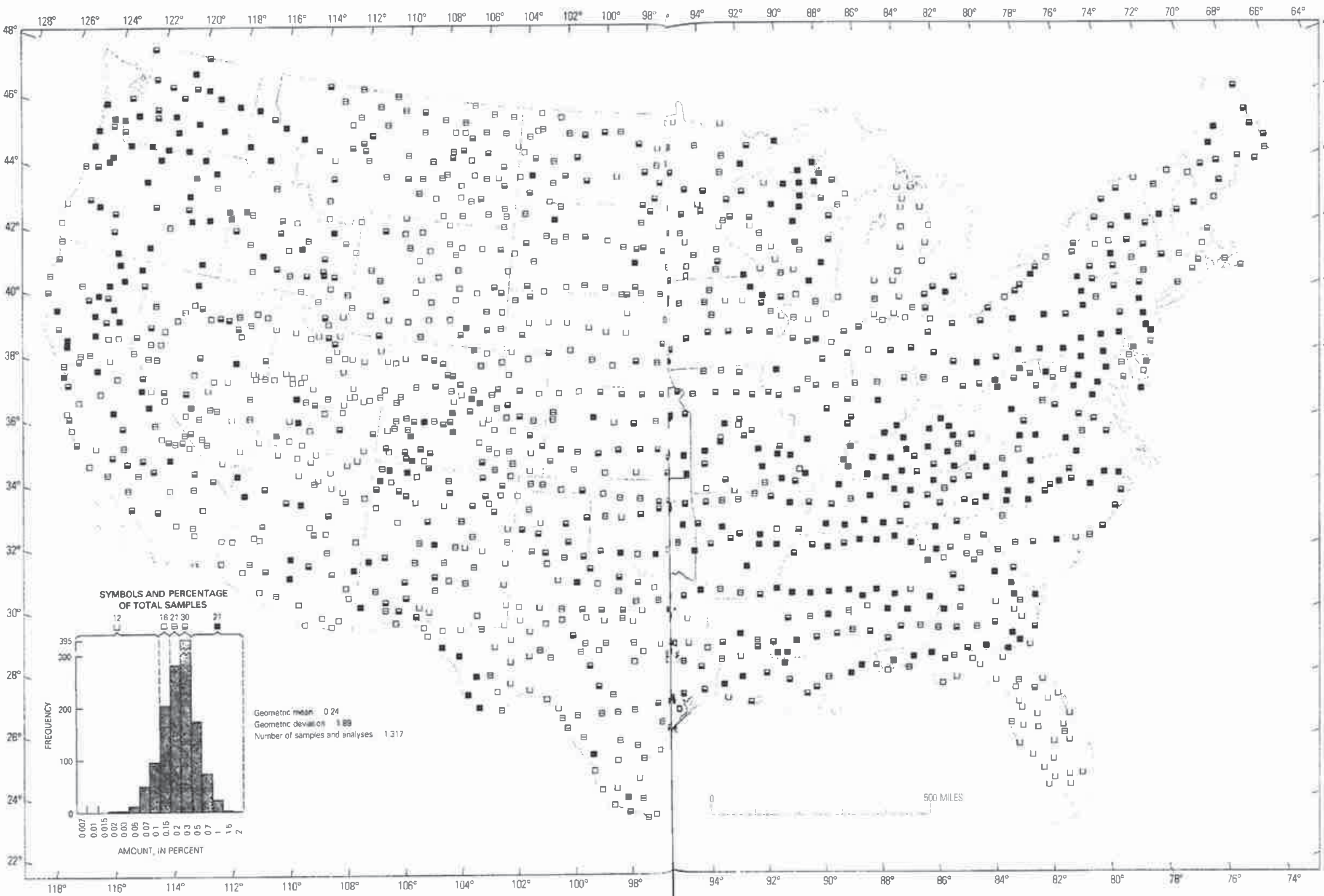

FIGURE 41.—Titanium content of surficial materials.

FIGURE 42.—Uranium content of surficial materials.

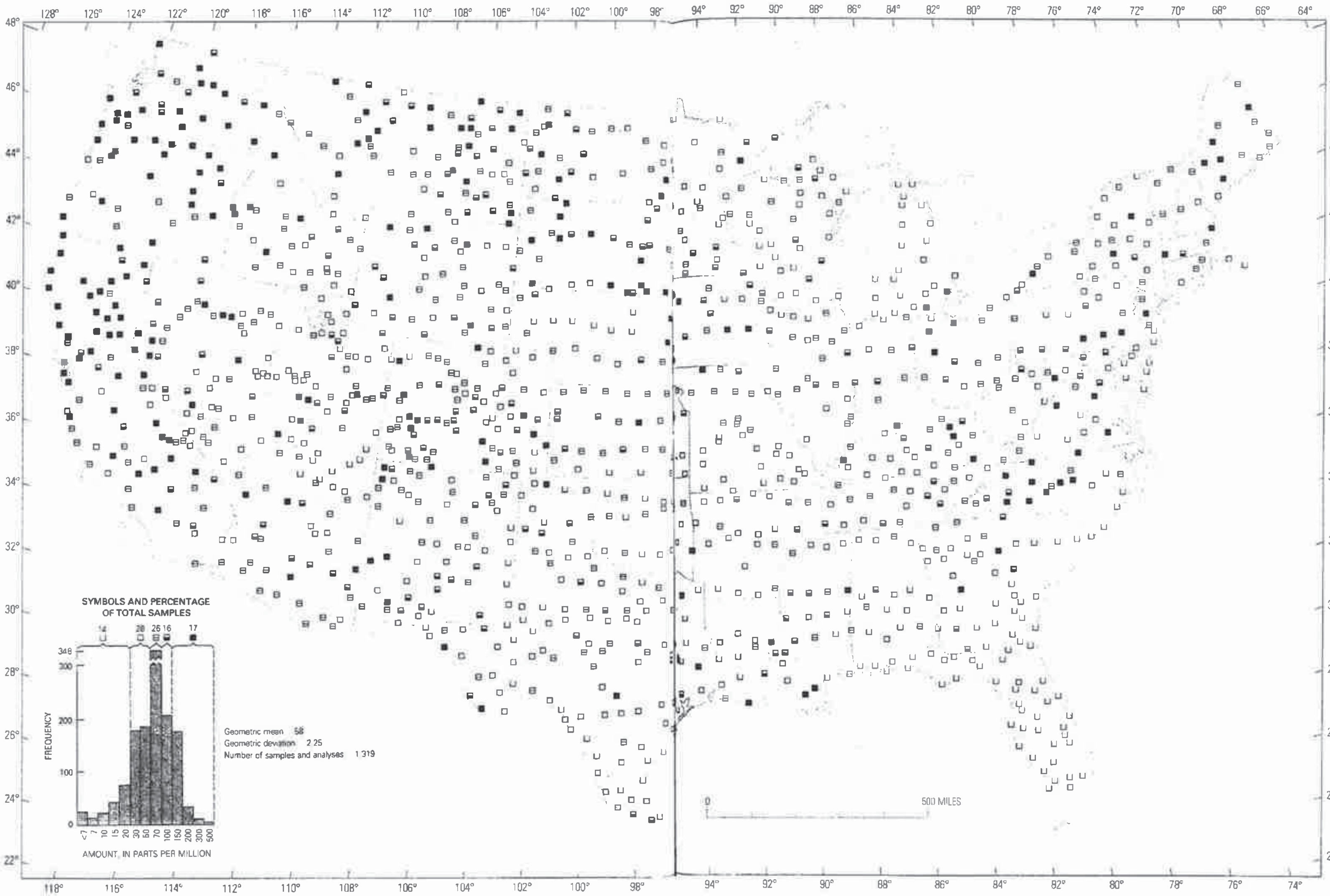

Figure 43.—Vanadium content of surficial materials.

FIGURE 44.—Ytterbium content of surficial materials.

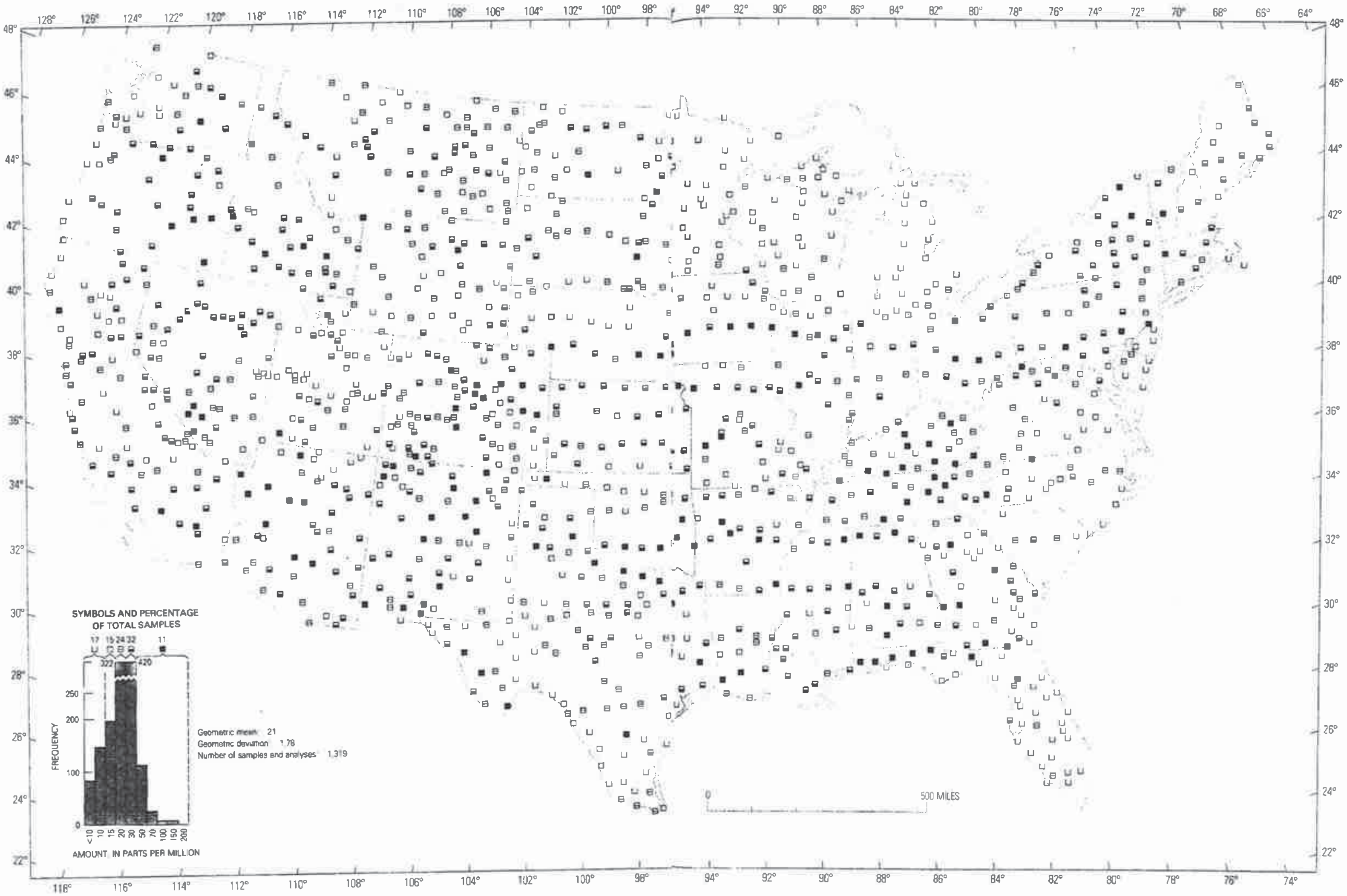

FIGURE 45.—Yttrium content of surficial materials.

FIGURE 46.—Zinc content of surficial materials.

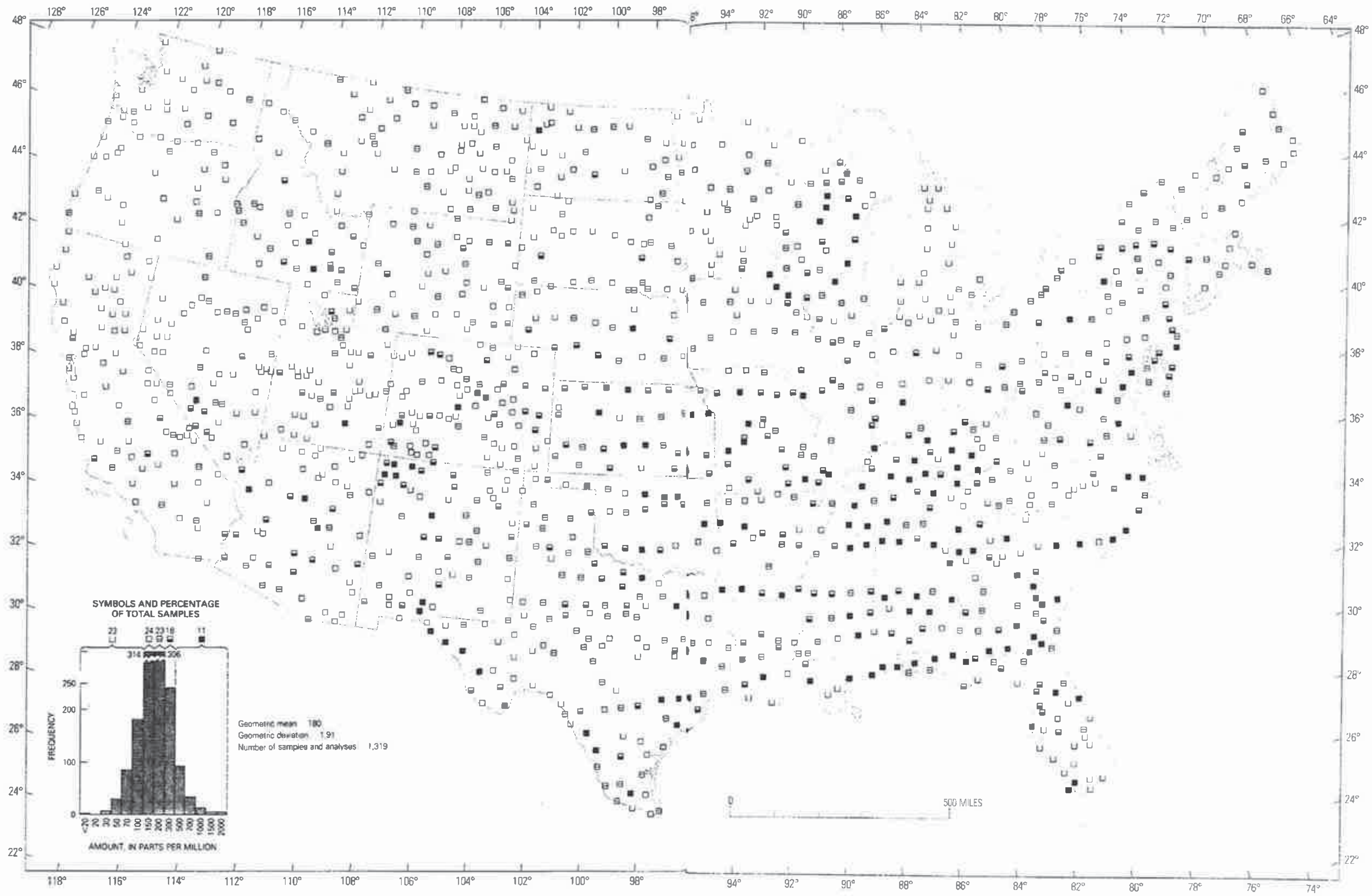

FIGURE 47.—Zirconium content of surficial materials.

APPENDIX K-1

NYSDOH SOIL VAPOR INTRUSION MATRICES (MAY 2017)

Soil Vapor / Indoor Air Matrix A

May 2017

Analytes Assigned:
Trichloroethene (TCE), *cis*-1,2-Dichloroethene (*c*12-DCE), 1,1-Dichloroethene (11-DCE), Carbon Tetrachloride

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m³)		
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m³)	< 0.2	0.2 to < 1	1 and above
< 6	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
6 to < 60	4. No further action	5. MONITOR	6. MITIGATE
60 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX A

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 0.20 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

Soil Vapor / Indoor Air Matrix B

May 2017

Analytes Assigned:
Tetrachloroethene (PCE), 1,1,1-Trichloroethane (111-TCA), Methylene Chloride

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)		
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 3	3 to < 10	10 and above
< 100	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
100 to < 1,000	4. No further action	5. MONITOR	6. MITIGATE
1,000 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX B

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 1 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

Soil Vapor/Indoor Air Matrix C

May 2017

Analytes Assigned:
Vinyl Chloride

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)	
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 0.2	0.2 and above
< 6	1. No further action	2. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
6 to < 60	3. MONITOR	4. MITIGATE
60 and above	5. MITIGATE	6. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX C

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 0.20 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

APPENDIX K-2

NYSDOH FACT SHEET: TETRACHLOROETHENE (PERC) IN INDOOR AND OUTDOOR AIR (SEPTEMBER 2013)

TETRACHLOROETHENE (PERC) IN INDOOR AND OUTDOOR AIR

SEPTEMBER 2013 FACT SHEET

This fact sheet answers questions about a chemical called tetrachloroethene (PERC), which is widely used to dry-clean clothes. It provides information on health effects seen in humans exposed to PERC in air. It also provides information about the New York State Department of Health's new guideline of 30 micrograms of PERC per cubic meter of air (30 mcg/m^3) or 0.03 milligrams of PERC per cubic meter of air (0.03 mg/m^3). The fact sheet focuses on the health risks from air exposures because most of the PERC released into the environment goes into air.

Prepared by

Bureau of Toxic Substance Assessment
New York State Department of Health

1. WHAT IS TETRACHLOROETHENE (PERC)?

Tetrachloroethene is a manufactured chemical that is widely used in the dry-cleaning of fabrics, including clothes. It is also used for degreasing metal parts and in manufacturing other chemicals. Tetrachloroethene is found in consumer products, including some paint and spot removers, water repellents, brake and wood cleaners, glues, and suede protectors. Other names for tetrachloroethene include PERC, tetrachloroethylene, perchloroethylene, and PCE. PERC is a commonly used name and will be used in the rest of the fact sheet.

PERC is a nonflammable, colorless liquid at room temperature. It readily evaporates into air and has an ether-like odor. Because most people stop noticing the odor of PERC in air after a short time, odor is not a reliable warning signal of PERC exposure.

2. HOW CAN I BE EXPOSED TO PERC?

People may be exposed to PERC in air, water, and food. Exposure can also occur when PERC or material containing PERC (for example, soil) gets on the skin. For most people, almost all exposure is from PERC in air.

PERC gets into outdoor and indoor air by evaporation from industrial or dry-cleaning operations and from areas where chemical wastes are stored or disposed. People living in homes located near these operations may be exposed to higher levels of PERC than the general population not living near such operations. Groundwater near these areas may become contaminated if PERC is improperly dumped or leaks into the ground. People may be exposed if they drink the contaminated water. They also may be exposed if PERC evaporates from contaminated drinking water into indoor air during cooking and washing. PERC may evaporate from contaminated groundwater and soil into the indoor air of buildings above the contaminated area. PERC also may evaporate from dry-cleaned clothes into indoor air or may get into indoor air after PERC-containing products, such as spot removers, are used. Indoor air PERC levels may get high if PERC-containing products are used in poorly ventilated areas.

3. HOW DOES PERC ENTER AND LEAVE MY BODY?

When people inhale air containing PERC, the PERC is taken into the body through the lungs and passed into the blood, which carries it to all parts of the body. A large fraction of this PERC is exhaled, unchanged, through the lungs into the air. Some of this PERC is stored in the body (for example, in fat, the liver, and the brain) and some is broken down in the liver to other compounds and eliminated in urine. PERC can also be found in breastmilk. Once exposure stops, most of the PERC and its breakdown products leave the body in several days. However, it may take several weeks for all of the PERC and its breakdown products to leave the body.

4. WHAT KINDS OF HEALTH EFFECTS CAN BE CAUSED BY EXPOSURE TO PERC IN AIR?

In humans, PERC may affect the central nervous system, the liver, kidneys, blood, immune system, and perhaps the reproductive system. The available data are insufficient to draw conclusions regarding effects of PERC exposure on development in infants and children.

For all health effects, the potential for an increased health risk depends on several factors, including the amount of exposure, the frequency of exposures, and the duration of the exposures. It also depends on the characteristics of the exposed person, such as age, sex, diet, family traits, lifestyle, genetic background, the presence of other chemicals in their body (e.g., alcohol, prescription drugs), and general state of health. Although difficult to quantify, these differences can affect how people will respond to a given exposure. This is known as sensitivity. Differences in sensitivity should be kept in mind when reading the following information on the human health effects of PERC.

Short-Term Exposure - Studies with volunteers show that exposure of eight hours or less to 700,000 micrograms per cubic meter of air (mcg/m^3) cause central nervous system symptoms such as dizziness, headache, sleepiness, lightheadedness, and poor balance. Exposure to 350,000 mcg/m^3 for four hours affected the nerves of the visual system and reduced scores on certain behavioral tests (which, for example, measure the speed and accuracy of a person's response to something they see on a computer screen). These effects were mild and disappeared soon after exposure ended.

Long-Term Exposure - Numerous studies of dry-cleaning workers indicate that long-term exposure (7 to 20 years, for example) to workplace air levels (41,000 mcg/m^3 to 120,000 mcg/m^3) caused reduced scores on neurobehavioral or color vision tests, increased levels of biochemical indicators of liver or kidney damage, reduced red blood cells, and blood and immune system effects [increased white blood cells and blood levels of a certain type of antibody (immunoglobulin E)]. The effects were mild and required special tests to be detected. It is not known how long these effects last.

The New York State Department of Health (NYSDOH, 2010) measured visual function [visual contrast sensitivity (VCS); color vision][1] in adults and children living in the apartments located in buildings with or without a dry-cleaner using PERC and also measured PERC indoor air levels. PERC levels were higher in the indoor air of apartments in buildings with dry-cleaners. Elevated indoor air PERC levels were associated with a slightly increased risk for children to have decreased VCS scores. The effect of PERC on VCS scores was most noticeable in a small group of children living in buildings with co-located dry cleaners using PERC. In those apartments, indoor air PERC levels ranged from 127 to 710 mcg/m^3, with a 50^{th} percentile[2] (also known as the median) level of 340 mcg/m^3. For affected children (7 years mean duration of residency), the decrease was very small and occurred for only one eye in one of five tests. Mean VCS test scores were still within a normal range. Therefore, the risk for decreased VCS scores among affected children is considered to be small. Elevated indoor air PERC levels were not associated with effects on adult VCS scores, or with color vision of either children or adults. The observed associations between elevated indoor air PERC levels and children's VCS suggests that indoor air PERC levels in the range detected may have subtle effects on the brain.

A few epidemiological studies showed positive associations between workplace PERC exposure and reproductive effects (increased risk of spontaneous abortion, sperm disorders, and reduced fertility or delayed conception). Data on workplace air levels were not reported or were limited; however, workplace air levels during the times these studies were conducted were considerably higher than those typically found in indoor or outdoor air. These data suggest, but do not prove, that the reproductive effects were caused by PERC and not by some other factor or factors.

Lastly, epidemiological studies provide a pattern of evidence for a positive association between PERC exposure in the workplace and several types of cancer, specifically bladder cancer, non-Hodgkin lymphoma, and multiple myeloma. These associations were observed in studies with high quality assessments of the likelihood of PERC only exposures. However, data on PERC workplace air levels were not reported, but measurements from other studies indicate that workplace air levels during the times the workers were exposed were considerably higher than those typically found in indoor or outdoor air. Moreover, it is unlikely that the associations were dependent, totally or in part, on factors other than PERC exposures, such as common lifestyle factors as smoking or drinking alcohol. Data from more limited studies suggest that other types of cancer (esophageal, kidney, lung, liver, cervical, and breast cancer) are associated with PERC exposure. In laboratory studies, PERC caused cancer in rats and mice when they ingested or inhaled high doses almost daily for a lifetime. Based on human and animal data, the United States Environmental Protection Agency (USEPA) classifies PERC as "likely to be carcinogenic in humans by all routes of exposure."

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[1] VCS is a measure of a person's ability to distinguish the contrast between a viewed object and its background. It is easier to detect images of high contrast (e.g., a black cat on snow) than low contrast (e.g., a white cat on snow).

[2] Half the results are less than or equal to this value and half are above this value.

5. WHAT ARE BACKGROUND LEVELS FOR PERC IN OUTDOOR AND INDOOR AIR IN AREAS THAT ARE NOT NEAR A KNOWN ENVIRONMENTAL SOURCE OF PERC?

Various studies provide data on background levels of PERC in outdoor and indoor air. The New York State Department of Environmental Conservation collects data on outdoor air levels of air toxics under the Toxics Monitoring System (also known as Volatile Organics Network). The monitoring sites were selected to provide air quality data from the state's urban, industrial, residential, and rural areas. Based on 5882 samples collected across the state during 1999 to 2008, the 50th percentile (median) and 95th percentile[3] PERC levels were 0.41 mcg/m^3 and 4.8 mcg/m^3, respectively. NYSDOH (2005) conducted a study between 1997 and 2005 on the occurrence of volatile organic chemicals, including PERC, in the indoor and outdoor air of about 100 homes across the state (excluding New York City). Two outdoor samples were collected just outside each home for a total of 200 samples. The 50th percentile and 95th percentile PERC levels were less than 0.25 mcg/m^3 and 1.6 mcg/m^3, respectively. Finally, the 50th percentile and 95% percentile PERC levels in 587 outdoor air samples collected in 1999 - 2011 during the investigation of NYS remedial sites not known to have nor suspected to have sources of PERC were 0.52 mcg/m^3 and 2.6 mcg/m^3, respectively (NYSDOH, 2013b). Collectively, these three data sets, particularly given the low 95% percentile level in the large dataset from the Toxics Monitoring System, indicate that fewer than 5% of the background PERC levels in outdoor air are above 10 mcg/m^3.

The NYSDOH, the USEPA, and others have collected and analyzed information on PERC levels in indoor air. The table below contains the results from air samples collected inside of buildings that were not near known sources of PERC and other chemicals (for example, a home not known to be near a chemical spill, a hazardous waste site, a dry-cleaner, or a factory). The five studies that reported 90th percentile PERC air levels indicate that fewer than 10% of the background PERC levels in indoor air are above 10 mcg/m^3. In addition, the results for six of the eight studies that reported 95th percentiles and contained most of the samples indicate that fewer than 5% of the background PERC levels in indoor air are above 10 mcg/m^3. The other two studies (NYSDOH, 2009, 2013b; USEPA, 2001, 2013) indicate that fewer than 5% of the background indoor air levels are above 20 mcg/m^3.

[3] 95% of the results are less than or equal to this value.

Background Indoor Air Levels in US Buildings (1990-2013).

Study Description (and Sampling Years)	No. of Samples	Air Level Percentiles (mcg/m³)			Reference
		50th (median)	90th A	95th	
Residential Buildings					
13 studies on residential properties (number NR[B]) in North America (1990-2005)	2312[C]	ND[D] - 2.2 (range)[E]	ND[D] - 7 (range)[E]	4.1 - 9.5 (range)[E]	USEPA (2011); also see Dawson & McAlary (2009)
screening study of households (284) in urban or non-urban areas of MN (1997)	284	1.4	NR[B]	4.9	Adgate et al. (2004)
subset of the screened households (101) in MN (1997)	101	1.3	NR[B]	5.2	
single family homes (about 100) heated with fuel oil from across NYS (excluding NYC) (1997-2003)	400	0.34	2.9	3.9	NYSDOH (2005, 2013a)[F]
households (about 100 each) in Elizabeth, NJ, Houston, TX, and Los Angeles, CA (1999-2001)	554	0.56	NR[B]	6.0	Weisel et al. (2005)
apartments (61) in NYC building **without** a co-located dry-cleaner (2001-2003)	61	2.2	8.5	19.09	NYSDOH (2009, 2013b)
Office Buildings					
public & commercial office buildings (70) in US (1994-1996)	209	1.5	9.3	18	USEPA (2001, 2013)
Mixed-Use Buildings					
buildings (number NR[B]) near NYS remedial sites not known nor suspected to have sources of PERC (1999-2011)	1625	0.72	2.8	6.6	NYSDOH (2013b)

[A] 90% of the results are less than or equal to this value.
[B] NR: not reported.
[C] Total number of samples, but number of samples associated with each percentile range is less than 2312, but was not reported.
[D] ND: not detected.
[E] The range from 13, 8, and 5 studies that reported the 50th, 90th, and 95th percentiles, respectively.
[F] One of the 13 studies included in USEPA (2011) and Dawson & McAlary (2009).

6. WHAT IS THE NEW YORK STATE DEPARTMENT OF HEALTH'S NEW GUIDELINE FOR PERC IN AIR?

After consideration of the potential health effects of PERC, background levels of PERC in air, and analytical techniques (the ability and reliability of methods to measure PERC in air), NYSDOH recommends that the average air level not exceed 30 mcg/m³. This determination considered continuous, lifetime exposure and sensitive people. Three other ways of expressing the new guideline are 0.03 milligrams per cubic meter of air (0.03 mg/m³), 4.4 parts per billion (ppb) or 0.0044 parts per million (ppm). This replaces the old guideline of 100 mcg/m³.

An air guideline of 30 mcg/m³ is below the PERC air levels known to cause noncancer effects, including developmental and reproductive effects, in humans and animals, and should be protective against those effects. It is lower than the USEPA's (2012) reference concentration (RfC)[4] for PERC of 40 mcg/m³. The estimated excess cancer risk associated with lifetime, continuous exposure to 30 mcg/m³ is about one-in-one-hundred thousand.

[4] The reference concentration is an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime.

Decisions about whether to take actions to further reduce exposure are generally made on a case-by-case basis at this level of risk.

However, NYSDOH recommends that reasonable and practical actions should be taken to reduce PERC exposure whenever air levels are above background. The purpose of the guideline is to help guide decisions about the urgency of the actions to reduce PERC exposure. The urgency to initiate these actions and to determine, in a timely manner, whether they have reduced exposure, increases with indoor air levels, particularly when air levels are above the guideline.

Indoor air levels substantially above the guideline indicate a significant PERC source and may require more immediate remedial action. NYSDOH has concerns about lengthy exposure (months to years) to air levels higher than 300 mcg/m^3 because the results of a recent NYSDOH study suggested that indoor air PERC levels in apartments (median value of 340 mcg/m^3) may have subtle effects on the nervous system (vision function) of children (NYSDOH, 2010 at http://www.health.ny.gov/environmental/investigations/perc/info_sheet.htm). Thus, NYSDOH recommends taking immediate and effective action to reduce exposure when an air level is equal to or above 300 mcg/m^3. In all cases, the specific corrective actions to be taken depend on a case-by-case evaluation of the situation. The goal of the recommended actions is to reduce PERC levels in indoor air to as close to background as practical.

7. WHY DID NEW YORK STATE DEPARTMENT OF HEALTH REDUCE THE GUIDELINE FOR PERC IN AIR FROM 100 MCG/M^3 TO 30 MCG/M^3?

The guideline of 100 mcg/m^3 was issued in 1997 and was based on the toxicological data available at the time. Since then, many new toxicity studies have been published and the USEPA has completed a comprehensive, state-of-the-science, peer-reviewed risk assessment of PERC. Based on the risk assessment, the USEPA recommended values for evaluating the potential for noncancer and cancer effects from exposure to PERC in air [a RfC (40 mcg/m^3) and an air level (4 mcg/m^3) associated with an estimated excess cancer risk of one-in-one million, assuming continuous, lifetime exposure]. NYSDOH staff reviewed the USEPA risk assessment and determined that the recommended values are scientifically robust and should replace the values derived in 1997. The USEPA publication of its RfC (40 mcg/m^3) necessitated a re-evaluation of the health-protectiveness of the old NYSDOH guideline (100 mcg/m^3) because it has been the past practice of NYSDOH to set guidelines at air levels that are equal to or less than a RfC. Consequently, the guideline was reduced to 30 mcg/m^3 after consideration of new toxicity data (e.g., NYSDOH, 2010) and the USEPA risk assessment.

8. SHOULD I BE CONCERNED ABOUT HEALTH EFFECTS IF I AM EXPOSED TO AN AIR LEVEL SLIGHTLY ABOVE THE GUIDELINE?

The guideline is not a bright line between PERC levels that cause health effects and those that do not. The differences between exposure at the guideline and exposure levels known to cause effects in humans and animals are large. Thus, exposure to levels above but near the guideline will not cause health effects in most, if not all, people. In addition, the guideline is based on the assumption that people are continuously exposed to PERC in air all day, every day for as long as a lifetime. Continuous exposure is rarely true for most people, who, if exposed, are more likely to be exposed for a part of the day and part of their lifetime.

9. IS THERE A TEST TO DETERMINE WHETHER I HAVE BEEN EXPOSED TO PERC?

PERC levels can be measured in the breath for weeks following a high exposure to PERC because it is stored in body fat and is slowly released into the bloodstream and then exhaled in the breath. PERC can be measured in blood. Also, breakdown products of PERC can be detected in the blood and urine for several days after exposure to PERC. Because exposure to other chemicals can produce the same breakdown products in the urine and blood as PERC, the tests for breakdown products cannot determine if you have been exposed only to PERC. Although the tests can show if PERC levels in the body are elevated compared to background levels, they cannot conclusively determine when and for how long a person was exposed, what the source of that exposure was, or whether or not the person will develop adverse health effects.

10. WHEN SHOULD MY CHILDREN OR I SEE A PHYSICIAN?

If you believe you or your children have symptoms that you think are caused by PERC exposure, you and your children should see a physician. You should tell the physician about the symptoms and about when, how, and for how long you think you and/or your children were exposed to PERC.

11. WHERE CAN I GET MORE INFORMATION?

If you have any questions about the information in this fact sheet, would like to know more about PERC, or are concerned that you may be exposed to elevated levels of PERC, please call the New York State Department of Health at 518-402-7800 or 1-800-458-1158, send an e-mail to btsa@health.state.ny.us, or write to us at the following address.

New York State Department of Health
Bureau of Toxic Substance Assessment
Corning Tower, Room 1743
Empire State Plaza,
Albany, NY 12237

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APPENDIX K-3

NYSDOH FACT SHEET: TRICHLOROETHENE (TCE) IN INDOOR AND OUTDOOR AIR (AUGUST 2015)

TRICHLOROETHENE (TCE) IN INDOOR AND OUTDOOR AIR

AUGUST 2015 FACT SHEET

This fact sheet answers questions about a chemical called trichloroethene (TCE), which is widely used to remove grease from manufactured products. It provides information on health effects seen in humans exposed to TCE in air. It also provides information about the New York State Department of Health's guideline of 2 micrograms of TCE per cubic meter of air (2 mcg/m^3) or 0.002 milligrams of TCE per cubic meter of air (0.002 mg/m^3). The fact sheet focuses on the health risks from air exposures because the primary route of exposure for most people in New York State is via indoor air.

Prepared by

Bureau of Toxic Substance Assessment

New York State Department of Health

1. WHAT IS TRICHLOROETHENE?[1]

Trichloroethene is a human-made clear, colorless liquid that has a somewhat sweet odor similar to ether or chloroform, but it is volatile, meaning it readily evaporates at room temperature into air. It is used as a solvent to remove grease from metal during the manufacture of variety of products, including building/furniture materials, fixtures, fabricated metal, and electric/electronic equipment. Trichloroethene also is used as a paint stripper, adhesive solvent, as an ingredient in paints and varnishes, and in the manufacture of other chemicals. Other names for trichloroethene include TCE and trichloroethylene. TCE will be used in the rest of this fact sheet.

2. HOW CAN PEOPLE BE EXPOSED TO TCE?

People may be exposed to TCE in air, water, and food. Exposure can also occur when TCE or material containing TCE (for example, soil) gets on the skin. For most people, almost all TCE exposure is from indoor air.

TCE gets into air when it is released from industrial facilities and when it evaporates from areas where chemical wastes are stored or disposed. People living in homes located near TCE sources may be exposed to higher levels of TCE than most other people. Groundwater near these areas may become contaminated if TCE is improperly dumped or leaks into the ground. People may be exposed if they drink the contaminated water or if TCE evaporates from contaminated drinking water into indoor air during cooking, showering, and bathing. They may also be exposed if TCE evaporates from the groundwater, enters soil vapor (air spaces between soil particles), and migrates through the foundation and into the indoor air of an overlying building. This process is called soil vapor intrusion. TCE also may get into indoor air when TCE-containing products (for example, glues, adhesives, paint removers, spot removers, and metal cleaners) are used. Indoor air TCE concentrations may increase if people use TCE-containing products in poorly ventilated areas.

3. HOW CAN TCE ENTER AND LEAVE THE BODY?

If people inhale air containing TCE, some of the TCE is exhaled unchanged from the lungs and back into the air. Much of the TCE is taken into the body through the lungs and is passed into the blood, which carries it to other parts of the body. The liver changes most of the TCE in the blood into other compounds,

[1] For a "plain language" version of this fact sheet, see the fact sheet "Important Information on Trichloroethene (TCE) in Indoor and Outdoor Air" available at http://www.health.ny.gov/environmental/chemicals/trichloroethene/.

called breakdown products, most of which are excreted in the urine within a week or so. However, some of the TCE and its breakdown products can be stored in the fat or the liver, and it may take several weeks after exposure stops before almost all of them leave the body.

4. WHAT ARE THE CONCENTRATIONS OF TCE IN INDOOR AND OUTDOOR AIR?

Background Concentrations in Air

Indoor Air

Background indoor air concentrations of chemicals such as TCE are the concentrations measured in buildings in the absence of a local, external environmental source of the chemical. In the absence of such a source, the presence of the chemical in the air of the building is due to its release from products in the building. We used several sources of information on background concentrations of TCE in indoor air collected across the US and in NY and other states (Adgate et al., 2004; Dawson and McAlary, 2009; NYSDOH, 2005, 2014; USEPA, 2001, 2011b, 2015a; Weisel et al., 2005). Overall, the results indicate background concentrations are almost always 1 micrograms per cubic meter of air (1 mcg/m^3) or less when a local, external TCE source is not present.

Outdoor Air

Background outdoor air concentrations of TCE are the concentrations measured in the absence of a known local point-source of TCE. Various NYS studies provide data on TCE outdoor air background concentrations (NYSDEC, 2000, 2002; NYSDOH, 2005, 2014). Collectively, the results indicate background concentrations are almost always 1 mcg/m^3 or less when a local, point-source of TCE source is not present.

Workplace Air Concentrations

TCE air concentrations in workplaces where TCE is manufactured or used are substantially higher than background concentrations. Bakke et al. (2007) reported that the average TCE workplace air concentration across all U.S. industries and over four decades (1950s to 1980s) was 210,000 mcg/m^3. Hein et al. (2010) reviewed the literature (1940 to 2001) and reported the average workplace air concentrations in various industries and occupations ranged from 1.1 mcg/m^3 to 5.9 million mcg/m), with a median of 38,000 mcg/m^3. ATSDR (1997, 2013) reported that the majority of published data on workplace air concentrations showed average concentrations ranging from less than 270,000 mcg/m^3 to 540,000 mcg/m^3.

5. WHAT KINDS OF HEALTH EFFECTS CAN BE CAUSED BY EXPOSURE TO TCE IN AIR?

Information on the health effects of TCE largely comes from studies where people were exposed to air levels much higher than the background levels commonly found in indoor or outdoor air (for example, 90,000 to 807,000 mcg/m^3). In humans, TCE can cause effects on the central nervous system (CNS), liver, kidneys, reproductive and immune systems, and may affect fetal development during pregnancy. Studies in animals show similar kinds of effects. In this fact sheet, we focus on those health effects of greatest concern, largely because they are considered the most sensitive or most serious human health responses to TCE exposures (i.e., CNS effects, developmental and reproductive effects, and cancer).

For all of the different kinds of health effects, the potential for a person to actually experience a health effect depends on several factors, including the amount of exposure, the frequency of exposure, and the duration of the exposure. It also depends on the characteristics of the exposed person, such as age, sex, diet, family traits, lifestyle, genetic background, the presence of other chemicals in their body (for example, alcohol, prescription drugs), and general state of health. Although difficult to quantify, these differences can affect how people will respond to a given exposure. This is known as sensitivity. Differences in sensitivity should be kept in mind when reading the following information on the human health effects of TCE.

Short-Term Exposure

TCE was once used as an anesthetic during surgery. The primary effects of short-term exposure to TCE in air are on the CNS. Exposure to 590,000 mcg/m^3 for eight hours or less reduced performance on neurobehavioral tests of perception, reaction time, memory, and learning. Symptoms of CNS effects, including headaches, lightheadedness, sleepiness, and fatigue, were common in volunteers exposed to 1,100,000 mcg/m^3 for 7 hours/day for 5 days. Also reported were eye, nose, and throat irritation.

A few studies have reported an increased risk for harmful effects on human development, including fetal heart defects, in the offspring of women who lived in areas with elevated concentrations of TCE in indoor air or drinking water. Due to the limitations of the studies, including poor or no quantitative exposure estimates, we do not know if the observed effects on fetal development in humans were caused by TCE or some other factor. Some, but not all, studies in rats, indicate that TCE exposure can cause heart defects in rat pups exposed *in utero* when the mother was exposed during pregnancy.

Long-Term Exposure

Long-term exposure to high concentrations of TCE in workplace air has caused a variety of effects on the CNS, including effects on nerve function, behavior, vision, hearing, muscle control, memory, ability to think, and other symptoms, such as headache and dizziness.

Some human studies have reported associations between TCE exposure and effects on the reproductive system. For women, reported effects include more difficulty getting pregnant and menstrual cycle disturbances. For men, reported effects have included changes in sperm quality/quantity, hormonal function, and reproductive behavior. These studies suggest, but do not prove, that the reproductive effects were caused by TCE and not by some other factor or factors.

Lastly, epidemiological studies provide convincing evidence of a cause-effect relationship between TCE exposure and cancer. The strongest evidence comes from several well-designed studies that found increased risks of kidney cancer among workers exposed to TCE during the degreasing of metal parts, with more limited evidence for non-Hodgkin's lymphoma (NHL) and liver cancer. In laboratory studies, TCE caused cancer at several sites (kidneys, liver, and lymphoid tissues) in rats and mice when they ingested or inhaled high doses almost daily for a lifetime. Based on human and animal data, the United States Environmental Protection Agency (USEPA) classifies TCE as "carcinogenic to humans by all routes of exposure."

6. WHAT IS THE NEW YORK STATE DEPARTMENT OF HEALTH (NYSDOH) GUIDELINE FOR TCE IN AIR?

After considering the potential health effects of TCE, the background concentrations of TCE in air, and the ability and reliability of the analytical techniques used to measure TCE in air, NYSDOH recommends that the TCE concentration in air not exceed 2 mcg/m^3. This determination also considers continuous exposure for months or as long as a lifetime and sensitive populations (for example, children, pregnant women). Three other ways of expressing this guideline are 0.002 milligrams per cubic meter of air (0.002 mg/m^3), 0.4 parts per billion (ppb) or 0.0004 parts per million (ppm). This replaces the previous guideline of 5 mcg/m^3 (NYSDOH, 2006).

7. WHY WAS THE TCE AIR GUIDELINE REDUCED FROM 5 MCG/M^3 TO 2 MCG/M^3?

NYSDOH reduced its air guideline because of new information on the toxicity of TCE. In 2011, the USEPA (2011a, 2015b) recommended a reference concentration (RfC), of 2 mcg/m^3 and an air unit risk of

4.8×10^{-6} per mcg/m^3. An RfC is the level of a chemical in air that is unlikely to cause harmful noncancer health effects in people, even after a lifetime of continuous exposure. An air unit risk is a measure of the potency of a chemical to cause cancer. The air unit risk for TCE means that 4.8 excess cancers are estimated to develop per 1,000,000 people continuously exposed to TCE in air for a lifetime at a concentration of 1 mcg/m^3. Another way to express this value is to say that an air concentration of 0.21 mcg/m^3 is associated with an estimated excess cancer risk of 1×10^{-6} (also expressed as one-in-one million), assuming continuous, lifetime exposure.

The NYSDOH replaced its old RfC and unit risk with USEPA's RfC and unit risk after determining that the USEPA values were (1) based on toxicity information not available when NYSDOH derived its RfC and unit risk and issued the guideline of 5 mcg/m^3; (2) scientifically strong; and (3) adequately protective of the public health. The new RfC is lower than the old NYSDOH guideline, which raised concerns because it has been the past practice of NYSDOH to set a guideline for a chemical at an air concentration that is equal to or less than its RfC. Lowering the guideline also would lower the estimated excess cancer risk associated with lifetime, continuous exposure to the guideline. Consequently, the guideline was reduced to 2 mcg/m^3.

8. HOW IS THE GUIDELINE USED?

The guideline is used to help guide decisions regarding the urgency of efforts to reduce TCE exposure. At TCE air levels above the guideline, the higher the level, the greater the urgency to take action to reduce exposure. But as with any chemical in indoor air, the NYSDOH always recommends taking action to reduce exposure when the air concentration of a chemical is above background, even if it is below the guideline.

Indoor air concentrations substantially above the guideline clearly indicate a significant TCE source and the need for action to reduce exposure. In particular, NYSDOH has concerns about exposure during pregnancy, particularly during the first trimester, to air concentrations higher than 20 mcg/m^3 because the major steps of heart development occur during this period and TCE may be a risk factor for fetal heart defects in humans. Thus, NYSDOH recommends taking immediate and effective action to reduce exposure when an air concentration is equal to, or above 20 mcg/m^3. In all cases, the specific recommended action depends on a case-by-case evaluation of the situation.

9. SHOULD I BE CONCERNED ABOUT HEALTH EFFECTS IF I AM EXPOSED TO TCE LEVELS SLIGHTLY ABOVE THE GUIDELINE?

The guideline is not a bright line between TCE concentrations that cause health effects and those that do not. The guideline was set at an air concentration that is lower than air concentrations known to cause, or suspected of causing, effects in humans and animals. Thus, exposure to concentrations above, but near the guideline, is not expected to cause health effects in people. In addition, the guideline is based on the assumption that people are continuously exposed to TCE in air all day, every day for months or as long as a lifetime. Continuous exposure is rarely true for most people, who, if exposed, are more likely to be exposed for a part of the day, part of a week, or part of their lifetime.

10. WHEN SHOULD I OR MY CHILDREN SEE A PHYSICIAN?

If you believe you, your children, or others you know have signs or symptoms that you think are caused by TCE exposure, see a physician. Tell the physician about the signs/symptoms and about when, how and for how long you think you and/or your children were exposed to TCE.

11. IS THERE A MEDICAL TEST THAT CAN TELL ME IF I HAVE BEEN EXPOSED TO TCE?

TCE can be measured in people's breath and blood soon after they are exposed, and levels generally reflect recent exposures (for example, within the past week or so). TCE breakdown products can be measured in the urine and blood for up to several weeks after exposure to TCE stops. However, the tests for breakdown products cannot determine if you have been exposed only to TCE because exposure to other chemicals can produce the same breakdown products in the urine and blood as TCE. These tests are not routinely done by most clinical laboratories.

Finding a measurable amount of any of these chemicals in breath, blood, or urine does not mean that the levels have or will cause adverse health effects. The results can be used to compare to levels in people without a known source of TCE exposure (i.e., the general population) or to levels found in workers exposed to much greater amounts of TCE. Your physician should discuss these test results with you.

12. WHERE CAN I GET MORE INFORMATION?

If you have any questions about the information in this fact sheet, would like to know more about TCE, or are concerned that you may be exposed to elevated levels of TCE, please call the New York State Department of Health at 1-518-402-7800 or 1-800-458-1158, send an e-mail to btsa@health.ny.gov, or write to us at the following address.

New York State Department of Health
Bureau of Toxic Substance Assessment
Corning Tower, Room 1743
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APPENDIX L

QUARTERLY GROUNDWATER MONITORING RESULTS (MAY 2017 THROUGH DECEMBER 2018)

Summary of Analytical Results - Groundwater
Troy Belting and Supply Co., Colonie, New York

Analyte	NYSDEC TOGs 1.1.1 Standards and Guidance Values	MW-1S								MW-1D					
		5/4/2012	12/20/2012	10/30/2014	11/19/2015	*MIN*	*MAX*	*AVERAGE*	*Trend*	10/30/2014	11/19/2015	*MIN*	*MAX*	*AVERAGE*	*Trend*
Volatile Organic Compounds, µg/L															
1,1,1,2-Tetrachloroethane*	5.0	NA	5.0 U	NA	0.5 U					NA	0.5 U				
1,1,1-Trichloroethane*	5.0	5.0 U	5.0 U	0.82 U	2.5 U	*N/A*	*N/A*	*N/A*	*N/A*	0.82 U	2.5 U	*N/A*	*N/A*	*N/A*	*N/A*
1,1,2,2-Tetrachloroethane*	5.0	5.0 U	5.0 U	0.21 U	NA					0.21 U	NA				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113) *	5.0	5.0 U	5.0 U	0.31 U	2.5 U					0.31 U	2.5 U				
1,1,2-Trichloroethane*	1.0	5.0 U	5.0 U	0.23 U	1.5 U					0.23 U	1.5 U	*N/A*	*N/A*	*N/A*	*N/A*
1,1-Dichloroethane*	5.0	5.0 U	5.0 U	0.38 U	2.5 U	*N/A*	*N/A*	*N/A*	*N/A*	0.38 U	2.5 U	*N/A*	*N/A*	*N/A*	*N/A*
1,1-Dichloroethene*	5.0	5.0 U	5.0 U	0.29 U	0.5 U	*N/A*	*N/A*	*N/A*	*N/A*	0.29 U	0.5 U	*N/A*	*N/A*	*N/A*	*N/A*
1,1-Dichloropropane	1.0	5.0 U	5.0 U	NA	NA					NA	NA				
1,2,3-Trichlorobenzene	5.0	5.0 U	5.0 U	NA	NA					NA	NA				
1,2,3-Trichloropropane	0.0	5.0 U	5.0 U	NA	NA					NA	NA				
1,2,4-Trichlorobenzene	5.0	5.0 U	5.0 U	0.41 U	2.5 U					0.41 U	2.5 U				
1,2,4-Trimethylbenzene	5.0	5.0 U	5.0 U	NA	2.5 U					NA	2.5 U				
1,2-Dibromo-3-Chloropropane	0.04	5.0 U	5.0 U	0.39 U	2.5 U					0.39 U	2.5 U				
1,2-Dibromoethane*	---	5.0 U	5.0 U	0.73 U	2 U					0.73 U	2 U				
1,2-Dichlorobenzene	3.0	5.0 U	5.0 U	0.79 U	2.5 U					0.79 U	2.5 U				
1,2-Dichloroethane	0.6	5.0 U	5.0 U	0.21 U	0.5 U					0.21 U	0.5 U				
1,2-Dichloropropane*	1.0	5.0 U	5.0 U	0.72 U	1 U					0.72 U	1 U				
1,3,5-Trimethylbenzene	5.0	5.0 U	5.0 U	NA	NA					NA	NA				
1,3-Dichlorobenzene	3.0	5.0 U	5.0 U	0.78 U	2.5 U					0.78 U	2.5 U				
1,3-Dichloropropane	5.0	5.0 U	5.0 U	NA	NA					NA	NA				
1,4-Dichlorobenzene	3.0	5.0 U	5.0 U	0.84 U	2.5 U					0.84 U	2.5 U				
1,4-Dioxane	---	NA	NA	NA	250 U					NA	250 U				
2,2 Dichloropropane	5.0	5.0 U	5.0 U	NA	NA					NA	NA				
2-Butanone (MEK)	50	5.0 U	5.0 U	1.3 U	5 U					1.3 U	5 U				
2-Chlorotoluene	5.0	5.0 U	5.0 U	NA	NA					NA	NA				
2-Hexanone	50	5.0 U	5.0 U	1.2 U	5 U					1.2 U	5 U				
4-Chlorotoluene	5.0	5.0 U	5.0 U	NA	NA					NA	NA				
4-Isopropyltoluene	5.0	5.0 U	5.0 U	NA	NA					NA	NA				
4-Methyl-2-pentanone (MIBK)	---	5.0 U	5.0 U	2.1 U	5 U					2.1 U	5 U				
Acetone	50	5.0 U	5.0 U	3.0 U	5 U					3.0 U	5 U				
Benzene	1.0	5.0 U	5.0 U	0.41 U	0.5 U					0.41 U	0.5 U				
Bromobenzene	5.0	5.0 U	5.0 U	NA	NA					NA	NA				
Bromochloromethane*	5.0	5.0 U	5.0 U	NA	2.5 U					NA	2.5 U				
Bromodichloromethane*	*50*	5.0 U	5.0 U	0.39 U	0.5 U					0.39 U	0.5 U				
Bromoform	50	5.0 U	5.0 U	0.26 U	2 U					0.26 U	2 U				
Bromomethane	5.0	5.0 U	5.0 U	0.69 U	2.5 U					0.69 U	2.5 U				
Carbon disulfide	60	5.0 U	5.0 U	1.7	5 U					0.19 U	5 U				
Carbon tetrachloride*	5.0	5.0 U	5.0 U	0.27 U	0.5 U					0.27 U	0.5 U				
Chlorobenzene	5.0	5.0 U	5.0 U	0.75 U	2.5 U					0.75 U	2.5 U				
Chloroethane*	5.0	5.0 U	5.0 U	0.32 U	2.5 U					0.32 U	2.5 U				
Chloroform*	7.0	5.0 U	5.0 U	0.34 U	2.5 U					0.34 U	2.5 U				
Chloromethane*	---	5.0 U	5.0 U	0.35 U	2.5 U					0.35 U	2.5 U				
cis-1,2-Dichloroethene*	5.0	0.76 J	0.79 J	1.1	1.4 J	*0.76*	*1.4*	*0.79*	>	0.81 U	2.5 U	*N/A*	*N/A*	*N/A*	*N/A*
cis-1,3-Dichloropropene	0.4○	5.0 U	5.0 U	0.36 U	0.5 U					0.36 U	0.5 U				
Cyclohexane	---	5.0 U	5.0 U	0.18 U	10 U					0.18 U	10 U				
Dibromochloromethane*	*50*	5.0 U	5.0 U	0.32 U	0.5 U					0.32 U	0.5 U				
Dibromomethane	5.0	5.0 U	5.0 U	NA	NA					NA	NA				
Dichlorodifluoromethane*	5.0	5.0 U	5.0 U	0.68 U	5 U					0.68 U	5 U				
Ethylbenzene	5.0	5.0 U	5.0 U	0.74 U	2.5 U					0.74 U	2.5 U				
Hexachlorobutadiene	0.5	5.0 U	5.0 U	NA	NA					NA	NA				
Iodomethane	---	5.0 U	5.0 U	NA	NA					NA	NA				
Isopropylbenzene	5.0	5.0 U	5.0 U	0.79 U	2.5 U					0.79 U	2.5 U				
Methyl acetate	---	5.0 U	5.0 U	0.5 U	2 U					0.50 U	2 U				
Methyl tert-butyl ether	*10*	5.0 U	5.0 U	0.16 U	10 U					0.16 U	10 U				
Methylcyclohexane	---	5.0 U	5.0 U	0.16 U	2.5 U					0.16 U	2.5 U				
Methylene Chloride*	5.0	5.0 U	5.0 U	0.44 U	2.5 U					0.44 U	2.5 U				
Napthalene	10.0	5.0 U	5.0 U	NA	NA					NA	NA				
n-Butylbenzene	5.0	5.0 U	5.0 U	NA	NA					NA	NA				
n-Propylbenzene	5.0	5.0 U	5.0 U	NA	NA					NA	NA				
o-Xylene	---	5.0 U	5.0 U	NA	2.5 U					NA	2.5 U				
p,m-Xylene	---	5.0 U	5.0 U	NA	2.5 U					NA	2.5 U				
sec-Butylbenzene	5.0	5.0 U	5.0 U	NA	NA					NA	NA				
Styrene	5.0	5.0 U	5.0 U	0.73 U	2.5 U					0.73 U	2.5 U				
tert-Butylbenzene	5.0	5.0 U	5.0 U	NA	NA					NA	NA				
Tetrachloroethene*	5.0	5.0 U	5.0 U	0.36 U	0.5 U	*N/A*	*N/A*	*N/A*	*N/A*	0.36 U	0.5 U	*N/A*	*N/A*	*N/A*	*N/A*
Toluene	5.0	5.0 U	5.0 U	0.51 U	2.5 U					2.0	2.5 U				
trans-1,2-Dichloroethene*	5.0	5.0 U	5.0 U	0.90 U	2.5 U					0.90 U	2.5 U				
trans-1,3-Dichloropropene	0.4○	5.0 U	5.0 U	0.37 U	0.5 U					0.37 U	0.5 U				
Trichloroethene*	5.0	5.0 U	0.76 J	0.46 U	0.5 U	*N/A*	*N/A*	*N/A*	*N/A*	0.46 U	0.5 U	*N/A*	*N/A*	*N/A*	*N/A*
Trichlorofluoromethane*	5.0	5.0 U	5.0 U	0.88 U	2.5 U					0.88 U	2.5 U				
Vinyl Acetate	---	5.0 U	5.0 U	NA	NA					NA	NA				
Vinyl chloride*	2.0	1.5 J	5.0 U	1.8	**2.8**	*1.5*	*2.8*	*2.15*	>	0.90 U	1 U	*N/A*	*N/A*	*N/A*	*N/A*
Xylenes, Total	5.0	5.0 U	5.0 U	0.66 U	NA					0.66 U	NA				
Total Chlorinated Solvents, µg/L															
Total Chlorinated Solvents		2.26 J	1.55 J	2.90	6.70	*1.6*	*6.7*	*2.6*	*N/A*	0.0	0.0	*0.0*	*0.0*	*0.0*	*N/A*
TCE+PCE/Total Chlorinated Solvents (%)		0.0%	0.0%	0.0%	0.0%	*N/A*	*N/A*	*N/A*	*N/A*	0.0%	0.0%	*N/A*	*N/A*	*N/A*	*N/A*
Semivolatile Organic Compounds, ng/L															
1,4-Dioxane		NA	NA	NA	NA	*N/A*	*N/A*	*N/A*	*N/A*	NA	NA	*N/A*	*N/A*	*N/A*	*N/A*

Notes:
Values in **BOLD and highlighted** indicate exceedance of applicable groundwater quality standard.
U = Not Detected. The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J = Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL), for instance, the result may be uncertain.
UJ = Not detected, quantitation limit may be inaccurate or imprecise.
J- = Analyte is present, Reported value may be biased high and associated with a higher level of uncertainty than is normally expected with the analytical method.
J+ = Analyte is present, Reported value may be biased high and associated with a higher level of uncertainty than is normally expected with the analytical method.
E = Result exceeded calibration range.
DL = Indicates a dilution of the sample was required for analysis.
R = Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information necessary to confirm the result.
○ = The groundwater standard is 0.4 µg/L for the sum of cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.
--- = No applicable groundwater standard or guidance value exists.
NA = Not analyzed.
N/A = Not applicable.
* = VOC is a chlorinated solvent.
Qualifiers in Red were modified based on Data Validation Review performed by Alpha Geoscience.
> = Data trend analysis indicates increasing concentration.
< = Data trend analysis indicates decreasing concentration.

Summary of Analytical Results - Groundwater
Troy Belting and Supply Co., Colonie, New York

Analyte	MW-2S								MW-3S					
	5/4/2012	12/20/2012	10/30/2014	11/19/2015	*MIN*	*MAX*	*AVERAGE*	*Trend*	5/4/2012	12/20/2012	10/30/2014	11/19/2015	2/23/2017	5/17/2017
Volatile Organic Compounds, µg/L														
1,1,1,2-Tetrachloroethane*	5.0 U	5.0 U	NA	1,000 U					5.0 U	5.0 U	NA	0.5 U	NA	NA
1,1,1-Trichloroethane*	**2,800 E**	**2,100**	**2,700 E**	**5,300**	***2,100***	***5,300***	***3,225***	>	5.0 U	5.0 U	0.82 U	2.5 U	2.5 U	2.5 U
1,1,2,2-Tetrachloroethane*	5.0 U	5.0 U	1.1 U	NA					5.0 U	5.0 U	0.21 U	NA	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113) *	5.0 U	5.0 U	1.6 U	5,000 U					5.0 U	NA	0.31 U	2.5 U	2.5 U	2.5 U
1,1,2-Trichloroethane*	**9.9**	**7.7**	**2.5 J**	3,000 U	***7.7***	***9.9***	***8.8***	N/A	5.0 U	5.0 U	0.23 U	1.5 U	1.5 U	1.5 U
1,1-Dichloroethane*	**4,300 J DL**	**3,100 E**	**2,900 J DL**	**2,100 J**	***2,100***	***4,300***	***3,100***	<	5.0 U	5.0 U	0.38 U	2.5 U	2.5 U	2.5 U
1,1-Dichloroethene*	**3,000 J DL**	**1,600 E**	**1,200 J DL**	**1,700**	***1,200***	***3,000***	***1,875***	>	5.0 U	5.0 U	0.29 U	0.5 U	0.5 U	0.5 U
1,1-Dichloropropane	5.0 U	5.0 U	NA	NA					5.0 U	5.0 U	NA	NA	NA	NA
1,2,3-Trichlorobenzene	0.82 J	5.0 U	NA	NA					5.0 U	5.0 U	NA	NA	2.5 U	2.5 U
1,2,3-Trichloropropane	5.0 U	5.0 U	NA	NA					5.0 U	5.0 U	NA	NA	NA	NA
1,2,4-Trichlorobenzene	5.0 U	0.64 J	2.1 U	5,000 U					5.0 U	5.0 U	0.41 U	2.5 U	2.5 U	2.5 U
1,2,4-Trimethylbenzene	**98**	110	NA	5,000 U					5.0 U	5.0 U	NA	2.5 U	NA	NA
1,2-Dibromo-3-Chloropropane	5.0 U	5.0 U	2.0 U	5,000 U					5.0 U	5.0 U	0.39 U	2.5 U	2.5 U	2.5 U
1,2-Dibromoethane*	5.0 U	5.0 U	3.7 U	4,000 U					5.0 U	5.0 U	0.73 U	2 U	2 U	2.0 U
1,2-Dichlorobenzene	5.0 U	5.0 U	4.0 U	5,000 U					5.0 U	5.0 U	0.79 U	2.5 U	2.5 U	2.5 U
1,2-Dichloroethane	**3.8 J**	**2.9**	**2.4 J**	1,000 U					5.0 U	5.0 U	0.21 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane*	5.0 U	5.0 U	3.6 U	2,000 U					5.0 U	5.0 U	0.72 U	1 U	1 U	1.0 U
1,3,5-Trimethylbenzene	**35**	**37**	NA	NA					5.0 U	5.0 U	NA	NA	NA	NA
1,3-Dichlorobenzene	5.0 U	5.0 U	3.9 U	5,000 U					5.0 U	5.0 U	0.78 U	2.5 U	2.5 U	2.5 U
1,3-Dichloropropane	5.0 U	5.0 U	NA	NA					5.0 U	5.0 U	NA	NA	NA	NA
1,4-Dichlorobenzene	5.0 U	5.0 U	4.2 U	5,000 U					5.0 U	5.0 U	0.84 U	2.5 U	2.5 U	2.5 U
1,4-Dioxane	NA	NA	NA	500,000 U					NA	NA	NA	250 U	250 U	250 U
2,2 Dichloropropane	5.0 U	5.0 U	NA	NA					5.0 U	5.0 U	NA	NA	NA	NA
2-Butanone (MEK)	5.0 U	5.0 U	6.6 U	10,000 U					5.0 U	5.0 U	1.3 U	5 U	5 U	5.0 U
2-Chlorotoluene	5.0 U	5.0 U	NA	NA					5.0 U	5.0 U	NA	NA	NA	NA
2-Hexanone	5.0 U	5.0 U	6.2 U	10,000 U					5.0 U	5.0 U	1.2 U	5 U	5 U	5.0 U
4-Chlorotoluene	5.0 U	5.0 U	NA	NA					5.0 U	5.0 U	NA	NA	NA	NA
4-Isopropyltoluene	5.0 U	5.0 U	NA	NA					5.0 U	5.0 U	NA	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	14	17	11 U	10,000 U					5.0 U	5.0 U	2.1 U	5 U	5 U	5.0 U
Acetone	**130**	**120**	**51**	10,000 U					5.0 U	5.0 U	3.0 U	5 U	5 U	5.0 U
Benzene	**8.4**	**6.2**	**6.2**	1,000 U					5.0 U	5.0 U	0.41 U	0.5 U	0.5 U	0.5 U
Bromobenzene	5.0 U	5.0 U	NA	NA					5.0 U	5.0 U	NA	NA	NA	NA
Bromochloromethane*	5.0 U	5.0 U	NA	5,000 U					5.0 U	5.0 U	NA	2.5 U	2.5 U	2.5 U
Bromodichloromethane*	5.0 U	5.0 U	2.0 U	1,000 U					5.0 U	5.0 U	0.39 U	0.5 U	0.5 U	0.5 U
Bromoform	5.0 U	5.0 U	1.3 U	4,000 U					5.0 U	5.0 U	0.26 U	2 U	2 U	2.0 U
Bromomethane	5.0 U	5.0 U	3.5 U	5,000 U					5.0 U	5.0 U	0.69 U	2.5 U	2.5 U	2.5 U
Carbon disulfide	2.1 J	0.77 J	2.2 J	10,000 U					5.0 U	5.0 U	0.19 U	5 U	5 U	5.0 U
Carbon tetrachloride*	5.0 U	5.0 U	1.4 U	1,000 U					5.0 U	5.0 U	0.27 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	5.0 U	5.0 U	3.8 U	5,000 U					5.0 U	5.0 U	0.75 U	2.5 U	2.5 U	2.5 U
Chloroethane*	2.0 J	1.8	1.6 U	5,000 U					5.0 U	5.0 U	0.32 U	2.5 U	2.5 U	2.5 U
Chloroform*	5.1	3.6	3.4 J	5,000 U					5.0 U	5.0 U	0.34 U	2.5 U	2.5 U	2.5 U
Chloromethane*	5.0 U	5.0 U	1.8 U	5,000 U					5.0 U	5.0 U	0.35 U	2.5 U	2.5 U	2.5 U
cis-1,2-Dichloroethene*	**5,200 DL**	**7,200 E**	**78,000 DL**	**100,000**	***5,200***	***100,000***	***47,600***	>	1.2 J	5.0 U	0.81 U	2.5 U	2.5 U	2.5 U
cis-1,3-Dichloropropene	5.0 U	5.0 U	1.8 U	1,000 U					5.0 U	5.0 U	0.36 U	0.5 U	0.5 U	0.5 U
Cyclohexane	NA	NA	0.90 U	20,000 U					NA	NA	0.18 U	10 U	10 U	10 U
Dibromochloromethane*	5.0 U	5.0 U	1.6 U	1,000 U					5.0 U	5.0 U	0.32 U	0.5 U	0.5 U	0.5 U
Dibromomethane	NA	5.0 U	NA	NA					NA	5.0 U	NA	NA	NA	NA
Dichlorodifluoromethane*	5.0 U	5.0 U	3.4 U	10,000 U					5.0 U	5.0 U	0.68 U	5 U	5 U	5.0 U
Ethylbenzene	**32**	**27**	**15**	5,000 U					5.0 U	5.0 U	0.74 U	2.5 U	2.5 U	2.5 U
Hexachlorobutadiene	5.0 U	5.0 U	NA	NA					5.0 U	5.0 U	NA	NA	NA	NA
Iodomethane	5.0 U	5.0 U	NA	NA					5.0 U	5.0 U	NA	NA	NA	NA
Isopropylbenzene	**7.5**	**7.4**	**5.3**	5,000 U					5.0 U	5.0 U	0.79 U	2.5 U	2.5 U	2.5 U
Methyl acetate	NA	NA	2.5 U	4,000 U					NA	NA	0.50 U	2 U	2 U	2.0 U
Methyl tert-butyl ether	NA	NA	1.1 J	20,000 U					NA	NA	0.16 U	10 U	10 U	2.5 U
Methylcyclohexane	5.0 U	5.0 U	0.80 U	5,000 U					5.0 U	5.0 U	0.16 U	2.5 U	2.5 U	10 U
Methylene Chloride*	**520 E**	**390**	**300**	5,000 U					5.0 U	0.60 J	0.44 U	2.5 U	2.5 U	2.5 U
Napthalene	**8.7**	**12**	NA	NA					5.0 U	NA	NA	NA	NA	NA
n-Butylbenzene	**11**	**8.2**	NA	NA					5.0 U	5.0 U	NA	NA	NA	NA
n-Propylbenzene	**12**	**13**	NA	NA					5.0 U	5.0 U	NA	NA	NA	NA
o-Xylene	44	39	NA	5,000 U					5.0 U	5.0 U	NA	2.5 U	2.5 U	2.5 U
p,m-Xylene	76	67	NA	5,000 U					5.0 U	5.0 U	NA	2.5 U	2.5 U	2.5 U
sec-Butylbenzene	**5.4**	**6.5**	NA	NA					5.0 U	5.0 U	NA	NA	NA	NA
Styrene	5.0 U	5.0 U	3.7 U	5,000 U					5.0 U	5.0 U	0.73 U	2.5 U	2.5 U	2.5 U
tert-Butylbenzene	5.0 U	5.0 U	NA	NA					5.0 U	5.0 U	NA	NA	NA	NA
Tetrachloroethene*	**2,600 E**	**2,400 E**	**2,100 J DL**	**2,000**	***2,000***	***2,600***	***2,275.0***	<	1.2	5.0 U	0.36 U	0.5 U	0.5 U	0.5 U
Toluene	**210 E**	**170**	**100**	5,000 U					5.0 U	5.0 U	0.51 U	2.5 U	2.5 U	2.5 U
trans-1,2-Dichloroethene*	**260 E**	**110**	**280**	5,000 U					5.0 U	5.0 U	0.90 U	2.5 U	2.5 U	2.5 U
trans-1,3-Dichloropropene	5.0 U	5.0 U	1.9 U	1,000 U					5.0 U	5.0 U	0.37 U	0.5 U	0.5 U	0.5 U
Trichloroethene*	**6,500 E**	**10,000 E**	**220,000 DL**	**330,000**	***6,500***	***330,000***	***141,625***	>	**39**	5.0 U	0.46 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane*	5.0 U	5.0 U	4.4 U	5,000 U					5.0 U	5.0 U	0.88 U	2.5 U	2.5 U	2.5 U
Vinyl Acetate	5.0 U	5.0 U	NA	NA					5.0 U	5.0 U	NA	NA	NA	NA
Vinyl chloride*	**290 E**	**390 E**	**1,500 E**	**4,100 J**	***290***	***4,100***	***1,963.3***	>	5.0 U	5.0 U	0.90 U	1.0 U	1.0 U	1.0 U
Xylenes, Total	**120**	**110**	**44**	NA					5.0 U	5.0 U	0.66 U	NA	NA	NA
Total Chlorinated Solvents, µg/L														
Total Chlorinated Solvents	25,485	27,301	308,986	445,200	*25,485*	*445,200*	*201,743*	>	41.4	0.6	0.0	2.5 J	0.0	0.0
TCE+PCE/Total Chlorinated Solvents (%)	36%	45%	72%	75%	*36%*	*75%*	*57%*	*N/A*	97%	0.0%	0.0%	0.0%	0.0%	0.0%
Semivolatile Organic Compounds, ng/L														
1,4-Dioxane	NA	NA	NA	NA	*N/A*	*N/A*	*N/A*	*N/A*	NA	NA	NA	NA	NA	147 U

Notes:
Values in **BOLD and highlighted** indicate exceedance of applicable groundwater quality standard.
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○ = The groundwater standard is 0.4 µg/L for the sum of cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.
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* = VOC is a chlorinated solvent.
Qualifiers in Red were modified based on Data Validation Review performed by Alpha Geoscience.
> = Data trend analysis indicates increasing concentration.
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Summary of Analytical Results - Groundwater
Troy Belting and Supply Co., Colonie, New York

Analyte	MW-3S (Continued)										MW-4S								
	9/20/2017	12/20/2017	3/28/2018	6/21/2018	9/26/2018	12/20/2018	*MIN*	*MAX*	*AVERAGE*	*Trend*	5/4/2012	12/20/2012	10/30/2014	11/19/2015	2/24/2017	5/18/2017	9/21/2017	12/21/2017	3/29/2018
Volatile Organic Compounds, µg/L																			
1,1,1,2-Tetrachloroethane*	NA	NA	NA	NA	NA	NA					NA	5.0 U	NA	25 U	NA	NA	NA	NA	NA
1,1,1-Trichloroethane*	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U	*N/A*	*N/A*	*N/A*	*N/A*	NA	0.53 J	1.6 U	120 U	100 U	120 U	120 U	120 U	120 U
1,1,2,2-Tetrachloroethane*	0.5 U	0.5 U	0.5 U	0.17 U	0.17 U	0.17 U					NA	5.0 U	0.42 U	NA	20 U	25 U	25 U	25 U	25 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113) *	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					NA	NA	0.62 U	120 U	100 U	120 U	120 U	120 U	120 U
1,1,2-Trichloroethane*	1.5 U	1.5 U	1.5 U	0.5 U	0.5 U	0.5 U	*N/A*	*N/A*	*N/A*	*N/A*	NA	5.0 U	0.46 U	75 U	60 U	75 U	75 U	75 U	75 U
1,1-Dichloroethane*	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U	*N/A*	*N/A*	*N/A*	*N/A*	NA	**93.0**	**5.80**	**69.0 J**	100 U	**57.0 J**	**79.0 J**	**58.0 J**	**40.0 J**
1,1-Dichloroethene*	0.5 U	0.5 U	0.5 U	0.17 U	0.17 U	0.17 U	*N/A*	*N/A*	*N/A*	*N/A*	NA	**15.0**	0.58 U	**10 J**	20 U	**10 J**	**14 J**	**11 J**	**8.4 J**
1,1-Dichloropropane	NA	NA	NA	NA	NA	NA					NA	5.0 U	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	2.5 U	2.5 U	2.5 UJ	0.7 U	0.7 U	0.7 U					NA	5.0 U	NA	NA	100 U	120 UJ	120 U	120 U	120 UJ
1,2,3-Trichloropropane	NA	NA	NA	NA	NA						NA	5.0 U	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					NA	5.0 U	0.82 U	120 U	100 U	120 U	120 U	120 U	120 UJ
1,2,4-Trimethylbenzene	NA	NA	NA	NA	NA	NA					NA	5.0 U	NA	120 U	NA	NA	NA	NA	NA
1,2-Dibromo-3-Chloropropane	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					NA	5.0 U	0.78 U	120 U	100 U	120 U	120 U	120 U	120 U
1,2-Dibromoethane*	2 U	2 U	2 U	0.65 U	0.65 U	0.65 U					NA	5.0 U	1.5 U	100 U	80 U	100 U	100 U	100 U	100 U
1,2-Dichlorobenzene	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					NA	5.0 U	1.6 U	120 U	100 U	120 U	120 U	120 U	120 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.13 U	0.13 U	0.13 U					NA	5.0 U	0.42 U	25 U	20 U	25 U	25 U	25 U	25 U
1,2-Dichloropropane*	1 U	130 U	1 U	0.14 U	0.14 U	0.14 U					NA	5.0 U	1.4 U	50 U	40 U	50 U	50 U	50 U	50 U
1,3,5-Trimethylbenzene	NA	NA	NA	NA	NA	NA					NA	5.0 U	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					NA	5.0 U	1.6 U	120 U	100 U	120 U	120 U	120 U	120 U
1,3-Dichloropropane	NA	NA	NA	NA	NA	NA					NA	5.0 U	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					NA	5.0 U	1.7 U	120 U	100 U	120 U	120 U	120 U	120 U
1,4-Dioxane	250 U	250 R	250 R	61 R	61 R	61 U					NA	NA	NA	12,000 U	10,000 U	12,000 U	12,000 U	12,000 R	12,000 R
2,2 Dichloropropane	NA	NA	NA	NA	NA	NA					NA	5.0 U	NA	NA	NA	NA	NA	NA	NA
2-Butanone (MEK)	5 U	5 U	5 U	1.9 U	1.9 U	1.9 U					NA	5.0 U	2.6 U	250 U	**120 J**	250 U	250 U	250 U	250 U
2-Chlorotoluene	NA	NA	NA	NA	NA	NA					NA	5.0 U	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	5 U	5 U	5 U	1 U	1 U	1 U					NA	5.0 U	2.5 U	250 U	200 U	250 U	250 U	250 U	250 U
4-Chlorotoluene	NA	NA	NA	NA	NA	NA					NA	5.0 U	NA	NA	NA	NA	NA	NA	NA
4-Isopropyltoluene	NA	NA	NA	NA	NA	NA					NA	5.0 U	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	5 U	5 U	5 U	1 U	1 U	1 U					NA	5.0 U	4.2 U	250 U	200 U	250 U	250 U	250 U	250 U
Acetone	5 U	5 U	5 U	1.5 U	1.8 U	1.5 U					NA	5.0 U	6.0 U	250 U	200 U	**340**	250 U	250 U	250 U
Benzene	0.5 U	0.5 U	0.5 U	0.16 U	0.16 U	0.16 U					NA	5.0 U	0.82 U	25 U	20 U	25 U	25 U	25 U	25 U
Bromobenzene	NA	NA	NA	NA	NA	NA					NA	5.0 U	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane*	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					NA	5.0 U	NA	120 U	100 U	120 U	120 U	120 U	120 U
Bromodichloromethane*	0.5 U	0.5 U	0.5 U	0.19 U	0.19 U	0.19 U					NA	5.0 U	0.78 U	25 U	20 U	25 U	25 U	25 U	25 U
Bromoform	2 U	2 U	2 U	0.65 U	0.65 U	0.65 U					NA	5.0 U	0.52 U	100 U	80 U	100 U	100 U	100 U	100 UJ
Bromomethane	2.5 U	2.5 UJ	2.5 UJ	0.7 U	0.7 U	0.7 U					NA	5.0 U	1.4 U	120 U	100 U	120 U	120 UJ	120 UJ	120 UJ
Carbon disulfide	5 U	5 U	5 U	1 U	1 U	1 U					NA	5.0 U	0.38 U	250 U	200 U	250 U	250 U	250 U	250 U
Carbon tetrachloride*	0.5 U	0.5 U	0.5 U	0.13 U	0.13 U	0.13 U					NA	5.0 U	0.54 U	25 U	20 U	25 U	25 U	25 U	25 U
Chlorobenzene	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					NA	5.0 U	1.5 U	120 U	100 U	120 U	120 U	120 U	120 U
Chloroethane*	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					NA	5.0 U	1.1 J	120 U	100 U	120 U	120 U	120 U	120 U
Chloroform*	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					NA	5.0 U	0.68 U	120 U	100 U	120 U	120 U	120 U	120 U
Chloromethane*	2.5 U	2.5 UJ	2.5 U	0.7 U	0.7 U	0.7 U					NA	5.0 U	0.70 U	120 U	100 U	120 U	120 U	120 UJ	120 U
cis-1,2-Dichloroethene*	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U	*N/A*	*N/A*	*N/A*	*N/A*	NA	**6,500 E**	**180**	**6,800**	**2,700**	**6,000**	**7,600**	**6,400**	**4,300**
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.14 U	0.14 U	0.14 U					NA	5.0 U	0.72 U	25 U	20 U	25 U	25 U	25 U	25 U
Cyclohexane	10 U	10 U	10 U	0.27 U	0.27 U	0.27 U					NA	NA	0.36 U	500 U	400 U	500 U	500 U	500 U	500 U
Dibromochloromethane*	0.5 U	0.5 U	0.5 U	0.15 U	0.15 U	0.15 U					NA	5.0 U	0.64 U	25 U	20 U	25 U	25 U	25 U	25 U
Dibromomethane	NA	NA	NA	NA	NA	NA					NA	5.0 U	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane*	5 U	5 U	5 U	1 U	1 U	1 U					NA	5.0 U	1.4 U	250 U	200 U	250 U	250 U	250 U	250 U
Ethylbenzene	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					NA	5.0 U	1.5 U	120 U	100 U	120 U	120 U	120 U	120 U
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA					NA	5.0 U	NA	NA	NA	NA	NA	NA	NA
Iodomethane	NA	NA	NA	NA	NA	NA					NA	5.0 U	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					NA	5.0 U	1.6 U	120 U	100 U	120 U	120 U	120 U	120 U
Methyl acetate	2 U	2 U	2 U	0.23 U	0.23 U	0.23 U					NA	NA	1.0 U	100 U	80 U	100 U	100 U	100 U	100 U
Methyl tert-butyl ether	0.40 J	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					NA	NA	0.32 U	500 U	400 U	120 U	500 U	120 U	120 U
Methylcyclohexane	2.5 U	10 U	10 U	0.4 U	0.4 U	0.4 U					NA	5.0 U	0.32 U	120 U	100 U	500 U	120 U	500 U	500 U
Methylene Chloride*	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					NA	5.0 U	0.88 U	120 U	100 U	120 U	120 U	120 U	120 U
Napthalene	NA	NA	NA	NA	NA	NA					NA	5.0 U	NA	NA	NA	NA	NA	NA	NA
n-Butylbenzene	NA	NA	NA	NA	NA	NA					NA	5.0 U	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	NA	NA	NA	NA	NA	NA					NA	5.0 U	NA	NA	NA	NA	NA	NA	NA
o-Xylene	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					NA	5.0 U	NA	120 U	100 U	120 U	120 U	120 U	120 U
p,m-Xylene	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					NA	5.0 U	NA	120 U	100 U	120 U	120 U	120 U	120 U
sec-Butylbenzene	NA	NA	NA	NA	NA	NA					NA	5.0 U	NA	NA	NA	NA	NA	NA	NA
Styrene	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					NA	5.0 U	1.5 U	120 U	100 U	120 U	120 U	120 U	120 U
tert-Butylbenzene	NA	NA	NA	NA	NA	NA					NA	5.0 U	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene*	0.5 U	0.5 U	0.5 U	0.18 U	0.18 U	0.18 U	*ND*	*1.2*	*N/A*	N/A	NA	3.3 J	0.72 U	25 U	20 U	25 U	25 U	25 U	25 U
Toluene	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					NA	5.0 U	1.0 U	120 U	100 U	120 U	120 U	120 U	120 U
trans-1,2-Dichloroethene*	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					NA	**34**	1.8 U	120 U	100 U	120 U	120 U	120 U	120 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.16 U	0.16 U	0.16 U					NA	5.0 U	0.74 U	25 U	20 U	25 U	25 U	25 U	25 U
Trichloroethene*	0.5 U	0.5 U	0.5 U	0.18 U	0.18 U	0.18 U	*ND*	**39**	*N/A*	N/A	NA	**460.0 E**	3.0	**160.0**	**33**	**84**	**84**	**82**	**44**
Trichlorofluoromethane*	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					NA	5.0 U	1.8 U	120 U	100 U	120 U	120 U	120 U	120 U
Vinyl Acetate	NA	NA	NA	NA	NA	NA					NA	5.0 U	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride*	1.0 UJ	1.0 UJ	1.0 U	0.07 U	0.07 U	0.07 U	*ND*	N/A	*N/A*	N/A	NA	**260 E**	**70.0**	**180 J**	**89**	**240**	**330 J**	**160 J-**	**140**
Xylenes, Total	NA	NA	NA	NA	NA	NA					NA	5.0 U	1.3 U	NA	NA	NA	NA	NA	NA
Total Chlorinated Solvents, µg/L																			
Total Chlorinated Solvents	0.40	0.0	0.0	0.0	0.0	0.0	*0.0*	*41.4*	*3.7*	<	NA	7,366	259	7,219	2,900	6,731	8,107	6,711	4,532
TCE+PCE/Total Chlorinated Solvents (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	*0%*	*97%*	*8%*	*N/A*	NA	6.3%	1.2%	2.2%	3.4%	1.2%	1.0%	1.2%	1.0%
Semivolatile Organic Compounds, ng/L																			
1,4-Dioxane	153 U	142 U	155 U	73.5 U	73.5 U	69.4 U	*N/A*	*N/A*	*N/A*	*N/A*	NA	NA	NA	NA	NA	18,500	28,800	31,000	21,000

Notes:
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Summary of Analytical Results - Groundwater
Troy Belting and Supply Co., Colonie, New York

Analyte	MW-4S (Continued)							MW-4D						MW-5S				
	6/22/2018	9/27/2018	12/21/2018	*MIN*	*MAX*	*AVERAGE*	*Trend*	10/30/2014	11/19/2015	*MIN*	*MAX*	*AVERAGE*	*Trend*	5/4/2012	12/20/2012	10/30/2014	11/19/2015	2/24/2017
Volatile Organic Compounds, µg/L																		
1,1,1,2-Tetrachloroethane*	NA	NA						NA	0.5 U					NA	5.0 U	NA	500 U	NA
1,1,1-Trichloroethane*	35 U	35 U	35 U	*N/A*	*N/A*	*N/A*	*N/A*	0.82 U	2.5 U	*N/A*	*N/A*	*N/A*	*N/A*	NA	**5,000 E**	**5,000 E**	**8,400**	**5,000**
1,1,2,2-Tetrachloroethane*	8.4 U	8.4 U	8.4 U					0.21 U	NA					NA	5.0 U	1.1 U	NA	250 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113) *	35 U	35 U	35 U					0.31 U	2.5 U					NA	NA	1.6 U	2,500 U	1,200 U
1,1,2-Trichloroethane*	25 U	25 U	25 U					0.23 U	1.5 U					NA	**8.1**	1.2 U	1,500 U	750 U
1,1-Dichloroethane*	**39 J**	**64 J**	**59 J**	***5.80***	***93.0***	***53.4***	>	0.38 U	2.5 U	*N/A*	*N/A*	*N/A*	*N/A*	NA	**1,700 E**	**100**	**940 J**	**460 J**
1,1-Dichloroethene*	**10 J**	**11 J**	**12 J**	***8.4***	***15***	***11.3***	---	0.29 U	0.5 U	*N/A*	*N/A*	*N/A*	*N/A*	NA	**2,700 E**	**2,000 E**	**830**	**550**
1,1-Dichloropropane	NA	NA	NA					NA	NA					NA	5 U	NA	NA	NA
1,2,3-Trichlorobenzene	35 U	35 U	35 U					NA	NA					NA	**1.2 J**	NA	NA	1,200 U
1,2,3-Trichloropropane	NA	NA	NA					NA	NA					NA	**91**	NA	NA	NA
1,2,4-Trichlorobenzene	35 U	35 U	35 U					0.41 U	2.5 U					NA	0.78 J	2.1 U	2,500 U	1,200 U
1,2,4-Trimethylbenzene	NA	NA	NA					NA	2.5 U					NA	5.0 U	NA	2,500 U	NA
1,2-Dibromo-3-Chloropropane	35 U	35 U	35 U					0.39 U	2.5 U					NA	5.0 U	2.0 U	2,500 U	1,200 U
1,2-Dibromoethane*	32 U	32 U	32 U					0.73 U	2 U					NA	5.0 U	3.7 U	2,000 U	1,000 U
1,2-Dichlorobenzene	35 U	35 U	35 U					0.79 U	2.5 U					NA	5.0 U	4.0 U	2,500 U	1,200 U
1,2-Dichloroethane	6.6 U	6.6 U	6.6 U					0.21 U	0.5 U					NA	**8.0**	**3.6 J**	500 U	250 U
1,2-Dichloropropane*	6.8 U	6.8 U	6.8 U					0.72 U	1 U					NA	5.0 U	3.6 U	1,000 U	500 U
1,3,5-Trimethylbenzene	NA	NA	NA					NA	NA					NA	NA	NA	NA	NA
1,3-Dichlorobenzene	35 U	35 U	35 U					0.78 U	2.5 U					NA	5.0 U	3.9 U	2,500 U	1,200 U
1,3-Dichloropropane	NA	NA	NA					NA	NA					NA	5.0 U	NA	NA	NA
1,4-Dichlorobenzene	35 U	35 U	35 U					0.84 U	2.5 U					NA	0.52 J	4.2 U	2,500 U	1,200 U
1,4-Dioxane	3,000 R	3,000 R	3000 R					NA	250 U					NA	NA	NA	250,000 U	120,000 U
2,2 Dichloropropane	NA	NA	NA					NA	NA					NA	5.0 U	NA	NA	NA
2-Butanone (MEK)	97 U	97 U	97 U					1.3 U	5 U					NA	5.0 U	6.6 U	5,000 U	**1,400 J**
2-Chlorotoluene	NA	NA	NA					NA	NA					NA	5.0 U	NA	NA	NA
2-Hexanone	50 U	50 U	50 U					1.2 U	5 U					NA	5.0 U	8.3 J	5,000 U	2,500 U
4-Chlorotoluene	NA	NA	NA					NA	NA					NA	5.0 U	NA	NA	NA
4-Isopropyltoluene	NA	NA	NA					NA	NA					NA	5.0 U	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	50 U	50 U	50 U					2.1 U	5 U					NA	23	11 U	5,000 U	2,500 U
Acetone	73 U	73 U	73 U					3.0 U	1.7 J					NA	**130**	**110**	5,000 U	2,500 U
Benzene	8 U	8 U	8 U					0.41 U	0.5 U					NA	**8.2**	**4.6 J**	500 U	250 U
Bromobenzene	NA	NA	NA					NA	NA					NA	5.0 U	NA	NA	NA
Bromochloromethane*	35 U	35 U	35 U					NA	2.5 U					NA	5.0 U	NA	2,500 U	1,200 U
Bromodichloromethane*	9.6 U	9.6 U	9.6 U					0.39 U	0.5 U					NA	5.0 U	2.0 U	500 U	250 U
Bromoform	32 U	32 U	32 U					0.26 U	2 U					NA	5.0 U	1.3 U	2,000 U	1,000 U
Bromomethane	35 U	35 U	35 U					0.69 U	2.5 U					NA	5.0 U	3.5 U	2,500 U	1,200 U
Carbon disulfide	50 U	50 U	50 U					1.2	5 U					NA	3.5 J	6.1	5,000 U	2,500 U
Carbon tetrachloride*	6.7 U	6.7 U	6.7 U					0.27 U	0.5 U					NA	5.0 U	1.4 U	500 U	250 U
Chlorobenzene	35 U	35 U	35 U					0.75 U	2.5 U					NA	0.60 J	3.8 U	2,500 U	1,200 U
Chloroethane*	35 U	35 U	35 U					0.32 U	2.5 U					NA	5.0 U	1.6 U	2,500 U	1,200 U
Chloroform*	35 U	35 U	35 U					0.34 U	2.5 U					NA	3.5 J	1.7 U	2,500 U	1,200 U
Chloromethane*	35 UJ	35 U	35 U					0.35 U	2.5 U					NA	5.0 U	1.8 U	2,500 U	1,200 U
cis-1,2-Dichloroethene*	**5,000**	**5,800**	**6,500**	***180***	***7,600***	***5,253***	>	**25.0**	2.1 J	*2.1*	***25.0***	***13.6***	<	NA	**9,900 E**	**99,000 DL**	**66,000**	**48,000**
cis-1,3-Dichloropropene	7.2 U	7.2 U	7.2 U					0.36 U	0.5 U					NA	5.0 U	1.8 U	500 U	250 U
Cyclohexane	14 U	14 U	14 U					0.18 U	10 U					NA	---	0.90 U	10,000 U	5,000 U
Dibromochloromethane*	7.4 U	7.4 U	7.4 U					0.32 U	0.5 U					NA	5.0 U	1.6 U	500 U	250 U
Dibromomethane	NA	NA	NA					NA	NA					NA	5.0 U	NA	NA	NA
Dichlorodifluoromethane*	50 U	50 U	50 U					0.68 U	5 U					NA	5.0 U	3.4 U	5,000 U	2,500 U
Ethylbenzene	35 U	35 U	35 U					0.74 U	2.5 U					NA	**48**	**46**	2,500 U	1,200 U
Hexachlorobutadiene	NA	NA	NA					NA	NA					NA	5.0 U	NA	NA	NA
Iodomethane	NA	NA	NA					NA	NA					NA	5.0 U	NA	NA	NA
Isopropylbenzene	35 U	35 U	35 U					0.79 U	2.5 U					NA	**6.3**	**6.4**	2,500 U	1,200 U
Methyl acetate	12 U	12 U	12 U					0.50 U	2 U					NA	NA	2.5 U	2,000 U	1,000 U
Methyl tert-butyl ether	35 U	35 U	35 U					0.16 U	10 U					NA	NA	0.80 U	10,000 U	5,000 U
Methylcyclohexane	20 U	20 U	20 U					0.16 U	2.5 U					NA	5.0 U	0.80 U	2,500 U	1,200 U
Methylene Chloride*	35 U	35 U	35 U					0.44 U	2.5 U					NA	**600**	**400**	2,500 U	1,200 U
Napthalene	NA	NA	NA					NA	NA					NA	**20**	NA	NA	NA
n-Butylbenzene	NA	NA	NA					NA	NA					NA	**8.6**	NA	NA	NA
n-Propylbenzene	NA	NA	NA					NA	NA					NA	**11**	NA	NA	NA
o-Xylene	35 U	35 U	35 U					NA	2.5 U					NA	**72 E**	NA	2,500 U	**360 J**
p,m-Xylene	35 U	35 U	35 U					NA	2.5 U					NA	**130 E**	NA	2,500 U	1,200 U
sec-Butylbenzene	NA	NA	NA					NA	NA					NA	4.0 J	NA	NA	NA
Styrene	35 U	35 U	35 U					0.73 U	2.5 U					NA	5.0 U	3.7 U	2,500 U	1,200 U
tert-Butylbenzene	NA	NA	NA					NA	NA					NA	5.0 U	NA	NA	NA
Tetrachloroethene*	9 U	9 U	9 U	*ND*	*3.3 J*	*N/A*	*N/A*	0.36 U	0.5 U					NA	**2,700 E**	**6,100 DL**	**8,000**	**6,500**
Toluene	35 U	35 U	35 U					**22**	2.5 U					NA	**300**	**230**	2,500 U	1,200 U
trans-1,2-Dichloroethene*	35 U	35 U	35 U					0.90 U	2.5 U					NA	**320 E**	4,500 U D	2,500 U	1,200 U
trans-1,3-Dichloropropene	8.2 U	8.2 U	8.2 U					0.37 U	0.5 U					NA	5.0 U	1.9 U	500 U	250 U
Trichloroethene*	**46**	**34**	**42**	***3.0***	***460***	***97.5***	<	0.46 U	0.5 U	*N/A*	*N/A*	*N/A*	*N/A*	NA	**11,000 E**	**400,000 DL**	**390,000 E**	**250,000 E DL**
Trichlorofluoromethane*	35 U	35 U	35 U					0.88 U	2.5 U					NA	5.0 U	4.4 U	2500 U	1,200 U
Vinyl Acetate	NA	NA	NA					NA	NA					NA	5.0 U	NA	NA	NA
Vinyl chloride*	**180**	**460**	**300**	***70.0***	***460***	***219.0***	>	**6.50**	**5.9 J**	***5.9***	**6.5**	**6.2**	<	NA	**5,900 E**	**7,600 DL**	**2,000 J**	**1,500**
Xylenes, Total	NA	NA	NA					0.66 U	NA					NA	**200**	**190**	NA	NA
Total Chlorinated Solvents, µg/L																		
Total Chlorinated Solvents	5,275	6,369	6,913	*259*	*8,107*	*5,671*	>	31.5	8.0 J	*8.0*	*31.5*	*19.8*	*N/A*	NA	39,832	524,700	476,170	57,610
TCE+PCE/Total Chlorinated Solvents (%)	0.9%	0.53%	0.61%	*0.5%*	*6.3%*	*1.8%*	<	0.0%	0.0%	*0.0%*	*0.0%*	*0.0%*	*N/A*	NA	34%	77%	84%	12.8%
Semivolatile Organic Compounds, ng/L																		
1,4-Dioxane	26,000 J-	30,400	27,200	*18,500*	*31,000*	*26,129*	>	NA	NA	N/A	N/A	N/A	N/A	NA	NA	NA	NA	NA

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○ = The groundwater standard is 0.4 µg/L for the sum of cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.
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Summary of Analytical Results - Groundwater
Troy Belting and Supply Co., Colonie, New York

Analyte	MW-5S (Continued)											MW-6S				
	5/18/2017	9/21/2017	12/21/2017	3/29/2018	6/22/2018	9/27/2018	12/21/2018	MIN	MAX	AVERAGE	Trend	10/30/2014	11/19/2015	2/24/2017	5/18/2017	9/21/2017
Volatile Organic Compounds, µg/L																
1,1,1,2-Tetrachloroethane*	NA	NA	NA	NA	NA	NA	NA					NA	12 U	NA	NA	NA
1,1,1-Trichloroethane*	**5,400**	**6,300 J**	**6,800**	**1,400 J**	**6,700**	**4,200 J**	**7,500**	**1,400**	**8,400**	**5,609**	<	4.1 U	62 U	62 U	50 U	62 U
1,1,2,2-Tetrachloroethane*	500 U	2,500 U	2,500 U	500 U	420 U	330 U	420 U					1.1 U	NA	12 U	10 U	12 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113) *	2,500 U	12,000 U	12,000 U	2,500 U	1,800 U	1,400 U	1,800 U					1.6 U	62 U	62 U	50 U	62 U
1,1,2-Trichloroethane*	1,500 U	7,500 U	7,500 U	1,500 U	1,200 U	1,000 U	1,200 U					1.2 U	38 U	38 U	30 U	38 U
1,1-Dichloroethane*	2,500 U	12,000 U	12,000 U	2,500 U	1,800 U	1,400 U	1,800 U	**100**	**1,700**	**800**	---	**28**	**38 J**	**23 J**	**44 J**	**28 J**
1,1-Dichloroethene*	**420 J**	2,500 U	2,500 U	500 U	**510 J**	340 U	**750 J**	**420**	**2,700**	**1,109**	<	4.7 J	**7 J**	4.7 J	**9.8 J**	**6.8 J**
1,1-Dichloropropane	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	2,500 UJ	12,000 U	12,000 U	2,500 UJ	1,800 U	1,400 U	1,800 U					NA	NA	62 U	50 U	62 U
1,2,3-Trichloropropane	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	2,500 U	12,000 U	12,000 U	2,500 UJ	1,800 U	1,400 U	1,800 U					2.1 U	62 U	62 U	50 U	62 U
1,2,4-Trimethylbenzene	NA	NA	NA	NA	NA	NA	NA					NA	62 U	NA	NA	NA
1,2-Dibromo-3-Chloropropane	2,500 U	12,000 U	12,000 U	2,500 U	1,800 U	1,400 U	1,800 U					2.0 U	62 U	62 U	50 U	62 U
1,2-Dibromoethane*	2,000 U	10,000 U	10,000 U	2,500 U	1,600 U	1,300 U	1,600 U					3.7 U	50 U	50 U	40 U	50 U
1,2-Dichlorobenzene	2,500 U	12,000 U	12,000 U	2,500 U	1,800 U	1,400 U	1,800 U					4.0 U	62 U	62 U	50 U	62 U
1,2-Dichloroethane	500 U	2,500 U	2,500 U	500 U	330 U	260 U	330 U					1.1 U	12 U	12 U	10 U	12 U
1,2-Dichloropropane*	1,000 U	5,000 U	5,000 U	1,000 U	340 U	270 U	340 U					3.6 U	25 U	25 U	20 U	25 U
1,3,5-Trimethylbenzene	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA
1,3-Dichlorobenzene	2,500 U	12,000 U	12,000 U	2,500 U	1,800 U	1,400 U	1,800 U					3.9 U	62 U	62 U	50 U	62 U
1,3-Dichloropropane	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA
1,4-Dichlorobenzene	2,500 U	12,000 U	12,000 U	2,500 U	1,800 U	1,400 U	1,800 U					4.2 U	62 U	62 U	50 U	62 U
1,4-Dioxane	250,000 U	1,200,000 U	1,200,000 R	25,000 R	150,000 R	120,000 R	150,000 R					NA	6200 U	6200 U	5000 U	6200 U
2,2 Dichloropropane	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA
2-Butanone (MEK)	5,000 U	25,000 U	25,000 U	5,000 U	4,800 U	3,900 U	4,800 U					6.6 U	120 U	**81 J**	100 U	120 U
2-Chlorotoluene	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA
2-Hexanone	5,000 U	25,000 U	25,000 U	5,000 U	2,500 U	2,000 U	2,500 U					6.2 U	120 U	120 U	100 U	120 U
4-Chlorotoluene	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA
4-Isopropyltoluene	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	5,000 U	25,000 U	25,000 U	5,000 U	2,500 U	2,000 U	2,500 U					11 U	120 U	120 U	100 U	120 U
Acetone	5,000 U	25,000 U	25,000 U	5,000 U	3,600 U	2,900 U	3,600 U					15 U	120 U	120 U	100 U	120 U
Benzene	500 U	2,500 U	2,500 U	500 U	400 U	320 U	400 U					2.1 U	12 U	12 U	10 U	12 U
Bromobenzene	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA
Bromochloromethane*	2,500 U	12,000 U	12,000 U	2,500 U	1,800 U	1,400 U	1,800 U					NA	62 U	62 U	50 U	62 U
Bromodichloromethane*	500 U	2,500 U	2,500 U	500 U	480 U	380 U	480 U					2.0 U	12 U	12 U	10 U	12 U
Bromoform	2,000 U	10,000 U	10,000 U	2,000 UJ	1,600 U	1,300 U	1,600 U					1.3 U	50 U	50 U	40 U	50 U
Bromomethane	2,500 U	12,000 U	12,000 UJ	2,500 UJ	1,800 U	1,400 U	1,800 U					3.5 U	62 U	62 U	50 U	62 U
Carbon disulfide	5,000 U	25,000 U	25,000 U	5,000 U	2,500 U	2,000 U	2,500 U					1.1 J	120 U	120 U	100 U	120 U
Carbon tetrachloride*	500 U	25,000 U	2,500 U	500 U	340 U	270 U	340 U					1.4 U	12 U	12 U	10 U	12 U
Chlorobenzene	2,500 U	12,000 U	12,000 U	2,500 U	1,800 U	1,400 U	1,800 U					3.8 U	62 U	62 U	50 U	62 U
Chloroethane*	2,500 U	12,000 U	12,000 U	2,500 U	1,800 U	1,400 U	1,800 U					1.6 U	62 U	62 U	50 U	62 U
Chloroform*	2,500 U	12,000 U	12,000 U	2,500 U	1,800 U	1,400 U	1,800 U					1.8 J	62 U	62 U	50 U	62 U
Chloromethane*	2,500 U	12,000 U	12,000 UJ	2,500 U	1,800 UJ	1,400 U	1,800 U					1.8 U	62 U	62 U	50 U	62 U
cis-1,2-Dichloroethene*	**44,000**	**43,000**	**48,000**	**9,400**	**500 DL**	**40,000**	**57,000**	**500**	**99,000**	**42,255**	---	**1,800 DL**	**2,500**	**1,900**	**3,100**	**2,100**
cis-1,3-Dichloropropene	500 U	2,500 U	2,500 U	500 U	360 U	290 U	360 U					1.8 U	12 U	12 U	10 U	12 U
Cyclohexane	10,000 U	50,000 U	50,000 U	10,000 U	680 U	540 U	680 U					0.90 U	250 U	250 U	200 U	250 U
Dibromochloromethane*	500 U	2,500 U	2,500 U	500 U	370 U	300 U	370 U					1.6 U	12 U	12 U	10 U	12 U
Dibromomethane	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA
Dichlorodifluoromethane*	5,000 U	25,000 U	25,000 U	5,000 U	2,500 U	2,000 U	2,500 U					3.4 U	120 U	120 U	100 U	120 U
Ethylbenzene	2,500 U	12,000 U	12,000 U	2,500 U	1,800 U	1,400 U	1,800 U					3.7 U	62 U	62 U	50 U	62 U
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA
Iodomethane	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA
Isopropylbenzene	2,500 U	12,000 U	12,000 U	2,500 U	1,800 U	1,400 U	1,800 U					4.0 U	62 U	62 U	50 U	62 U
Methyl acetate	2,000 U	10,000 U	10,000 U	2,000 U	580 U	470 U	580 U					2.5 U	50 U	50 U	40 U	50 U
Methyl tert-butyl ether	2,500 U	50,000 U	12,000 U	2,500 U	1,800 U	1,400 U	1,800 U					0.80 U	62 U	62 U	200 U	250 U
Methylcyclohexane	10,000 U	12,000 U	50,000 U	10,000 U	2,400 J	790 U	990 U					0.80 U	250 U	250 U	50 U	62 U
Methylene Chloride*	2,500 U	12,000 U	12,000 U	2,500 U	1,800 U	1,400 U	1,800 U					2.2 U	62 U	62 U	50 U	62 U
Napthalene	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA
n-Butylbenzene	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA
n-Propylbenzene	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA
o-Xylene	2,500 U	12,000 U	12,000 U	2,500 U	1,800 U	1,400 U	1,800 U					NA	62 U	62 U	50 U	62 U
p,m-Xylene	2,500 U	12,000 U	12,000 U	2,500 U	1,800 U	1,400 U	1,800 U					NA	62 U	62 U	50 U	62 U
sec-Butylbenzene	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA
Styrene	2,500 U	12,000 U	12,000 U	2,500 U	1,800 U	1,400 U	1,800 U					3.7 U	62 U	62 U	50 U	62 U
tert-Butylbenzene	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA
Tetrachloroethene*	**11,000**	**7,400**	**8,300**	**1,700**	**8,900**	**7,600**	**11,000**	**1,700**	**11,000**	**7,200**	<	1.8 U	12 U	12 U	10 U	12 U
Toluene	2,500 U	12,000 U	12,000 U	2,500 U	1,800 U	1,400 U	1,800 U					2.6 U	62 U	62 U	50 U	62 U
trans-1,2-Dichloroethene*	2,500 U	12,000 U	12,000 U	2,500 U	1,800 U	1,400 U	1,800 U					4.5 U	62 U	62 U	**15 J**	62 U
trans-1,3-Dichloropropene	500 U	2,500 U	2,500 U	500 U	410 U	330 U	410 U					1.9 U	12 U	12 U	10 U	12 U
Trichloroethene*	**320,000 E DL**	**320,000**	**340,000**	**82,000**	**330,000**	**200,000**	**400,000**	**11,000**	**400,000**	**276,636**	<	**6.2**	**5.3 J**	12 U	**7.4 J**	12 U
Trichlorofluoromethane*	2,500 U	2,500 U	12,000 U	2,500 U	1,800 U	1,400 U	1,800 U					4.4 U	62 U	62 U	50 U	62 U
Vinyl Acetate	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA
Vinyl chloride*	**2,000**	**1,900 J**	5,000 UJ	**260 J**	**920 J**	**1,100 J**	**1,900 J**	**260**	**7,600**	**2,508**	>	**130**	**280 J**	**36**	**360 J+**	**240**
Xylenes, Total	NA	NA	NA	NA	NA	NA	NA					3.3 U	NA	NA	NA	NA
Total Chlorinated Solvents, µg/L																
Total Chlorinated Solvents	382,820	378,600	403,100	94,760	347,530	252,900	478,150	39,832	524,700	312,379	>	1,971	2,830	1,985	3,536	2,375
TCE+PCE/Total Chlorinated Solvents (%)	86.5%	86.5%	86.4%	88.3%	97.5%	82.1%	83.7%	12.8%	97.5%	74.5%	<	0.31%	0.19%	0.0%	0.21%	0.0%
Semivolatile Organic Compounds, ng/L																
1,4-Dioxane	10,600	13,800	17,800	13,800	11,000	15,000 U	NA	10,600	17,800	13,400	N/A	NA	NA	NA	34,400	32,300

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Summary of Analytical Results - Groundwater
Troy Belting and Supply Co., Colonie, New York

Analyte	MW-6S (Continued)									MW-6D							
	12/21/2017	3/29/2018	6/22/2018	9/27/2018	12/21/2018	*MIN*	*MAX*	*AVERAGE*	*Trend*	10/30/2014	11/19/2015	2/24/2017	5/18/2017	9/21/2017	12/21/2017	3/29/2018	6/22/2018
Volatile Organic Compounds, µg/L																	
1,1,1,2-Tetrachloroethane*	NA	NA	NA	NA	NA					NA	0.5 U	NA	NA	NA	NA	NA	NA
1,1,1-Trichloroethane*	2.5 U	50 U	14 U	18 U	0.7 U	*N/A*	*N/A*	*N/A*	*N/A*	4.1 U	2.5 U	25 U	50 U	100 U	50 U	2.5 U	35 U
1,1,2,2-Tetrachloroethane*	0.5 U	10 U	3.3 U	4.2 U	0.17 U					1.1 U	NA	5 U	10 U	20 U	10 U	0.5 U	8.4 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113) *	2.5 U	50 U	14 U	18 U	0.7 U					1.6 U	2.5 U	25 U	50 U	100 U	50 U	2.5 U	35 U
1,1,2-Trichloroethane*	1.5 U	30 U	10 U	12 U	0.5 U					1.2 U	1.5 U	15 U	30 U	60 U	30 U	1.5 U	25 U
1,1-Dichloroethane*	0.76 J	**20 J**	14 U	**20 J**	0.74 J	*0.74*	***44***	***21.81***	>	**15**	2.5 U	**8.5 J**	**24 J**	**35 J**	**22 J**	2.1 J	35 U
1,1-Dichloroethene*	0.5 U	10 U	4.2 J	4.9 J	0.18 J	*0.2*	***9.8***	***5.37***	*N/A*	2.7 J	0.5 U	2.9 J	**9.6 J**	**12 J**	**8 J**	0.86	**14 J**
1,1-Dichloropropane	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	2.5 U	50 UJ	14 U	18 U	0.7 U					NA	NA	25 U	50 U	100 U	50 U	2.5 UJ	35 U
1,2,3-Trichloropropane	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	2.5 U	50 UJ	14 U	18 U	0.7 U					2.1 U	2.5 U	25 U	50 U	100 U	50 U	2.5 UJ	35 U
1,2,4-Trimethylbenzene	NA	NA	NA	NA	NA					NA	2.5 U	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-Chloropropane	2.5 U	50 U	14 U	18 U	0.7 U					2.0 U	2.5 U	25 U	50 U	100 U	50 U	2.5 U	35 U
1,2-Dibromoethane*	2 U	40 U	13 U	16 U	0.65 U					3.7 U	2 U	20 U	40 U	80 U	40 U	2 U	32 U
1,2-Dichlorobenzene	2.5 U	50 U	14 U	18 U	0.7 U					4.0 U	2.5 U	25 U	50 U	100 U	50 U	2.5 U	35 U
1,2-Dichloroethane	0.5 U	10 U	2.6 U	3.3 U	0.13 U					1.1 U	0.5 U	5 U	10 U	20 U	10 U	0.5 U	6.6 U
1,2-Dichloropropane*	1 U	20 U	2.7 U	3.4 U	0.14 U					3.6 U	1 U	10 U	20 U	40 U	20 U	1 U	6.8 U
1,3,5-Trimethylbenzene	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	2.5 U	50 U	14 U	18 U	0.7 U					3.9 U	2.5 U	25 U	50 U	100 U	50 U	2.5 U	35 U
1,3-Dichloropropane	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	2.5 U	50 U	14 U	18 U	0.7 U					4.2 U	2.5 U	25 U	50 U	100 U	50 U	2.5 U	35 U
1,4-Dioxane	250 R	5,000 R	1,200 R	1,500 R	61 R					NA	250 U	2,500 U	5,000 U	10,000 U	5,000 R	250 R	3,000 R
2,2 Dichloropropane	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone (MEK)	5 U	100 U	39 U	48 U	1.9 U					6.6 U	5 U	50 U	100 U	200 U	100 U	5 U	97 U
2-Chlorotoluene	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	5 U	100 U	20 U	25 U	1 U					6.2 U	5 U	50 U	100 U	200 U	100 U	5 U	50 U
4-Chlorotoluene	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA
4-Isopropyltoluene	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	5 U	100 U	20 U	25 U	1 U					11 U	5 U	50 U	100 U	200 U	100 U	5 U	50 U
Acetone	5 U	100 U	29 U	36 U	6.6					15 U	2 J	50 U	100 U	200 U	100 U	5 U	73 U
Benzene	0.5 U	10 U	3.2 U	4 U	0.16 U					2.1 U	0.5 U	5 U	10 U	20 U	10 U	0.5 U	8 U
Bromobenzene	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane*	2.5 U	50 U	14 U	18 U	0.7 U					NA	2.5 U	25 U	50 U	100 U	50 U	2.5 U	35 U
Bromodichloromethane*	0.5 U	10 U	3.8 U	4.8 U	0.19 U					2 U	0.5 U	5 U	10 U	20 U	10 U	0.5 U	9.6 U
Bromoform	2 U	40 UJ	13 U	16 U	0.65 U					1.3 U	2 U	20 U	40 U	80 U	40 U	2 UJ	32 U
Bromomethane	2.5 UJ	50 UJ	14 U	18 U	0.7 U					3.5 U	2.5 U	25 U	50 U	100 UJ	50 UJ	2.5 UJ	35 U
Carbon disulfide	5 U	100 U	20 U	25 U	1 U					0.95 U	5 U	50 U	100 U	200 U	100 U	5 U	50 U
Carbon tetrachloride*	0.5 U	10 U	2.7 U	3.4 U	0.13 U					1.4 U	0.5 U	5 U	10 U	20 U	10 U	0.5 U	6.7 U
Chlorobenzene	2.5 U	50 U	14 U	18 U	0.7 U					3.8 U	2.5 U	25 U	50 U	100 U	50 U	2.5 U	35 U
Chloroethane*	2.5 U	50 U	14 U	18 U	0.7 U					1.6 U	2.5 U	25 U	50 U	100 U	50 U	2.5 U	35 U
Chloroform*	2.5 U	50 U	14 U	18 U	0.7 U					1.7 U	2.5 U	25 U	50 U	100 U	50 U	2.5 U	35 U
Chloromethane*	2.5 UJ	50 U	14 UJ	18 U	0.7 U					1.8 U	2.5 U	25 U	50 U	100 U	50 UJ	2.5 U	35 UJ
cis-1,2-Dichloroethene*	**84**	**1,600**	**1,200 DL**	**1,600 J**	**76**	***76***	***3,100***	***1,596***	<	**1,800 DL**	**22**	**820**	**2,000**	**2,900**	**1,900**	**190**	**3,200**
cis-1,3-Dichloropropene	0.5 U	10 U	2.9 U	3.6 U	0.14 U					1.8 U	0.5 U	5 U	10 U	20 U	10 U	0.5 U	7.2 U
Cyclohexane	10 U	200 U	5.4 U	6.8 U	0.3 J					0.90 U	10 U	100 U	200 U	400 U	200 U	10 U	14 U
Dibromochloromethane*	0.5 U	10 U	3 U	3.7 U	0.15 U					1.6 U	0.5 U	5 U	10 U	20 U	10 U	0.5 U	7.4 U
Dibromomethane	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane*	5 U	100 U	20 U	25 U	1 U					3.4 U	5 U	50 U	100 U	200 U	100 U	5 U	50 U
Ethylbenzene	2.5 U	50 U	14 U	18 U	1.1 J					3.7 U	2.5 U	25 U	50 U	100 U	50 U	2.5 U	35 U
Hexachlorobutadiene	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA
Iodomethane	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	2.5 U	50 U	14 U	18 U	0.7 U					4.0 U	2.5 U	25 U	50 U	100 U	50 U	2.5 U	35 U
Methyl acetate	2 U	40 U	4.7 U	5.8 U	0.23 U					2.5 U	2 U	20 U	40 U	80 U	40 U	2 U	12 U
Methyl tert-butyl ether	2.5 U	50 U	14 U	18 U	0.7 U					0.80 U	2.5 U	25 U	200 U	400 U	50 U	2.5 U	35 U
Methylcyclohexane	10 U	200 U	7.9 U	9.9 U	0.4 U					0.80 U	10 U	100 U	50 U	100 U	200 U	10 U	20 U
Methylene Chloride*	2.5 U	50 U	14 U	18 U	0.7 U					2.2 U	2.5 U	25 U	50 U	100 U	50 U	2.5 U	35 U
Napthalene	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA
n-Butylbenzene	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	2.5 U	50 U	14 U	18 U	3					NA	2.5 U	25 U	50 U	100 U	50 U	2.5 U	35 U
p,m-Xylene	2.5 U	50 U	14 U	18 U	**5.6**					NA	2.5 U	25 U	50 U	100 U	50 U	2.5 U	35 U
sec-Butylbenzene	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA
Styrene	2.5 U	50 U	14 U	18 U	0.7 U					3.7 U	2.5 U	25 U	50 U	100 UJ	50 UJ	2.5 U	35 U
tert-Butylbenzene	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene*	0.5 U	10 U	3.6 U	4.5 U	0.18 U	*N/A*	*N/A*	*N/A*	*N/A*	1.8 U	0.5 U	5 U	10 U	20 U	10 U	0.5 U	9 U
Toluene	2.5 U	50 U	14 U	18 U	2.4 J					**6.3**	2.5 U	25 U	50 U	100 U	50 U	2.5 U	35 U
trans-1,2-Dichloroethene*	2.5 U	50 U	14 U	18 U	0.7 U					4.5 U	2.5 U	25 U	50 U	100 U	50 U	2.5 U	35 U
trans-1,3-Dichloropropene	0.5 U	10 U	3.3 U	4.1 U	0.16 U					1.9 U	0.5 U	5 U	10 U	20 U	10 U	0.5 U	8.2 U
Trichloroethene*	0.5 U	10 U	3.5 U	4.4 U	0.18 J	***0.18***	***7.4***	***4.29***	*N/A*	2.3 U	0.29 J	**25**	**67**	**82**	**62**	**7.5**	**150**
Trichlorofluoromethane*	2.5 U	50 U	14 U	18 U	0.7 U					4.4 U	2.5 U	25 U	50 U	100 U	50 U	2.5 U	35 U
Vinyl Acetate	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride*	1.0 UJ	**33**	**60**	**110 J**	0.18 J	*0.18*	***360***	***138.80***	<	**79**	**7.3 J**	**67**	**240 J+**	**180**	**180 J-**	**15**	**160**
Xylenes, Total	NA	NA	NA	NA	NA					3.3 U	NA	NA	NA	NA	NA	NA	NA
Total Chlorinated Solvents, µg/L																	
Total Chlorinated Solvents	84.8	1,653	1,274	1,735 J	77.28	*77.3*	*3,536*	*1,752*	>	1,897	29.6	923.4	2,341	3,209	2,172	215.5	3,559
TCE+PCE/Total Chlorinated Solvents (%)	0.0%	0.0%	0.0%	0.0%	0.23%	*0.0%*	*0.3%*	*0.1%*	*N/A*	0.0%	0.98%	2.71%	2.86%	2.56%	2.85%	3.48%	4.21%
Semivolatile Organic Compounds, ng/L																	
1,4-Dioxane	4,490	27,000	14,700	2,270 J	439	*439*	*34,400*	*16,514*	<	NA	NA	NA	17,900	32,200	36,400	2,690	30,700 J-

Notes:
Values in **BOLD and highlighted** indicate exceedance of applicable groundwater quality standard.
U = Not Detected. The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J = Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL), for instance, the result may be uncertain.
UJ = Not detected, quantitation limit may be inaccurate or imprecise.
J- = Analyte is present, Reported value may be biased high and associated with a higher level of uncertainty than is normally expected with the analytical method.
J+ = Analyte is present, Reported value may be biased high and associated with a higher level of uncertainty than is normally expected with the analytical method.
E = Result exceeded calibration range.
DL = Indicates a dilution of the sample was required for analysis.
R = Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information necessary to confirm the result.
○ = The groundwater standard is 0.4 µg/L for the sum of cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.
--- = No applicable groundwater standard or guidance value exists.
NA = Not analyzed; N/A = Not applicable.
Qualifiers in Red were modified based on Data Validation Review performed by Alpha Geoscience.
* = VOC is a chlorinated solvent.
> = Data trend analysis indicates increasing concentration.
< = Data trend analysis indicates decreasing concentration.

Summary of Analytical Results - Groundwater
Troy Belting and Supply Co., Colonie, New York

Analyte	MW-6D (Continued)						MW-6D'												
	9/27/2018	12/21/2018	MIN	MAX	AVERAGE	Trend	11/19/2015	2/24/2017	5/18/2017	9/20/2017	12/20/2017	3/29/2018	6/22/2018	9/27/2018	12/21/2018	MIN	MAX	AVERAGE	Trend
Volatile Organic Compounds, µg/L																			
1,1,1,2-Tetrachloroethane*	NA	NA					0.5 U	NA	NA	NA	NA	NA	NA	NA	NA				
1,1,1-Trichloroethane*	28 U	18 U	N/A	N/A	N/A	N/A	2.5 U	6.2 U	6.2 U	2.5 U	2.5 U	2.5 U	3.5 U	0.7 U	0.7 U	N/A	N/A	N/A	N/A
1,1,2,2-Tetrachloroethane*	6.7 U	4 U					NA	1.2 U	1.2 U	0.5 U	0.5 U	0.5 U	0.84 U	0.17 U	0.17 U				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113) *	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 U	2.5 U	3.5 U	0.7 U	0.7 U				
1,1,2-Trichloroethane*	20 U	12 U					1.5 U	3.8 U	3.8 U	1.5 U	1.5 U	1.5 U	2.5 U	0.5 U	0.5 U				
1,1-Dichloroethane*	**53 J**	**51 J**	***2.1***	***53***	***28***	>	2 J	2.6 J	3.0 J	1.6 J	1.8 J	2.5 U	**17**	2.2 J	0.7 U	*1.6*	***17***	*4.3*	<
1,1-Dichloroethene*	**17 J**	**19**	***0.9***	***19***	***10.42***	***N/A***	0.24 J	1.2 U	1.2 U	0.17 J	0.5 U	0.5 U	4.4	0.25 J	0.17 U	*0.17*	*4.4*	*1.27*	>
1,1-Dichloropropane	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA				
1,2,3-Trichlorobenzene	28 U	18 U					NA	6.2 U	6.2 U	2.5 U	2.5 U	2.5 UJ	3.5 U	0.7 U	0.7 U				
1,2,3-Trichloropropane	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA				
1,2,4-Trichlorobenzene	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 U	2.5 UJ	3.5 U	0.7 U	0.7 U				
1,2,4-Trimethylbenzene	NA	NA					2.5 U	NA	NA	NA	NA	NA	NA	NA	NA				
1,2-Dibromo-3-Chloropropane	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 U	2.5 U	3.5 U	0.7 U	0.7 U				
1,2-Dibromoethane*	26 U	16 U					2 U	5 U	5 U	2 U	2 U	2 U	3.2 U	0.65 U	0.65 U				
1,2-Dichlorobenzene	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 U	2.5 U	3.5 U	0.7 U	0.7 U				
1,2-Dichloroethane	5.3 U	3 U					0.5 U	1.2 U	1.2 U	0.5 U	0.5 U	0.5 U	0.66 U	0.13 U	0.13 U				
1,2-Dichloropropane*	5.5 U	3 U					1 U	2.5 U	2.5 U	1 U	1 U	1 U	0.68 U	0.14 U	0.14 U				
1,3,5-Trimethylbenzene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA				
1,3-Dichlorobenzene	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 U	2.5 U	3.5 U	0.7 U	0.7 U				
1,3-Dichloropropane	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA				
1,4-Dichlorobenzene	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 U	2.5 U	3.5 U	0.7 U	0.7 U				
1,4-Dioxane	2,400 U	1,500 R					250 U	620 U	620 U	250 R	250 R	250 R	300 U	61 U	61 R				
2,2 Dichloropropane	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA				
2-Butanone (MEK)	78 U	48 U					5 U	12 U	12 U	5 U	5 U	5 U	9.7 U	1.9 U	1.9 U				
2-Chlorotoluene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA				
2-Hexanone	40 U	25 U					5 U	12 U	12 U	5 U	5 U	5 U	5 U	1 U	1 U				
4-Chlorotoluene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA				
4-Isopropyltoluene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA				
4-Methyl-2-pentanone (MIBK)	40 U	25 U					5 U	12 U	12 U	5 U	5 U	5 U	5 U	1 U	1 U				
Acetone	58 U	36 U					5 U	12 U	12 U	5 U	5 U	2.5 J	7.3 U	1.5 U	33				
Benzene	6.4 U	4 U					0.5 U	1.2 U	1.2 U	0.5 U	0.5 U	0.5 U	0.8 U	0.16 U	0.16 U				
Bromobenzene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA				
Bromochloromethane*	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 U	2.5 U	3.5 U	0.7 U	0.7 U				
Bromodichloromethane*	7.7 U	5 U					0.5 U	1.2 U	1.2 U	0.5 U	0.5 U	0.5 U	0.96 U	0.19 U	0.19 U				
Bromoform	26 U	16 U					2 U	5 U	5.0 U	2 U	2 UJ	2 UJ	3.2 U	0.65 U	0.65 U				
Bromomethane	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 UJ	2.5 UJ	3.5 U	0.7 U	0.7 U				
Carbon disulfide	40 U	25 U					5 U	12 U	12 U	5 U	5 U	5 U	5 U	2.7 J	1 U				
Carbon tetrachloride*	5.4 U	3 U					0.5 U	1.2 U	1.2 U	0.5 U	0.5 U	0.5 U	0.67 U	0.13 U	0.13 U				
Chlorobenzene	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 U	2.5 U	3.5 U	0.7 U	0.7 U				
Chloroethane*	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 U	2.5 U	3.5 U	0.7 U	0.7 U				
Chloroform*	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 U	2.5 U	3.5 U	0.7 U	0.7 U				
Chloromethane*	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 U	2.5 U	3.5 UJ	0.7 U	0.7 U				
cis-1,2-Dichloroethene*	**3,900**	**4,300**	***22***	***4,300***	***2,103***	>	**180**	**180**	**240**	**120**	**100**	**26**	**550 EJDL**	**130**	2 J	*2*	***550***	***170***	>
cis-1,3-Dichloropropene	5.8 U	4 U					0.5 U	1.2 U	1.2 U	0.5 U	0.5 U	0.5 U	0.72 U	0.14 U	0.14 U				
Cyclohexane	11 U	7 U					10 U	25 U	25 U	10 U	10 U	10 U	1.4 U	0.27 U	0.27 U				
Dibromochloromethane8	6 U	4 U					0.5 U	1.2 U	1.2 U	0.5 U	0.5 U	0.5 U	0.74 U	0.15 U	0.15 U				
Dibromomethane	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA				
Dichlorodifluoromethane*	40 U	25 U					5 U	12 U	12 U	5 U	5 U	5 U	5 U	1 U	1 U				
Ethylbenzene	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 U	2.5 U	3.5 U	0.7 U	0.7 U				
Hexachlorobutadiene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA				
Iodomethane	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA				
Isopropylbenzene	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 U	2.5 U	3.5 U	0.7 U	0.7 U				
Methyl acetate	9.4 U	6 U					2 U	5 U	5.0 U	2 U	2 U	2 U	1.2 U	0.23 U	0.23 U				
Methyl tert-butyl ether	28 U	18 U					2.5 U	6.2 U	25 U	10 U	2.5 U	2.5 U	3.5 U	0.7 U	0.7 U				
Methylcyclohexane	16 U	10 U					10 U	25 U	6.2 U	2.5 U	10 U	10 U	2.0 U	0.4 U	0.4 U				
Methylene Chloride*	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 U	2.5 U	3.5 U	0.7 U	0.7 U				
Napthalene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA				
n-Butylbenzene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA				
n-Propylbenzene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA				
o-Xylene	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 U	2.5 U	3.5 U	0.7 U	0.7 U				
p,m-Xylene	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 U	2.5 U	3.5 U	0.7 U	0.7 U				
sec-Butylbenzene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA				
Styrene	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 UJ	2.5 U	3.5 U	0.7 U	0.7 U				
tert-Butylbenzene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA				
Tetrachloroethene*	7.2 U	5 U	N/A	N/A	N/A	N/A	0.5 U	1.2 U	1.2 U	0.5 U	0.5 U	0.5 U	0.9 U	0.18 U	0.18 U	N/A	N/A	N/A	N/A
Toluene	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 U	2.5 U	3.5 U	0.7 U	0.7 U				
trans-1,2-Dichloroethene*	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 U	2.5 U	3.5 U	0.7 U	0.7 U				
trans-1,3-Dichloropropene	6.6 U	4 U					0.5 U	1.2 U	1.2 U	0.5 U	0.5 U	0.5 U	0.82 U	0.16 U	0.16 U				
Trichloroethene*	**160**	**170**	***0.3***	***170***	***80***	>	0.5 U	1.2 U	1.2 U	0.5 U	0.5 U	0.5 U	**14 J**	0.18 U	0.18 U	N/A	***14***	N/A	N/A
Trichlorofluoromethane*	28 U	18 U					2.5 U	6.2 U	6.2 U	2.5 U	2.5 U	2.5 U	3.5 U	0.7 U	0.7 U				
Vinyl Acetate	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA				
Vinyl chloride*	**270**	**260**	***7.3***	***270***	***146***	>	**81 J**	**150**	**190 J+**	**79**	**72**	**0.55 J**	**480**	**140**	1.3	***0.55***	***480***	***132.7***	>
Xylenes, Total	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA				
Total Chlorinated Solvents, µg/L																			
Total Chlorinated Solvents	4,400	4,800	*29.6*	*4,800*	*2,355*	>	263.2	188.8	433.0	200.8	173.8	26.6	1,065	275.2	3.3	*3.3*	*1,065*	*292.2*	>
TCE+PCE/Total Chlorinated Solvents (%)	3.6%	3.54%	0.0%	4.2%	2.7%	N/A	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%	*0%*	*1.3%*	*0%*	N/A
Semivolatile Organic Compounds, ng/L																			
1,4-Dioxane	29,800	34,400	*2,690*	*36,400*	*27,561.3*	N/A	NA	NA	421	319	394	155 U	1,130	70.8 U	94.7 J	*94.7*	*1,130*	*472*	<

Notes:
Values in **BOLD and highlighted** indicate exceedance of applicable groundwater quality standard.
U = Not Detected. The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J = Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL), for instance, the result may be u
UJ = Not detected, quantitation limit may be inaccurate or imprecise.
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R = Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information necessary to confirm the result.
○ = The groundwater standard is 0.4 µg/L for the sum of cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.
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NA = Not analyzed.
N/A = Not applicable.
* = VOC is a chlorinated solvent.
'Qualifiers in Red were modified based on Data Validation Review performed by Alpha Geoscience.
> = Data trend analysis indicates increasing concentration.
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Summary of Analytical Results - Groundwater
Troy Belting and Supply Co., Colonie, New York

Analyte	MW-7S													MW-7D						
	11/19/2015	2/23/2017	5/17/2017	9/20/2017	12/20/2017	3/28/2018	6/21/2018	9/26/2018	12/20/2018	*MIN*	*MAX*	*AVERAGE*	*Trend*	11/19/2015	2/23/2017	5/17/2017	9/20/2017	12/20/2017	3/28/2018	6/21/2018
Volatile Organic Compounds, µg/L																				
1,1,1,2-Tetrachloroethane*	0.5 U	NA	NA	NA	NA	NA	NA	NA	NA					0.5 U	NA	NA	NA	NA	NA	NA
1,1,1-Trichloroethane*	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U	*N/A*	*N/A*	*N/A*	*N/A*	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
1,1,2,2-Tetrachloroethane*	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.17 U	0.17 U	0.17 U					NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.17 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113) *	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
1,1,2-Trichloroethane*	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.5 U	0.5 U	0.5 U					1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.5 U
1,1-Dichloroethane*	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U	*N/A*	*N/A*	*N/A*	*N/A*	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
1,1-Dichloroethene*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.17 U	0.17 U	0.17 U	*N/A*	*N/A*	*N/A*	*N/A*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.17 U
1,1-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	NA	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 UJ	0.7 U	0.7 U	0.7 U					NA	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 UJ	0.7 U
1,2,3-Trichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
1,2,4-Trimethylbenzene	2.5 U	NA	NA	NA	NA	NA	NA	NA	NA					2.5 U	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-Chloropropane	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
1,2-Dibromoethane*	2 U	2 U	2.0 U	2 U	2 U	2 U	0.65 U	0.65 U	0.65 U					2 U	2 U	2.0 U	2 U	2 U	2 U	0.65 U
1,2-Dichlorobenzene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.13 U	0.13 U	0.13 U					0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.13 U
1,2-Dichloropropane*	1 U	1 U	1.0 U	1 U	1 U	1 U	0.14 U	0.14 U	0.14 U					1 U	1 U	1.0 U	1 U	1 U	1 U	0.14 U
1,3,5-Trimethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
1,3-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
1,4-Dioxane	250 U	250 U	250 U	250 R	250 R	250 R	61 R	61 R	61 U					250 U	250 U	250 U	250 R	250 R	250 R	61 R
2,2 Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA
2-Butanone (MEK)	5 U	5 U	5.0 U	5 U	5 U	5 U	1.9 U	1.9 U	1.9 U					5 U	5 U	5.0 U	5 U	5 U	5 U	1.9 U
2-Chlorotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA
2-Hexanone	5 U	5 U	5.0 U	5 U	5 U	5 U	1 U	1 U	1 U					5 U	5 U	5.0 U	5 U	5 U	5 U	1 U
4-Chlorotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA
4-Isopropyltoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	5 U	5 U	5.0 U	5 U	5 U	5 U	1 U	1 U	1 U					5 U	5 U	5.0 U	5 U	5 U	5 U	1 U
Acetone	5 U	5 U	5.0 U	5 U	5 U	5 U	1.5 U	2.6 U	1.5 J					1.6 U	5 U	5.0 U	5 U	5 U	5 U	1.5 U
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.16 U	0.16 U	0.16 U					0.49 J	0.5 U	0.5 U	0.5 U	0.28 J	0.28 J	0.16 U
Bromobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA
Bromochloromethane*	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
Bromodichloromethane*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.19 U	0.19 U	0.19 U					0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.19 U
Bromoform	2 U	2 U	2.0 U	2 U	2 UJ	2 U	0.65 U	0.65 U	0.65 U					2 U	2 U	2.0 U	2 U	2 U	2 U	0.65 U
Bromomethane	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 UJ	2.5 UJ	0.7 U	0.7 U	0.7 U					2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 UJ	2.5 UJ	0.7 U
Carbon disulfide	5 U	5 U	5.0 U	2.9 R	5 U	5 U	1 U	1 U	1 U					5 U	5 U	5.0 U	6.9 R	5 U	5 U	1 U
Carbon tetrachloride*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.13 U	0.13 U	0.13 U					0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.13 U
Chlorobenzene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
Chloroethane*	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
Chloroform*	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
Chloromethane*	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ	0.7 U	0.7 U	0.7 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
cis-1,2-Dichloroethene*	**6.3**	2.5	3.4	4.1	3.3	1.9	1.5 J	1.8 J+	1.9 J	*1.5*	***6.3***	*3.0*	*N/A*	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.14 U	0.14 U	0.14 U					0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.14 U
Cyclohexane	10 U	10 U	10 U	10 U	10 U	10 U	0.27 U	0.27 U	0.27 U					10 U	10 U	10 U	10 U	10 U	10 U	0.27 U
Dibromochloromethane8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.15 U	0.15 U	0.15 U					0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.15 U
Dibromomethane	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane*	5 U	5 U	5.0 U	5 U	5 U	5 U	1 U	1 U	1 U					5 U	5 U	5.0 U	5 U	5 U	5 U	1 U
Ethylbenzene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA
Iodomethane	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
Methyl acetate	2 U	2 U	2.0 U	2 U	2 U	2 U	0.23 U	0.23 U	0.23 U					2 U	2 U	2.0 U	2 U	2 U	2 U	0.23 U
Methyl tert-butyl ether	2.5 U	2.5 U	10 U	10 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U	2.5 U	10 U	10 U	2.5 U	10 U	0.7 U
Methylcyclohexane	10 U	10 U	2.5 U	2.5 U	10 U	10 U	0.4 U	0.4 U	0.4 U					10 U	10 U	2.5 U	2.5 U	10 U	2.5 U	0.4 U
Methylene Chloride*	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
Napthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA
n-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA
o-Xylene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					1.9 J	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
p,m-Xylene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					0.9 J	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
sec-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA
Styrene	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 UJ	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 U	0.7 U
tert-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.18 U	0.18 U	0.18 U	*N/A*	*N/A*	*N/A*	*N/A*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.18 U
Toluene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
trans-1,2-Dichloroethene*	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.16 U	0.16 U	0.16 U					0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.16 U
Trichloroethene*	0.18 J	0.5 U	0.43 J	0.2 J	0.5 U	0.5 U	0.18 U	0.18 U	0.18 U	*0.18*	*0.43*	*0.33*	*N/A*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.18 U
Trichlorofluoromethane*	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
Vinyl Acetate	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA
Vinyl chloride*	0.25 J	0.31 J	0.43 J+	0.3 J	1.0 U	0.17 J	0.25 J	0.3 J	0.19 J	*0.25*	*0.43*	*0.31*	*N/A*	1.0 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.07 U
Xylenes, Total	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA	NA	NA	NA	NA
Total Chlorinated Solvents, µg/L																				
Total Chlorinated Solvents	6.73	5.31	4.26	4.60	3.30	2.07	1.75	2.10	2.1	*1.8*	*6.7*	*3.6*	*N/A*	1.0 J	0.0	0.0	0.0	0.0	0.0	0.0
TCE+PCE/Total Chlorinated Solvents (%)	2.7%	0.0%	10.1%	4.3%	0.0%	0.0%	0.0%	0.0%	0.0%	*0.0%*	*10.1%*	*1.9%*	*N/A*	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Semivolatile Organic Compounds, ng/L																				
1,4-Dioxane	NA	NA	76 J	196	127 J	155 U	221	73.5 U	69.4 U	*76*	*221*	*155*	<	NA	NA	142 U	150 U	153 U	155 U	73.5 U

Notes:
Values in **BOLD and highlighted** indicate exceedance of applicable groundwater quality standard.
U = Not Detected. The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J = Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL), for instance, the result may be uncertain.
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* = VOC is a chlorinated solvent.
Qualifiers in Red were modified based on Data Validation Review performed by Alpha Geoscience.
> = Data trend analysis indicates increasing concentration.
< = Data trend analysis indicates decreasing concentration.

Summary of Analytical Results - Groundwater
Troy Belting and Supply Co., Colonie, New York

Analyte	MW-7D (Continued)						MW-8S														DUP122018**
	9/26/2018	12/20/2018	*MIN*	*MAX*	*AVERAGE*	*Trend*	10/30/2014	11/19/2015	2/23/2017	5/17/2017	9/20/2017	12/20/2017	3/28/2018	6/21/2018	9/26/2018	12/20/2018	*MIN*	*MAX*	*AVERAGE*	*Trend*	12/20/2018
Volatile Organic Compounds, µg/L																					
1,1,1,2-Tetrachloroethane*	NA	NA					NA	0.5 U	NA	NA	NA	NA	NA	NA	NA	NA					NA
1,1,1-Trichloroethane*	0.7 U	0.7 U	*N/A*	*N/A*	*N/A*	*N/A*	0.82 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U	*N/A*	*N/A*	*N/A*	*N/A*	2.5 U
1,1,2,2-Tetrachloroethane*	0.17 U	0.17 U					0.21 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.17 U	0.17 U	0.17 U					0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113) *	0.7 U	0.7 U					0.31 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U
1,1,2-Trichloroethane*	0.5 U	0.5 U					0.23 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.5 U	0.5 U	0.5 U					1.5 U
1,1-Dichloroethane*	0.7 U	0.7 U	*N/A*	*N/A*	*N/A*	*N/A*	0.38 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U	*N/A*	*N/A*	*N/A*	*N/A*	2.5 U
1,1-Dichloroethene*	0.17 U	0.17 U	*N/A*	*N/A*	*N/A*	*N/A*	0.29 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.17 U	0.17 U	0.17 U	*N/A*	*N/A*	*N/A*	*N/A*	0.5 U
1,1-Dichloropropane	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA
1,2,3-Trichlorobenzene	0.7 U	0.7 U					NA	NA	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ	0.7 U	0.7 U	0.7 U					2.5 U
1,2,3-Trichloropropane	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA
1,2,4-Trichlorobenzene	0.7 U	0.7 U					0.41 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U
1,2,4-Trimethylbenzene	NA	NA					NA	2.5 U	NA	NA	NA	NA	NA	NA	NA	NA					NA
1,2-Dibromo-3-Chloropropane	0.7 U	0.7 U					0.39 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U
1,2-Dibromoethane*	0.65 U	0.65 U					0.73 U	2 U	2 U	2.0 U	2 U	2 U	2 U	0.65 U	0.65 U	0.65 U					2 U
1,2-Dichlorobenzene	0.7 U	0.7 U					0.79 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U
1,2-Dichloroethane	0.13 U	0.13 U					0.21 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.13 U	0.13 U	0.13 U					0.5 U
1,2-Dichloropropane*	0.14 U	0.14 U					0.72 U	1 U	1 U	1.0 U	1 U	1 U	1 U	0.14 U	0.14 U	0.14 U					1 U
1,3,5-Trimethylbenzene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA
1,3-Dichlorobenzene	0.7 U	0.7 U					0.78 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U
1,3-Dichloropropane	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA
1,4-Dichlorobenzene	0.7 U	0.7 U					0.84 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U
1,4-Dioxane	61 R	61 U					NA	250 U	250 U	250 U	250 R	250 R	250 R	61 R	61 R	61 U					250 U
2,2 Dichloropropane	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA
2-Butanone (MEK)	1.9 U	1.9 U					1.3 U	5 U	5 U	5.0 U	5 U	5 U	5 U	1.9 U	1.9 U	1.9 U					5 U
2-Chlorotoluene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA
2-Hexanone	1 U	1 U					1.2 U	5 U	5 U	5.0 U	5 U	5 U	5 U	1 U	1 U	1 U					5 U
4-Chlorotoluene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	1 U	NA					NA
4-Isopropyltoluene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	1.5 U	NA					NA
4-Methyl-2-pentanone (MIBK)	1 U	1 U					2.1 U	5 U	5 U	5.0 U	5 U	5 U	5 U	1 U	1.5 U	1 U					5 U
Acetone	1.5 U	1.5 U					3.0 U	5 U	5 U	5.0 U	5 U	5 U	5 U	1.5 U	0.16 U	1.5 U					5 U
Benzene	0.16 U	0.16 U					0.41 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.16 U	0.16 U	0.16 U					0.5 U
Bromobenzene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA
Bromochloromethane*	0.7 U	0.7 U					NA	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	NA U	0.7 U	0.7 U	0.7 U					2.5 U
Bromodichloromethane*	0.19 U	0.19 U					0.39 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.19 U	0.19 U	0.19 U					0.5 U
Bromoform	0.65 U	0.65 U					0.26 U	2 U	2 U	2.0 U	2 U	2 U	2 U	0.65 U	0.65 U	0.65 U					2 U
Bromomethane	0.7 U	0.7 U					0.69 U	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 UJ	2.5 UJ	0.7 U	0.7 U	0.7 U					2.5 U
Carbon disulfide	1 U	1 U					0.19 U	5 U	5 U	5.0 U	5 U	5 U	5 U	1 U	1 U	1 U					5 U
Carbon tetrachloride*	0.13 U	0.13 U					0.27 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.13 U	0.13 U	0.13 U					0.5 U
Chlorobenzene	0.7 U	0.7 U					0.75 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U
Chloroethane*	0.7 U	0.7 U					0.32 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U
Chloroform*	0.7 U	0.7 U					0.34 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U
Chloromethane*	0.7 U	0.7 U					0.35 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U
cis-1,2-Dichloroethene*	0.7 U	0.7 U	*N/A*	*N/A*	*N/A*	*N/A*	0.81 U	1.5 J	1.1 J	**6.2**	2.7	3.7	3.7	**24.0**	**8.2**	**14**	*1.1*	***24.0***	***6.77***	>	**13**
cis-1,3-Dichloropropene	0.14 U	0.14 U					0.36 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.14 U	0.14 U	0.14 U					0.5 U
Cyclohexane	0.27 U	0.27 U					0.18 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	0.27 U	0.27 U	0.27 U					10 U
Dibromochloromethane8	0.15 U	0.15 U					0.32 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.15 U	0.15 U	0.15 U					0.5 U
Dibromomethane	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA
Dichlorodifluoromethane*	1 U	1 U					0.68 U	5 U	5 U	5.0 U	5 U	5 U	5 U	1 U	1 U	1 U					5 U
Ethylbenzene	0.7 U	0.7 U					0.74 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U
Hexachlorobutadiene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA
Iodomethane	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA
Isopropylbenzene	0.7 U	0.7 U					0.79 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U
Methyl acetate	0.23 U	0.23 U					0.50 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.23 U	0.23 U	0.23 U					2 U
Methyl tert-butyl ether	0.7 U	0.7 U					0.16 U	2.5 U	2.5 U	10 U	10 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U
Methylcyclohexane	0.4 U	0.4 U					0.16 U	10 U	10 U	2.5 U	2.5 U	10 U	10 U	0.4 U	0.4 U	0.4 U					10 U
Methylene Chloride*	0.7 U	0.7 U					0.44 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U
Napthalene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA
n-Butylbenzene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA
n-Propylbenzene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA
o-Xylene	0.7 U	0.7 U					NA	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U
p,m-Xylene	0.7 U	0.7 U					NA	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U
sec-Butylbenzene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA
Styrene	0.7 U	0.7 U					0.73 U	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U
tert-Butylbenzene	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA
Tetrachloroethene*	0.18 U	0.18 U	*N/A*	*N/A*	*N/A*	*N/A*	0.36 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.18 U	0.18 U	0.18 U	*N/A*	*N/A*	*N/A*	*N/A*	0.5 U
Toluene	0.7 U	0.7 U					0.51 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U
trans-1,2-Dichloroethene*	0.7 U	0.7 U					0.90 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U
trans-1,3-Dichloropropene	0.16 U	0.16 U					0.37 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.16 U	0.16 U	0.16 U					0.5 U
Trichloroethene*	0.18 U	0.18 U	*N/A*	*N/A*	*N/A*	*N/A*	0.46 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.18 U	0.18 U	0.18 U	*N/A*	*N/A*	*N/A*	*N/A*	0.5 U
Trichlorofluoromethane*	0.7 U	0.7 U					0.88 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U	0.7 U	0.7 U					2.5 U
Vinyl Acetate	NA	NA					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA
Vinyl chloride*	0.07 U	0.07 U	*1.0*	*1.0*	*N/A*	*N/A*	0.9 U	**4.0**	**2.8**	**9.6**	**12.0**	**6.5 J-**	**8.5**	**31.0**	**15**	**25**	**2.8**	**31.0**	**13.2**	>	**23**
Xylenes, Total	NA	NA					0.66 U	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA
Total Chlorinated Solvents, µg/L																					
Total Chlorinated Solvents	0.0	0.0	*0.0*	*1.0*	*0.1*	*N/A*	0.0	8.0	3.9	15.8	14.7	10.2	12.2	55.0	23.2	39	*3.9*	*55.0*	*17.9*	>	42
TCE+PCE/Total Chlorinated Solvents (%)	0.0%	0.0%	0.0%	0.0%	0.0%	*N/A*	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	*N/A*	2.4%
Semivolatile Organic Compounds, ng/L																					
1,4-Dioxane	70.8 U	73.5 U	*N/A*	*N/A*	*N/A*	*N/A*	NA	NA	NA	6,020	7,450	6,570	4,420	7,810	7,070	7,380	*4,420*	*7,810*	*6,674*	<	7,540

Notes:
Values in **BOLD and highlighted** indicate exceedance of applicable groundwater quality standard.
U = Not Detected. The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J = Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL), for instance, the result may be uncertain.
UJ = Not detected, quantitation limit may be inaccurate or imprecise.
J- = Analyte is present, Reported value may be biased high and associated with a higher level of uncertainty than is normally expected with the analytical method.
J+ = Analyte is present, Reported value may be biased high and associated with a higher level of uncertainty than is normally expected with the analytical method.
E = Result exceeded calibration range.
DL = Indicates a dilution of the sample was required for analysis.
R = Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information necessary to confirm the result.
○ = The groundwater standard is 0.4 µg/L for the sum of cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.
--- = No applicable groundwater standard or guidance value exists.
NA = Not analyzed. N/A = Not applicable.
** DUP122018 was collected at MW-8S.
* = VOC is a chlorinated solvent.
'Qualifiers in Red were modified based on Data Validation Review performed by Alpha Geoscience.
\> = Data trend analysis indicates increasing concentration.
< = Data trend analysis indicates decreasing concentration.

Summary of Analytical Results - Groundwater
Troy Belting and Supply Co., Colonie, New York

Analyte	MW-8D						MW-9S						MW-10D						
	10/30/2014	11/19/2015	*MIN*	*MAX*	*AVERAGE*	*Trend*	10/30/2014	11/19/2015	*MIN*	*MAX*	*AVERAGE*	*Trend*	11/19/2015	2/23/2017	5/17/2017	9/20/2017	12/20/2017	3/28/2018	6/21/2018
Volatile Organic Compounds, µg/L																			
1,1,1,2-Tetrachloroethane*	NA	0.5 U					NA	0.5 U					0.5 U	NA	NA	NA	NA	NA	NA
1,1,1-Trichloroethane*	0.82 U	2.5 U	*N/A*	*N/A*	*N/A*	*N/A*	0.82 U	2.5 U	*N/A*	*N/A*	*N/A*	*N/A*	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
1,1,2,2-Tetrachloroethane*	0.21 U	NA					0.21 U	NA					NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.17 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113) *	0.31 U	2.5 U					0.31 U	2.5 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
1,1,2-Trichloroethane*	0.23 U	1.5 U					0.23 U	1.5 U					1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.5 U
1,1-Dichloroethane*	0.38 U	2.5 U	*N/A*	*N/A*	*N/A*	*N/A*	0.38 U	2.5 U	*N/A*	*N/A*	*N/A*	*N/A*	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
1,1-Dichloroethene*	0.29 U	0.5 U	*N/A*	*N/A*	*N/A*	*N/A*	0.29 U	0.5 U	*N/A*	*N/A*	*N/A*	*N/A*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.17 U
1,1-Dichloropropane	NA	NA					NA	NA					NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	NA	NA					NA	NA					NA	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 UJ	0.7 U
1,2,3-Trichloropropane	NA	NA					NA	NA					NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	0.41 U	2.5 U					0.41 U	2.5 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
1,2,4-Trimethylbenzene	NA	2.5 U					NA	2.5 U					2.5 U	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-Chloropropane	0.39 U	2.5 U					0.39 U	2.5 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
1,2-Dibromoethane*	0.73 U	2 U					0.73 U	2 U					2 U	2 U	2.0 U	2 U	2 U	2 U	0.65 U
1,2-Dichlorobenzene	0.79 U	2.5 U					0.79 U	2.5 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
1,2-Dichloroethane	0.21 U	0.5 U					0.21 U	0.5 U					0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.13 U
1,2-Dichloropropane*	0.72 U	1.0 U					0.72 U	1.0 U					1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.14 U
1,3,5-Trimethylbenzene	NA	NA					NA	NA					NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	0.78 U	2.5 U					0.78 U	2.5 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
1,3-Dichloropropane	NA	NA					NA	NA					NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	0.84 U	2.5 U					0.84 U	2.5 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
1,4-Dioxane	NA	250 U					NA	250 U					250 U	250 U	250 U	250 R	250 R	250 R	61 R
2,2 Dichloropropane	NA	NA					NA	NA					NA	NA	NA	NA	NA	NA	NA
2-Butanone (MEK)	1.3 U	5 U					1.3 U	5 U					5 U	5 U	5.0 U	5 U	5 U	5 U	1.9 U
2-Chlorotoluene	NA	NA					NA	NA					NA	NA	NA	NA	NA	NA	NA
2-Hexanone	1.2 U	5 U					1.2 U	5 U					5 U	5 U	5.0 U	5 U	5 U	5 U	1 U
4-Chlorotoluene	NA	NA					NA	NA					NA	NA	NA	NA	NA	NA	NA
4-Isopropyltoluene	NA	NA					NA	NA					NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	2.1 U	5 U					2.1 U	5 U					5 U	5 U	5.0 U	5 U	5 U	5 U	1 U
Acetone	3.0 U	5 U					3.0 U	5 U					5 U	5 U	5.0 U	5 U	5 U	5 U	1.5 U
Benzene	0.41 U	0.5 U					0.41 U	0.5 U					0.55	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.16 U
Bromobenzene	NA	NA					NA	NA					NA	NA	NA	NA	NA	NA	NA
Bromochloromethane*	NA	2.5 U					NA	2.5 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
Bromodichloromethane*	0.39 U	0.5 U					0.39 U	0.5 U					0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.19 U
Bromoform	0.26 U	2 U					0.26 U	2 U					2 U	2 U	2.0 U	2 U	2 U	2 U	0.65 U
Bromomethane	0.69 U	2.5 U					0.69 U	2.5 U					**10**	2.5 U	2.5 U	2.5 UJ	2.5 UJ	2.5 UJ	0.7 U
Carbon disulfide	1.1	5 U					0.19 U	5 U					5 U	5 U	5.0 U	5 U	5 U	5 U	1 U
Carbon tetrachloride*	0.27 U	0.5 U					0.27 U	0.5 U					0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.13 U
Chlorobenzene	0.75 U	2.5 U					0.75 U	2.5 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
Chloroethane*	0.32 U	2.5 U					0.32 U	2.5 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
Chloroform*	0.34 U	2.5 U					0.34 U	2.5 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
Chloromethane*	0.35 U	2.5 U					0.35 U	2.5 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
cis-1,2-Dichloroethene*	0.81 U	2.5 U	*N/A*	*N/A*	*N/A*	*N/A*	0.81 U	2.5 U	*N/A*	*N/A*	*N/A*	*N/A*	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
cis-1,3-Dichloropropene	0.36 U	0.5 U					0.36 U	0.5 U					0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.14 U
Cyclohexane	0.18 U	10 U					0.18 U	10 U					10 U	10 U	10 U	10 U	10 U	10 U	0.27 U
Dibromochloromethane8	0.32 U	0.5 U					0.32 U	0.5 U					0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.15 U
Dibromomethane	NA	NA					NA	NA					NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane*	0.68 U	5 U					0.68 U	5 U					5 U	5 U	5.0 U	5 U	5 U	5 U	1 U
Ethylbenzene	0.74 U	2.5 U					0.74 U	2.5 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
Hexachlorobutadiene	NA	NA					NA	NA					NA	NA	NA	NA	NA	NA	NA
Iodomethane	NA	NA					NA	NA					NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	0.79 U	2.5 U					0.79 U	2.5 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
Methyl acetate	0.50 U	2 U					0.50 U	2 U					2 U	2 U	2.0 U	2 U	2 U	2 U	0.23 U
Methyl tert-butyl ether	0.16 U	2.5 U					0.16 U	2.5 U					2.5 U	2.5 U	10 U	10 U	2.5 U	2.5 U	0.7 U
Methylcyclohexane	0.16 U	10 U					0.16 U	10 U					10 U	10 U	2.5 U	2.5 U	10 U	10 U	0.4 U
Methylene Chloride*	0.44 U	2.5 U					0.44 U	2.5 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
Napthalene	NA	NA					NA	NA					NA	NA	NA	NA	NA	NA	NA
n-Butylbenzene	NA	NA					NA	NA					NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	NA	NA					NA	NA					NA	NA	NA	NA	NA	NA	NA
o-Xylene	NA	2.5 U					NA	2.5 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
p,m-Xylene	NA	2.5 U					NA	2.5 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
sec-Butylbenzene	NA	NA					NA	NA					NA	NA	NA	NA	NA	NA	NA
Styrene	0.73 U	2.5 U					0.73 U	2.5 U					2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 U	0.7 U
tert-Butylbenzene	NA	NA					NA	NA					NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene*	0.36 U	0.5 U	*N/A*	*N/A*	*N/A*	*N/A*	0.36 U	0.5 U	*N/A*	*N/A*	*N/A*	*N/A*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.18 U
Toluene	0.51 U	2.5 U					0.51 U	2.5 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
trans-1,2-Dichloroethene*	0.90 U	2.5 U					0.90 U	2.5 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
trans-1,3-Dichloropropene	0.37 U	0.5 U					0.37 U	0.5 U					0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.16 U
Trichloroethene*	0.46 U	0.5 U	*N/A*	*N/A*	*N/A*	*N/A*	0.46 U	0.5 U	*N/A*	*N/A*	*N/A*	*N/A*	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.18 U
Trichlorofluoromethane*	0.88 U	2.5 U					0.88 U	2.5 U					2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.7 U
Vinyl Acetate	NA	NA					NA	NA					NA	NA	NA	NA	NA	NA	NA
Vinyl chloride*	0.9 U	1.0 U	*N/A*	*N/A*	*N/A*	*N/A*	0.9 U	1.0 U	*N/A*	*N/A*	*N/A*	*N/A*	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.07 U
Xylenes, Total	0.66 U	NA					0.66 U	NA					NA	NA	NA	NA	NA	NA	NA
Total Chlorinated Solvents, µg/L																			
Total Chlorinated Solvents	0.0	0.0	*0.0*	*0.0*	*0.0*	>	0.0	0.0	*0.0*	*0.0*	*0.0*	>	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TCE+PCE/Total Chlorinated Solvents (%)	0.0%	0.0%	0.0%	0.0%	0.0%	*N/A*	0.0%	0.0%	0.0%	0.0%	0.0%	*N/A*	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Semivolatile Organic Compounds, ng/L																			
1,4-Dioxane	NA	NA	*N/A*	*N/A*	*N/A*	*N/A*	NA	NA	*N/A*	*N/A*	*N/A*	*N/A*	NA	NA	144 U	144 U	144 U	156 U	72.1 U

Notes:
Values in **BOLD and highlighted** indicate exceedance of applicable groundwater quality standard.
U = Not Detected. The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J = Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL), for instance, the result may be uncertain.
UJ = Not detected, quantitation limit may be inaccurate or imprecise.
J- = Analyte is present, Reported value may be biased high and associated with a higher level of uncertainty than is normally expected with the analytical method.
J+ = Analyte is present, Reported value may be biased high and associated with a higher level of uncertainty than is normally expected with the analytical method.
E = Result exceeded calibration range.
DL = Indicates a dilution of the sample was required for analysis.
R = Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information necessary to confirm the result.
○ = The groundwater standard is 0.4 µg/L for the sum of cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.
--- = No applicable groundwater standard or guidance value exists.
NA = Not analyzed.
N/A = Not applicable.
* = VOC is a chlorinated solvent.
'Qualifiers in Red were modified based on Data Validation Review performed by Alpha Geoscience.
> = Data trend analysis indicates increasing concentration.
< = Data trend analysis indicates decreasing concentration.

Summary of Analytical Results - Groundwater
Troy Belting and Supply Co., Colonie, New York

Analyte	MW-10D (Continued)						MW-11S					EB-122118+	TB122018	TB122118
	9/26/2018	12/20/2018	*MIN*	*MAX*	*AVERAGE*	*Trend*	11/19/2015	*MIN*	*MAX*	*AVERAGE*	*Trend*	12/21/2018	12/20/2018	12/21/2018
Volatile Organic Compounds, µg/L														
1,1,1,2-Tetrachloroethane*	NA	NA					0.5 U					NA	NA	NA
1,1,1-Trichloroethane*	0.7 U	0.7 U	*N/A*	*N/A*	*N/A*	*N/A*	2.5 U	*N/A*	*N/A*	*N/A*	*N/A*	2.5 U	2.5 U	2.5 U
1,1,2,2-Tetrachloroethane*	0.17 U	0.17 U					NA					0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113) *	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
1,1,2-Trichloroethane*	0.5 U	0.5 U					1.5 U					1.5 U	1.5 U	1.5 U
1,1-Dichloroethane*	0.7 U	0.7 U	*N/A*	*N/A*	*N/A*	*N/A*	2.5 U	*N/A*	*N/A*	*N/A*	*N/A*	2.5 U	2.5 U	2.5 U
1,1-Dichloroethene*	0.17 U	0.17 U	*N/A*	*N/A*	*N/A*	*N/A*	0.5 U	*N/A*	*N/A*	*N/A*	*N/A*	0.5 U	0.5 U	0.5 U
1,1-Dichloropropane	NA	NA					NA					NA	NA	NA
1,2,3-Trichlorobenzene	0.7 U	0.7 U					NA					2.5 U	2.5 U	2.5 U
1,2,3-Trichloropropane	NA	NA					NA					NA	NA	NA
1,2,4-Trichlorobenzene	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
1,2,4-Trimethylbenzene	NA	NA					2.5 U					NA	NA	NA
1,2-Dibromo-3-Chloropropane	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
1,2-Dibromoethane*	0.65 U	0.65 U					2.0 U					2 U	2 U	2 U
1,2-Dichlorobenzene	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
1,2-Dichloroethane	0.13 U	0.13 U					0.5 U					0.5 U	0.5 U	0.5 U
1,2-Dichloropropane*	0.14 U	0.14 U					1.0 U					1 U	1 U	1 U
1,3,5-Trimethylbenzene	NA	NA					NA					NA	NA	NA
1,3-Dichlorobenzene	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
1,3-Dichloropropane	NA	NA					NA					NA	NA	NA
1,4-Dichlorobenzene	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
1,4-Dioxane	61 R	61 U					250 U					250 R	250 U	250 R
2,2 Dichloropropane	NA	NA					NA					NA	NA	NA
2-Butanone (MEK)	1.9 U	1.9 U					5 U					5 U	5 U	5 U
2-Chlorotoluene	NA	NA					NA					NA	NA	NA
2-Hexanone	1 U	1 U					5 U					5 U	5 U	5 U
4-Chlorotoluene	NA	NA					NA					NA	NA	NA
4-Isopropyltoluene	NA	NA					NA					NA	NA	NA
4-Methyl-2-pentanone (MIBK)	1 U	1 U					5 U					5 U	5 U	5 U
Acetone	2.2 U	1.5 U					5 U					5 U	5 U	5 U
Benzene	0.16 U	0.16 U					0.5 U					0.5 U	0.5 U	0.5 U
Bromobenzene	NA	NA					NA					NA	NA	NA
Bromochloromethane*	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
Bromodichloromethane*	0.19 U	0.19 U					0.5 U					0.5 U	0.5 U	0.5 U
Bromoform	0.65 U	0.65 U					2.0 U					2 U	2 U	2 U
Bromomethane	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
Carbon disulfide	1 U	1 U					5.0 U					5 U	5 U	5 U
Carbon tetrachloride*	0.13 U	0.13 U					0.5 U					0.5 U	0.5 U	0.5 U
Chlorobenzene	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
Chloroethane*	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
Chloroform*	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
Chloromethane*	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
cis-1,2-Dichloroethene*	0.7 U	0.7 U	*N/A*	*N/A*	*N/A*	*N/A*	2.5 U	*N/A*	*N/A*	*N/A*	*N/A*	2.5 U	2.5 U	2.5 U
cis-1,3-Dichloropropene	0.14 U	0.14 U					0.5 U					0.5 U	0.5 U	0.5 U
Cyclohexane	0.27 U	0.27 U					10 U					10 U	10 U	10 U
Dibromochloromethane*	0.15 U	0.15 U					0.5 U					0.5 U	0.5 U	0.5 U
Dibromomethane	NA	NA					NA					NA	NA	NA
Dichlorodifluoromethane*	1 U	1 U					5 U					5 U	5 U	5 U
Ethylbenzene	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
Hexachlorobutadiene	NA	NA					NA					NA	NA	NA
Iodomethane	NA	NA					NA					NA	NA	NA
Isopropylbenzene	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
Methyl acetate	0.23 U	0.23 U					2 U					2 U	2 U	2 U
Methyl tert-butyl ether	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
Methylcyclohexane	0.4 U	0.4 U					10 U					10 U	10 U	10 U
Methylene Chloride*	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
Napthalene	NA	NA					NA					NA	NA	NA
n-Butylbenzene	NA	NA					NA					NA	NA	NA
n-Propylbenzene	NA	NA					NA					NA	NA	NA
o-Xylene	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
p,m-Xylene	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
sec-Butylbenzene	NA	NA					NA					NA	NA	NA
Styrene	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
tert-Butylbenzene	NA	NA					NA					NA	NA	NA
Tetrachloroethene*	0.18 U	0.18 U	*N/A*	*N/A*	*N/A*	*N/A*	0.5 U	*N/A*	*N/A*	*N/A*	*N/A*	0.5 U	0.5 U	0.5 U
Toluene	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
trans-1,2-Dichloroethene*	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
trans-1,3-Dichloropropene	0.16 U	0.16 U					0.5 U					0.5 U	0.5 U	0.5 U
Trichloroethene*	0.18 U	0.18 U	*N/A*	*N/A*	*N/A*	*N/A*	0.5 U	*N/A*	*N/A*	*N/A*	*N/A*	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane*	0.7 U	0.7 U					2.5 U					2.5 U	2.5 U	2.5 U
Vinyl Acetate	NA	NA					NA					NA	NA	NA
Vinyl chloride*	0.07 U	0.07 U	*N/A*	*N/A*	*N/A*	*N/A*	1.0 U	*N/A*	*N/A*	*N/A*	*N/A*	1 U	1 U	1 U
Xylenes, Total	NA	NA					NA					NA	NA	NA
Total Chlorinated Solvents, µg/L														
Total Chlorinated Solvents	0.0	0.0	*0.0*	*0.0*	*0.0*	---	0.0	*0.0*	*0.0*	*0.0*	*N/A*	*0.0*	*0.0*	*0.0*
TCE+PCE/Total Chlorinated Solvents (%)	0.0%	0.0%	*0.0%*	*0.0%*	*0.0%*	*N/A*	0.0%	*0.0%*	*0.0%*	*0.0%*	*N/A*	*0.0%*	*0.0%*	*0.0%*
Semivolatile Organic Compounds, ng/L														
1,4-Dioxane	72.1 U	72.1 U	*N/A*	*N/A*	*N/A*	*N/A*	NA	*N/A*	*N/A*	*N/A*	*N/A*	0.16 U	NA	NA

Notes:
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J = Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL), for instance, the result may be uncertain.
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J- = Analyte is present, Reported value may be biased high and associated with a higher level of uncertainty than is normally expected with the analytical method.
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E = Result exceeded calibration range.
DL = Indicates a dilution of the sample was required for analysis.
R = Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information necessary to confirm the result.
○ = The groundwater standard is 0.4 µg/L for the sum of cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.
--- = No applicable groundwater standard or guidance value exists.
NA = Not analyzed.
N/A = Not applicable.
* = VOC is a chlorinated solvent.
Qualifiers in Red were modified based on Data Validation Review performed by Alpha Geoscience.
> = Data trend analysis indicates increasing concentration.
< = Data trend analysis indicates decreasing concentration.

Summary of Groundwater Analytical Results - Trichloroethene (TCE) in Groundwater
Troy Belting and Supply Co., Colonie, New York

Well ID	MW-1S	MW-1D	MW-2S	MW-3S	MW-4S	MW-4D	MW-5S	MW-6S	MW-6D	MW-6D'	MW-7S	MW-7D	MW-8S	DUP122018**	MW-8D	MW-9S	MW-10D	MW-11S
Location	Upgradient	Upgradient	Source	Downgradient/ Crossgradient	Crossgradient	Crossgradient	Source	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient	Crossgradient	Crossgradient	Crossgradient	Upgradient	Downgradient/ Crossgradient	Upgradient
DATE																		
May-12	5.0 U	NA	**6,500 E**	**39.0**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dec-12	0.76 J	NA	**10,000 E**	5 U	**460.0 E**	NA	**11,000 E**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oct-14	0.46 U	0.46 U	**220,000 DL**	0.46 U	3.0	0.46 U	**400,000 DL**	**6.2**	2.3 U	NA	NA	NA	0.46 U	NA	0.46 U	0.46 U	NA	NA
Nov-15	0.50 U	0.50 U	**330,000**	0.50 U	**160.0**	0.5 U	**390,000 E**	**5.3 J**	0.29 J	0.5 U	0.18 J	0.5 U	0.5 U	NA	0.5 U	0.50 U	0.5 U	0.5 U
Feb-17	NA	NA	NA	0.50 U	**33.0**	NA	**250,000 E DL**	12 U	**25.0**	1.2 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
May-17	NA	NA	NA	0.50 U	**84.0**	NA	**320,000 E DL**	**7.4 J**	**67.0**	1.2 U	0.43 J	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Sep-17	NA	NA	NA	0.50 U	**84.0**	NA	**320,000**	12 U	**82.0**	0.5 U	0.2 J	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Dec-17	NA	NA	NA	0.50 U	**82.0**	NA	**340,000**	0.5 U	**62.0**	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Mar-18	NA	NA	NA	0.50 U	**84.0**	NA	**320,000**	12 U	**82.0**	0.5 U	0.2 J	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Jun-18	NA	NA	NA	0.18 U	**46.0**	NA	**330,000**	3.5 U	**150.0**	**14 J**	0.18 U	0.18 U	0.18 U	NA	NA	NA	0.18 U	NA
Sep-18	NA	NA	NA	0.18 U	**34.0**	NA	**200,000**	4.4 U	**160.0**	0.18 U	0.18 U	0.18 U	0.18 U	NA	NA	NA	0.18 U	NA
Dec-18	NA	NA	NA	0.18 U	**42.0**	NA	**400,000**	0.18 J	**170.0**	1.18 U	1.18 U	0.18 U	0.18 U	0.5 U	NA	NA	0.18 U	NA
Statistics Summary*																		
Minimum	0.76 J	N/A	6,500	39.0	3.0	N/A	11,000	5.3	0.29	14 J	0.18	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Maximum	0.76 J	N/A	330,000	39.0	460.0 E	N/A	400,000	7.4	170.0	14 J	0.43	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean	N/A	N/A	141,625	N/A	107.0	N/A	298,273	6.30	80.06	N/A	0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A
St.Dev.	N/A	N/A	160,428	N/A	131.2	N/A	113,043	1.05	62.64	N/A	0.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10-Prcntl	N/A	N/A	7,550	N/A	33	N/A	200,000	5.48	2.10	N/A	0.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Median	N/A	N/A	115,000	N/A	82	N/A	320,000	6.20	74.5	N/A	0.20	N/A	N/A	N/A	N/A	N/A	N/A	N/A
90-Prcntl	N/A	N/A	297,000	N/A	160	N/A	400,000	7.16	161.0	N/A	0.36	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes:

Value in **BOLD** indicates the reported concentration is greater than the water quality standard.

U = Not Detected (ND). The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

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DL = Indicates a dilution of the sample was required for analysis.

E = Result exceeded calibration range.

NA = Not analyzed.

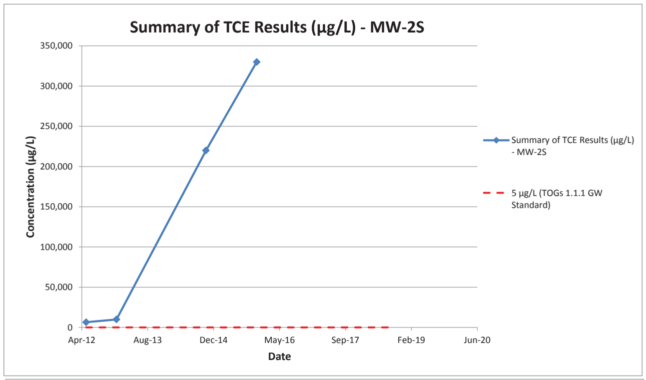
N/A = Not applicable.

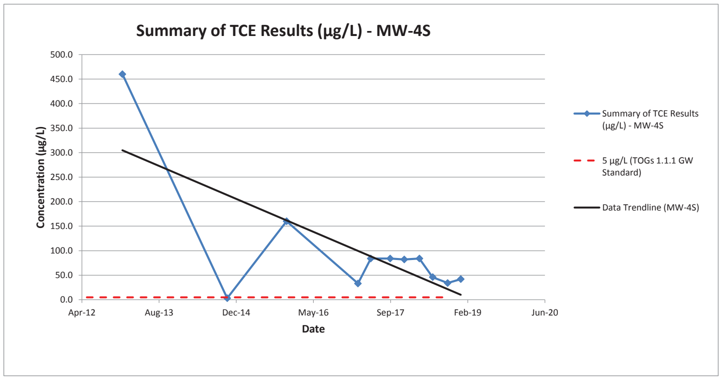
** DUP122018 was collected at MW-8S.

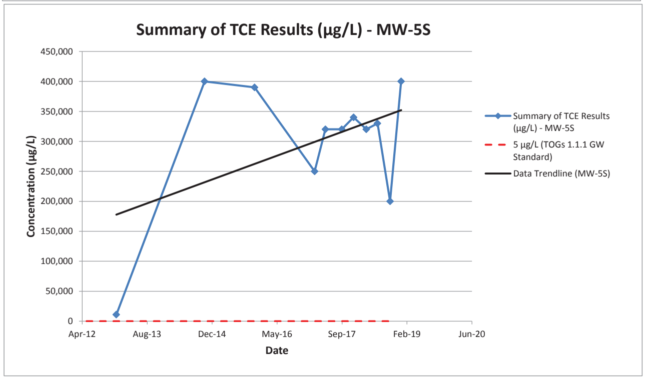
* Non-detect concentrations and not analyzed events are not represented in statistics summary.

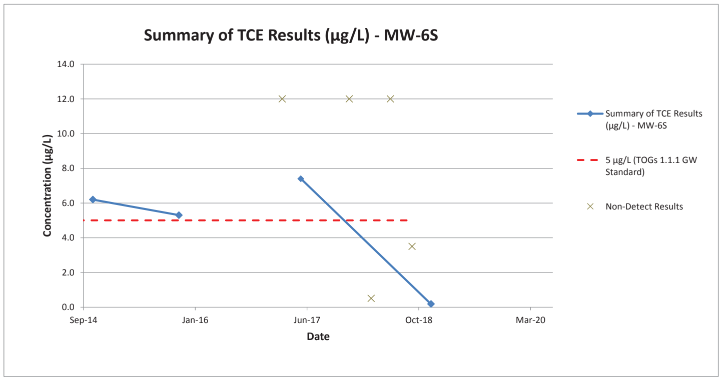
Summary of Groundwater Analytical Results - Trichloroethene (TCE) in Groundwater
Troy Belting and Supply Co., Colonie, New York

Data Trend Analysis



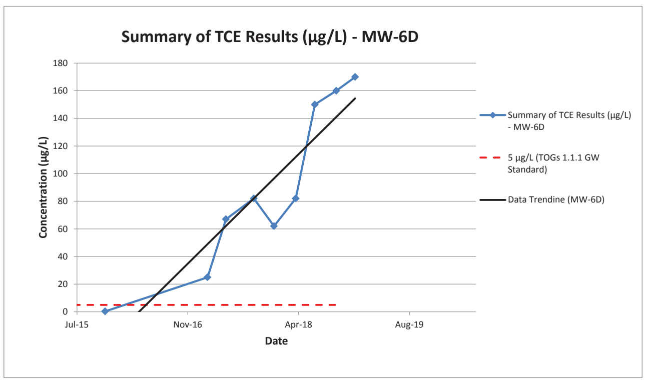






Summary of Groundwater Analytical Results - Trichloroethene (TCE) in Groundwater
Troy Belting and Supply Co., Colonie, New York

Data Trend Analysis



Summary of Groundwater Analytical Results - Tetrachloroethene (PCE) in Groundwater
Troy Belting and Supply Co., Colonie, New York

Well ID	MW-1S	MW-1D	MW-2S	MW-3S	MW-4S	MW-4D	MW-5S	MW-6S	MW-6D	MW-6D'	MW-7S	MW-7D	MW-8S	DUP122018**	MW-8D	MW-9S	MW-10D	MW-11S
Location	Upgradient	Upgradient	Source	Downgradient/ Crossgradient	Crossgradient	Crossgradient	Source	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient	Crossgradient	Crossgradient	Crossgradient	Upgradient	Downgradient/ Crossgradient	Upgradient
DATE																		
May-12	5.0 U	NA	**2,600 E**	1.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dec-12	5.0 U	NA	**2,400 E**	5.0 U	3.3 J	NA	**2,700 E**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oct-14	0.36 U	0.36 U	**2,100 J DL**	0.36 U	0.72 U	0.36 U	**6,100 DL**	1.8 U	1.8 U	NA	NA	NA	0.36 U	NA	0.36 U	0.36 U	NA	NA
Nov-15	0.50 U	0.50 U	**2,000**	0.50 U	25 U	0.50 U	**8,000**	12 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U
Feb-17	NA	NA	NA	0.50 U	20 U	NA	**6,500**	12 U	5 U	1.2 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
May-17	NA	NA	NA	0.50 U	25 U	NA	**11,000**	10 U	10 U	1.2 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Sep-17	NA	NA	NA	0.50 U	25 U	NA	**7,400**	12 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Dec-17	NA	NA	NA	0.50 U	25 U	NA	**8,300**	0.5 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Mar-18	NA	NA	NA	0.50 U	25 U	NA	**1,700**	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	0.5 U	NA
Jun-18	NA	NA	NA	0.18 U	9 U	NA	**8,900**	3.6 U	9 U	0.9 U	0.18 U	0.18 U	0.18 U	NA	NA	NA	0.18 U	NA
Sep-18	NA	NA	NA	0.18 U	9 U	NA	**7,600**	4.5 U	7.2 U	0.18 U	0.18 U	0.18 U	0.18 U	NA	NA	NA	0.18 U	NA
Dec-18	NA	NA	NA	0.18 U	9 U	NA	**11,000**	0.18 U	5 U	0.18 U	0.18 U	0.18 U	0.18 U	0.5 U	NA	NA	0.18 U	NA
Statistics Summary*																		
Minimum	N/A	N/A	2,000	N/A	N/A	N/A	1,700	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Maximum	N/A	N/A	2,600	N/A	N/A	N/A	11,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean	N/A	N/A	2,275	N/A	N/A	N/A	7,200	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
St.Dev.	N/A	N/A	275.38	N/A	N/A	N/A	2,932.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10-Prcntl	N/A	N/A	2,030	N/A	N/A	N/A	2,700	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Median	N/A	N/A	2,250	N/A	N/A	N/A	7,600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
90-Prcntl	N/A	N/A	2,540	N/A	N/A	N/A	11,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes:

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N/A = Not applicable.

** DUP122018 was collected at MW-8S.

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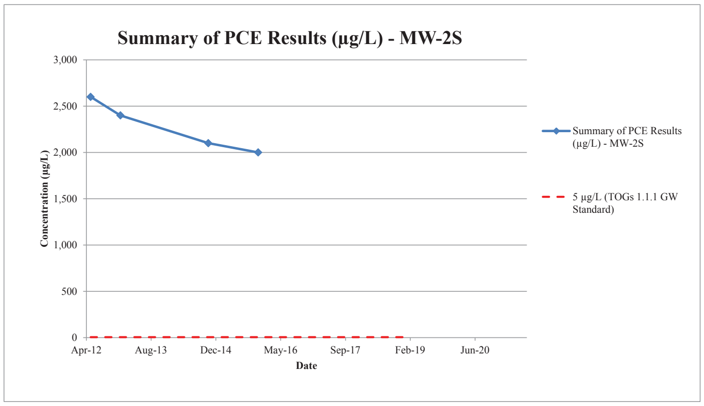
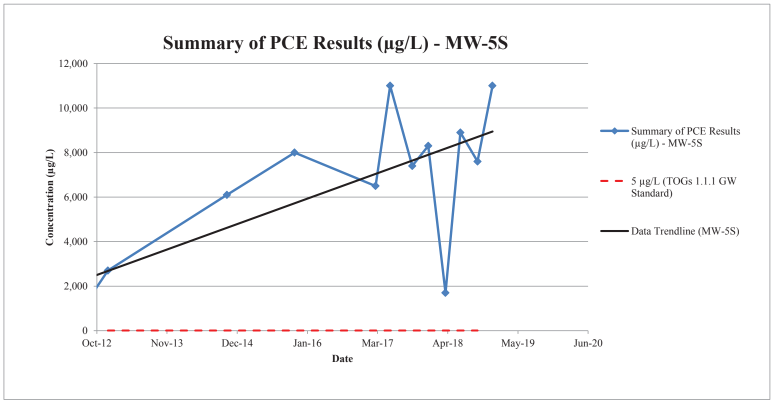
Summary of Groundwater Analytical Results - Tetrachloroethene (PCE) in Groundwater
Troy Belting and Supply Co., Colonie, New York

Data Trend Analysis





Summary of Groundwater Analytical Results - cis-1,2-DCE in Groundwater
Troy Belting and Supply Co., Colonie, New York

Well ID	MW-1S	MW-1D	MW-2S	MW-3S	MW-4S	MW-4D	MW-5S	MW-6S	MW-6D	MW-6D'	MW-7S	MW-7D	MW-8S	DUP122018**	MW-8D	MW-9S	MW-10D	MW-11S
Location	**Upgradient**	**Upgradient**	**Source**	**Downgradient/ Crossgradient**	**Crossgradient**	**Crossgradient**	**Source**	**Downgradient**	**Downgradient**	**Downgradient**	**Downgradient**	**Downgradient**	**Crossgradient**	**Crossgradient**	**Crossgradient**	**Upgradient**	**Downgradient/ Crossgradient**	**Upgradient**
DATE																		
May-12	0.76 J	NA	**5,200 DL**	1.2 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dec-12	0.79 J	NA	**7,200 E**	5.0 U	**6,500 E**	NA	**9,900 E**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oct-14	1.10	0.81 U	**78,000 DL**	0.81 U	**180**	**25**	**99,000 DL**	**1,800 DL**	**1,800 DL**	NA	NA	NA	0.81 U	NA	0.81 U	0.81 U	NA	NA
Nov-15	1.4 J	2.5 U	**100,000**	2.5 U	**6,800**	2.1 J	**66,000**	**2,500**	**22**	**180**	**6.3**	2.5 U	1.5 J	NA	2.5 U	2.5 U	2.5 U	2.5 U
Feb-17	NA	NA	NA	2.5 U	**2,700**	NA	**48,000**	**1,900**	**820**	**180**	2.5	2.5 U	1.1 J	NA	NA	NA	2.5 U	NA
May-17	NA	NA	NA	2.5 U	**6,000**	NA	**44,000**	**3,100**	**2,000**	**240**	3.4	2.5 U	**6.2**	NA	NA	NA	2.5 U	NA
Sep-17	NA	NA	NA	2.5 U	**7,600**	NA	**43,000**	**2,100**	**2,900**	**120**	4.1	2.5 U	2.7	NA	NA	NA	2.5 U	NA
Dec-17	NA	NA	NA	2.5 U	**6,400**	NA	**48,000**	**84**	**1,900**	**100**	3.3	2.5 U	3.7	NA	NA	NA	2.5 U	NA
Mar-18	NA	NA	NA	2.5 U	**4,500**	NA	**9,400**	**1,600**	**190**	**26**	1.9 J	2.5 U	3.7	NA	NA	NA	2.5 U	NA
Jun-18	NA	NA	NA	0.7 U	**5,000**	NA	**500 DL**	**1,200 DL**	**3,200**	**550 EJ DL**	1.5 J	0.7 U	**24**	NA	NA	NA	0.7 U	NA
Sep-18	NA	NA	NA	0.7 U	**5,800**	NA	**40,000**	**1,600 J**	**3,900**	**130**	1.8 J+	0.7 U	**8.2**	NA	NA	NA	0.7 U	NA
Dec-18	NA	NA	NA	0.7 U	**6,500**	NA	**57,000**	**76**	**4,300**	2 J	1.9 J	0.7 U	**14**	**13**	NA	NA	0.7 U	NA
Statistics Summary*																		
Minimum	0.76 J	N/A	5,200	N/A	180	2.1 J	500	76	22	2	1.5 J	N/A	0.8 J	N/A	N/A	N/A	N/A	N/A
Maximum	1.4	N/A	100,000	N/A	7,600	25	99,000	3,100	4,300	550	6.3	N/A	24.0	N/A	N/A	N/A	N/A	N/A
Mean	1.0	N/A	47,600	N/A	5,271	13.55	42,255	1,596	2,103	169.8	2.97	N/A	6.59	N/A	N/A	N/A	N/A	N/A
St.Dev.	0.30	N/A	48,648	N/A	2,146.3	16.19	28,188	956	1,479	161.0	1.53	N/A	7.32	N/A	N/A	N/A	N/A	N/A
10-Prcntl	0.77	N/A	5,800	N/A	2,700	4.39	9,400	83	173	21.2	1.74	N/A	1.07	N/A	N/A	N/A	N/A	N/A
Median	0.95	N/A	42,600	N/A	6,000	13.55	44,000	1,700	1,950	130	2.50	N/A	3.7	N/A	N/A	N/A	N/A	N/A
90-Prcntl	1.31	N/A	93,400	N/A	6,800	22.71	66,000	2,560	3,940	302	4.54	N/A	15.0	N/A	N/A	N/A	N/A	N/A

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** DUP122018 was collected at MW-8S.

Qualifiers in Red were modified based on Data Validation Review (performed by Alpha Geoscience) of December 2018 results.

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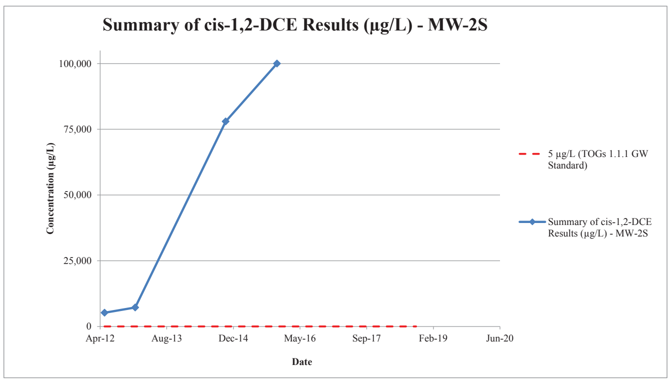
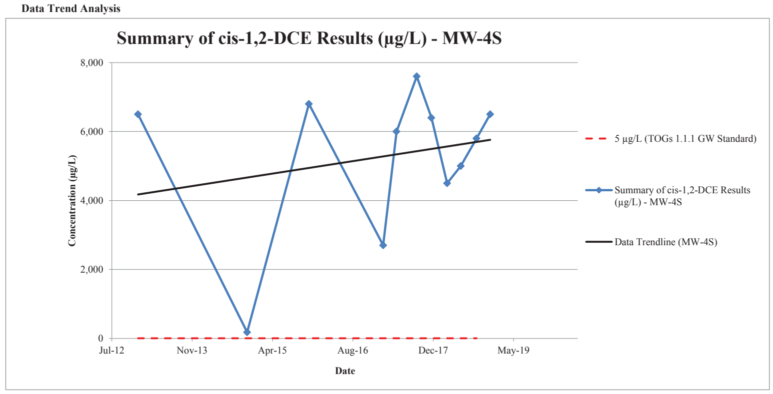
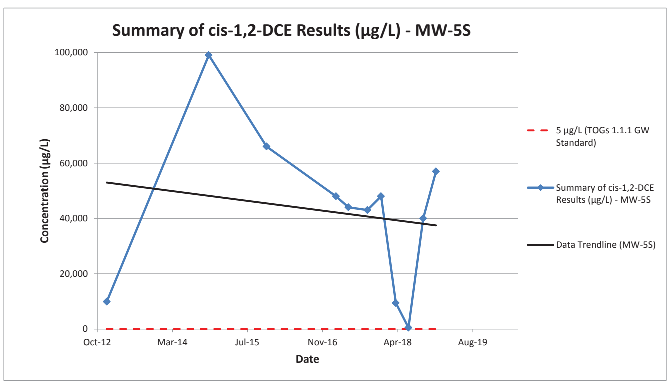
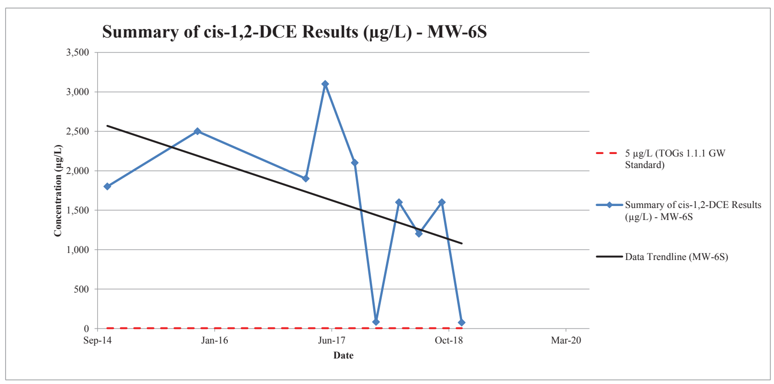
Summary of Groundwater Analytical Results - cis-1,2-DCE in Groundwater
Troy Belting and Supply Co., Colonie, New York

Data Trend Analysis



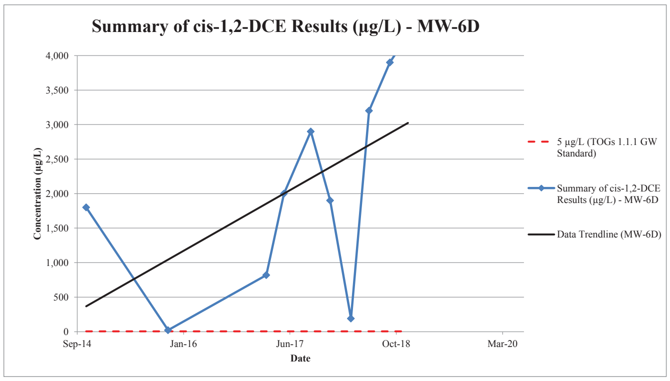


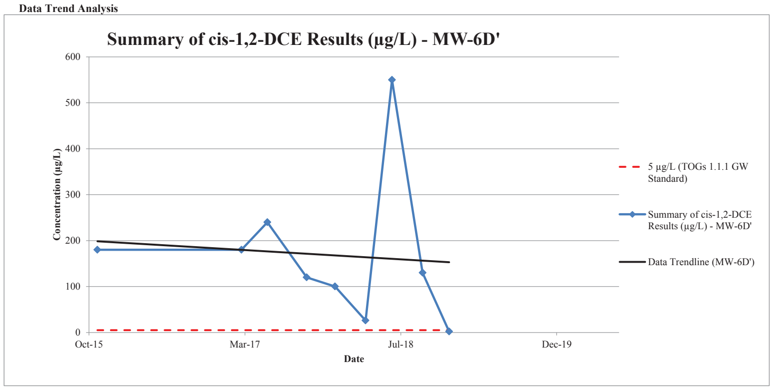


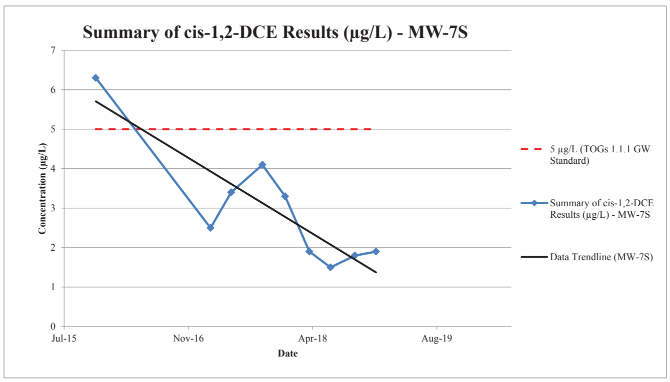


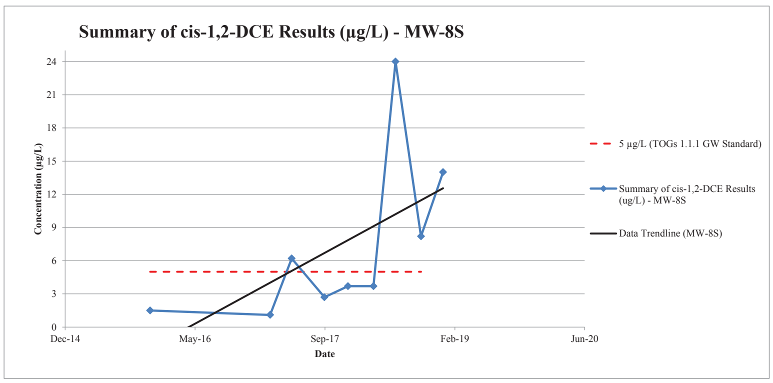
Summary of Groundwater Analytical Results - cis-1,2-DCE in Groundwater
Troy Belting and Supply Co., Colonie, New York

Data Trend Analysis









Summary of Groundwater Analytical Results - Vinyl Chloride (VC) in Groundwater
Troy Belting and Supply Co., Colonie, New York

Well ID	MW-1S	MW-1D	MW-2S	MW-3S	MW-4S	MW-4D	MW-5S	MW-6S	MW-6D	MW-6D'	MW-7S	MW-7D	MW-8S	DUP122018**	MW-8D	MW-9S	MW-10D	MW-11S
Location	Upgradient	Upgradient	Source	Downgradient/ Crossgradient	Crossgradient	Crossgradient	Source	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient	Crossgradient	Crossgradient	Crossgradient	Upgradient	Downgradient/ Crossgradient	Upgradient
DATE																		
May-12	1.5 J	NA	**290 E**	5.0 U		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dec-12	5.0 U	NA	**390 E**	5.0 U	**260 E**	NA	**5,900 E**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oct-14	1.8	0.9 U	**1,500 E**	0.9 U	**70**	**6.50**	**7,600 DL**	**130**	**79**	NA	NA	NA	0.81 U	NA	0.81 U	0.9 U	NA	NA
Nov-15	**2.8**	1 U	**4,100 J**	1.0 U	**180 J**	**5.9 J**	**2,000 J**	**280 J**	**7.3 J**	**81 J**	0.25 J	1.0 J	**4**	NA	2.5 U	1.0 U	1.0 U	1.0 U
Feb-17	NA	NA	NA	1.0 U	**89**	NA	**1,500**	**36**	**67**	**150**	0.31 J	1.0 U	**2.8**	NA	NA	NA	1.0 U	NA
May-17	NA	NA	NA	1.0 U	**240**	NA	**2,000**	**360 J+**	**240 J+**	**190 J+**	0.43 J+	1.0 U	**9.6**	NA	NA	NA	1.0 U	NA
Sep-17	NA	NA	NA	1.0 U	**330 J**	NA	**1,900 J**	**240**	**180**	**79**	0.3 J	1.0 U	**12**	NA	NA	NA	1.0 U	NA
Dec-17	NA	NA	NA	1.0 U	**160 J**	NA	5,000 UJ	1.0 UJ	**180 J**	**72**	1.0 U	1.0 U	**6.5 J**	NA	NA	NA	1.0 U	NA
Mar-18	NA	NA	NA	1.0 U	**140**	NA	**260 J**	**33**	**15**	**0.55 J**	0.17 J	1.0 U	**8.5**	NA	NA	NA	1.0 U	NA
Jun-18	NA	NA	NA	0.07 U	**180**	NA	**920 J**	**60**	**160**	**480**	0.25 J	0.07 U	**31**	NA	NA	NA	0.07 U	NA
Sep-18	NA	NA	NA	0.07 U	**460**	NA	**1,100 J**	**110 J**	**270**	**140**	0.3 J	0.07 U	**15**	NA	NA	NA	0.07 U	NA
Dec-18	NA	NA	NA	0.07 U	**300**	NA	**1,900 J**	0.18 J	**260**	1.3	0.19 J	0.07 U	**25**	**23**	NA	NA	0.07 U	NA
Statistics Summary*																		
Minimum	1.5 J	N/A	290 E	N/A	70	5.9 J	260 J	33	7.3 J	0.55 J	0.17 J	N/A	0.8	N/A	N/A	N/A	N/A	N/A
Maximum	2.8	N/A	4,100	N/A	460	6.5	7,600	360 J+	270	480.0	0.4	N/A	31.0	N/A	N/A	N/A	N/A	N/A
Mean	2.0	N/A	1,570	N/A	219	6.20	2,576	156	133	132.7	0.29	N/A	11.52	N/A	N/A	N/A	N/A	N/A
St.Dev.	0.68	N/A	1,774	N/A	114.4	0.42	2,471	123	98	145.0	0.08	N/A	9.77	N/A	N/A	N/A	N/A	N/A
10-Prcntl	1.56	N/A	320	N/A	89	5.96	788	35	14	1.2	0.22	N/A	2.60	N/A	N/A	N/A	N/A	N/A
Median	1.80	N/A	945	N/A	180	6.20	1,900	120	170	81.0	0.30	N/A	9.1	N/A	N/A	N/A	N/A	N/A
90-Prcntl	2.60	N/A	3,320	N/A	330	6.44	6,240	304	261	248.0	0.36	N/A	25.6	N/A	N/A	N/A	N/A	N/A

Notes:

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J+ = Analyte is present, Reported value may be biased high and associated with a higher level of uncertainty than is norn

UJ = Not detected, quantitaion limit may be inaccurate or imprecise.

DL = Indicates a dilution of the sample was required for analysis.

E = Result exceeded calibration range.

NA = Not analyzed.

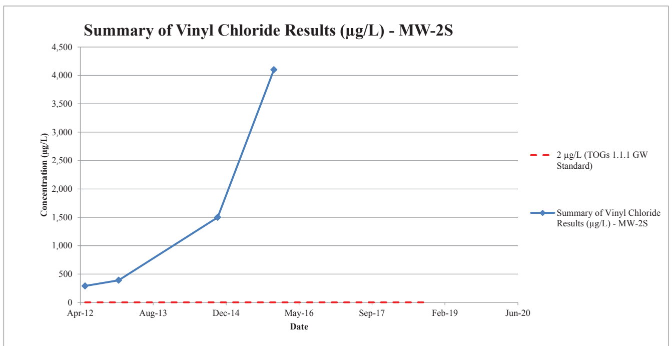
N/A = Not applicable.

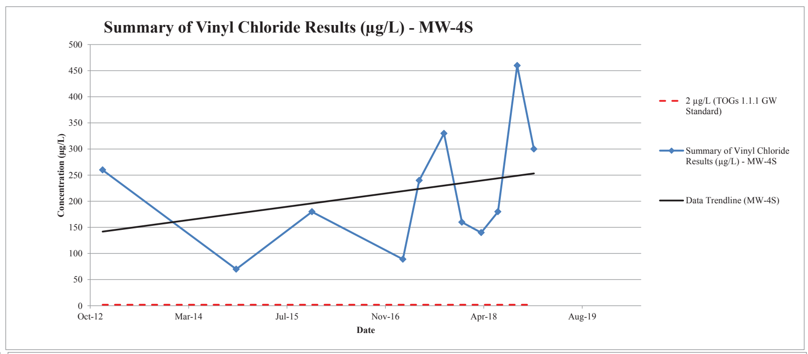
* Non-detect concentrations and not analyzed events are not represented in statistics summary.

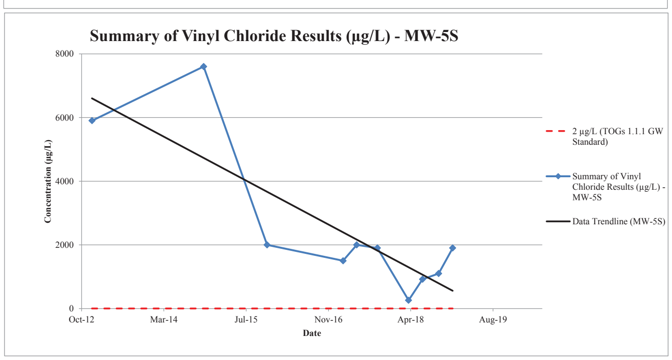
** DUP122018 was collected at MW-8S.

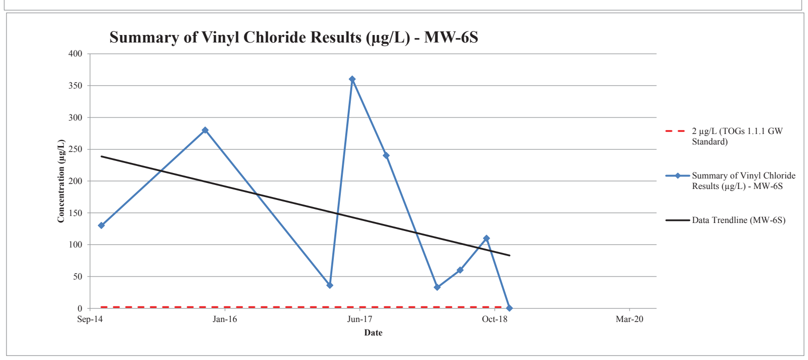
Summary of Groundwater Analytical Results - Vinyl Chloride (VC) in Groundwater
Troy Belting and Supply Co., Colonie, New York

Data Trend Analysis



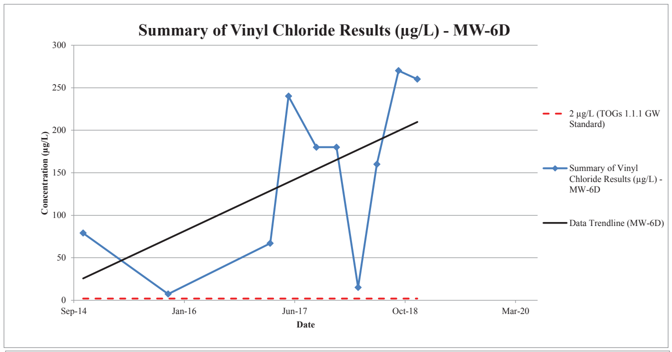


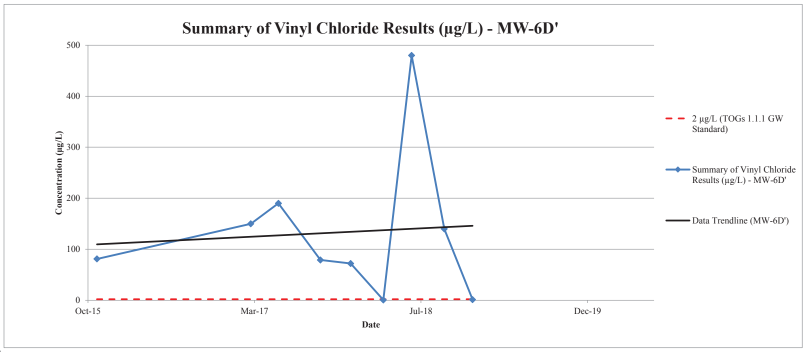


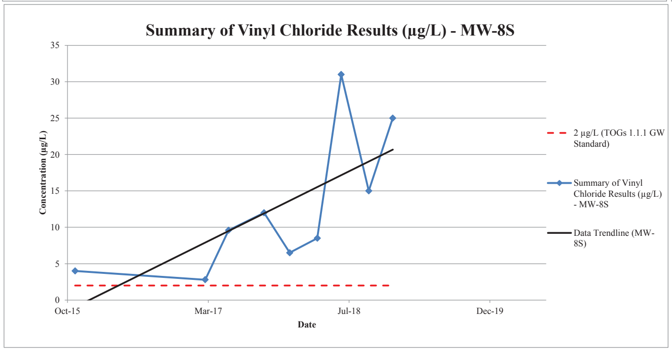


Summary of Groundwater Analytical Results - Vinyl Chloride (VC) in Groundwater
Troy Belting and Supply Co., Colonie, New York

Data Trend Analysis







Summary of Groundwater Analytical Results - Total Chlorinated VOCs (CVOCs) in Groundwater
Troy Belting and Supply Co., Colonie, New York

Well ID	MW-1S	MW-1D	MW-2S	MW-3S	MW-4S	MW-4D	MW-5S	MW-6S	MW-6D	MW-6D'	MW-7S	MW-7D	MW-8S	DUP122018*	MW-8D	MW-9S	MW-10D	MW-11S
Location	**Upgradient**	**Upgradient**	**Source**	**Downgradient/ Crossgradient**	**Crossgradient**	**Crossgradient**	**Source**	**Downgradient**	**Downgradient**	**Downgradient**	**Downgradient**	**Downgradient**	**Crossgradient**	**Crossgradient**	**Crossgradient**	**Upgradient**	**Downgradient/ Crossgradient**	**Upgradient**
DATE																		
May-12	2.26 J	NA	25,485	41.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dec-12	1.55 J	NA	27,301	0.6	7,366	NA	39,832	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oct-14	2.9	0 U	308,986	0	258.80	31.5	524,700	1,971	1,897	NA	NA	NA	0	NA	0	0	NA	NA
Nov-15	6.7	0 U	445,200	0	7,219	8 J	476,170	2,830	29.59	263.2	6.73	1 J	8	NA	0	0	0	0
Feb-17	NA	NA	NA	0	2,900	NA	57,610	1,985	923.4	188.8	5.31	0	3.6	NA	NA	NA	0	NA
May-17	NA	NA	NA	0	6,731	NA	382,820	3,536	2,341	433	4.26	0	15.8	NA	NA	NA	0	NA
Sep-17	NA	NA	NA	0.4	8,107	NA	378,600	2,375	3,209	200.8	4.6	0	14.7	NA	NA	NA	0	NA
Dec-17	NA	NA	NA	0	6,711	NA	403,100	84.8	2,172	173.8	3.3	0	10.2	NA	NA	NA	0	NA
Mar-18	NA	NA	NA	0	4,532	NA	94,760	1,653	215.5	26.6	2.07	0	12.2	NA	NA	NA	0	NA
Jun-18	NA	NA	NA	0	5,275	NA	347,530	1,274	3,559	1065.4	1.75	0	55	NA	NA	NA	0	NA
Sep-18	NA	NA	NA	0	6,369	NA	252,900	1,735	4,400	275.2	2.1	0	23.2	NA	NA	NA	0	NA
Dec-18	NA	NA	NA	0	6,913	NA	478,150	77	4,800	3.3	2.1	0	39	42	NA	NA	0	NA
Statistics Summary*																		
Minimum	1.55	N/A	25,485	0	258.80	8	39,832	77	30	3.3	1.75	0	0	N/A	N/A	N/A	N/A	N/A
Maximum	6.7	N/A	445,200	41.4	8,107	32	524,700	3,536	4,800	1065.4	6.7	1	55	N/A	N/A	N/A	N/A	N/A
Mean	3.4	N/A	201,743	3.53	5,671	19.75	312,379	1,752	2,355	292.2	3.58	0.11	18.17	N/A	N/A	N/A	N/A	N/A
St.Dev.	2.30	N/A	209,976	11.93	2,321	16.62	175,581	1,088	1,654	317.4	1.75	0.33	16.93	N/A	N/A	N/A	N/A	N/A
10-Prcntl	1.76	N/A	26,030	0	2,900	10.35	57,610	84	197	21.9	2.01	0	3.24	N/A	N/A	N/A	N/A	N/A
Median	2.58	N/A	168,144	0	6,711	19.75	378,600	1,853	2,256	200.8	3	0	13.45	N/A	N/A	N/A	N/A	N/A
90-Prcntl	5.56	N/A	404,336	0.58	7,366	29.15	478,150	2,901	4,440	559.5	5.59	0.2	41	N/A	N/A	N/A	N/A	N/A

Notes:

U = Not Detected (ND). The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J = Result is less than reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

DL = Indicates a dilution of the sample was required for analysis.

NA = Not analyzed.

N/A = Not applicable.

* Non-detect concentrations and not analyzed events are not represented in statistics summary.

** DUP122018 was collected at MW-8S.

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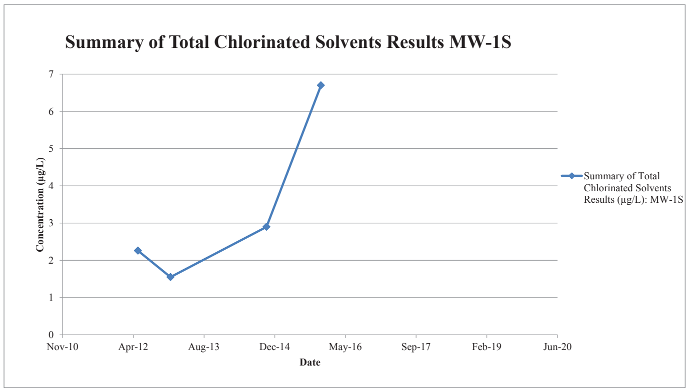
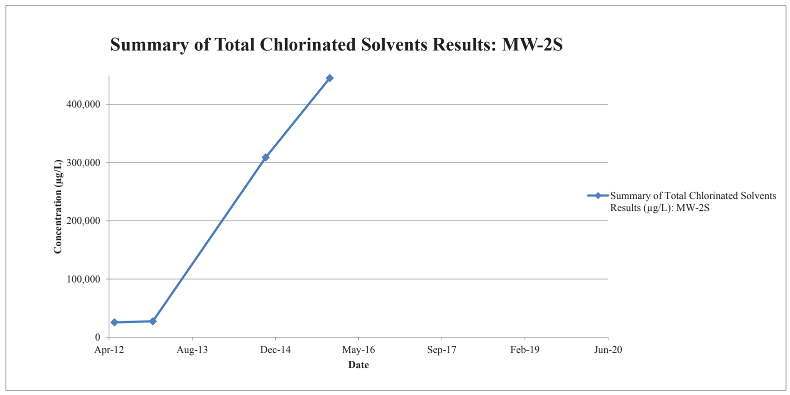
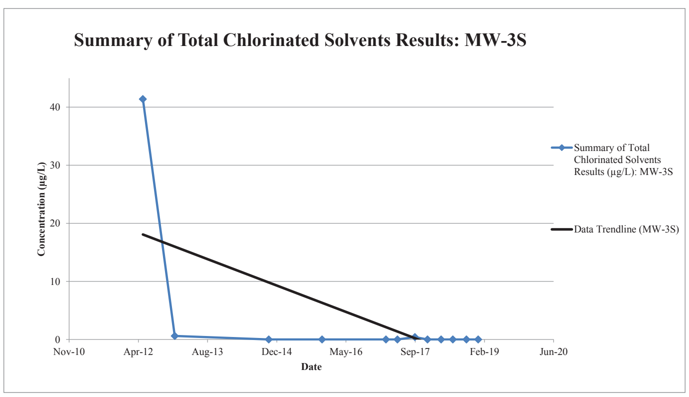
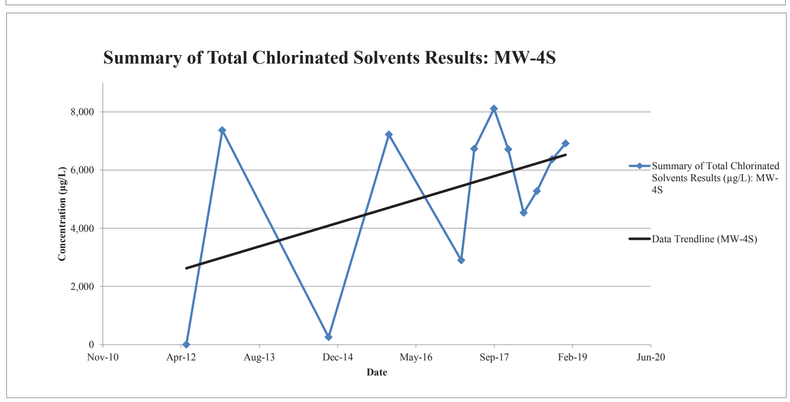
Data Trend Analysis









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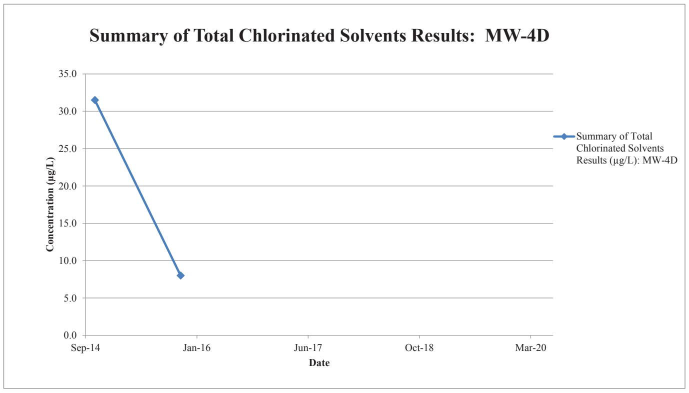

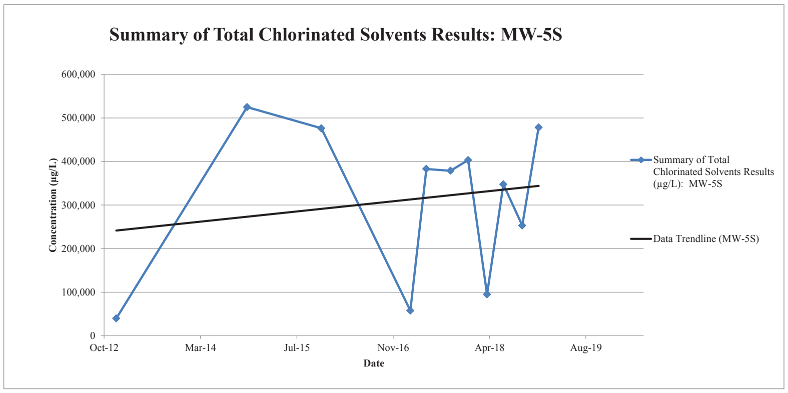

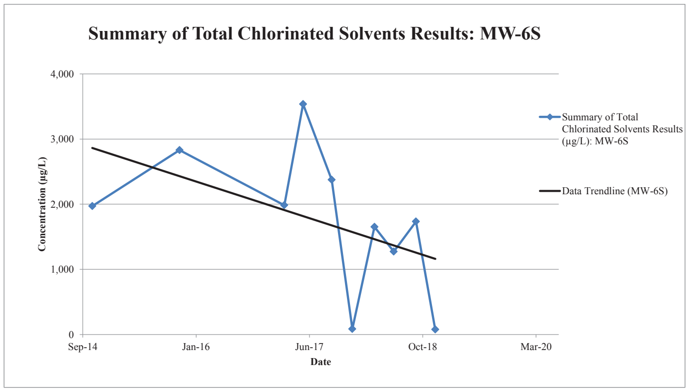

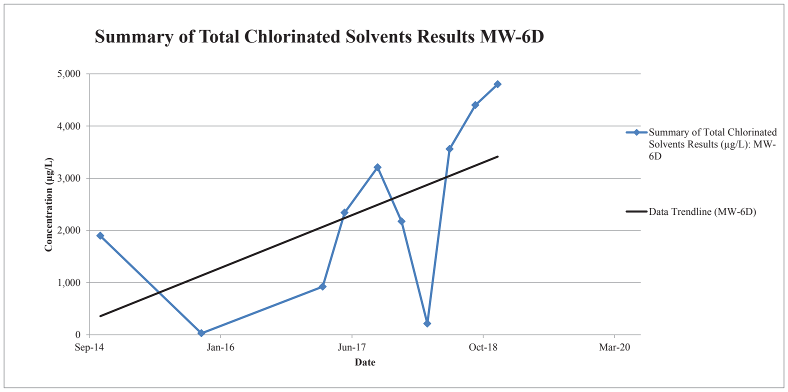

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