

APPENDIX C2
LABORATORY ANALYTICAL RESULTS – YEAR 2016
(PDF ONLY)

Comprehensive Data Validation Report

Sample/Blind Field Duplicate Results Greater Than the Quantitation Limit

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-5

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L) Q	Validated Result (ug/L) Q	QL (ug/L)	Validation Notes
Method: 6020A					
Laboratory: ELLE, Lancaster, PA					
Barium	5WC21	13.8	13.8	4	No action taken. Blind field duplicate 5WDUP.
	5WDUP	14.4	14.4	4	No action taken. Blind field duplicate of 5WC21.
Beryllium	5WC21	1	1	1	No action taken. Blind field duplicate 5WDUP.
	5WDUP	1.1	1.1	1	No action taken. Blind field duplicate of 5WC21.
Cobalt	5WC21	61.6	61.6	5	No action taken. Blind field duplicate 5WDUP.
	5WDUP	62.7	62.7	5	No action taken. Blind field duplicate of 5WC21.
Nickel	5WC21	32.9	32.9	4	No action taken. Blind field duplicate 5WDUP.
	5WDUP	33.2	33.2	4	No action taken. Blind field duplicate of 5WC21.
Method: 8260C					
Laboratory: ELLE, Lancaster, PA					
Chloroform	5WC21	1.1	1.1	1	No action taken. Blind field duplicate of 5WDUP.
	5WDUP	1.1	1.1	1	No action taken. Blind field duplicate of 5WC21.
Trichloroethene	5WC21	3.5	3.5 J	1	MSD recovered high. Blind field duplicate of 5WDUP.
	5WDUP	3.6	3.6 J	1	MSD recovered high. Blind field duplicate of 5WC21.

Definitions:

Data Validation Qualifiers:

QL Denotes permit quantitation limit. Q Denotes data qualifier.

J Denotes analyte reported at or above quantitation limit and associated result is estimated.

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Facility: HWMU-5 Groundwater Monitoring Event: Second Quarter 2016

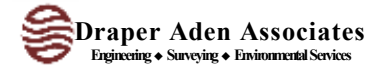


Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 6020A											
Laboratory: ELLE, Lancaster, PA											
Antimony	5W5B	0.4	U	U		2	0.4	1	0.4	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.4	U	U		2	0.4	1	0.4	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.4	U	U		2	0.4	1	0.4	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WDUP.
	5WC22	0.4	U	U		2	0.4	1	0.4	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.4	U	U		2	0.4	1	0.4	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.4	U	U		2	0.4	1	0.4	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WC21.
Arsenic	5W5B	2	U	U		4	2	10	2	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	2	U	U		4	2	10	2	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	2	U	U		4	2	10	2	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WDUP.
	5WC22	2	U	U		4	2	10	2	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	2	U	U		4	2	10	2	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	2	U	U		4	2	10	2	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WC21.
Barium	5W5B	32.3		32.3		4	1	10	1	ug/l	No action taken.
	5W7B	44.8		44.8		4	1	10	1	ug/l	No action taken.
	5WC21	13.8		13.8		4	1	10	1	ug/l	No action taken. Blind field duplicate 5WDUP.
	5WC22	33.6		33.6		4	1	10	1	ug/l	No action taken.
	5WC23	22.9		22.9		4	1	10	1	ug/l	No action taken.
	5WDUP	14.4		14.4		4	1	10	1	ug/l	No action taken. Blind field duplicate of 5WC21.
Beryllium	5W5B	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	1		1		1	0.2	1	0.2	ug/l	No action taken. Blind field duplicate 5WDUP.
	5WC22	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	1.1		1.1		1	0.2	1	0.2	ug/l	No action taken. Blind field duplicate of 5WC21.
Cadmium	5W5B	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.

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Facility: HWMU-5 Groundwater Monitoring Event: Second Quarter 2016

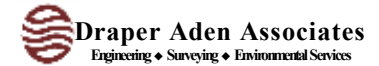


Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 6020A											
Laboratory: ELLE, Lancaster, PA											
Cadmium	5WC21	0.43	J	0.43	J	1	0.2	1	0.2	ug/l	Result < permit QL. Blind field duplicate 5WDUP.
	5WC22	0.25	J	0.25	J	1	0.2	1	0.2	ug/l	Result < permit QL.
	5WC23	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.45	J	0.45	J	1	0.2	1	0.2	ug/l	Result < permit QL. Blind field duplicate 5WC21.
Chromium	5W5B	1	U	U		4	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	1	U	U		4	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	3.6	J	3.6	J	4	1	5	1	ug/l	Result < permit QL. Blind field duplicate 5WDUP.
	5WC22	1	U	U		4	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
Cobalt	5WC23	1	U	U		4	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	3.4	J	3.4	J	4	1	5	1	ug/l	Result < permit QL. Blind field duplicate 5WC21.
	5W8B	1	U	U		5	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	1	U	U		5	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
Copper	5W7B	1.4	J	1.4	J	5	1	5	1	ug/l	Result < permit QL.
	5WC21	61.6		61.6		5	1	5	1	ug/l	No action taken. Blind field duplicate 5WDUP.
	5WC22	11.4		11.4		5	1	5	1	ug/l	No action taken.
	5WC23	3.1	J	3.1	J	5	1	5	1	ug/l	Result < permit QL.
Lead	5WDUP	62.7		62.7		5	1	5	1	ug/l	No action taken. Blind field duplicate of 5WC21.
	5W12A	1	U	U		5	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	1.3	J	1.3	J	4	1	5	1	ug/l	Result < permit QL.
	5W7B	1.1	J	1.1	J	4	1	5	1	ug/l	Result < permit QL.
Copper	5WC21	3.1	J	3.1	J	4	1	5	1	ug/l	Result < permit QL. Blind field duplicate 5WDUP.
	5WC22	1	U	U		4	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	1	U	U		4	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	3.1	J	3.1	J	4	1	5	1	ug/l	Result < permit QL. Blind field duplicate 5WC21.
Lead	5W5B	0.53	J	0.53	J	2	0.2	1	0.2	ug/l	Result < permit QL.
	5W7B	0.76	J	0.76	J	2	0.2	1	0.2	ug/l	Result < permit QL.

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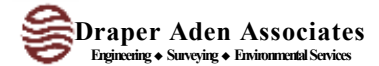


Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 6020A											
Laboratory: ELLE, Lancaster, PA											
Lead	5WC21	0.2	U	U		2	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WDUP.
	5WC22	0.2	U	U		2	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.2	U	U		2	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.2	U	U		2	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WC21.
Nickel	5W5B	2	U	U		4	2	10	2	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	2	U	U		4	2	10	2	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	32.9		32.9		4	2	10	2	ug/l	No action taken. Blind field duplicate 5WDUP.
	5WC22	5.6		5.6		4	2	10	2	ug/l	No action taken.
	5WC23	2.9	J	2.9	J	4	2	10	2	ug/l	Result < permit QL.
	5WDUP	33.2		33.2		4	2	10	2	ug/l	No action taken. Blind field duplicate of 5WC21.
Selenium	5W5B	3	U	U		4	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	3	U	U		4	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	3	U	U		4	3	10	3	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WDUP.
	5WC22	3	U	U		4	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	3	U	U		4	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	3	U	U		4	3	10	3	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WC21.
Silver	5W5B	0.2	U	U		1	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.2	U	U		1	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.2	U	U		1	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WDUP.
	5WC22	0.2	U	U		1	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.2	U	U		1	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.2	U	U		1	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WC21.
Thallium	5W5B	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WDUP.
	5WC22	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.

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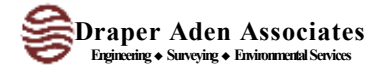


Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 6020A											
Laboratory: ELLE, Lancaster, PA											
Thallium	5WC23	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WC21.
Vanadium	5W5B	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WDUP.
	5WC22	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WC21.
Zinc	5W5B	3	U	U		30	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	6.1	J	6.1	J	30	3	10	3	ug/l	Result < permit QL.
	5WC21	27.1	J	27.1	J	30	3	10	3	ug/l	Result < permit QL. Blind field duplicate 5WDUP.
	5WC22	3	U	U		30	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	3	U	U		30	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	27.4	J	27.4	J	30	3	10	3	ug/l	Result < permit QL. Blind field duplicate 5WC21.
Method: 7470A											
Laboratory: ELLE, Lancaster, PA											
Mercury	5W5B	0.05	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.05	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.05	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WDUP.
	5WC22	0.05	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.05	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.05	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WC21.

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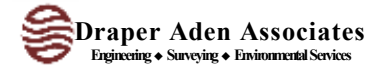


Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8260C											
Laboratory: ELLE, Lancaster, PA											
Acetone	5W5B	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WDUP.
	5WC22	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WC21.
	Trip Blank 1	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
2-Butanone	5W5B	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WDUP.
	5WC22	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WC21.
	Trip Blank 1	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
Chloroform	5W5B	2.3		2.3		1	0.1	1	0.1	ug/l	No action taken.
	5W7B	34		34		1	0.1	1	0.1	ug/l	Analyzed in dilution (1:10). Actual QL 10 ug/L.
	5WC21	1.1		1.1		1	0.1	1	0.1	ug/l	No action taken. Blind field duplicate of 5WDUP.
	5WC22	0.9	J	0.9	J	1	0.1	1	0.1	ug/l	Result < permit QL.
	5WC23	0.9	J	0.9	J	1	0.1	1	0.1	ug/l	Result < permit QL.
	5WDUP	1.1		1.1		1	0.1	1	0.1	ug/l	No action taken. Blind field duplicate of 5WC21.
	Trip Blank 1	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
Dichlorodifluoromethane	5W5B	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL.

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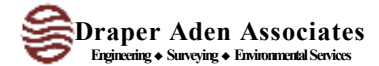


Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8260C											
Laboratory: ELLE, Lancaster, PA											
Dichlorodifluoromethane	5W7B	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WDUP.
	5WC22	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WC21.
	Trip Blank 1	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL.
	1,2-Dichloroethane	5W5B	0.1	U	U	1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL.
		5W7B	0.1	U	U	1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL.
		5WC21	0.1	U	U	1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WDUP.
		5WC22	0.1	U	U	1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL.
		5WC23	0.1	U	U	1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL.
		5WDUP	0.1	U	U	1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WC21.
		Trip Blank 1	0.1	U	U	1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL.
		Trip Blank 2	0.1	U	U	1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL.
1,1-Dichloroethene	5W8B	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WDUP.
	5WC22	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WC21.
	5W12A	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-5 Groundwater Monitoring Event: Second Quarter 2016

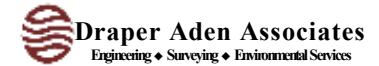


Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8260C											
Laboratory: ELLE, Lancaster, PA											
cis-1,2-Dichloroethene	5W8B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WDUP.
	5WC22	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WC21.
	5W12A	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
trans-1,2-Dichloroethene	5W8B	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WDUP.
	5WC22	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WC21.
	5W12A	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
Diethyl ether	5W5B	0.4	U	U		12	0.4	12	0.39	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.4	U	U		12	0.4	12	0.39	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	1.6	J	1.6	J	12	0.4	12	0.39	ug/l	Result < permit QL. Blind field duplicate of 5WDUP.
	5WC22	3.6	J	3.6	J	12	0.4	12	0.39	ug/l	Result < permit QL.
	5WC23	4.8	J	4.8	J	12	0.4	12	0.39	ug/l	Result < permit QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-5 Groundwater Monitoring Event: Second Quarter 2016

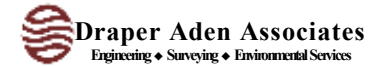


Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8260C											
Laboratory: ELLE, Lancaster, PA											
Diethyl ether	5WDUP	1.6	J	1.6	J	12	0.4	12	0.39	ug/l	Result < permit QL. Blind field duplicate of 5WC21.
	Trip Blank 1	0.4	U	U		12	0.4	12	0.39	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.4	U	U		12	0.4	12	0.39	ug/l	Analyte not detected at or above the DL or QL.
Methylene chloride	5W5B	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.3	J	0.3	J	1	0.2	1	0.182	ug/l	Result < permit QL.
	5WC21	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WDUP.
	5WC22	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WC21.
	Trip Blank 1	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL.
Toluene	5W5B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WDUP.
	5WC22	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WC21.
	Trip Blank 1	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
Trichloroethene	5W8B	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	3.5		3.5	J	1	0.2	1	0.177	ug/l	MSD recovered high. Blind field duplicate of 5WDUP.
	5WC22	3.8		3.8	J	1	0.2	1	0.177	ug/l	MSD recovered high.
	5WC23	3.9		3.9	J	1	0.2	1	0.177	ug/l	MSD recovered high.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-5 Groundwater Monitoring Event: Second Quarter 2016

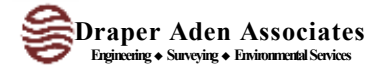


Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8260C											
Laboratory: ELLE, Lancaster, PA											
Trichloroethene	5WDUP	3.6		3.6	J	1	0.2	1	0.177	ug/l	MSD recovered high. Blind field duplicate of 5WC21.
	5W12A	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
Vinyl chloride	5W8B	0.1	U	U	J	1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (22%).
	5W5B	0.1	U	U	J	1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (22%).
	5W7B	0.1	U	U	J	1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (22%).
	5WC21	0.1	U	U	J	1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (22%). Blind field duplicate of 5WDUP.
	5WC22	0.1	U	U	J	1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (22%).
	5WC23	0.1	U	U	J	1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (22%).
	5WDUP	0.1	U	U	J	1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (22%). Blind field duplicate of 5WC21.
	5W12A	0.1	U	U	J	1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (22%).
	Trip Blank 1	0.1	U	U	J	1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (22%).
	Trip Blank 2	0.1	U	U	J	1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (22%).
Xylenes (Total)	5W5B	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WDUP.
	5WC22	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WC21.
	Trip Blank 1	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-5 Groundwater Monitoring Event: Second Quarter 2016

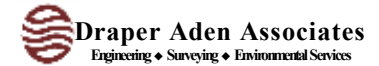


Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8270D											
Laboratory: ELLE, Lancaster, PA											
bis(2-Ethylhexyl)phthalate	5W5B	1.5	U	U		6	1.5	6	1.5	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	1.5	U	U		6	1.5	6	1.5	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	1.5	U	U		6	1.5	6	1.5	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WDUP.
	5WC22	1.5	U	U		6	1.5	6	1.5	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	1.5	U	U		6	1.5	6	1.5	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	1.5	U	U		6	1.5	6	1.5	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WC21.
Diethyl phthalate	5W5B	0.5	U	U		10	0.5	10	0.5	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.5	U	U		10	0.5	10	0.5	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.51	U	U		10	0.5	10	0.5	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WDUP.
	5WC22	0.5	U	U		10	0.5	10	0.5	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.5	U	U		10	0.5	10	0.5	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.5	U	U		10	0.5	10	0.5	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WC21.
2,4-Dinitrotoluene	5W5B	0.6	U	U		10	0.6	10	0.6	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.6	U	U		10	0.6	10	0.6	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	1	J	1	J	10	0.6	10	0.6	ug/l	Result < permit QL. Blind field duplicate of 5WDUP.
	5WC22	0.7	J	0.7	J	10	0.6	10	0.6	ug/l	Result < permit QL.
	5WC23	0.8	J	0.8	J	10	0.6	10	0.6	ug/l	Result < permit QL.
	5WDUP	1	J	1	J	10	0.6	10	0.6	ug/l	Result < permit QL. Blind field duplicate of 5WC21.
2,6-Dinitrotoluene	5W5B	0.7	U	U		10	0.7	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.7	U	U		10	0.7	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.71	U	U		10	0.7	10	0.7	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WDUP.
	5WC22	0.7	U	U		10	0.7	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.71	U	U		10	0.7	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.7	U	U		10	0.7	10	0.7	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WC21.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-5 Groundwater Monitoring Event: Second Quarter 2016



Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8270D											
Laboratory: ELLE, Lancaster, PA											
o-Nitroaniline	5W5B	0.7	U	U		10	0.7	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.7	U	U		10	0.7	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.8	J	0.8	J	10	0.7	10	0.7	ug/l	Result < permit QL. Blind field duplicate of 5WDUP.
	5WC22	2	J	2	J	10	0.7	10	0.7	ug/l	Result < permit QL.
	5WC23	2	J	2	J	10	0.7	10	0.7	ug/l	Result < permit QL.
	5WDUP	0.9	J	0.9	J	10	0.7	10	0.7	ug/l	Result < permit QL. Blind field duplicate of 5WC21.
p-Nitroaniline	5W5B	1.3	U	U		20	1.3	20	1.3	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	1.3	U	U		20	1.3	20	1.3	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	1.3	U	U		20	1.3	20	1.3	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WDUP.
	5WC22	1.3	U	U		20	1.3	20	1.3	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.22	U	U		20	1.3	20	1.3	ug/l	Analyte not detected at or above the DL or QL. ELLE result 1.5 ug/l J. TestAmerica result used. Not detected at or above MDL. LOQ 2 ug/l. LOD 0.22 ug/L.
	5WDUP	1.3	U	U		20	1.3	20	1.3	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WC21.
Nitrobenzene	5W5B	0.8	U	U		10	0.8	10	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.8	U	U		10	0.8	10	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	1	J	1	J	10	0.8	10	0.8	ug/l	Result < permit QL. Blind field duplicate of 5WDUP.
	5WC22	1	J	1	J	10	0.8	10	0.8	ug/l	Result < permit QL.
	5WC23	1	J	1	J	10	0.8	10	0.8	ug/l	Result < permit QL.
	5WDUP	1	J	1	J	10	0.8	10	0.8	ug/l	Result < permit QL. Blind field duplicate of 5WC21.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-5 Groundwater Monitoring Event: Second Quarter 2016



Analyte	Sample ID	Lab Result	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Definitions: QL Denotes quantitation limit. DL Denotes detection limit Q Denotes data qualifier. U Denotes analyte not detected at or above Detection Limit (DL) or Quantitation Limit (QL). UA Denotes analyte not detected at or above adjusted sample DL or QL. J Denotes analyte reported at or above the DL and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not detected at or above DL and QL and DL and QL are estimated. When used with "UA" (i.e., "UAJ"), denotes analyte not detected at or above adjusted DL and QL and adjusted DL and QL are estimated. R Denotes result rejected. Laboratory Data Qualifiers, "U" and "<", denote not detected at or above the DL or QL.										

SW-846 METHODS 6020A AND 7470A INORGANIC DATA REVIEW SUMMARY

Draper Aden Associates performed a manual comprehensive data review of the analytical results for the April 25-26, 2016 Corrective Action groundwater monitoring event for Hazardous Waste Management Unit 5 (HWMU 5) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia. Draper Aden Associates collected the groundwater samples from monitoring wells 5W8B, 5W5B, 5W7B, 5WC21, 5WC22, 5WC23, and 5W12A. Groundwater sample 5WDUP was submitted to the laboratory as a blind sample duplicate for 5WC21. The following information and attached table summarize the inorganic data validation results. Validation of other required methods is presented on separate reports.

For this Corrective Action annual groundwater monitoring event, samples 5W5B, 5W7B, 5WC21, 5WC22 and 5WC23 (downgradient point of compliance (POC) wells) were analyzed for the sixteen inorganic constituents listed in Appendix K of the facility's permit by SW-846 Method 6020A and SW-846 Method 7470A. Samples 5W8B (upgradient groundwater monitoring well) and 5W12A (plume monitoring well) were analyzed for cobalt only by SW-846 Method 6020A.

Inductively coupled plasma atomic emission spectroscopy/mass spectrometry (ICP-MS) and cold vapor atomic absorption (CVAA) were the techniques used for the metal analyses. ICP-MS Method 6020A was used to analyze for antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium and zinc. CVAA Method 7470A was used to analyze for mercury. Target analytes were analyzed for total (T) concentrations.

Draper Aden Associates sent samples to Eurofins Lancaster Laboratories Environmental (ELLE), of Lancaster, Pennsylvania. ELLE performed the Method 6020A and 7470A analyses. On behalf of RFAAP, ELLE submitted results to Draper Aden Associates in a final certificate of analysis, which included sample analytical results, as well as relevant documentation to validate and verify the results. ELLE is a VELAP accredited laboratory for the above analytes, methods and matrix.

The evaluation of ELLE's compliance with the method and validation of results presented here are based upon a review of QA/QC information including chain-of-custody, case narrative, holding times, preservation procedures, instrument calibration, tuning, blank (method, calibration and other blanks), interference check sample, matrix spike/matrix spike duplicate (MS/MSD), laboratory control sample (LCS), internal standard, and serial dilution data. A review of transcriptions from instrument data to sample summary sheets was performed. Calculation checks were performed on ten percent of the data set, where applicable. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

ELLE received the samples on ice and in good condition with custody seals intact. The chain of custody was appropriately signed and dated by field and laboratory personnel, except where noted below. Applicable holding time and preservation criteria were met.

Method 6020A (ICP-MS)

The original certificates of analysis were received on May 27, 2016. The certificates of analysis appeared complete in its presentation and the data were of acceptable quality. The data set demonstrated the laboratory's ability to achieve the reported permit quantitation limit (QL) or detection limit (DL).

QC history documentation was provided. Applicable preservation and technical holding time criteria were met. Instrument calibration, calibration verification and tuning requirements were met. QL check standards, blank, interference check samples (ICSAB), MS/MSD, LCS, internal standard data, and serial dilution sample results were within control limits, where applicable. Field duplicate/sample results exhibited acceptable precision. Calculation checks were performed on ten percent of the data set. A review of transcriptions from instrument data to sample summary sheets was performed. Deviations from QA/QC criteria that were noted during data review are summarized below.

The QL standard concentration for antimony and lead was 2 µg/l instead of 1 µg/l. The instrument data were evaluated and antimony was not detected in any sample at or above the detection limit or QL and no data qualification was required for antimony. The QL standard concentration was at or below the project QL for the other analytes.

The previous laboratory, CompuChem, a Division of Liberty Analytical (CompuChem), of Cary, North Carolina, went out of business in January 2016. Samples were submitted to ELLE and QLs and DLs differ, however, QL was less than or equal to groundwater protection standard (GPS).

For this Corrective Action groundwater monitoring event, sample results were reported to at or above the permit specified detection limit (DL). Target analytes detected at or above the DL or QL and/or analytical data that required a data validation qualifier due to quality control deviations noted above are summarized on the attached table. The certificate of analysis reports a QL of 1 ug/l for vanadium instead of 10 ug/l. Since all results were reported as not detected to 1 ug/l, no revision was requested.

Results for samples unaffected by the data validation process and reported as not detected at or above the DL were validated and qualified "U." Reported values less than the QL should be considered estimated concentrations and were validated and qualified "J." No results were rejected based on the data validation criteria.

Method 7470A (CVAA)

The original certificate of analysis was received on May 27, 2016. The certificate of analysis appeared complete in its presentation and the final data were of acceptable quality. The certificate of analysis demonstrated the ability of the laboratory to achieve the reported permit QL or DL for mercury.

Radford Army Ammunition Plant (RFAAP-HWMU5)
Second Quarter 2016 Corrective Action Annual Groundwater Monitoring Event
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QC history documentation was provided. Applicable preservation and technical holding time criteria were met. Instrument calibration and calibration verification criteria were met. QL standard, blank, MS/MSD and LCS results recovered within control limits. Field duplicate/sample results exhibited acceptable precision, where applicable. Calculation checks were performed on ten percent of the data set. A review of transcriptions from instrument data to sample summary sheets was performed. No deviations from QA/QC criteria were noted during data review.

For this Corrective Action groundwater monitoring event, sample results were reported to at or above the permit detection limit. Target analytes detected at or above the detection limit or QL and/or analytical data that required a data validation qualifier due to quality control deviations noted above are summarized on the attached table.

For this Corrective Action groundwater monitoring event, mercury results for the samples unaffected by the data validation process and not detected at or above the detection limit and/or QL were validated and reported as "U." No results were rejected based on the data validation criteria.

INORGANIC DATA EVALUATION FOR ICP/MS SW-846 METHOD 6020A

ELLE, Lancaster, PA; SDGs: RAE60
Preparation Method 3020A

"☑" denotes items reviewed. See Data Validation Summary for additional comments.

A. DOCUMENTATION COMPLETENESS CRITERIA:

Data Quality Objective: Representativeness

- ☑ Chain of custody – Custody transfers must be signed and dated
- ☑ Chain of custody properly and completely filled out including sampler signatures, date and time of sampling, sample ID, analysis requested

B. DETECTION LIMIT AND QUANTITATION LIMIT CRITERIA:

Data Quality Objective: Analytical Sensitivity

- ☑ Specific detection limit reported
- ☑ Specific quantitation limit reported
- ☑ Standard analyzed at the QL (LLQC), digested, 70-130% recovery, analyzed after MDL determination and as needed
- ☑ Instrument detection limit (IDL) less than QL
- ☑ VELAP accredited within 12 months

C. INITIAL DEMONSTRATION OF CAPABILITY (IDOC) CRITERIA:

Data Quality Objective: Laboratory Method Sensitivity

- ☑ Analyst IDOC for J. Mertz – requested

D. SAMPLE AND STANDARD PREPARATION CRITERIA:

Data Quality Objective: Accuracy and Representativeness

- ☑ Digestion prior to analysis
- ☑ Digestion method: 3020A
- ☑ Samples and standards matrix matched

E. TECHNICAL HOLDING TIME / PRESERVATION REQUIREMENTS:

Data Quality Objective: Representativeness

- ☑ 6 month holding time, pH<2 with Nitric Acid (HNO₃)

F. INSTRUMENT TUNE CRITERIA:

Data Quality Objective: Verify Operating Conditions

- ☑ Prior to calibration
- ☑ Relative Standard Deviation (RSD) <=5%
- ☑ Resolution < 0.9 amu full width at 10% peak height (or lower)
- ☑ Mass calibration <=0.1 amu difference from true value

G. INITIAL CALIBRATION CRITERIA:

Data Quality Objective: Laboratory Accuracy

- ☑ 1 calibration blank and at least 1 standard,
- ☑ Linear curve fit with correlation coefficient r>0.998
- ☑ Daily calibration following tuning and prior to sample analysis

H. INITIAL CALIBRATION VERIFICATION (ICV) CRITERIA:

Data Quality Objective: Laboratory Accuracy

- ☒ Daily following initial calibration
- ☒ ICV concentration near mid-point of calibration curve, 90-110% recovery
- ☒ Low level ICV (LLICV) – prior to analysis, at QL concentration, 70-130% recovery

I. INITIAL CALIBRATION BLANK CRITERIA:

Data Quality Objective: Laboratory Analytical Sensitivity/Instrument Drift/Contamination Evaluation

- ☒ Daily following ICV
- ☒ Interference free

J. CONTINUING CALIBRATION VERIFICATION (CCV) CRITERIA:

Data Quality Objective: Laboratory Analytical Accuracy

- ☒ CCV, prior to analysis, after every 10 samples, at end of analysis
- ☒ CCV recovery within 90-110%, mid-point of curve concentration
- ☒ Low level CCV (LLCCV), concentration at QL, prior to analysis, after every 10 samples, end of analysis (70-130% R)

K. CONTINUING CALIBRATION BLANK CRITERIA:

Data Quality Objective: Laboratory Analytical Sensitivity/Instrument Drift/Contamination Evaluation

- ☒ Immediately after the CCV, 10 sample frequency
- ☒ Interference free

L. BLANK CRITERIA:

Data Quality Objective: Sensitivity/Instrument Drift/Contamination Evaluation

- N/A Trip Blank (check only if analyzed)
- ☒ Method/Other Lab Blanks (check only if analyzed), one per digestion batch
- ☒ Interference free

M. INTERFERENCE CHECK SAMPLE (ICS) CRITERIA:

Data Quality Objective: Analytical Accuracy/Verification of Isobaric Interference Corrections

- ☒ At beginning of analytical run
- ☒ Recovery: 80-120%

N. MATRIX SPIKE DUPLICATE (MSD) OR SAMPLE DUPLICATE CRITERIA:

Data Quality Objective: Method Precision in Sample Matrix

- ☒ All analytes, one MSD or sample duplicate per batch of 20 samples
- ☒ Spiked prior to sample preparation
- ☒ RPD \leq 20 between MS and MSD results or sample and duplicate results
- ☒ MSD analyte recovery 75-125%

O. MATRIX SPIKE (MS) CRITERIA:

Data Quality Objective: Method Accuracy in Sample Matrix

- ☒ All analytes, one MS per digestion batch of 20 samples
- ☒ Spiked prior to sample preparation
- ☒ Recovery: 75-125%
- ☒ Post digestion spike if MS/MSD recoveries low
- ☒ Recovery of post digestion spike analytes within 80-120%

P. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

Data Quality Objective: Laboratory Method Accuracy, Laboratory Performance

- ☒ LCS for all target analytes, one LCS per 20 sample batch
- ☒ LCS concentration at approximately mid-point of analytical curve

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- ☒ Recovery within 80-120% for all analytes

Q. INTERNAL STANDARDS (IS) CRITERIA:

Data Quality Objective: Analytical Accuracy in Sample Matrix

- ☒ IS added to each sample and QC sample
☒ % Relative intensity (RI) within 70-125%

R. SERIAL DILUTION TEST CRITERIA:

Data Quality Objective: Accuracy in Sample Matrix

- ☒ Similar matrix, if concentration is 10X QL, then % Difference < 10%

S. SAMPLE QUANTITATION AND GENERAL REPORTING CRITERIA:

Data Quality Objective: n/a

- ☒ Sample results reported within instrument calibration range
☒ Sample results reported to the project detection limit
☒ Calculation checks on 10% of the data set
☒ Sample/Field duplicate RPD ≤ 20 , where applicable

Draper Aden Associates conducted a limited data validation of the above noted data set using the data package provided by the analyzing laboratory. Data evaluation was conducted using SW-846 (Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, USEPA, SW-846, 3rd Edition-Final Update I, II/IIA, III, and subsequent updates) method requirements and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, August 2014, where applicable). Validation of this data set is limited to review of items detailed in this data review report. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria was available. Validation of this data set is limited to the items detailed in this report.

**INORGANIC DATA EVALUATION FOR MERCURY
BY COLD VAPOR AA METHOD 7470A**

ELLE, Lancaster, PA; SDG: RAE60

"☑" denotes items were reviewed. See Data Validation Summary for additional comments.

A. QC DOCUMENTATION CRITERIA:

- ☑ Specific quantitation limit for mercury
- ☑ Specific detection limit for mercury, where applicable
- ☑ Electronic data file reviewed
- ☑ QC standard analyzed at or less than the QL (70-130% Recovery)
- ☑ Analyst IDOC for James Mertz-requested
- ☑ VELAP accredited within 12 months

B. TECHNICAL HOLDING TIMES / PRESERVATION REQUIREMENTS:

- ☑ 28 days holding time
- ☑ Adjust pH <2 w/ HNO₃

C. INSTRUMENT CALIBRATION CRITERIA:

- ☑ 1 calibration blank and at least 5 standards
- ☑ Instrument calibrated for every analytical sequence for every method
- ☑ Linear curve fit with correlation coefficient $r > 0.995$

D. INITIAL / CONTINUING CALIBRATION VERIFICATION CRITERIA:

- ☑ 10 sample frequency for CCV
- ☑ Recovery within 80-120% range

E. BLANK CRITERIA:

- N/A Trip Blank (check only if analyzed)
- N/A Equipment Blank (check only if analyzed)
- ☑ Method/other laboratory blanks (check only if analyzed)
- ☑ Interference free

F. DUPLICATE/MATRIX SPIKE DUPLICATE (MSD) CRITERIA:

- ☑ Target analyte: mercury
- ☑ One sample duplicate or matrix spike duplicate per batch of 20 samples
- ☑ $RPD \leq 20$ for spike/sample values greater than 5 times QL
- ☑ $RPD \leq 20$ between MS and MSD results

G. MATRIX SPIKE (MS) SAMPLE CRITERIA:

- ☑ Mercury, MS spiked prior to digestion
- ☑ Recovery within 75-125%

H. LABORATORY CONTROL SAMPLE CRITERIA:

- ☒ Recovery within 80-120%
- ☒ LCS for Mercury, one LCS per 20 sample batch

I. SAMPLE RESULTS CRITERIA:

- ☒ Results reported within instrument calibration range
- ☒ Results reported to detection limit
- ☒ Calculation checks on 10% of the data set
- ☒ Sample/Field duplicate RPD ≤ 20 , where applicable

Draper Aden Associates conducted a limited data validation of the above noted data set using the data package provided by the analyzing laboratory. Data evaluation was conducted using SW-846 (Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, USEPA, SW-846, 3rd Edition-Final Update I, II/IIA, III, and subsequent updates) method requirements and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, August 2014, where applicable). Validation of this data set is limited to review of items detailed in this data review report. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria was available. Validation of this data set is limited to the items detailed in this report.

SW-846 METHOD 8260C VOLATILE ORGANIC DATA REVIEW SUMMARY

Draper Aden Associates performed a manual comprehensive review of the analytical results for the April 25-26, 2016 semiannual groundwater monitoring event at Hazardous Waste Management Unit 5 (HWMU 5) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia. Draper Aden Associates collected the groundwater samples from monitoring wells 5W8B, 5W5B, 5W7B, 5WC21, 5WC22, 5WC23 and 5W12A. Groundwater sample 5WDUP was submitted to the laboratory as a blind sample duplicate for 5WC21. The following information and attached table summarize the Method 8260C data validation results. Validation of other required methods is presented on separate reports.

For this Corrective Action annual groundwater monitoring event, samples 5W5B, 5W7B, 5WC21, 5WC22 and 5WC23 (downgradient point of compliance (POC) wells) were analyzed for five Appendix J and nine Appendix K volatile organic target analytes, as listed in the facility's permit, by USEPA SW-846 Method 8260C. Samples 5W8B (upgradient groundwater monitoring well) and 5W12A (plume monitoring well) were analyzed for the five Appendix J volatile organic target analytes by USEPA SW-846 Method 8260C.

Draper Aden Associates sent samples to Eurofins Lancaster Laboratories Environmental, (ELLE), of Lancaster, Pennsylvania. ELLE performed the SW-846 Method 8260C volatile analysis. ELLE is a VELAP accredited laboratory for the analytes, method and matrix as reported on the certificate of analysis. On behalf of RFAAP, ELLE submitted results to Draper Aden Associates in a final certificate of analysis that included sample analytical results as well as relevant documentation to validate and verify the results (SDG RAE59).

The evaluation of ELLE's compliance with Method 8260C and validation of the results were based on a review of the following items: quality control (QC) deliverables package, QC history documentation, technical holding time and preservation requirements, instrument performance (tune) check, instrument calibration and calibration verification data, blank, surrogate spike, matrix spike and matrix spike duplicate (MS/MSD), laboratory control sample (LCS), internal standard, and/or target analyte identification and quantitation results. A review of transcriptions from instrument data to sample summary sheets was performed. Calculation verifications were performed on ten percent of the data set, where applicable. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

ELLE received the samples on ice and in good condition, with custody seals intact. The chain of custody was appropriately signed and dated by field and laboratory personnel. Applicable holding time and preservation criteria were met for the samples.

The original certificate of analysis was received on June 2, 2016. The original certificate of analysis appeared complete in its presentation and the data were of acceptable quality. The certificate of analysis demonstrated the ability of the laboratory to achieve the permit required quantitation limit (QL) for each target analyte, except where noted below.

QC deliverables package requirements were met. QC history documentation and instrument performance check criteria were met. Sample holding time, preservation, initial calibration, calibration verification, blanks, surrogates, MS/MSD, LCS, and internal standards criteria were met, except where noted below. Deviations from specific QA/QC criteria that were identified during the review process are summarized below. Field duplicate/sample results exhibited acceptable precision, where applicable. Sample results were verified and no transcription errors were observed.

Vinyl chloride did not meet the continuing calibration verification (CV) standard percent difference/drift requirement ($\pm 20\%$). Vinyl chloride was not detected at or above the detection limit or QL in any sample and sample results for this analyte were validated and qualified "UJ" to note that the QL was estimated due to the observed QC deficiency. The remaining CV standard criteria were met.

Trichloroethene recovered high in the MSD. Detected results for trichloroethene were validated and qualified "J" to note that the results were estimated due to the observed QC deficiency. The remaining MS/MSD/LCS criteria were met or no data qualifications were needed.

A 25 ml sample purge volume was used for the analysis of the target analytes.

Results were reported by the laboratory to at or above the laboratory method detection limit (MDL) for this Corrective Action monitoring event. The laboratory MDL was at or below the permit specified detection limit (DL), or slightly above, due to rounding.

Results for samples unaffected by the data validation process and reported as not detected at or above the MDL were validated and qualified "U." Except where noted above, reported values less than the quantitation limit (QL) should be considered estimated concentrations and were validated and qualified "J." No results were rejected based on the data validation criteria.

SW-846 METHOD 8260C (GC/MS) VOLATILE ORGANIC DATA VALIDATION

Comments: Volatile organic analysis uses a purge and trap system to remove volatile organic target analytes from a 25 ml water sample (SW-846 5030C). Target analytes are separated and quantified using a capillary column gas chromatograph (GC)/mass spectrometer (MS).

A. QC DELIVERABLES PACKAGE:

- | | | |
|----|---|---|
| 1. | Was the case narrative present/signed by a lab representative? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 2. | Was the Chain of Custody present/signed by a lab representative? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 3. | Were the sample results included for the sample locations? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 4. | Did the laboratory report the required target analytes? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 5. | Were the analyte QLs reported on reports in agreement with the instrument specific MDL study and project required QL? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 6. | Were the sample locations, analytes and QLs in agreement with the electronic deliverable (EDD)? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |

Comments: QC deliverables package requirements were met.

B. QC HISTORY DOCUMENTATION CRITERIA:

- | | | |
|----|--|---|
| 1. | Was an instrument specific MDL study provided which included DL and QL values for the target analytes? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 2. | Was the instrument calibration range provided? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 3. | Were the instrument specific check sample data provided for the target analytes? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |

Comments: QC history documentation was provided and met criteria. The laboratory analyzed a MDL check sample at 0.1 µg/l (25 ml purge) for most target analytes.

C. TECHNICAL HOLDING TIME AND PRESERVATION CRITERIA:

- | | | |
|----|--|---|
| 1. | Was the 14-day sample collection to analysis holding time met? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 2. | Were the samples received at ≤6°C, zero headspace? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 3. | Were the sample pHs adjusted to < 2 with HCl? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 4. | Were sample pHs adjusted to 4-5 with HCl? (Acrolein) | <input checked="" type="checkbox"/> NA <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 5. | Were samples analyzed unpreserved (2-Chloroethyl vinyl) | <input checked="" type="checkbox"/> NA <input type="checkbox"/> YES <input type="checkbox"/> NO |

Comments: Technical holding time and sample preservation criteria were met.

D. GC/MS INSTRUMENT PERFORMANCE (TUNING) CHECK CRITERIA:

- | | | |
|----|--|---|
| 1. | Was analysis of the instrument performance check solution performed at the beginning of each 12-hour period during which standards or samples were analyzed? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
|----|--|---|

- | | | |
|----|---|---|
| 2. | Was there documentation of the injection of 5-50 ng bromofluorobenzene (BFB)? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 3. | Were the ion abundance criteria met? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 4. | Were calibration, blank, and sample analyses performed within 12 hours of tuning? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |

Comments: Instrument performance check criteria were met.

E. INITIAL GC/MS CALIBRATION CRITERIA:

SW-846 Criteria:

- | | | |
|-----|---|---|
| 1. | Did the internal standard (IS) which was selected for target analyte RF calculation have a retention time close to the IS? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 2. | Were the target analytes included in the ICAL? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 3. | Were any calibration levels removed from the curve that would negatively influence the data integrity? | <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO |
| 4. | Did the ICALs consist of a minimum of 5 calibration levels? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 5. | Was the lowest concentration calibration standard at or below the associated MCL? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 6. | Was the calibration curve developed using the same purge volume used for sample analysis? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 7. | Were 8260C minimum Relative Response Factor (RRF) criteria met?
<i>Refer to Table 4- SW-846 Method 8260C (Rev3 2/06) for specific analyte RRFs</i> | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 8. | Was each target analyte %RSD $\leq 20\%$? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 9. | Was the correlation coefficient >0.99 for target analytes with $\geq 20\%$ RSD? <i>(System recalibrated if $>10\%$ analytes fail above condition)</i> | <input checked="" type="checkbox"/> NA <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 10. | Was an initial calibration verification (ICV) standard analyzed immediately following the ICAL? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 11. | Was the recovery within 70-130%? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 12. | Was the ICV standard prepared from a different source from the ICAL ? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |

Method Validation Performance Criteria:

- | | | |
|----|--|---|
| 1. | Did target analytes and surrogates that have RSDs $> 20\%$ have ≥ 0.99 correlation coefficient or coefficient of determination? | <input checked="" type="checkbox"/> NA <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 2. | For linear regression curves, was the recalculated concentration of the low calibration point within $\pm 30\%$? | <input checked="" type="checkbox"/> NA <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 3. | For quadratic curves, was a minimum six standards used? | <input checked="" type="checkbox"/> NA <input type="checkbox"/> YES <input type="checkbox"/> NO |

Comments: Initial calibration criteria were met.

F. CALIBRATION VERIFICATION (CV) CRITERIA:

SW-846 Criteria:

- | | |
|----|---|
| 1. | Was a calibration verification analyzed at the beginning of each 12-hour period following the analysis of the instrument performance check and prior to analysis of the method blank and samples? The calibration verification may be part of the ICAL or |
|----|---|

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- analyzed independently during another 12-hour analysis period. ☒ YES ☐ NO
2. Were 8260C minimum Relative Response Factor (RRF) criteria met?
Refer to Table 4- SW-846 Method 8260C (Rev3 2/06) for specific analyte RRFs ☒ YES ☐ NO
3. Did the target analytes and system monitoring analytes
(surrogates) have the % D within $\pm 20\%$? See comment
If "NO", list analytes that exceed these criteria:

Draper Aden Associates Contractual Requirements:

1. Did the target analytes and system monitoring analytes
(surrogates) have % Ds within $\pm 20\%$? See comment

Comments: The CV standard criteria were met except where discussed in data review summary.

G. BLANK CRITERIA:

1. Was a method blank analyzed after the calibration standards,
prior to sample analysis, and once for every 12-hour period
beginning with the injection of BFB? ☒ YES ☐ NO
2. Was a trip blank analyzed with this sample batch? ☒ YES ☐ NO
3. Were the trip blanks and method blanks interference free? See comment
4. Was the level of blank contamination less than 5% of the
regulatory limit associated with an analyte or less than 5% of the
sample result for the same analyte, whichever is greater? ☒ YES ☐ NO
5. List target analytes detected in the blanks: none
6. Did any result exceed the calibration range? ☐ YES ☒ NO
7. Were one or more blanks analyzed following the high concentration
sample to prevent cross contamination? ☒ NA ☐ YES ☐ NO

Comments: A trip blank was submitted and analyzed for each day of sample collection. Blank criteria were met.

H. SURROGATE CRITERIA:

SW-846 Criteria:

1. Were the following surrogates used? ☒ YES ☐ NO
- dibromofluoromethane (77-114%)
 - 4-bromofluorobenzene (78-110%)
 - toluene-d8 (77-110%)
 - 1,2-dichloroethane-d4 (74-113%)
2. Were recoveries within specified ranges? ☒ YES ☐ NO
If "NO", corrective action is required. Flagging of the data as estimated
is not acceptable until corrective action has been attempted
3. Were samples with surrogates outside the
QC window reanalyzed as required? ☒ NA ☐ YES ☐ NO

Comments: Surrogate criteria were met.

I. MATRIX SPIKE, MATRIX SPIKE DUPLICATE (MS/MSD) CRITERIA:
(MS/MSD Requirements - CLP Guidelines)

<u>Analyte</u>	<u>% R Water</u>	<u>% RPD Water</u>
1,1-dichloroethene	61-145	14
trichloroethene	71-120	14
benzene	76-127	11
toluene	76-125	13
chlorobenzene	75-130	13

1. Was a MS/MSD analyzed per sample batch or every 20 samples? ☒ YES ☐ NO
2. Did the MS/MSD spike contain additional target analytes? ☒ YES ☐ NO
3. Was the MS/MSD analyzed on the specific project matrix? ☒ YES ☐ NO
4. List the MS % recovery range: 75-125%; 70-130% poor purge analytes; RPD \leq 20
5. Were any analytes qualified as estimated? ☒ YES ☐ NO
 - If yes, and the LCS for the analyte(s) recovered within control limits, matrix interference is suspected.

Comments: MS/MSD criteria were met except as noted above.

J. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

1. Was a LCS included in the sample analysis? ☒ YES ☐ NO
2. Did the LCS contain the required target analytes? ☒ YES ☐ NO
3. List the LCS acceptance criteria: 80-120% (most analytes).
4. List the LCS analytes which were not within the specified ranges: *None*
5. Were any analytes flagged as estimated due to LCS criteria? ☐ YES ☒ NO

Comments: LCS criteria were met or no qualifications were needed.

K. INTERNAL STANDARDS (IS) CRITERIA:

1. Were the following internal standards (IS) used? ☒ YES ☐ NO
t-butyl alcohol-d10, fluorobenzene, chlorobenzene-d₅, 1,4-dichlorobenzene-d₄
2. Were IS areas within - 50% to + 100% of the last CV? ☒ YES ☐ NO
3. Were IS RTs within \pm 30 seconds of the last CV? ☒ YES ☐ NO
4. Were samples failing Items 2 and/or 3 above reanalyzed as required by the method? ☒ NA ☐ YES ☐ NO

Comments: Internal standards criteria were met.

L. TARGET ANALYTE IDENTIFICATION:

1. Were the RRTs of the reported analytes within \pm 0.06 RRT units of the standard RRT? ☒ YES ☐ NO
2. Check the sample spectra against the laboratory standard

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spectra to see that the following criteria were met:

- * Did characteristic ions maximize in the same scan or within one scan of each other? ☒ YES ☐ NO
 - * Were the characteristic ions present in the standard spectra and sample spectra for analytes detected above the QL? ☒ YES ☐ NO
 - * Were the relative intensities of the ions between the standard and sample spectra within $\pm 30\%$? ☒ YES ☐ NO
3. Were the reported analytes confirmed? ☒ YES ☐ NO

Comments: See attached table for detected analytes. Identification criteria were met.

M. TARGET ANALYTE QUANTITATION:

- * If the %RSD of an analyte was 20% or less, then the average relative response factor should have been used for quantitation.
 - * If the %RSD of an analyte was greater than 20%, then the quantitation should have been based on a calibration curve using the first or higher order regression fit of the five calibration points. (6 calibration points for 2nd order).
1. List the detected analytes whose %RSD was $> 20\%$: *None*.
- Was quantitation based on a linear regression fit? ☒ NA ☐ YES ☐ NO
2. Did the initial analysis of any sample have a concentration of an analyte which exceeded the initial calibration range? ☐ YES ☒ NO
- If so, was the sample reanalyzed at a higher dilution? ☒ NA ☐ YES ☐ NO
3. Were the analyte concentrations that were recorded on the instrument data/quantitation reports accurately transferred to the sample summary sheets? ☒ YES ☐ NO
4. Were sample/ field duplicate RPDs $<20\%$ where applicable? ☒ YES ☐ NO

Comments: Target analyte quantitation criteria were met. Calculation checks were performed on ten percent of the data set and no errors were noted.

N. CORRECTIVE ACTION TAKEN AND GENERAL COMMENTS:

Comments: No corrective action was taken. Library searches were not requested. The IDOC for analyst K. Sposito was provided previously.

REFERENCES:

Draper Aden Associates conducted data validation of the above noted data set using summary tables and instrument data provided by the analyzing laboratory. Data were evaluated in general accordance with SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates) and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, August 2014, where applicable). Where QA/QC criteria differed, the analytical method acceptance criteria were used. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria was available. Validation of this data set is limited to the items detailed in this report.

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SW-846 METHOD 8270D SEMIVOLATILE ORGANIC DATA REVIEW SUMMARY

Draper Aden Associates performed a comprehensive manual review of the analytical results for the April 25-26, 2016 Corrective Action groundwater monitoring event at Hazardous Waste Management Unit 5 (HWMU 5) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia. Draper Aden Associates collected the groundwater samples from point of compliance (POC) monitoring wells 5W5B, 5W7B, 5WC21, 5WC22, and 5WC23. Sample 5WDUP was submitted to the laboratory as a blind sample duplicate for 5WC21.

Samples were analyzed for the seven Appendix K semivolatile target analytes listed in the facility's permit by USEPA SW-846 Method 8270D. The following information and attached table summarize the Method 8270D data validation results. Other wells were listed on the chain of custody (COC); however, USEPA SW-846 Method 8270D was not required for those sample locations.

Draper Aden Associates sent samples to Eurofins Lancaster Laboratories Environmental, (ELLE), of Lancaster, Pennsylvania. ELLE performed the Method 8270D analyses. ELLE is a VELAP accredited laboratory for the analytes, method and matrix as reported on the certificate of analysis. On behalf of RFAAP, ELLE submitted results to Draper Aden Associates in a final certificate of analysis, which included sample analytical results, as well as relevant documentation to validate and verify the results (SDG RAE59).

The evaluation of ELLE's compliance with Method 8270D and validation of the results was based on a limited review of the following items: QC deliverables package, QC history documentation, case narrative, technical holding time and preservation requirements, instrument performance (tune) check, instrument calibrations, blank analysis, surrogate spike recoveries, matrix spike and matrix spike duplicate (MS/MSD) analyses, laboratory control sample (LCS) data, and internal standard requirements. A review of transcriptions from instrument data to sample summary sheets was performed. Calculations checks were performed on ten percent of the data set, where applicable. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

ELLE received the samples on ice and in good condition, with custody seals intact. The chain of custody (COC) was appropriately signed and dated by field and laboratory personnel, except as noted. The laboratory's courier inadvertently signed the chain of custody at 10:30 instead of 10:35. The field personnel was present at the sample exchange and noted the time. No data qualification was necessary.

The revised certificate of analysis was received on June 2, 2016. The original certificate of analysis appeared complete and data were of acceptable quality, except where noted below. The data set demonstrated the laboratory's ability to achieve the reported permit required quantitation limit (QL).

QC history documentation (instrument specific initial demonstration of proficiency and method detection limit data) were provided. Applicable preservation and technical holding time

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criteria were met. Instrument performance check (tuning) criteria, initial calibration, calibration verification, blank, MS/MSD, LCS, surrogate recoveries, and internal standard requirements were met, except where noted below. Sample results were reviewed for transcription errors from the instrument data to the laboratory report and no errors were noted. No deviations from specific QA/QC criteria were identified during the review process. Field duplicate/sample results exhibited acceptable precision, where applicable.

A footnote presented in Appendix K, Groundwater Corrective Action Annual Monitoring List, of Permit Module VI – *Groundwater Corrective Action & Monitoring Program for Unit 5* indicates that verification is required for constituents detected at concentrations less than the Limit of Quantitation (LOQ)/QL if their associated groundwater protection standard (GPS) are:

- (1) based on background values equal to the QL/LOQ/PQL
- (2) greater than the applicable risk-based concentrations (i.e., ACL or RBC).

During Second Quarter 2016, the following constituent listed in the table below with a GPS based on a background value equal to the QL/LOQ/PQL was detected at a concentration less than the respective QL. In order to confirm the observed detection below the QL, an additional aliquot, collected from sample location 5WC23 during the original sampling event and submitted to TestAmerica North Canton, North Canton, Ohio, was analyzed. The result for p-nitroaniline at 5WC23, received June 8, 2016 (SDG 240-64029-1), was not detected at or above the laboratory DL. The additional low-level sample analysis refuted the initial detection of p-nitroaniline and no further action is warranted.

Sample Location	Constituent Detected Below the QL	GPS (µg/l)	Analytical Method (SW-846)	Confirming Laboratory QL / DL (µg/l)	Permit ACL (µg/l)
5WC23	p-Nitroaniline	20	8270D	2 / 0.22	3.3

The detected results less than the QL for nitrobenzene were unable to be confirmed by TestAmerica as the ACL/RSL for nitrobenzene is unattainable by the laboratory's QL/DL.

Except where noted above, results remain as reported by the laboratory. Sample results were reported by the laboratory to at or above the method detection limit (MDL) for this monitoring event. These current laboratory established MDLs slightly differ from the MDL listed in Appendix K of the permit.

Target analytes detected at or above the MDL or QL and/or analytical data that required a data validation qualifier due to quality control deviations noted above are summarized on the attached table.

Results for samples unaffected by the data validation process and reported as not detected at or above the MDL/detection limit (DL) were validated and qualified "U." Reported values less than the QL should be considered estimated concentrations and were validated and qualified "J." No results were rejected based on the data validation criteria.

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SW-846 METHOD 8270D (GC/MS) SEMIVOLATILE ORGANIC DATA VALIDATION

Comments: Semivolatile (a.k.a, base/neutral and acid extractables) analysis involves sample preparation using liquid/liquid extraction technique (SW-846 Method 3510C). The semivolatile extracts are concentrated through evaporation. Target analytes are separated and quantified using a capillary column gas chromatograph (GC)/mass spectrometer (MS).

A. QC DELIVERABLES PACKAGE:

- | | | |
|----|---|---|
| 1. | Was the case narrative present/signed by a lab representative? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 2. | Was the Chain of Custody present/signed by a lab representative? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 3. | Were the sample results included for the sample locations? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 4. | Did the data correspond to the project specific analyte list? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 5. | Were the analyte QLs reported on sample summary sheets in agreement with the instrument specific MDL study? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |

Comments: QC deliverables package criteria were met.

B. QC HISTORY DOCUMENTATION CRITERIA:

- | | | |
|----|--|---|
| 1. | Were instrument specific detection limits provided for analytes? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 2. | Were the instrument specific QLs for target analytes provided? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 3. | Was calibration range specified for the target analytes? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |

Comments: QC history documentation criteria were met.

C. TECHNICAL HOLDING TIME AND PRESERVATION CRITERIA:

- | | | |
|----|---|---|
| 1. | Was the 7-day sample collection to extraction holding time met? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 2. | Was the 40-day extraction to analysis holding time met? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 3. | Were the samples received at $\leq 6^{\circ}\text{C}$? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |

Comments: Sample holding times and preservation criteria were met.

D. GC/MS INSTRUMENT PERFORMANCE CHECK CRITERIA:
(Tuning, Injection Port and Column Performance)

- | | | |
|----|---|---|
| 1. | Was performance check solution analysis performed at the beginning of each 12-hour period of standard and/or sample analysis? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 2. | Was there documentation of the injection of 50 ng of DFTPP? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 3. | Were the ion abundance criteria met? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 4. | Was the injection port inertness verified by analysis of 4,4'-DDT? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| | • If no, does associated data require qualification? | <input checked="" type="checkbox"/> NA <input type="checkbox"/> YES <input type="checkbox"/> NO |
| | • Was the injection port inertness check acceptable? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 5. | Was column performance checked through the analysis of peak tailing of pentachlorophenol and benzidine? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |

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- If no, does associated data require qualification? ☒ NA ☐ YES ☐ NO
- Was column performance check acceptable? ☒ YES ☐ NO

Comments: Instrument performance check criteria were met. Per the laboratory, 50 ng of DFTPP was injected.

E. INITIAL GC/MS CALIBRATION CRITERIA:

SW-846 Criteria:

1. Were the initial calibrations (ICAL) and any directly associated blanks and samples analyzed within 12-hours of the associated instrument performance (tune) check? ☒ YES ☐ NO
2. Were quantitation ions, used and listed on data, randomly checked against primary quantitation ions as required by Method 8270D and the RFP? ☒ YES ☐ NO
3. Were the target analytes included in the ICAL? ☒ YES ☐ NO
4. Did the ICAL consist of a minimum of 5 calibration levels? ☒ YES ☐ NO
5. Was the lowest concentration calibration standard at or below the associated MCL, regulatory compliance, or action limit? ☒ YES ☐ NO
6. Were calibration levels removed from the curve that would negatively impact the data integrity? ☐ YES ☒ NO
7. Were 8270D minimum RRF criteria met?
Relative Response Factor-range (RRF 0.010-0.900) ☒ YES ☐ NO
**Refer to Table 4 of SW-846 Method 8270D (Rev4 2/07) for specific analyte RRFs*
8. Was each target analyte %RSD $\leq 20\%$? See comment
9. Was the correlation coefficient or coefficient of determination >0.99 for target analytes with $> 20\%$ RSD? ☒ YES ☐ NO
**System recalibrated if $>10\%$ analytes fail above condition*
10. Was an initial calibration verification (ICV) standard analyzed immediately following the ICAL? ☒ YES ☐ NO
11. Was the recovery within 70-130%? ☒ YES ☐ NO
12. Was the ICV standard prepared from a different source from the ICAL ? ☒ YES ☐ NO

Method Validation Performance Criteria:

1. Did target analytes and surrogates that have RSDs $> 20\%$ have ≥ 0.99 correlation coefficient or coefficient of determination? ☒ YES ☐ NO
2. For linear regression curves, was the recalculated concentration of the low calibration point within $\pm 30\%$? ☒ YES ☐ NO
3. For quadratic curves, was a minimum six standards used? ☒ NA ☐ YES ☐ NO

Comments: Initial calibration criteria were met.

F. CALIBRATION VERIFICATION CRITERIA:

SW-846 Criteria:

1. Was a calibration verification analyzed at the beginning of each 12-hour period following the analysis of the instrument performance check and prior to analysis of the method blank and samples? The calibration verification may be part of the

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- ICAL or run independently on another 12-hour analysis period. ☒ YES ☐ NO
2. Was each target analyte % difference/drift $\leq 20\%$? ☒ YES ☐ NO
(Corrective action if $>20\%$)
3. Were 8270D minimum RRF criteria met?
Relative Response Factor-range (RRF 0.010-0.900) ☒ YES ☐ NO
**Refer to Table 4 of SW-846 Method 8270D (Rev4 2/07) for specific analyte RRFs*

Method Validation Performance Criteria:

1. Did target analytes and system monitoring
analytes (surrogates) have % Ds within $\pm 20.0\%$? ☒ YES ☐ NO
If "NO", list analytes that exceed this criterion: see attached table

Comments: Calibration verification criteria were met.

G. BLANK CRITERIA:

1. Was a method/extraction blank analyzed on each GC/MS system
used for sample analysis? ☒ YES ☐ NO
2. Was a trip blank analyzed with this sample batch? ☒ NA ☐ YES ☐ NO
3. Were the blank samples interference free? ☒ YES ☐ NO
4. Was the level of blank contamination $> 5\%$ of the MCL? ☒ NA ☐ YES ☐ NO
5. List target analytes detected in the blanks: none

Comments: Blank criteria were met.

H. SURROGATE CRITERIA:

1. Were the following surrogates used? See comment
- | | | |
|---|-------------------------------|------------|
| - | phenol - d ₆ | (10%-94%) |
| - | 2-fluorophenol | (21%-100%) |
| - | 2,4,6-tribromophenol | (10%-123%) |
| - | nitrobenzene - d ₈ | (35%-114%) |
| - | 2-fluorobiphenyl | (43%-116%) |
| - | p-terphenyl - d ₁₄ | (33%-141%) |
2. Were recoveries within the specified ranges? ☒ YES ☐ NO
3. Were any two base/neutral or acid surrogates out of
specification or did any one base/neutral or acid extractable
surrogate have a recovery of less than 10%? ☐ YES ☒ NO
If yes, was a reextraction and reanalysis performed to confirm that the non-
compliance was due to sample matrix effects rather than laboratory deficiencies?

Comments: The laboratory made surrogate substitutions as allowed by the method. The surrogate criteria were met or no data qualifications were needed.

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I. MATRIX SPIKE/ MATRIX SPIKE DUPLICATE (MS/MSD) CRITERIA:
(MS/MSD Requirements - CLP Guidelines)

Analyte	% R Water	% RPD Water
Phenol	12-110	42
2-Chlorophenol	27-123	40
N-Nitroso-di-n-propylamine	41-116	38
4-Chloro-3-methylphenol	23-97	42
Acenaphthene	46-118	31
4-Nitrophenol	10-80	50
2,4-Dinitrotoluene	24-96	38
Pyrene	26-127	31

1. Was a MS/MSD analyzed per sample batch or every 20 samples, whichever may occur first? ☒ YES ☐ NO
2. Did the MS/MSD spike contain additional target analytes? ☒ YES ☐ NO
3. Was the MS/MSD analyzed on the specific project matrix? ☒ YES ☐ NO
4. List the MS % recovery range: *See certificate of analysis*
5. Were any analytes qualified as estimated? ☐ YES ☒ NO
 - If yes, and the LCS for the analyte(s) recovered within control limits, matrix interference is suspected.

Comments: MS/MSD criteria were met. Field duplicate/sample results exhibited acceptable precision, where applicable.

J. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

1. Was a LCS included in the sample analysis? ☒ YES ☐ NO
2. Did the LCS contain required target analytes? ☒ YES ☐ NO
3. List the LCS target analytes and laboratory recovery range:
See semivolatile certificate of analysis.
4. Were any analytes qualified as estimated due to LCS criteria? ☐ YES ☒ NO

Comments: LCS criteria were met.

K. INTERNAL STANDARDS (IS) CRITERIA:

1. Were the following internal standards used? ☒ YES ☐ NO
 - 1,4-Dichlorobenzene-d₄
 - Naphthalene-d₈
 - Acenaphthene-d₁₀
 - Phenanthrene-d₁₀
 - Chrysene-d₁₂
 - Perylene-d₁₂
2. Were the IS areas within - 50% to + 100% of the last CV? ☒ YES ☐ NO
3. Were IS RTs within \pm 30 seconds of last CV? ☒ YES ☐ NO

Comments: Internal standard criteria were met.

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L. TARGET ANALYTE IDENTIFICATION:

1. Were the RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT? ☒ YES ☐ NO
2. Check the sample spectra against the laboratory standard spectra to see that the following criteria were met: ☒ YES ☐ NO
 - * Did characteristic ions maximize in the same scan or within one scan of each other?
 - * Were characteristic ions present in the standard spectra present in the sample spectra for analytes detected above the QL?
 - * Were the relative ion intensities between the standard and sample spectra within $\pm 30\%$?
3. Were the reported analytes confirmed? ☒ YES ☐ NO

Comments: Target analyte identification criteria were met.

M. TARGET ANALYTE QUANTITATION:

- * If the %RSD of an analyte was 20% or less, then the average relative response factor should have been used for quantitation.
- * If the %RSD of an analyte was greater than 20%, then the quantitation should be based on a calibration curve using the first or higher order regression fit of the five calibration points (6 calibration points for 2nd order).
1. List the analytes detected above the QL whose %RSD was $>20\%$: *none*
 - a. Was quantitation based on a linear regression fit? ☒ NA ☐ YES ☐ NO
 - b. Was the curve forced through the origin? ☒ NA ☐ YES ☐ NO
2. Did the initial analysis of any sample have a concentration of a target analyte that exceeded the initial calibration range? ☐ YES ☒ NO
-If so, was the sample reanalyzed at a higher dilution? ☒ NA ☐ YES ☐ NO
3. Were the analyte concentrations that were recorded on the raw sample quantitation reports accurately transferred to the sample summary sheets? ☒ YES ☐ NO

Comments: Target analyte quantitation criteria were met. Calculations checks were performed on ten percent of the data set, where applicable.

N. CORRECTIVE ACTION TAKEN AND GENERAL COMMENTS:

Comments: No corrective action was required. Library searches were not requested with this data set. The IDOC for analyst W. Saadeh was submitted previously.

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REFERENCES:

Draper Aden Associates conducted data validation of the above noted data set using summary tables and instrument data provided by the analyzing laboratory. Data were evaluated in general accordance with SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates) and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, August 2014, where applicable). Where QA/QC criteria differed, the analytical method acceptance criteria were used. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria was available. Validation of this data set is limited to the items detailed in this report.

LIMITATIONS:

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Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Sample/Blind Field Duplicate Results Greater Than the Quantitation Limit

Facility: HWMU-16

Monitoring Event: Second Quarter 2016



Analyte	Sample ID	Laboratory Result (ug/L) Q	Validated Result (ug/L) Q	QL (ug/L)	Validation Notes
Method: 6020A					
Laboratory: TestAmerica, North Canton, OH					
Barium	16WC1A	330	330	10	No action taken. Blind field duplicate of 16WDUP.
	16WDUP	300	300	10	No action taken. Blind field duplicate of 16WC1A.
Method: 8260C					
Laboratory: ELLE, Lancaster, PA					
Chloroethane	16WC1A	2.4	2.4	1	No action taken. Blind field duplicate of 16WDUP.
	16WDUP	2.4	2.4	1	No action taken. Blind field duplicate of 16WC1A.
1,1-Dichloroethane	16WC1A	6	6	1	No action taken. Blind field duplicate of 16WDUP.
	16WDUP	5.9	5.9	1	No action taken. Blind field duplicate of 16WC1A.
Diethyl ether	16WC1A	28	28	13	Analyzed in dilution (1:10). Actual laboratory adjusted QL 10 ug/L. Blind field duplicate of 16WDUP.
	16WDUP	29	29	13	Analyzed in dilution (1:10). Actual laboratory adjusted QL 10 ug/L. Blind field duplicate of 16WC1A.

Definitions:

Data Validation Qualifiers:

QL Denotes permit quantitation limit. Q Denotes data qualifier.

J Denotes analyte reported at or above quantitation limit and associated result is estimated.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020A							
Laboratory: TestAmerica, North Canton, OH							
Antimony	16C1	2	U	U		2	Analyte not detected at or above the DL or QL.
	16MW8	2	U	U		2	Analyte not detected at or above the DL or QL.
	16MW9	2	U	U		2	Analyte not detected at or above the DL or QL.
	16WC1A	2	U	U		2	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U		2	Analyte not detected at or above the DL or QL.
	16WDUP	2	U	U		2	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Arsenic	16C1	10	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	10	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	10	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	10	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	10	U	U		10	Analyte not detected at or above the DL or QL.
	16WC2B	10	U	U		10	Analyte not detected at or above the QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the QL.
	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
Barium	16WDUP	10	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	16C1	140		140		10	No action taken.
	16MW8	120		120		10	No action taken.
	16MW9	590		590		10	No action taken.
	16WC1A	330		330		10	No action taken. Blind field duplicate of 16WDUP.
	16WC1B	120		120		10	No action taken.
	16WC2B	110		110		10	No action taken.
	16-2	180		180		10	No action taken.
	16-3	750		750		10	No action taken.
	16-5	160		160		10	No action taken.
Beryllium	16SPRING	180		180		10	No action taken.
	16WDUP	300		300		10	No action taken. Blind field duplicate of 16WC1A.
	16C1	0.52	J	0.52	J	1	Result < QL. Blank contamination the calibration blanks (0.1-0.3 J ug/l).
	16MW8	0.54	J	0.54	J	1	Result < QL. Blank contamination in the calibration blanks (0.1-0.3 J ug/l).
	16MW9	0.23	J	0.23	J	1	Result < QL. Blank contamination in the calibration blanks (0.1-0.3 J ug/l).
	16WC1A	0.3	J	0.3	J	1	Result < QL. Blank contamination in the calibration blanks (0.1-0.3 J ug/l). Blind field duplicate of 16WDUP.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020A							
Laboratory: TestAmerica, North Canton, OH							
Beryllium	16WC1B	1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.23	J	0.23	J	1	Result < QL. Blank contamination in the calibration blanks (0.1-0.3 J ug/l). Blind field duplicate of
Cadmium	16C1	0.42	J	0.42	J	1	Result < QL.
	16MW8	0.4	J	0.4	J	1	Result < QL.
	16MW9	1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.26	J	0.26	J	1	Result < QL. Blind field duplicate of 16WDUP.
	16WC1B	0.23	J	0.23	J	1	Result < QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
Chromium	16WDUP	1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	16C1	5	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	5	U	U		5	Analyte not detected at or above the DL or QL.
	16MW9	5	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	5	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	5	U	U		5	Analyte not detected at or above the DL or QL.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
	16-5	5	U	U		5	Analyte not detected at or above the QL.
Cobalt	16SPRING	5	U	U		5	Analyte not detected at or above the QL.
	16WDUP	5	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	16C1	5	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	4	J	4	J	5	Result < QL.
	16MW9	5.5		5.5		5	Result < QL. Verification event performed on June 16, 2016. Original result reported. Verification results 4.7 J, 4.8 J, 5.6, 6.0 ug/l.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020A							
Laboratory: TestAmerica, North Canton, OH							
Cobalt	16WC1A	4.9	J	4.9	J	5	Result < QL. Blind field duplicate of 16WDUP.
	16WC1B	35		35		5	No action taken.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
	16-5	5	U	U		5	Analyte not detected at or above the QL.
	16SPRING	5	U	U		5	Analyte not detected at or above the QL.
	16WDUP	4.3	J	4.3	J	5	Result < QL. Blind field duplicate of 16WC1A..
Copper	16C1	5	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	6.5		6.5		5	No action taken.
	16MW9	5	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	5	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	5	U	U		5	Analyte not detected at or above the DL or QL.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
Lead	16-5	5	U	U		5	Analyte not detected at or above the QL.
	16SPRING	5	U	U		5	Analyte not detected at or above the QL.
	16WDUP	5	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	16C1	1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.36	J	0.36	J	1	Result < QL.
	16MW9	1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the DL or QL.
Nickel	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	16C1	3.9	J	3.9	J	10	Result < QL.
	16MW8	6.1	J	6.1	J	10	Result < QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory	Result	Validated	QL	Validation Notes	
		(ug/L)	Q	(ug/L)	Q		(ug/L)
Method: 6020A							
Laboratory: TestAmerica, North Canton, OH							
Nickel	16MW9	15		15		10	No action taken.
	16WC1A	7.6	J	7.6	J	10	Result < QL. Blind field duplicate of 16WDUP.
	16WC1B	7.2	J	7.2	J	10	Result < QL.
	16WC2B	10	U	U		10	Analyte not detected at or above the QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the QL.
	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
	16WDUP	6.3	J	6.3	J	10	Result < QL. Blind field duplicate of 16WC1A..
Selenium	16C1	5	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	5	U	U		5	Analyte not detected at or above the DL or QL.
	16MW9	5	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	5	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	5	U	U		5	Analyte not detected at or above the DL or QL.
	16WDUP	5	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Silver	16C1	1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Thallium	16C1	1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Vanadium	16C1	10	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	10	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	10	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	10	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	10	U	U		10	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16**Monitoring Event: Second Quarter 2016**

Analyte	Sample ID	Laboratory Result		Validated Result		QL (ug/L)	Validation Notes
		(ug/L)	Q	(ug/L)	Q		
Method: 6020A							
Laboratory: TestAmerica, North Canton, OH							
Vanadium	16WC2B	10	U	U		10	Analyte not detected at or above the QL
	16-2	10	U	U		10	Analyte not detected at or above the QL
	16-3	10	U	U		10	Analyte not detected at or above the QL
	16-5	10	U	U		10	Analyte not detected at or above the QL
	16SPRING	10	U	U		10	Analyte not detected at or above the QL
	16WDUP	10	U	U		10	Analyte not detected at or above the DL or QL Blind field duplicate of 16WC1A.
Zinc	16C1	10	U	U		10	Analyte not detected at or above the DL or QL
	16MW8	27		27		10	No action taken.
	16MW9	10	U	U		10	Analyte not detected at or above the DL or QL
	16WC1A	10	U	U		10	Analyte not detected at or above the DL or QL Blind field duplicate of 16WDUP.
	16WC1B	10	U	U		10	Analyte not detected at or above the DL or QL
	16WC2B	10	U	U		10	Analyte not detected at or above the QL
	16-2	10	U	U		10	Analyte not detected at or above the QL
	16-3	10	U	U		10	Analyte not detected at or above the QL
	16-5	10	U	U		10	Analyte not detected at or above the QL
	16SPRING	10	U	U		10	Analyte not detected at or above the QL
	16WDUP	10	U	U		10	Analyte not detected at or above the DL or QL Blind field duplicate of 16WC1A.
Method: 7470A							
Laboratory: TestAmerica, North Canton, OH							
Mercury	16C1	2	U	U		2	Analyte not detected at or above the DL or QL
	16MW8	2	U	U		2	Analyte not detected at or above the DL or QL
	16MW9	2	U	U		2	Analyte not detected at or above the DL or QL
	16WC1A	2	U	U		2	Analyte not detected at or above the DL or QL Blind field duplicate of 16WDUP.
	16WC1B	2	U	U		2	Analyte not detected at or above the DL or QL
	16WC2B	2	U	U		2	Analyte not detected at or above the QL
	16-2	2	U	U		2	Analyte not detected at or above the QL
	16-3	2	U	U		2	Analyte not detected at or above the QL
	16-5	2	U	U		2	Analyte not detected at or above the QL
	16SPRING	2	U	U		2	Analyte not detected at or above the QL
	16WDUP	2	U	U		2	Analyte not detected at or above the DL or QL Blind field duplicate of 16WC1A.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Acetone	16C1	3	U	U		10	Analyte not detected at or above the DL or QL
	16MW8	3	U	U		10	Analyte not detected at or above the DL or QL
	16MW9	3	U	U		10	Analyte not detected at or above the DL or QL
	16WC1A	3	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	3	U	U		10	Analyte not detected at or above the DL or QL
	16WDUP	3	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	10	U	U		10	Analyte not detected at or above the DL or QL
	Trip_Blank_2	10	U	U		10	Analyte not detected at or above the DL or QL
	Trip_Blank_3	10	U	U		10	Analyte not detected at or above the DL or QL
Acetonitrile	16C1	32	U	U		100	Analyte not detected at or above the DL or QL
	16MW8	32	U	U		100	Analyte not detected at or above the DL or QL
	16MW9	32	U	U		100	Analyte not detected at or above the DL or QL
	16WC1A	32	U	U		100	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	32	U	U		100	Analyte not detected at or above the DL or QL
	16WDUP	32	U	U		100	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	100	U	U		100	Analyte not detected at or above the DL or QL
	Trip_Blank_2	100	U	U		100	Analyte not detected at or above the DL or QL
	Trip_Blank_3	100	U	U		100	Analyte not detected at or above the DL or QL
Acrolein	16C1	5	U	U	J	25	Analyte not detected at or above the DL or QL. Sample aliquot pH<2 SU.
	16MW8	5	U	U	J	25	Analyte not detected at or above the DL or QL. Sample aliquot pH<2 SU.
	16MW9	5	U	U	J	25	Analyte not detected at or above the DL or QL. Sample aliquot pH<2 SU.
	16WC1A	5	U	U	J	25	Analyte not detected at or above the DL or QL. Sample aliquot pH<2 SU. Blind field duplicate of 16WDUP.
	16WC1B	5	U	U	J	25	Analyte not detected at or above the DL or QL. Sample aliquot pH<2 SU.
	16WDUP	5	U	U	J	25	Analyte not detected at or above the DL or QL. Sample aliquot pH<2 SU. Blind field duplicate of 16WC1A.
	Trip_Blank_1	25	U	U	J	25	Analyte not detected at or above the DL or QL. Sample aliquot pH<2 SU.
	Trip_Blank_2	25	U	U	J	25	Analyte not detected at or above the DL or QL. Sample aliquot pH<2 SU.
	Trip_Blank_3	25	U	U	J	25	Analyte not detected at or above the DL or QL. Sample aliquot pH<2 SU.
Acrylonitrile	16C1	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (24%).
	16MW8	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (24%).
	16MW9	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (24%).
	16WC1A	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (24%). Blind field duplicate of 16WDUP.
	16WC1B	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (24%).

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Acrylonitrile	16WDUP	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV % Δ > +/- 20 (24%). Blind field duplicate of 16WC1A.
	Trip_Blank_1	10	U	U	J	10	Analyte not detected at or above the DL or QL. CV % Δ > +/- 20 (24%).
	Trip_Blank_2	10	U	U	J	10	Analyte not detected at or above the DL or QL. CV % Δ > +/- 20 (24%).
	Trip_Blank_3	10	U	U	J	10	Analyte not detected at or above the DL or QL. CV % Δ > +/- 20 (24%).
Allyl chloride	16C1	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.8	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.8	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	10	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	10	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	10	U	U		10	Analyte not detected at or above the DL or QL.
Benzene	16C1	0.3	J	0.3	J	1	Result < QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.4	J	0.4	J	1	Result < QL.
	16WC1A	0.4	J	0.4	J	1	Result < QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.3	J	0.3	J	1	Result < QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	1	U	U		1	Analyte not detected at or above the DL or QL.
Bromodichloromethane	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory	Result	Validated	QL	Validation Notes	
		(ug/L)	Q	(ug/L)	Q		(ug/L)
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Bromodichloromethane	16WDUP	0.1	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
	Trip_Blank_1	1	U	U	1	Analyte not detected at or above the DL or QL.	
	Trip_Blank_2	1	U	U	1	Analyte not detected at or above the DL or QL.	
	Trip_Blank_3	1	U	U	1	Analyte not detected at or above the DL or QL.	
Bromoform	16C1	0.1	U	U	1	Analyte not detected at or above the DL or QL.	
	16MW8	0.1	U	U	1	Analyte not detected at or above the DL or QL.	
	16MW9	0.1	U	U	1	Analyte not detected at or above the DL or QL.	
	16WC1A	0.1	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
	16WC1B	0.1	U	U	1	Analyte not detected at or above the DL or QL.	
	16WDUP	0.1	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
	Trip_Blank_1	1	U	U	1	Analyte not detected at or above the DL or QL.	
	Trip_Blank_2	1	U	U	1	Analyte not detected at or above the DL or QL.	
	Trip_Blank_3	1	U	U	1	Analyte not detected at or above the DL or QL.	
	2-Butanone	16C1	1	U	U	10	Analyte not detected at or above the DL or QL.
16MW8		1	U	U	10	Analyte not detected at or above the DL or QL.	
16MW9		1	U	U	10	Analyte not detected at or above the DL or QL.	
16WC1A		1	U	U	10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
16WC1B		1	U	U	10	Analyte not detected at or above the DL or QL.	
16WC2B		10	U	U	10	Analyte not detected at or above the QL.	
16-2		10	U	U	10	Analyte not detected at or above the QL.	
16-3		10	U	U	10	Analyte not detected at or above the QL.	
16-5		10	U	U	10	Analyte not detected at or above the QL.	
16SPRING		10	U	U	10	Analyte not detected at or above the QL.	
16WDUP		1	U	U	10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
Trip_Blank_1		10	U	U	10	Analyte not detected at or above the DL or QL.	
Trip_Blank_2		10	U	U	10	Analyte not detected at or above the DL or QL.	
Trip_Blank_3		10	U	U	10	Analyte not detected at or above the DL or QL.	
Carbon disulfide		16C1	0.4	U	U	10	Analyte not detected at or above the DL or QL.
		16MW8	0.4	U	U	10	Analyte not detected at or above the DL or QL.
	16MW9	0.4	U	U	10	Analyte not detected at or above the DL or QL.	
	16WC1A	0.4	U	U	10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
	16WC1B	0.4	U	U	10	Analyte not detected at or above the DL or QL.	

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Carbon disulfide	16WDUP	0.4	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	10	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	10	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	10	U	U		10	Analyte not detected at or above the DL or QL.
Carbon tetrachloride	16C1	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.2	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.2	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	1	U	U		1	Analyte not detected at or above the DL or QL.
Chloroethane	16C1	4.9		4.9		1	No action taken.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	3.3		3.3		1	No action taken.
	16WC1A	2.4		2.4		1	No action taken. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	2.4		2.4		1	No action taken. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	1	U	U		1	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Chloroform	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the DL or QL
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the DL or QL
	Trip_Blank_3	1	U	U		1	Analyte not detected at or above the DL or QL
Chloroprene	16C1	0.5	U	U		10	Analyte not detected at or above the DL or QL
	16MW8	0.5	U	U		10	Analyte not detected at or above the DL or QL
	16MW9	0.5	U	U		10	Analyte not detected at or above the DL or QL
	16WC1A	0.5	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL
	16WDUP	0.5	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	10	U	U		10	Analyte not detected at or above the DL or QL
	Trip_Blank_2	10	U	U		10	Analyte not detected at or above the DL or QL
	Trip_Blank_3	10	U	U		10	Analyte not detected at or above the DL or QL
Dibromochloromethane	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the DL or QL
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the DL or QL
	Trip_Blank_3	1	U	U		1	Analyte not detected at or above the DL or QL
1,2-Dibromo-3-chloropropane	16C1	0.2	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (44%).
	16MW8	0.2	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (44%).
	16MW9	0.2	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (44%).
	16WC1A	0.2	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (44%). Blind field duplicate of 16WDUP.
	16WC1B	0.2	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (44%).

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,2-Dibromo-3-chloropropane	16WDUP	0.2	U	U	J	1	Analyte not detected at or above the DL or QL. CV %Δ > +/- 20 (44%). Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U	J	1	Analyte not detected at or above the DL or QL. CV %Δ > +/- 20 (44%).
	Trip_Blank_2	1	U	U	J	1	Analyte not detected at or above the DL or QL. CV %Δ > +/- 20 (44%).
	Trip_Blank_3	1	U	U	J	1	Analyte not detected at or above the DL or QL. CV %Δ > +/- 20 (44%).
1,2-Dibromoethane	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	1	U	U		1	Analyte not detected at or above the DL or QL.
1,2-Dichlorobenzene	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	1	U	U		1	Analyte not detected at or above the DL or QL.
1,3-Dichlorobenzene	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	1	U	U		1	Analyte not detected at or above the DL or QL.
1,4-Dichlorobenzene	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,4-Dichlorobenzene	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	1	U	U		1	Analyte not detected at or above the DL or QL.
trans-1,4-Dichloro-2-butene	16C1	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (44%).
	16MW8	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (44%).
	16MW9	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (44%).
	16WC1A	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (44%). Blind field duplicate of 16WDUP.
	16WC1B	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (44%).
	16WDUP	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (44%). Blind field duplicate of 16WC1A.
	Trip_Blank_1	10	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (44%).
	Trip_Blank_2	10	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (44%).
	Trip_Blank_3	10	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (44%).
Dichlorodifluoromethane	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.2	J	0.2	J	1	Result < QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	1	U	U		1	Analyte not detected at or above the DL or QL.
1,1-Dichloroethane	16C1	6		6		1	No action taken.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory	Result	Validated	QL	Validation Notes	
		(ug/L)	Q	(ug/L)	Q		(ug/L)
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,1-Dichloroethane	16MW8	0.3	J	0.3	J	1	Result < QL
	16MW9	9.1		9.1		1	No action taken.
	16WC1A	6		6		1	No action taken. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL
	16WC2B	1	U	U		1	Analyte not detected at or above the QL
	16-2	1	U	U		1	Analyte not detected at or above the QL
	16-3	1	U	U		1	Analyte not detected at or above the QL
	16-5	1	U	U		1	Analyte not detected at or above the QL
	16SPRING	1	U	U		1	Analyte not detected at or above the QL
	16WDUP	5.9		5.9		1	No action taken. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the DL or QL
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the DL or QL
	Trip_Blank_3	1	U	U		1	Analyte not detected at or above the DL or QL
1,2-Dichloroethane	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the DL or QL
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the DL or QL
	Trip_Blank_3	1	U	U		1	Analyte not detected at or above the DL or QL
1,1-Dichloroethene	16C1	0.3	J	0.3	J	1	Result < QL
	16MW8	0.2	U	U		1	Analyte not detected at or above the DL or QL
	16MW9	0.3	J	0.3	J	1	Result < QL
	16WC1A	0.2	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.2	U	U		1	Analyte not detected at or above the DL or QL
	16WC2B	1	U	U		1	Analyte not detected at or above the QL
	16-2	1	U	U		1	Analyte not detected at or above the QL
	16-3	1	U	U		1	Analyte not detected at or above the QL
	16-5	1	U	U		1	Analyte not detected at or above the QL
	16SPRING	1	U	U		1	Analyte not detected at or above the QL

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory	Result	Validated	QL	Validation Notes
		(ug/L)	Q	(ug/L)	Q	
Method: 8260C						
Laboratory: ELLE, Lancaster, PA						
1,1-Dichloroethene	16WDUP	0.2	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U	1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1	U	U	1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	1	U	U	1	Analyte not detected at or above the DL or QL.
trans-1,2-Dichloroethene	16C1	0.2	U	U	1	Analyte not detected at or above the DL or QL.
	16MW8	0.2	U	U	1	Analyte not detected at or above the DL or QL.
	16MW9	0.2	U	U	1	Analyte not detected at or above the DL or QL.
	16WC1A	0.2	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.2	U	U	1	Analyte not detected at or above the DL or QL.
	16WDUP	0.2	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U	1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1	U	U	1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	1	U	U	1	Analyte not detected at or above the DL or QL.
1,2-Dichloropropane	16C1	0.1	U	U	1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U	1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U	1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U	1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U	1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1	U	U	1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	1	U	U	1	Analyte not detected at or above the DL or QL.
1,3-Dichloropropane	16C1	0.1	U	U	1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U	1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U	1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U	1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U	1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1	U	U	1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	1	U	U	1	Analyte not detected at or above the DL or QL.
trans-1,3-Dichloropropene	16C1	0.1	U	U	1	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory	Validated	QL	Validation Notes		
		Result (ug/L) Q	Result (ug/L) Q	(ug/L)			
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
trans-1,3-Dichloropropene	16MW8	0.1	U	U	1	Analyte not detected at or above the DL or QL.	
	16MW9	0.1	U	U	1	Analyte not detected at or above the DL or QL.	
	16WC1A	0.1	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
	16WC1B	0.1	U	U	1	Analyte not detected at or above the DL or QL.	
	16WDUP	0.1	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
	Trip_Blank_1	1	U	U	1	Analyte not detected at or above the DL or QL.	
	Trip_Blank_2	1	U	U	1	Analyte not detected at or above the DL or QL.	
	Trip_Blank_3	1	U	U	1	Analyte not detected at or above the DL or QL.	
Diethyl ether	16C1	33		33	13	Analyzed in dilution (1:10). Actual laboratory adjusted QL 10 ug/L.	
	16MW8	12	J	12	J	13	Result < QL.
	16MW9	70		70	13	Analyzed in dilution (1:10). Actual laboratory adjusted QL 10 ug/L.	
	16WC1A	28		28	13	Analyzed in dilution (1:10). Actual laboratory adjusted QL 10 ug/L. Blind field duplicate of 16WDUP.	
	16WC1B	1.1	U	U	13	Analyte not detected at or above the DL or QL.	
	16WC2B	13	U	U	13	Analyte not detected at or above the QL.	
	16-2	13	U	U	13	Analyte not detected at or above the QL.	
	16-3	13	U	U	13	Analyte not detected at or above the QL.	
	16-5	13	U	U	13	Analyte not detected at or above the QL.	
	16SPRING	13	U	U	13	Analyte not detected at or above the QL.	
	16WDUP	29		29	13	Analyzed in dilution (1:10). Actual laboratory adjusted QL 10 ug/L. Blind field duplicate of 16WC1A.	
	Trip_Blank_1	13	U	U	13	Analyte not detected at or above the DL or QL.	
	Trip_Blank_2	13	U	U	13	Analyte not detected at or above the DL or QL.	
	Trip_Blank_3	13	U	U	13	Analyte not detected at or above the DL or QL.	
Dimethyl ether	16C1	7.8	J	7.8	J	13	Result < QL.
	16MW8	0.6	J	0.6	J	13	Result < QL.
	16MW9	0.8	J	0.8	J	13	Result < QL.
	16WC1A	4.9	J	4.9	J	13	Result < QL. Blind field duplicate of 16WDUP.
	16WC1B	0.3	J	0.3	J	13	Result < QL.
	16WC2B	13	U	U	13	Analyte not detected at or above the QL.	
	16-2	13	U	U	13	Analyte not detected at or above the QL.	
	16-3	13	U	U	13	Analyte not detected at or above the QL.	
	16-5	13	U	U	13	Analyte not detected at or above the QL.	
	16SPRING	13	U	U	13	Analyte not detected at or above the QL.	

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Dimethyl ether	16WDUP	4.6	J	4.6	J	13	Result < QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	13	U	U		13	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	13	U	U		13	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	13	U	U		13	Analyte not detected at or above the DL or QL.
1,4-Dioxane	16C1	45	U	U		200	Analyte not detected at or above the DL or QL.
	16MW8	45	U	U		200	Analyte not detected at or above the DL or QL.
	16MW9	45	U	U		200	Analyte not detected at or above the DL or QL.
	16WC1A	45	U	U		200	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	45	U	U		200	Analyte not detected at or above the DL or QL.
	16WDUP	45	U	U		200	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	200	U	U		200	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	200	U	U		200	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	200	U	U		200	Analyte not detected at or above the DL or QL.
Ethylbenzene	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	1	U	U		1	Analyte not detected at or above the DL or QL.
Ethyl methacrylate	16C1	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.8	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.8	U	U		10	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory	Result	Validated	QL	Validation Notes
		(ug/L)	Q	(ug/L)	Q	
Method: 8260C						
Laboratory: ELLE, Lancaster, PA						
Ethyl methacrylate	16WDUP	0.8	U	U	10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	10	U	U	10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	10	U	U	10	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	10	U	U	10	Analyte not detected at or above the DL or QL.
Hexachlorobutadiene	16C1	0.1	U	U	1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U	1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U	1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U	1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U	1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1	U	U	1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	1	U	U	1	Analyte not detected at or above the DL or QL.
	Hexachloroethane	16C1	0.1	U	U	10
16MW8		0.1	U	U	10	Analyte not detected at or above the DL or QL.
16MW9		0.1	U	U	10	Analyte not detected at or above the DL or QL.
16WC1A		0.1	U	U	10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
16WC1B		0.1	U	U	10	Analyte not detected at or above the DL or QL.
16WDUP		0.1	U	U	10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Trip_Blank_1		10	U	U	10	Analyte not detected at or above the DL or QL.
Trip_Blank_2		10	U	U	10	Analyte not detected at or above the DL or QL.
Trip_Blank_3		10	U	U	10	Analyte not detected at or above the DL or QL.
2-Hexanone		16C1	1	U	U	10
	16MW8	1	U	U	10	Analyte not detected at or above the DL or QL.
	16MW9	1	U	U	10	Analyte not detected at or above the DL or QL.
	16WC1A	1	U	U	10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U	10	Analyte not detected at or above the DL or QL.
	16WDUP	1	U	U	10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	10	U	U	10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	10	U	U	10	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	10	U	U	10	Analyte not detected at or above the DL or QL.
	Isobutyl alcohol	16C1	10	U	U	200

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Isobutyl alcohol	16MW8	10	U	U		200	Analyte not detected at or above the DL or QL
	16MW9	10	U	U		200	Analyte not detected at or above the DL or QL
	16WC1A	10	U	U		200	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	10	U	U		200	Analyte not detected at or above the DL or QL
	16WDUP	10	U	U		200	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	200	U	U		200	Analyte not detected at or above the DL or QL
	Trip_Blank_2	200	U	U		200	Analyte not detected at or above the DL or QL
	Trip_Blank_3	200	U	U		200	Analyte not detected at or above the DL or QL
Methacrylonitrile	16C1	9.8	U	U	J	100	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (29%).
	16MW8	9.8	U	U	J	100	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (29%).
	16MW9	9.8	U	U	J	100	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (29%).
	16WC1A	9.8	U	U	J	100	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (29%). Blind field duplicate of 16WDUP.
	16WC1B	9.8	U	U	J	100	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (29%).
	16WDUP	9.8	U	U	J	100	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (29%). Blind field duplicate of 16WC1A.
	Trip_Blank_1	100	U	U	J	100	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (29%).
	Trip_Blank_2	100	U	U	J	100	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (29%).
Bromomethane	Trip_Blank_3	100	U	U	J	100	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (29%).
	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the DL or QL
Chloromethane	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the DL or QL
	Trip_Blank_3	1	U	U		1	Analyte not detected at or above the DL or QL
	16C1	0.2	U	U		1	Analyte not detected at or above the DL or QL
	16MW8	0.2	U	U		1	Analyte not detected at or above the DL or QL
	16MW9	0.2	U	U		1	Analyte not detected at or above the DL or QL
	16WC1A	0.2	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.2	U	U		1	Analyte not detected at or above the DL or QL
	16WC2B	1	U	U		1	Analyte not detected at or above the QL

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Chloromethane	16-2	1	U	U		1	Analyte not detected at or above the QL
	16-3	1	U	U		1	Analyte not detected at or above the QL
	16-5	1	U	U		1	Analyte not detected at or above the QL
	16SPRING	1	U	U		1	Analyte not detected at or above the QL
	16WDUP	0.2	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the DL or QL
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the DL or QL
Iodomethane	Trip_Blank_3	1	U	U		1	Analyte not detected at or above the DL or QL
	16C1	0.6	U	U		10	Analyte not detected at or above the DL or QL
	16MW8	0.6	U	U		10	Analyte not detected at or above the DL or QL
	16MW9	0.6	U	U		10	Analyte not detected at or above the DL or QL
	16WC1A	0.6	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.6	U	U		10	Analyte not detected at or above the DL or QL
	16WDUP	0.6	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Methyl methacrylate	Trip_Blank_1	10	U	U		10	Analyte not detected at or above the DL or QL
	Trip_Blank_2	10	U	U		10	Analyte not detected at or above the DL or QL
	Trip_Blank_3	10	U	U		10	Analyte not detected at or above the DL or QL
	16C1	3.6	U	U	J	10	Analyte not detected at or above the DL or QL. CV %d > +/- 20 (23%).
	16MW8	3.6	U	U	J	10	Analyte not detected at or above the DL or QL. CV %d > +/- 20 (23%).
	16MW9	3.6	U	U	J	10	Analyte not detected at or above the DL or QL. CV %d > +/- 20 (23%).
	16WC1A	3.6	U	U	J	10	Analyte not detected at or above the DL or QL. CV %d > +/- 20 (23%). Blind field duplicate of 16WDUP.
4-Methyl-2-pentanone	16WC1B	3.6	U	U	J	10	Analyte not detected at or above the DL or QL. CV %d > +/- 20 (23%).
	16WDUP	3.6	U	U	J	10	Analyte not detected at or above the DL or QL. CV %d > +/- 20 (23%). Blind field duplicate of 16WC1A.
	Trip_Blank_1	10	U	U	J	10	Analyte not detected at or above the DL or QL. CV %d > +/- 20 (23%).
	Trip_Blank_2	10	U	U	J	10	Analyte not detected at or above the DL or QL. CV %d > +/- 20 (23%).
	Trip_Blank_3	10	U	U	J	10	Analyte not detected at or above the DL or QL. CV %d > +/- 20 (23%).
	16C1	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %d > +/- 20 (21%).
	16MW8	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %d > +/- 20 (21%).
4-Methyl-2-pentanone	16MW9	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %d > +/- 20 (21%).
	16WC1A	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %d > +/- 20 (21%). Blind field duplicate of 16WDUP.
	16WC1B	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %d > +/- 20 (21%).
	16WDUP	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %d > +/- 20 (21%). Blind field duplicate of 16WC1A.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
4-Methyl-2-pentanone	Trip_Blank_1	10	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (21%).
	Trip_Blank_2	10	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (21%).
	Trip_Blank_3	10	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (21%).
Dibromomethane	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	1	U	U		1	Analyte not detected at or above the DL or QL.
Methylene chloride	16C1	1.8		1.8		1	No action taken.
	16MW8	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.4	J	0.4	J	1	Result < QL. Blind field duplicate of 16WDUP.
	16WC1B	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.4	J	0.4	J	1	Result < QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	1	U	U		1	Analyte not detected at or above the DL or QL.
	16C1	0.1	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (-21%).
	16MW8	0.1	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (-21%).
	16MW9	0.1	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (-21%).
Naphthalene	16WC1A	0.1	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (-21%). Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (-21%).
	16WDUP	0.1	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (-21%). Blind field duplicate of 16WC1A.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory	Result	Validated	QL	Validation Notes	
		(ug/L)	Q	(ug/L)	Q		(ug/L)
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Naphthalene	Trip_Blank_1	1	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (-21%).
	Trip_Blank_2	1	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (-21%).
	Trip_Blank_3	1	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (-21%).
Pentachloroethane	16C1	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.8	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.8	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	10	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	10	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	10	U	U		10	Analyte not detected at or above the DL or QL.
2-Propanol	16C1	50	U	U		100	Analyte not detected at or above the DL or QL.
	16MW8	50	U	U		100	Analyte not detected at or above the DL or QL.
	16MW9	50	U	U		100	Analyte not detected at or above the DL or QL.
	16WC1A	50	U	U		100	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	50	U	U		100	Analyte not detected at or above the DL or QL.
	16WDUP	50	U	U		100	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Propionitrile	16C1	10	U	U		100	Analyte not detected at or above the DL or QL.
	16MW8	10	U	U		100	Analyte not detected at or above the DL or QL.
	16MW9	10	U	U		100	Analyte not detected at or above the DL or QL.
	16WC1A	10	U	U		100	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	10	U	U		100	Analyte not detected at or above the DL or QL.
	16WDUP	10	U	U		100	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	100	U	U		100	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	100	U	U		100	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	100	U	U		100	Analyte not detected at or above the DL or QL.
Styrene	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory	Result	Validated	QL	Validation Notes	
		(ug/L)	Q	(ug/L)	Q		(ug/L)
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Styrene	16WDUP	0.1	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
	Trip_Blank_1	1	U	U	1	Analyte not detected at or above the DL or QL.	
	Trip_Blank_2	1	U	U	1	Analyte not detected at or above the DL or QL.	
	Trip_Blank_3	1	U	U	1	Analyte not detected at or above the DL or QL.	
1,1,1,2-Tetrachloroethane	16C1	0.1	U	U	1	Analyte not detected at or above the DL or QL.	
	16MW8	0.1	U	U	1	Analyte not detected at or above the DL or QL.	
	16MW9	0.1	U	U	1	Analyte not detected at or above the DL or QL.	
	16WC1A	0.1	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
	16WC1B	0.1	U	U	1	Analyte not detected at or above the DL or QL.	
	16WDUP	0.1	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
	Trip_Blank_1	1	U	U	1	Analyte not detected at or above the DL or QL.	
	Trip_Blank_2	1	U	U	1	Analyte not detected at or above the DL or QL.	
	Trip_Blank_3	1	U	U	1	Analyte not detected at or above the DL or QL.	
	1,1,2,2-Tetrachloroethane	16C1	0.2	U	U	1	Analyte not detected at or above the DL or QL.
		16MW8	0.2	U	U	1	Analyte not detected at or above the DL or QL.
		16MW9	0.2	U	U	1	Analyte not detected at or above the DL or QL.
16WC1A		0.2	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
16WC1B		0.2	U	U	1	Analyte not detected at or above the DL or QL.	
16WDUP		0.2	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
Trip_Blank_1		1	U	U	1	Analyte not detected at or above the DL or QL.	
Trip_Blank_2		1	U	U	1	Analyte not detected at or above the DL or QL.	
Trip_Blank_3		1	U	U	1	Analyte not detected at or above the DL or QL.	
Tetrachloroethene		16C1	0.3	J	0.3	J	Result < QL.
		16MW8	0.1	U	U	1	Analyte not detected at or above the DL or QL.
		16MW9	0.1	U	U	1	Analyte not detected at or above the DL or QL.
	16WC1A	0.3	J	0.3	J	Result < QL. Blind field duplicate of 16WDUP.	
	16WC1B	0.1	U	U	1	Analyte not detected at or above the DL or QL.	
	16WC2B	1	U	U	1	Analyte not detected at or above the QL.	
	16-2	1	U	U	1	Analyte not detected at or above the QL.	
	16-3	1	U	U	1	Analyte not detected at or above the QL.	
	16-5	1	U	U	1	Analyte not detected at or above the QL.	
	16SPRING	1	U	U	1	Analyte not detected at or above the QL.	

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Tetrachloroethene	16WDUP	0.3	J	0.3	J	1	Result < QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	1	U	U		1	Analyte not detected at or above the DL or QL.
Tetrahydrofuran	16C1	13	J	13	J	25	Result < QL. CV %d > +/- 20 (25%).
	16MW8	2	U	U		25	Verification event performed June 16, 2016. Verification result reported. Original result 2.2 J ug/l.
	16MW9	2	U	U	J	25	Analyte not detected at or above the DL or QL. CV %d > +/- 20 (25%).
	16WC1A	4.6	J	4.6	J	25	Result < QL. CV %d > +/- 20 (25%). Verification event performed June 16, 2016 (2.3 J ug/l). Original result reported. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U	J	25	Analyte not detected at or above the DL or QL. CV %d > +/- 20 (25%).
	16WDUP	3.9	J	3.9	J	25	Result < QL. CV %d > +/- 20 (25%). Blind field duplicate of 16WC1A.
	Trip_Blank_1	25	U	U	J	25	Analyte not detected at or above the DL or QL. CV %d > +/- 20 (25%).
	Trip_Blank_2	25	U	U	J	25	Analyte not detected at or above the DL or QL. CV %d > +/- 20 (25%).
	Trip_Blank_3	25	U	U	J	25	Analyte not detected at or above the DL or QL. CV %d > +/- 20 (25%).
Toluene	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	1	U	U		1	Analyte not detected at or above the DL or QL.
1,2,4-Trichlorobenzene	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory	Validated	QL	Validation Notes		
		Result (ug/L)	Q	Result (ug/L)		Q	(ug/L)
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,2,4-Trichlorobenzene	16WDUP	0.1	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
	Trip_Blank_1	1	U	U	1	Analyte not detected at or above the DL or QL.	
	Trip_Blank_2	1	U	U	1	Analyte not detected at or above the DL or QL.	
	Trip_Blank_3	1	U	U	1	Analyte not detected at or above the DL or QL.	
1,1,1-Trichloroethane	16C1	0.2	J	0.2	J	1	Result < QL.
	16MW8	0.1	U	U	1	Analyte not detected at or above the DL or QL.	
	16MW9	0.1	U	U	1	Analyte not detected at or above the DL or QL.	
	16WC1A	0.1	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
	16WC1B	0.1	U	U	1	Analyte not detected at or above the DL or QL.	
	16WC2B	1	U	U	1	Analyte not detected at or above the QL.	
	16-2	1	U	U	1	Analyte not detected at or above the QL.	
	16-3	1	U	U	1	Analyte not detected at or above the QL.	
	16-5	1	U	U	1	Analyte not detected at or above the QL.	
	16SPRING	1	U	U	1	Analyte not detected at or above the QL.	
	16WDUP	0.1	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
	Trip_Blank_1	1	U	U	1	Analyte not detected at or above the DL or QL.	
	Trip_Blank_2	1	U	U	1	Analyte not detected at or above the DL or QL.	
	Trip_Blank_3	1	U	U	1	Analyte not detected at or above the DL or QL.	
	1,1,2-Trichloroethane	16C1	0.1	U	U	1	Analyte not detected at or above the DL or QL.
		16MW8	0.1	U	U	1	Analyte not detected at or above the DL or QL.
16MW9		0.1	U	U	1	Analyte not detected at or above the DL or QL.	
16WC1A		0.1	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
16WC1B		0.1	U	U	1	Analyte not detected at or above the DL or QL.	
16WDUP		0.1	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
Trip_Blank_1		1	U	U	1	Analyte not detected at or above the DL or QL.	
Trip_Blank_2		1	U	U	1	Analyte not detected at or above the DL or QL.	
Trip_Blank_3		1	U	U	1	Analyte not detected at or above the DL or QL.	
Trichloroethene	16C1	0.3	J	0.3	J	1	Result < QL.
	16MW8	0.2	U	U	1	Analyte not detected at or above the DL or QL.	
	16MW9	0.2	U	U	1	Analyte not detected at or above the DL or QL.	
	16WC1A	0.2	J	0.2	J	1	Result < QL. Blind field duplicate of 16WDUP.
	16WC1B	0.2	U	U	1	Analyte not detected at or above the DL or QL.	

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory	Result	Validated	QL	Validation Notes	
		(ug/L)	Q	(ug/L)	Q		(ug/L)
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Trichloroethene	16WC2B	1	U	U	1	Analyte not detected at or above the QL	
	16-2	1	U	U	1	Analyte not detected at or above the QL	
	16-3	1	U	U	1	Analyte not detected at or above the QL	
	16-5	1	U	U	1	Analyte not detected at or above the QL	
	16SPRING	1	U	U	1	Analyte not detected at or above the QL	
	16WDUP	0.2	J	0.2	J	1	Result < QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U	1	Analyte not detected at or above the DL or QL	
	Trip_Blank_2	1	U	U	1	Analyte not detected at or above the DL or QL	
	Trip_Blank_3	1	U	U	1	Analyte not detected at or above the DL or QL	
Trichlorofluoromethane	16C1	0.2	U	U	1	Analyte not detected at or above the DL or QL	
	16MW8	0.2	U	U	1	Analyte not detected at or above the DL or QL	
	16MW9	0.2	U	U	1	Analyte not detected at or above the DL or QL	
	16WC1A	0.2	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
	16WC1B	0.2	U	U	1	Analyte not detected at or above the DL or QL	
	16WC2B	1	U	U	1	Analyte not detected at or above the QL	
	16-2	1	U	U	1	Analyte not detected at or above the QL	
	16-3	1	U	U	1	Analyte not detected at or above the QL	
	16-5	1	U	U	1	Analyte not detected at or above the QL	
	16SPRING	1	U	U	1	Analyte not detected at or above the QL	
	16WDUP	0.2	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
	Trip_Blank_1	1	U	U	1	Analyte not detected at or above the DL or QL	
	Trip_Blank_2	1	U	U	1	Analyte not detected at or above the DL or QL	
	Trip_Blank_3	1	U	U	1	Analyte not detected at or above the DL or QL	
1,2,3-Trichloropropane	16C1	0.3	U	U	1	Analyte not detected at or above the DL or QL	
	16MW8	0.3	U	U	1	Analyte not detected at or above the DL or QL	
	16MW9	0.3	U	U	1	Analyte not detected at or above the DL or QL	
	16WC1A	0.3	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
	16WC1B	0.3	U	U	1	Analyte not detected at or above the DL or QL	
	16WDUP	0.3	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
	Trip_Blank_1	1	U	U	1	Analyte not detected at or above the DL or QL	
	Trip_Blank_2	1	U	U	1	Analyte not detected at or above the DL or QL	
	Trip_Blank_3	1	U	U	1	Analyte not detected at or above the DL or QL	

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory	Result	Validated	QL	Validation Notes
		(ug/L)	Q	(ug/L)	Q	
Method: 8260C						
Laboratory: ELLE, Lancaster, PA						
1,1,2-Trichloro-1,2,2-Trifluoroethane	16C1	0.2	U	U	1	Analyte not detected at or above the DL or QL
	16MW8	0.2	U	U	1	Analyte not detected at or above the DL or QL
	16MW9	0.2	U	U	1	Analyte not detected at or above the DL or QL
	16WC1A	0.2	U	U	1	Analyte not detected at or above the DL or QL Blind field duplicate of 16WDUP.
	16WC1B	0.2	U	U	1	Analyte not detected at or above the DL or QL
	16WC2B	1	U	U	1	Analyte not detected at or above the QL
	16-2	1	U	U	1	Analyte not detected at or above the QL
	16-3	1	U	U	1	Analyte not detected at or above the QL
	16-5	1	U	U	1	Analyte not detected at or above the QL
	16SPRING	1	U	U	1	Analyte not detected at or above the QL
	16WDUP	0.2	U	U	1	Analyte not detected at or above the DL or QL Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U	1	Analyte not detected at or above the DL or QL
	Trip_Blank_2	1	U	U	1	Analyte not detected at or above the DL or QL
	Trip_Blank_3	1	U	U	1	Analyte not detected at or above the DL or QL
Vinyl acetate	16C1	3.3	U	U	10	Analyte not detected at or above the DL or QL
	16MW8	3.3	U	U	10	Analyte not detected at or above the DL or QL
	16MW9	3.3	U	U	10	Analyte not detected at or above the DL or QL
	16WC1A	3.3	U	U	10	Analyte not detected at or above the DL or QL Blind field duplicate of 16WDUP.
	16WC1B	3.3	U	U	10	Analyte not detected at or above the DL or QL
	16WDUP	3.3	U	U	10	Analyte not detected at or above the DL or QL Blind field duplicate of 16WC1A.
	Trip_Blank_1	10	U	U	10	Analyte not detected at or above the DL or QL
	Trip_Blank_2	10	U	U	10	Analyte not detected at or above the DL or QL
	Trip_Blank_3	10	U	U	10	Analyte not detected at or above the DL or QL
Vinyl chloride	16C1	0.2	U	U	1	Analyte not detected at or above the DL or QL
	16MW8	0.2	U	U	1	Analyte not detected at or above the DL or QL
	16MW9	0.2	U	U	1	Verification event performed on June 16, 2016. Verification result reported. Original result 0.2 J ug/l.
	16WC1A	0.2	U	U	1	Verification event performed on June 16, 2016. Verification result reported. Original result 0.2 J ug/l. Blind field duplicate of 16WDUP (verification event).
	16WC1B	0.2	U	U	1	Analyte not detected at or above the DL or QL
	16WDUP	0.2	U	U	1	Verification event performed on June 16, 2016. Verification result reported. Original result 0.2 J ug/l. Blind field duplicate of 16WC1A (verification event).
	Trip_Blank_1	1	U	U	1	Analyte not detected at or above the DL or QL
	Trip_Blank_2	1	U	U	1	Analyte not detected at or above the DL or QL

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory		Validated	QL	Validation Notes
		Result	Q	Result	Q	
Method: 8260C						
Laboratory: ELLE, Lancaster, PA						
Vinyl chloride	Trip_Blank_3	1	U	U	1	Analyte not detected at or above the DL or QL
Xylenes (Total)	16C1	0.2	U	U	3	Analyte not detected at or above the DL or QL
	16MW8	0.2	U	U	3	Analyte not detected at or above the DL or QL
	16MW9	0.2	U	U	3	Analyte not detected at or above the DL or QL
	16WC1A	0.2	U	U	3	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.2	U	U	3	Analyte not detected at or above the DL or QL
	16WC2B	3	U	U	3	Analyte not detected at or above the QL
	16-2	3	U	U	3	Analyte not detected at or above the QL
	16-3	3	U	U	3	Analyte not detected at or above the QL
	16-5	3	U	U	3	Analyte not detected at or above the QL
	16SPRING	3	U	U	3	Analyte not detected at or above the QL
	16WDUP	0.2	U	U	3	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	3	U	U	3	Analyte not detected at or above the DL or QL
	Trip_Blank_2	3	U	U	3	Analyte not detected at or above the DL or QL
	Trip_Blank_3	3	U	U	3	Analyte not detected at or above the DL or QL

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory	Validated	Q	QL	Validation Notes	
		Result	Result		(ug/L)		
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Acenaphthene	16C1	0.1	U	U	0	Analyte not detected at or above the DL or QL	
	16MW8	0.1	U	U	0	Analyte not detected at or above the DL or QL	
	16MW9	0.1	U	U	0	Analyte not detected at or above the DL or QL	
	16WC1A	0.1	U	U	0	Analyte not detected at or above the DL or QL Blind field duplicate of 16WDUP.	
	16WC1B	0.1	U	U	0	Analyte not detected at or above the DL or QL	
	16WDUP	0.1	U	U	0	Analyte not detected at or above the DL or QL Blind field duplicate of 16WC1A.	
Acenaphthylene	16C1	0.1	U	U	0	Analyte not detected at or above the DL or QL	
	16MW8	0.1	U	U	0	Analyte not detected at or above the DL or QL	
	16MW9	0.1	U	U	0	Analyte not detected at or above the DL or QL	
	16WC1A	0.1	U	U	0	Analyte not detected at or above the DL or QL Blind field duplicate of 16WDUP.	
	16WC1B	0.1	U	U	0	Analyte not detected at or above the DL or QL	
	16WDUP	0.1	U	U	0	Analyte not detected at or above the DL or QL Blind field duplicate of 16WC1A.	
Acetophenone	16C1	0.5	U	U	1	Analyte not detected at or above the DL or QL	
	16MW8	0.5	U	U	1	Analyte not detected at or above the DL or QL	
	16MW9	0.5	U	U	1	Analyte not detected at or above the DL or QL	
	16WC1A	0.5	U	U	1	Analyte not detected at or above the DL or QL Blind field duplicate of 16WDUP.	
	16WC1B	0.5	U	U	1	Analyte not detected at or above the DL or QL	
	16WDUP	0.5	U	U	1	Analyte not detected at or above the DL or QL Blind field duplicate of 16WC1A.	
2-Acetylaminofluorene	16C1	2	U	U	5	Analyte not detected at or above the DL or QL	
	16MW8	2	U	U	5	Analyte not detected at or above the DL or QL	
	16MW9	2	U	U	5	Analyte not detected at or above the DL or QL	
	16WC1A	2	U	U	5	Analyte not detected at or above the DL or QL Blind field duplicate of 16WDUP.	
	16WC1B	2	U	U	5	Analyte not detected at or above the DL or QL	
	16WDUP	2	U	U	5	Analyte not detected at or above the DL or QL Blind field duplicate of 16WC1A.	
4-Aminobiphenyl	16C1	0.5	U	U	J	1	Analyte not detected at or above the DL or QL ICV %d > +/- 30 (37%).
	16MW8	0.5	U	U	J	1	Analyte not detected at or above the DL or QL ICV %d > +/- 30 (37%).
	16MW9	0.5	U	U	J	1	Analyte not detected at or above the DL or QL ICV %d > +/- 30 (37%).
	16WC1A	0.5	U	U	J	1	Analyte not detected at or above the DL or QL ICV %d > +/- 30 (37%). Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U	J	1	Analyte not detected at or above the DL or QL ICV %d > +/- 30 (37%).
	16WDUP	0.5	U	U	J	1	Analyte not detected at or above the DL or QL ICV %d > +/- 30 (37%). Blind field duplicate of 16WC1A.
Aniline	16C1	0.5	U	U	1	Analyte not detected at or above the DL or QL	
	16MW8	0.5	U	U	1	Analyte not detected at or above the DL or QL	

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Aniline	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Anthracene	16C1	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Aramite	16C1	5	U	U	J	15	Analyte not detected at or above the DL or QL. Analyte calibrated with only one calibration standard in ICAL.
	16MW8	5	U	U	J	15	Analyte not detected at or above the DL or QL. Analyte calibrated with only one calibration standard in ICAL.
	16MW9	5	U	U	J	15	Analyte not detected at or above the DL or QL. Analyte calibrated with only one calibration standard in ICAL.
	16WC1A	5	U	U	J	15	Analyte not detected at or above the DL or QL. Analyte calibrated with only one calibration standard in ICAL. Blind field duplicate of 16WDUP.
	16WC1B	5	U	U	J	15	Analyte not detected at or above the DL or QL. Analyte calibrated with only one calibration standard in ICAL.
	16WDUP	5	U	U	J	15	Analyte not detected at or above the DL or QL. Analyte calibrated with only one calibration standard in ICAL. Blind field duplicate of 16WC1A.
Benzo[a]anthracene	16C1	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Benzo[b]fluoranthene	16C1	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Benzo[k]fluoranthene	16C1	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		0	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Benzo[k]fluoranthene	16WC1A	0.1	U	U		0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Benzo[ghi]perylene	16C1	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	16C1	0.1	U	U		0	Analyte not detected at or above the DL or QL.
Benzo(a)pyrene	16MW8	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	16C1	75	U	U		300	Analyte not detected at or above the DL or QL.
	16MW8	75	U	U		300	Analyte not detected at or above the DL or QL.
1,4-Benzenediamine	16MW9	75	U	U		300	Analyte not detected at or above the DL or QL.
	16WC1A	75	U	U		300	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	75	U	U		300	Analyte not detected at or above the DL or QL.
	16WDUP	75	U	U		300	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	16C1	10	U	U		15	Analyte not detected at or above the DL or QL.
	16MW8	10	U	U		15	Analyte not detected at or above the DL or QL.
	16MW9	10	U	U		15	Analyte not detected at or above the DL or QL.
Benzyl alcohol	16WC1A	10	U	U		15	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	10	U	U		15	Analyte not detected at or above the DL or QL.
	16WDUP	10	U	U		15	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
bis(2-Chloroethoxy)methane	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result		Validated Result		QL	Validation Notes	
		(ug/L)	Q	(ug/L)	Q	(ug/L)		
Method: 8270D								
Laboratory: ELLE, Lancaster, PA								
bis(2-Chloroethoxy)methane	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
bis(2-Chloroethyl)ether	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL.	
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL.	
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL.	
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL.	
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL.	
bis(2-Chloro-1-methylethyl)ether	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL.	
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL.	
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL.	
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
	bis(2-Ethylhexyl)phthalate	16C1	2	U	U		5	Analyte not detected at or above the DL or QL.
		16MW8	2	U	U		5	Analyte not detected at or above the DL or QL.
16MW9		2	U	U		5	Analyte not detected at or above the DL or QL.	
16WC1A		2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
16WC1B		2	U	U		5	Analyte not detected at or above the DL or QL.	
16WDUP		2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
4-Bromophenyl phenyl ether		16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL.	
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL.	
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL.	
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
	Butyl benzyl phthalate	16C1	2	U	U		5	Analyte not detected at or above the DL or QL.
16MW8		2	U	U		5	Analyte not detected at or above the DL or QL.	
16MW9		2	U	U		5	Analyte not detected at or above the DL or QL.	
16WC1A		2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
16WC1B		2	U	U		5	Analyte not detected at or above the DL or QL.	
16WDUP		2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
p-Chloroaniline		16C1	2	U	U		4	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
p-Chloroaniline	16MW8	2	U	U		4	Analyte not detected at or above the DL or QL
	16MW9	2	U	U		4	Analyte not detected at or above the DL or QL
	16WC1A	2	U	U		4	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U		4	Analyte not detected at or above the DL or QL
	16WDUP	2	U	U		4	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Chlorobenzilate	16C1	3	U	U		10	Analyte not detected at or above the DL or QL
	16MW8	3	U	U		10	Analyte not detected at or above the DL or QL
	16MW9	3	U	U		10	Analyte not detected at or above the DL or QL
	16WC1A	3	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	3	U	U		10	Analyte not detected at or above the DL or QL
p-Chloro-m-cresol	16WDUP	3	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
2-Chloronaphthalene	16WC1B	0.5	U	U	J	1	Analyte not detected at or above the DL or QL. Acid surrogates recovered low.
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	16C1	0.4	U	U		1	Analyte not detected at or above the DL or QL
	16MW8	0.4	U	U		1	Analyte not detected at or above the DL or QL
	16MW9	0.4	U	U		1	Analyte not detected at or above the DL or QL
2-Chlorophenol	16WC1A	0.4	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.4	U	U		1	Analyte not detected at or above the DL or QL
	16WDUP	0.4	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL
4-Chlorophenyl phenyl ether	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U	J	1	Analyte not detected at or above the DL or QL. Acid surrogates recovered low.
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory	Result	Validated	QL	Validation Notes
		(ug/L)	Q	(ug/L)	Q	
Method: 8270D						
Laboratory: ELLE, Lancaster, PA						
4-Chlorophenyl phenyl ether	16WC1A	0.5	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U	1	Analyte not detected at or above the DL or QL.
	16WDUP	0.5	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Chrysene	16C1	0.1	U	U	0	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U	0	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U	0	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U	0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U	0	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U	0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Diallate	16C1	1	U	U	5	Analyte not detected at or above the DL or QL.
	16MW8	1	U	U	5	Analyte not detected at or above the DL or QL.
	16MW9	1	U	U	5	Analyte not detected at or above the DL or QL.
	16WC1A	1	U	U	5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U	5	Analyte not detected at or above the DL or QL.
	16WDUP	1	U	U	5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Dibenz(a,h)anthracene	16C1	0.1	U	U	0	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U	0	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U	0	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U	0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U	0	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U	0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Dibenzofuran	16C1	0.5	U	U	1	Analyte not detected at or above the DL or QL.
	16MW8	0.5	U	U	1	Analyte not detected at or above the DL or QL.
	16MW9	0.5	U	U	1	Analyte not detected at or above the DL or QL.
	16WC1A	0.5	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U	1	Analyte not detected at or above the DL or QL.
	16WDUP	0.5	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Di-n-butyl phthalate	16C1	2	U	U	5	Analyte not detected at or above the DL or QL.
	16MW8	2	U	U	5	Analyte not detected at or above the DL or QL.
	16MW9	2	U	U	5	Analyte not detected at or above the DL or QL.
	16WC1A	2	U	U	5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U	5	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result		Validated Result		QL	Validation Notes
		(ug/L)	Q	(ug/L)	Q	(ug/L)	
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Di-n-butyl phthalate	16WDUP	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
3,3'-Dichlorobenzidine	16C1	2	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	2	U	U		5	Analyte not detected at or above the DL or QL.
	16MW9	2	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U		5	Analyte not detected at or above the DL or QL.
	16WDUP	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
2,4-Dichlorophenol	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U	J	1	Analyte not detected at or above the DL or QL. Acid surrgates recovered low.
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
2,6-Dichlorophenol	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U	J	1	Analyte not detected at or above the DL or QL. Acid surrgates recovered low.
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Diethyl phthalate	16C1	2	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	2	U	U		5	Analyte not detected at or above the DL or QL.
	16MW9	2	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U		5	Analyte not detected at or above the DL or QL.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
	16-5	5	U	U		5	Analyte not detected at or above the QL.
	16SPRING	5	U	U		5	Analyte not detected at or above the QL.
	16WDUP	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
O,O-Diethyl O-2-pyrazinyl	16C1	2	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	2	U	U		5	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
O,O-Diethyl O-2-pyrazinyl	16MW9	2	U	U		5	Analyte not detected at or above the DL or QL
	16WC1A	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U		5	Analyte not detected at or above the DL or QL
	16WDUP	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Dimethoate	16C1	3	U	U		10	Analyte not detected at or above the DL or QL
	16MW8	3	U	U		10	Analyte not detected at or above the DL or QL
	16MW9	3	U	U		10	Analyte not detected at or above the DL or QL
	16WC1A	3	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	3	U	U		10	Analyte not detected at or above the DL or QL
	16WDUP	3	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
p-(Dimethylamino)azobenzene	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
7,12-Dimethylbenz[a]anthracene	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
3,3'-Dimethylbenzidine	16C1	25	U	U		75	Analyte not detected at or above the DL or QL
	16MW8	25	U	U		75	Analyte not detected at or above the DL or QL
	16MW9	25	U	U		75	Analyte not detected at or above the DL or QL
	16WC1A	25	U	U		75	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	25	U	U		75	Analyte not detected at or above the DL or QL
	16WDUP	25	U	U		75	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
a,a-Dimethylphenethylamine	16C1	5	U	U	J	50	Analyte not detected at or above the DL or QL. Analyte calibrated with only one calibration standard in ICAL.
	16MW8	5	U	U	J	50	Analyte not detected at or above the DL or QL. Analyte calibrated with only one calibration standard in ICAL.
	16MW9	5	U	U	J	50	Analyte not detected at or above the DL or QL. Analyte calibrated with only one calibration standard in ICAL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
a,a-Dimethylphenethylamine	16WC1A	5	U	U	J	50	Analyte not detected at or above the DL or QL. Analyte calibrated with only one calibration standard in ICAL. Blind field duplicate of 16WDUP.
	16WC1B	5	U	U	J	50	Analyte not detected at or above the DL or QL. Analyte calibrated with only one calibration standard in ICAL.
	16WDUP	5	U	U	J	50	Analyte not detected at or above the DL or QL. Analyte calibrated with only one calibration standard in ICAL. Blind field duplicate of 16WC1A.
2,4-Dimethylphenol	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U	J	1	Analyte not detected at or above the DL or QL. Acid surrogates recovered low.
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Dimethyl phthalate	16C1	2	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	2	U	U		5	Analyte not detected at or above the DL or QL.
	16MW9	2	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U		5	Analyte not detected at or above the DL or QL.
	16WDUP	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
m-Dinitrobenzene	16C1	2	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	2	U	U		5	Analyte not detected at or above the DL or QL.
	16MW9	2	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U		5	Analyte not detected at or above the DL or QL.
	16WDUP	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
4,6-Dinitro-o-cresol	16C1	5	U	U		15	Analyte not detected at or above the DL or QL.
	16MW8	5	U	U		15	Analyte not detected at or above the DL or QL.
	16MW9	5	U	U		15	Analyte not detected at or above the DL or QL.
	16WC1A	5	U	U		15	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	5	U	U	J	15	Analyte not detected at or above the DL or QL. Acid surrogates recovered low.
	16WDUP	5	U	U		15	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
2,4-Dinitrophenol	16C1	10	U	U	J	30	Analyte not detected at or above the DL or QL. Analyte not detected at or above the DL or QL. CV %D > +/- 20 (-27%).
	16MW8	10	U	U	J	30	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (-27%).
	16MW9	10	U	U	J	30	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (-27%).
	16WC1A	10	U	U	J	30	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (-27%). Blind field duplicate of 16WDUP.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
2,4-Dinitrophenol	16WC1B	10	U	U	J	30	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (-27%). Acid surrogates recovered low.
	16WDUP	10	U	U	J	30	Analyte not detected at or above the DL or QL. CV %D > +/- 20 (-27%). Blind field duplicate of 16WC1A.
2,4-Dinitrotoluene	16C1	1	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		10	Analyte not detected at or above the DL or QL.
	16WC2B	5	U	U		10	Analyte not detected at or above the QL.
	16-2	5	U	U		10	Analyte not detected at or above the QL.
	16-3	5	U	U		10	Analyte not detected at or above the QL.
	16-5	5	U	U		10	Analyte not detected at or above the QL.
	16SPRING	5	U	U		10	Analyte not detected at or above the QL.
	16WDUP	1	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	16C1	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.5	U	U		10	Analyte not detected at or above the DL or QL.
2,6-Dinitrotoluene	16WC1A	0.5	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		10	Analyte not detected at or above the QL.
	16-2	1	U	U		10	Analyte not detected at or above the QL.
	16-3	1	U	U		10	Analyte not detected at or above the QL.
	16-5	1	U	U		10	Analyte not detected at or above the QL.
	16SPRING	1	U	U		10	Analyte not detected at or above the QL.
	16WDUP	0.5	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	16C1	2	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	2	U	U		5	Analyte not detected at or above the DL or QL.
	16MW9	2	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U		5	Analyte not detected at or above the DL or QL.
	16WDUP	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Di-n-octyl phthalate	16C1	5	U	U		5	Analyte not detected at or above QL or DL.
	16MW8	5	U	U		5	Analyte not detected at or above QL or DL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Diphenylamine	16MW9	5	U	U		5	Analyte not detected at or above QL or DL.
	16WC1A	5	U	U		5	Analyte not detected at or above QL or DL.
	16WC1B	5	U	U		5	Analyte not detected at or above QL or DL.
	16WDUP	5	U	U		5	Analyte not detected at or above QL or DL. Field duplicate of 16WC1A.
Disulfoton	16C1	25	U	U		50	Analyte not detected at or above the DL or QL.
	16MW8	25	U	U		50	Analyte not detected at or above the DL or QL.
	16MW9	25	U	U		50	Analyte not detected at or above the DL or QL.
	16WC1A	25	U	U		50	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	25	U	U		50	Analyte not detected at or above the DL or QL.
	16WDUP	25	U	U		50	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Ethyl methanesulfonate	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Famphur	16C1	25	U	U		50	Analyte not detected at or above the DL or QL.
	16MW8	25	U	U		50	Analyte not detected at or above the DL or QL.
	16MW9	25	U	U		50	Analyte not detected at or above the DL or QL.
	16WC1A	25	U	U		50	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	25	U	U		50	Analyte not detected at or above the DL or QL.
	16WDUP	25	U	U		50	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Fluoranthene	16C1	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Fluorene	16C1	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory	Result	Validated	QL	Validation Notes	
		(ug/L)	Q	(ug/L)	Q		(ug/L)
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Fluorene	16WC1B	0.1	U	U	0	Analyte not detected at or above the DL or QL	
	16WDUP	0.1	U	U	0	Analyte not detected at or above the DL or QL Blind field duplicate of 16WC1A.	
Hexachlorobenzene	16C1	0.1	U	U	0	Analyte not detected at or above the DL or QL	
	16MW8	0.1	U	U	0	Analyte not detected at or above the DL or QL	
	16MW9	0.1	U	U	0	Analyte not detected at or above the DL or QL	
	16WC1A	0.1	U	U	0	Analyte not detected at or above the DL or QL Blind field duplicate of 16WDUP.	
	16WC1B	0.1	U	U	0	Analyte not detected at or above the DL or QL	
	16WDUP	0.1	U	U	0	Analyte not detected at or above the DL or QL Blind field duplicate of 16WC1A.	
Hexachlorocyclopentadiene	16C1	5	U	U	15	Analyte not detected at or above the DL or QL	
	16MW8	5	U	U	15	Analyte not detected at or above the DL or QL	
	16MW9	5	U	U	15	Analyte not detected at or above the DL or QL	
	16WC1A	5	U	U	15	Analyte not detected at or above the DL or QL Blind field duplicate of 16WDUP.	
	16WC1B	5	U	U	15	Analyte not detected at or above the DL or QL	
	16WDUP	5	U	U	15	Analyte not detected at or above the DL or QL Blind field duplicate of 16WC1A.	
Hexachloroethane	16C1	1	U	U	5	Analyte not detected at or above the DL or QL	
	16MW8	1	U	U	5	Analyte not detected at or above the DL or QL	
	16MW9	1	U	U	5	Analyte not detected at or above the DL or QL	
	16WC1A	1	U	U	5	Analyte not detected at or above the DL or QL Blind field duplicate of 16WDUP.	
	16WC1B	1	U	U	5	Analyte not detected at or above the DL or QL	
	16WDUP	1	U	U	5	Analyte not detected at or above the DL or QL Blind field duplicate of 16WC1A.	
Hexachlorophene	16C1	8.9	U	U	J	8.9	Analyte not detected at or above the DL or QL. Reported by Tentatively Identified Compound (TIC).
	16MW8	8.9	U	U	J	8.9	Analyte not detected at or above the DL or QL. Reported by Tentatively Identified Compound (TIC).
	16MW9	8.9	U	U	J	8.9	Analyte not detected at or above the DL or QL. Reported by Tentatively Identified Compound (TIC).
	16WC1A	8.9	U	U	J	8.9	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP. Reported by Tentatively Identified Compound (TIC).
	16WC1B	8.9	U	U	J	8.9	Analyte not detected at or above the DL or QL. Reported by Tentatively Identified Compound (TIC).
	16WDUP	8.9	U	U	J	8.9	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A. Reported by Tentatively Identified Compound (TIC).
Hexachloropropene	16C1	2	U	U	5	Analyte not detected at or above the DL or QL	
	16MW8	2	U	U	5	Analyte not detected at or above the DL or QL	
	16MW9	2	U	U	5	Analyte not detected at or above the DL or QL	
	16WC1A	2	U	U	5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
	16WC1B	2	U	U	5	Analyte not detected at or above the DL or QL	

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Hexachloropropene	16WDUP	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Indeno[1,2,3-cd]pyrene	16C1	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U		0	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Isodrin	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Isophorone	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Isosafrole	16C1	2	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	2	U	U		5	Analyte not detected at or above the DL or QL.
	16MW9	2	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U		5	Analyte not detected at or above the DL or QL.
	16WDUP	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Kepone	16C1	25	U	U		50	Analyte not detected at or above the DL or QL.
	16MW8	25	U	U		50	Analyte not detected at or above the DL or QL.
	16MW9	25	U	U		50	Analyte not detected at or above the DL or QL.
	16WC1A	25	U	U		50	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	25	U	U		50	Analyte not detected at or above the DL or QL.
	16WDUP	25	U	U		50	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Methapyrilene	16C1	15	U	U		50	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory	Validated	QL	Validation Notes	
		Result (ug/L)	Q	Result (ug/L)		Q
Method: 8270D						
Laboratory: ELLE, Lancaster, PA						
Methapyrilene	16MW8	15	U	U	50	Analyte not detected at or above the DL or QL
	16MW9	15	U	U	50	Analyte not detected at or above the DL or QL
	16WC1A	15	U	U	50	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	15	U	U	50	Analyte not detected at or above the DL or QL
	16WDUP	15	U	U	50	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
3-Methylcholanthrene	16C1	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16MW8	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16MW9	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16WC1A	0.5	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U	1	Analyte not detected at or above the DL or QL
Methyl methane sulfonate	16WDUP	0.5	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	16C1	1	U	U	5	Analyte not detected at or above the DL or QL
	16MW8	1	U	U	5	Analyte not detected at or above the DL or QL
	16MW9	1	U	U	5	Analyte not detected at or above the DL or QL
	16WC1A	1	U	U	5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
2-Methylnaphthalene	16WC1B	1	U	U	5	Analyte not detected at or above the DL or QL
	16WDUP	1	U	U	5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	16C1	0.1	U	U	0	Analyte not detected at or above the DL or QL
	16MW8	0.1	U	U	0	Analyte not detected at or above the DL or QL
	16MW9	0.1	U	U	0	Analyte not detected at or above the DL or QL
Methyl parathion	16WC1A	0.1	U	U	0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U	0	Analyte not detected at or above the DL or QL
	16WDUP	0.1	U	U	0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	16C1	1	U	U	5	Analyte not detected at or above the DL or QL
	16MW8	1	U	U	5	Analyte not detected at or above the DL or QL
2-Methylphenol	16MW9	1	U	U	5	Analyte not detected at or above the DL or QL
	16WC1A	1	U	U	5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U	5	Analyte not detected at or above the DL or QL
	16WDUP	1	U	U	5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	16C1	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16MW8	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16MW9	0.5	U	U	1	Analyte not detected at or above the DL or QL

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory	Result	Validated	QL	Validation Notes	
		(ug/L)	Q	(ug/L)	Q		(ug/L)
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
2-Methylphenol	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U	J	1	Analyte not detected at or above the DL or QL. Acid surrgates recovered low.
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
3 & 4-Methylphenol	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U	J	1	Analyte not detected at or above the DL or QL. Acid surrgates recovered low.
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
1,4-Naphthoquinone	16C1	25	U	U	J	60	Analyte not detected at or above the DL or QL. Low LCS recovery.
	16MW8	25	U	U	J	60	Analyte not detected at or above the DL or QL. Low LCS recovery.
	16MW9	25	U	U	J	60	Analyte not detected at or above the DL or QL. Low LCS recovery.
	16WC1A	25	U	U	J	60	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	25	U	U	J	60	Analyte not detected at or above the DL or QL. Low LCS recovery.
	16WDUP	25	U	U	J	60	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A. Low LCS recovery.
1-Naphthylamine	16C1	5	U	U		15	Analyte not detected at or above the DL or QL.
	16MW8	5	U	U		15	Analyte not detected at or above the DL or QL.
	16MW9	5	U	U		15	Analyte not detected at or above the DL or QL.
	16WC1A	5	U	U		15	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	5	U	U		15	Analyte not detected at or above the DL or QL.
	16WDUP	5	U	U		15	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
2-Naphthylamine	16C1	5	U	U		15	Analyte not detected at or above the DL or QL.
	16MW8	5	U	U		15	Analyte not detected at or above the DL or QL.
	16MW9	5	U	U		15	Analyte not detected at or above the DL or QL.
	16WC1A	5	U	U		15	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	5	U	U		15	Analyte not detected at or above the DL or QL.
	16WDUP	5	U	U		15	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
o-Nitroaniline	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory	Result	Validated	QL	Validation Notes	
		(ug/L)	Q	(ug/L)	Q		(ug/L)
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
o-Nitroaniline	16WDUP	0.5	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
m-Nitroaniline	16C1	0.5	U	U	1	Analyte not detected at or above the DL or QL.	
	16MW8	0.5	U	U	1	Analyte not detected at or above the DL or QL.	
	16MW9	0.5	U	U	1	Analyte not detected at or above the DL or QL.	
	16WC1A	0.5	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
	16WC1B	0.5	U	U	1	Analyte not detected at or above the DL or QL.	
	16WDUP	0.5	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
p-Nitroaniline	16C1	0.5	U	U	1	Analyte not detected at or above the DL or QL.	
	16MW8	0.5	U	U	1	Analyte not detected at or above the DL or QL.	
	16MW9	0.5	U	U	1	Analyte not detected at or above the DL or QL.	
	16WC1A	0.5	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
	16WC1B	0.5	U	U	1	Analyte not detected at or above the DL or QL.	
	16WDUP	0.5	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
Nitrobenzene	16C1	0.5	U	U	1	Analyte not detected at or above the DL or QL.	
	16MW8	0.5	U	U	1	Analyte not detected at or above the DL or QL.	
	16MW9	0.5	U	U	1	Analyte not detected at or above the DL or QL.	
	16WC1A	0.5	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
	16WC1B	0.5	U	U	1	Analyte not detected at or above the DL or QL.	
	16WDUP	0.5	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
o-Nitrophenol	16C1	0.5	U	U	1	Analyte not detected at or above the DL or QL.	
	16MW8	0.5	U	U	1	Analyte not detected at or above the DL or QL.	
	16MW9	0.5	U	U	1	Analyte not detected at or above the DL or QL.	
	16WC1A	0.5	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
	16WC1B	0.5	U	U	J	1	Analyte not detected at or above the DL or QL. Acid surrogates recovered low.
	16WDUP	0.5	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
p-Nitrophenol	16C1	10	U	U	30	Analyte not detected at or above the DL or QL.	
	16MW8	10	U	U	30	Analyte not detected at or above the DL or QL.	
	16MW9	10	U	U	30	Analyte not detected at or above the DL or QL.	
	16WC1A	10	U	U	30	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.	
	16WC1B	10	U	U	J	30	Analyte not detected at or above the DL or QL. Acid surrogates recovered low.
	16WDUP	10	U	U	30	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.	
4-Nitroquinoline-1-oxide	16C1	20	U	U	J	60	Analyte not detected at or above the DL or QL. ICV %D > +/- 30 (46%). CV %D > +/- 20 (-31%).

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory		Validated		QL	Validation Notes
		Result	Q	Result	Q	(ug/L)	
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
4-Nitroquinoline-1-oxide	16MW8	20	U	U	J	60	Analyte not detected at or above the DL or QL. ICV %D > +/- 30 (46%). CV %D > +/- 20 (-31%).
	16MW9	20	U	U	J	60	Analyte not detected at or above the DL or QL. ICV %D > +/- 30 (46%). CV %D > +/- 20 (-31%).
	16WC1A	20	U	U	J	60	Analyte not detected at or above the DL or QL. ICV %D > +/- 30 (46%). CV %D > +/- 20 (-31%). Blind field duplicate of 16WDUP.
	16WC1B	20	U	U	J	60	Analyte not detected at or above the DL or QL. ICV %D > +/- 30 (46%). CV %D > +/- 20 (-31%).
	16WDUP	20	U	U	J	60	Analyte not detected at or above the DL or QL. ICV %D > +/- 30 (46%). CV %D > +/- 20 (-31%). Blind field duplicate of 16WC1A.
N-Nitrosodi-n-butylamine	16C1	2	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	2	U	U		5	Analyte not detected at or above the DL or QL.
	16MW9	2	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U		5	Analyte not detected at or above the DL or QL.
	16WDUP	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
N-Nitrosodiethylamine	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
N-Nitrosodimethylamine	16C1	2	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	2	U	U		5	Analyte not detected at or above the DL or QL.
	16MW9	2	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U		5	Analyte not detected at or above the DL or QL.
	16WDUP	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
N-Nitrosodiphenylamine	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
N-Nitrosodipropylamine	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
N-Nitrosodipropylamine	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
N-Nitrosomethylethylamine	16C1	2	U	U		5	Analyte not detected at or above the DL or QL
	16MW8	2	U	U		5	Analyte not detected at or above the DL or QL
	16MW9	2	U	U		5	Analyte not detected at or above the DL or QL
	16WC1A	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U		5	Analyte not detected at or above the DL or QL
	16WDUP	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
N-Nitrosomorpholine	16C1	2	U	U		5	Analyte not detected at or above the DL or QL
	16MW8	2	U	U		5	Analyte not detected at or above the DL or QL
	16MW9	2	U	U		5	Analyte not detected at or above the DL or QL
	16WC1A	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U		5	Analyte not detected at or above the DL or QL
	16WDUP	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
N-Nitrosopiperidine	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
N-Nitrosopyrrolidine	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
5-Nitroso-o-toluidine	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
5-Nitroso-o-toluidine	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Parathion	16C1	2	U	U		5	Analyte not detected at or above the DL or QL
	16MW8	2	U	U		5	Analyte not detected at or above the DL or QL
	16MW9	2	U	U		5	Analyte not detected at or above the DL or QL
	16WC1A	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U		5	Analyte not detected at or above the DL or QL
	16WDUP	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Pentachlorobenzene	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Pentachloronitrobenzene	16C1	2	U	U		5	Analyte not detected at or above the DL or QL
	16MW8	2	U	U		5	Analyte not detected at or above the DL or QL
	16MW9	2	U	U		5	Analyte not detected at or above the DL or QL
	16WC1A	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U		5	Analyte not detected at or above the DL or QL
	16WDUP	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Pentachlorophenol	16C1	1	U	U		5	Analyte not detected at or above the DL or QL
	16MW8	1	U	U		5	Analyte not detected at or above the DL or QL
	16MW9	1	U	U		5	Analyte not detected at or above the DL or QL
	16WC1A	1	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U	J	5	Analyte not detected at or above the DL or QL. Acid surrogates recovered low.
	16WDUP	1	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Phenacetin	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory	Validated	QL	Validation Notes	
		Result (ug/L)	Q	Result (ug/L)		Q
Method: 8270D						
Laboratory: ELLE, Lancaster, PA						
Phenanthrene	16C1	0.1	U	U	0	Analyte not detected at or above the DL or QL
	16MW8	0.1	U	U	0	Analyte not detected at or above the DL or QL
	16MW9	0.1	U	U	0	Analyte not detected at or above the DL or QL
	16WC1A	0.1	U	U	0	Analyte not detected at or above the DL or QL Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U	0	Analyte not detected at or above the DL or QL
	16WDUP	0.1	U	U	0	Analyte not detected at or above the DL or QL Blind field duplicate of 16WC1A.
Phenol	16C1	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16MW8	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16MW9	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16WC1A	0.5	U	U	1	Analyte not detected at or above the DL or QL Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U	J 1	Analyte not detected at or above the DL or QL Acid surrgates recovered low.
	16WDUP	0.5	U	U	1	Analyte not detected at or above the DL or QL Blind field duplicate of 16WC1A.
Phorate	16C1	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16MW8	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16MW9	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16WC1A	0.5	U	U	1	Analyte not detected at or above the DL or QL Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16WDUP	0.5	U	U	1	Analyte not detected at or above the DL or QL Blind field duplicate of 16WC1A.
2-Picoline	16C1	2	U	U	5	Analyte not detected at or above the DL or QL
	16MW8	2	U	U	5	Analyte not detected at or above the DL or QL
	16MW9	2	U	U	5	Analyte not detected at or above the DL or QL
	16WC1A	2	U	U	5	Analyte not detected at or above the DL or QL Blind field duplicate of 16WDUP.
	16WC1B	2	U	U	5	Analyte not detected at or above the DL or QL
	16WDUP	2	U	U	5	Analyte not detected at or above the DL or QL Blind field duplicate of 16WC1A.
Pronamide	16C1	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16MW8	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16MW9	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16WC1A	0.5	U	U	1	Analyte not detected at or above the DL or QL Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16WDUP	0.5	U	U	1	Analyte not detected at or above the DL or QL Blind field duplicate of 16WC1A.
Pyrene	16C1	0.1	U	U	0	Analyte not detected at or above the DL or QL
	16MW8	0.1	U	U	0	Analyte not detected at or above the DL or QL

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory	Result	Validated	QL	Validation Notes
		(ug/L)	Q	(ug/L)	Q	
Method: 8270D						
Laboratory: ELLE, Lancaster, PA						
Pyrene	16MW9	0.1	U	U	0	Analyte not detected at or above the DL or QL
	16WC1A	0.1	U	U	0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.1	U	U	0	Analyte not detected at or above the DL or QL
	16WDUP	0.1	U	U	0	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Pyridine	16C1	2	U	U	5	Analyte not detected at or above the DL or QL
	16MW8	2	U	U	5	Analyte not detected at or above the DL or QL
	16MW9	2	U	U	5	Analyte not detected at or above the DL or QL
	16WC1A	2	U	U	5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U	5	Analyte not detected at or above the DL or QL
	16WDUP	2	U	U	5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Safrole	16C1	2	U	U	5	Analyte not detected at or above the DL or QL
	16MW8	2	U	U	5	Analyte not detected at or above the DL or QL
	16MW9	2	U	U	5	Analyte not detected at or above the DL or QL
	16WC1A	2	U	U	5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U	5	Analyte not detected at or above the DL or QL
	16WDUP	2	U	U	5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Sulfotep	16C1	8.9	U	U	8.9	Analyte not detected at or above the DL or QL
	16MW8	8.9	U	U	8.9	Analyte not detected at or above the DL or QL
	16MW9	8.9	U	U	8.9	Analyte not detected at or above the DL or QL
	16WC1A	8.9	U	U	8.9	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	8.9	U	U	8.9	Analyte not detected at or above the DL or QL
	16WDUP	8.9	U	U	8.9	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
1,2,4,5-Tetrachlorobenzene	16C1	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16MW8	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16MW9	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16WC1A	0.5	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16WDUP	0.5	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
2,3,4,6-Tetrachlorophenol	16C1	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16MW8	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16MW9	0.5	U	U	1	Analyte not detected at or above the DL or QL
	16WC1A	0.5	U	U	1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
2,3,4,6-Tetrachlorophenol	16WC1B	0.5	U	U	J	1	Analyte not detected at or above the DL or QL. Acid surrogates recovered low.
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
o-Toluidine	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
2,4,5-Trichlorophenol	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U	J	1	Analyte not detected at or above the DL or QL. Acid surrogates recovered low.
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
2,4,6-Trichlorophenol	16C1	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.5	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	0.5	U	U	J	1	Analyte not detected at or above the DL or QL. Acid surrogates recovered low.
	16WDUP	0.5	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
O,O,O-Triethyl phosphorothioate	16C1	2	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	2	U	U		5	Analyte not detected at or above the DL or QL.
	16MW9	2	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U		5	Analyte not detected at or above the DL or QL.
	16WDUP	2	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
sym-Trinitrobenzene	16C1	5	U	U		15	Analyte not detected at or above the DL or QL.
	16MW8	5	U	U		15	Analyte not detected at or above the DL or QL.
	16MW9	5	U	U		15	Analyte not detected at or above the DL or QL.
	16WC1A	5	U	U		15	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WDUP.
	16WC1B	5	U	U		15	Analyte not detected at or above the DL or QL.
	16WDUP	5	U	U		15	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Second Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 9012B							
Laboratory: TestAmerica, North Canton, OH							
Cyanide	16C1	20	U	U		20	Analyte not detected at or above the DL or QL
	16MW8	20	U	U		20	Verification event performed on June 16, 2016. Verification result reported. Original result 13 J ug/l.
	16MW9	20	U	U		20	Verification event performed on June 16, 2016. Verification result reported. Original result 8.5 J ug/l. Blind field duplicate of 16WDUP (verification event).
	16WC1A	20	U	U		20	Verification event performed on June 16, 2016. Verification result reported. Original result 19 J ug/l.
	16WC1B	20	U	U		20	Analyte not detected at or above the DL or QL
	16WDUP	20	U	U		20	Verification event performed on June 16, 2016. Verification result reported. Original result 15 J ug/l. Blind field duplicate of 16MW9 (verification event).

Definitions:

Appendix IX monitoring events and compliance monitoring wells:

For Appendix IX monitoring events, all compliance well results evaluated to the project detection limit.

See separate table for Appendix IX monitoring event detection limits.

QL Denotes permit quantitation limit.

Q Denotes data qualifier.

U Denotes analyte not detected at or above laboratory detection limit (DL) or QL.

J Denotes analyte reported at or above laboratory detection limit and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not detected at or above laboratory detection limit and project required quantitation limit/detection limit is estimated.

UA Denotes analyte not detected at or above adjusted sample detection limit /QL.

UN Denotes analyte concentration is less than the quantitation limit and five times the blank concentration. Analyte was not reliably detected due to blank contamination.

R Denotes result rejected.

Laboratory Data Qualifiers,

"U" and "<", denote not detected at or above the detection limit or QL.

B or J denote result detected between DL and QL, associated value should be considered an estimated concentration.

Appendix IX monitoring events:

Third Quarter 2003, Second Quarter 2004, Second Quarter 2005, Third Quarter 2006, Second Quarter 2007, Second Quarter 2008, Second Quarter 2009, Second Quarter 2010, Second Quarter 2011, Second Quarter 2012, Second Quarter 2013. Second Quarter 2014, Second Quarter 2015, Second Quarter 2016

Definitions for Non-Appendix IX Monitoring Events and plume monitoring wells:

QL Denotes permit quantitation limit.

Q Denotes data qualifier.

U Denotes analyte not detected at or above QL.

UA Denotes analyte not detected at or above adjusted sample QL. See data validation report for further explanation.

J Denotes analyte reported at or above QL and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not detected at or above QL and QL is estimated.

When used with "UA" (i.e., "UAJ"), denotes analyte not detected at or above adjusted QL and adjusted QL is estimated.

R Denotes result rejected. See data validation report for further explanation.

Laboratory Data Qualifiers, "U" and "<", denote not detected at or above the QL.

SW-846 METHODS 6020A & 7470A INORGANIC DATA REVIEW SUMMARY

Draper Aden Associates performed a comprehensive manual review of the analytical results for the April 26-27, 2016 groundwater monitoring event at Hazardous Waste Management Unit 16 (HWMU 16) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia. Draper Aden Associates collected the groundwater samples from monitoring wells 16C1, 16MW8, 16MW9, 16WC1A, 16WC1B, 16-2, 16-3, 16-5, 16WC2B, and 16SPRING. Sample 16WDUP was submitted to the laboratory as a blind sample duplicate for sample 16WC1A. Validation of other required methods is presented on separate reports.

Samples 16C1, 16MW8, 16MW9, 16WC1A and 16WC1B (compliance wells) were analyzed for fifteen (15) metals by SW-846 Method 6020A and mercury by SW-846 Method 7470A. Samples 16-2, 16-3, 16-5, 16WC2B and 16SPRING (plume wells) were analyzed for eleven (11) metals by SW-846 Method 6020A and mercury by SW-846 Method 7470A. The following information and attached table summarize the inorganic data validation results.

Techniques used for metals analysis include inductively coupled plasma ICP-mass spectrometry (ICP-MS) and cold vapor atomic absorption (CVAA). Samples 16C1, 16MW8, 16MW9, 16WC1A, 16WC1B were analyzed for antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium and zinc by ICP-MS Method 6020A and mercury by CVAA Method 7470A. The remaining plume monitoring well samples were analyzed for arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, vanadium, and zinc by ICP-MS Method 6020A and mercury by CVAA Method 7470A. Total (T) concentrations were determined for the inorganic (metal) analytes.

Draper Aden Associates sent samples to TestAmerica, North Canton (TestAmerica), of North Canton, Ohio for the inorganic analyses. On behalf of RFAAP, TestAmerica submitted results to Draper Aden Associates in a final certificate of analysis which included sample analytical results as well as relevant documentation to verify and validate the results. TestAmerica is a VELAP accredited laboratory for the above analytes, methods and matrix as reported on the certificate of analysis.

The evaluation of TestAmerica's compliance with the method and validation of results presented here are based upon a limited review of QA/QC information including holding times, preservation procedures, instrument tuning, calibration and calibration verification data, QL standards, blank samples (method, calibration, and others), interference check sample, pre-digestion matrix spike and matrix spike duplicate (MS/MSD), laboratory control sample (LCS), internal standard, and serial dilution results, where applicable. A review of transcriptions from instrument data to sample summary sheets was performed. Calculation checks were performed on ten percent of the data set, where applicable. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

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TestAmerica received the samples on ice and in good condition, with custody seals intact. Applicable holding time and preservation criteria were met. The chain of custody was appropriately signed and dated by field and laboratory personnel.

Method 6020A (ICP-MS)

The original certificates of analysis were received on May 23, 2016. The certificates of analysis appeared complete in their presentation and the data were of acceptable quality. The data set demonstrated the laboratory's ability to achieve the reported permit quantitation limit (QL) or detection limit (DL).

QC documentation criteria were met. Applicable instrument tune, calibration and calibration verification requirements were met. Blank samples, interference check samples, pre-digestion MS/MSD, LCS, internal standard and serial dilution results were within control limits, except where noted below. Deviations from QA/QC control limits that were identified during the data review process are summarized below.

The QL standard concentration for antimony and lead was 2 µg/l instead of 1 µg/l. The instrument data were evaluated and antimony was not detected in any sample at or above the detection limit (0.4 µg/l) or QL and no data qualification was required for antimony. The instrument data were evaluated and except for 16MW8, lead was not detected in any sample at or above the detection limit (0.2 µg/l) or QL. No data qualification was required for lead. The QL standard concentration was at or below the project QL for the other analytes.

Beryllium was reported in associated laboratory calibration blanks (0.1 – 0.3 J ug/l). All detected results for beryllium were attributed to laboratory blank contamination.

Cobalt was detected above the QL in 16MW9. A split sampling verification event to confirm or refute the 16MW9 detection was performed on June 16, 2016. The verification event confirmed the cobalt detection for 16MW9. The original result was reported as the final result (see data validation report). The data packages from both laboratories will be submitted with the final report. An alternate source demonstration (ASD) for cobalt is ongoing as directed by the DEQ for cobalt for 16WC1A and 16WC1B and will now include 16MW9.

Field duplicate/sample results exhibited acceptable precision, where applicable.

The previous laboratory, CompuChem, a Division of Liberty Analytical (CompuChem), of Cary, North Carolina, went out of business in January 2016. Samples were submitted to TestAmerica and QLs and DLs differ.

Target analytes detected at or above the permit detection limit or QL and/or analytical data that required a data validation qualifier due to quality control deviations noted above are summarized on the attached table. The reported concentration for target analytes detected less than the QL should be considered estimated.

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For this Appendix IX groundwater monitoring event, results for samples 16C1, 16MW8, 16MW9, 16WC1A, 16WC1B, and 16WDUP were reported to at or above the laboratory detection limit. Sample results unaffected by the data validation process, and not detected at or above the detection limit or QL, were validated and reported as “U.” The reported concentration for target analytes detected less than the QL were validated and qualified “J” to note that the reported concentration should be considered estimated.

Sample results for 16-2, 16-3, 16-5, 16WC2B, and 16SPRING were reported at or above the permit required QL. Sample results unaffected by the data validation process, and not detected at or above the permit QL, were validated and reported as “U.” No results were rejected based on the data validation criteria. All QLs were at or below the applicable groundwater protection standard (GPS).

Method 7470A (CVAA)

The original certificates of analysis were received on May 23, 2016. The certificates of analysis appeared complete in its presentation and the final data were of acceptable quality. The certificate of analysis demonstrated the ability of the laboratory to achieve the reported permit required QL or DL for mercury.

QC documentation criteria were met. Instrument calibration and calibration verification criteria were met. QL standards, blank samples, MS/MSD, and LCS were analyzed as required and applicable criteria were met unless noted below. No deviations from QA/QC control limits were identified during the data review process.

Field duplicate/sample results exhibited acceptable precision, where applicable.

Target analytes detected at or above the permit detection limit or QL and/or analytical data that required a data validation qualifier due to quality control deviations noted above are summarized on the attached table.

For samples 16-2, 16-3, 16-5, 16WC2B and 16SPRING, results were reported at or above the permit required QL. For this Appendix IX groundwater monitoring event, results for samples 16C1, 16MW8, 16MW9, 16WC1A, 16WC1B were reported to at or above the permit detection limit. Sample results unaffected by the data validation process, and not detected at or above the detection limit or QL, were validated and reported as “U.” No results were rejected based on the data validation criteria.

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INORGANIC DATA EVALUATION FOR ICP/MS SW-846 METHOD 6020A

TestAmerica, North Canton, OH; SDGs: 240-64160-1, 240-64160-2, 240-66154-1 (verification)

Preparation Method: 3005A

"☑" denotes items reviewed. See Data Validation Summary for additional comments.

A. DOCUMENTATION COMPLETENESS CRITERIA:

Data Quality Objective: Representativeness

- ☑ Chain of custody – Custody transfers must be signed and dated
- ☑ Chain of custody properly and completely filled out including sampler signatures, date and time of sampling, sample ID, analysis requested

B. DETECTION LIMIT AND QUANTITATION LIMIT CRITERIA:

Data Quality Objective: Analytical Sensitivity

- ☑ Specific detection limit reported
- ☑ Specific quantitation limit reported
- ☑ Standard analyzed at the QL (LLQC), digested, 70-130% recovery, analyzed after MDL determination and as needed
- ☑ Method detection limit (MDL) less than QL
- ☑ Performance evaluation sample analyzed within 12 months

C. INITIAL DEMONSTRATION OF CAPABILITY (IDOC) CRITERIA:

Data Quality Objective: Laboratory Method Sensitivity

- ☑ Analyst IDOC for J. Feldhaus submitted previously

D. SAMPLE AND STANDARD PREPARATION CRITERIA:

Data Quality Objective: Accuracy and Representativeness

- ☑ Digestion prior to analysis
- ☑ Digestion method: 3005A
- ☑ Samples and standards matrix matched

E. TECHNICAL HOLDING TIME / PRESERVATION REQUIREMENTS:

Data Quality Objective: Representativeness

- ☑ 6 month holding time, pH<2 with Nitric Acid (HNO₃)

F. INSTRUMENT TUNE CRITERIA:

Data Quality Objective: Verify Operating Conditions

- ☑ Prior to calibration
- ☑ Relative Standard Deviation (RSD) <=5%
- ☑ Resolution < 0.9 amu full width at 10% peak height (or lower)
- ☑ Mass calibration <=0.1 amu difference from true value

G. INITIAL CALIBRATION CRITERIA:

Data Quality Objective: Laboratory Accuracy

- ☑ 1 calibration blank and 3 standards,
- ☑ Linear curve fit with correlation coefficient $r \geq 0.998$
- ☑ Daily calibration following tuning and prior to sample analysis

H. INITIAL CALIBRATION VERIFICATION (ICV) CRITERIA:

Data Quality Objective: Laboratory Accuracy

- ☑ Daily following initial calibration, independent/second source used for ICV

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- ☒ ICV concentration near mid-point of calibration curve, 90-110% recovery
- ☒ Low level ICV (LLICV) – prior to analysis, at QL concentration, 70-130% recovery

I. INITIAL CALIBRATION BLANK CRITERIA:

Data Quality Objective: Laboratory Analytical Sensitivity/Instrument Drift/Contamination Evaluation

- ☒ Daily following ICV
- ☒ Interference free

J. CONTINUING CALIBRATION VERIFICATION (CCV) CRITERIA:

Data Quality Objective: Laboratory Analytical Accuracy

- ☒ CCV, prior to analysis, after every 10 samples, at end of analysis
- ☒ CCV recovery within 90-110%, mid-point of curve concentration
- ☒ Low level CCV (LLCCV), concentration at QL, prior to analysis, end of analysis, after every 10 samples, if necessary (70-130% R)

K. CONTINUING CALIBRATION BLANK CRITERIA:

Data Quality Objective: Laboratory Analytical Sensitivity/Instrument Drift/Contamination Evaluation

- ☒ Immediately after the CCV, 10 sample frequency
- ☒ Interference free

L. BLANK CRITERIA:

Data Quality Objective: Sensitivity/Instrument Drift/Contamination Evaluation

- N/A Trip Blank (check only if analyzed)
- ☒ Method/Other Lab Blanks (check only if analyzed), one per digestion batch
- ☒ Interference free

M. INTERFERENCE CHECK SAMPLE (ICS) CRITERIA:

Data Quality Objective: Analytical Accuracy/Verification of Isobaric Interference Corrections

- ☒ At beginning of analytical run
- ☒ Recovery: 80-120% (ICSAB)

N. MATRIX SPIKE DUPLICATE (MSD) CRITERIA:

Data Quality Objective: Method Precision in Sample Matrix

- ☒ All analytes, one MSD or sample duplicate per batch of 20 samples
- ☒ Spiked prior to sample preparation
- ☒ RPD \leq 20 between MS and MSD results or sample and duplicate results
- ☒ MSD analyte recovery 75-125%

O. MATRIX SPIKE (MS) CRITERIA:

Data Quality Objective: Method Accuracy in Sample Matrix

- ☒ All analytes, one MS per digestion batch of 20 samples
- ☒ Spiked prior to sample preparation
- ☒ Recovery: 75-125%
- ☒ Post digestion spike if MS/MSD recoveries fail
- ☒ Recovery of post digestion spike analytes within 80-120%

P. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

Data Quality Objective: Laboratory Method Accuracy, Laboratory Performance

- ☒ LCS for all target analytes, one LCS per 20 sample batch
- ☒ LCS concentration at approximately mid-point of analytical curve
- ☒ Recovery within 80-120% for all analytes

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Q. INTERNAL STANDARDS (IS) CRITERIA:

Data Quality Objective: Analytical Accuracy in Sample Matrix

- ☒ IS added to each sample and QC sample
- ☒ % Relative intensity (RI) within 70-125%

R. SERIAL DILUTION (DILUTION TEST) TEST CRITERIA:

Data Quality Objective: Accuracy in Sample Matrix

- ☒ <10% Difference (applicable when sample concentration >10X QL)

S. SAMPLE QUANTITATION AND GENERAL REPORTING CRITERIA:

Data Quality Objective: n/a

- ☒ Sample results reported within instrument linear dynamic range
- ☒ Sample results reported to the detection limit (compliance wells)
- ☒ Sample results reported to the quantitation limit (plume wells)

Draper Aden Associates conducted a limited data validation of the above noted data set using the data package provided by the analyzing laboratory. Data evaluation was conducted using SW-846 (Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, USEPA, SW-846, 3rd Edition-Final Update I, II/IIA, III, and subsequent updates) method requirements and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, August 2014, where applicable). Validation of this data set is limited to review of items detailed in this data review report. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria was available. Validation of this data set is limited to the items detailed in this report.

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INORGANIC DATA EVALUATION FOR MERCURY
BY COLD VAPOR AA SW-846 METHOD 7470A

TestAmerica, North Canton, OH; SDGs: 240-64160-1, 240-64160-2

"☑" denotes items were reviewed. See Data Validation Summary for additional comments.

A. QC DOCUMENTATION CRITERIA:

- ☑ Specific detection limits/quantitation limit (QLs) for target analyte
- ☑ Standard analyzed at the QL (70-130% Recovery)
- ☑ Passed single blind performance evaluation study within 12 months
- ☑ IDOC for analyst N. Bolton submitted previously

B. METHOD INFORMATION DOCUMENTATION:

- ☑ Mercury analyzed by requested method

C. TECHNICAL HOLDING TIME / PRESERVATION REQUIREMENTS:

- ☑ 28 day holding time
- ☑ Adjust pH <2 w/ HNO₃

D. INSTRUMENT CALIBRATION CRITERIA:

- ☑ 1 calibration blank and at least 3 standards, correlation coefficient >0.995
- ☑ Instrument calibrated for every analytical sequence for every method

E. INITIAL / CONTINUING CALIBRATION VERIFICATION CRITERIA:

- ☑ 10 sample frequency for CCV
- ☑ Recovery within 80-120%

F. BLANK SAMPLE CRITERIA:

- N/A Trip Blank (check only if analyzed)
- N/A Equipment Blank (check only if analyzed)
- ☑ Method/other laboratory blanks (check only if analyzed)
- ☑ Interference free

G. MATRIX SPIKE DUPLICATE (MSD) SAMPLE CRITERIA:

- ☑ One MSD or sample duplicate per batch of 20 samples
- ☑ RPD ≤20 between MS and MSD or sample and duplicate results
- ☑ Recovery 75-125% for MSD

H. MATRIX SPIKE (MS) SAMPLE CRITERIA:

- ☑ Recovery within 75-125% range
- ☑ One MS per batch of 20 samples
- ☑ MS added prior to digestion

I. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

- ☑ LCS for mercury
- ☑ Recovery within 80-120%
- ☑ Independent source for LCS

J. SAMPLE RESULTS CRITERIA:

- ☒ Results reported within instrument calibration range
- ☒ Results reported to laboratory detection limit (compliance wells)
- ☒ Results reported to laboratory quantitation limit (plume wells)

Draper Aden Associates conducted a limited data validation of the above noted data set using the data package provided by the analyzing laboratory. Data evaluation was conducted using SW-846 (Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, USEPA, SW-846, 3rd Edition-Final Update I, II/IIA, III, and subsequent updates) method requirements and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, August 2014, where applicable). Validation of this data set is limited to review of items detailed in this data review report. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria was available. Validation of this data set is limited to the items detailed in this report.

SW-846 METHOD 8260C VOLATILE ORGANICS DATA REVIEW SUMMARY

Draper Aden Associates performed a comprehensive manual review of the analytical results for the April 26-27, 2016 monitoring event at Hazardous Waste Management Unit 16 (HWMU 16) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia. Draper Aden Associates collected groundwater samples from monitoring wells 16C1, 16MW8, 16MW9, 16WC1A, 16WC1B, 16-2, 16-3, 16-5, 16WC2B, and 16Spring. Groundwater sample 16WDUP was submitted to the laboratory as a blind field duplicate for 16WC1A.

Samples 16C1, 16MW8, 16MW9, 16WC1A, and 16WC1B (compliance monitoring wells) were analyzed for 66 volatile organic target analytes and samples 16-2, 16-3, 16-5, 16WC2B, and 16Spring (plume wells) were analyzed for 19 volatile organic target analytes per USEPA SW-846 Method 8260C. The following information and attached table summarize the Method 8260C data validation results.

Draper Aden Associates sent samples to Eurofins Lancaster Laboratories Environmental (ELLE), of Lancaster, Pennsylvania. ELLE performed the SW-846 Method 8260C volatile analysis. ELLE is a VELAP accredited laboratory for the analytes, method and matrix as reported on the certificate of analysis. Hexachloroethane was also analyzed by SW-846 Method 8270D (semivolatile analysis) and reported by an alternate laboratory. ELLE submitted results to Draper Aden Associates in a final certificate of analysis, which included sample analytical results as well as relevant documentation to validate and verify the results (SDG: RAE61).

The evaluation of ELLE's compliance with Method 8260C and validation of the results were based on a review of the following items: QC deliverables package, QC history documentation, technical holding times and preservation requirements, instrument performance (tune) check, instrument calibration and calibration verification data, blank samples analyses, surrogate spike recoveries, matrix spike and matrix spike duplicate (MS/MSD) analyses, laboratory control sample (LCS) data, internal standards requirements, and/or target analyte identification and quantitation. A review of transcriptions from instrument data to sample summary sheets was performed. Calculation verifications were performed on ten percent of the data set, where applicable. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

ELLE received the samples on ice and in good condition, with custody seals intact. The chain of custody (COC) was appropriately signed and dated by field and laboratory personnel. Technical holding time and preservation criteria were met, except where noted below.

The original certificate of analysis was received on June 1, 2016. The certificate of analysis appeared complete in its presentation and the data were of acceptable quality. The certificates of analysis demonstrated the ability of the laboratory to achieve the quantitation limit (QL) and method detection limit/detection (MDL/DL) for each target analyte, unless noted below.

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QC deliverables package requirements were met. QC history documentation and instrument performance check criteria were met. Tuning, initial calibration, calibration verification, blanks, surrogates, MS/MSD, LCS and internal standards criteria were met, except where noted below. Sample results were verified and no transcription errors were observed.

Acrolein was analyzed using a sample aliquot adjusted to pH <2 SU. Acrolein was not reported as detected in any sample and sample results for this target analyte were validated and qualified "UJ" to note this QC discrepancy. Acrolein is not a target analyte for the plume well samples.

Acrylonitrile, methacrylonitrile, methyl methacrylate, naphthalene, tetrahydrofuran, trans-1,4-dichloro-2-butene, 1,2-dibromo-3-chloropropane, and 4-methyl-2-pentanone did not meet the continuing calibration verification (CV) standard percent difference/drift requirement ($\pm 20\%$). For those sample results not detected at or above the DL, results for were validated and qualified "UJ" due to the observed QC deficiency. For the sample results detected less above the DL, results were validated and qualified as "J" to note the result was considered estimated. The remaining CV standard criteria were met.

For sample 16C1, 16MW9, and 16WC1A, the initial results for diethyl ether exceeded the instrument calibration range. These samples were reanalyzed in dilution and diethyl ether results from the dilution analysis were reported for these samples.

Vinyl chloride was detected in 16MW9 and 16WC1A below the QL. A verification event was performed on June 16, 2016 to confirm or refute the detections. The verification results did not confirm the original detections and the verification results were reported as the final results.

Tetrahydrofuran was detected in 16MW8 and 16WC1A below the QL. A verification event was performed on June 16, 2016 to confirm or refute the detections (RAE66). The verification result did not confirm the original detection for 16MW8 and the verification result was reported as the final results. The verification result for 16WC1A did confirm the original detections and the original result was reported as the final result.

Laboratory analysis was performed using a 25 ml purge volume for the analytes except 2-propanol. 2-Propanol analysis was performed using a 5 ml purge volume.

Field duplicate/sample results for 16WC1A exhibited acceptable precision, where applicable. A trip blank was submitted and analyzed for each day of sampling.

For compliance well samples 16C1, 16MW8, 16MW9, 16WC1A, 16WDUP, and 16WC1B, results were reported to at or above the permit detection limit for this Appendix IX monitoring event. Where permit MDLs were lower than the laboratory's current MDL study, results were reported to the laboratory MDL. For the remaining samples (plume wells), target analytes were reported to at or above the permit QL.

Target analytes detected at or above the detection limit or QL and/or analytical data that required a data validation qualifier due to quality control deviations noted above are summarized on the attached table. The reported concentration for target analytes detected less than the QL should be considered estimated.

Results for samples unaffected by the data validation process, and not detected at or above the detection limit and/or QL, were validated and reported as “U.” No results were rejected based on the data validation criteria.

SW-846 METHOD 8260C (GC/MS) VOLATILE ORGANICS DATA VALIDATION

Comments: Volatile organic analysis uses a purge and trap system to remove volatile organic target analytes from a 5 or 25 ml water sample (SW-846 5030C). Target analytes are separated and quantified using a capillary column gas chromatograph (GC)/mass spectrometer (MS).

A. QC DELIVERABLES PACKAGE:

- | | | |
|----|---|---|
| 1. | Was the case narrative present/signed by a lab representative? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 2. | Was the Chain of Custody present/signed by a lab representative? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 3. | Were the sample results included for the sample locations? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 4. | Did the results correspond to the project specific analyte list? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 5. | Were the analyte QLs reported on sample summary sheets in agreement with the MDL study? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 6. | Were sample locations, analytes and QLs in agreement with the electronic deliverable (EDD)? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 7. | Currently VELAP accredited? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |

Comments: QC deliverables package requirements were met. The Appendix IX monitoring target analyte list was modified per the 2014 permit modification.

B. QC HISTORY DOCUMENTATION CRITERIA:

- | | | |
|----|--|---|
| 1. | Was an instrument specific MDL study provided which included DL and QL values for the target analytes? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 2. | Was the instrument calibration range provided? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 3. | Were the instrument specific check sample data provided for the target analytes? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |

Comments: Except as noted above, QC history documentation was provided and met criteria. The laboratory analyzed a MDL check sample at 1 µg/l (5 ml purge) and at 0.1 µg/l (25 ml purge) for most target analytes.

C. TECHNICAL HOLDING TIME AND PRESERVATION CRITERIA:

- | | | |
|----|--|---|
| 1. | Was the 14-day sample collection to analysis holding time met? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 2. | Were the samples received at ≤6°C, zero headspace? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 3. | Were the sample pHs adjusted to < 2 with HCl? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 4. | Were the sample pHs adjusted to 4-5 with HCl? (Acrolein only) | <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO |
| 5. | Were samples analyzed unpreserved (2-chloroethyl vinyl only)? | <input checked="" type="checkbox"/> NA <input type="checkbox"/> YES <input type="checkbox"/> NO |

Comments: Technical holding time and sample preservation criteria were met except where discussed in the data review summary above.

D. GC/MS INSTRUMENT PERFORMANCE (TUNING) CHECK CRITERIA:

1. Was the instrument performance check solution analyzed at the beginning of each 12-hour period prior to standards/samples analysis? ☒ YES ☐ NO
2. Was there documentation of the injection of 5-50 ng bromofluorobenzene (BFB)? ☒ YES ☐ NO
3. Were the ion abundance criteria met? ☒ YES ☐ NO
4. Were calibration, blank, and sample analyses performed within 12 hours of tuning? ☒ YES ☐ NO

Comments: Instrument performance check criteria were met.

E. INITIAL GC/MS CALIBRATION CRITERIA:

SW-846 Criteria:

1. Was the internal standard (IS) which was selected for target analyte RF calculation the IS which had the closest retention time? ☒ YES ☐ NO
2. Were the target analytes included in the ICAL? ☒ YES ☐ NO
3. Were any calibration levels removed from the curve that would negatively influence the data integrity? ☐ YES ☒ NO
4. Did the ICALs consist of a minimum of 5 calibration levels? ☒ YES ☐ NO
5. Was the lowest concentration calibration standard at or below the associated MCL? ☒ YES ☐ NO
6. Was the calibration curve developed using the same purge volume used for sample analysis? ☒ YES ☐ NO
7. Were 8260C minimum Relative Response Factor (RRF) criteria met?
Refer to Table 4- SW-846 Method 8260C (Rev3 2/06) for specific analyte RRFs ☒ YES ☐ NO
8. Was each target analyte %RSD $\leq 20\%$? ☒ YES ☐ NO
9. Was the correlation coefficient >0.99 for target analytes with $\geq 20\%$ RSD? (System recalibrated if $>10\%$ analytes fail above condition) ☒ NA ☐ YES ☐ NO
10. Was an initial calibration verification (ICV) standard analyzed immediately following the ICAL? ☒ YES ☐ NO
11. Was the recovery within 70-130%? ☒ YES ☐ NO
12. Was the ICV standard prepared from a different source from the ICAL ? ☒ YES ☐ NO

Method Validation Performance Criteria:

1. Did target analytes and surrogates that have RSDs $> 20\%$ have ≥ 0.99 correlation coefficient or coefficient of determination? ☒ NA ☐ YES ☐ NO
2. For linear regression curves, was the recalculated concentration of the low calibration point within $\pm 30\%$? ☒ NA ☐ YES ☐ NO
3. For quadratic curves, was a minimum six standards used? ☒ NA ☐ YES ☐ NO

Comments: Initial calibration criteria were met.

F. CALIBRATION VERIFICATION CRITERIA:

SW-846 Criteria:

1. Was a calibration verification analyzed at the beginning of each 12-hour period following the analysis of the instrument performance check and prior to analysis of the method blank and samples? The calibration verification may be part of the ICAL or analyzed independently during another 12-hour analysis period. ☒ YES ☐ NO
2. Were 8260C minimum Relative Response Factor (RRF) criteria met?
Refer to Table 4- SW-846 Method 8260C (Rev3 2/06) for specific analyte RRFs ☒ YES ☐ NO
3. Did the target analytes and system monitoring analytes (surrogates) have the % D within $\pm 20\%$? ☐ YES ☒ NO
If criteria not met for more than 20% of analytes in the initial calibration, then corrective action must be taken prior to the analysis of samples.
If "NO", list analytes that exceed these criteria: See comment

Draper Aden Associates Contractual Requirements:

1. Did the target analytes and system monitoring analytes (surrogates) have % Ds within $\pm 20\%$? ☐ YES ☒ NO

Comments: The CV standard criteria were met except as noted above.

G. BLANK CRITERIA:

1. Was a method blank analyzed after the calibration standards, prior to sample analysis, and once for every 12-hour period beginning with the injection of BFB? ☒ YES ☐ NO
2. Was a trip blank analyzed with this sample batch? ☒ YES ☐ NO
3. Were the trip blanks and method blanks interference free? ☒ YES ☐ NO
4. Was the level of blank contamination less than 5% of the regulatory limit associated with an analyte or less than 5% of the sample result for the same analyte, whichever is greater? ☒ NA ☐ YES ☐ NO
5. List target analytes detected in the blanks: *None*
6. Did any result exceed the calibration range? ☒ YES ☐ NO
7. Were one or more blanks analyzed following the high concentration sample to prevent cross contamination? ☐ YES ☒ NO

Comments: Blank criteria were met or no data qualification was needed.

H. SURROGATE CRITERIA:

SW-846 Criteria:

1. Were the following surrogates used? ☒ YES ☐ NO
 - dibromofluoromethane (77-114%)
 - 4-bromofluorobenzene (78-110%)
 - toluene-d8 (77-110%)
 - 1,2-dichloroethane-d4 (74-113%)
2. Were recoveries within specified ranges? ☒ YES ☐ NO

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If "NO", corrective action is required. Flagging of the data as estimated is not acceptable until corrective action has been attempted

3. Were samples with surrogates outside the QC window reanalyzed as required? ☒ NA ☐ YES ☐ NO

Comments: Surrogate criteria were met.

I. MATRIX SPIKE, MATRIX SPIKE DUPLICATE (MS/MSD) CRITERIA:
(MS/MSD Requirements - CLP Guidelines)

<u>Analyte</u>	<u>% R Water</u>	<u>% RPD Water</u>
1,1-dichloroethene	61-145	14
trichloroethene	71-120	14
benzene	76-127	11
toluene	76-125	13
chlorobenzene	75-130	13

1. Was a matrix spike and matrix spike duplicate (MS/MSD) analyzed per sample batch or every 20 samples, whichever may occur first? ☒ YES ☐ NO
2. Did the MS/MSD spike contain additional target analytes? ☒ YES ☐ NO
3. Was the MS/MSD analyzed on the specific project matrix? ☒ YES ☐ NO
4. MS/MSD acceptance range: 75-125%; 70-130% poor purge analytes; RPD \leq 20
5. Were analytes qualified as estimated due to MS/MSD criteria? ☐ YES ☒ NO
 - If yes, and the LCS for the analyte(s) recovered within control limits, matrix interference is suspected.

Comments: MS/MSD criteria were met.

J. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

1. Was a LCS included in the sample batch analysis? ☒ YES ☐ NO
2. Did the LCS contain the required target analytes? (No TICs) ☒ YES ☐ NO
3. List the LCS acceptance criteria: 80-120%; 70-130% for poor purge analytes
4. Were any analytes qualified as estimated? ☐ YES ☒ NO

Comments: LCS criteria were met.

K. INTERNAL STANDARDS (IS) CRITERIA:

1. Were the following internal standards (IS) used? ☒ YES ☐ NO
t-butyl alcohol-d10, fluorobenzene, chlorobenzene-d5, 1,4-dichlorobenzene-d4
2. Were IS areas within - 50% to + 100% of the last CV? ☒ YES ☐ NO
3. Were IS RTs within \pm 30 seconds of the last CV? ☒ YES ☐ NO
4. Were samples failing Items 2 and/or 3 above reanalyzed as required by the method? ☒ NA ☐ YES ☐ NO

Comments: Internal standards criteria were met.

L. TARGET ANALYTE IDENTIFICATION:

1. Were the RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT? ☒ YES ☐ NO
2. Check the sample spectra against the laboratory standard spectra to see that the following criteria were met:
 - * Characteristic ions maximize in the same scan or within one scan of each other
 - * Characteristic ions present in the standard spectra present in the sample spectra for analytes detected above the QL
 - * Relative intensities of the ions between the standard and sample spectra within $\pm 30\%$
3. Were the reported analytes confirmed? ☒ YES ☐ NO

Comments: Target analyte identification criteria were met. See attached table for detected analytes. Identification criteria were met.

M. TARGET ANALYTE QUANTITATION:

- * If the %RSD of an analyte was 20% or less, then the average relative response factor should have been used for quantitation.
- * If the %RSD of an analyte was greater than 20%, then the quantitation should have been based on a calibration curve using the first or higher order regression fit of the five calibration points. (6 calibration points for 2nd order).

1. List the detected analytes whose %RSD was $> 20\%$:
 - Was quantitation based on a linear regression fit? ☒ NA ☐ YES ☐ NO
2. Did the initial analysis of any sample have a concentration of an analyte which exceeded the initial calibration range? ☒ YES ☐ NO
-If so, was the sample reanalyzed at a higher dilution? ☒ YES ☐ NO
3. Were the analyte concentrations that were recorded on the raw sample quantitation reports accurately transferred to the sample summary sheets? ☒ YES ☐ NO
4. Were field sample duplicate RPDs < 20 where applicable? ☒ YES ☐ NO

Comments: Target analyte quantitation criteria were met, where applicable.

N. LIBRARY SEARCHES: Library searches were not requested with this data set.

O. CORRECTIVE ACTION TAKEN AND GENERAL COMMENTS:

The IDOC for analysts B. Kenyon and K. Legerlotz have been previously submitted by the laboratory. No other corrective action was taken.

REFERENCES:

Draper Aden Associates conducted data validation of the above noted data set using summary tables and instrument data provided by the analyzing laboratory. Data were evaluated in general accordance with SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates) and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, August 2014, where applicable). Where QA/QC criteria differed, the analytical method acceptance criteria were used. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria was available. Validation of this data set is limited to the items detailed in this report.

SW-846 METHOD 8270D SEMIVOLATILE DATA REVIEW SUMMARY

Draper Aden Associates performed a comprehensive manual review of the analytical results for the April 26-27, 2016 groundwater monitoring event at Hazardous Waste Management Unit 16 (HWMU 16) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia. Draper Aden Associates collected groundwater samples from monitoring wells 16C1, 16MW8, 16MW9, 16WC1A, 16WC1B, 16-2, 16-3, 16-5, 16WC2B, and 16Spring. Groundwater sample 16WDUP was submitted to the laboratory as a blind sample duplicate for 16WC1A.

Samples 16C1, 16MW8, 16MW9, 16WC1A, and 16WC1B (compliance monitoring wells) were analyzed for 114 semivolatile target analytes. Samples 16-2, 16-3, 16-5, 16WC2B, and 16Spring (plume wells) were analyzed for three semivolatile target analytes per USEPA SW-846 Method 8270D. The following information and attached table summarize the Method 8270D data validation results. Validation of other required methods are presented on separate reports.

Draper Aden Associates sent samples to Eurofins Lancaster Laboratories Environmental (ELLE), of Lancaster, Pennsylvania and to TestAmerica North Canton, (TestAmerica), of North Canton, Ohio. Each laboratory is a VELAP accredited laboratory for the analytes, method and matrix as reported on the certificates of analysis. Both laboratories submitted results to Draper Aden Associates in a final certificate of analysis that included sample analytical results as well as relevant QA/QC and method performance criteria documentation to verify and validate the results. TestAmerica analyzed hexachlorophene and sulfotep only (SDG: 240-64029-1). ELLE reported the remaining target analytes (SDG: RAE61).

The evaluation of each laboratory's compliance with Method 8270D and validation of the results was based on a review of the following items: QC deliverables package, QC history documentation, case narrative, technical holding time and preservation requirements, instrument performance (tune) check, instrument calibrations, blank analysis, surrogate spike recoveries, matrix spike and matrix spike duplicate (MS/MSD) analyses, laboratory control sample (LCS) data, and internal standard requirements. A review of the transcriptions from instrument data to sample summary sheets was performed. Calculation verifications were performed on ten percent of the data set, where applicable. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

Each laboratory received the samples on ice and in good condition, with custody seals intact. The chain of custody was appropriately signed and dated by field and laboratory personnel. Technical holding time and sample preservation were met.

The original certificates of analyses were received on or before June 1, 2016. Each certificate of analysis appeared complete and the data were of acceptable quality, except where noted below. The data set demonstrated the laboratory's ability to achieve the reported permit required quantitation limit (QL) or detection limit (DL), unless noted below.

QC history documentation, instrument performance check (tuning) criteria, calibration, blank, surrogate, MS/MSD, LCS and internal standard requirements were met, except where noted

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below. Sample results were reviewed for transcription errors from the instrument data to the laboratory report and no errors were noted. Deviations from specific QA/QC criteria that were identified during the data review process are summarized below.

The initial calibration (ICAL) for aramite and a,a-dimethylphenethylamine only incorporated one calibration standard instead of a minimum of five calibration standards as recommended by the method. These analytes were not detected at or above the detection limit or QL in any sample and sample results were validated and qualified as "UJ" to note that the detection limit and QL are estimated due to the observed QC deficiency.

4-Aminobiphenyl and 4-nitroquinoline-1-oxide exceeded the initial calibration verification standard percent difference/drift requirement ($\pm 30\%$). These analytes were not detected at or above the detection limit or permit QL in any sample and results for these analytes were validated and qualified "UJ" due to the observed QC deficiency. The remaining ICV standard criteria were met.

2,4-Dinitrophenol and 4-nitroquinoline-1-oxide exceeded the calibration verification standard percent difference/drift requirement ($\pm 20\%$). These analytes were not detected at or above the detection limit or permit QL in any sample and results for these analytes were validated and qualified "UJ" due to the observed QC deficiency. The remaining CV standard criteria were met.

The acid surrogates recovered low in sample 16WC1B. 16WC1B was re-extracted outside holding time criteria with similar surrogate recoveries. The original results were reported as the final results. No acid target analytes were detected at or above the detection limit or QL and results were validated and qualified as estimated "UJ" to note that the detection limit and QL are estimated due to the low surrogate recovery.

1,4-Naphthoquinone recovered low in the LCS. These analytes were not detected at or above the detection limit or permit QL in any sample. Results for these analytes were validated and qualified "UJ" due to the observed QC deficiency. The remaining LCS criteria were met or no data qualifications were needed.

Hexachlorophene was not included in the calibration standards and was reported by the laboratory as a tentatively identified compound (TIC). Hexachlorophene was not detected in any sample and hexachlorophene results were qualified as estimated, "UJ" to note that the detection limit and QL are estimated due to the observed QC deficiency.

Due to analytical limitations, 3-methylphenol and 4-methylphenol cannot be analyzed separately. 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The results reported for 3-methylphenol and 4-methylphenol represent the combined total for both compounds. N-Nitrosodiphenylamine decomposes during analysis to form diphenylamine. The results reported for diphenylamine represent the combined total for both compounds.

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For this Appendix IX monitoring event, results for compliance wells (16C1, 16MW8, 16MW9, 16WC1A and 16WC1B) were reported to at or above the detection limit. The detection limit was based on the current laboratory MDL study. For plume wells (16-2, 16-3, 16-5, 16WC2B, and 16Spring), results were reported to at or above the permit required QL. The sample results unaffected by the data validation process, and not detected at or above the detection limit and/or QL, were validated and reported as “U.” No results were rejected based on the data validation criteria.

SW-846 METHOD 8270D (GC/MS) SEMIVOLATILE ORGANIC DATA VALIDATION

Comments: *Semivolatile (a.k.a, base/neutral and acid extractables) analysis involves sample preparation using SW-846 Method 3510C. The semivolatile extracts are concentrated through evaporation. Target analytes are separated and quantified using a capillary column gas chromatograph (GC)/mass spectrometer (MS).*

A. QC DELIVERABLES PACKAGE:

- | | | |
|----|--|---|
| 1. | Was the case narrative present/signed by a lab representative? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 2. | Was the Chain of Custody present/signed by a lab representative? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 3. | Were the sample results included for the sample locations? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 4. | Did the data correspond to the project specific analyte list? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 5. | Were target analyte QLs reported on sample summary sheets in agreement with the instrument specific MDL study? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |

Comments: QC deliverables package criteria were met.

B. QC HISTORY DOCUMENTATION CRITERIA:

- | | | |
|----|--|---|
| 1. | Were instrument specific detection limits provided for the analytes? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 2. | Were the instrument specific QLs for target analytes provided? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 3. | Was calibration range specified for the target analytes? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |

Comments: QC history documentation criteria were met.

C. TECHNICAL HOLDING TIME AND PRESERVATION CRITERIA:

- | | | |
|----|---|---|
| 1. | Was the 7-day sample collection to extraction holding time met? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 2. | Was the 40-day extraction to analysis holding time met? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 3. | Were the samples received at $\leq 6^{\circ}\text{C}$? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |

Comments: The sample collection to extraction/analysis holding times and preservation criteria were met.

D. GC/MS INSTRUMENT PERFORMANCE CHECK CRITERIA:
(Tuning, Injection Port and Column Performance)

- | | | |
|----|---|---|
| 1. | Was analysis of the instrument performance check solution performed at the beginning of each 12-hour period of standard and/or sample analysis? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 2. | Was there documentation of the injection of 50 ng of DFTPP? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 3. | Were ion abundance criteria met? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 4. | Was the injection port inertness verified by analysis of 4,4'-DDT? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 5. | Was the degradation of DDT to DDE and DDD $<20\%$? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| | • If no, does associated data require qualification? | <input checked="" type="checkbox"/> NA <input type="checkbox"/> YES <input type="checkbox"/> NO |
| | • Was the injection port inertness check acceptable? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |

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6. Was column performance checked through the analysis of peak tailing (<2 tailing factor) of pentachlorophenol and benzidine? ☒ YES ☐ NO
- If no, does associated data require qualification? ☒ NA ☐ YES ☐ NO
 - Was column performance check acceptable? ☐ NA ☒ YES ☐ NO

Comments: Instrument performance check criteria were met. Laboratory tune criteria windows are within those specified by 8270D.

E. INITIAL GC/MS CALIBRATION CRITERIA:

SW-846 Criteria:

1. Were the initial calibrations (ICAL) and any directly associated blanks and samples analyzed within 12-hours of the associated instrument performance (tune) check? ☒ YES ☐ NO
2. Were quantitation ions, used and listed on data, randomly checked against primary quantitation ions as required by Method 8270D and the RFP? ☒ YES ☐ NO
3. Were target analytes included in the ICAL? ☒ YES ☐ NO
4. Did the ICAL consist of a minimum of 5 calibration levels? See comment
5. Was the lowest concentration calibration standard at or below the associated MCL, regulatory compliance, or action limit? ☒ YES ☐ NO
6. Were calibration standards dropped to meet calibration criteria? ☐ YES ☒ NO
7. Were 8270D minimum RRF criteria met?
Relative Response Factor-range (RRF 0.010-0.900) ☒ YES ☐ NO
**Refer to Table 4 of SW-846 Method 8270D (Rev5 7/14) for specific analyte RRFs*
8. Was each target analyte %RSD ≤ 20%? ☐ YES ☒ NO
9. Was the correlation coefficient or coefficient of determination >0.99 for target analytes with > 20% RSD? ☒ YES ☐ NO
**System recalibrated if >10% analytes fail above condition*
10. Was an initial calibration verification (ICV) standard analyzed immediately following the ICAL? ☒ YES ☐ NO
11. Was the recovery within 70-130%? ☐ YES ☒ NO
12. Was the ICV standard prepared from a different source from the ICAL ? ☒ YES ☐ NO

Method Validation Performance Criteria:

1. Did target analytes and surrogates that have RSDs > 20% have ≥0.99 correlation coefficient or coefficient of determination? ☒ YES ☐ NO
2. For linear regression curves, was the recalculated concentration of the low calibration point within ±30%? ☒ YES ☐ NO
3. For quadratic curves, was a minimum six standards used? ☒ NA ☐ YES ☐ NO

Comments: Initial calibration criteria were met except as noted in the summary above.

F. CALIBRATION VERIFICATION CRITERIA:

SW-846 Criteria:

1. Was a calibration verification analyzed at the beginning of each 12-hour period following the analysis of the instrument

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- performance check and prior to analysis of the method blank and samples? The calibration verification may be part of the ICAL or analyzed independently during another 12-hour analysis period. ☒ YES ☐ NO
2. Were 8260C minimum Relative Response Factor (RRF) criteria met?
Refer to Table 4- SW-846 Method 8260C (Rev3 2/06) for specific analyte RRFs ☒ YES ☐ NO
3. Did the target analytes and system monitoring analytes (surrogates) have the % D within $\pm 20\%$? ☐ YES ☒ NO
If criteria not met for more than 20% of analytes in the initial calibration, then corrective action must be taken prior to the analysis of samples.
If "NO", list analytes that exceed these criteria:

Draper Aden Associates Contractual Requirements:

1. Did the target analytes and system monitoring analytes (surrogates) have % Ds within $\pm 20\%$? ☐ YES ☒ NO

Comments: The CV standard criteria were met except as noted above.

G. BLANK CRITERIA:

1. Was a method/extraction blank analyzed on each GC/MS system used for sample analysis? ☒ YES ☐ NO
2. Was a trip blank analyzed with this sample batch? ☒ NA ☐ YES ☐ NO
3. Were the blank samples interference free? ☒ YES ☐ NO
4. Was the level of blank contamination > 5% of the MCL? ☒ NA ☐ YES ☐ NO
5. List target analytes detected in the blanks: *none*

Comments: Blank criteria were met.

H. SURROGATE CRITERIA:

1. Were the following surrogates used? ☒ YES ☐ NO
- | | | |
|---|-------------------------------|------------|
| - | phenol - d ₆ | (10%-94%) |
| - | 2-fluorophenol | (21%-100%) |
| - | 2,4,6-tribromophenol | (10%-123%) |
| - | nitrobenzene - d ₅ | (43%-108%) |
| - | 2-fluorobiphenyl | (43%-116%) |
| - | p-terphenyl - d ₁₄ | (33%-141%) |
2. Were recoveries within the specified ranges? ☐ YES ☒ NO
3. Were any two base/neutral or acid surrogates out of specification or did any one base/neutral or acid extractable surrogate have a recovery of less than 10%? ☒ YES ☐ NO
If yes, was a re-extraction and reanalysis performed to confirm that the non-compliance was due to sample matrix effects rather than laboratory deficiencies? ☒ YES ☐ NO

Comments: Surrogate recovery criteria were met unless noted above.

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I. MATRIX SPIKE/ MATRIX SPIKE DUPLICATE (MS/MSD) CRITERIA:
(MS/MSD Requirements - CLP Guidelines)

Analyte	% R Water	% RPD Water
Phenol	12-110	42
2-Chlorophenol	27-123	40
N-Nitroso-di-n-propylamine	41-116	38
4-Chloro-3-methylphenol	23-97	42
Acenaphthene	46-118	31
4-Nitrophenol	10-80	50
2,4-Dinitrotoluene	24-96	38
Pyrene	26-127	31

1. Was a MS/MSD analyzed per sample batch or every 20 samples, whichever may occur first? ☒ YES ☐ NO
2. Did the MS/MSD spike contain additional target analytes? ☒ YES ☐ NO
3. Was the MS/MSD analyzed on the specific project matrix? ☒ YES ☐ NO
4. List MS/MSD target analytes not within laboratory recovery ranges: *None*
5. Was a LCS analyzed to address failed MS spike criteria? ☒ NA ☐ YES ☐ NO
6. Did the LCS for the failed MS analyte(s) fall within the recovery ranges and was the problem identified as matrix interference? ☒ NA ☐ YES ☐ NO
7. Were analytes qualified as estimated due to MS/MSD criteria? ☐ YES ☒ NO
 - If yes, and the LCS for the analyte(s) recovered within control limits, matrix interference is suspected.

Comments: MS/MSD criteria were met or no data qualification was needed.

J. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

1. Was a LCS included in the sample analysis? ☒ YES ☐ NO
2. Did the LCS contain the required target analytes? ☒ YES ☐ NO
3. List the LCS target analytes and laboratory recovery range.
See semivolatile certificate of analysis.
4. Were any analytes qualified as estimated due to LCS criteria? ☒ YES ☐ NO

Comments: LCS criteria were met except as discussed in the review summary above.

K. INTERNAL STANDARDS CRITERIA:

1. Were the following internal standards (IS) used? ☒ YES ☐ NO
 - 1,4-Dichlorobenzene-d₄
 - Naphthalene-d₈
 - Acenaphthene-d₁₀
 - Phenanthrene-d₁₀
 - Chrysene-d₁₂
 - Perylene-d₁₂
2. Were IS areas within $\pm 50\%$ of last CV? ☒ YES ☐ NO
3. Were IS RTs within ± 30 seconds of last CV? ☒ YES ☐ NO

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Comments: Internal standard criteria were met.

L. TARGET ANALYTE IDENTIFICATION:

1. Were the RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT? ☒ NA ☐ YES ☐ NO
2. Check the sample spectra against the laboratory standard spectra to see that the following criteria were met: ☒ NA ☐ YES ☐ NO
 - * Did characteristic ions maximize in the same scan or within one scan of each other?
 - * Were the characteristic ions present in the standard spectra present in the sample spectra for analytes detected above the QL?
 - * Were the relative ion intensities between the standard and sample spectra within $\pm 30\%$?
3. Were the reported analytes confirmed? ☒ NA ☐ YES ☐ NO

Comments: Target analyte identification criteria were met. No target analytes were detected at or above the detection limit or permit QL (compliance samples) or the permit QL (plume samples).

M. TARGET ANALYTE QUANTITATION:

- * If the %RSD of an analyte was 20% or less, then the average relative response factor should have been used for quantitation.
 - * If the %RSD of an analyte was greater than 20%, then the quantitation should be based on a calibration curve using the first or higher order regression fit of the five calibration points (6 calibration points for 2nd order).
1. List the analytes detected above the QL whose %RSD was $>20\%$: *None*
 - a. Was quantitation based on a linear regression fit? ☒ NA ☐ YES ☐ NO
 - b. Was the curve forced through the origin? ☒ NA ☐ YES ☐ NO
 2. Did the initial analysis of any sample have a concentration of a target analyte that exceeded the initial calibration range? ☐ YES ☒ NO
-If so, was the sample reanalyzed at a higher dilution? ☒ NA ☐ YES ☐ NO
 3. Were the analyte concentrations that were recorded on the raw sample quantitation reports accurately transferred to the sample summary sheets? ☒ YES ☐ NO

Comments: Target analyte quantitation criteria were met.

N. LIBRARY SEARCHES: Library searches were not requested with this data set.

O. CORRECTIVE ACTION TAKEN AND GENERAL COMMENTS:

Comments: Analyst IDOC for C. Bachman was provided previously. No other corrective action was required.

SW-846 METHOD 9012B DATA REVIEW SUMMARY

Draper Aden Associates performed a comprehensive manual review of the analytical results for the April 26-27, 2016 monitoring event at Hazardous Waste Management Unit 16 (HWMU 16) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia. Draper Aden Associates collected the groundwater samples from monitoring wells 16C1, 16MW8, 16MW9, 16WC1A, and 16WC1B. Sample 16WDUP was submitted to the laboratory as a blind field sample duplicate for 16WC1A.

The samples were analyzed for cyanide by SW-846 Method 9012B. The following information and attached table summarize the data validation results. Validation of other required methods is presented on separate reports.

Draper Aden Associates sent samples to TestAmerica, North Canton (TestAmerica), of North Canton, Ohio. TestAmerica performed the Method 9012B analysis. The laboratory submitted results to Draper Aden Associates in a final certificate of analysis, which included sample analytical results as well as relevant documentation to validate and verify the results. The laboratory is a VELAP accredited laboratory for the above analyte, method, and matrix reported.

The evaluation of TestAmerica's compliance with the analytical methods and validation of results presented here are based upon a limited review of QA/QC information including holding times, preservation procedures and standards, blank samples analyses (method, calibration and other blanks), matrix spike/matrix spike duplicate (MS/MSD) or matrix spike/sample duplicate (MS/DUP), and laboratory control standard (LCS) results. A review of transcriptions from instrument data to sample summary sheets was performed. Calculation checks were performed on a minimum ten percent of the data set. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

TestAmerica received the samples in good condition with custody seals intact. Technical holding time and preservation criteria were met, unless noted below. The preparation method was incorrectly listed as 9010C instead of 9012B.

The original certificate of analysis was received on May 23, 2016. The certificate of analysis appeared complete in its presentation and the data were of acceptable quality. Documentation was provided to demonstrate the ability of the laboratory to achieve the reported project quantitation limit (QL) or detection limit (DL) for cyanide.

QC history documentation, holding time, sample preservation, instrument calibration and calibration verification criteria were met. Blank, MS/MSD, and LCS samples were analyzed as required and results were within control limits. The blanks were interference free, unless noted below.

Cyanide was detected below the QL in samples 16MW8, 16MW9, and 16WC1A. A verification event was performed June 16, 2016 to confirm or refute these detections. The

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verification samples were submitted to Eurofins Lancaster Laboratories Environmental (ELLE), of Lancaster, Pennsylvania (sdg: RAE66). The cyanide detections were refuted. The verification results did not confirm the original cyanide detections and the verification results were reported as the final results.

Field duplicate/sample results exhibited acceptable precision, where applicable.

For this Appendix IX monitoring event, cyanide results were reported to at or above the detection limit. Cyanide was not detected at or above the laboratory detection limit or permit defined QL in any sample and sample results for cyanide were validated and reported as "U." No results were rejected based on data validation criteria.

INORGANIC DATA EVALUATION FOR CYANIDE BY SW-846 METHOD 9012B

TestAmerica, North Canton, OH; SDG: 240-64160-1
ELLE, Lancaster, PA; SDG: RAE66 (verification event)
Preparation Method: 9012B

“☑” denotes items reviewed. See Data Validation Summary for additional comments.

A. QC DOCUMENTATION CRITERIA:

- ☑ Specific detection limit for target analyte
- ☑ Specific QLs for target analyte
- ☑ Passed single blind performance evaluation study within 12 months
- ☑ IDOC for analyst submitted previously

B. METHOD INFORMATION DOCUMENTATION:

- ☑ Cyanide analyzed by requested method

C. TECHNICAL HOLDING TIME / PRESERVATION REQUIREMENTS:

- ☑ 14 day holding time
- ☑ Cool $\leq 6^{\circ}$ C
- ☑ Adjust pH >12 w/ NaOH

D. INSTRUMENT CALIBRATION CRITERIA:

- ☑ 1 calibration blank and at least 3 standards; correlation coefficient ≥ 0.995

E. INITIAL / CONTINUING CALIBRATION VALIDATION CRITERIA:

- ☑ ICV, 10 sample frequency for CCV
- ☑ Distilled check standards (high/low) per batch of samples (90-110%)
- ☑ CCV Recovery within 85-115%

F. BLANK SAMPLE CRITERIA:

- ☑ Interference free
- ☑ ICB, then 10 sample frequency for CCB
- ☑ One preparation blank per sample batch

G. MATRIX SPIKE DUPLICATE (MSD) SAMPLE CRITERIA:

- ☑ One MSD or sample duplicate for every 20 samples
- ☑ RPD ≤ 20 between MS and MSD or sample and duplicate results
- ☑ Recovery 75-125% for MSD

H. MATRIX SPIKE (MS) SAMPLE CRITERIA:

- ☑ One MS sample for every 20 samples
- ☑ MS recovered within 75-125%
- ☑ Spike added prior to distillation

I. LABORATORY CONTROL SAMPLE (LCS) SAMPLE CRITERIA:

- ☒ One LCS sample for every 20 samples
- ☒ LCS recovered within 80-120%
- ☒ Spike added prior to distillation

J. SAMPLE RESULTS CRITERIA:

- ☒ Sample results reported within calibration range
- ☒ Sample results reported to the method detection limit

REFERENCES:

Draper Aden Associates conducted a limited data validation of the above noted data set using the data package provided by the analyzing laboratory. Data evaluation was conducted using SW-846 (Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, USEPA, SW-846, 3rd Edition-Final Update I, II/IIA, III, and subsequent updates) method requirements and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, August 2014, where applicable). Validation of this data set is limited to review of items detailed in this data review report. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria was available. Validation of this data set is limited to the items detailed in this report.

Radford Army Ammunition Plant (HWMU-16)
Second Quarter 2015 Annual Groundwater Monitoring Event
Draper Aden Associates Job Number: B03204-16
Page 5 of 5

LIMITATIONS:

Draper Aden Associates prepared this document (which may include drawings, specifications, reports, studies and attachments) in accordance with the agreement between Draper Aden Associates and BAE Systems, Ordnance Systems, Inc.

The standard of care for all professional engineering, environmental and surveying and related services performed or furnished by Draper Aden Associates under this Agreement are the care and skill ordinarily used by members of these professions practicing under similar circumstances at the same time and in the same locality. Draper Aden Associates makes no warranties, express or implied, under this Agreement in connection with Draper Aden Associates services.

Conclusions presented are based upon a review of available information, the results of our field studies, and/or professional judgment. To the best of our knowledge, information provided by others is true and accurate, unless otherwise noted. Draper Aden Associates liability, hereunder, shall be limited to amounts due Draper Aden Associates for services actually rendered, or reimbursable expenses actually incurred. Any reuse or modification of any of the aforementioned documents (whether hard copies or electronic transmittals) prepared by Draper Aden Associates without written verification or adaptation by Draper Aden Associates will be at the sole risk of the individual or entity utilizing said documents and such use is without the authorization of Draper Aden Associates. Draper Aden Associates shall have no legal liability resulting from any and all claims, damages, losses, and expenses, including attorney's fees arising out of the unauthorized reuse or modification of these documents. Client shall indemnify Draper Aden Associates from any claims arising out of unauthorized use or modification of the documents whether hard copy or electronic.



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Date:

Data Validation Summary

Second Quarter 2016 Groundwater Monitoring Event - Annual Monitoring under 40 CFR 264 Appendix IX For HWMU-16; and Corrective Action Annual Groundwater Monitoring Event for HWMU-5

Final Hazardous Waste Post-Closure Care Permit for Hazardous Waste Management Units 5 and 16 Radford Facility Army Ammunition Plant, Radford, Virginia EPA ID# VA1210020730

Draper Aden Associates performed data validation of the analytical results for the Second Quarter 2016 semiannual groundwater monitoring event at Hazardous Waste Management Units (HWMUs) 5 and 16 located at the Radford Army Ammunition Plant (RFAAP), in Radford, Virginia. The monitoring event also served as annual monitoring under 40 CFR 264 Appendix IX for HWMU-16. As well, the event served as the corrective action semiannual monitoring for HWMU-5 conducted in accordance with the *Final Hazardous Waste Post-Closure Care Permit for HWMU 5 and 16 (reissued August 16, 2014)*. The following information and attached tables summarize the data validation results.

Sample Collection/Analytical Services

Draper Aden Associates, of Blacksburg, Virginia, collected groundwater samples during April 25 -27, 2016.

Samples were submitted for laboratory analysis to TestAmerica, North Canton, (TestAmerica), of North Canton Ohio; and to Eurofins Lancaster Laboratories Environmental, (ELLE) of Lancaster, Pennsylvania. The previous laboratory, CompuChem, a Division of Liberty Analytical (CompuChem), of Cary, North Carolina, went out of business in January 2016 and samples were submitted to TestAmerica and ELLE.

Receipt of Monitoring Event Data

On behalf of BAE SYSTEMS, Ordnance Systems, Inc., each laboratory submitted results to Draper Aden Associates in a final certificate of analysis which included analytical results as well as relevant documentation to verify and validate the results. The final certificate of analysis for the event was received on June 2, 2016.

Verification Events

Verification sampling was required and conducted on June 16, 2016, at HWMU-16 to confirm or refute detections of concern reported for the Second Quarter 2016 monitoring event. Results of the verification event are summarized below and reported in the permit required semiannual groundwater monitoring report. The final certificate of analysis for the event was received on July 7, 2016.

HWMU-16:

- Cobalt was initially detected in well 16MW9 above the QL. The sample was collected in duplicate and as a split sample. Two cobalt results were detected above the GPS and two cobalt results were detected below the GPS. VDEQ requested the addition of cobalt to the on-going alternate source evaluation for cobalt at HWMU16.
- Cyanide was initially detected in wells 16MW8, 16MW9, and 16WC1A below the QL. Vinyl chloride was initially detected in wells 16MW9 and 16WC1A below the QL. The verification results did not confirm the original detections and the verification results were reported as the final results. No further action was required.
- Tetrahydrofuran was initially detected in wells 16MW8 and 16WC1A below the QL. The verification result did not confirm the original detection for 16MW8 and the verification result was reported as the final result. The verification result for 16WC1A did confirm the original detection and the original result was reported as the final result. This analyte will be added to the compliance monitoring list for the unit and a Class 1 permit modification is forthcoming.

Summary of Monitoring Event Data by Analytical Method

Certificates of analysis were received from each laboratory in the following sample delivery groups (SDGs):

Summary of Required Analytical Methods and SDGs

Analytical Method	Hazardous Waste Management Unit	
	HWMU-5	HWMU-16
<i>8260C Volatiles</i>	RAE59	RAE61 RAE66 (verification)
<i>8270D Semivolatiles</i>	RAE59 240-64029-1 (p-nitroaniline)	RAE61 240-64160-1
<i>6020A/6010C Inorganics</i>	RAE60	240-64160-1, 240-64160-2 240-66154-1;RAE 65,67 (verification)
<i>9012B Cyanide</i>	Not required	240-64160-1 RAE66 (verification)
<i>7470A Mercury</i>	RAE60	240-64160-1 240-64160-2

Each final certificate of analysis was complete in its presentation and the data were of acceptable quality. Chains of custody and permit required target analytes are provided in each SDG.

Data Analysis and Validation

Samples were analyzed by *SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates)*. Data were evaluated in general accordance with:

- *Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates)*
- *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, August 2014, where applicable.*
- *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, August 2014, where applicable.*

Draper Aden Associates, of Blacksburg, Virginia, performed a comprehensive data validation, including recalculation of 10% of the data, where noted. For each HWMU, data validation reports and a summary table of data validation results are provided as an attachment (Appendix A – data validation summary tables, Appendix B – data validation reports).

Reporting of Results

For HWMU-16, compliance well results were reported to at or above the detection limit for the target analytes (constituents) listed in Appendix IX to 40 CFR Part 264 as presented in Appendix I of Attachment 1 of the Final Post-Closure Care Permit. The 8270D target analyte detection limits vary slightly from the permit required detection limit; however, no corrective action was needed. Results reported between the detection limit and quantitation limit should be considered estimated concentrations. Plume well results were reported to at or above the permit quantitation limit for the constituents listed in the semiannual compliance monitoring lists (Attachment 3 Appendix E).

Additionally, for HWMU-16, a footnote presented in Appendix G of Permit Attachment 3 of the August 16, 2014 reissuance of the Permit indicates that verification is required for constituents detected at concentrations less than the QL if their associated GPSs are equal to the QL and are greater than the applicable risk-based concentrations (i.e., ACL or RSL). In these instances, verification must be conducted using an alternate low-level analytical method in order to confirm or refute the observed initial detections if the QL achievable by that method is less than, or equal to, the ACL or RSL for the subject constituent. If a concentration greater than the low-level analytical method QL is observed, then the GPS for that constituent will be updated, if warranted. During Second Quarter 2016, no constituents with GPSs equal to their respective QLs and greater than the applicable risk-based concentrations were detected.

For HWMU-5, results were reported to at or above the permit detection limit for the target analytes (constituents) listed in Appendix J to Permit Attachment 2 and Appendix K to Permit Attachment 2 of Module VI-Groundwater Corrective Action & Monitoring Program for Unit-5, with the exception of Methods 8260C and 8270D target analytes. Select target analyte detection limits based on current laboratory method detection limit studies varied slightly from the detection limit listed in the permit; however, no corrective action was needed. Results reported between the detection limit and quantitation limit should be considered estimated concentrations.

The USEPA periodically updates the Regional Screening Levels (RSLs) (formerly known as RBCs). As stated in section VI.E.3 of Module IV of the Permit, "The Permittee shall use the most up-to-date USEPA MCL, the Department ACL, or EPA Region 3 RBC as the GPS. If USEPA implements any changes to MCLs or RBCs, the GPS defined by that MCL or RBC will be updated to reflect the most current value established by USEPA." At the time of the Second Quarter 2016 groundwater monitoring event, the May 2016 USEPA Region 3 RSL table reflected the most current value. The USEPA RSL for one constituent, diethyl ether, listed in Appendix K to Attachment 2 was updated from 7,300 µg/l to 3,900 µg/l; therefore, the GPS comparison value for diethyl ether listed in Appendix A-2 of this report is 3,900 µg/l. Diethyl ether is the only constituent listed in Appendix K to Attachment 2 whose GPS is based on an EPA RSL that was updated in 2016. Diethyl ether was detected below the quantitation limit (12 µg/l) at estimated values of 1.6 ug/l and 3.6 ug/l and 4.8 ug/l at wells 5WC21, 5WC22 and 5WC23, respectively, which are below the GPS listed Appendix K to Attachment 2 of the permit and the May 2016 USEPA Region 3 RSL of 3,900 µg/l. Diethyl ether was not detected in any other wells comprising the CA groundwater monitoring network.



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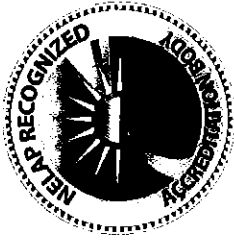
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8/3/16

Date:



**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF GENERAL SERVICES
DIVISION OF CONSOLIDATED LABORATORY SERVICES**



Certifies that

**VA Laboratory ID#: 460182
Eurofins Lancaster Laboratories Environmental, LLC**

**2425 New Holland Pike
Lancaster, PA 17601**

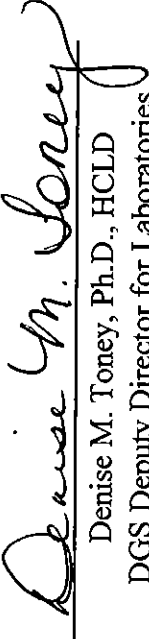
**Owner: EUROFINS SCIENTIFIC
Responsible Official: DUANE LUCKENBILL**

**Having met the requirements of 1 VAC 30-46
and the National Environmental Laboratory Accreditation Conference 2003 Standard
is hereby approved as an
Accredited Laboratory**

As more fully described in the attached Scope of Accreditation

**Effective Date: August 21, 2015
Expiration Date: June 14, 2016
Certificate # 7991**

Continued accreditation status depends on successful ongoing participation in the program.
Certificate to be conspicuously displayed at the laboratory.
Not valid unless accompanied by a valid Virginia Environmental Laboratory Accreditation Program (VELAP)
Scope of Accreditation.
Customers are urged to verify the laboratory's current accreditation status.
Certificate Not Transferable


Denise M. Toney, Ph.D., HCLD
DGS Deputy Director for Laboratories



Commonwealth of Virginia
Department of General Services
Division of Consolidated Laboratory Services



Scope of Accreditation

VELAP Certificate No.: 7991

Eurofins Lancaster Laboratories Environmental, LLC

2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182

Effective Date: August 21, 2015

Expiration Date: June 14, 2016

AIR

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 18	TOTAL GASEOUS ORGANIC COMPOUNDS	LA DEQ	EPA 25	TOTAL GASEOUS NONMETHANE ORGANIC COMPOUNDS (TGNMO)	LA DEQ
EPA TO-14A 2nd Ed.	1,1,1-TRICHLOROETHANE	LA DEQ	EPA TO-14A 2nd Ed.	1,1,2,2-TETRACHLOROETHANE	LA DEQ
EPA TO-14A 2nd Ed.	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE (FREON 113)	LA DEQ	EPA TO-14A 2nd Ed.	1,1,2-TRICHLOROETHANE	LA DEQ
EPA TO-14A 2nd Ed.	1,1-DICHLOROETHANE	LA DEQ	EPA TO-14A 2nd Ed.	1,1-DICHLOROETHYLENE	LA DEQ
EPA TO-14A 2nd Ed.	1,2,4-TRICHLOROBENZENE	LA DEQ	EPA TO-14A 2nd Ed.	1,2,4-TRIMETHYLBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	LA DEQ	EPA TO-14A 2nd Ed.	1,2-DICHLOROBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	LA DEQ	EPA TO-14A 2nd Ed.	1,2-DICHLOROPROPANE	LA DEQ
EPA TO-14A 2nd Ed.	1,3,5-TRIMETHYLBENZENE	LA DEQ	EPA TO-14A 2nd Ed.	1,3-DICHLOROBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	1,4-DICHLOROBENZENE	LA DEQ	EPA TO-14A 2nd Ed.	2-BUTANONE (METHYL ETHYL KETONE, MEK)	LA DEQ
EPA TO-14A 2nd Ed.	BENZENE	LA DEQ	EPA TO-14A 2nd Ed.	BROMOFORM	LA DEQ
EPA TO-14A 2nd Ed.	CARBON TETRACHLORIDE	LA DEQ	EPA TO-14A 2nd Ed.	CHLOROBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	CHLOROETHANE (ETHYL CHLORIDE)	LA DEQ	EPA TO-14A 2nd Ed.	CHLOROFORM	LA DEQ
EPA TO-14A 2nd Ed.	CIS-1,2-DICHLOROETHYLENE	LA DEQ	EPA TO-14A 2nd Ed.	CIS-1,3-DICHLOROPROPENE	LA DEQ
EPA TO-14A 2nd Ed.	ETHYLBENZENE	LA DEQ	EPA TO-14A 2nd Ed.	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	LA DEQ
EPA TO-14A 2nd Ed.	M+P-XYLENE	LA DEQ	EPA TO-14A 2nd Ed.	METHYL BROMIDE (BROMOMETHANE)	LA DEQ
EPA TO-14A 2nd Ed.	METHYL CHLORIDE (CHLOROMETHANE)	LA DEQ	EPA TO-14A 2nd Ed.	METHYLENE CHLORIDE (DICHLOROMETHANE)	LA DEQ
EPA TO-14A 2nd Ed.	O-XYLENE	LA DEQ	EPA TO-14A 2nd Ed.	STYRENE	LA DEQ
EPA TO-14A 2nd Ed.	TETRACHLOROETHENE (PERCHLOROETHENE)	LA DEQ	EPA TO-14A 2nd Ed.	TOLUENE	LA DEQ
EPA TO-14A 2nd Ed.	TRANS-1,2-DICHLOROETHENE	LA DEQ	EPA TO-14A 2nd Ed.	TRANS-1,3-DICHLOROPROPENE	LA DEQ
EPA TO-14A 2nd Ed.	TRICHLOROETHENE (TRICHLOROETHYLENE)	LA DEQ	EPA TO-14A 2nd Ed.	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	LA DEQ
EPA TO-14A 2nd Ed.	VINYL CHLORIDE	LA DEQ	EPA TO-14A 2nd Ed. - EXTENDED	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	LA DEQ
EPA TO-14A 2nd Ed. - EXTENDED	BROMODICHLOROMETHANE	LA DEQ	EPA TO-14A 2nd Ed. - EXTENDED	CARBON DISULFIDE	LA DEQ
EPA TO-14A 2nd Ed. - EXTENDED	METHYL TERT-BUTYL ETHER (MTBE)	LA DEQ	EPA TO-14A 2nd Ed. - EXTENDED	XYLENE (TOTAL)	LA DEQ
EPA TO-15 2nd Ed.	1,1,1-TRICHLOROETHANE	LA DEQ	EPA TO-15 2nd Ed.	1,1,2,2-TETRACHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE (FREON 113)	LA DEQ	EPA TO-15 2nd Ed.	1,1,2-TRICHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	1,1-DICHLOROETHANE	LA DEQ	EPA TO-15 2nd Ed.	1,1-DICHLOROETHYLENE	LA DEQ
EPA TO-15 2nd Ed.	1,2,4-TRICHLOROBENZENE	LA DEQ	EPA TO-15 2nd Ed.	1,2,4-TRIMETHYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	LA DEQ	EPA TO-15 2nd Ed.	1,2-DICHLOROBENZENE	LA DEQ



Commonwealth of Virginia
Department of General Services
Division of Consolidated Laboratory Services



Scope of Accreditation

VELAP Certificate No.: 7991

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Virginia Laboratory ID: 460182
Effective Date: August 21, 2015
Expiration Date: June 14, 2016

AIR

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA TO-15 2nd Ed.	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	LA DEQ	EPA TO-15 2nd Ed.	1,2-DICHLOROPROPANE	LA DEQ
EPA TO-15 2nd Ed.	1,3,5-TRIMETHYLBENZENE	LA DEQ	EPA TO-15 2nd Ed.	1,3-BUTADIENE	LA DEQ
EPA TO-15 2nd Ed.	1,3-DICHLOROBENZENE	LA DEQ	EPA TO-15 2nd Ed.	1,4-DICHLOROBENZENE	LA DEQ
EPA TO-15 2nd Ed.	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	LA DEQ	EPA TO-15 2nd Ed.	2-BUTANONE (METHYL ETHYL KETONE, MEK)	LA DEQ
EPA TO-15 2nd Ed.	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	LA DEQ	EPA TO-15 2nd Ed.	ACETONITRILE	LA DEQ
EPA TO-15 2nd Ed.	ACROLEIN (PROPENAL)	LA DEQ	EPA TO-15 2nd Ed.	ACRYLONITRILE	LA DEQ
EPA TO-15 2nd Ed.	ALLYL CHLORIDE (3-CHLOROPROPENE)	LA DEQ	EPA TO-15 2nd Ed.	BENZENE	LA DEQ
EPA TO-15 2nd Ed.	BROMODICHLOROMETHANE	LA DEQ	EPA TO-15 2nd Ed.	BROMOFORM	LA DEQ
EPA TO-15 2nd Ed.	CARBON DISULFIDE	LA DEQ	EPA TO-15 2nd Ed.	CARBON TETRACHLORIDE	LA DEQ
EPA TO-15 2nd Ed.	CHLOROBENZENE	LA DEQ	EPA TO-15 2nd Ed.	CHLOROETHANE (ETHYL CHLORIDE)	LA DEQ
EPA TO-15 2nd Ed.	CHLOROFORM	LA DEQ	EPA TO-15 2nd Ed.	CIS-1,2-DICHLOROETHYLENE	LA DEQ
EPA TO-15 2nd Ed.	CIS-1,3-DICHLOROPROPENE	LA DEQ	EPA TO-15 2nd Ed.	CYCLOHEXANE	LA DEQ
EPA TO-15 2nd Ed.	ETHYL ACRYLATE	LA DEQ	EPA TO-15 2nd Ed.	ETHYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	LA DEQ	EPA TO-15 2nd Ed.	HEXACHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	IODOMETHANE (METHYL IODIDE)	LA DEQ	EPA TO-15 2nd Ed.	ISOPROPYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	M+P-XYLENE	LA DEQ	EPA TO-15 2nd Ed.	METHYL BROMIDE (BROMOMETHANE)	LA DEQ
EPA TO-15 2nd Ed.	METHYL CHLORIDE (CHLOROMETHANE)	LA DEQ	EPA TO-15 2nd Ed.	METHYL METHACRYLATE	LA DEQ
EPA TO-15 2nd Ed.	METHYL TERT-BUTYL ETHER (MTBE)	LA DEQ	EPA TO-15 2nd Ed.	METHYLENE CHLORIDE (DICHLOROMETHANE)	LA DEQ
EPA TO-15 2nd Ed.	O-XYLENE	LA DEQ	EPA TO-15 2nd Ed.	PROPYLENE	LA DEQ
EPA TO-15 2nd Ed.	STYRENE	LA DEQ	EPA TO-15 2nd Ed.	TETRACHLOROETHENE (PERCHLOROETHENE)	LA DEQ
EPA TO-15 2nd Ed.	TOLUENE	LA DEQ	EPA TO-15 2nd Ed.	TRANS-1,2-DICHLOROETHENE	LA DEQ
EPA TO-15 2nd Ed.	TRANS-1,3-DICHLOROPROPENE	LA DEQ	EPA TO-15 2nd Ed.	TRICHLOROETHENE (TRICHLOROETHYLENE)	LA DEQ
EPA TO-15 2nd Ed.	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	LA DEQ	EPA TO-15 2nd Ed.	VINYL ACETATE	LA DEQ
EPA TO-15 2nd Ed.	VINYL CHLORIDE	LA DEQ	EPA TO-15 2nd Ed.	XYLENE (TOTAL)	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	2-CHLOROTOLUENE	LA DEQ	EPA TO-15 2nd Ed. - EXTENDED	2-HEXANONE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	4-ETHYLTOLUENE	LA DEQ	EPA TO-15 2nd Ed. - EXTENDED	ACETONE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	CHLORODIFLUOROMETHANE (FREON-22)	LA DEQ	EPA TO-15 2nd Ed. - EXTENDED	NAPHTHALENE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	TERT-BUTYL ALCOHOL	LA DEQ			



Commonwealth of Virginia
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Scope of Accreditation

VELAP Certificate No.: 7991

Eurofins Lancaster Laboratories Environmental, LLC
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Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: August 21, 2015
Expiration Date: June 14, 2016

DRINKING WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 200.7 REV 4.4	ALUMINUM	PA	EPA 200.7 REV 4.4	BARIUM	PA
EPA 200.7 REV 4.4	BERYLLIUM	PA	EPA 200.7 REV 4.4	CADMIUM	PA
EPA 200.7 REV 4.4	CALCIUM	PA	EPA 200.7 REV 4.4	CHROMIUM	PA
EPA 200.7 REV 4.4	COPPER	PA	EPA 200.7 REV 4.4	IRON	PA
EPA 200.7 REV 4.4	MAGNESIUM	PA	EPA 200.7 REV 4.4	MANGANESE	PA
EPA 200.7 REV 4.4	NICKEL	PA	EPA 200.7 REV 4.4	SILVER	PA
EPA 200.7 REV 4.4	SODIUM	PA	EPA 200.7 REV 4.4	ZINC	PA
EPA 200.8 REV 5.4	ANTIMONY	PA	EPA 200.8 REV 5.4	ARSENIC	PA
EPA 200.8 REV 5.4	BERYLLIUM	PA	EPA 200.8 REV 5.4	CADMIUM	PA
EPA 200.8 REV 5.4	CHROMIUM	PA	EPA 200.8 REV 5.4	COPPER	PA
EPA 200.8 REV 5.4	LEAD	PA	EPA 200.8 REV 5.4	NICKEL	PA
EPA 200.8 REV 5.4	SELENIUM	PA	EPA 200.8 REV 5.4	THALLIUM	PA
EPA 245.1 REV 3	MERCURY	PA	EPA 300.0 REV 2.1	CHLORIDE	PA
EPA 300.0 REV 2.1	FLUORIDE	PA	EPA 300.0 REV 2.1	NITRATE AS N	PA
EPA 300.0 REV 2.1	NITRITE AS N	PA	EPA 300.0 REV 2.1	SULFATE	PA
EPA 335.4 REV 1.0	CYANIDE	PA	EPA 353.2 REV 2	NITRATE AS N	PA
EPA 353.2 REV 2	NITRATE/NITRITE	PA	EPA 353.2 REV 2	NITRITE AS N	PA
EPA 504.1 REV 1.1	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA	EPA 504.1 REV 1.1	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 507 REV 2.1	ALACHLOR	PA	EPA 507 REV 2.1	ATRAZINE	PA
EPA 507 REV 2.1	SIMAZINE	PA	EPA 515.1 REV 4	2,4-D	PA
EPA 515.1 REV 4	DALAPON	PA	EPA 515.1 REV 4	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA
EPA 515.1 REV 4	PENTACHLOROPHENOL	PA	EPA 515.1 REV 4	PICLORAM	PA
EPA 515.1 REV 4	SILVEX (2,4,5-TP)	PA	EPA 524.2 REV 4.1	1,1,1-TRICHLOROETHANE	PA
EPA 524.2 REV 4.1	1,1,2-TRICHLOROETHANE	PA	EPA 524.2 REV 4.1	1,1-DICHLOROETHYLENE	PA
EPA 524.2 REV 4.1	1,2,4-TRICHLOROBENZENE	PA	EPA 524.2 REV 4.1	1,2-DICHLOROBENZENE	PA
EPA 524.2 REV 4.1	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA	EPA 524.2 REV 4.1	1,2-DICHLOROPROPANE	PA
EPA 524.2 REV 4.1	1,4-DICHLOROBENZENE	PA	EPA 524.2 REV 4.1	BENZENE	PA
EPA 524.2 REV 4.1	BROMODICHLOROMETHANE	PA	EPA 524.2 REV 4.1	BROMOFORM	PA
EPA 524.2 REV 4.1	CARBON TETRACHLORIDE	PA	EPA 524.2 REV 4.1	CHLOROBENZENE	PA
EPA 524.2 REV 4.1	CHLORODIBROMOMETHANE	PA	EPA 524.2 REV 4.1	CHLOROFORM	PA
EPA 524.2 REV 4.1	CIS-1,2-DICHLOROETHYLENE	PA	EPA 524.2 REV 4.1	ETHYLBENZENE	PA
EPA 524.2 REV 4.1	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA	EPA 524.2 REV 4.1	STYRENE	PA
EPA 524.2 REV 4.1	TETRACHLOROETHENE (PERCHLOROETHENE)	PA	EPA 524.2 REV 4.1	TOLUENE	PA
EPA 524.2 REV 4.1	TOTAL TRIHALOMETHANES	PA	EPA 524.2 REV 4.1	TRANS-1,2-DICHLOROETHENE	PA
EPA 524.2 REV 4.1	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA	EPA 524.2 REV 4.1	VINYL CHLORIDE	PA

This Scope of Accreditation must accompany the Certificate issued by Virginia DCLS with the same Certificate Number indicated above.



Commonwealth of Virginia
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Eurofins Lancaster Laboratories Environmental, LLC

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Virginia Laboratory ID: 460182

Effective Date: August 21, 2015

Expiration Date: June 14, 2016

DRINKING WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 524.2 REV 4.1	XYLENE (TOTAL)	PA	EPA 525.2 REV 2	ALACHLOR	PA
EPA 525.2 REV 2	ATRAZINE	PA	EPA 525.2 REV 2	BENZO(A)PYRENE	PA
EPA 525.2 REV 2	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA	EPA 525.2 REV 2	BIS(2-ETHYLHEXYL)ADIPATE (DI(2-ETHYLHEXYL)ADIPATE)	PA
EPA 525.2 REV 2	ENDRIN	PA	EPA 525.2 REV 2	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 525.2 REV 2	HEPTACHLOR	PA	EPA 525.2 REV 2	HEPTACHLOR EPOXIDE	PA
EPA 525.2 REV 2	HEXACHLOROBENZENE	PA	EPA 525.2 REV 2	HEXACHLOROCYCLOPENTADIENE	PA
EPA 525.2 REV 2	METHOXYCHLOR	PA	EPA 525.2 REV 2	SIMAZINE	PA
EPA 531.1 REV 3.1	CARBOFURAN (FURADEN)	PA	EPA 531.1 REV 3.1	OXAMYL	PA
SM 2130 B-2001	TURBIDITY	PA	SM 2320 B-1997	ALKALINITY AS CaCO ₃	PA
SM 2510 B-1997	CONDUCTIVITY	PA	SM 2540 C-1997	RESIDUE-FILTERABLE (TDS)	PA
SM 4500-F ⁻ C-1997	FLUORIDE	PA	SM 4500-H ⁺ B-2000	PH	PA
SM 4500-P E-1999	ORTHOPHOSPHATE AS P	PA	SM 5540 C-2000	SURFACTANTS - MBAS	PA
SM 9215 B-1994	HETEROTROPHIC PLATE COUNT	PA	SM 9223 COLILERT P/A	ESCHERICHIA COLI	PA
SM 9223 COLILERT P/A	TOTAL COLIFORMS	PA			

NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 1010	FLASHPOINT	PA	EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	PA
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	PA	EPA 160.4	RESIDUE-VOLATILE	PA
EPA 1613 B	1,2,3,4,6,7,8,9-OCTACHLORODIBENZ O-P-DIOXIN (OCDD)	PA	EPA 1613 B	1,2,3,4,6,7,8,9-OCTACHLORODIBENZ OFURAN (OCDF)	PA
EPA 1613 B	1,2,3,4,6,7,8-HEPTACHLORODIBENZ O-P-DIOXIN (1,2,3,4,6,7,8-HPCDD)	PA	EPA 1613 B	1,2,3,4,6,7,8-HEPTACHLORODIBENZ OFURAN (1,2,3,4,6,7,8-HPCDF)	PA
EPA 1613 B	1,2,3,4,7,8,9-HEPTACHLORODIBENZ OFURAN (1,2,3,4,7,8,9-HPCDF)	PA	EPA 1613 B	1,2,3,4,7,8-HEXACHLORODIBENZO-P -DIOXIN (1,2,3,4,7,8-HXCDD)	PA
EPA 1613 B	1,2,3,4,7,8-HEXACHLORODIBENZOF URAN (1,2,3,4,7,8-HXCDF)	PA	EPA 1613 B	1,2,3,6,7,8-HEXACHLORODIBENZO-P -DIOXIN (1,2,3,6,7,8-HXCDD)	PA
EPA 1613 B	1,2,3,6,7,8-HEXACHLORODIBENZOF URAN (1,2,3,6,7,8-HXCDF)	PA	EPA 1613 B	1,2,3,7,8,9-HEXACHLORODIBENZO-P -DIOXIN (1,2,3,7,8,9-HXCDD)	PA
EPA 1613 B	1,2,3,7,8,9-HEXACHLORODIBENZOF URAN (1,2,3,7,8,9-HXCDF)	PA	EPA 1613 B	1,2,3,7,8-PENTACHLORODIBENZO-P -DIOXIN (1,2,3,7,8-PCDD)	PA
EPA 1613 B	1,2,3,7,8-PENTACHLORODIBENZOF URAN (1,2,3,7,8-PCDF)	PA	EPA 1613 B	2,3,4,6,7,8-HEXACHLORODIBENZOF URAN (2,3,4,6,7,8-HXCDF)	PA
EPA 1613 B	2,3,4,7,8-PENTACHLORODIBENZOF URAN	PA	EPA 1613 B	2,3,7,8-TETRACHLORODIBENZO- P-DIOXIN (2,3,7,8-TCDD)	PA
EPA 1613 B	2,3,7,8-TETRACHLORODIBENZOFUR AN (2,3,7,8-TCDF)	PA	EPA 1631 E	MERCURY	PA
EPA 1664 A	OIL AND GREASE (AS HEM)	PA	EPA 1664 A	TOTAL PETROLEUM HYDROCARBONS (TPH) (AS NONPOLAR MATERIAL, SGT-HEM)	PA



Commonwealth of Virginia
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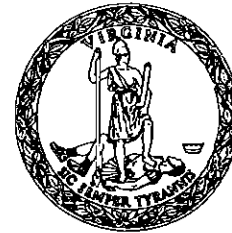
Virginia Laboratory ID: 460182
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NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 1666 A	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA	EPA 1666 A	DHISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 1666 A	ETHYL ACETATE	PA	EPA 1666 A	ISOBUTYRALDEHYDE	PA
EPA 1666 A	ISOPROPYL ACETATE	PA	EPA 1666 A	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 1666 A	METHYL FORMATE	PA	EPA 1666 A	N-AMYL ACETATE	PA
EPA 1666 A	N-AMYL ALCOHOL	PA	EPA 1666 A	N-BUTYL-ACETATE	PA
EPA 1666 A	N-HEPTANE	PA	EPA 1666 A	N-HEXANE	PA
EPA 1666 A	TERT-BUTYL ALCOHOL	PA	EPA 1666 A	TETRAHYDROFURAN (THF)	PA
EPA 1666 A	XYLENE (TOTAL)	PA	EPA 1668 A	2,2',3,3',4,4',5,5',6'-NONACHLOROBIPHENYL (BZ-206)	PA
EPA 1668 A	2,2',3,3',4,4',5,5',6'-OCTACHLOROBIPHENYL (BZ-194)	PA	EPA 1668 A	2,2',3,3',4,4',5,5',6'-OCTACHLOROBIPHENYL (BZ-196)	PA
EPA 1668 A	2,2',3,3',4,4',5,6,6'-NONACHLOROBIPHENYL (BZ-207)	PA	EPA 1668 A	2,2',3,3',4,4',5,6,6'-OCTACHLOROBIPHENYL (BZ-195)	PA
EPA 1668 A	2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL (BZ-170)	PA	EPA 1668 A	2,2',3,3',4,4',6,6'-OCTACHLOROBIPHENYL (BZ-197)	PA
EPA 1668 A	2,2',3,3',4,4',6-HEPTACHLOROBIPHENYL (BZ-171)	PA	EPA 1668 A	2,2',3,3',4,4'-HEXACHLOROBIPHENYL (BZ-128)	PA
EPA 1668 A	2,2',3,3',4,5,6'-HEPTACHLOROBIPHENYL (BZ-177)	PA	EPA 1668 A	2,2',3,3',4,5,6'-OCTACHLOROBIPHENYL (BZ-201)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-175)	PA	EPA 1668 A	2,2',3,3',4,5'-HEXACHLOROBIPHENYL (BZ-130)	PA
EPA 1668 A	2,2',3,3',4,5,5',6'-OCTACHLOROBIPHENYL (BZ-199)	PA	EPA 1668 A	2,2',3,3',4,5,5',6'-NONACHLOROBIPHENYL (BZ-208)	PA
EPA 1668 A	2,2',3,3',4,5,5',6-OCTACHLOROBIPHENYL (BZ-198)	PA	EPA 1668 A	2,2',3,3',4,5,5'-HEPTACHLOROBIPHENYL (BZ-172)	PA
EPA 1668 A	2,2',3,3',4,5,6'-HEPTACHLOROBIPHENYL (BZ-174)	PA	EPA 1668 A	2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL (BZ-200)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-173)	PA	EPA 1668 A	2,2',3,3',4,5-HEXACHLOROBIPHENYL (BZ-129)	PA
EPA 1668 A	2,2',3,3',4,6'-HEXACHLOROBIPHENYL (BZ-132)	PA	EPA 1668 A	2,2',3,3',4,6,6'-HEPTACHLOROBIPHENYL (BZ-176)	PA
EPA 1668 A	2,2',3,3',4,6-HEXACHLOROBIPHENYL (BZ-131)	PA	EPA 1668 A	2,2',3,3',4-PENTACHLOROBIPHENYL (BZ-82)	PA
EPA 1668 A	2,2',3,3',5,5',6,6'-OCTACHLOROBIPHENYL (BZ-202)	PA	EPA 1668 A	2,2',3,3',5,5',6-HEPTACHLOROBIPHENYL (BZ-178)	PA
EPA 1668 A	2,2',3,3',5,5'-HEXACHLOROBIPHENYL (BZ-133)	PA	EPA 1668 A	2,2',3,3',5,6'-HEXACHLOROBIPHENYL (BZ-135)	PA
EPA 1668 A	2,2',3,3',5,6,6'-HEPTACHLOROBIPHENYL (BZ-179)	PA	EPA 1668 A	2,2',3,3',5,6-HEXACHLOROBIPHENYL (BZ-134)	PA
EPA 1668 A	2,2',3,3',5-PENTACHLOROBIPHENYL (BZ-83)	PA	EPA 1668 A	2,2',3,3',6,6'-HEXACHLOROBIPHENYL (BZ-136)	PA
EPA 1668 A	2,2',3,3',6-PENTACHLOROBIPHENYL (BZ-84)	PA	EPA 1668 A	2,2',3,3'-TETRACHLOROBIPHENYL (BZ-40)	PA
EPA 1668 A	2,2',3,4,5,6-HEXACHLOROBIPHENYL (BZ-149)	PA	EPA 1668 A	2,2',3,4,5'-PENTACHLOROBIPHENYL (BZ-97)	PA
EPA 1668 A	2,2',3,4,5,5',6-HEPTACHLOROBIPHENYL (BZ-187)	PA	EPA 1668 A	2,2',3,4,5,5'-HEXACHLOROBIPHENYL (BZ-146)	PA



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NON-POTABLE WATER

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EPA 1668 A	2,2',3,4',5,6'-HEXACHLOROBIPHENYL (BZ-148)	PA	EPA 1668 A	2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL (BZ-188)	PA
EPA 1668 A	2,2',3,4',5,6'-HEXACHLOROBIPHENYL (BZ-147)	PA	EPA 1668 A	2,2',3,4',5-PENTACHLOROBIPHENYL (BZ-90)	PA
EPA 1668 A	2,2',3,4',6'-PENTACHLOROBIPHENYL (BZ-98)	PA	EPA 1668 A	2,2',3,4',6,6'-HEXACHLOROBIPHENYL (BZ-150)	PA
EPA 1668 A	2,2',3,4',6-PENTACHLOROBIPHENYL (BZ-91)	PA	EPA 1668 A	2,2',3,4'-TETRACHLOROBIPHENYL (BZ-42)	PA
EPA 1668 A	2,2',3,4,4',5',6'-HEPTACHLOROBIPHENYL (BZ-183)	PA	EPA 1668 A	2,2',3,4,4',5'-HEXACHLOROBIPHENYL (BZ-138)	PA
EPA 1668 A	2,2',3,4,4',5',6'-OCTACHLOROBIPHENYL (BZ-203)	PA	EPA 1668 A	2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-180)	PA
EPA 1668 A	2,2',3,4,4',5,6'-HEPTACHLOROBIPHENYL (BZ-182)	PA	EPA 1668 A	2,2',3,4,4',5,6,6'-OCTACHLOROBIPHENYL (BZ-204)	PA
EPA 1668 A	2,2',3,4,4',5,6-HEPTACHLOROBIPHENYL (BZ-181)	PA	EPA 1668 A	2,2',3,4,4',5-HEXACHLOROBIPHENYL (BZ-137)	PA
EPA 1668 A	2,2',3,4,4',6'-HEXACHLOROBIPHENYL (BZ-140)	PA	EPA 1668 A	2,2',3,4,4',6,6'-HEPTACHLOROBIPHENYL (BZ-184)	PA
EPA 1668 A	2,2',3,4,4',6-HEXACHLOROBIPHENYL (BZ-139)	PA	EPA 1668 A	2,2',3,4,4'-PENTACHLOROBIPHENYL (BZ-85)	PA
EPA 1668 A	2,2',3,4,5',6-HEXACHLOROBIPHENYL (BZ-144)	PA	EPA 1668 A	2,2',3,4,5'-PENTACHLOROBIPHENYL (BZ-87)	PA
EPA 1668 A	2,2',3,4,5,5',6-HEPTACHLOROBIPHENYL (BZ-185)	PA	EPA 1668 A	2,2',3,4,5,5'-HEXACHLOROBIPHENYL (BZ-141)	PA
EPA 1668 A	2,2',3,4,5,6'-HEXACHLOROBIPHENYL (BZ-143)	PA	EPA 1668 A	2,2',3,4,5,6,6'-HEPTACHLOROBIPHENYL (BZ-186)	PA
EPA 1668 A	2,2',3,4,5,6-HEXACHLOROBIPHENYL (BZ-142)	PA	EPA 1668 A	2,2',3,4,5-PENTACHLOROBIPHENYL (BZ-86)	PA
EPA 1668 A	2,2',3,4,6'-PENTACHLOROBIPHENYL (BZ-89)	PA	EPA 1668 A	2,2',3,4,6,6'-HEXACHLOROBIPHENYL (BZ-145)	PA
EPA 1668 A	2,2',3,4,6-PENTACHLOROBIPHENYL (BZ-88)	PA	EPA 1668 A	2,2',3,4-TETRACHLOROBIPHENYL (BZ-41)	PA
EPA 1668 A	2,2',3,5',6-PENTACHLOROBIPHENYL (BZ-95)	PA	EPA 1668 A	2,2',3,5'-TETRACHLOROBIPHENYL (BZ-44)	PA
EPA 1668 A	2,2',3,5,5',6-HEXACHLOROBIPHENYL (BZ-151)	PA	EPA 1668 A	2,2',3,5,5'-PENTACHLOROBIPHENYL (BZ-92)	PA
EPA 1668 A	2,2',3,5,6'-PENTACHLOROBIPHENYL (BZ-94)	PA	EPA 1668 A	2,2',3,5,6,6'-HEXACHLOROBIPHENYL (BZ-152)	PA
EPA 1668 A	2,2',3,5,6-PENTACHLOROBIPHENYL (BZ-93)	PA	EPA 1668 A	2,2',3,5-TETRACHLOROBIPHENYL (BZ-43)	PA
EPA 1668 A	2,2',3,6'-TETRACHLOROBIPHENYL (BZ-46)	PA	EPA 1668 A	2,2',3,6,6'-PENTACHLOROBIPHENYL (BZ-96)	PA
EPA 1668 A	2,2',3,6-TETRACHLOROBIPHENYL (BZ-45)	PA	EPA 1668 A	2,2',3-TRICHLOROBIPHENYL (BZ-16)	PA
EPA 1668 A	2,2',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-153)	PA	EPA 1668 A	2,2',4,4',5,6'-HEXACHLOROBIPHENYL (BZ-154)	PA
EPA 1668 A	2,2',4,4',5-PENTACHLOROBIPHENYL (BZ-99)	PA	EPA 1668 A	2,2',4,4',6,6'-HEXACHLOROBIPHENYL (BZ-155)	PA
EPA 1668 A	2,2',4,4',6-PENTACHLOROBIPHENYL (BZ-100)	PA	EPA 1668 A	2,2',4,4'-TETRACHLOROBIPHENYL (BZ-47)	PA



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EPA 1668 A	2,2',4,5'-PENTACHLOROBIPHENYL (BZ-103)	PA	EPA 1668 A	2,2',4,5'-TETRACHLOROBIPHENYL (BZ-49)	PA
EPA 1668 A	2,2',4,5,5'-PENTACHLOROBIPHENYL (BZ-101)	PA	EPA 1668 A	2,2',4,5,6'-PENTACHLOROBIPHENYL (BZ-102)	PA
EPA 1668 A	2,2',4,5-TETRACHLOROBIPHENYL (BZ-48)	PA	EPA 1668 A	2,2',4,6'-TETRACHLOROBIPHENYL (BZ-51)	PA
EPA 1668 A	2,2',4,6,6'-PENTACHLOROBIPHENYL (BZ-104)	PA	EPA 1668 A	2,2',4,6-TETRACHLOROBIPHENYL (BZ-50)	PA
EPA 1668 A	2,2',4-TRICHLOROBIPHENYL (BZ-17)	PA	EPA 1668 A	2,2',5,5'-TETRACHLOROBIPHENYL (BZ-52)	PA
EPA 1668 A	2,2',5,6'-TETRACHLOROBIPHENYL (BZ-53)	PA	EPA 1668 A	2,2',5-TRICHLOROBIPHENYL (BZ-18)	PA
EPA 1668 A	2,2',6,6'-TETRACHLOROBIPHENYL (BZ-54)	PA	EPA 1668 A	2,2',6-TRICHLOROBIPHENYL (BZ-19)	PA
EPA 1668 A	2,2'-DICHLOROBIPHENYL (BZ-4)	PA	EPA 1668 A	2,3',4',5',6'-PENTACHLOROBIPHENYL (BZ-125)	PA
EPA 1668 A	2,3',4',5'-TETRACHLOROBIPHENYL (BZ-76)	PA	EPA 1668 A	2,3',4',5,5'-PENTACHLOROBIPHENYL (BZ-124)	PA
EPA 1668 A	2,3',4',5-TETRACHLOROBIPHENYL (BZ-70)	PA	EPA 1668 A	2,3',4',6-TETRACHLOROBIPHENYL (BZ-71)	PA
EPA 1668 A	2,3',4'-TRICHLOROBIPHENYL (BZ-33)	PA	EPA 1668 A	2,3',4',5',6-HEXACHLOROBIPHENYL (BZ-168)	PA
EPA 1668 A	2,3',4,4',5'-PENTACHLOROBIPHENYL (BZ-123)	PA	EPA 1668 A	2,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-167)	PA
EPA 1668 A	2,3',4,4',5-PENTACHLOROBIPHENYL (BZ-118)	PA	EPA 1668 A	2,3',4,4',6-PENTACHLOROBIPHENYL (BZ-119)	PA
EPA 1668 A	2,3',4,4'-TETRACHLOROBIPHENYL (BZ-66)	PA	EPA 1668 A	2,3',4,5',6-PENTACHLOROBIPHENYL (BZ-121)	PA
EPA 1668 A	2,3',4,5'-TETRACHLOROBIPHENYL (BZ-68)	PA	EPA 1668 A	2,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-120)	PA
EPA 1668 A	2,3',4,5-TETRACHLOROBIPHENYL (BZ-67)	PA	EPA 1668 A	2,3',4,6-TETRACHLOROBIPHENYL (BZ-69)	PA
EPA 1668 A	2,3',4-TRICHLOROBIPHENYL (BZ-25)	PA	EPA 1668 A	2,3',5',6-TETRACHLOROBIPHENYL (BZ-73)	PA
EPA 1668 A	2,3',5-TRICHLOROBIPHENYL (BZ-34)	PA	EPA 1668 A	2,3',5,5'-TETRACHLOROBIPHENYL (BZ-72)	PA
EPA 1668 A	2,3',5-TRICHLOROBIPHENYL (BZ-26)	PA	EPA 1668 A	2,3',6-TRICHLOROBIPHENYL (BZ-27)	PA
EPA 1668 A	2,3'-DICHLOROBIPHENYL (BZ-6)	PA	EPA 1668 A	2,3,3',4',5',6-HEXACHLOROBIPHENYL (BZ-164)	PA
EPA 1668 A	2,3,3',4',5'-PENTACHLOROBIPHENYL (BZ-122)	PA	EPA 1668 A	2,3,3',4',5,5',6-HEPTACHLOROBIPHENYL (BZ-193)	PA
EPA 1668 A	2,3,3',4',5,5'-HEXACHLOROBIPHENYL (BZ-162)	PA	EPA 1668 A	2,3,3',4',5,6-HEXACHLOROBIPHENYL (BZ-163)	PA
EPA 1668 A	2,3,3',4',5-PENTACHLOROBIPHENYL (BZ-107)	PA	EPA 1668 A	2,3,3',4',6-PENTACHLOROBIPHENYL (BZ-110)	PA
EPA 1668 A	2,3,3',4'-TETRACHLOROBIPHENYL (BZ-56)	PA	EPA 1668 A	2,3,3',4',5',6-HEPTACHLOROBIPHENYL (BZ-191)	PA
EPA 1668 A	2,3,3',4,4',5'-HEXACHLOROBIPHENYL (BZ-157)	PA	EPA 1668 A	2,3,3',4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-205)	PA



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EPA 1668 A	2,3,3',4,4',5,5'-HEPTACHLOROBIPHE NYL (BZ-189)	PA	EPA 1668 A	2,3,3',4,4',5,6-HEPTACHLOROBIPHE NYL (BZ-190)	PA
EPA 1668 A	2,3,3',4,4',5-HEXACHLOROBIPHENYL (BZ-156)	PA	EPA 1668 A	2,3,3',4,4',6-HEXACHLOROBIPHENYL (BZ-158)	PA
EPA 1668 A	2,3,3',4,4'-PENTACHLOROBIPHENYL (BZ-105)	PA	EPA 1668 A	2,3,3',4,5,6-HEXACHLOROBIPHENYL (BZ-161)	PA
EPA 1668 A	2,3,3',4,5'-PENTACHLOROBIPHENYL (BZ-108)	PA	EPA 1668 A	2,3,3',4,5,5',6-HEPTACHLOROBIPHE NYL (BZ-192)	PA
EPA 1668 A	2,3,3',4,5,5'-HEXACHLOROBIPHENYL (BZ-159)	PA	EPA 1668 A	2,3,3',4,5,6-HEXACHLOROBIPHENYL (BZ-160)	PA
EPA 1668 A	2,3,3',4,5-PENTACHLOROBIPHENYL (BZ-106)	PA	EPA 1668 A	2,3,3',4,6-PENTACHLOROBIPHENYL (BZ-109)	PA
EPA 1668 A	2,3,3',4-TETRACHLOROBIPHENYL (BZ-55)	PA	EPA 1668 A	2,3,3',5,6-PENTACHLOROBIPHENYL (BZ-113)	PA
EPA 1668 A	2,3,3',5-TETRACHLOROBIPHENYL (BZ-58)	PA	EPA 1668 A	2,3,3',5,5',6-HEXACHLOROBIPHENYL (BZ-165)	PA
EPA 1668 A	2,3,3',5,5'-PENTACHLOROBIPHENYL (BZ-111)	PA	EPA 1668 A	2,3,3',5,6-PENTACHLOROBIPHENYL (BZ-112)	PA
EPA 1668 A	2,3,3',5-TETRACHLOROBIPHENYL (BZ-57)	PA	EPA 1668 A	2,3,3',6-TETRACHLOROBIPHENYL (BZ-59)	PA
EPA 1668 A	2,3,3'-TRICHLOROBIPHENYL (BZ-20)	PA	EPA 1668 A	2,3,4',5,6-PENTACHLOROBIPHENYL (BZ-117)	PA
EPA 1668 A	2,3,4',5-TETRACHLOROBIPHENYL (BZ-63)	PA	EPA 1668 A	2,3,4',6-TETRACHLOROBIPHENYL (BZ-64)	PA
EPA 1668 A	2,3,4'-TRICHLOROBIPHENYL (BZ-22)	PA	EPA 1668 A	2,3,4,4',5,6-HEXACHLOROBIPHENYL (BZ-166)	PA
EPA 1668 A	2,3,4,4',5-PENTACHLOROBIPHENYL (BZ-114)	PA	EPA 1668 A	2,3,4,4',6-PENTACHLOROBIPHENYL (BZ-115)	PA
EPA 1668 A	2,3,4,4'-TETRACHLOROBIPHENYL (BZ-60)	PA	EPA 1668 A	2,3,4,5,6-PENTACHLOROBIPHENYL (BZ-116)	PA
EPA 1668 A	2,3,4,5-TETRACHLOROBIPHENYL (BZ-61)	PA	EPA 1668 A	2,3,4,6-TETRACHLOROBIPHENYL (BZ-62)	PA
EPA 1668 A	2,3,4-TRICHLOROBIPHENYL (BZ-21)	PA	EPA 1668 A	2,3,5,6-TETRACHLOROBIPHENYL (BZ-65)	PA
EPA 1668 A	2,3,5-TRICHLOROBIPHENYL (BZ-23)	PA	EPA 1668 A	2,3,6-TRICHLOROBIPHENYL (BZ-24)	PA
EPA 1668 A	2,3-DICHLOROBIPHENYL (BZ-5)	PA	EPA 1668 A	2,4',5-TRICHLOROBIPHENYL (BZ-31)	PA
EPA 1668 A	2,4',6-TRICHLOROBIPHENYL (BZ-32)	PA	EPA 1668 A	2,4'-DICHLOROBIPHENYL (BZ-8)	PA
EPA 1668 A	2,4,4',5-TETRACHLOROBIPHENYL (BZ-74)	PA	EPA 1668 A	2,4,4',6-TETRACHLOROBIPHENYL (BZ-75)	PA
EPA 1668 A	2,4,4'-TRICHLOROBIPHENYL (BZ-28)	PA	EPA 1668 A	2,4,5-TRICHLOROBIPHENYL (BZ-29)	PA
EPA 1668 A	2,4,6-TRICHLOROBIPHENYL (BZ-30)	PA	EPA 1668 A	2,4-DICHLOROBIPHENYL (BZ-7)	PA
EPA 1668 A	2,5-DICHLOROBIPHENYL (BZ-9)	PA	EPA 1668 A	2,6-DICHLOROBIPHENYL (BZ-10)	PA
EPA 1668 A	2-CHLOROBIPHENYL (BZ-1)	PA	EPA 1668 A	3,3',4,4',5,5'-HEXACHLOROBIPHENY L (BZ-169)	PA
EPA 1668 A	3,3',4,4',5-PENTACHLOROBIPHENYL (BZ-126)	PA	EPA 1668 A	3,3',4,4'-TETRACHLOROBIPHENYL (BZ-77)	PA
EPA 1668 A	3,3',4,5'-TETRACHLOROBIPHENYL (BZ-79)	PA	EPA 1668 A	3,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-127)	PA



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EPA 1668 A	3,3',4,5-TETRACHLOROBIPHENYL (BZ-78)	PA	EPA 1668 A	3,3',4-TRICHLOROBIPHENYL (BZ-35)	PA
EPA 1668 A	3,3',5,5'-TETRACHLOROBIPHENYL (BZ-80)	PA	EPA 1668 A	3,3',5-TRICHLOROBIPHENYL (BZ-36)	PA
EPA 1668 A	3,3'-DICHLOROBIPHENYL (BZ-11)	PA	EPA 1668 A	3,4',5-TRICHLOROBIPHENYL (BZ-39)	PA
EPA 1668 A	3,4'-DICHLOROBIPHENYL (BZ-13)	PA	EPA 1668 A	3,4,4',5-TETRACHLOROBIPHENYL (BZ-81)	PA
EPA 1668 A	3,4,4'-TRICHLOROBIPHENYL (BZ-37)	PA	EPA 1668 A	3,4,5-TRICHLOROBIPHENYL (BZ-38)	PA
EPA 1668 A	3,4-DICHLOROBIPHENYL (BZ-12)	PA	EPA 1668 A	3,5-DICHLOROBIPHENYL (BZ-14)	PA
EPA 1668 A	3-CHLOROBIPHENYL (BZ-2)	PA	EPA 1668 A	4,4'-DICHLOROBIPHENYL (BZ-15)	PA
EPA 1668 A	4-CHLOROBIPHENYL (BZ-3)	PA	EPA 1668 A	DECACHLOROBIPHENYL (BZ-209)	PA
EPA 1671 A	2-METHOXYETHANOL (METHYL CELLOSOLVE)	PA	EPA 1671 A	ACETONITRILE	PA
EPA 1671 A	DIETHYLAMINE	PA	EPA 1671 A	DIMETHYL SULFOXIDE	PA
EPA 1671 A	ETHANOL	PA	EPA 1671 A	METHANOL	PA
EPA 1671 A	N-PROPANOL (1-PROPANOL)	PA	EPA 1671 A	TRIETHYLAMINE	PA
EPA 180.1 REV 2	TURBIDITY	PA	EPA 200.2 REV 2.8	PREP: SAMPLE PREPARATION PROCEDURE FOR SPECTROCHEMICAL DETERMINATION OF TOTAL RECOVERABLE ELEMENTS	PA
EPA 200.7 REV 4.4	ALUMINUM	PA	EPA 200.7 REV 4.4	ANTIMONY	PA
EPA 200.7 REV 4.4	ARSENIC	PA	EPA 200.7 REV 4.4	BARIUM	PA
EPA 200.7 REV 4.4	BERYLLIUM	PA	EPA 200.7 REV 4.4	BORON	PA
EPA 200.7 REV 4.4	CADMIUM	PA	EPA 200.7 REV 4.4	CALCIUM	PA
EPA 200.7 REV 4.4	CHROMIUM	PA	EPA 200.7 REV 4.4	COBALT	PA
EPA 200.7 REV 4.4	COPPER	PA	EPA 200.7 REV 4.4	IRON	PA
EPA 200.7 REV 4.4	LEAD	PA	EPA 200.7 REV 4.4	MAGNESIUM	PA
EPA 200.7 REV 4.4	MANGANESE	PA	EPA 200.7 REV 4.4	MOLYBDENUM	PA
EPA 200.7 REV 4.4	NICKEL	PA	EPA 200.7 REV 4.4	POTASSIUM	PA
EPA 200.7 REV 4.4	SELENIUM	PA	EPA 200.7 REV 4.4	SILVER	PA
EPA 200.7 REV 4.4	SODIUM	PA	EPA 200.7 REV 4.4	THALLIUM	PA
EPA 200.7 REV 4.4	TIN	PA	EPA 200.7 REV 4.4	TITANIUM	PA
EPA 200.7 REV 4.4	VANADIUM	PA	EPA 200.7 REV 4.4	ZINC	PA
EPA 200.8 REV 5.4	ALUMINUM	PA	EPA 200.8 REV 5.4	ANTIMONY	PA
EPA 200.8 REV 5.4	ARSENIC	PA	EPA 200.8 REV 5.4	BARIUM	PA
EPA 200.8 REV 5.4	BERYLLIUM	PA	EPA 200.8 REV 5.4	CADMIUM	PA
EPA 200.8 REV 5.4	CHROMIUM	PA	EPA 200.8 REV 5.4	COBALT	PA
EPA 200.8 REV 5.4	COPPER	PA	EPA 200.8 REV 5.4	LEAD	PA
EPA 200.8 REV 5.4	MANGANESE	PA	EPA 200.8 REV 5.4	MOLYBDENUM	PA
EPA 200.8 REV 5.4	NICKEL	PA	EPA 200.8 REV 5.4	SELENIUM	PA
EPA 200.8 REV 5.4	SILVER	PA	EPA 200.8 REV 5.4	THALLIUM	PA

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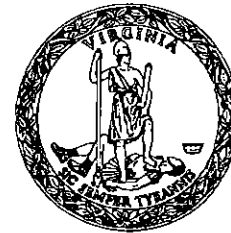
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EPA 200.8 REV 5.4	VANADIUM	PA	EPA 200.8 REV 5.4	ZINC	PA
EPA 200.8 REV 5.4 - EXTENDED	BORON	PA	EPA 200.8 REV 5.4 - EXTENDED	CALCIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	IRON	PA	EPA 200.8 REV 5.4 - EXTENDED	MAGNESIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	POTASSIUM	PA	EPA 200.8 REV 5.4 - EXTENDED	SODIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	TIN	PA	EPA 200.8 REV 5.4 - EXTENDED	TITANIUM	PA
EPA 245.1 REV 3	MERCURY	PA	EPA 300.0 REV 2.1	BROMIDE	PA
EPA 300.0 REV 2.1	CHLORIDE	PA	EPA 300.0 REV 2.1	FLUORIDE	PA
EPA 300.0 REV 2.1	NITRATE AS N	PA	EPA 300.0 REV 2.1	NITRITE AS N	PA
EPA 300.0 REV 2.1	SULFATE	PA	EPA 3005 A	PREP: ACID DIGESTION OF WATERS FOR TOTAL RECOVERABLE OR DISSOLVED METALS	PA
EPA 3010 A	PREP: ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS	PA	EPA 3020 A	PREP: ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS	PA
EPA 335.4 REV 1.0	CYANIDE	PA	EPA 351.2 REV 2	KJELDAHL NITROGEN - TOTAL	PA
EPA 3510 C	PREP: LIQUID-LIQUID EXTRACTION	PA	EPA 3511	PREP: ORGANIC EXTRACTION AND SAMPLE PREPARATION	PA
EPA 3520 C	PREP: CONTINUOUS LIQUID-LIQUID EXTRACTION	PA	EPA 353.2 REV 2	NITRATE AS N	PA
EPA 353.2 REV 2	NITRATE/NITRITE	PA	EPA 353.2 REV 2	NITRITE AS N	PA
EPA 3620 B	PREP: FLORISIL CLEANUP	PA	EPA 3630 C	PREP: SILICA GEL CLEANUP	PA
EPA 365.1 REV 2	PHOSPHORUS, TOTAL	PA	EPA 365.3	ORTHOPHOSPHATE AS P	PA
EPA 410.4 REV 2	CHEMICAL OXYGEN DEMAND	PA	EPA 420.4 REV 1	TOTAL PHENOLICS	PA
EPA 5030	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	PA	EPA 6010 B	ALUMINUM	PA
EPA 6010 B	ANTIMONY	PA	EPA 6010 B	ARSENIC	PA
EPA 6010 B	BARIUM	PA	EPA 6010 B	BERYLLIUM	PA
EPA 6010 B	BORON	PA	EPA 6010 B	CADMIUM	PA
EPA 6010 B	CALCIUM	PA	EPA 6010 B	CHROMIUM	PA
EPA 6010 B	COBALT	PA	EPA 6010 B	COPPER	PA
EPA 6010 B	IRON	PA	EPA 6010 B	LEAD	PA
EPA 6010 B	LITHIUM	PA	EPA 6010 B	MAGNESIUM	PA
EPA 6010 B	MANGANESE	PA	EPA 6010 B	MOLYBDENUM	PA
EPA 6010 B	NICKEL	PA	EPA 6010 B	POTASSIUM	PA
EPA 6010 B	SELENIUM	PA	EPA 6010 B	SILVER	PA
EPA 6010 B	SODIUM	PA	EPA 6010 B	STRONTIUM	PA
EPA 6010 B	THALLIUM	PA	EPA 6010 B	TIN	PA
EPA 6010 B	TITANIUM	PA	EPA 6010 B	VANADIUM	PA
EPA 6010 B	ZINC	PA	EPA 6010 B - EXTENDED	ZIRCONIUM	PA



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EPA 6010 C	ALUMINUM	PA	EPA 6010 C	ANTIMONY	PA
EPA 6010 C	ARSENIC	PA	EPA 6010 C	BARIUM	PA
EPA 6010 C	BERYLLIUM	PA	EPA 6010 C	BORON	PA
EPA 6010 C	CADMIUM	PA	EPA 6010 C	CALCIUM	PA
EPA 6010 C	CHROMIUM	PA	EPA 6010 C	COBALT	PA
EPA 6010 C	COPPER	PA	EPA 6010 C	IRON	PA
EPA 6010 C	LEAD	PA	EPA 6010 C	LITHIUM	PA
EPA 6010 C	MAGNESIUM	PA	EPA 6010 C	MANGANESE	PA
EPA 6010 C	MOLYBDENUM	PA	EPA 6010 C	NICKEL	PA
EPA 6010 C	POTASSIUM	PA	EPA 6010 C	SELENIUM	PA
EPA 6010 C	SILVER	PA	EPA 6010 C	SODIUM	PA
EPA 6010 C	STRONTIUM	PA	EPA 6010 C	THALLIUM	PA
EPA 6010 C	TIN	PA	EPA 6010 C	TITANIUM	PA
EPA 6010 C	VANADIUM	PA	EPA 6010 C	ZINC	PA
EPA 6010 C - EXTENDED	ZIRCONIUM	PA	EPA 602	BENZENE	PA
EPA 602	ETHYLBENZENE	PA	EPA 602	TOLUENE	PA
EPA 602	XYLENE (TOTAL)	PA	EPA 6020 A	ALUMINUM	PA
EPA 6020 A	ANTIMONY	PA	EPA 6020 A	ARSENIC	PA
EPA 6020 A	BARIUM	PA	EPA 6020 A	BERYLLIUM	PA
EPA 6020 A	CADMIUM	PA	EPA 6020 A	CALCIUM	PA
EPA 6020 A	CHROMIUM	PA	EPA 6020 A	COBALT	PA
EPA 6020 A	COPPER	PA	EPA 6020 A	IRON	PA
EPA 6020 A	LEAD	PA	EPA 6020 A	MAGNESIUM	PA
EPA 6020 A	MANGANESE	PA	EPA 6020 A	NICKEL	PA
EPA 6020 A	POTASSIUM	PA	EPA 6020 A	SELENIUM	PA
EPA 6020 A	SILVER	PA	EPA 6020 A	SODIUM	PA
EPA 6020 A	THALLIUM	PA	EPA 6020 A	VANADIUM	PA
EPA 6020 A	ZINC	PA	EPA 6020 A - EXTENDED	BORON	PA
EPA 6020 A - EXTENDED	MOLYBDENUM	PA	EPA 6020 A - EXTENDED	STRONTIUM	PA
EPA 6020 A - EXTENDED	TIN	PA	EPA 6020 A - EXTENDED	TITANIUM	PA
EPA 608	4,4'-DDD	PA	EPA 608	4,4'-DDE	PA
EPA 608	4,4'-DDT	PA	EPA 608	ALDRIN	PA
EPA 608	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA	EPA 608	AROCLOR-1016 (PCB-1016)	PA
EPA 608	AROCLOR-1221 (PCB-1221)	PA	EPA 608	AROCLOR-1232 (PCB-1232)	PA
EPA 608	AROCLOR-1242 (PCB-1242)	PA	EPA 608	AROCLOR-1248 (PCB-1248)	PA
EPA 608	AROCLOR-1254 (PCB-1254)	PA	EPA 608	AROCLOR-1260 (PCB-1260)	PA
EPA 608	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA			

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EPA 608	CHLORDANE (TECH.)	PA	EPA 608	DELTA-BHC	PA
EPA 608	DIELDRIN	PA	EPA 608	ENDOSULFAN I	PA
EPA 608	ENDOSULFAN II	PA	EPA 608	ENDOSULFAN SULFATE	PA
EPA 608	ENDRIN	PA	EPA 608	ENDRIN ALDEHYDE	PA
EPA 608	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA	EPA 608	HEPTACHLOR	PA
EPA 608	HEPTACHLOR EPOXIDE	PA	EPA 608	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 622	AZINPHOS-METHYL (GUTHION)	PA	EPA 622	BOLSTAR (SULPROFOS)	PA
EPA 622	CHLORPYRIFOS	PA	EPA 622	DEMETON-O	PA
EPA 622	DEMETON-S	PA	EPA 622	DIAZINON	PA
EPA 622	DICHLOROVOS (DDVP, DICHLORVOS)	PA	EPA 622	DISULFOTON	PA
EPA 622	ETHOPROP	PA	EPA 622	FENSULFOTHION	PA
EPA 622	FENTHION	PA	EPA 622	MERPHOS	PA
EPA 622	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 622	MEVINPHOS	PA
EPA 622	NALED	PA	EPA 622	PHORATE	PA
EPA 622	STIROFOS	PA	EPA 624	1,1,1-TRICHLOROETHANE	PA
EPA 624	1,1,2,2-TETRACHLOROETHANE	PA	EPA 624	1,1,2-TRICHLOROETHANE	PA
EPA 624	1,1-DICHLOROETHANE	PA	EPA 624	1,2-DICHLOROBENZENE	PA
EPA 624	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA	EPA 624	1,2-DICHLOROPROPANE	PA
EPA 624	1,3-DICHLOROBENZENE	PA	EPA 624	1,4-DICHLOROBENZENE	PA
EPA 624	2-CHLOROETHYL VINYL ETHER	PA	EPA 624	ACROLEIN (PROPENAL)	PA
EPA 624	ACRYLONITRILE	PA	EPA 624	BENZENE	PA
EPA 624	BROMODICHLOROMETHANE	PA	EPA 624	BROMOFORM	PA
EPA 624	CARBON TETRACHLORIDE	PA	EPA 624	CHLOROBENZENE	PA
EPA 624	CHLORODIBROMOMETHANE	PA	EPA 624	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 624	CHLOROFORM	PA	EPA 624	CIS-1,3-DICHLOROPROPENE	PA
EPA 624	ETHYLBENZENE	PA	EPA 624	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 624	METHYL CHLORIDE (CHLOROMETHANE)	PA	EPA 624	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 624	TETRACHLOROETHENE (PERCHLOROETHENE)	PA	EPA 624	TOLUENE	PA
EPA 624	TRANS-1,2-DICHLOROETHENE	PA	EPA 624	TRANS-1,3-DICHLOROPROPENE	PA
EPA 624	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA	EPA 624	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 624	VINYL CHLORIDE	PA	EPA 624 - EXTENDED	1,1-DICHLOROETHYLENE	PA
EPA 625	1,2,4-TRICHLOROBENZENE	PA	EPA 625	2,4,6-TRICHLOROPHENOL	PA

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Commonwealth of Virginia
Department of General Services
Division of Consolidated Laboratory Services



Scope of Accreditation

VELAP Certificate No.: 7991

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: August 21, 2015
Expiration Date: June 14, 2016

NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 625	2,4-DICHLOROPHENOL	PA	EPA 625	2,4-DIMETHYLPHENOL	PA
EPA 625	2,4-DINITROPHENOL	PA	EPA 625	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 625	2,6-DINITROTOLUENE (2,6-DNT)	PA	EPA 625	2-CHLORONAPHTHALENE	PA
EPA 625	2-CHLOROPHENOL	PA	EPA 625	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 625	2-METHYLPHENOL (O-CRESOL)	PA	EPA 625	2-NITROPHENOL	PA
EPA 625	3,3'-DICHLOROBENZIDINE	PA	EPA 625	4-BROMOPHENYL PHENYL ETHER	PA
EPA 625	4-CHLORO-3-METHYLPHENOL	PA	EPA 625	4-CHLOROPHENYL PHENYLETHER	PA
EPA 625	4-NITROPHENOL	PA	EPA 625	ACENAPHTHENE	PA
EPA 625	ACENAPHTHYLENE	PA	EPA 625	ANTHRACENE	PA
EPA 625	BENZIDINE	PA	EPA 625	BENZO(A)ANTHRACENE	PA
EPA 625	BENZO(A)PYRENE	PA	EPA 625	BENZO(B)FLUORANTHENE	PA
EPA 625	BENZO(G,H,I)PERYLENE	PA	EPA 625	BENZO(K)FLUORANTHENE	PA
EPA 625	BIS(2-CHLOROETHOXY)METHANE	PA	EPA 625	BIS(2-CHLOROETHYL) ETHER	PA
EPA 625	BIS(2-CHLOROISOPROPYL) ETHER	PA	EPA 625	BIS(2-ETHYLHEXYL) PHTHALATE (D(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 625	BUTYL BENZYL PHTHALATE	PA	EPA 625	CHRYSENE	PA
EPA 625	DI-N-BUTYL PHTHALATE	PA	EPA 625	DI-N-OCTYL PHTHALATE	PA
EPA 625	DIBENZO(A,H) ANTHRACENE	PA	EPA 625	DIETHYL PHTHALATE	PA
EPA 625	DIMETHYL PHTHALATE	PA	EPA 625	FLUORANTHENE	PA
EPA 625	FLUORENE	PA	EPA 625	HEXACHLOROBENZENE	PA
EPA 625	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA	EPA 625	HEXACHLOROCYCLOPENTADIENE	PA
EPA 625	HEXACHLOROETHANE	PA	EPA 625	INDENO(1,2,3-CD) PYRENE	PA
EPA 625	ISOPHORONE	PA	EPA 625	N-NITROSODI-N-PROPYLAMINE	PA
EPA 625	N-NITROSODIMETHYLAMINE	PA	EPA 625	N-NITROSODIPHENYLAMINE	PA
EPA 625	NAPHTHALENE	PA	EPA 625	NITROBENZENE	PA
EPA 625	PENTACHLOROPHENOL	PA	EPA 625	PHENANTHRENE	PA
EPA 625	PHENOL	PA	EPA 625	PYRENE	PA
EPA 625 - EXTENDED	1,2-DIPHENYLHYDRAZINE	PA	EPA 625 - EXTENDED	4-METHYLPHENOL (P-CRESOL)	PA
EPA 625 - EXTENDED	ACETOPHENONE	PA	EPA 625 - EXTENDED	ANILINE	PA
EPA 625 - EXTENDED	CARBAZOLE	PA	EPA 625 - EXTENDED	N-DECANE	PA
EPA 625 - EXTENDED	N-OCTADECANE	PA	EPA 625 - EXTENDED	PYRIDINE	PA
EPA 6850	PERCHLORATE	PA	EPA 7196 A	CHROMIUM VI	PA
EPA 7470 A	MERCURY	PA	EPA 8011	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8011	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA	EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	PA
EPA 8015 B	ETHANOL	PA	EPA 8015 B	ETHYLENE GLYCOL	PA
EPA 8015 B	GASOLINE RANGE ORGANICS (GRO)	PA	EPA 8015 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA

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Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
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NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8015 B	METHANOL	PA	EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	PA
EPA 8015 C	ETHANOL	PA	EPA 8015 C	ETHYLENE GLYCOL	PA
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	PA	EPA 8015 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8015 C	METHANOL	PA	EPA 8021 B	BENZENE	PA
EPA 8021 B	ETHYLBENZENE	PA	EPA 8021 B	ISOPROPYLBENZENE	PA
EPA 8021 B	M+P-XYLENE	PA	EPA 8021 B	NAPHTHALENE	PA
EPA 8021 B	O-XYLENE	PA	EPA 8021 B	TOLUENE	PA
EPA 8021 B	XYLENE (TOTAL)	PA	EPA 8021 B - EXTENDED	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8081 A	4,4'-DDD	PA	EPA 8081 A	4,4'-DDE	PA
EPA 8081 A	4,4'-DDT	PA	EPA 8081 A	ALDRIN	PA
EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA	EPA 8081 A	ALPHA-CHLORDANE [CIS-CHLORDANE]	PA
EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA	EPA 8081 A	CHLORDANE (TECH.)	PA
EPA 8081 A	DELTA-BHC	PA	EPA 8081 A	DIELDRIN	PA
EPA 8081 A	ENDOSULFAN I	PA	EPA 8081 A	ENDOSULFAN II	PA
EPA 8081 A	ENDOSULFAN SULFATE	PA	EPA 8081 A	ENDRIN	PA
EPA 8081 A	ENDRIN ALDEHYDE	PA	EPA 8081 A	ENDRIN KETONE	PA
EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA	EPA 8081 A	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	PA
EPA 8081 A	HEPTACHLOR	PA	EPA 8081 A	HEPTACHLOR EPOXIDE	PA
EPA 8081 A	METHOXYCHLOR	PA	EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 8081 A - EXTENDED	KEPONE	PA	EPA 8081 B	4,4'-DDD	PA
EPA 8081 B	4,4'-DDE	PA	EPA 8081 B	4,4'-DDT	PA
EPA 8081 B	ALDRIN	PA	EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	ALPHA-CHLORDANE [CIS-CHLORDANE]	PA	EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	CHLORDANE (TECH.)	PA	EPA 8081 B	DELTA-BHC	PA
EPA 8081 B	DIELDRIN	PA	EPA 8081 B	ENDOSULFAN I	PA
EPA 8081 B	ENDOSULFAN II	PA	EPA 8081 B	ENDOSULFAN SULFATE	PA
EPA 8081 B	ENDRIN	PA	EPA 8081 B	ENDRIN ALDEHYDE	PA
EPA 8081 B	ENDRIN KETONE	PA	EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	PA	EPA 8081 B	HEPTACHLOR	PA

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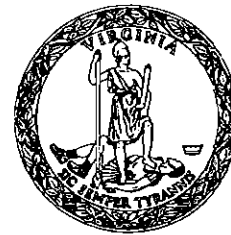
NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8081 B	HEPTACHLOR EPOXIDE	PA	EPA 8081 B	METHOXYCHLOR	PA
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	PA	EPA 8081 B - EXTENDED	KEPONE	PA
EPA 8082 A	AROCLOR-1016 (PCB-1016)	PA	EPA 8082 A	AROCLOR-1221 (PCB-1221)	PA
EPA 8082 A	AROCLOR-1232 (PCB-1232)	PA	EPA 8082 A	AROCLOR-1242 (PCB-1242)	PA
EPA 8082 A	AROCLOR-1248 (PCB-1248)	PA	EPA 8082 A	AROCLOR-1254 (PCB-1254)	PA
EPA 8082 A	AROCLOR-1260 (PCB-1260)	PA	EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	PA
EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	PA	EPA 8141 A	ATRAZINE	PA
EPA 8141 A	BOLSTAR (SULPROFOS)	PA	EPA 8141 A	CHLORPYRIFOS	PA
EPA 8141 A	COUMAPHOS	PA	EPA 8141 A	DEMETON-O	PA
EPA 8141 A	DEMETON-S	PA	EPA 8141 A	DIAZINON	PA
EPA 8141 A	DICHLOROVOS (DDVP, DICHLORVOS)	PA	EPA 8141 A	DISULFOTON	PA
EPA 8141 A	ETHION	PA	EPA 8141 A	ETHOPROP	PA
EPA 8141 A	FAMPHUR	PA	EPA 8141 A	FENSULFOTHION	PA
EPA 8141 A	FENTHION	PA	EPA 8141 A	MALATHION	PA
EPA 8141 A	MERPHOS	PA	EPA 8141 A	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8141 A	MEVINPHOS	PA	EPA 8141 A	NALED	PA
EPA 8141 A	PARATHION (PARATHION - ETHYL)	PA	EPA 8141 A	PHORATE	PA
EPA 8141 A	RONNEL	PA	EPA 8141 A	SIMAZINE	PA
EPA 8141 A	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA	EPA 8141 A	TOKUTHION (PROTHIOPHOS)	PA
EPA 8141 A	TRICHLORONATE	PA	EPA 8141 B	ATRAZINE	PA
EPA 8141 B	AZINPHOS-METHYL (GUTHION)	PA	EPA 8141 B	BOLSTAR (SULPROFOS)	PA
EPA 8141 B	CHLORPYRIFOS	PA	EPA 8141 B	COUMAPHOS	PA
EPA 8141 B	DEMETON-O	PA	EPA 8141 B	DEMETON-S	PA
EPA 8141 B	DICHLOROVOS (DDVP, DICHLORVOS)	PA	EPA 8141 B	DISULFOTON	PA
EPA 8141 B	EPN (PHOSPHONOTHIOIC ACID, PHENYL, O-ETHYL O-(P-NITROPHENYL) ESTER)	PA	EPA 8141 B	ETHION	PA
EPA 8141 B	ETHOPROP	PA	EPA 8141 B	FAMPHUR	PA
EPA 8141 B	FENSULFOTHION	PA	EPA 8141 B	FENTHION	PA
EPA 8141 B	MALATHION	PA	EPA 8141 B	MERPHOS	PA
EPA 8141 B	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8141 B	MEVINPHOS	PA
EPA 8141 B	NALED	PA	EPA 8141 B	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 B	PHORATE	PA	EPA 8141 B	RONNEL	PA
EPA 8141 B	SIMAZINE	PA	EPA 8141 B	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 B	TOKUTHION (PROTHIOPHOS)	PA	EPA 8141 B	TRICHLORONATE	PA
EPA 8151 A	2,4,5-T	PA	EPA 8151 A	2,4-D	PA

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NON-POTABLE WATER

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EPA 8151 A	2,4-DB	PA	EPA 8151 A	DALAPON	PA
EPA 8151 A	DICAMBA	PA	EPA 8151 A	DICHLOROPROP (DICHLORPROP)	PA
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA	EPA 8151 A	MCPA	PA
EPA 8151 A	MCPP	PA	EPA 8151 A	PENTACHLOROPHENOL	PA
EPA 8151 A	PICLORAM	PA	EPA 8151 A	SILVEX (2,4,5-TP)	PA
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	PA	EPA 8260 B	1,1,1-TRICHLOROETHANE	PA
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	PA	EPA 8260 B	1,1,2-TRICHLOROETHANE	PA
EPA 8260 B	1,1-DICHLOROETHANE	PA	EPA 8260 B	1,1-DICHLOROETHYLENE	PA
EPA 8260 B	1,1-DICHLOROPROPENE	PA	EPA 8260 B	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 B	1,2,3-TRICHLOROPROPANE	PA	EPA 8260 B	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	PA	EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA	EPA 8260 B	1,2-DICHLOROBENZENE	PA
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA	EPA 8260 B	1,2-DICHLOROPROPANE	PA
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	PA	EPA 8260 B	1,3-DICHLOROBENZENE	PA
EPA 8260 B	1,3-DICHLOROPROPANE	PA	EPA 8260 B	1,4-DICHLOROBENZENE	PA
EPA 8260 B	1,4-DIOXANE (P-DIOXANE /1,4- DIETHYLENEOXIDE)	PA	EPA 8260 B	1-BUTANOL (N-BUTANOL)	PA
EPA 8260 B	2,2-DICHLOROPROPANE	PA	EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	PA	EPA 8260 B	2-CHLOROTOLUENE	PA
EPA 8260 B	2-HEXANONE	PA	EPA 8260 B	2-NITROPROPANE	PA
EPA 8260 B	4-CHLOROTOLUENE	PA	EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYME)	PA
EPA 8260 B	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA	EPA 8260 B	ACETONE	PA
EPA 8260 B	ACETONITRILE	PA	EPA 8260 B	ACROLEIN (PROPENAL)	PA
EPA 8260 B	ACRYLONITRILE	PA	EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA
EPA 8260 B	BENZENE	PA	EPA 8260 B	BENZYL CHLORIDE	PA
EPA 8260 B	BROMOBENZENE	PA	EPA 8260 B	BROMOCHLOROMETHANE	PA
EPA 8260 B	BROMODICHLOROMETHANE	PA	EPA 8260 B	BROMOFORM	PA
EPA 8260 B	CARBON DISULFIDE	PA	EPA 8260 B	CARBON TETRACHLORIDE	PA
EPA 8260 B	CHLOROBENZENE	PA	EPA 8260 B	CHLORODIBROMOMETHANE	PA
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	PA	EPA 8260 B	CHLOROFORM	PA
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA	EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	PA
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	PA	EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	PA



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EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	PA	EPA 8260 B	DIETHYL ETHER	PA
EPA 8260 B	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA	EPA 8260 B	ETHANOL	PA
EPA 8260 B	ETHYL ACETATE	PA	EPA 8260 B	ETHYL METHACRYLATE	PA
EPA 8260 B	ETHYLBENZENE	PA	EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	PA	EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA	EPA 8260 B	ISOPROPYLBENZENE	PA
EPA 8260 B	M+P-XYLENE	PA	EPA 8260 B	METHACRYLONITRILE	PA
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	PA	EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 B	METHYL METHACRYLATE	PA	EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA	EPA 8260 B	N-BUTYLBENZENE	PA
EPA 8260 B	N-PROPYLAMINE	PA	EPA 8260 B	N-PROPYLBENZENE	PA
EPA 8260 B	NAPHTHALENE	PA	EPA 8260 B	O-XYLENE	PA
EPA 8260 B	PENTACHLOROETHANE	PA	EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 B	SEC-BUTYLBENZENE	PA	EPA 8260 B	STYRENE	PA
EPA 8260 B	TERT-BUTYL ALCOHOL	PA	EPA 8260 B	TERT-BUTYLBENZENE	PA
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	PA	EPA 8260 B	TOLUENE	PA
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	PA	EPA 8260 B	TRANS-1,3-DICHLOROPROPENE	PA
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	PA	EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA	EPA 8260 B	VINYL ACETATE	PA
EPA 8260 B	VINYL CHLORIDE	PA	EPA 8260 B	XYLENE (TOTAL)	PA
EPA 8260 B - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE (FREON 113)	PA	EPA 8260 B - EXTENDED	CYCLOHEXANE	PA
EPA 8260 B - EXTENDED	DIISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA	EPA 8260 B - EXTENDED	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 B - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA	EPA 8260 B - EXTENDED	METHYL ACETATE	PA
EPA 8260 B - EXTENDED	METHYLCYCLOHEXANE	PA	EPA 8260 B - EXTENDED	N-HEXANE	PA
EPA 8260 B - EXTENDED	T-AMYL ALCOHOL (TAA)	PA	EPA 8260 B - EXTENDED	T-AMYLMETHYLETHER (TAME)	PA
EPA 8260 B - EXTENDED	TETRAHYDROFURAN (THF)	PA	EPA 8260 C	1,1,1,2-TETRACHLOROETHANE	PA
EPA 8260 C	1,1,1-TRICHLOROETHANE	PA	EPA 8260 C	1,1,2,2-TETRACHLOROETHANE	PA
EPA 8260 C	1,1,2-TRICHLOROETHANE	PA	EPA 8260 C	1,1-DICHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROETHYLENE	PA	EPA 8260 C	1,1-DICHLOROPROPENE	PA
EPA 8260 C	1,2,3-TRICHLOROBENZENE	PA	EPA 8260 C	1,2,3-TRICHLOROPROPANE	PA

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8260 C	1,2,4-TRICHLOROBENZENE	PA	EPA 8260 C	1,2,4-TRIMETHYLBENZENE	PA
EPA 8260 C	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA	EPA 8260 C	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8260 C	1,2-DICHLOROBENZENE	PA	EPA 8260 C	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 8260 C	1,2-DICHLOROPROPANE	PA	EPA 8260 C	1,3,5-TRIMETHYLBENZENE	PA
EPA 8260 C	1,3-DICHLOROBENZENE	PA	EPA 8260 C	1,3-DICHLOROPROPANE	PA
EPA 8260 C	1,4-DICHLOROBENZENE	PA	EPA 8260 C	1,4-DIOXANE (P-DIOXANE / 1,4-DIETHYLENEOXIDE)	PA
EPA 8260 C	1-BUTANOL (N-BUTANOL)	PA	EPA 8260 C	2,2-DICHLOROPROPANE	PA
EPA 8260 C	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA	EPA 8260 C	2-CHLOROETHYL VINYL ETHER	PA
EPA 8260 C	2-CHLOROTOLUENE	PA	EPA 8260 C	2-HEXANONE	PA
EPA 8260 C	2-NITROPROPANE	PA	EPA 8260 C	4-CHLOROTOLUENE	PA
EPA 8260 C	4-ISOPROPYLTOLUENE (P-CYMENE)	PA	EPA 8260 C	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 8260 C	ACETONE	PA	EPA 8260 C	ACETONITRILE	PA
EPA 8260 C	ACROLEIN (PROPENAL)	PA	EPA 8260 C	ACRYLONITRILE	PA
EPA 8260 C	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA	EPA 8260 C	BENZENE	PA
EPA 8260 C	BENZYL CHLORIDE	PA	EPA 8260 C	BROMOBENZENE	PA
EPA 8260 C	BROMOCHLOROMETHANE	PA	EPA 8260 C	BROMODICHLOROMETHANE	PA
EPA 8260 C	BROMOFORM	PA	EPA 8260 C	CARBON DISULFIDE	PA
EPA 8260 C	CARBON TETRACHLORIDE	PA	EPA 8260 C	CHLOROBENZENE	PA
EPA 8260 C	CHLORODIBROMOMETHANE	PA	EPA 8260 C	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 8260 C	CHLOROFORM	PA	EPA 8260 C	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 C	CIS-1,2-DICHLOROETHYLENE	PA	EPA 8260 C	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 C	CYCLOHEXANE	PA	EPA 8260 C	DIBROMOMETHANE (METHYLENE BROMIDE)	PA
EPA 8260 C	DICHLORODIFLUOROMETHANE (FREON-12)	PA	EPA 8260 C	DIETHYL ETHER	PA
EPA 8260 C	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA	EPA 8260 C	ETHANOL	PA
EPA 8260 C	ETHYL ACETATE	PA	EPA 8260 C	ETHYL METHACRYLATE	PA
EPA 8260 C	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA	EPA 8260 C	ETHYLBENZENE	PA
EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA	EPA 8260 C	HEXACHLOROETHANE	PA
EPA 8260 C	IODOMETHANE (METHYL IODIDE)	PA	EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA	EPA 8260 C	ISOPROPYLBENZENE	PA
EPA 8260 C	METHACRYLONITRILE	PA	EPA 8260 C	METHYL BROMIDE (BROMOMETHANE)	PA

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Commonwealth of Virginia
Department of General Services
Division of Consolidated Laboratory Services



Scope of Accreditation

VELAP Certificate No.: 7991

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: August 21, 2015
Expiration Date: June 14, 2016

NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
			EPA 8260 C	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 C	METHYL METHACRYLATE	PA	EPA 8260 C	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8260 C	METHYLCYCLOHEXANE	PA	EPA 8260 C	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 8260 C	N-BUTYLBENZENE	PA	EPA 8260 C	N-PROPYLBENZENE	PA
EPA 8260 C	NAPHTHALENE	PA	EPA 8260 C	PENTACHLOROETHANE	PA
EPA 8260 C	PROPIONITRILE (ETHYL CYANIDE)	PA	EPA 8260 C	SEC-BUTYLBENZENE	PA
EPA 8260 C	STYRENE	PA	EPA 8260 C	T-AMYLMETHYLETHER (TAME)	PA
EPA 8260 C	TERT-BUTYL ALCOHOL	PA	EPA 8260 C	TERT-BUTYLBENZENE	PA
EPA 8260 C	TETRACHLOROETHENE (PERCHLOROETHENE)	PA	EPA 8260 C	TOLUENE	PA
EPA 8260 C	TRANS-1,2-DICHLOROETHENE	PA	EPA 8260 C	TRANS-1,3-DICHLOROPROPENE	PA
EPA 8260 C	TRANS-1,4-DICHLORO-2-BUTENE	PA	EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 C	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA	EPA 8260 C	VINYL ACETATE	PA
EPA 8260 C	VINYL CHLORIDE	PA	EPA 8260 C	XYLENE (TOTAL)	PA
EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE (FREON 113)	PA	EPA 8260 C - EXTENDED	CYCLOHEXANONE	PA
EPA 8260 C - EXTENDED	DIIISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA	EPA 8260 C - EXTENDED	DIMETHYL ETHER	PA
EPA 8260 C - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA	EPA 8260 C - EXTENDED	METHYL ACETATE	PA
EPA 8260 C - EXTENDED	N-HEPTANE	PA	EPA 8260 C - EXTENDED	T-AMYL ALCOHOL (TAA)	PA
EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	PA	EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 C	1,2,4-TRICHLOROBENZENE	PA	EPA 8270 C	1,2-DICHLOROBENZENE	PA
EPA 8270 C	1,2-DIPHENYLHYDRAZINE	PA	EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 C	1,3-DICHLOROBENZENE	PA	EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 C	1,4-DICHLOROBENZENE	PA	EPA 8270 C	1,4-DINITROBENZENE	PA
EPA 8270 C	1,4-NAPHTHOQUINONE	PA	EPA 8270 C	1,4-PHENYLENEDIAMINE	PA
EPA 8270 C	1-CHLORONAPHTHALENE	PA	EPA 8270 C	1-NAPHTHYLAMINE	PA
EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	PA	EPA 8270 C	2,4,5-TRICHLOROPHENOL	PA
EPA 8270 C	2,4,6-TRICHLOROPHENOL	PA	EPA 8270 C	2,4-DICHLOROPHENOL	PA
EPA 8270 C	2,4-DIMETHYLPHENOL	PA	EPA 8270 C	2,4-DINITROPHENOL	PA
EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	PA	EPA 8270 C	2,6-DICHLOROPHENOL	PA
EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	PA	EPA 8270 C	2-ACETYLAMINOFLUORENE	PA
EPA 8270 C	2-CHLORONAPHTHALENE	PA	EPA 8270 C	2-CHLOROPHENOL	PA
EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA	EPA 8270 C	2-METHYLNAPHTHALENE	PA
EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	PA	EPA 8270 C	2-NAPHTHYLAMINE	PA

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Virginia Laboratory ID: 460182
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NON-POTABLE WATER

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EPA 8270 C	2-NITROANILINE	PA	EPA 8270 C	2-NITROPHENOL	PA
EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	PA	EPA 8270 C	3,3'-DICHLOROBENZIDINE	PA
EPA 8270 C	3,3'-DIMETHYLBENZIDINE	PA	EPA 8270 C	3-METHYLCHOLANTHRENE	PA
EPA 8270 C	3-METHYLPHENOL (M-CRESOL)	PA	EPA 8270 C	3-NITROANILINE	PA
EPA 8270 C	4,4'-METHYLENEBIS(2-CHLOROANILINE)	PA	EPA 8270 C	4-AMINOBIIPHENYL	PA
EPA 8270 C	4-BROMOPHENYL PHENYL ETHER	PA	EPA 8270 C	4-CHLORO-3-METHYLPHENOL	PA
EPA 8270 C	4-CHLOROANILINE	PA	EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	PA
EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	PA	EPA 8270 C	4-METHYLPHENOL (P-CRESOL)	PA
EPA 8270 C	4-NITROANILINE	PA	EPA 8270 C	4-NITROPHENOL	PA
EPA 8270 C	4-NITROQUINOLINE-1-OXIDE	PA	EPA 8270 C	5-NITRO-O-TOLUIDINE	PA
EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA	EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	PA
EPA 8270 C	ACENAPHTHENE	PA	EPA 8270 C	ACENAPHTHYLENE	PA
EPA 8270 C	ACETOPHENONE	PA	EPA 8270 C	ANILINE	PA
EPA 8270 C	ANTHRACENE	PA	EPA 8270 C	ARAMITE	PA
EPA 8270 C	BENZIDINE	PA	EPA 8270 C	BENZO(A)ANTHRACENE	PA
EPA 8270 C	BENZO(A)PYRENE	PA	EPA 8270 C	BENZO(B)FLUORANTHENE	PA
EPA 8270 C	BENZO(G,H,I)PERYLENE	PA	EPA 8270 C	BENZO(K)FLUORANTHENE	PA
EPA 8270 C	BENZOIC ACID	PA	EPA 8270 C	BENZYL ALCOHOL	PA
EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	PA	EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	PA
EPA 8270 C	BIS(2-CHLOROISOPROPYL) ETHER	PA	EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (D(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 C	BUTYL BENZYL PHTHALATE	PA	EPA 8270 C	CHLOROBENZILATE	PA
EPA 8270 C	CHRYSENE	PA	EPA 8270 C	DI-N-BUTYL PHTHALATE	PA
EPA 8270 C	DI-N-OCTYL PHTHALATE	PA	EPA 8270 C	DIALATE	PA
EPA 8270 C	DIBENZ(A, J) ACRIDINE	PA	EPA 8270 C	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 C	DIBENZOFURAN	PA	EPA 8270 C	DIETHYL PHTHALATE	PA
EPA 8270 C	DIMETHOATE	PA	EPA 8270 C	DIMETHYL PHTHALATE	PA
EPA 8270 C	DIPHENYLAMINE	PA	EPA 8270 C	DISULFOTON	PA
EPA 8270 C	ETHYL METHANESULFONATE	PA	EPA 8270 C	FAMPHUR	PA
EPA 8270 C	FLUORANTHENE	PA	EPA 8270 C	FLUORENE	PA
EPA 8270 C	HEXACHLOROBENZENE	PA	EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	PA	EPA 8270 C	HEXACHLOROETHANE	PA
EPA 8270 C	HEXACHLOROPROPENE	PA	EPA 8270 C	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 C	ISODRIN	PA	EPA 8270 C	ISOPHORONE	PA
EPA 8270 C	ISOSAFROLE	PA	EPA 8270 C	KEPONE	PA
EPA 8270 C	METHAPYRILENE	PA	EPA 8270 C	METHYL METHANESULFONATE	PA
EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	PA			

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Scope of Accreditation

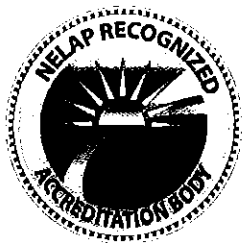
VELAP Certificate No.: 7991

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NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	PA	EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 C	N-NITROSODIETHYLAMINE	PA	EPA 8270 C	N-NITROSODIMETHYLAMINE	PA
EPA 8270 C	N-NITROSODIPHENYLAMINE	PA	EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 C	N-NITROSOMORPHOLINE	PA	EPA 8270 C	N-NITROSOPIPERIDINE	PA
EPA 8270 C	N-NITROSOPYRROLIDINE	PA	EPA 8270 C	NAPHTHALENE	PA
EPA 8270 C	NITROBENZENE	PA	EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA
EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	PA	EPA 8270 C	PARATHION (PARATHION - ETHYL)	PA
EPA 8270 C	PENTACHLOROBENZENE	PA	EPA 8270 C	PENTACHLORONITROBENZENE	PA
EPA 8270 C	PENTACHLOROPHENOL	PA	EPA 8270 C	PHENACETIN	PA
EPA 8270 C	PHENANTHRENE	PA	EPA 8270 C	PHENOL	PA
EPA 8270 C	PHORATE	PA	EPA 8270 C	PHTHALIC ANHYDRIDE	PA
EPA 8270 C	PRONAMIDE (KERB)	PA	EPA 8270 C	PYRENE	PA
EPA 8270 C	PYRIDINE	PA	EPA 8270 C	SAFROLE	PA
EPA 8270 C	THIONAZIN (ZINOPHOS)	PA	EPA 8270 C	THIOPHENOL (BENZENETHIOL)	PA
EPA 8270 C	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA	EPA 8270 C SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 C SIM	ACENAPHTHENE	PA	EPA 8270 C SIM	ACENAPHTHYLENE	PA
EPA 8270 C SIM	ANTHRACENE	PA	EPA 8270 C SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 C SIM	BENZO(A)PYRENE	PA	EPA 8270 C SIM	BENZO(B)FLUORANTHENE	PA
EPA 8270 C SIM	BENZO(G,H,I)PERYLENE	PA	EPA 8270 C SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 C SIM	CHRYSENE	PA	EPA 8270 C SIM	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 C SIM	FLUORANTHENE	PA	EPA 8270 C SIM	FLUORENE	PA
EPA 8270 C SIM	INDENO(1,2,3-CD) PYRENE	PA	EPA 8270 C SIM	NAPHTHALENE	PA
EPA 8270 C SIM	PHENANTHRENE	PA	EPA 8270 C SIM	PYRENE	PA
EPA 8270 C SIM - EXTENDED	1-METHYLNAPHTHALENE	PA	EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 D	1,2,4-TRICHLOROBENZENE	PA	EPA 8270 D	1,2-DICHLOROBENZENE	PA
EPA 8270 D	1,2-DIPHENYLHYDRAZINE	PA	EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 D	1,3-DICHLOROBENZENE	PA	EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 D	1,4-DICHLOROBENZENE	PA	EPA 8270 D	1,4-DINITROBENZENE	PA
EPA 8270 D	1,4-NAPHTHOQUINONE	PA	EPA 8270 D	1,4-PHENYLENEDIAMINE	PA
EPA 8270 D	1-CHLORONAPHTHALENE	PA	EPA 8270 D	1-NAPHTHYLAMINE	PA
EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	PA	EPA 8270 D	2,4,5-TRICHLOROPHENOL	PA
EPA 8270 D	2,4,6-TRICHLOROPHENOL	PA	EPA 8270 D	2,4-DICHLOROPHENOL	PA
EPA 8270 D	2,4-DIMETHYLPHENOL	PA	EPA 8270 D	2,4-DINITROPHENOL	PA
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	PA	EPA 8270 D	2,6-DICHLOROPHENOL	PA
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	PA	EPA 8270 D	2-ACETYLAMINOFUORENE	PA
EPA 8270 D	2-CHLORONAPHTHALENE	PA	EPA 8270 D	2-CHLOROPHENOL	PA



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EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA	EPA 8270 D	2-METHYLNAPHTHALENE	PA
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	PA	EPA 8270 D	2-NAPHTHYLAMINE	PA
EPA 8270 D	2-NITROANILINE	PA	EPA 8270 D	2-NITROPHENOL	PA
EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	PA	EPA 8270 D	3,3'-DICHLOROBENZIDINE	PA
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	PA	EPA 8270 D	3-METHYLCHOLANTHRENE	PA
EPA 8270 D	3-METHYLPHENOL (M-CRESOL)	PA	EPA 8270 D	3-NITROANILINE	PA
EPA 8270 D	4,4'-METHYLENEBIS(2-CHLOROANIL INE)	PA	EPA 8270 D	4-AMINOBIPHENYL	PA
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER	PA	EPA 8270 D	4-CHLORO-3-METHYLPHENOL	PA
EPA 8270 D	4-CHLOROANILINE	PA	EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	PA
EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	PA	EPA 8270 D	4-METHYLPHENOL (P-CRESOL)	PA
EPA 8270 D	4-NITROANILINE	PA	EPA 8270 D	4-NITROPHENOL	PA
EPA 8270 D	4-NITROQUINOLINE-1-OXIDE	PA	EPA 8270 D	5-NITRO-O-TOLUIDINE	PA
EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA	EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	PA
EPA 8270 D	ACENAPHTHENE	PA	EPA 8270 D	ACENAPHTHYLENE	PA
EPA 8270 D	ACETOPHENONE	PA	EPA 8270 D	ANILINE	PA
EPA 8270 D	ANTHRACENE	PA	EPA 8270 D	ARAMITE	PA
EPA 8270 D	BENZIDINE	PA	EPA 8270 D	BENZO(A)ANTHRACENE	PA
EPA 8270 D	BENZO(A)PYRENE	PA	EPA 8270 D	BENZO(B)FLUORANTHENE	PA
EPA 8270 D	BENZO(G,H,I)PERYLENE	PA	EPA 8270 D	BENZO(K)FLUORANTHENE	PA
EPA 8270 D	BENZOIC ACID	PA	EPA 8270 D	BENZYL ALCOHOL	PA
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	PA	EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	PA
EPA 8270 D	BIS(2-CHLOROISOPROPYL) ETHER	PA	EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (D(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 D	BUTYL BENZYL PHTHALATE	PA	EPA 8270 D	CHLOROBENZILATE	PA
EPA 8270 D	CHRYSENE	PA	EPA 8270 D	DI-N-BUTYL PHTHALATE	PA
EPA 8270 D	DI-N-OCTYL PHTHALATE	PA	EPA 8270 D	DIALATE	PA
EPA 8270 D	DIBENZ(A, J) ACRIDINE	PA	EPA 8270 D	DIBENZO(A, H) ANTHRACENE	PA
EPA 8270 D	DIBENZOFURAN	PA	EPA 8270 D	DIETHYL PHTHALATE	PA
EPA 8270 D	DIMETHOATE	PA	EPA 8270 D	DIMETHYL PHTHALATE	PA
EPA 8270 D	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA	EPA 8270 D	DIPHENYLAMINE	PA
EPA 8270 D	DISULFOTON	PA	EPA 8270 D	ETHYL METHANESULFONATE	PA
EPA 8270 D	FAMPHUR	PA	EPA 8270 D	FLUORANTHENE	PA
EPA 8270 D	FLUORENE	PA	EPA 8270 D	HEXACHLOROBENZENE	PA
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA	EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	PA
EPA 8270 D	HEXACHLOROETHANE	PA	EPA 8270 D	HEXACHLOROPROPENE	PA



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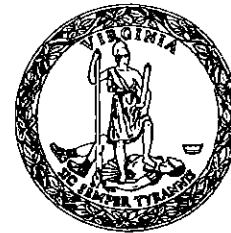
Virginia Laboratory ID: 460182
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NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	PA	EPA 8270 D	ISODRIN	PA
EPA 8270 D	ISOPHORONE	PA	EPA 8270 D	ISOSAFROLE	PA
EPA 8270 D	KEPONE	PA	EPA 8270 D	METHAPYRILENE	PA
EPA 8270 D	METHYL METHANESULFONATE	PA	EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	PA	EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 D	N-NITROSODIETHYLAMINE	PA	EPA 8270 D	N-NITROSODIMETHYLAMINE	PA
EPA 8270 D	N-NITROSODIPHENYLAMINE	PA	EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 D	N-NITROSOMORPHOLINE	PA	EPA 8270 D	N-NITROSOPIPERIDINE	PA
EPA 8270 D	N-NITROSOPYRROLIDINE	PA	EPA 8270 D	NAPHTHALENE	PA
EPA 8270 D	NITROBENZENE	PA	EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA
EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	PA	EPA 8270 D	PARATHION (PARATHION - ETHYL)	PA
EPA 8270 D	PENTACHLOROBENZENE	PA	EPA 8270 D	PENTACHLORONITROBENZENE	PA
EPA 8270 D	PENTACHLOROPHENOL	PA	EPA 8270 D	PHENACETIN	PA
EPA 8270 D	PHENANTHRENE	PA	EPA 8270 D	PHENOL	PA
EPA 8270 D	PHORATE	PA	EPA 8270 D	PHTHALIC ANHYDRIDE	PA
EPA 8270 D	PRONAMIDE (KERB)	PA	EPA 8270 D	PYRENE	PA
EPA 8270 D	SAFROLE	PA	EPA 8270 D	THIONAZIN (ZINOPHOS)	PA
EPA 8270 D	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA	EPA 8270 D - EXTENDED	1,1'-BIPHENYL	PA
EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	PA	EPA 8270 D - EXTENDED	ATRAZINE	PA
EPA 8270 D - EXTENDED	BENZALDEHYDE	PA	EPA 8270 D - EXTENDED	CAPROLACTAM	PA
EPA 8270 D - EXTENDED	CARBAZOLE	PA	EPA 8270 D - EXTENDED	PYRIDINE	PA
EPA 8270 D SIM	2-METHYLNAPHTHALENE	PA	EPA 8270 D SIM	ACENAPHTHENE	PA
EPA 8270 D SIM	ACENAPHTHYLENE	PA	EPA 8270 D SIM	ANTHRACENE	PA
EPA 8270 D SIM	BENZO(A)ANTHRACENE	PA	EPA 8270 D SIM	BENZO(A)PYRENE	PA
EPA 8270 D SIM	BENZO(B)FLUORANTHENE	PA	EPA 8270 D SIM	BENZO(G,H,I)PERYLENE	PA
EPA 8270 D SIM	BENZO(K)FLUORANTHENE	PA	EPA 8270 D SIM	CHRYSENE	PA
EPA 8270 D SIM	FLUORANTHENE	PA	EPA 8270 D SIM	FLUORENE	PA
EPA 8270 D SIM	INDENO(1,2,3-CD) PYRENE	PA	EPA 8270 D SIM	NAPHTHALENE	PA
EPA 8270 D SIM	PHENANTHRENE	PA	EPA 8270 D SIM	PYRENE	PA
EPA 8270 D SIM - EXTENDED	1-METHYLNAPHTHALENE	PA	EPA 8270 D SIM - EXTENDED	DIBENZO(A,H) PYRENE	PA
EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZ O-P-DIOXIN (OCDD)	PA	EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZ OFURAN (OCDF)	PA
EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZ O-P-DIOXIN (1,2,3,4,6,7,8-HPCDD)	PA	EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZ OFURAN (1,2,3,4,6,7,8-HPCDF)	PA
EPA 8290 A	1,2,3,4,7,8,9-HEPTACHLORODIBENZ OFURAN (1,2,3,4,7,8,9-HPCDF)	PA	EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZO-P -DIOXIN (1,2,3,4,7,8-HXCDD)	PA
EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZOF URAN (1,2,3,4,7,8-HXCDF)	PA	EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZO-P -DIOXIN(1,2,3,6,7,8-HXCDD)	PA



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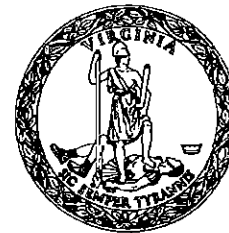
NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZOF URAN (1,2,3,6,7,8-HXCDF)	PA	EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,7,8,9-HXCDD)	PA
EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZOF URAN (1,2,3,7,8,9-HXCDF)	PA	EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN (1,2,3,7,8-PECDD)	PA
EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZOF URAN (1,2,3,7,8-PECDF)	PA	EPA 8290 A	2,3,4,6,7,8-HEXACHLORODIBENZOF URAN (2,3,4,6,7,8-HXCDF)	PA
EPA 8290 A	2,3,4,7,8-PENTACHLORODIBENZOF URAN	PA	EPA 8290 A	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD)	PA
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZOFUR AN (2,3,7,8-TCDF)	PA	EPA 8315 A	ACETALDEHYDE	PA
EPA 8315 A	BENZALDEHYDE	PA	EPA 8315 A	BUTYLALDEHYDE (BUTANAL)	PA
EPA 8315 A	CROTONALDEHYDE	PA	EPA 8315 A	FORMALDEHYDE	PA
EPA 8315 A	HEXANALDEHYDE (HEXANAL)	PA	EPA 8315 A	ISOVALERALDEHYDE	PA
EPA 8315 A	M-TOLUALDEHYDE	PA	EPA 8315 A	O-TOLUALDEHYDE	PA
EPA 8315 A	(1,3-TOLUALDEHYDE)		EPA 8315 A	(1,2-TOLUALDEHYDE)	
EPA 8315 A	P-TOLUALDEHYDE	PA	EPA 8315 A	PENTANAL (VALERALDEHYDE)	PA
EPA 8315 A	(1,4-TOLUALDEHYDE)				
EPA 8315 A	PROPIONALDEHYDE (PROPANAL)	PA	EPA 8330 A	1,3,5-TRINITROBENZENE	PA
EPA 8330 A	1,3-DINITROBENZENE (1,3-DNB)	PA	EPA 8330 A	(1,3,5-TNB)	
EPA 8330 A	2,4-DINITROTOLUENE (2,4-DNT)	PA	EPA 8330 A	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	PA
EPA 8330 A	2-AMINO-4,6-DINITROTOLUENE	PA	EPA 8330 A	(2,6-DNT)	
EPA 8330 A	(2-AM-DNT)		EPA 8330 A	2-NITROTOLUENE	PA
EPA 8330 A	3-NITROTOLUENE	PA	EPA 8330 A	4-AMINO-2,6-DINITROTOLUENE	PA
EPA 8330 A	4-NITROTOLUENE	PA	EPA 8330 A	(4-AM-DNT)	
EPA 8330 A	NITROBENZENE	PA	EPA 8330 A	METHYL-2,4,6-TRINITROPHENYLNIT RAMINE (TETRYL)	PA
EPA 8330 A	OCTAHYDRO-1,3,5,7-TETRANITRO-1 ,3,5,7-TETRAZOCINE (HMX)	PA	EPA 8330 A	NITROGLYCERIN	PA
EPA 9012 A	TOTAL CYANIDE	PA	EPA 8330 A	RDX	PA
EPA 9040 C	PH	PA	EPA 9012 B	(HEXAHYDRO-1,3,5-TRINITRO-1,3,5- TRIAZINE)	
EPA 9056 A	BROMIDE	PA	EPA 9012 B	TOTAL CYANIDE	PA
EPA 9056 A	FLUORIDE	PA	EPA 9050 A	CONDUCTIVITY	PA
EPA 9056 A	NITRITE	PA	EPA 9056 A	CHLORIDE	PA
EPA 9066	TOTAL PHENOLICS	PA	EPA 9056 A	NITRATE AS N	PA
OIA-1677-09	FREE CYANIDE	PA	EPA 9056 A	SULFATE	PA
RSK-175	ETHENE	PA	OIA-1677-09	AMENABLE CYANIDE	PA
SM 2120 B-2001	COLOR	PA	RSK-175	ETHANE	PA
SM 2320 B-1997	ALKALINITY AS CaCO3	PA	RSK-175	METHANE	PA
SM 2510 B-1997	CONDUCTIVITY	PA	SM 2310 B-1997	ACIDITY, AS CaCO3	PA
SM 2540 C-1997	RESIDUE-FILTERABLE (TDS)	PA	SM 2340 C-1997	TOTAL HARDNESS AS CaCO3	PA
SM 2540 F-1997	RESIDUE-SETTLEABLE	PA	SM 2540 B-1997	RESIDUE-TOTAL	PA
SM 4500-F B-1997	FLUORIDE	PA	SM 2540 D-1997	RESIDUE-NONFILTERABLE (TSS)	PA
			SM 3500-CR B-2009	CHROMIUM VI	PA
			SM 4500-F C-1997	FLUORIDE	PA

This Scope of Accreditation must accompany the Certificate issued by Virginia DCLS with the same Certificate Number indicated above.



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NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
SM 4500-NH3 B-1997	AMMONIA AS N	PA	SM 4500-NH3 D-1997	AMMONIA AS N	PA
SM 4500-P E-1999	ORTHOPHOSPHATE AS P	PA	SM 4500-P F-1999	PHOSPHORUS, TOTAL	PA
SM 4500-S2 ⁻ D-2000	SULFIDE	PA	SM 4500-SIO2 C-1997	SILICA AS SIO2	PA
SM 5210 B-2001	BIOCHEMICAL OXYGEN DEMAND	PA	SM 5210 B-2001	CARBONACEOUS BOD, CBOD	PA
SM 5310 C-2000	TOTAL ORGANIC CARBON	PA	SM 5540 C-2000	SURFACTANTS - MBAS	PA
SM 9222 D-1997	FECAL COLIFORMS	PA			

SOLID AND CHEMICAL MATERIALS

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 1010 A	FLASHPOINT	PA	EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	PA
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	PA	EPA 1668 A	2,2',3,3',4,4',5,5',6'-NONACHLOROBIPHENYL (BZ-206)	PA
EPA 1668 A	2,2',3,3',4,4',5,5',6'-OCTACHLOROBIPHENYL (BZ-194)	PA	EPA 1668 A	2,2',3,3',4,4',5,6'-OCTACHLOROBIPHENYL (BZ-196)	PA
EPA 1668 A	2,2',3,3',4,4',5,6,6'-NONACHLOROBIPHENYL (BZ-207)	PA	EPA 1668 A	2,2',3,3',4,4',5,6-OCTACHLOROBIPHENYL BZ-195)	PA
EPA 1668 A	2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL (BZ-170)	PA	EPA 1668 A	2,2',3,3',4,4',6,6'-OCTACHLOROBIPHENYL (BZ-197)	PA
EPA 1668 A	2,2',3,3',4,4',6-HEPTACHLOROBIPHENYL (BZ-171)	PA	EPA 1668 A	2,2',3,3',4,4'-HEXACHLOROBIPHENYL (BZ-128)	PA
EPA 1668 A	2,2',3,3',4,5,6'-HEPTACHLOROBIPHENYL (BZ-177)	PA	EPA 1668 A	2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL (BZ-201)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-175)	PA	EPA 1668 A	2,2',3,3',4,5'-HEXACHLOROBIPHENYL (BZ-130)	PA
EPA 1668 A	2,2',3,3',4,5,5',6'-OCTACHLOROBIPHENYL (BZ-199)	PA	EPA 1668 A	2,2',3,3',4,5,5',6'-NONACHLOROBIPHENYL (BZ-208)	PA
EPA 1668 A	2,2',3,3',4,5,5',6-OCTACHLOROBIPHENYL (BZ-198)	PA	EPA 1668 A	2,2',3,3',4,5,5'-HEPTACHLOROBIPHENYL (BZ-172)	PA
EPA 1668 A	2,2',3,3',4,5,6'-HEPTACHLOROBIPHENYL (BZ-174)	PA	EPA 1668 A	2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL (BZ-200)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-173)	PA	EPA 1668 A	2,2',3,3',4,5-HEXACHLOROBIPHENYL (BZ-129)	PA
EPA 1668 A	2,2',3,3',4,6'-HEXACHLOROBIPHENYL (BZ-132)	PA	EPA 1668 A	2,2',3,3',4,6,6'-HEPTACHLOROBIPHENYL (BZ-176)	PA
EPA 1668 A	2,2',3,3',4,6-HEXACHLOROBIPHENYL (BZ-131)	PA	EPA 1668 A	2,2',3,3',4-PENTACHLOROBIPHENYL (BZ-82)	PA
EPA 1668 A	2,2',3,3',5,5',6,6'-OCTACHLOROBIPHENYL (BZ-202)	PA	EPA 1668 A	2,2',3,3',5,5',6-HEPTACHLOROBIPHENYL (BZ-178)	PA
EPA 1668 A	2,2',3,3',5,5'-HEXACHLOROBIPHENYL (BZ-133)	PA	EPA 1668 A	2,2',3,3',5,6'-HEXACHLOROBIPHENYL (BZ-135)	PA
EPA 1668 A	2,2',3,3',5,6,6'-HEPTACHLOROBIPHENYL (BZ-179)	PA	EPA 1668 A	2,2',3,3',5,6-HEXACHLOROBIPHENYL (BZ-134)	PA
EPA 1668 A	2,2',3,3',5-PENTACHLOROBIPHENYL (BZ-83)	PA	EPA 1668 A	2,2',3,3',6,6'-HEXACHLOROBIPHENYL (BZ-136)	PA
EPA 1668 A	2,2',3,3',6-PENTACHLOROBIPHENYL (BZ-84)	PA	EPA 1668 A	2,2',3,3',3-TETRACHLOROBIPHENYL (BZ-40)	PA



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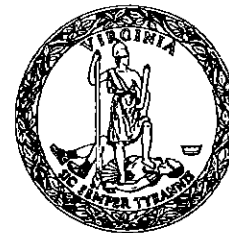
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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,2',3,4',5',6'-HEXACHLOROBIPHENYL (BZ-149)	PA	EPA 1668 A	2,2',3,4',5'-PENTACHLOROBIPHENYL (BZ-97)	PA
EPA 1668 A	2,2',3,4',5',6'-HEPTACHLOROBIPHENYL (BZ-187)	PA	EPA 1668 A	2,2',3,4',5,5'-HEXACHLOROBIPHENYL (BZ-146)	PA
EPA 1668 A	2,2',3,4',5',6'-HEXACHLOROBIPHENYL (BZ-148)	PA	EPA 1668 A	2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL (BZ-188)	PA
EPA 1668 A	2,2',3,4',5,6'-HEXACHLOROBIPHENYL (BZ-147)	PA	EPA 1668 A	2,2',3,4',5'-PENTACHLOROBIPHENYL (BZ-90)	PA
EPA 1668 A	2,2',3,4',6'-PENTACHLOROBIPHENYL (BZ-98)	PA	EPA 1668 A	2,2',3,4',6,6'-HEXACHLOROBIPHENYL (BZ-150)	PA
EPA 1668 A	2,2',3,4',6'-PENTACHLOROBIPHENYL (BZ-91)	PA	EPA 1668 A	2,2',3,4'-TETRACHLOROBIPHENYL (BZ-42)	PA
EPA 1668 A	2,2',3,4,4',5',6'-HEPTACHLOROBIPHENYL (BZ-183)	PA	EPA 1668 A	2,2',3,4,4',5'-HEXACHLOROBIPHENYL (BZ-138)	PA
EPA 1668 A	2,2',3,4,4',5,5',6'-OCTACHLOROBIPHENYL (BZ-203)	PA	EPA 1668 A	2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-180)	PA
EPA 1668 A	2,2',3,4,4',5,6'-HEPTACHLOROBIPHENYL (BZ-182)	PA	EPA 1668 A	2,2',3,4,4',5,6,6'-OCTACHLOROBIPHENYL (BZ-204)	PA
EPA 1668 A	2,2',3,4,4',5,6'-HEPTACHLOROBIPHENYL (BZ-181)	PA	EPA 1668 A	2,2',3,4,4',5'-HEXACHLOROBIPHENYL (BZ-137)	PA
EPA 1668 A	2,2',3,4,4',6'-HEXACHLOROBIPHENYL (BZ-140)	PA	EPA 1668 A	2,2',3,4,4',6,6'-HEPTACHLOROBIPHENYL (BZ-184)	PA
EPA 1668 A	2,2',3,4,4',6'-HEXACHLOROBIPHENYL (BZ-139)	PA	EPA 1668 A	2,2',3,4,4'-PENTACHLOROBIPHENYL (BZ-85)	PA
EPA 1668 A	2,2',3,4,5',6'-HEXACHLOROBIPHENYL (BZ-144)	PA	EPA 1668 A	2,2',3,4,5'-PENTACHLOROBIPHENYL (BZ-87)	PA
EPA 1668 A	2,2',3,4,5,5',6'-HEPTACHLOROBIPHENYL (BZ-185)	PA	EPA 1668 A	2,2',3,4,5,5'-HEXACHLOROBIPHENYL (BZ-141)	PA
EPA 1668 A	2,2',3,4,5,6'-HEXACHLOROBIPHENYL (BZ-143)	PA	EPA 1668 A	2,2',3,4,5,6,6'-HEPTACHLOROBIPHENYL (BZ-186)	PA
EPA 1668 A	2,2',3,4,5,6'-HEXACHLOROBIPHENYL (BZ-142)	PA	EPA 1668 A	2,2',3,4,5'-PENTACHLOROBIPHENYL (BZ-86)	PA
EPA 1668 A	2,2',3,4,6'-PENTACHLOROBIPHENYL (BZ-89)	PA	EPA 1668 A	2,2',3,4,6,6'-HEXACHLOROBIPHENYL (BZ-145)	PA
EPA 1668 A	2,2',3,4,6'-PENTACHLOROBIPHENYL (BZ-88)	PA	EPA 1668 A	2,2',3,4'-TETRACHLOROBIPHENYL (BZ-41)	PA
EPA 1668 A	2,2',3,5',6'-PENTACHLOROBIPHENYL (BZ-95)	PA	EPA 1668 A	2,2',3,5'-TETRACHLOROBIPHENYL (BZ-44)	PA
EPA 1668 A	2,2',3,5,5',6'-HEXACHLOROBIPHENYL (BZ-151)	PA	EPA 1668 A	2,2',3,5,5'-PENTACHLOROBIPHENYL (BZ-92)	PA
EPA 1668 A	2,2',3,5,6'-PENTACHLOROBIPHENYL (BZ-94)	PA	EPA 1668 A	2,2',3,5,6,6'-HEXACHLOROBIPHENYL (BZ-152)	PA
EPA 1668 A	2,2',3,5,6'-PENTACHLOROBIPHENYL (BZ-93)	PA	EPA 1668 A	2,2',3,5'-TETRACHLOROBIPHENYL (BZ-43)	PA
EPA 1668 A	2,2',3,6'-TETRACHLOROBIPHENYL (BZ-46)	PA	EPA 1668 A	2,2',3,6,6'-PENTACHLOROBIPHENYL (BZ-96)	PA
EPA 1668 A	2,2',3,6'-TETRACHLOROBIPHENYL (BZ-45)	PA	EPA 1668 A	2,2',3-TRICHLOROBIPHENYL (BZ-16)	PA
EPA 1668 A	2,2',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-153)	PA	EPA 1668 A	2,2',4,4',5,6'-HEXACHLOROBIPHENYL (BZ-154)	PA



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EPA 1668 A	2,2',4,4',5-PENTACHLOROBIPHENYL (BZ-99)	PA	EPA 1668 A	2,2',4,4',6,6'-HEXACHLOROBIPHENYL (BZ-155)	PA
EPA 1668 A	2,2',4,4',6-PENTACHLOROBIPHENYL (BZ-100)	PA	EPA 1668 A	2,2',4,4'-TETRACHLOROBIPHENYL (BZ-47)	PA
EPA 1668 A	2,2',4,5',6-PENTACHLOROBIPHENYL (BZ-103)	PA	EPA 1668 A	2,2',4,5'-TETRACHLOROBIPHENYL (BZ-49)	PA
EPA 1668 A	2,2',4,5,5'-PENTACHLOROBIPHENYL (BZ-101)	PA	EPA 1668 A	2,2',4,5,6'-PENTACHLOROBIPHENYL (BZ-102)	PA
EPA 1668 A	2,2',4,5-TETRACHLOROBIPHENYL (BZ-48)	PA	EPA 1668 A	2,2',4,6-TETRACHLOROBIPHENYL (BZ-51)	PA
EPA 1668 A	2,2',4,6,6'-PENTACHLOROBIPHENYL (BZ-104)	PA	EPA 1668 A	2,2',4,6-TETRACHLOROBIPHENYL (BZ-50)	PA
EPA 1668 A	2,2',4-TRICHLOROBIPHENYL (BZ-17)	PA	EPA 1668 A	2,2',5,5'-TETRACHLOROBIPHENYL (BZ-52)	PA
EPA 1668 A	2,2',5,6'-TETRACHLOROBIPHENYL (BZ-53)	PA	EPA 1668 A	2,2',5-TRICHLOROBIPHENYL (BZ-18)	PA
EPA 1668 A	2,2',6,6'-TETRACHLOROBIPHENYL (BZ-54)	PA	EPA 1668 A	2,2',6-TRICHLOROBIPHENYL (BZ-19)	PA
EPA 1668 A	2,2'-DICHLOROBIPHENYL (BZ-4)	PA	EPA 1668 A	2,3',4',5',6-PENTACHLOROBIPHENYL (BZ-125)	PA
EPA 1668 A	2,3',4',5-TETRACHLOROBIPHENYL (BZ-76)	PA	EPA 1668 A	2,3',4',5,5'-PENTACHLOROBIPHENYL (BZ-124)	PA
EPA 1668 A	2,3',4',5-TETRACHLOROBIPHENYL (BZ-70)	PA	EPA 1668 A	2,3',4',6-TETRACHLOROBIPHENYL (BZ-71)	PA
EPA 1668 A	2,3',4-TRICHLOROBIPHENYL (BZ-33)	PA	EPA 1668 A	2,3',4,4',5',6-HEXACHLOROBIPHENYL (BZ-168)	PA
EPA 1668 A	2,3',4,4',5'-PENTACHLOROBIPHENYL (BZ-123)	PA	EPA 1668 A	2,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-167)	PA
EPA 1668 A	2,3',4,4',5-PENTACHLOROBIPHENYL (BZ-118)	PA	EPA 1668 A	2,3',4,4',6-PENTACHLOROBIPHENYL (BZ-119)	PA
EPA 1668 A	2,3',4,4'-TETRACHLOROBIPHENYL (BZ-66)	PA	EPA 1668 A	2,3',4,5',6-PENTACHLOROBIPHENYL (BZ-121)	PA
EPA 1668 A	2,3',4,5-TETRACHLOROBIPHENYL (BZ-68)	PA	EPA 1668 A	2,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-120)	PA
EPA 1668 A	2,3',4,5-TETRACHLOROBIPHENYL (BZ-67)	PA	EPA 1668 A	2,3',4,6-TETRACHLOROBIPHENYL (BZ-69)	PA
EPA 1668 A	2,3',4-TRICHLOROBIPHENYL (BZ-25)	PA	EPA 1668 A	2,3',5',6-TETRACHLOROBIPHENYL (BZ-73)	PA
EPA 1668 A	2,3',5-TRICHLOROBIPHENYL (BZ-34)	PA	EPA 1668 A	2,3',5,5'-TETRACHLOROBIPHENYL (BZ-72)	PA
EPA 1668 A	2,3',5-TRICHLOROBIPHENYL (BZ-26)	PA	EPA 1668 A	2,3',6-TRICHLOROBIPHENYL (BZ-27)	PA
EPA 1668 A	2,3'-DICHLOROBIPHENYL (BZ-6)	PA	EPA 1668 A	2,3,3',4',5',6-HEXACHLOROBIPHENYL (BZ-164)	PA
EPA 1668 A	2,3,3',4',5'-PENTACHLOROBIPHENYL (BZ-122)	PA	EPA 1668 A	2,3,3',4',5,5',6-HEPTACHLOROBIPHENYL (BZ-193)	PA
EPA 1668 A	2,3,3',4',5,5'-HEXACHLOROBIPHENYL (BZ-162)	PA	EPA 1668 A	2,3,3',4',5,6-HEXACHLOROBIPHENYL (BZ-163)	PA
EPA 1668 A	2,3,3',4',5-PENTACHLOROBIPHENYL (BZ-107)	PA	EPA 1668 A	2,3,3',4',6-PENTACHLOROBIPHENYL (BZ-110)	PA



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EPA 1668 A	2,3,3',4'-TETRACHLOROBIPHENYL (BZ-56)	PA	EPA 1668 A	2,3,3',4,4',5,5',6-HEPTACHLOROBIPHE NYL (BZ-191)	PA
EPA 1668 A	2,3,3',4,4',5'-HEXACHLOROBIPHENY L (BZ-157)	PA	EPA 1668 A	2,3,3',4,4',5,5',6-OCTACHLOROBIPHE NYL (BZ-205)	PA
EPA 1668 A	2,3,3',4,4',5'-HEPTACHLOROBIPHE NYL (BZ-189)	PA	EPA 1668 A	2,3,3',4,4',5,6-HEPTACHLOROBIPHE NYL (BZ-190)	PA
EPA 1668 A	2,3,3',4,4',5-HEXACHLOROBIPHENYL (BZ-156)	PA	EPA 1668 A	2,3,3',4,4',6-HEXACHLOROBIPHENYL (BZ-158)	PA
EPA 1668 A	2,3,3',4,4'-PENTACHLOROBIPHENYL (BZ-105)	PA	EPA 1668 A	2,3,3',4,5,6-HEXACHLOROBIPHENYL (BZ-161)	PA
EPA 1668 A	2,3,3',4,4',5-PENTACHLOROBIPHENYL (BZ-108)	PA	EPA 1668 A	2,3,3',4,5,5',6-HEPTACHLOROBIPHE NYL (BZ-192)	PA
EPA 1668 A	2,3,3',4,5,5'-HEXACHLOROBIPHENYL (BZ-159)	PA	EPA 1668 A	2,3,3',4,5,6-HEXACHLOROBIPHENYL (BZ-160)	PA
EPA 1668 A	2,3,3',4,5-PENTACHLOROBIPHENYL (BZ-106)	PA	EPA 1668 A	2,3,3',4,6-PENTACHLOROBIPHENYL (BZ-109)	PA
EPA 1668 A	2,3,3',4-TETRACHLOROBIPHENYL (BZ-55)	PA	EPA 1668 A	2,3,3',5,6-PENTACHLOROBIPHENYL (BZ-113)	PA
EPA 1668 A	2,3,3',5-TETRACHLOROBIPHENYL (BZ-58)	PA	EPA 1668 A	2,3,3',5,5',6-HEXACHLOROBIPHENYL (BZ-165)	PA
EPA 1668 A	2,3,3',5,5'-PENTACHLOROBIPHENYL (BZ-111)	PA	EPA 1668 A	2,3,3',5,6-PENTACHLOROBIPHENYL (BZ-112)	PA
EPA 1668 A	2,3,3',5-TETRACHLOROBIPHENYL (BZ-57)	PA	EPA 1668 A	2,3,3',6-TETRACHLOROBIPHENYL (BZ-59)	PA
EPA 1668 A	2,3,3'-TRICHLOROBIPHENYL (BZ-20)	PA	EPA 1668 A	2,3,4',5,6-PENTACHLOROBIPHENYL (BZ-117)	PA
EPA 1668 A	2,3,4',5-TETRACHLOROBIPHENYL (BZ-63)	PA	EPA 1668 A	2,3,4',6-TETRACHLOROBIPHENYL (BZ-64)	PA
EPA 1668 A	2,3,4'-TRICHLOROBIPHENYL (BZ-22)	PA	EPA 1668 A	2,3,4,4',5,6-HEXACHLOROBIPHENYL (BZ-166)	PA
EPA 1668 A	2,3,4,4',5-PENTACHLOROBIPHENYL (BZ-114)	PA	EPA 1668 A	2,3,4,4',6-PENTACHLOROBIPHENYL (BZ-115)	PA
EPA 1668 A	2,3,4,4'-TETRACHLOROBIPHENYL (BZ-60)	PA	EPA 1668 A	2,3,4,5,6-PENTACHLOROBIPHENYL (BZ-116)	PA
EPA 1668 A	2,3,4,5-TETRACHLOROBIPHENYL (BZ-61)	PA	EPA 1668 A	2,3,4,6-TETRACHLOROBIPHENYL (BZ-62)	PA
EPA 1668 A	2,3,4-TRICHLOROBIPHENYL (BZ-21)	PA	EPA 1668 A	2,3,5,6-TETRACHLOROBIPHENYL (BZ-65)	PA
EPA 1668 A	2,3,5-TRICHLOROBIPHENYL (BZ-23)	PA	EPA 1668 A	2,3,6-TRICHLOROBIPHENYL (BZ-24)	PA
EPA 1668 A	2,3-DICHLOROBIPHENYL (BZ-5)	PA	EPA 1668 A	2,4',5-TRICHLOROBIPHENYL (BZ-31)	PA
EPA 1668 A	2,4',6-TRICHLOROBIPHENYL (BZ-32)	PA	EPA 1668 A	2,4'-DICHLOROBIPHENYL (BZ-8)	PA
EPA 1668 A	2,4,4',5-TETRACHLOROBIPHENYL (BZ-74)	PA	EPA 1668 A	2,4,4',6-TETRACHLOROBIPHENYL (BZ-75)	PA
EPA 1668 A	2,4,4'-TRICHLOROBIPHENYL (BZ-28)	PA	EPA 1668 A	2,4,5-TRICHLOROBIPHENYL (BZ-29)	PA
EPA 1668 A	2,4,6-TRICHLOROBIPHENYL (BZ-30)	PA	EPA 1668 A	2,4-DICHLOROBIPHENYL (BZ-7)	PA
EPA 1668 A	2,5-DICHLOROBIPHENYL (BZ-9)	PA	EPA 1668 A	2,6-DICHLOROBIPHENYL (BZ-10)	PA
EPA 1668 A	2-CHLOROBIPHENYL (BZ-1)	PA	EPA 1668 A	3,3',4,4',5,5'-HEXACHLOROBIPHENY L (BZ-169)	PA



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EPA 1668 A	3,3',4,4',5-PENTACHLOROBIPHENYL (BZ-126)	PA	EPA 1668 A	3,3',4,4'-TETRACHLOROBIPHENYL (BZ-77)	PA
EPA 1668 A	3,3',4,5'-TETRACHLOROBIPHENYL (BZ-79)	PA	EPA 1668 A	3,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-127)	PA
EPA 1668 A	3,3',4,5-TETRACHLOROBIPHENYL (BZ-78)	PA	EPA 1668 A	3,3',4-TRICHLOROBIPHENYL (BZ-35)	PA
EPA 1668 A	3,3',5,5'-TETRACHLOROBIPHENYL (BZ-80)	PA	EPA 1668 A	3,3',5-TRICHLOROBIPHENYL (BZ-36)	PA
EPA 1668 A	3,3'-DICHLOROBIPHENYL (BZ-11)	PA	EPA 1668 A	3,4',5-TRICHLOROBIPHENYL (BZ-39)	PA
EPA 1668 A	3,4'-DICHLOROBIPHENYL (BZ-13)	PA	EPA 1668 A	3,4,4',5-TETRACHLOROBIPHENYL (BZ-81)	PA
EPA 1668 A	3,4,4'-TRICHLOROBIPHENYL (BZ-37)	PA	EPA 1668 A	3,4,5-TRICHLOROBIPHENYL (BZ-38)	PA
EPA 1668 A	3,4-DICHLOROBIPHENYL (BZ-12)	PA	EPA 1668 A	3,5-DICHLOROBIPHENYL (BZ-14)	PA
EPA 1668 A	3-CHLOROBIPHENYL (BZ-2)	PA	EPA 1668 A	4,4'-DICHLOROBIPHENYL (BZ-15)	PA
EPA 1668 A	4-CHLOROBIPHENYL (BZ-3)	PA	EPA 1668 A	DECACHLOROBIPHENYL (BZ-209)	PA
EPA 3050 B	PREP: ACID DIGESTION OF SEDIMENTS, SLUDGES, AND SOILS	PA	EPA 3540 C	PREP: SOXHLET EXTRACTION	PA
EPA 3546	PREP: MICROWAVE EXTRACTION	PA	EPA 3550 B	PREP: ULTRASONIC EXTRACTION	PA
EPA 3620 B	PREP: FLORISIL CLEANUP	PA	EPA 3630 C	PREP: SILICA GEL CLEANUP	PA
EPA 3640 A	PREP: GEL PERMEATION CLEANUP	PA	EPA 3660 B	PREP: SULFUR CLEANUP	PA
EPA 3665 A	SULFURIC ACID/PERMANGANATE CLEANUP	PA	EPA 5030 B	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	PA
EPA 5035	PREP: CLOSED-SYSTEM PURGE AND TRAP AND EXTRACTION	PA	EPA 6010 B	ALUMINUM	PA
EPA 6010 B	ANTIMONY	PA	EPA 6010 B	ARSENIC	PA
EPA 6010 B	BARIUM	PA	EPA 6010 B	BERYLLIUM	PA
EPA 6010 B	BORON	PA	EPA 6010 B	CADMIUM	PA
EPA 6010 B	CALCIUM	PA	EPA 6010 B	CHROMIUM	PA
EPA 6010 B	COBALT	PA	EPA 6010 B	COPPER	PA
EPA 6010 B	IRON	PA	EPA 6010 B	LEAD	PA
EPA 6010 B	MAGNESIUM	PA	EPA 6010 B	MANGANESE	PA
EPA 6010 B	MOLYBDENUM	PA	EPA 6010 B	NICKEL	PA
EPA 6010 B	POTASSIUM	PA	EPA 6010 B	SELENIUM	PA
EPA 6010 B	SILVER	PA	EPA 6010 B	SODIUM	PA
EPA 6010 B	STRONTIUM	PA	EPA 6010 B	THALLIUM	PA
EPA 6010 B	TIN	PA	EPA 6010 B	TITANIUM	PA
EPA 6010 B	VANADIUM	PA	EPA 6010 B	ZINC	PA
EPA 6010 B - EXTENDED	ZIRCONIUM	PA	EPA 6010 C	ALUMINUM	PA
EPA 6010 C	ANTIMONY	PA	EPA 6010 C	ARSENIC	PA
EPA 6010 C	BARIUM	PA	EPA 6010 C	BERYLLIUM	PA
EPA 6010 C	BORON	PA	EPA 6010 C	CADMIUM	PA
EPA 6010 C	CALCIUM	PA	EPA 6010 C	CHROMIUM	PA
EPA 6010 C	COBALT	PA	EPA 6010 C	COPPER	PA

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EPA 6010 C	IRON	PA	EPA 6010 C	LEAD	PA
EPA 6010 C	MAGNESIUM	PA	EPA 6010 C	MANGANESE	PA
EPA 6010 C	MOLYBDENUM	PA	EPA 6010 C	NICKEL	PA
EPA 6010 C	POTASSIUM	PA	EPA 6010 C	SELENIUM	PA
EPA 6010 C	SILVER	PA	EPA 6010 C	SODIUM	PA
EPA 6010 C	STRONTIUM	PA	EPA 6010 C	THALLIUM	PA
EPA 6010 C	TIN	PA	EPA 6010 C	TITANIUM	PA
EPA 6010 C	VANADIUM	PA	EPA 6010 C	ZINC	PA
EPA 6010 C - EXTENDED	ZIRCONIUM	PA	EPA 6020 A	ALUMINUM	PA
EPA 6020 A	ANTIMONY	PA	EPA 6020 A	ARSENIC	PA
EPA 6020 A	BERYLLIUM	PA	EPA 6020 A	CADMIUM	PA
EPA 6020 A	CALCIUM	PA	EPA 6020 A	CHROMIUM	PA
EPA 6020 A	COBALT	PA	EPA 6020 A	COPPER	PA
EPA 6020 A	IRON	PA	EPA 6020 A	LEAD	PA
EPA 6020 A	MAGNESIUM	PA	EPA 6020 A	MANGANESE	PA
EPA 6020 A	NICKEL	PA	EPA 6020 A	POTASSIUM	PA
EPA 6020 A	SELENIUM	PA	EPA 6020 A	SILVER	PA
EPA 6020 A	SODIUM	PA	EPA 6020 A	THALLIUM	PA
EPA 6020 A	VANADIUM	PA	EPA 6020 A	ZINC	PA
EPA 6020 A - EXTENDED	BORON	PA	EPA 6020 A - EXTENDED	STRONTIUM	PA
EPA 6020 A - EXTENDED	TIN	PA	EPA 6020 A - EXTENDED	TITANIUM	PA
EPA 6850	PERCHLORATE	PA	EPA 7196 A	CHROMIUM VI	PA
EPA 7471 A	MERCURY	PA	EPA 7471 B	MERCURY	PA
EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	PA	EPA 8015 B	ETHANOL	PA
EPA 8015 B	ETHYLENE GLYCOL	PA	EPA 8015 B	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8015 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA	EPA 8015 B	METHANOL	PA
EPA 8015 C	ETHANOL	PA	EPA 8015 C	ETHYLENE GLYCOL	PA
EPA 8015 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA	EPA 8015 C	METHANOL	PA
EPA 8021 B	BENZENE	PA	EPA 8021 B	ETHYLBENZENE	PA
EPA 8021 B	ISOPROPYLBENZENE	PA	EPA 8021 B	M+P-XYLENE	PA
EPA 8021 B	NAPHTHALENE	PA	EPA 8021 B	O-XYLENE	PA
EPA 8021 B	TOLUENE	PA	EPA 8021 B	XYLENE (TOTAL)	PA
EPA 8021 B - EXTENDED	METHYL TERT-BUTYL ETHER (MTBE)	PA	EPA 8081 A	4,4'-DDD	PA
EPA 8081 A	4,4'-DDE	PA	EPA 8081 A	4,4'-DDT	PA
EPA 8081 A	ALDRIN	PA	EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA



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EPA 8081 A	ALPHA-CHLORDANE [CIS-CHLORDANE]	PA	EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXAN E)	PA
EPA 8081 A	CHLORDANE (TECH.)	PA	EPA 8081 A	DELTA-BHC	PA
EPA 8081 A	DIELDRIN	PA	EPA 8081 A	ENDOSULFAN I	PA
EPA 8081 A	ENDOSULFAN II	PA	EPA 8081 A	ENDOSULFAN SULFATE	PA
EPA 8081 A	ENDRIN	PA	EPA 8081 A	ENDRIN ALDEHYDE	PA
EPA 8081 A	ENDRIN KETONE	PA	EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXA NE)	PA
EPA 8081 A	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	PA	EPA 8081 A	HEPTACHLOR	PA
EPA 8081 A	HEPTACHLOR EPOXIDE	PA	EPA 8081 A	METHOXYCHLOR	PA
EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	PA	EPA 8081 B	4,4'-DDD	PA
EPA 8081 B	4,4'-DDE	PA	EPA 8081 B	4,4'-DDT	PA
EPA 8081 B	ALDRIN	PA	EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXA NE)	PA
EPA 8081 B	ALPHA-CHLORDANE [CIS-CHLORDANE]	PA	EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXAN E)	PA
EPA 8081 B	CHLORDANE (TECH.)	PA	EPA 8081 B	DELTA-BHC	PA
EPA 8081 B	DIELDRIN	PA	EPA 8081 B	ENDOSULFAN I	PA
EPA 8081 B	ENDOSULFAN II	PA	EPA 8081 B	ENDOSULFAN SULFATE	PA
EPA 8081 B	ENDRIN	PA	EPA 8081 B	ENDRIN ALDEHYDE	PA
EPA 8081 B	ENDRIN KETONE	PA	EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXA NE)	PA
EPA 8081 B	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	PA	EPA 8081 B	HEPTACHLOR	PA
EPA 8081 B	HEPTACHLOR EPOXIDE	PA	EPA 8081 B	METHOXYCHLOR	PA
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	PA	EPA 8081 B - EXTENDED	KEPONE	PA
EPA 8081 B - EXTENDED	MIREX	PA	EPA 8082 - OIL A	AROCLOR-1016 (PCB-1016)	PA
EPA 8082 - OIL A	AROCLOR-1221 (PCB-1221)	PA	EPA 8082 - OIL A	AROCLOR-1232 (PCB-1232)	PA
EPA 8082 - OIL A	AROCLOR-1242 (PCB-1242)	PA	EPA 8082 - OIL A	AROCLOR-1248 (PCB-1248)	PA
EPA 8082 - OIL A	AROCLOR-1254 (PCB-1254)	PA	EPA 8082 - OIL A	AROCLOR-1260 (PCB-1260)	PA
EPA 8082 A	AROCLOR-1016 (PCB-1016)	PA	EPA 8082 A	AROCLOR-1221 (PCB-1221)	PA
EPA 8082 A	AROCLOR-1232 (PCB-1232)	PA	EPA 8082 A	AROCLOR-1242 (PCB-1242)	PA
EPA 8082 A	AROCLOR-1248 (PCB-1248)	PA	EPA 8082 A	AROCLOR-1254 (PCB-1254)	PA
EPA 8082 A	AROCLOR-1260 (PCB-1260)	PA	EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	PA
EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	PA	EPA 8141 A	ATRAZINE	PA

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EPA 8141 A	BOLSTAR (SULPROFOS)	PA	EPA 8141 A	CHLORPYRIFOS	PA
EPA 8141 A	COUMAPHOS	PA	EPA 8141 A	DEMETON-O	PA
EPA 8141 A	DEMETON-S	PA	EPA 8141 A	DIAZINON	PA
EPA 8141 A	DICHLOROVOS (DDVP, DICHLORVOS)	PA	EPA 8141 A	DISULFOTON	PA
EPA 8141 A	EPN (PHOSPHONOTHIOIC ACID, PHENYL- O-ETHYL O- (P-NITROPHENYL) ESTER)	PA	EPA 8141 A	ETHION	PA
EPA 8141 A	ETHOPROP	PA	EPA 8141 A	FAMPHUR	PA
EPA 8141 A	FENSULFOTHION	PA	EPA 8141 A	FENTHION	PA
EPA 8141 A	MALATHION	PA	EPA 8141 A	MERPHOS	PA
EPA 8141 A	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8141 A	MEVINPHOS	PA
EPA 8141 A	NALED	PA	EPA 8141 A	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 A	PHORATE	PA	EPA 8141 A	RONNEL	PA
EPA 8141 A	SIMAZINE	PA	EPA 8141 A	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 A	TOKUTHION (PROTHIOPHOS)	PA	EPA 8141 A	TRICHLORONATE	PA
EPA 8141 B	ATRAZINE	PA	EPA 8141 B	BOLSTAR (SULPROFOS)	PA
EPA 8141 B	COUMAPHOS	PA	EPA 8141 B	DEMETON-O	PA
EPA 8141 B	DEMETON-S	PA	EPA 8141 B	DIAZINON	PA
EPA 8141 B	DICHLOROVOS (DDVP, DICHLORVOS)	PA	EPA 8141 B	DISULFOTON	PA
EPA 8141 B	EPN (PHOSPHONOTHIOIC ACID, PHENYL- O-ETHYL O- (P-NITROPHENYL) ESTER)	PA	EPA 8141 B	ETHION	PA
EPA 8141 B	ETHOPROP	PA	EPA 8141 B	FAMPHUR	PA
EPA 8141 B	FENSULFOTHION	PA	EPA 8141 B	FENTHION	PA
EPA 8141 B	MALATHION	PA	EPA 8141 B	MERPHOS	PA
EPA 8141 B	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8141 B	MEVINPHOS	PA
EPA 8141 B	NALED	PA	EPA 8141 B	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 B	PHORATE	PA	EPA 8141 B	RONNEL	PA
EPA 8141 B	SIMAZINE	PA	EPA 8141 B	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 B	TOKUTHION (PROTHIOPHOS)	PA	EPA 8141 B	TRICHLORONATE	PA
EPA 8151 A	2,4,5-T	PA	EPA 8151 A	2,4-D	PA
EPA 8151 A	2,4-DB	PA	EPA 8151 A	DALAPON	PA
EPA 8151 A	DICAMBA	PA	EPA 8151 A	DICHLOROPROP (DICHLORPROP)	PA
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA	EPA 8151 A	MCPA	PA
EPA 8151 A	MOPP	PA	EPA 8151 A	PENTACHLOROPHENOL	PA
EPA 8151 A	PICLORAM	PA	EPA 8151 A	SILVEX (2,4,5-TP)	PA

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Commonwealth of Virginia
Department of General Services
Division of Consolidated Laboratory Services



Scope of Accreditation

VELAP Certificate No.: 7991

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

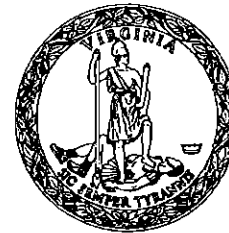
Virginia Laboratory ID: 460182
Effective Date: August 21, 2015
Expiration Date: June 14, 2016

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	PA	EPA 8260 B	1,1,1-TRICHLOROETHANE	PA
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	PA	EPA 8260 B	1,1,2-TRICHLOROETHANE	PA
EPA 8260 B	1,1-DICHLOROETHANE	PA	EPA 8260 B	1,1-DICHLOROETHYLENE	PA
EPA 8260 B	1,1-DICHLOROPROPENE	PA	EPA 8260 B	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 B	1,2,3-TRICHLOROPROPANE	PA	EPA 8260 B	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	PA	EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA	EPA 8260 B	1,2-DICHLOROBENZENE	PA
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA	EPA 8260 B	1,2-DICHLOROPROPANE	PA
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	PA	EPA 8260 B	1,3-DICHLOROBENZENE	PA
EPA 8260 B	1,3-DICHLOROPROPANE	PA	EPA 8260 B	1,4-DICHLOROBENZENE	PA
EPA 8260 B	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA	EPA 8260 B	1-BUTANOL (N-BUTANOL)	PA
EPA 8260 B	2,2-DICHLOROPROPANE	PA	EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	PA	EPA 8260 B	2-CHLOROTOLUENE	PA
EPA 8260 B	2-HEXANONE	PA	EPA 8260 B	4-CHLOROTOLUENE	PA
EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYME)	PA	EPA 8260 B	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 8260 B	ACETONE	PA	EPA 8260 B	ACETONITRILE	PA
EPA 8260 B	ACROLEIN (PROPENAL)	PA	EPA 8260 B	ACRYLONITRILE	PA
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA	EPA 8260 B	BENZENE	PA
EPA 8260 B	BENZYL CHLORIDE	PA	EPA 8260 B	BROMOBENZENE	PA
EPA 8260 B	BROMOCHLOROMETHANE	PA	EPA 8260 B	BROMODICHLOROMETHANE	PA
EPA 8260 B	BROMOFORM	PA	EPA 8260 B	CARBON DISULFIDE	PA
EPA 8260 B	CARBON TETRACHLORIDE	PA	EPA 8260 B	CHLOROBENZENE	PA
EPA 8260 B	CHLORODIBROMOMETHANE	PA	EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 8260 B	CHLOROFORM	PA	EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	PA	EPA 8260 B	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	PA	EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 B	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA	EPA 8260 B	ETHANOL	PA
EPA 8260 B	ETHYL ACETATE	PA	EPA 8260 B	ETHYL METHACRYLATE	PA
EPA 8260 B	ETHYLBENZENE	PA	EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	PA	EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA	EPA 8260 B	ISOPROPYLBENZENE	PA



Commonwealth of Virginia
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Scope of Accreditation

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2425 New Holland Pike
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Virginia Laboratory ID: 460182
Effective Date: August 21, 2015
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SOLID AND CHEMICAL MATERIALS

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8260 B	M+P-XYLENE	PA	EPA 8260 B	METHACRYLONITRILE	PA
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	PA	EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 B	METHYL METHACRYLATE	PA	EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA	EPA 8260 B	N-BUTYLBENZENE	PA
EPA 8260 B	N-PROPYLBENZENE	PA	EPA 8260 B	NAPHTHALENE	PA
EPA 8260 B	O-XYLENE	PA	EPA 8260 B	PENTACHLOROETHANE	PA
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	PA	EPA 8260 B	SEC-BUTYLBENZENE	PA
EPA 8260 B	STYRENE	PA	EPA 8260 B	TERT-BUTYL ALCOHOL	PA
EPA 8260 B	TERT-BUTYLBENZENE	PA	EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 B	TOLUENE	PA	EPA 8260 B	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE	PA	EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA	EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 B	VINYL ACETATE	PA	EPA 8260 B	VINYL CHLORIDE	PA
EPA 8260 B	XYLENE (TOTAL)	PA	EPA 8260 B - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	PA
EPA 8260 B - EXTENDED	CYCLOHEXANE	PA	EPA 8260 B - EXTENDED	CYCLOHEXANONE	PA
EPA 8260 B - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA	EPA 8260 B - EXTENDED	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 B - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA	EPA 8260 B - EXTENDED	METHYL ACETATE	PA
EPA 8260 B - EXTENDED	METHYLCYCLOHEXANE	PA	EPA 8260 B - EXTENDED	T-AMYL ALCOHOL (TAA)	PA
EPA 8260 B - EXTENDED	T-AMYLMETHYLETHER (TAME)	PA	EPA 8260 B - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8260 C	1,1,1,2-TETRACHLOROETHANE	PA	EPA 8260 C	1,1,1-TRICHLOROETHANE	PA
EPA 8260 C	1,1,2,2-TETRACHLOROETHANE	PA	EPA 8260 C	1,1,2-TRICHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROETHANE	PA	EPA 8260 C	1,1-DICHLOROETHYLENE	PA
EPA 8260 C	1,1-DICHLOROPROPENE	PA	EPA 8260 C	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 C	1,2,3-TRICHLOROPROPANE	PA	EPA 8260 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 C	1,2,4-TRIMETHYLBENZENE	PA	EPA 8260 C	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 C	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA	EPA 8260 C	1,2-DICHLOROBENZENE	PA
EPA 8260 C	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA	EPA 8260 C	1,2-DICHLOROPROPANE	PA
EPA 8260 C	1,3,5-TRIMETHYLBENZENE	PA	EPA 8260 C	1,3-DICHLOROBENZENE	PA
EPA 8260 C	1,3-DICHLOROPROPANE	PA	EPA 8260 C	1,4-DICHLOROBENZENE	PA
EPA 8260 C	1,4-DIOXANE (P-DIOXANE /1,4- DIETHYLENEOXIDE)	PA	EPA 8260 C	2,2-DICHLOROPROPANE	PA
EPA 8260 C	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA			

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SOLID AND CHEMICAL MATERIALS

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EPA 8260 C	2-CHLOROETHYL VINYL ETHER	PA	EPA 8260 C	2-CHLOROTOLUENE	PA
EPA 8260 C	2-HEXANONE	PA	EPA 8260 C	4-CHLOROTOLUENE	PA
EPA 8260 C	4-ISOPROPYLTOLUENE (P-CYME)	PA	EPA 8260 C	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 8260 C	ACETONE	PA	EPA 8260 C	ACETONITRILE	PA
EPA 8260 C	ACROLEIN (PROPENAL)	PA	EPA 8260 C	ACRYLONITRILE	PA
EPA 8260 C	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA	EPA 8260 C	BENZENE	PA
EPA 8260 C	BENZYL CHLORIDE	PA	EPA 8260 C	BROMOBENZENE	PA
EPA 8260 C	BROMOCHLOROMETHANE	PA	EPA 8260 C	BROMODICHLOROMETHANE	PA
EPA 8260 C	BROMOFORM	PA	EPA 8260 C	CARBON DISULFIDE	PA
EPA 8260 C	CARBON TETRACHLORIDE	PA	EPA 8260 C	CHLOROBENZENE	PA
EPA 8260 C	CHLORODIBROMOMETHANE	PA	EPA 8260 C	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 8260 C	CHLOROFORM	PA	EPA 8260 C	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 C	CIS-1,2-DICHLOROETHYLENE	PA	EPA 8260 C	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 C	CYCLOHEXANE	PA	EPA 8260 C	DIBROMOMETHANE (METHYLENE BROMIDE)	PA
EPA 8260 C	DICHLORODIFLUOROMETHANE (FREON-12)	PA	EPA 8260 C	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA
EPA 8260 C	ETHANOL	PA	EPA 8260 C	ETHYL ACETATE	PA
EPA 8260 C	ETHYL METHACRYLATE	PA	EPA 8260 C	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 C	ETHYLBENZENE	PA	EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 C	IODOMETHANE (METHYL IODIDE)	PA	EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA	EPA 8260 C	ISOPROPYLBENZENE	PA
EPA 8260 C	METHACRYLONITRILE	PA	EPA 8260 C	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 8260 C	METHYL CHLORIDE (CHLOROMETHANE)	PA	EPA 8260 C	METHYL METHACRYLATE	PA
EPA 8260 C	METHYL TERT-BUTYL ETHER (MTBE)	PA	EPA 8260 C	METHYLCYCLOHEXANE	PA
EPA 8260 C	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA	EPA 8260 C	N-BUTYLBENZENE	PA
EPA 8260 C	N-PROPYLBENZENE	PA	EPA 8260 C	NAPHTHALENE	PA
EPA 8260 C	PENTACHLOROETHANE	PA	EPA 8260 C	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 C	SEC-BUTYLBENZENE	PA	EPA 8260 C	STYRENE	PA
EPA 8260 C	T-AMYLMETHYLETHER (TAME)	PA	EPA 8260 C	TERT-BUTYL ALCOHOL	PA
EPA 8260 C	TETRACHLOROETHENE (PERCHLOROETHENE)	PA	EPA 8260 C	TOLUENE	PA
EPA 8260 C	TRANS-1,2-DICHLOROETHENE	PA	EPA 8260 C	TRANS-1,3-DICHLOROPROPENE	PA

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<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8260 C	TRANS-1,4-DICHLORO-2-BUTENE	PA	EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 C	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA	EPA 8260 C	VINYL ACETATE	PA
EPA 8260 C	VINYL CHLORIDE	PA	EPA 8260 C	XYLENE (TOTAL)	PA
EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	PA	EPA 8260 C - EXTENDED	DIISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 8260 C - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA	EPA 8260 C - EXTENDED	METHYL ACETATE	PA
EPA 8260 C - EXTENDED	T-AMYL ALCOHOL (TAA)	PA	EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	PA	EPA 8270 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 C	1,2-DICHLOROBENZENE	PA	EPA 8270 C	1,2-DINITROBENZENE	PA
EPA 8270 C	1,2-DIPHENYLHYDRAZINE	PA	EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 C	1,3-DICHLOROBENZENE	PA	EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 C	1,4-DICHLOROBENZENE	PA	EPA 8270 C	1,4-DINITROBENZENE	PA
EPA 8270 C	1,4-NAPHTHOQUINONE	PA	EPA 8270 C	1,4-PHENYLENEDIAMINE	PA
EPA 8270 C	1-CHLORONAPHTHALENE	PA	EPA 8270 C	1-NAPHTHYLAMINE	PA
EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	PA	EPA 8270 C	2,4,5-TRICHLOROPHENOL	PA
EPA 8270 C	2,4,6-TRICHLOROPHENOL	PA	EPA 8270 C	2,4-DICHLOROPHENOL	PA
EPA 8270 C	2,4-DIMETHYLPHENOL	PA	EPA 8270 C	2,4-DINITROPHENOL	PA
EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	PA	EPA 8270 C	2,6-DICHLOROPHENOL	PA
EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	PA	EPA 8270 C	2-ACETYLAMINOFLUORENE	PA
EPA 8270 C	2-CHLORONAPHTHALENE	PA	EPA 8270 C	2-CHLOROPHENOL	PA
EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA	EPA 8270 C	2-METHYLNAPHTHALENE	PA
EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	PA	EPA 8270 C	2-NAPHTHYLAMINE	PA
EPA 8270 C	2-NITROANILINE	PA	EPA 8270 C	2-NITROPHENOL	PA
EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	PA	EPA 8270 C	3,3'-DICHLOROBENZIDINE	PA
EPA 8270 C	3,3'-DIMETHOXYBENZIDINE	PA	EPA 8270 C	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 C	3-METHYLCHOLANTHRENE	PA	EPA 8270 C	3-METHYLPHENOL (M-CRESOL)	PA
EPA 8270 C	3-NITROANILINE	PA	EPA 8270 C	4,4'-METHYLENEBIS(2-CHLOROANIL INE)	PA
EPA 8270 C	4-AMINOBIIPHENYL	PA	EPA 8270 C	4-BROMOPHENYL PHENYL ETHER	PA
EPA 8270 C	4-CHLORO-3-METHYLPHENOL	PA	EPA 8270 C	4-CHLOROANILINE	PA
EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	PA	EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 C	4-METHYLPHENOL (P-CRESOL)	PA	EPA 8270 C	4-NITROANILINE	PA
EPA 8270 C	4-NITROPHENOL	PA	EPA 8270 C	4-NITROQUINOLINE-1-OXIDE	PA
EPA 8270 C	5-NITRO-O-TOLUIDINE	PA	EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA
EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	PA	EPA 8270 C	ACENAPHTHENE	PA
EPA 8270 C	ACENAPHTHYLENE	PA	EPA 8270 C	ACETOPHENONE	PA

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EPA 8270 C	ANILINE	PA	EPA 8270 C	ANTHRACENE	PA
EPA 8270 C	ARAMITE	PA	EPA 8270 C	BENZIDINE	PA
EPA 8270 C	BENZO(A)ANTHRACENE	PA	EPA 8270 C	BENZO(A)PYRENE	PA
EPA 8270 C	BENZO(B)FLUORANTHENE	PA	EPA 8270 C	BENZO(G,H,I)PERYLENE	PA
EPA 8270 C	BENZO(K)FLUORANTHENE	PA	EPA 8270 C	BENZOIC ACID	PA
EPA 8270 C	BENZYL ALCOHOL	PA	EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	PA	EPA 8270 C	BIS(2-CHLOROISOPROPYL) ETHER	PA
EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA	EPA 8270 C	BUTYL BENZYL PHTHALATE	PA
EPA 8270 C	CHLOROBENZILATE	PA	EPA 8270 C	CHRYSENE	PA
EPA 8270 C	DI-N-BUTYL PHTHALATE	PA	EPA 8270 C	DI-N-OCTYL PHTHALATE	PA
EPA 8270 C	DIALATE	PA	EPA 8270 C	DIBENZ(A, J) ACRIDINE	PA
EPA 8270 C	DIBENZO(A,H) ANTHRACENE	PA	EPA 8270 C	DIBENZOFURAN	PA
EPA 8270 C	DIETHYL PHTHALATE	PA	EPA 8270 C	DIMETHOATE	PA
EPA 8270 C	DIMETHYL PHTHALATE	PA	EPA 8270 C	DIPHENYLAMINE	PA
EPA 8270 C	DISULFOTON	PA	EPA 8270 C	ETHYL METHANESULFONATE	PA
EPA 8270 C	FAMPHUR	PA	EPA 8270 C	FLUORANTHENE	PA
EPA 8270 C	FLUORENE	PA	EPA 8270 C	HEXACHLOROBENZENE	PA
EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA	EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	PA
EPA 8270 C	HEXACHLOROETHANE	PA	EPA 8270 C	HEXACHLOROPROPENE	PA
EPA 8270 C	INDENO(1,2,3-CD) PYRENE	PA	EPA 8270 C	ISODRIN	PA
EPA 8270 C	ISOPHORONE	PA	EPA 8270 C	ISOSAFROLE	PA
EPA 8270 C	KEPONE	PA	EPA 8270 C	METHAPYRILENE	PA
EPA 8270 C	METHYL METHANESULFONATE	PA	EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	PA	EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 C	N-NITROSODIETHYLAMINE	PA	EPA 8270 C	N-NITROSODIMETHYLAMINE	PA
EPA 8270 C	N-NITROSODIPHENYLAMINE	PA	EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 C	N-NITROSOMORPHOLINE	PA	EPA 8270 C	N-NITROSOPIPERIDINE	PA
EPA 8270 C	N-NITROSOPYRROLIDINE	PA	EPA 8270 C	NAPHTHALENE	PA
EPA 8270 C	NITROBENZENE	PA	EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA
EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	PA	EPA 8270 C	PARATHION (PARATHION - ETHYL)	PA
EPA 8270 C	PENTACHLOROBENZENE	PA	EPA 8270 C	PENTACHLORONITROBENZENE	PA
EPA 8270 C	PENTACHLOROPHENOL	PA	EPA 8270 C	PHENACETIN	PA
EPA 8270 C	PHENANTHRENE	PA	EPA 8270 C	PHENOL	PA
EPA 8270 C	PHORATE	PA	EPA 8270 C	PHTHALIC ANHYDRIDE	PA
EPA 8270 C	PRONAMIDE (KERB)	PA	EPA 8270 C	PYRENE	PA
EPA 8270 C	PYRIDINE	PA	EPA 8270 C	SAFROLE	PA

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Commonwealth of Virginia
Department of General Services
Division of Consolidated Laboratory Services



Scope of Accreditation

VELAP Certificate No.: 7991

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: August 21, 2015
Expiration Date: June 14, 2016

SOLID AND CHEMICAL MATERIALS

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8270 C	THIONAZIN (ZINOPHOS)	PA	EPA 8270 C	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA
EPA 8270 C SIM	2-METHYLNAPHTHALENE	PA	EPA 8270 C SIM	ACENAPHTHENE	PA
EPA 8270 C SIM	ACENAPHTHYLENE	PA	EPA 8270 C SIM	ANTHRACENE	PA
EPA 8270 C SIM	BENZO(A)ANTHRACENE	PA	EPA 8270 C SIM	BENZO(A)PYRENE	PA
EPA 8270 C SIM	BENZO(B)FLUORANTHENE	PA	EPA 8270 C SIM	BENZO(G,H,I)PERYLENE	PA
EPA 8270 C SIM	BENZO(K)FLUORANTHENE	PA	EPA 8270 C SIM	CHRYSENE	PA
EPA 8270 C SIM	DIBENZO(A,H) ANTHRACENE	PA	EPA 8270 C SIM	FLUORANTHENE	PA
EPA 8270 C SIM	FLUORENE	PA	EPA 8270 C SIM	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 C SIM	NAPHTHALENE	PA	EPA 8270 C SIM	PHENANTHRENE	PA
EPA 8270 C SIM	PYRENE	PA	EPA 8270 C SIM - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	PA	EPA 8270 D	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 D	1,2-DICHLOROBENZENE	PA	EPA 8270 D	1,2-DINITROBENZENE	PA
EPA 8270 D	1,2-DIPHENYLHYDRAZINE	PA	EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 D	1,3-DICHLOROBENZENE	PA	EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 D	1,4-DICHLOROBENZENE	PA	EPA 8270 D	1,4-DINITROBENZENE	PA
EPA 8270 D	1,4-NAPHTHOQUINONE	PA	EPA 8270 D	1,4-PHENYLENEDIAMINE	PA
EPA 8270 D	1-CHLORONAPHTHALENE	PA	EPA 8270 D	1-NAPHTHYLAMINE	PA
EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	PA	EPA 8270 D	2,4,5-TRICHLOROPHENOL	PA
EPA 8270 D	2,4,6-TRICHLOROPHENOL	PA	EPA 8270 D	2,4-DICHLOROPHENOL	PA
EPA 8270 D	2,4-DIMETHYLPHENOL	PA	EPA 8270 D	2,4-DINITROPHENOL	PA
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	PA	EPA 8270 D	2,6-DICHLOROPHENOL	PA
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	PA	EPA 8270 D	2-ACETYLAMINOFUORENE	PA
EPA 8270 D	2-CHLORONAPHTHALENE	PA	EPA 8270 D	2-CHLOROPHENOL	PA
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA	EPA 8270 D	2-METHYLNAPHTHALENE	PA
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	PA	EPA 8270 D	2-NAPHTHYLAMINE	PA
EPA 8270 D	2-NITROANILINE	PA	EPA 8270 D	2-NITROPHENOL	PA
EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	PA	EPA 8270 D	3,3'-DICHLOROBENZIDINE	PA
EPA 8270 D	3,3'-DIMETHOXYBENZIDINE	PA	EPA 8270 D	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 D	3-METHYLCHOLANTHRENE	PA	EPA 8270 D	3-METHYLPHENOL (M-CRESOL)	PA
EPA 8270 D	3-NITROANILINE	PA	EPA 8270 D	4,4'-METHYLENEBIS(2-CHLOROANILINE)	PA
EPA 8270 D	4-AMINOBIIPHENYL	PA	EPA 8270 D	4-BROMOPHENYL PHENYL ETHER	PA
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	PA	EPA 8270 D	4-CHLOROANILINE	PA
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	PA	EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 D	4-METHYLPHENOL (P-CRESOL)	PA	EPA 8270 D	4-NITROANILINE	PA
EPA 8270 D	4-NITROPHENOL	PA	EPA 8270 D	4-NITROQUINOLINE-1-OXIDE	PA
EPA 8270 D	5-NITRO-O-TOLUIDINE	PA	EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	PA	EPA 8270 D	ACENAPHTHENE	PA
EPA 8270 D	ACENAPHTHYLENE	PA	EPA 8270 D	ACETOPHENONE	PA
EPA 8270 D	ANILINE	PA	EPA 8270 D	ANTHRACENE	PA
EPA 8270 D	ARAMITE	PA	EPA 8270 D	BENZIDINE	PA
EPA 8270 D	BENZO(A)ANTHRACENE	PA	EPA 8270 D	BENZO(A)PYRENE	PA
EPA 8270 D	BENZO(B)FLUORANTHENE	PA	EPA 8270 D	BENZO(G,H,I)PERYLENE	PA
EPA 8270 D	BENZO(K)FLUORANTHENE	PA	EPA 8270 D	BENZOIC ACID	PA
EPA 8270 D	BENZYL ALCOHOL	PA	EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	PA	EPA 8270 D	BIS(2-CHLOROISOPROPYL) ETHER	PA
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA	EPA 8270 D	BUTYL BENZYL PHTHALATE	PA
EPA 8270 D	CHLOROBENZILATE	PA	EPA 8270 D	CHRYSENE	PA
EPA 8270 D	DI-N-BUTYL PHTHALATE	PA	EPA 8270 D	DI-N-OCTYL PHTHALATE	PA
EPA 8270 D	DIALATE	PA	EPA 8270 D	DIBENZ(A, J) ACRIDINE	PA
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	PA	EPA 8270 D	DIBENZOFURAN	PA
EPA 8270 D	DIETHYL PHTHALATE	PA	EPA 8270 D	DIMETHOATE	PA
EPA 8270 D	DIMETHYL PHTHALATE	PA	EPA 8270 D	DIPHENYLAMINE	PA
EPA 8270 D	DISULFOTON	PA	EPA 8270 D	ETHYL METHANESULFONATE	PA
EPA 8270 D	FAMPHUR	PA	EPA 8270 D	FLUORANTHENE	PA
EPA 8270 D	FLUORENE	PA	EPA 8270 D	HEXACHLOROBENZENE	PA
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA	EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	PA
EPA 8270 D	HEXACHLOROETHANE	PA	EPA 8270 D	HEXACHLOROPROPENE	PA
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	PA	EPA 8270 D	ISODRIN	PA
EPA 8270 D	ISOPHORONE	PA	EPA 8270 D	ISOSAFROLE	PA
EPA 8270 D	KEPONE	PA	EPA 8270 D	METHAPYRILENE	PA
EPA 8270 D	METHYL METHANESULFONATE	PA	EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	PA	EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 D	N-NITROSODIETHYLAMINE	PA	EPA 8270 D	N-NITROSODIMETHYLAMINE	PA
EPA 8270 D	N-NITROSODIPHENYLAMINE	PA	EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 D	N-NITROSOMORPHOLINE	PA	EPA 8270 D	N-NITROSOPIPERIDINE	PA
EPA 8270 D	N-NITROSOPYRROLIDINE	PA	EPA 8270 D	NAPHTHALENE	PA
EPA 8270 D	NITROBENZENE	PA	EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA
EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	PA	EPA 8270 D	PARATHION (PARATHION - ETHYL)	PA
EPA 8270 D	PENTACHLOROBENZENE	PA	EPA 8270 D	PENTACHLORONITROBENZENE	PA
EPA 8270 D	PENTACHLOROPHENOL	PA	EPA 8270 D	PHENACETIN	PA
EPA 8270 D	PHENANTHRENE	PA	EPA 8270 D	PHENOL	PA
EPA 8270 D	PHORATE	PA	EPA 8270 D	PHTHALIC ANHYDRIDE	PA

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 D	PRONAMIDE (KERB)	PA	EPA 8270 D	PYRENE	PA
EPA 8270 D	SAFROLE	PA	EPA 8270 D	THIONAZIN (ZINOPHOS)	PA
EPA 8270 D	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA	EPA 8270 D - EXTENDED	1,1'-BIPHENYL	PA
EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	PA	EPA 8270 D - EXTENDED	ATRAZINE	PA
EPA 8270 D - EXTENDED	BENZALDEHYDE	PA	EPA 8270 D - EXTENDED	BIS(2-ETHYLHEXYL)ADIPATE (D(2-ETHYLHEXYL)ADIPATE)	PA
EPA 8270 D - EXTENDED	CAPROLACTAM	PA	EPA 8270 D - EXTENDED	CARBAZOLE	PA
EPA 8270 D - EXTENDED	PYRIDINE	PA	EPA 8270 D SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 D SIM	ACENAPHTHENE	PA	EPA 8270 D SIM	ACENAPHTHYLENE	PA
EPA 8270 D SIM	ANTHRACENE	PA	EPA 8270 D SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 D SIM	BENZO(A)PYRENE	PA	EPA 8270 D SIM	BENZO(B)FLUORANTHENE	PA
EPA 8270 D SIM	BENZO(G,H,I)PERYLENE	PA	EPA 8270 D SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 D SIM	CHRYSENE	PA	EPA 8270 D SIM	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 D SIM	FLUORANTHENE	PA	EPA 8270 D SIM	FLUORENE	PA
EPA 8270 D SIM	INDENO(1,2,3-CD) PYRENE	PA	EPA 8270 D SIM	NAPHTHALENE	PA
EPA 8270 D SIM	PHENANTHRENE	PA	EPA 8270 D SIM	PYRENE	PA
EPA 8270 D SIM - EXTENDED	1-METHYLNAPHTHALENE	PA	EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZ O-P-DIOXIN (OCDD)	PA
EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZ OFURAN (OCDF)	PA	EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZ O-P-DIOXIN (1,2,3,4,6,7,8-HPCDD)	PA
EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZ OFURAN (1,2,3,4,6,7,8-HPCDF)	PA	EPA 8290 A	1,2,3,4,7,8,9-HEPTACHLORODIBENZ OFURAN (1,2,3,4,7,8,9-HPCDF)	PA
EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZO-P -DIOXIN (1,2,3,4,7,8-HXCDD)	PA	EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZOF URAN (1,2,3,4,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZO-P -DIOXIN (1,2,3,6,7,8-HXCDD)	PA	EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZOF URAN (1,2,3,6,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZO-P -DIOXIN (1,2,3,7,8,9-HXCDD)	PA	EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZOF URAN (1,2,3,7,8,9-HXCDF)	PA
EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZO-P -DIOXIN (1,2,3,7,8-PECDD)	PA	EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZOF URAN (1,2,3,7,8-PECDF)	PA
EPA 8290 A	2,3,4,6,7,8-HEXACHLORODIBENZOF URAN (2,3,4,6,7,8-HXCDF)	PA	EPA 8290 A	2,3,4,7,8-PENTACHLORODIBENZOF URAN	PA
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZO- P-DIOXIN (2,3,7,8-TCDD)	PA	EPA 8290 A	2,3,7,8-TETRACHLORODIBENZOFUR AN (2,3,7,8-TCDF)	PA
EPA 8315 A	2,5-DIMETHYLBENZALDEHYDE	PA	EPA 8315 A	ACETALDEHYDE	PA
EPA 8315 A	BENZALDEHYDE	PA	EPA 8315 A	BUTYLALDEHYDE (BUTANAL)	PA
EPA 8315 A	CROTONALDEHYDE	PA	EPA 8315 A	FORMALDEHYDE	PA
EPA 8315 A	HEXANALDEHYDE (HEXANAL)	PA	EPA 8315 A	ISOVALERALDEHYDE	PA
EPA 8315 A	M-TOLUALDEHYDE (1,3-TOLUALDEHYDE)	PA	EPA 8315 A	O-TOLUALDEHYDE (1,2-TOLUALDEHYDE)	PA
EPA 8315 A	P-TOLUALDEHYDE (1,4-TOLUALDEHYDE)	PA	EPA 8315 A	PENTANAL (VALERALDEHYDE)	PA
EPA 8315 A	PROPIONALDEHYDE (PROPANAL)	PA	EPA 8330	NITROGLYCERIN	PA



Commonwealth of Virginia
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SOLID AND CHEMICAL MATERIALS

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8330 A	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA	EPA 8330 A	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8330 A	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	PA	EPA 8330 A	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8330 A	2,6-DINITROTOLUENE (2,6-DNT)	PA	EPA 8330 A	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	PA
EPA 8330 A	2-NITROTOLUENE	PA	EPA 8330 A	3-NITROTOLUENE	PA
EPA 8330 A	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	PA	EPA 8330 A	4-NITROTOLUENE	PA
EPA 8330 A	METHYL-2,4,6-TRINITROPHENYLNIT RAMINE (TETRYL)	PA	EPA 8330 A	NITROBENZENE	PA
EPA 8330 A	OCTAHYDRO-1,3,5,7-TETRANITRO-1 3,5,7-TETRAZOCINE (HMX)	PA	EPA 8330 A	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5- TRIAZINE)	PA
EPA 9012 A	CYANIDE	PA	EPA 9045 C	PH	PA
EPA 9045 D	PH	PA	EPA 9050 A	CONDUCTIVITY	PA
EPA 9060	TOTAL ORGANIC CARBON	PA	EPA 9066	TOTAL PHENOLICS	PA
EPA 9071 B	OIL AND GREASE (AS HEM)	PA	EPA 9081	CATION EXCHANGE CAPACITY	PA
EPA 9095 B	FREE LIQUID	PA			



COMMONWEALTH OF VIRGINIA
DEPARTMENT OF GENERAL SERVICES
DIVISION OF CONSOLIDATED LABORATORY SERVICES



Certifies that

VA Laboratory ID#: 460175
Testamerica Laboratories, Inc.
4101 Shuffel Street N.W.
North Canton, OH 44720

Owner: TESTAMERICA HOLDINGS, INC.
Operator: RACHEL BRYDON JANNETTA
Responsible Official: DANIEL PITTMAN


Having met the requirements of 1 VAC 30-46
and the National Environmental Laboratory Accreditation Conference 2003 Standard
is hereby approved as an

Accredited Laboratory

As more fully described in the attached Scope of Accreditation

Effective Date: **September 15, 2015**
Expiration Date: **September 14, 2016**
Certificate # 8028

Continued accreditation status depends on successful ongoing participation in the program.
Certificate to be conspicuously displayed at the laboratory.
Not valid unless accompanied by a valid Virginia Environmental Laboratory Accreditation Program (VELAP)
Scope of Accreditation.
Customers are urged to verify the laboratory's current accreditation status.
Certificate Not Transferable


Denise M. Toney, Ph.D., HCLD
DGS Deputy Director for Laboratories



Commonwealth of Virginia
Department of General Services
Division of Consolidated Laboratory Services



Scope of Accreditation

VELAP Certificate No.: 8028

Testamerica Laboratories, Inc.
4101 Shuffel Street N.W.
North Canton, OH 44720

Virginia Laboratory ID: 460175
Effective Date: September 15, 2015
Expiration Date: September 14, 2016

NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 1010	FLASHPOINT	OR	EPA 1010 A	FLASHPOINT	OR
EPA 120.1	CONDUCTIVITY	OR	EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	OR
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	OR	EPA 1630	METHYL MERCURY	OR
EPA 1631 E	MERCURY	OR	EPA 1664 A	OIL AND GREASE (AS HEM)	OR
EPA 1664 A	TOTAL PETROLEUM HYDROCARBONS (TPH) (AS NONPOLAR MATERIAL, SGT-HEM)	OR	EPA 180.1 (AS HACH 8195)	TURBIDITY	OR
EPA 200.7 REV 4.4	ALUMINUM	OR	EPA 200.7 REV 4.4	ANTIMONY	OR
EPA 200.7 REV 4.4	ARSENIC	OR	EPA 200.7 REV 4.4	BARIUM	OR
EPA 200.7 REV 4.4	BERYLLIUM	OR	EPA 200.7 REV 4.4	BORON	OR
EPA 200.7 REV 4.4	CADMIUM	OR	EPA 200.7 REV 4.4	CALCIUM	OR
EPA 200.7 REV 4.4	CHROMIUM	OR	EPA 200.7 REV 4.4	COBALT	OR
EPA 200.7 REV 4.4	COPPER	OR	EPA 200.7 REV 4.4	IRON	OR
EPA 200.7 REV 4.4	LEAD	OR	EPA 200.7 REV 4.4	MAGNESIUM	OR
EPA 200.7 REV 4.4	MANGANESE	OR	EPA 200.7 REV 4.4	MOLYBDENUM	OR
EPA 200.7 REV 4.4	NICKEL	OR	EPA 200.7 REV 4.4	POTASSIUM	OR
EPA 200.7 REV 4.4	SELENIUM	OR	EPA 200.7 REV 4.4	SILICA AS SIO2	OR
EPA 200.7 REV 4.4	SILVER	OR	EPA 200.7 REV 4.4	SODIUM	OR
EPA 200.7 REV 4.4	THALLIUM	OR	EPA 200.7 REV 4.4	TIN	OR
EPA 200.7 REV 4.4	TITANIUM	OR	EPA 200.7 REV 4.4	VANADIUM	OR
EPA 200.7 REV 4.4	ZINC	OR	EPA 200.8 REV 5.4	ALUMINUM	OR
EPA 200.8 REV 5.4	ANTIMONY	OR	EPA 200.8 REV 5.4	ARSENIC	OR
EPA 200.8 REV 5.4	BARIUM	OR	EPA 200.8 REV 5.4	BERYLLIUM	OR
EPA 200.8 REV 5.4	CADMIUM	OR	EPA 200.8 REV 5.4	CHROMIUM	OR
EPA 200.8 REV 5.4	COBALT	OR	EPA 200.8 REV 5.4	COPPER	OR
EPA 200.8 REV 5.4	LEAD	OR	EPA 200.8 REV 5.4	MANGANESE	OR
EPA 200.8 REV 5.4	MOLYBDENUM	OR	EPA 200.8 REV 5.4	NICKEL	OR
EPA 200.8 REV 5.4	SELENIUM	OR	EPA 200.8 REV 5.4	SILVER	OR
EPA 200.8 REV 5.4	THALLIUM	OR	EPA 200.8 REV 5.4	VANADIUM	OR
EPA 200.8 REV 5.4	ZINC	OR	EPA 200.8 REV 5.4 - EXTENDED	TIN	OR
EPA 245.1 REV 3	MERCURY	OR	EPA 300.0 REV 2.1	BROMIDE	OR
EPA 300.0 REV 2.1	CHLORIDE	OR	EPA 300.0 REV 2.1	FLUORIDE	OR
EPA 300.0 REV 2.1	NITRATE AS N	OR	EPA 300.0 REV 2.1	NITRITE AS N	OR
EPA 300.0 REV 2.1	SULFATE	OR	EPA 3005 A	PREP: ACID DIGESTION OF WATERS FOR TOTAL RECOVERABLE OR DISSOLVED METALS	OR

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EPA 3010 A	PREP: ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS	OR	EPA 335.4 REV 1.0	CYANIDE	OR
EPA 3510 C	PREP: LIQUID-LIQUID EXTRACTION	OR	EPA 3520 C	PREP: CONTINUOUS LIQUID-LIQUID EXTRACTION	OR
EPA 353.2 REV 2	NITRATE/NITRITE	OR	EPA 3620 B	PREP: FLORISIL CLEANUP	OR
EPA 3620 C	PREP: FLORISIL CLEANUP	OR	EPA 3640 A	PREP: GEL PERMEATION CLEANUP	OR
EPA 365.1 REV 2	ORTHOPHOSPHATE AS P	OR	EPA 365.1 REV 2	PHOSPHORUS, TOTAL	OR
EPA 3660 B	PREP: SULFUR CLEANUP	OR	EPA 3665 A	SULFURIC ACID/PERMANGANATE CLEAN-UP	OR
EPA 410.4 REV 2	CHEMICAL OXYGEN DEMAND	OR	EPA 420.1 (AS HACH 8047)	TOTAL PHENOLICS	OR
EPA 5030 B	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	OR	EPA 5030 C	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	OR
EPA 6010 B	ALUMINUM	OR	EPA 6010 B	ANTIMONY	OR
EPA 6010 B	ARSENIC	OR	EPA 6010 B	BARIUM	OR
EPA 6010 B	BERYLLIUM	OR	EPA 6010 B	BORON	OR
EPA 6010 B	CADMIUM	OR	EPA 6010 B	CALCIUM	OR
EPA 6010 B	CHROMIUM	OR	EPA 6010 B	COBALT	OR
EPA 6010 B	COPPER	OR	EPA 6010 B	IRON	OR
EPA 6010 B	LEAD	OR	EPA 6010 B	LITHIUM	OR
EPA 6010 B	MAGNESIUM	OR	EPA 6010 B	MANGANESE	OR
EPA 6010 B	MOLYBDENUM	OR	EPA 6010 B	NICKEL	OR
EPA 6010 B	POTASSIUM	OR	EPA 6010 B	SELENIUM	OR
EPA 6010 B	SILICA AS SIO2	OR	EPA 6010 B	SILVER	OR
EPA 6010 B	SODIUM	OR	EPA 6010 B	STRONTIUM	OR
EPA 6010 B	THALLIUM	OR	EPA 6010 B	TIN	OR
EPA 6010 B	TITANIUM	OR	EPA 6010 B	VANADIUM	OR
EPA 6010 B	ZINC	OR	EPA 6010 B - EXTENDED	SILICON	OR
EPA 6010 C	ALUMINUM	OR	EPA 6010 C	ANTIMONY	OR
EPA 6010 C	ARSENIC	OR	EPA 6010 C	BARIUM	OR
EPA 6010 C	BERYLLIUM	OR	EPA 6010 C	BORON	OR
EPA 6010 C	CADMIUM	OR	EPA 6010 C	CALCIUM	OR
EPA 6010 C	CHROMIUM	OR	EPA 6010 C	COBALT	OR
EPA 6010 C	COPPER	OR	EPA 6010 C	IRON	OR
EPA 6010 C	LEAD	OR	EPA 6010 C	LITHIUM	OR
EPA 6010 C	MAGNESIUM	OR	EPA 6010 C	MANGANESE	OR
EPA 6010 C	MOLYBDENUM	OR	EPA 6010 C	NICKEL	OR
EPA 6010 C	POTASSIUM	OR	EPA 6010 C	SELENIUM	OR
EPA 6010 C	SILICA AS SIO2	OR	EPA 6010 C	SILVER	OR
EPA 6010 C	SODIUM	OR	EPA 6010 C	STRONTIUM	OR
EPA 6010 C	THALLIUM	OR			

This Scope of Accreditation must accompany the Certificate issued by Virginia DCLS with the same Certificate Number indicated above.



Commonwealth of Virginia
Department of General Services
Division of Consolidated Laboratory Services



Scope of Accreditation

VELAP Certificate No.: 8028

Testamerica Laboratories, Inc.
4101 Shuffel Street N.W.
North Canton, OH 44720

Virginia Laboratory ID: 460175
Effective Date: September 15, 2015
Expiration Date: September 14, 2016

NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 6010 C	TIN	OR	EPA 6010 C	TITANIUM	OR
EPA 6010 C	VANADIUM	OR	EPA 6010 C	ZINC	OR
EPA 6010 C - EXTENDED	SILICON	OR	EPA 6020	ALUMINUM	OR
EPA 6020	ANTIMONY	OR	EPA 6020	ARSENIC	OR
EPA 6020	BARIUM	OR	EPA 6020	BERYLLIUM	OR
EPA 6020	CADMIUM	OR	EPA 6020	CHROMIUM	OR
EPA 6020	COBALT	OR	EPA 6020	COPPER	OR
EPA 6020	LEAD	OR	EPA 6020	MANGANESE	OR
EPA 6020	NICKEL	OR	EPA 6020	SILVER	OR
EPA 6020	THALLIUM	OR	EPA 6020	ZINC	OR
EPA 6020 - EXTENDED	BORON	OR	EPA 6020 - EXTENDED	CALCIUM	OR
EPA 6020 - EXTENDED	IRON	OR	EPA 6020 - EXTENDED	MAGNESIUM	OR
EPA 6020 - EXTENDED	MOLYBDENUM	OR	EPA 6020 - EXTENDED	POTASSIUM	OR
EPA 6020 - EXTENDED	SELENIUM	OR	EPA 6020 - EXTENDED	SODIUM	OR
EPA 6020 - EXTENDED	STRONTIUM	OR	EPA 6020 - EXTENDED	TIN	OR
EPA 6020 - EXTENDED	TITANIUM	OR	EPA 6020 - EXTENDED	VANADIUM	OR
EPA 6020 A	ALUMINUM	OR	EPA 6020 A	ANTIMONY	OR
EPA 6020 A	ARSENIC	OR	EPA 6020 A	BARIUM	OR
EPA 6020 A	BERYLLIUM	OR	EPA 6020 A	CADMIUM	OR
EPA 6020 A	CALCIUM	OR	EPA 6020 A	CHROMIUM	OR
EPA 6020 A	COBALT	OR	EPA 6020 A	COPPER	OR
EPA 6020 A	IRON	OR	EPA 6020 A	LEAD	OR
EPA 6020 A	MAGNESIUM	OR	EPA 6020 A	MANGANESE	OR
EPA 6020 A	NICKEL	OR	EPA 6020 A	POTASSIUM	OR
EPA 6020 A	SELENIUM	OR	EPA 6020 A	SILVER	OR
EPA 6020 A	SODIUM	OR	EPA 6020 A	THALLIUM	OR
EPA 6020 A	VANADIUM	OR	EPA 6020 A	ZINC	OR
EPA 6020 A - EXTENDED	BORON	OR	EPA 6020 A - EXTENDED	MOLYBDENUM	OR
EPA 6020 A - EXTENDED	STRONTIUM	OR	EPA 6020 A - EXTENDED	TIN	OR
EPA 6020 A - EXTENDED	TITANIUM	OR	EPA 608	4,4'-DDD	OR
EPA 608	4,4'-DDE	OR	EPA 608	4,4'-DDT	OR
EPA 608	ALDRIN	OR	EPA 608	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	OR
EPA 608	AROCLOR-1016 (PCB-1016)	OR	EPA 608	AROCLOR-1221 (PCB-1221)	OR
EPA 608	AROCLOR-1232 (PCB-1232)	OR	EPA 608	AROCLOR-1242 (PCB-1242)	OR
EPA 608	AROCLOR-1248 (PCB-1248)	OR	EPA 608	AROCLOR-1254 (PCB-1254)	OR
EPA 608	AROCLOR-1260 (PCB-1260)	OR	EPA 608	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	OR
EPA 608	CHLORDANE (TECH.)	OR			

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Scope of Accreditation

VELAP Certificate No.: 8028

Testamerica Laboratories, Inc.
4101 Shuffel Street N.W.
North Canton, OH 44720

Virginia Laboratory ID: 460175
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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 608	DELTA-BHC	OR	EPA 608	DIELDRIN	OR
EPA 608	ENDOSULFAN I	OR	EPA 608	ENDOSULFAN II	OR
EPA 608	ENDOSULFAN SULFATE	OR	EPA 608	ENDRIN	OR
EPA 608	ENDRIN ALDEHYDE	OR	EPA 608	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	OR
EPA 608	HEPTACHLOR	OR	EPA 608	HEPTACHLOR EPOXIDE	OR
EPA 608	TOXAPHENE (CHLORINATED CAMPHENE)	OR	EPA 624	1,1,1-TRICHLOROETHANE	OR
EPA 624	1,1,2,2-TETRACHLOROETHANE	OR	EPA 624	1,1,2-TRICHLOROETHANE	OR
EPA 624	1,1-DICHLOROETHANE	OR	EPA 624	1,2-DICHLOROBENZENE	OR
EPA 624	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	OR	EPA 624	1,2-DICHLOROPROPANE	OR
EPA 624	1,3-DICHLOROBENZENE	OR	EPA 624	1,3-DICHLOROPROPENE (TOTAL)	OR
EPA 624	1,4-DICHLOROBENZENE	OR	EPA 624	2-CHLOROETHYL VINYL ETHER	OR
EPA 624	ACROLEIN (PROPENAL)	OR	EPA 624	ACRYLONITRILE	OR
EPA 624	BENZENE	OR	EPA 624	BROMODICHLOROMETHANE	OR
EPA 624	BROMOFORM	OR	EPA 624	CARBON TETRACHLORIDE	OR
EPA 624	CHLOROBENZENE	OR	EPA 624	CHLORODIBROMOMETHANE	OR
EPA 624	CHLOROETHANE (ETHYL CHLORIDE)	OR	EPA 624	CHLOROFORM	OR
EPA 624	CIS-1,3-DICHLOROPROPENE	OR	EPA 624	ETHYLBENZENE	OR
EPA 624	METHYL BROMIDE (BROMOMETHANE)	OR	EPA 624	METHYL CHLORIDE (CHLOROMETHANE)	OR
EPA 624	METHYLENE CHLORIDE (DICHLOROMETHANE)	OR	EPA 624	TETRACHLOROETHENE (PERCHLOROETHENE)	OR
EPA 624	TOLUENE	OR	EPA 624	TRANS-1,2-DICHLOROETHENE	OR
EPA 624	TRANS-1,3-DICHLOROPROPENE	OR	EPA 624	TRICHLOROETHENE (TRICHLOROETHYLENE)	OR
EPA 624	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	OR	EPA 624	VINYL CHLORIDE	OR
EPA 624 - EXTENDED	1,1-DICHLOROETHYLENE	OR	EPA 624 - EXTENDED	2-BUTANONE (METHYL ETHYL KETONE, MEK)	OR
EPA 624 - EXTENDED	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	OR	EPA 624 - EXTENDED	ACETONE	OR
EPA 624 - EXTENDED	CIS-1,2-DICHLOROETHYLENE	OR	EPA 624 - EXTENDED	METHYL TERT-BUTYL ETHER (MTBE)	OR
EPA 624 - EXTENDED	N-HEXANE	OR	EPA 624 - EXTENDED	XYLENE (TOTAL)	OR
EPA 625	1,2,4-TRICHLOROBENZENE	OR	EPA 625	2,4,6-TRICHLOROPHENOL	OR
EPA 625	2,4-DICHLOROPHENOL	OR	EPA 625	2,4-DIMETHYLPHENOL	OR
EPA 625	2,4-DINITROPHENOL	OR	EPA 625	2,4-DINITROTOLUENE (2,4-DNT)	OR
EPA 625	2,6-DINITROTOLUENE (2,6-DNT)	OR	EPA 625	2-CHLORONAPHTHALENE	OR
EPA 625	2-CHLOROPHENOL	OR	EPA 625	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	OR

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Scope of Accreditation

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Virginia Laboratory ID: 460175
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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 625	2-METHYLPHENOL (O-CRESOL)	OR	EPA 625	2-NITROPHENOL	OR
EPA 625	3,3'-DICHLOROBENZIDINE	OR	EPA 625	4-BROMOPHENYL PHENYL ETHER	OR
EPA 625	4-CHLORO-3-METHYLPHENOL	OR	EPA 625	4-CHLOROPHENYL PHENYLETHER	OR
EPA 625	4-NITROPHENOL	OR	EPA 625	ACENAPHTHENE	OR
EPA 625	ACENAPHTHYLENE	OR	EPA 625	ANTHRACENE	OR
EPA 625	BENZIDINE	OR	EPA 625	BENZO(A)ANTHRACENE	OR
EPA 625	BENZO(A)PYRENE	OR	EPA 625	BENZO(B)FLUORANTHENE	OR
EPA 625	BENZO(G,H,I)PERYLENE	OR	EPA 625	BENZO(K)FLUORANTHENE	OR
EPA 625	BIS(2-CHLOROETHOXY)METHANE	OR	EPA 625	BIS(2-CHLOROETHYL) ETHER	OR
EPA 625	BIS(2-CHLOROISOPROPYL) ETHER	OR	EPA 625	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	OR
EPA 625	BUTYL BENZYL PHTHALATE	OR	EPA 625	CHRYSENE	OR
EPA 625	DI-N-BUTYL PHTHALATE	OR	EPA 625	DI-N-OCTYL PHTHALATE	OR
EPA 625	DIBENZO(A,H) ANTHRACENE	OR	EPA 625	DIETHYL PHTHALATE	OR
EPA 625	DIMETHYL PHTHALATE	OR	EPA 625	FLUORANTHENE	OR
EPA 625	FLUORENE	OR	EPA 625	HEXACHLOROBENZENE	OR
EPA 625	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	OR	EPA 625	HEXACHLOROCYCLOPENTADIENE	OR
EPA 625	HEXACHLOROETHANE	OR	EPA 625	INDENO(1,2,3-CD) PYRENE	OR
EPA 625	ISOPHORONE	OR	EPA 625	N-NITROSODI-N-PROPYLAMINE	OR
EPA 625	N-NITROSODIMETHYLAMINE	OR	EPA 625	N-NITROSODIPHENYLAMINE	OR
EPA 625	NAPHTHALENE	OR	EPA 625	NITROBENZENE	OR
EPA 625	PENTACHLOROPHENOL	OR	EPA 625	PHENANTHRENE	OR
EPA 625	PHENOL	OR	EPA 625	PYRENE	OR
EPA 625 - EXTENDED	1,2-DIPHENYLHYDRAZINE	OR	EPA 625 - EXTENDED	ACETOPHENONE	OR
EPA 625 - EXTENDED	ANILINE	OR	EPA 625 - EXTENDED	BENZOIC ACID	OR
EPA 625 - EXTENDED	CARBAZOLE	OR	EPA 625 - EXTENDED	N-DECANE	OR
EPA 625 - EXTENDED	N-OCTADECANE	OR	EPA 625 - EXTENDED	PYRIDINE	OR
EPA 7196 A	CHROMIUM VI	OR	EPA 7470 A	MERCURY	OR
EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	OR	EPA 8015 B	GASOLINE RANGE ORGANICS (GRO)	OR
EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	OR	EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	OR
EPA 8015 D	DIESEL RANGE ORGANICS (DRO)	OR	EPA 8015 D	GASOLINE RANGE ORGANICS (GRO)	OR
EPA 8081 A	4,4'-DDD	OR	EPA 8081 A	4,4'-DDE	OR
EPA 8081 A	4,4'-DDT	OR	EPA 8081 A	ALDRIN	OR
EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	OR	EPA 8081 A	ALPHA-CHLORDANE [CIS-CHLORDANE]	OR

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Scope of Accreditation

VELAP Certificate No.: 8028

Testamerica Laboratories, Inc.
4101 Shuffel Street N.W.
North Canton, OH 44720

Virginia Laboratory ID: 460175
Effective Date: September 15, 2015
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NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXAN E)	OR	EPA 8081 A	CHLORDANE (TECH.)	OR
EPA 8081 A	CHLOROBENZILATE	OR	EPA 8081 A	DELTA-BHC	OR
EPA 8081 A	DIALLATE	OR	EPA 8081 A	DIELDRIN	OR
EPA 8081 A	ENDOSULFAN I	OR	EPA 8081 A	ENDOSULFAN II	OR
EPA 8081 A	ENDOSULFAN SULFATE	OR	EPA 8081 A	ENDRIN	OR
EPA 8081 A	ENDRIN ALDEHYDE	OR	EPA 8081 A	ENDRIN KETONE	OR
EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXA NE)	OR	EPA 8081 A	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	OR
EPA 8081 A	HEPTACHLOR	OR	EPA 8081 A	HEPTACHLOR EPOXIDE	OR
EPA 8081 A	HEXACHLOROBENZENE	OR	EPA 8081 A	ISODRIN	OR
EPA 8081 A	METHOXYCHLOR	OR	EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	OR
EPA 8081 A - EXTENDED	KEPONE	OR	EPA 8081 A - EXTENDED	MIREX	OR
EPA 8081 B	4,4'-DDD	OR	EPA 8081 B	4,4'-DDE	OR
EPA 8081 B	4,4'-DDT	OR	EPA 8081 B	ALDRIN	OR
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXA NE)	OR	EPA 8081 B	ALPHA-CHLORDANE [CIS-CHLORDANE]	OR
EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXAN E)	OR	EPA 8081 B	CHLORDANE (TECH.)	OR
EPA 8081 B	CHLOROBENZILATE	OR	EPA 8081 B	DELTA-BHC	OR
EPA 8081 B	DIALLATE	OR	EPA 8081 B	DIELDRIN	OR
EPA 8081 B	ENDOSULFAN I	OR	EPA 8081 B	ENDOSULFAN II	OR
EPA 8081 B	ENDOSULFAN SULFATE	OR	EPA 8081 B	ENDRIN	OR
EPA 8081 B	ENDRIN ALDEHYDE	OR	EPA 8081 B	ENDRIN KETONE	OR
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXA NE)	OR	EPA 8081 B	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	OR
EPA 8081 B	HEPTACHLOR	OR	EPA 8081 B	HEPTACHLOR EPOXIDE	OR
EPA 8081 B	HEXACHLOROBENZENE	OR	EPA 8081 B	ISODRIN	OR
EPA 8081 B	METHOXYCHLOR	OR	EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	OR
EPA 8081 B - EXTENDED	KEPONE	OR	EPA 8081 B - EXTENDED	MIREX	OR
EPA 8082	AROCLOR-1016 (PCB-1016)	OR	EPA 8082	AROCLOR-1221 (PCB-1221)	OR
EPA 8082	AROCLOR-1232 (PCB-1232)	OR	EPA 8082	AROCLOR-1242 (PCB-1242)	OR
EPA 8082	AROCLOR-1248 (PCB-1248)	OR	EPA 8082	AROCLOR-1254 (PCB-1254)	OR
EPA 8082	AROCLOR-1260 (PCB-1260)	OR	EPA 8082 - EXTENDED	AROCLOR-1262 (PCB-1262)	OR
EPA 8082 - EXTENDED	AROCLOR-1268 (PCB-1268)	OR	EPA 8082 A	AROCLOR-1016 (PCB-1016)	OR
EPA 8082 A	AROCLOR-1221 (PCB-1221)	OR	EPA 8082 A	AROCLOR-1232 (PCB-1232)	OR
EPA 8082 A	AROCLOR-1242 (PCB-1242)	OR	EPA 8082 A	AROCLOR-1248 (PCB-1248)	OR

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Commonwealth of Virginia
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Scope of Accreditation

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Testamerica Laboratories, Inc.
4101 Shuffel Street N.W.
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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8082 A	AROCLOR-1254 (PCB-1254)	OR	EPA 8082 A	AROCLOR-1260 (PCB-1260)	OR
EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	OR	EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	OR
EPA 8151 A	2,4,5-T	OR	EPA 8151 A	2,4-D	OR
EPA 8151 A	2,4-DB	OR	EPA 8151 A	DALAPON	OR
EPA 8151 A	DICAMBA	OR	EPA 8151 A	DICHLOROPROP (DICHLORPROP)	OR
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	OR	EPA 8151 A	MCPA	OR
EPA 8151 A	MCPP	OR	EPA 8151 A	PENTACHLOROPHENOL	OR
EPA 8151 A	SILVEX (2,4,5-TP)	OR	EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	OR
EPA 8260 B	1,1,1-TRICHLOROETHANE	OR	EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	OR
EPA 8260 B	1,1,2-TRICHLOROETHANE	OR	EPA 8260 B	1,1-DICHLOROETHANE	OR
EPA 8260 B	1,1-DICHLOROETHYLENE	OR	EPA 8260 B	1,1-DICHLOROPROPENE	OR
EPA 8260 B	1,2,3-TRICHLOROBENZENE	OR	EPA 8260 B	1,2,3-TRICHLOROPROPANE	OR
EPA 8260 B	1,2,4-TRICHLOROBENZENE	OR	EPA 8260 B	1,2,4-TRIMETHYLBENZENE	OR
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	OR	EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	OR
EPA 8260 B	1,2-DICHLOROBENZENE	OR	EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	OR
EPA 8260 B	1,2-DICHLOROPROPANE	OR	EPA 8260 B	1,3,5-TRIMETHYLBENZENE	OR
EPA 8260 B	1,3-DICHLOROBENZENE	OR	EPA 8260 B	1,3-DICHLOROPROPANE	OR
EPA 8260 B	1,4-DICHLOROBENZENE	OR	EPA 8260 B	1,4-DIOXANE (P-DIOXANE /1,4- DIETHYLENEOXIDE)	OR
EPA 8260 B	1-BUTANOL (N-BUTANOL)	OR	EPA 8260 B	1-CHLOROHEXANE	OR
EPA 8260 B	2,2-DICHLOROPROPANE	OR	EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	OR
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	OR	EPA 8260 B	2-CHLOROTOLUENE	OR
EPA 8260 B	2-HEXANONE	OR	EPA 8260 B	2-NITROPROPANE	OR
EPA 8260 B	4-CHLOROTOLUENE	OR	EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYME)	OR
EPA 8260 B	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	OR	EPA 8260 B	ACETONE	OR
EPA 8260 B	ACETONITRILE	OR	EPA 8260 B	ACROLEIN (PROPENAL)	OR
EPA 8260 B	ACRYLONITRILE	OR	EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	OR
EPA 8260 B	BENZENE	OR	EPA 8260 B	BENZYL CHLORIDE	OR
EPA 8260 B	BROMOBENZENE	OR	EPA 8260 B	BROMOCHLOROMETHANE	OR
EPA 8260 B	BROMODICHLOROMETHANE	OR	EPA 8260 B	BROMOFORM	OR
EPA 8260 B	CARBON DISULFIDE	OR	EPA 8260 B	CARBON TETRACHLORIDE	OR
EPA 8260 B	CHLOROBENZENE	OR	EPA 8260 B	CHLORODIBROMOMETHANE	OR
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	OR	EPA 8260 B	CHLOROFORM	OR
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	OR	EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	OR

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NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	OR	EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	OR
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	OR	EPA 8260 B	DIETHYL ETHER	OR
EPA 8260 B	ETHYL ACETATE	OR	EPA 8260 B	ETHYL METHACRYLATE	OR
EPA 8260 B	ETHYLBENZENE	OR	EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	OR
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	OR	EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	OR
EPA 8260 B	ISOPROPYLBENZENE	OR	EPA 8260 B	M+P-XYLENE	OR
EPA 8260 B	METHACRYLONITRILE	OR	EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	OR
EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	OR	EPA 8260 B	METHYL METHACRYLATE	OR
EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	OR	EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	OR
EPA 8260 B	N-BUTYLBENZENE	OR	EPA 8260 B	N-PROPYLBENZENE	OR
EPA 8260 B	NAPHTHALENE	OR	EPA 8260 B	O-XYLENE	OR
EPA 8260 B	PENTACHLOROETHANE	OR	EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	OR
EPA 8260 B	SEC-BUTYLBENZENE	OR	EPA 8260 B	STYRENE	OR
EPA 8260 B	TERT-BUTYL ALCOHOL	OR	EPA 8260 B	TERT-BUTYLBENZENE	OR
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	OR	EPA 8260 B	TOLUENE	OR
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	OR	EPA 8260 B	TRANS-1,3-DICHLOROPROPENE	OR
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	OR	EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	OR
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	OR	EPA 8260 B	VINYL ACETATE	OR
EPA 8260 B	VINYL CHLORIDE	OR	EPA 8260 B	XYLENE (TOTAL)	OR
EPA 8260 B - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE (FREON 113)	OR	EPA 8260 B - EXTENDED	1,2,3-TRIMETHYLBENZENE	OR
EPA 8260 B - EXTENDED	1,3,5-TRICHLOROBENZENE	OR	EPA 8260 B - EXTENDED	2-METHYLNAPHTHALENE	OR
EPA 8260 B - EXTENDED	CYCLOHEXANE	OR	EPA 8260 B - EXTENDED	CYCLOHEXANONE	OR
EPA 8260 B - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	OR	EPA 8260 B - EXTENDED	DICHLOROFLUOROMETHANE (FREON 21)	OR
EPA 8260 B - EXTENDED	ETHYL ACRYLATE	OR	EPA 8260 B - EXTENDED	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	OR
EPA 8260 B - EXTENDED	METHYL ACETATE	OR	EPA 8260 B - EXTENDED	METHYLCYCLOHEXANE	OR
EPA 8260 B - EXTENDED	N-HEPTANE	OR	EPA 8260 B - EXTENDED	N-HEXANE	OR
EPA 8260 B - EXTENDED	T-AMYLMETHYLETHER (TAME)	OR	EPA 8260 B - EXTENDED	TETRAHYDROFURAN (THF)	OR
EPA 8260 B SIM	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	OR	EPA 8260 C	1,1,1,2-TETRACHLOROETHANE	OR
EPA 8260 C	1,1,1-TRICHLOROETHANE	OR	EPA 8260 C	1,1,2,2-TETRACHLOROETHANE	OR
EPA 8260 C	1,1,2-TRICHLOROETHANE	OR	EPA 8260 C	1,1-DICHLOROETHANE	OR

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Commonwealth of Virginia
Department of General Services
Division of Consolidated Laboratory Services



Scope of Accreditation

VELAP Certificate No.: 8028

Testamerica Laboratories, Inc.
4101 Shuffel Street N.W.
North Canton, OH 44720

Virginia Laboratory ID: 460175
Effective Date: September 15, 2015
Expiration Date: September 14, 2016

NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8260 C	1,1-DICHLOROETHYLENE	OR	EPA 8260 C	1,1-DICHLOROPROPENE	OR
EPA 8260 C	1,2,3-TRICHLOROBENZENE	OR	EPA 8260 C	1,2,3-TRICHLOROPROPANE	OR
EPA 8260 C	1,2,4-TRIMETHYLBENZENE	OR	EPA 8260 C	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	OR
EPA 8260 C	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	OR	EPA 8260 C	1,2-DICHLOROBENZENE	OR
EPA 8260 C	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	OR	EPA 8260 C	1,2-DICHLOROPROPANE	OR
EPA 8260 C	1,3,5-TRIMETHYLBENZENE	OR	EPA 8260 C	1,3-DICHLOROBENZENE	OR
EPA 8260 C	1,3-DICHLOROPROPANE	OR	EPA 8260 C	1,4-DICHLOROBENZENE	OR
EPA 8260 C	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	OR	EPA 8260 C	1-BUTANOL (N-BUTANOL)	OR
EPA 8260 C	1-CHLOROHEXANE	OR	EPA 8260 C	2,2-DICHLOROPROPANE	OR
EPA 8260 C	2-BUTANONE (METHYL ETHYL KETONE, MEK)	OR	EPA 8260 C	2-CHLOROETHYL VINYL ETHER	OR
EPA 8260 C	2-CHLOROTOLUENE	OR	EPA 8260 C	2-HEXANONE	OR
EPA 8260 C	2-NITROPROPANE	OR	EPA 8260 C	4-CHLOROTOLUENE	OR
EPA 8260 C	4-ISOPROPYLTOLUENE (P-CYME)	OR	EPA 8260 C	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	OR
EPA 8260 C	ACETONE	OR	EPA 8260 C	ACETONITRILE	OR
EPA 8260 C	ACROLEIN (PROPENAL)	OR	EPA 8260 C	ACRYLONITRILE	OR
EPA 8260 C	ALLYL CHLORIDE (3-CHLOROPROPENE)	OR	EPA 8260 C	BENZENE	OR
EPA 8260 C	BENZYL CHLORIDE	OR	EPA 8260 C	BROMOBENZENE	OR
EPA 8260 C	BROMOCHLOROMETHANE	OR	EPA 8260 C	BROMODICHLOROMETHANE	OR
EPA 8260 C	BROMOFORM	OR	EPA 8260 C	CARBON DISULFIDE	OR
EPA 8260 C	CARBON TETRACHLORIDE	OR	EPA 8260 C	CHLOROBENZENE	OR
EPA 8260 C	CHLORODIBROMOMETHANE	OR	EPA 8260 C	CHLOROETHANE (ETHYL CHLORIDE)	OR
EPA 8260 C	CHLOROFORM	OR	EPA 8260 C	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	OR
EPA 8260 C	CIS-1,2-DICHLOROETHYLENE	OR	EPA 8260 C	CIS-1,3-DICHLOROPROPENE	OR
EPA 8260 C	CYCLOHEXANE	OR	EPA 8260 C	DIBROMOMETHANE (METHYLENE BROMIDE)	OR
EPA 8260 C	DICHLORODIFLUOROMETHANE (FREON-12)	OR	EPA 8260 C	DIETHYL ETHER	OR
EPA 8260 C	ETHYL ACETATE	OR	EPA 8260 C	ETHYL METHACRYLATE	OR
EPA 8260 C	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	OR	EPA 8260 C	ETHYLBENZENE	OR
EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	OR	EPA 8260 C	IODOMETHANE (METHYL IODIDE)	OR
EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	OR	EPA 8260 C	ISOPROPYLBENZENE	OR
EPA 8260 C	M+P-XYLENE	OR	EPA 8260 C	METHACRYLONITRILE	OR

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Scope of Accreditation

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North Canton, OH 44720

Virginia Laboratory ID: 460175
Effective Date: September 15, 2015
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NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8260 C	METHYL BROMIDE (BROMOMETHANE)	OR	EPA 8260 C	METHYL CHLORIDE (CHLOROMETHANE)	OR
EPA 8260 C	METHYL METHACRYLATE	OR	EPA 8260 C	METHYL TERT-BUTYL ETHER (MTBE)	OR
EPA 8260 C	METHYLCYCLOHEXANE	OR	EPA 8260 C	METHYLENE CHLORIDE (DICHLOROMETHANE)	OR
EPA 8260 C	N-BUTYLBENZENE	OR	EPA 8260 C	N-PROPYLBENZENE	OR
EPA 8260 C	NAPHTHALENE	OR	EPA 8260 C	O-XYLENE	OR
EPA 8260 C	PENTACHLOROETHANE	OR	EPA 8260 C	PROPIONITRILE (ETHYL CYANIDE)	OR
EPA 8260 C	SEC-BUTYLBENZENE	OR	EPA 8260 C	STYRENE	OR
EPA 8260 C	T-AMYLMETHYLETHER (TAME)	OR	EPA 8260 C	TERT-BUTYL ALCOHOL	OR
EPA 8260 C	TERT-BUTYLBENZENE	OR	EPA 8260 C	TETRACHLOROETHENE (PERCHLOROETHENE)	OR
EPA 8260 C	TOLUENE	OR	EPA 8260 C	TRANS-1,2-DICHLOROETHENE	OR
EPA 8260 C	TRANS-1,3-DICHLOROPROPENE	OR	EPA 8260 C	TRANS-1,4-DICHLORO-2-BUTENE	OR
EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	OR	EPA 8260 C	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	OR
EPA 8260 C	VINYL ACETATE	OR	EPA 8260 C	VINYL CHLORIDE	OR
EPA 8260 C	XYLENE (TOTAL)	OR	EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	OR
EPA 8260 C - EXTENDED	1,3,5-TRICHLOROBENZENE	OR	EPA 8260 C - EXTENDED	2-METHYLNAPHTHALENE	OR
EPA 8260 C - EXTENDED	CYCLOHEXANONE	OR	EPA 8260 C - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	OR
EPA 8260 C - EXTENDED	DICHLOROFLUOROMETHANE (FREON 21)	OR	EPA 8260 C - EXTENDED	ETHYL ACRYLATE	OR
EPA 8260 C - EXTENDED	METHYL ACETATE	OR	EPA 8260 C - EXTENDED	N-HEPTANE	OR
EPA 8260 C - EXTENDED	N-HEXANE	OR	EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	OR
EPA 8260 C SIM	1,4-DIOXANE (P-DIOXANE /1,4- DIETHYLENEOXIDE)	OR	EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	OR
EPA 8270 C	1,2,4-TRICHLOROBENZENE	OR	EPA 8270 C	1,2-DICHLOROBENZENE	OR
EPA 8270 C	1,2-DIPHENYLHYDRAZINE	OR	EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	OR
EPA 8270 C	1,3-DICHLOROBENZENE	OR	EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	OR
EPA 8270 C	1,4-DICHLOROBENZENE	OR	EPA 8270 C	1,4-DINITROBENZENE	OR
EPA 8270 C	1,4-NAPHTHOQUINONE	OR	EPA 8270 C	1,4-PHENYLENEDIAMINE	OR
EPA 8270 C	1-CHLORONAPHTHALENE	OR	EPA 8270 C	1-NAPHTHYLAMINE	OR
EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	OR	EPA 8270 C	2,4,5-TRICHLOROPHENOL	OR
EPA 8270 C	2,4,6-TRICHLOROPHENOL	OR	EPA 8270 C	2,4-DIAMINOTOLUENE	OR
EPA 8270 C	2,4-DICHLOROPHENOL	OR	EPA 8270 C	2,4-DIMETHYLPHENOL	OR
EPA 8270 C	2,4-DINITROPHENOL	OR	EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	OR
EPA 8270 C	2,6-DICHLOROPHENOL	OR	EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	OR
EPA 8270 C	2-ACETYLAMINOFLUORENE	OR	EPA 8270 C	2-CHLORONAPHTHALENE	OR
EPA 8270 C	2-CHLOROPHENOL	OR			

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	OR	EPA 8270 C	2-METHYLNAPHTHALENE	OR
EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	OR	EPA 8270 C	2-NAPHTHYLAMINE	OR
EPA 8270 C	2-NITROANILINE	OR	EPA 8270 C	2-NITROPHENOL	OR
EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	OR	EPA 8270 C	3,3'-DICHLOROBENZIDINE	OR
EPA 8270 C	3,3'-DIMETHOXYBENZIDINE	OR	EPA 8270 C	3,3'-DIMETHYLBENZIDINE	OR
EPA 8270 C	3-METHYLCHOLANTHRENE	OR	EPA 8270 C	3-NITROANILINE	OR
EPA 8270 C	4,4'-METHYLENEBIS(2-CHLOROANIL INE)	OR	EPA 8270 C	4-AMINOBIIPHENYL	OR
EPA 8270 C	4-BROMOPHENYL PHENYL ETHER	OR	EPA 8270 C	4-CHLORO-3-METHYLPHENOL	OR
EPA 8270 C	4-CHLOROANILINE	OR	EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	OR
EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	OR	EPA 8270 C	4-NITROANILINE	OR
EPA 8270 C	4-NITROPHENOL	OR	EPA 8270 C	4-NITROQUINOLINE-1-OXIDE	OR
EPA 8270 C	5-NITRO-O-TOLUIDINE	OR	EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	OR
EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	OR	EPA 8270 C	ACENAPHTHENE	OR
EPA 8270 C	ACENAPHTHYLENE	OR	EPA 8270 C	ACETOPHENONE	OR
EPA 8270 C	ANILINE	OR	EPA 8270 C	ANTHRACENE	OR
EPA 8270 C	ARAMITE	OR	EPA 8270 C	BENZIDINE	OR
EPA 8270 C	BENZO(A)ANTHRACENE	OR	EPA 8270 C	BENZO(A)PYRENE	OR
EPA 8270 C	BENZO(B)FLUORANTHENE	OR	EPA 8270 C	BENZO(G,H,I)PERYLENE	OR
EPA 8270 C	BENZO(K)FLUORANTHENE	OR	EPA 8270 C	BENZOIC ACID	OR
EPA 8270 C	BENZYL ALCOHOL	OR	EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	OR
EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	OR	EPA 8270 C	BIS(2-CHLOROISOPROPYL) ETHER	OR
EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	OR	EPA 8270 C	BUTYL BENZYL PHTHALATE	OR
EPA 8270 C	CHLOROBENZILATE	OR	EPA 8270 C	CHRYSENE	OR
EPA 8270 C	DI-N-BUTYL PHTHALATE	OR	EPA 8270 C	DI-N-OCTYL PHTHALATE	OR
EPA 8270 C	DIALATE	OR	EPA 8270 C	DIBENZ(A, J) ACRIDINE	OR
EPA 8270 C	DIBENZO(A,H) ANTHRACENE	OR	EPA 8270 C	DIBENZOFURAN	OR
EPA 8270 C	DIETHYL PHTHALATE	OR	EPA 8270 C	DIMETHOATE	OR
EPA 8270 C	DIMETHYL PHTHALATE	OR	EPA 8270 C	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	OR
EPA 8270 C	DIPHENYLAMINE	OR	EPA 8270 C	DISULFOTON	OR
EPA 8270 C	ETHYL METHANESULFONATE	OR	EPA 8270 C	FAMPHUR	OR
EPA 8270 C	FLUORANTHENE	OR	EPA 8270 C	FLUORENE	OR
EPA 8270 C	HEXACHLOROBENZENE	OR	EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	OR
EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	OR	EPA 8270 C	HEXACHLOROETHANE	OR
EPA 8270 C	HEXACHLOROPHENE	OR	EPA 8270 C	HEXACHLOROPROPENE	OR

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NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8270 C	INDENO(1,2,3-CD) PYRENE	OR	EPA 8270 C	ISODRIN	OR
EPA 8270 C	ISOPHORONE	OR	EPA 8270 C	ISOSAFROLE	OR
EPA 8270 C	KEPONE	OR	EPA 8270 C	METHAPYRILENE	OR
EPA 8270 C	METHYL METHANESULFONATE	OR	EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	OR
EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	OR	EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	OR
EPA 8270 C	N-NITROSODIETHYLAMINE	OR	EPA 8270 C	N-NITROSODIMETHYLAMINE	OR
EPA 8270 C	N-NITROSODIPHENYLAMINE	OR	EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	OR
EPA 8270 C	N-NITROSOMORPHOLINE	OR	EPA 8270 C	N-NITROSOPIPERIDINE	OR
EPA 8270 C	N-NITROSOPYRROLIDINE	OR	EPA 8270 C	NAPHTHALENE	OR
EPA 8270 C	NITROBENZENE	OR	EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	OR
EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	OR	EPA 8270 C	PARATHION (PARATHION - ETHYL)	OR
EPA 8270 C	PENTACHLOROBENZENE	OR	EPA 8270 C	PENTACHLORONITROBENZENE	OR
EPA 8270 C	PENTACHLOROPHENOL	OR	EPA 8270 C	PHENACETIN	OR
EPA 8270 C	PHENANTHRENE	OR	EPA 8270 C	PHENOL	OR
EPA 8270 C	PHORATE	OR	EPA 8270 C	PRONAMIDE (KERB)	OR
EPA 8270 C	PYRENE	OR	EPA 8270 C	PYRIDINE	OR
EPA 8270 C	SAFROLE	OR	EPA 8270 C	SULFOTEP (TETRAETHYL DITHIOPYROPHOSPHATE)	OR
EPA 8270 C	THIONAZIN (ZINOPHOS)	OR	EPA 8270 C	THIOPHENOL (BENZENETHIOL)	OR
EPA 8270 C - EXTENDED	1,1'-BIPHENYL	OR	EPA 8270 C - EXTENDED	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	OR
EPA 8270 C - EXTENDED	1-METHYLNAPHTHALENE	OR	EPA 8270 C - EXTENDED	2,3,5,6-TETRACHLOROPHENOL	OR
EPA 8270 C - EXTENDED	3+4-METHYLPHENOL (M+P CRESOL)	OR	EPA 8270 C - EXTENDED	6-METHYLCHRYSENE	OR
EPA 8270 C - EXTENDED	ATRAZINE	OR	EPA 8270 C - EXTENDED	BENZALDEHYDE	OR
EPA 8270 C - EXTENDED	CAPROLACTAM	OR	EPA 8270 C - EXTENDED	CARBAZOLE	OR
EPA 8270 C - EXTENDED	DIBENZ(A,H) ACRIDINE	OR	EPA 8270 C - EXTENDED	INDENE	OR
EPA 8270 C - EXTENDED	N-OCTADECANE	OR	EPA 8270 C - EXTENDED	PENTACHLOROETHANE	OR
EPA 8270 C - EXTENDED	QUINOLINE	OR	EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	OR
EPA 8270 D	1,2,4-TRICHLOROBENZENE	OR	EPA 8270 D	1,2-DICHLOROBENZENE	OR
EPA 8270 D	1,2-DIPHENYLHYDRAZINE	OR	EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	OR
EPA 8270 D	1,3-DICHLOROBENZENE	OR	EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	OR
EPA 8270 D	1,4-DICHLOROBENZENE	OR	EPA 8270 D	1,4-DINITROBENZENE	OR
EPA 8270 D	1,4-NAPHTHOQUINONE	OR	EPA 8270 D	1,4-PHENYLENEDIAMINE	OR
EPA 8270 D	1-CHLORONAPHTHALENE	OR	EPA 8270 D	1-NAPHTHYLAMINE	OR
EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	OR	EPA 8270 D	2,4,5-TRICHLOROPHENOL	OR
EPA 8270 D	2,4,6-TRICHLOROPHENOL	OR	EPA 8270 D	2,4-DIAMINOTOLUENE	OR
EPA 8270 D	2,4-DICHLOROPHENOL	OR	EPA 8270 D	2,4-DIMETHYLPHENOL	OR
EPA 8270 D	2,4-DINITROPHENOL	OR	EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	OR

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 D	2,6-DICHLOROPHENOL	OR	EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	OR
EPA 8270 D	2-ACETYLAMINOFLUORENE	OR	EPA 8270 D	2-CHLORONAPHTHALENE	OR
EPA 8270 D	2-CHLOROPHENOL	OR	EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	OR
EPA 8270 D	2-METHYLNAPHTHALENE	OR	EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	OR
EPA 8270 D	2-NAPHTHYLAMINE	OR	EPA 8270 D	2-NITROANILINE	OR
EPA 8270 D	2-NITROPHENOL	OR	EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	OR
EPA 8270 D	3,3'-DICHLOROBENZIDINE	OR	EPA 8270 D	3,3'-DIMETHOXYBENZIDINE	OR
EPA 8270 D	3-METHYLCHOLANTHRENE	OR	EPA 8270 D	3-NITROANILINE	OR
EPA 8270 D	4,4'-METHYLENEBIS(2-CHLOROANIL INE)	OR	EPA 8270 D	4-AMINOBIPHENYL	OR
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER	OR	EPA 8270 D	4-CHLORO-3-METHYLPHENOL	OR
EPA 8270 D	4-CHLOROANILINE	OR	EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	OR
EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	OR	EPA 8270 D	4-NITROANILINE	OR
EPA 8270 D	4-NITROPHENOL	OR	EPA 8270 D	4-NITROQUINOLINE-1-OXIDE	OR
EPA 8270 D	5-NITRO-O-TOLUIDINE	OR	EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	OR
EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	OR	EPA 8270 D	ACENAPHTHENE	OR
EPA 8270 D	ACENAPHTHYLENE	OR	EPA 8270 D	ACETOPHENONE	OR
EPA 8270 D	ANILINE	OR	EPA 8270 D	ANTHRACENE	OR
EPA 8270 D	ARAMITE	OR	EPA 8270 D	BENZIDINE	OR
EPA 8270 D	BENZO(A)ANTHRACENE	OR	EPA 8270 D	BENZO(A)PYRENE	OR
EPA 8270 D	BENZO(B)FLUORANTHENE	OR	EPA 8270 D	BENZO(G,H,I)PERYLENE	OR
EPA 8270 D	BENZO(K)FLUORANTHENE	OR	EPA 8270 D	BENZOIC ACID	OR
EPA 8270 D	BENZYL ALCOHOL	OR	EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	OR
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	OR	EPA 8270 D	BIS(2-CHLOROISOPROPYL) ETHER	OR
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	OR	EPA 8270 D	BUTYL BENZYL PHTHALATE	OR
EPA 8270 D	CHLOROBENZILATE	OR	EPA 8270 D	CHRYSENE	OR
EPA 8270 D	DI-N-BUTYL PHTHALATE	OR	EPA 8270 D	DI-N-OCTYL PHTHALATE	OR
EPA 8270 D	DIALATE	OR	EPA 8270 D	DIBENZ(A, J) ACRIDINE	OR
EPA 8270 D	DIBENZO(A, H) ANTHRACENE	OR	EPA 8270 D	DIBENZOFURAN	OR
EPA 8270 D	DIETHYL PHTHALATE	OR	EPA 8270 D	DIMETHOATE	OR
EPA 8270 D	DIMETHYL PHTHALATE	OR	EPA 8270 D	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	OR
EPA 8270 D	DIPHENYLAMINE	OR	EPA 8270 D	DISULFOTON	OR
EPA 8270 D	ETHYL METHANESULFONATE	OR	EPA 8270 D	FAMPHUR	OR
EPA 8270 D	FLUORANTHENE	OR	EPA 8270 D	FLUORENE	OR
EPA 8270 D	HEXACHLOROBENZENE	OR	EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	OR



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NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	OR	EPA 8270 D	HEXACHLOROETHANE	OR
EPA 8270 D	HEXACHLOROPHENE	OR	EPA 8270 D	HEXACHLOROPROPENE	OR
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	OR	EPA 8270 D	ISODRIN	OR
EPA 8270 D	ISOPHORONE	OR	EPA 8270 D	ISOSAFROLE	OR
EPA 8270 D	KEPONE	OR	EPA 8270 D	METHAPYRILENE	OR
EPA 8270 D	METHYL METHANESULFONATE	OR	EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	OR
EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	OR	EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	OR
EPA 8270 D	N-NITROSODIETHYLAMINE	OR	EPA 8270 D	N-NITROSODIMETHYLAMINE	OR
EPA 8270 D	N-NITROSODIPHENYLAMINE	OR	EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	OR
EPA 8270 D	N-NITROSOMORPHOLINE	OR	EPA 8270 D	N-NITROSOPIPERIDINE	OR
EPA 8270 D	N-NITROSOPYRROLIDINE	OR	EPA 8270 D	NAPHTHALENE	OR
EPA 8270 D	NITROBENZENE	OR	EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	OR
EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	OR	EPA 8270 D	PARATHION (PARATHION - ETHYL)	OR
EPA 8270 D	PENTACHLOROBENZENE	OR	EPA 8270 D	PENTACHLORONITROBENZENE	OR
EPA 8270 D	PENTACHLOROPHENOL	OR	EPA 8270 D	PHENACETIN	OR
EPA 8270 D	PHENANTHRENE	OR	EPA 8270 D	PHENOL	OR
EPA 8270 D	PHORATE	OR	EPA 8270 D	PRONAMIDE (KERB)	OR
EPA 8270 D	PYRENE	OR	EPA 8270 D	SAFROLE	OR
EPA 8270 D	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	OR	EPA 8270 D	THIONAZIN (ZINOPHOS)	OR
EPA 8270 D	THIOPHENOL (BENZENETHIOL)	OR	EPA 8270 D - EXTENDED	1,1'-BIPHENYL	OR
EPA 8270 D - EXTENDED	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	OR	EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	OR
EPA 8270 D - EXTENDED	2,3,5,6-TETRACHLOROPHENOL	OR	EPA 8270 D - EXTENDED	3+4-METHYLPHENOL (M+P CRESOL)	OR
EPA 8270 D - EXTENDED	6-METHYLCHRYSENE	OR	EPA 8270 D - EXTENDED	ATRAZINE	OR
EPA 8270 D - EXTENDED	AZOBENZENE	OR	EPA 8270 D - EXTENDED	BENZALDEHYDE	OR
EPA 8270 D - EXTENDED	CAPROLACTAM	OR	EPA 8270 D - EXTENDED	DIBENZ(A,H) ACRIDINE	OR
EPA 8270 D - EXTENDED	INDENE	OR	EPA 8270 D - EXTENDED	N-DECANE	OR
EPA 8270 D - EXTENDED	N-OCTADECANE	OR	EPA 8270 D - EXTENDED	PYRIDINE	OR
EPA 8270 D - EXTENDED	QUINOLINE	OR	EPA 8270 D SIM	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	OR
EPA 8315 A	FORMALDEHYDE	OR	EPA 9012 A	AMENABLE CYANIDE	OR
EPA 9012 A	TOTAL CYANIDE	OR	EPA 9012 B	AMENABLE CYANIDE	OR
EPA 9012 B	TOTAL CYANIDE	OR	EPA 9030 B	PREP: SULFIDE	OR
EPA 9034	TOTAL SULFIDES	OR	EPA 9040 B	PH	OR
EPA 9040 C	PH	OR	EPA 9050 A	CONDUCTIVITY	OR
EPA 9056 A	BROMIDE	OR	EPA 9056 A	CHLORIDE	OR
EPA 9056 A	FLUORIDE	OR	EPA 9056 A	NITRATE AS N	OR
EPA 9056 A	NITRITE	OR	EPA 9056 A	SULFATE	OR

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NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 9060	TOTAL ORGANIC CARBON	OR	EPA 9060 A	TOTAL ORGANIC CARBON	OR
EPA 9065	TOTAL PHENOLICS	OR	EPA 9095 B	FREE LIQUID	OR
EPA 9251	CHLORIDE	OR	RSK-175	ETHANE	OR
RSK-175	ETHENE	OR	RSK-175	METHANE	OR
SM 2320 B-1997	ALKALINITY AS CaCO ₃	OR	SM 2340 B-1997	TOTAL HARDNESS AS CaCO ₃	OR
SM 2510 B-1997	CONDUCTIVITY	OR	SM 2540 B-1997	RESIDUE-TOTAL	OR
SM 2540 C-1997	RESIDUE-FILTERABLE (TDS)	OR	SM 2540 D-1997	RESIDUE-NONFILTERABLE (TSS)	OR
SM 2540 F-1997	RESIDUE-SETTLEABLE	OR	SM 3500-CR B-2009	CHROMIUM VI	OR
SM 3500-FE B-1997	IRON	OR	SM 4500-CL ⁻ E-1997	CHLORIDE	OR
SM 4500-CN ⁻ E-1999	CYANIDE	OR	SM 4500-CN ⁻ G-1999	AMENABLE CYANIDE	OR
SM 4500-F ⁻ C-1997	FLUORIDE	OR	SM 4500-NH ₃ B-1997	AMMONIA AS N	OR
SM 4500-NH ₃ C-1997	AMMONIA AS N	OR	SM 4500-NH ₃ D-1997	AMMONIA AS N	OR
SM 4500-NORG C-1997	KJELDAHL NITROGEN - TOTAL	OR	SM 4500-P E-1999	ORTHOPHOSPHATE AS P	OR
SM 4500-P E-1999	PHOSPHORUS, TOTAL	OR	SM 4500-S ₂ ⁻ F-2000	SULFIDE	OR
SM 5210 B-2001	BIOCHEMICAL OXYGEN DEMAND	OR	SM 5210 B-2001	CARBONACEOUS BOD, CBOD	OR
SM 5220 D-1997	CHEMICAL OXYGEN DEMAND	OR	SM 5310 C-2000	TOTAL ORGANIC CARBON	OR
SM 5540 C-1993	SURFACTANTS - MBAS	OR			

SOLID AND CHEMICAL MATERIALS

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
ASTM D3987-06	PREP: SHAKE EXTRACTION OF SOLID WASTEWATER WITH WATER	OR	EPA 1010 A	FLASHPOINT	OR
EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	OR	EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	OR
EPA 1630	METHYL MERCURY	OR	EPA 1631 E	MERCURY	OR
EPA 3050 B	PREP: ACID DIGESTION OF SEDIMENTS, SLUDGES, AND SOILS	OR	EPA 3051	PREP: MICROWAVE ASSISTED ACID DIGESTION OF SEDIMENTS, SLUDGES, SOILS, AND OILS	OR
EPA 3051 A	PREP: MICROWAVE ASSISTED ACID DIGESTION OF SEDIMENTS, SLUDGES, SOILS, AND OILS	OR	EPA 3060 A	PREP: HEXAVALENT CHROMIUM	OR
EPA 3540 C	PREP: SOXHLET EXTRACTION	OR	EPA 3546	PREP: MICROWAVE EXTRACTION	OR
EPA 3550 B	PREP: ULTRASONIC EXTRACTION	OR	EPA 3550 C	PREP: ULTRASONIC EXTRACTION	OR
EPA 3580 A	PREP: WASTE DILUTION	OR	EPA 3620 B	PREP: FLORISIL CLEANUP	OR
EPA 3620 C	PREP: FLORISIL CLEANUP	OR	EPA 3640 A	PREP: GEL PERMEATION CLEANUP	OR
EPA 3650 B	PREP: ACID BASE PARTITION CLEANUP	OR	EPA 3660 B	PREP: SULFUR CLEANUP	OR
EPA 3665 A	SULFURIC ACID/PERMANGANATE CLEAN-UP	OR	EPA 5030 B	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	OR
EPA 5035	PREP: CLOSED-SYSTEM PURGE AND TRAP AND EXTRACTION	OR	EPA 5035 A	PREP: CLOSED-SYSTEM PURGE AND TRAP AND EXTRACTION	OR
EPA 6010 B	ALUMINUM	OR	EPA 6010 B	ANTIMONY	OR
EPA 6010 B	ARSENIC	OR	EPA 6010 B	BARIUM	OR

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EPA 6010 B	BERYLLIUM	OR
EPA 6010 B	CADMIUM	OR
EPA 6010 B	CHROMIUM	OR
EPA 6010 B	COPPER	OR
EPA 6010 B	LEAD	OR
EPA 6010 B	MAGNESIUM	OR
EPA 6010 B	MOLYBDENUM	OR
EPA 6010 B	POTASSIUM	OR
EPA 6010 B	SILICA AS SiO_2	OR
EPA 6010 B	SODIUM	OR
EPA 6010 B	THALLIUM	OR
EPA 6010 B	TITANIUM	OR
EPA 6010 B	ZINC	OR
EPA 6010 C	ALUMINUM	OR
EPA 6010 C	ARSENIC	OR
EPA 6010 C	BERYLLIUM	OR
EPA 6010 C	CADMIUM	OR
EPA 6010 C	CHROMIUM	OR
EPA 6010 C	COPPER	OR
EPA 6010 C	LEAD	OR
EPA 6010 C	MAGNESIUM	OR
EPA 6010 C	MOLYBDENUM	OR
EPA 6010 C	POTASSIUM	OR
EPA 6010 C	SILICA AS SiO_2	OR
EPA 6010 C	SODIUM	OR
EPA 6010 C	THALLIUM	OR
EPA 6010 C	TITANIUM	OR
EPA 6010 C	ZINC	OR
EPA 6020	ALUMINUM	OR
EPA 6020	ARSENIC	OR
EPA 6020	BERYLLIUM	OR
EPA 6020	CHROMIUM	OR
EPA 6020	COPPER	OR
EPA 6020	MANGANESE	OR
EPA 6020	SILVER	OR
EPA 6020	ZINC	OR
EPA 6020 - EXTENDED	CALCIUM	OR
EPA 6020 - EXTENDED	MAGNESIUM	OR
EPA 6020 - EXTENDED	POTASSIUM	OR

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 6010 B	BORON	OR
EPA 6010 B	CALCIUM	OR
EPA 6010 B	COBALT	OR
EPA 6010 B	IRON	OR
EPA 6010 B	LITHIUM	OR
EPA 6010 B	MANGANESE	OR
EPA 6010 B	NICKEL	OR
EPA 6010 B	SELENIUM	OR
EPA 6010 B	SILVER	OR
EPA 6010 B	STRONTIUM	OR
EPA 6010 B	TIN	OR
EPA 6010 B	VANADIUM	OR
EPA 6010 B - EXTENDED	SILICON	OR
EPA 6010 C	ANTIMONY	OR
EPA 6010 C	BARIUM	OR
EPA 6010 C	BORON	OR
EPA 6010 C	CALCIUM	OR
EPA 6010 C	COBALT	OR
EPA 6010 C	IRON	OR
EPA 6010 C	LITHIUM	OR
EPA 6010 C	MANGANESE	OR
EPA 6010 C	NICKEL	OR
EPA 6010 C	SELENIUM	OR
EPA 6010 C	SILVER	OR
EPA 6010 C	STRONTIUM	OR
EPA 6010 C	TIN	OR
EPA 6010 C	VANADIUM	OR
EPA 6010 C - EXTENDED	SILICON	OR
EPA 6020	ANTIMONY	OR
EPA 6020	BARIUM	OR
EPA 6020	CADMIUM	OR
EPA 6020	COBALT	OR
EPA 6020	LEAD	OR
EPA 6020	NICKEL	OR
EPA 6020	THALLIUM	OR
EPA 6020 - EXTENDED	BORON	OR
EPA 6020 - EXTENDED	IRON	OR
EPA 6020 - EXTENDED	MOLYBDENUM	OR
EPA 6020 - EXTENDED	SELENIUM	OR

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 6020 - EXTENDED	SODIUM	OR	EPA 6020 - EXTENDED	STRONTIUM	OR
EPA 6020 - EXTENDED	TIN	OR	EPA 6020 - EXTENDED	TITANIUM	OR
EPA 6020 - EXTENDED	VANADIUM	OR	EPA 6020 A	ALUMINUM	OR
EPA 6020 A	ANTIMONY	OR	EPA 6020 A	ARSENIC	OR
EPA 6020 A	BARIUM	OR	EPA 6020 A	BERYLLIUM	OR
EPA 6020 A	CADMIUM	OR	EPA 6020 A	CALCIUM	OR
EPA 6020 A	CHROMIUM	OR	EPA 6020 A	COBALT	OR
EPA 6020 A	COPPER	OR	EPA 6020 A	IRON	OR
EPA 6020 A	LEAD	OR	EPA 6020 A	MAGNESIUM	OR
EPA 6020 A	MANGANESE	OR	EPA 6020 A	NICKEL	OR
EPA 6020 A	POTASSIUM	OR	EPA 6020 A	SELENIUM	OR
EPA 6020 A	SILVER	OR	EPA 6020 A	SODIUM	OR
EPA 6020 A	THALLIUM	OR	EPA 6020 A	VANADIUM	OR
EPA 6020 A	ZINC	OR	EPA 6020 A - EXTENDED	BORON	OR
EPA 6020 A - EXTENDED	MOLYBDENUM	OR	EPA 6020 A - EXTENDED	STRONTIUM	OR
EPA 6020 A - EXTENDED	TIN	OR	EPA 6020 A - EXTENDED	TITANIUM	OR
EPA 7196 A	CHROMIUM VI	OR	EPA 7471 A	MERCURY	OR
EPA 7471 B	MERCURY	OR	EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	OR
EPA 8015 B	GASOLINE RANGE ORGANICS (GRO)	OR	EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	OR
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	OR	EPA 8015 D	DIESEL RANGE ORGANICS (DRO)	OR
EPA 8015 D	GASOLINE RANGE ORGANICS (GRO)	OR	EPA 8081 A	4,4'-DDD	OR
EPA 8081 A	4,4'-DDE	OR	EPA 8081 A	4,4'-DDT	OR
EPA 8081 A	ALDRIN	OR	EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	OR
EPA 8081 A	ALPHA-CHLORDANE [CIS-CHLORDANE]	OR	EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	OR
EPA 8081 A	CHLORDANE (TECH.)	OR	EPA 8081 A	CHLOROBENZILATE	OR
EPA 8081 A	DELTA-BHC	OR	EPA 8081 A	DIALATE	OR
EPA 8081 A	DIELDRIN	OR	EPA 8081 A	ENDOSULFAN I	OR
EPA 8081 A	ENDOSULFAN II	OR	EPA 8081 A	ENDOSULFAN SULFATE	OR
EPA 8081 A	ENDRIN	OR	EPA 8081 A	ENDRIN ALDEHYDE	OR
EPA 8081 A	ENDRIN KETONE	OR	EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	OR
EPA 8081 A	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	OR	EPA 8081 A	HEPTACHLOR	OR
EPA 8081 A	HEPTACHLOR EPOXIDE	OR	EPA 8081 A	HEXACHLOROBENZENE	OR

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METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8081 A	ISODRIN	OR	EPA 8081 A	METHOXYCHLOR	OR
EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	OR	EPA 8081 A - EXTENDED	KEPONE	OR
EPA 8081 A - EXTENDED	MIREX	OR	EPA 8081 B	4,4'-DDD	OR
EPA 8081 B	4,4'-DDE	OR	EPA 8081 B	4,4'-DDT	OR
EPA 8081 B	ALDRIN	OR	EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	OR
EPA 8081 B	ALPHA-CHLORDANE [CIS-CHLORDANE]	OR	EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	OR
EPA 8081 B	CHLORDANE (TECH.)	OR	EPA 8081 B	CHLOROBENZILATE	OR
EPA 8081 B	DELTA-BHC	OR	EPA 8081 B	DIALLATE	OR
EPA 8081 B	DIELDRIN	OR	EPA 8081 B	ENDOSULFAN I	OR
EPA 8081 B	ENDOSULFAN II	OR	EPA 8081 B	ENDOSULFAN SULFATE	OR
EPA 8081 B	ENDRIN	OR	EPA 8081 B	ENDRIN ALDEHYDE	OR
EPA 8081 B	ENDRIN KETONE	OR	EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	OR
EPA 8081 B	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	OR	EPA 8081 B	HEPTACHLOR	OR
EPA 8081 B	HEPTACHLOR EPOXIDE	OR	EPA 8081 B	HEXACHLOROBENZENE	OR
EPA 8081 B	ISODRIN	OR	EPA 8081 B	METHOXYCHLOR	OR
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	OR	EPA 8081 B - EXTENDED	KEPONE	OR
EPA 8081 B - EXTENDED	MIREX	OR	EPA 8082	AROCLOR-1016 (PCB-1016)	OR
EPA 8082	AROCLOR-1221 (PCB-1221)	OR	EPA 8082	AROCLOR-1232 (PCB-1232)	OR
EPA 8082	AROCLOR-1242 (PCB-1242)	OR	EPA 8082	AROCLOR-1248 (PCB-1248)	OR
EPA 8082	AROCLOR-1254 (PCB-1254)	OR	EPA 8082	AROCLOR-1260 (PCB-1260)	OR
EPA 8082 - EXTENDED	AROCLOR-1262 (PCB-1262)	OR	EPA 8082 - EXTENDED	AROCLOR-1268 (PCB-1268)	OR
EPA 8082 A	AROCLOR-1016 (PCB-1016)	OR	EPA 8082 A	AROCLOR-1221 (PCB-1221)	OR
EPA 8082 A	AROCLOR-1232 (PCB-1232)	OR	EPA 8082 A	AROCLOR-1242 (PCB-1242)	OR
EPA 8082 A	AROCLOR-1248 (PCB-1248)	OR	EPA 8082 A	AROCLOR-1254 (PCB-1254)	OR
EPA 8082 A	AROCLOR-1260 (PCB-1260)	OR	EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	OR
EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	OR	EPA 8151 A	2,4,5-T	OR
EPA 8151 A	2,4-D	OR	EPA 8151 A	2,4-DB	OR
EPA 8151 A	DALAPON	OR	EPA 8151 A	DICAMBA	OR
EPA 8151 A	DICHLOROPROP (DICHLOROPROP)	OR	EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	OR
EPA 8151 A	MCPA	OR	EPA 8151 A	MCPP	OR
EPA 8151 A	PENTACHLOROPHENOL	OR	EPA 8151 A	SILVEX (2,4,5-TP)	OR
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	OR	EPA 8260 B	1,1,1-TRICHLOROETHANE	OR

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Commonwealth of Virginia
Department of General Services
Division of Consolidated Laboratory Services



Scope of Accreditation

VELAP Certificate No.: 8028

Testamerica Laboratories, Inc.
4101 Shuffel Street N.W.
North Canton, OH 44720

Virginia Laboratory ID: 460175
Effective Date: September 15, 2015
Expiration Date: September 14, 2016

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	OR	EPA 8260 B	1,1,2-TRICHLOROETHANE	OR
EPA 8260 B	1,1-DICHLOROETHANE	OR	EPA 8260 B	1,1-DICHLOROETHYLENE	OR
EPA 8260 B	1,1-DICHLOROPROPENE	OR	EPA 8260 B	1,2,3-TRICHLOROBENZENE	OR
EPA 8260 B	1,2,3-TRICHLOROPROPANE	OR	EPA 8260 B	1,2,4-TRICHLOROBENZENE	OR
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	OR	EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	OR
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	OR	EPA 8260 B	1,2-DICHLOROBENZENE	OR
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	OR	EPA 8260 B	1,2-DICHLOROPROPANE	OR
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	OR	EPA 8260 B	1,3-DICHLOROBENZENE	OR
EPA 8260 B	1,3-DICHLOROPROPANE	OR	EPA 8260 B	1,4-DICHLOROBENZENE	OR
EPA 8260 B	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	OR	EPA 8260 B	1-BUTANOL (N-BUTANOL)	OR
EPA 8260 B	2,2-DICHLOROPROPANE	OR	EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	OR
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	OR	EPA 8260 B	2-CHLOROTOLUENE	OR
EPA 8260 B	2-HEXANONE	OR	EPA 8260 B	2-NITROPROPANE	OR
EPA 8260 B	4-CHLOROTOLUENE	OR	EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYME)	OR
EPA 8260 B	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	OR	EPA 8260 B	ACETONE	OR
EPA 8260 B	ACETONITRILE	OR	EPA 8260 B	ACROLEIN (PROPENAL)	OR
EPA 8260 B	ACRYLONITRILE	OR	EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	OR
EPA 8260 B	BENZENE	OR	EPA 8260 B	BENZYL CHLORIDE	OR
EPA 8260 B	BROMOBENZENE	OR	EPA 8260 B	BROMOCHLOROMETHANE	OR
EPA 8260 B	BROMODICHLOROMETHANE	OR	EPA 8260 B	BROMOFORM	OR
EPA 8260 B	CARBON DISULFIDE	OR	EPA 8260 B	CARBON TETRACHLORIDE	OR
EPA 8260 B	CHLOROBENZENE	OR	EPA 8260 B	CHLORODIBROMOMETHANE	OR
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	OR	EPA 8260 B	CHLOROFORM	OR
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	OR	EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	OR
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	OR	EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	OR
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	OR	EPA 8260 B	DIETHYL ETHER	OR
EPA 8260 B	ETHYL ACETATE	OR	EPA 8260 B	ETHYL METHACRYLATE	OR
EPA 8260 B	ETHYLBENZENE	OR	EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	OR
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	OR	EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	OR
EPA 8260 B	ISOPROPYLBENZENE	OR	EPA 8260 B	M+P-XYLENE	OR
EPA 8260 B	METHACRYLONITRILE	OR	EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	OR

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Commonwealth of Virginia
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Scope of Accreditation

VELAP Certificate No.: 8028

Testamerica Laboratories, Inc.
4101 Shuffel Street N.W.
North Canton, OH 44720

Virginia Laboratory ID: 460175
Effective Date: September 15, 2015
Expiration Date: September 14, 2016

SOLID AND CHEMICAL MATERIALS

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	OR	EPA 8260 B	METHYL METHACRYLATE	OR
EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	OR	EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	OR
EPA 8260 B	N-BUTYLBENZENE	OR	EPA 8260 B	N-PROPYLBENZENE	OR
EPA 8260 B	NAPHTHALENE	OR	EPA 8260 B	O-XYLENE	OR
EPA 8260 B	PENTACHLOROETHANE	OR	EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	OR
EPA 8260 B	SEC-BUTYLBENZENE	OR	EPA 8260 B	STYRENE	OR
EPA 8260 B	TERT-BUTYL ALCOHOL	OR	EPA 8260 B	TERT-BUTYLBENZENE	OR
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	OR	EPA 8260 B	TOLUENE	OR
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	OR	EPA 8260 B	TRANS-1,3-DICHLOROPROPENE	OR
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	OR	EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	OR
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	OR	EPA 8260 B	VINYL ACETATE	OR
EPA 8260 B	VINYL CHLORIDE	OR	EPA 8260 B	XYLENE (TOTAL)	OR
EPA 8260 B - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	OR	EPA 8260 B - EXTENDED	1,2,3-TRIMETHYLBENZENE	OR
EPA 8260 B - EXTENDED	1,3,5-TRICHLOROBENZENE	OR	EPA 8260 B - EXTENDED	2-METHYLNAPHTHALENE	OR
EPA 8260 B - EXTENDED	CYCLOHEXANE	OR	EPA 8260 B - EXTENDED	CYCLOHEXANONE	OR
EPA 8260 B - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	OR	EPA 8260 B - EXTENDED	DICHLOROFLUOROMETHANE (FREON 21)	OR
EPA 8260 B - EXTENDED	METHYL ACETATE	OR	EPA 8260 B - EXTENDED	METHYLCYCLOHEXANE	OR
EPA 8260 B - EXTENDED	N-HEPTANE	OR	EPA 8260 B - EXTENDED	N-HEXANE	OR
EPA 8260 B - EXTENDED	T-AMYLMETHYLETHER (TAME)	OR	EPA 8260 B - EXTENDED	TETRAHYDROFURAN (THF)	OR
EPA 8260 B SIM	1,4-DIOXANE (P-DIOXANE /1,4- DIETHYLENEOXIDE)	OR	EPA 8260 C	1,1,1,2-TETRACHLOROETHANE	OR
EPA 8260 C	1,1,1-TRICHLOROETHANE	OR	EPA 8260 C	1,1,2,2-TETRACHLOROETHANE	OR
EPA 8260 C	1,1,2-TRICHLOROETHANE	OR	EPA 8260 C	1,1-DICHLOROETHANE	OR
EPA 8260 C	1,1-DICHLOROETHYLENE	OR	EPA 8260 C	1,1-DICHLOROPROPENE	OR
EPA 8260 C	1,2,3-TRICHLOROBENZENE	OR	EPA 8260 C	1,2,3-TRICHLOROPROPANE	OR
EPA 8260 C	1,2,4-TRICHLOROBENZENE	OR	EPA 8260 C	1,2,4-TRIMETHYLBENZENE	OR
EPA 8260 C	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	OR	EPA 8260 C	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	OR
EPA 8260 C	1,2-DICHLOROBENZENE	OR	EPA 8260 C	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	OR
EPA 8260 C	1,2-DICHLOROPROPANE	OR	EPA 8260 C	1,3,5-TRIMETHYLBENZENE	OR
EPA 8260 C	1,3-DICHLOROBENZENE	OR	EPA 8260 C	1,3-DICHLOROPROPANE	OR
EPA 8260 C	1,4-DICHLOROBENZENE	OR	EPA 8260 C	1,4-DIOXANE (P-DIOXANE /1,4- DIETHYLENEOXIDE)	OR
EPA 8260 C	1-BUTANOL (N-BUTANOL)	OR	EPA 8260 C	2,2-DICHLOROPROPANE	OR
EPA 8260 C	2-BUTANONE (METHYL ETHYL KETONE, MEK)	OR	EPA 8260 C	2-CHLOROETHYL VINYL ETHER	OR

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SOLID AND CHEMICAL MATERIALS

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8260 C	2-CHLOROTOLUENE	OR	EPA 8260 C	2-HEXANONE	OR
EPA 8260 C	2-NITROPROPANE	OR	EPA 8260 C	4-CHLOROTOLUENE	OR
EPA 8260 C	4-ISOPROPYLTOLUENE (P-CYME)	OR	EPA 8260 C	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	OR
EPA 8260 C	ACETONE	OR	EPA 8260 C	ACETONITRILE	OR
EPA 8260 C	ACROLEIN (PROPENAL)	OR	EPA 8260 C	ACRYLONITRILE	OR
EPA 8260 C	ALLYL CHLORIDE (3-CHLOROPROPENE)	OR	EPA 8260 C	BENZENE	OR
EPA 8260 C	BENZYL CHLORIDE	OR	EPA 8260 C	BROMOBENZENE	OR
EPA 8260 C	BROMOCHLOROMETHANE	OR	EPA 8260 C	BROMODICHLOROMETHANE	OR
EPA 8260 C	BROMOFORM	OR	EPA 8260 C	CARBON DISULFIDE	OR
EPA 8260 C	CARBON TETRACHLORIDE	OR	EPA 8260 C	CHLOROBENZENE	OR
EPA 8260 C	CHLORODIBROMOMETHANE	OR	EPA 8260 C	CHLOROETHANE (ETHYL CHLORIDE)	OR
EPA 8260 C	CHLOROFORM	OR	EPA 8260 C	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	OR
EPA 8260 C	CIS-1,2-DICHLOROETHYLENE	OR	EPA 8260 C	CIS-1,3-DICHLOROPROPENE	OR
EPA 8260 C	CYCLOHEXANE	OR	EPA 8260 C	DIBROMOMETHANE (METHYLENE BROMIDE)	OR
EPA 8260 C	DICHLORODIFLUOROMETHANE (FREON-12)	OR	EPA 8260 C	DIETHYL ETHER	OR
EPA 8260 C	ETHYL ACETATE	OR	EPA 8260 C	ETHYL METHACRYLATE	OR
EPA 8260 C	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	OR	EPA 8260 C	ETHYLBENZENE	OR
EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	OR	EPA 8260 C	IODOMETHANE (METHYL IODIDE)	OR
EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	OR	EPA 8260 C	ISOPROPYLBENZENE	OR
EPA 8260 C	M+P-XYLENE	OR	EPA 8260 C	METHACRYLONITRILE	OR
EPA 8260 C	METHYL BROMIDE (BROMOMETHANE)	OR	EPA 8260 C	METHYL CHLORIDE (CHLOROMETHANE)	OR
EPA 8260 C	METHYL METHACRYLATE	OR	EPA 8260 C	METHYL TERT-BUTYL ETHER (MTBE)	OR
EPA 8260 C	METHYLCYCLOHEXANE	OR	EPA 8260 C	METHYLENE CHLORIDE (DICHLOROMETHANE)	OR
EPA 8260 C	N-BUTYLBENZENE	OR	EPA 8260 C	N-PROPYLBENZENE	OR
EPA 8260 C	NAPHTHALENE	OR	EPA 8260 C	O-XYLENE	OR
EPA 8260 C	PENTACHLOROETHANE	OR	EPA 8260 C	PROPIONITRILE (ETHYL CYANIDE)	OR
EPA 8260 C	SEC-BUTYLBENZENE	OR	EPA 8260 C	STYRENE	OR
EPA 8260 C	T-AMYLMETHYLETHER (TAME)	OR	EPA 8260 C	TERT-BUTYL ALCOHOL	OR
EPA 8260 C	TERT-BUTYLBENZENE	OR	EPA 8260 C	TETRACHLOROETHENE (PERCHLOROETHENE)	OR
EPA 8260 C	TOLUENE	OR	EPA 8260 C	TRANS-1,2-DICHLOROETHENE	OR
EPA 8260 C	TRANS-1,3-DICHLOROPROPENE	OR	EPA 8260 C	TRANS-1,4-DICHLORO-2-BUTENE	OR

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Scope of Accreditation

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SOLID AND CHEMICAL MATERIALS

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	OR	EPA 8260 C	TRICHLOROFUOROMETHANE (FLUOROTRICHOROMETHANE, FREON 11)	OR
EPA 8260 C	VINYL ACETATE	OR	EPA 8260 C	VINYL CHLORIDE	OR
EPA 8260 C	XYLENE (TOTAL)	OR	EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	OR
EPA 8260 C - EXTENDED	1,3,5-TRICHLOROBENZENE	OR	EPA 8260 C - EXTENDED	2-METHYLNAPHTHALENE	OR
EPA 8260 C - EXTENDED	CYCLOHEXANONE	OR	EPA 8260 C - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	OR
EPA 8260 C - EXTENDED	DICHLOROFUOROMETHANE (FREON 21)	OR	EPA 8260 C - EXTENDED	METHYL ACETATE	OR
EPA 8260 C - EXTENDED	N-HEPTANE	OR	EPA 8260 C - EXTENDED	N-HEXANE	OR
EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	OR	EPA 8260 C SIM	1,4-DIOXANE (P-DIOXANE /1,4- DIETHYLENEOXIDE)	OR
EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	OR	EPA 8270 C	1,2,4-TRICHLOROBENZENE	OR
EPA 8270 C	1,2-DICHLOROBENZENE	OR	EPA 8270 C	1,2-DIPHENYLHYDRAZINE	OR
EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	OR	EPA 8270 C	1,3-DICHLOROBENZENE	OR
EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	OR	EPA 8270 C	1,4-DICHLOROBENZENE	OR
EPA 8270 C	1,4-DINITROBENZENE	OR	EPA 8270 C	1,4-NAPHTHOQUINONE	OR
EPA 8270 C	1,4-PHENYLENEDIAMINE	OR	EPA 8270 C	1-CHLORONAPHTHALENE	OR
EPA 8270 C	1-NAPHTHYLAMINE	OR	EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	OR
EPA 8270 C	2,4,5-TRICHLOROPHENOL	OR	EPA 8270 C	2,4,6-TRICHLOROPHENOL	OR
EPA 8270 C	2,4-DIAMINOTOLUENE	OR	EPA 8270 C	2,4-DICHLOROPHENOL	OR
EPA 8270 C	2,4-DIMETHYLPHENOL	OR	EPA 8270 C	2,4-DINITROPHENOL	OR
EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	OR	EPA 8270 C	2,6-DICHLOROPHENOL	OR
EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	OR	EPA 8270 C	2-ACETYLAMINOFLUORENE	OR
EPA 8270 C	2-CHLORONAPHTHALENE	OR	EPA 8270 C	2-CHLOROPHENOL	OR
EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	OR	EPA 8270 C	2-METHYLNAPHTHALENE	OR
EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	OR	EPA 8270 C	2-NAPHTHYLAMINE	OR
EPA 8270 C	2-NITROANILINE	OR	EPA 8270 C	2-NITROPHENOL	OR
EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	OR	EPA 8270 C	3,3'-DICHLOROBENZIDINE	OR
EPA 8270 C	3,3'-DIMETHOXYBENZIDINE	OR	EPA 8270 C	3,3'-DIMETHYLBENZIDINE	OR
EPA 8270 C	3-METHYLCHOLANTHRENE	OR	EPA 8270 C	3-NITROANILINE	OR
EPA 8270 C	4,4'-METHYLENEBIS(2-CHLOROANIL INE)	OR	EPA 8270 C	4-AMINOBIPHENYL	OR
EPA 8270 C	4-BROMOPHENYL PHENYL ETHER	OR	EPA 8270 C	4-CHLORO-3-METHYLPHENOL	OR
EPA 8270 C	4-CHLOROANILINE	OR	EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	OR
EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	OR	EPA 8270 C	4-NITROANILINE	OR
EPA 8270 C	4-NITROPHENOL	OR	EPA 8270 C	4-NITROQUINOLINE-1-OXIDE	OR
EPA 8270 C	5-NITRO-O-TOLUIDINE	OR	EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	OR

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	OR	EPA 8270 C	ACENAPHTHENE	OR
EPA 8270 C	ACENAPHTHYLENE	OR	EPA 8270 C	ACETOPHENONE	OR
EPA 8270 C	ANILINE	OR	EPA 8270 C	ANTHRACENE	OR
EPA 8270 C	ARAMITE	OR	EPA 8270 C	BENZIDINE	OR
EPA 8270 C	BENZO(A)ANTHRACENE	OR	EPA 8270 C	BENZO(A)PYRENE	OR
EPA 8270 C	BENZO(B)FLUORANTHENE	OR	EPA 8270 C	BENZO(G,H,I)PERYLENE	OR
EPA 8270 C	BENZO(K)FLUORANTHENE	OR	EPA 8270 C	BENZOIC ACID	OR
EPA 8270 C	BENZYL ALCOHOL	OR	EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	OR
EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	OR	EPA 8270 C	BIS(2-CHLOROISOPROPYL) ETHER	OR
EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	OR	EPA 8270 C	BUTYL BENZYL PHTHALATE	OR
EPA 8270 C	CHLOROBENZILATE	OR	EPA 8270 C	CHRYSENE	OR
EPA 8270 C	DI-N-BUTYL PHTHALATE	OR	EPA 8270 C	DI-N-OCTYL PHTHALATE	OR
EPA 8270 C	DIALATE	OR	EPA 8270 C	DIBENZ(A, J) ACRIDINE	OR
EPA 8270 C	DIBENZO(A,H) ANTHRACENE	OR	EPA 8270 C	DIBENZOFURAN	OR
EPA 8270 C	DIETHYL PHTHALATE	OR	EPA 8270 C	DIMETHOATE	OR
EPA 8270 C	DIMETHYL PHTHALATE	OR	EPA 8270 C	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	OR
EPA 8270 C	DIPHENYLAMINE	OR	EPA 8270 C	DISULFOTON	OR
EPA 8270 C	ETHYL METHANESULFONATE	OR	EPA 8270 C	FAMPHUR	OR
EPA 8270 C	FLUORANTHENE	OR	EPA 8270 C	FLUORENE	OR
EPA 8270 C	HEXACHLOROBENZENE	OR	EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	OR
EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	OR	EPA 8270 C	HEXACHLOROETHANE	OR
EPA 8270 C	HEXACHLOROPHENE	OR	EPA 8270 C	HEXACHLOROPROPENE	OR
EPA 8270 C	INDENO(1,2,3-CD) PYRENE	OR	EPA 8270 C	ISODRIN	OR
EPA 8270 C	ISOPHORONE	OR	EPA 8270 C	ISOSAFROLE	OR
EPA 8270 C	METHAPYRILENE	OR	EPA 8270 C	METHYL METHANESULFONATE	OR
EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	OR	EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	OR
EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	OR	EPA 8270 C	N-NITROSODIETHYLAMINE	OR
EPA 8270 C	N-NITROSODIMETHYLAMINE	OR	EPA 8270 C	N-NITROSODIPHENYLAMINE	OR
EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	OR	EPA 8270 C	N-NITROSOMORPHOLINE	OR
EPA 8270 C	N-NITROSOPIPERIDINE	OR	EPA 8270 C	N-NITROSOPYRROLIDINE	OR
EPA 8270 C	NAPHTHALENE	OR	EPA 8270 C	NITROBENZENE	OR
EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	OR	EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	OR
EPA 8270 C	PARATHION (PARATHION - ETHYL)	OR	EPA 8270 C	PENTACHLOROBENZENE	OR
EPA 8270 C	PENTACHLORONITROBENZENE	OR	EPA 8270 C	PENTACHLOROPHENOL	OR
EPA 8270 C	PHENACETIN	OR	EPA 8270 C	PHENANTHRENE	OR

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Expiration Date: September 14, 2016

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 C	PHENOL	OR	EPA 8270 C	PHORATE	OR
EPA 8270 C	PRONAMIDE (KERB)	OR	EPA 8270 C	PYRENE	OR
EPA 8270 C	PYRIDINE	OR	EPA 8270 C	SAFROLE	OR
EPA 8270 C	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	OR	EPA 8270 C	THIONAZIN (ZINOPHOS)	OR
EPA 8270 C	THIOPHENOL (BENZENETHIOL)	OR	EPA 8270 C - EXTENDED	1,1'-BIPHENYL	OR
EPA 8270 C - EXTENDED	1,4-DIOXANE (P-DIOXANE /1,4- DIETHYLENEOXIDE)	OR	EPA 8270 C - EXTENDED	1-METHYLNAPHTHALENE	OR
EPA 8270 C - EXTENDED	2,3,5,6-TETRACHLOROPHENOL	OR	EPA 8270 C - EXTENDED	3+4-METHYLPHENOL (M+P CRESOL)	OR
EPA 8270 C - EXTENDED	ATRAZINE	OR	EPA 8270 C - EXTENDED	BENZALDEHYDE	OR
EPA 8270 C - EXTENDED	CAPROLACTAM	OR	EPA 8270 C - EXTENDED	CARBAZOLE	OR
EPA 8270 C - EXTENDED	DIBENZ(A,H) ACRIDINE	OR	EPA 8270 C - EXTENDED	INDENE	OR
EPA 8270 C - EXTENDED	N-OCTADECANE	OR	EPA 8270 C - EXTENDED	PENTACHLOROETHANE	OR
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	OR	EPA 8270 D	1,2,4-TRICHLOROBENZENE	OR
EPA 8270 D	1,2-DICHLOROBENZENE	OR	EPA 8270 D	1,2-DIPHENYLHYDRAZINE	OR
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	OR	EPA 8270 D	1,3-DICHLOROBENZENE	OR
EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	OR	EPA 8270 D	1,4-DICHLOROBENZENE	OR
EPA 8270 D	1,4-DINITROBENZENE	OR	EPA 8270 D	1,4-NAPHTHOQUINONE	OR
EPA 8270 D	1,4-PHENYLENEDIAMINE	OR	EPA 8270 D	1-CHLORONAPHTHALENE	OR
EPA 8270 D	1-NAPHTHYLAMINE	OR	EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	OR
EPA 8270 D	2,4,5-TRICHLOROPHENOL	OR	EPA 8270 D	2,4,6-TRICHLOROPHENOL	OR
EPA 8270 D	2,4-DIAMINOTOLUENE	OR	EPA 8270 D	2,4-DICHLOROPHENOL	OR
EPA 8270 D	2,4-DIMETHYLPHENOL	OR	EPA 8270 D	2,4-DINITROPHENOL	OR
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	OR	EPA 8270 D	2,6-DICHLOROPHENOL	OR
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	OR	EPA 8270 D	2-ACETYLAMINOFLUORENE	OR
EPA 8270 D	2-CHLORONAPHTHALENE	OR	EPA 8270 D	2-CHLOROPHENOL	OR
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	OR	EPA 8270 D	2-METHYLNAPHTHALENE	OR
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	OR	EPA 8270 D	2-NAPHTHYLAMINE	OR
EPA 8270 D	2-NITROANILINE	OR	EPA 8270 D	2-NITROPHENOL	OR
EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	OR	EPA 8270 D	3,3'-DICHLOROBENZIDINE	OR
EPA 8270 D	3,3'-DIMETHOXYBENZIDINE	OR	EPA 8270 D	3,3'-DIMETHYLBENZIDINE	OR
EPA 8270 D	3-METHYLCHOLANTHRENE	OR	EPA 8270 D	3-NITROANILINE	OR
EPA 8270 D	4,4'-METHYLENEBIS(2-CHLOROANIL INE)	OR	EPA 8270 D	4-AMINOBIIPHENYL	OR
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER	OR	EPA 8270 D	4-CHLORO-3-METHYLPHENOL	OR
EPA 8270 D	4-CHLOROANILINE	OR	EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	OR
EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	OR	EPA 8270 D	4-NITROANILINE	OR
EPA 8270 D	4-NITROPHENOL	OR	EPA 8270 D	4-NITROQUINOLINE-1-OXIDE	OR
EPA 8270 D	5-NITRO-O-TOLUIDINE	OR			

This Scope of Accreditation must accompany the Certificate issued by Virginia DCLS with the same Certificate Number indicated above.



Commonwealth of Virginia
Department of General Services
Division of Consolidated Laboratory Services



Scope of Accreditation

VELAP Certificate No.: 8028

Testamerica Laboratories, Inc.
4101 Shuffel Street N.W.
North Canton, OH 44720

Virginia Laboratory ID: 460175
Effective Date: September 15, 2015
Expiration Date: September 14, 2016

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	OR	EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	OR
EPA 8270 D	ACENAPHTHENE	OR	EPA 8270 D	ACENAPHTHYLENE	OR
EPA 8270 D	ACETOPHENONE	OR	EPA 8270 D	ANILINE	OR
EPA 8270 D	ANTHRACENE	OR	EPA 8270 D	ARAMITE	OR
EPA 8270 D	BENZIDINE	OR	EPA 8270 D	BENZO(A)ANTHRACENE	OR
EPA 8270 D	BENZO(A)PYRENE	OR	EPA 8270 D	BENZO(B)FLUORANTHENE	OR
EPA 8270 D	BENZO(G,H,I)PERYLENE	OR	EPA 8270 D	BENZO(K)FLUORANTHENE	OR
EPA 8270 D	BENZOIC ACID	OR	EPA 8270 D	BENZYL ALCOHOL	OR
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	OR	EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	OR
EPA 8270 D	BIS(2-CHLOROISOPROPYL) ETHER	OR	EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	OR
EPA 8270 D	BUTYL BENZYL PHTHALATE	OR	EPA 8270 D	CHLOROBENZILATE	OR
EPA 8270 D	CHRYSENE	OR	EPA 8270 D	DI-N-BUTYL PHTHALATE	OR
EPA 8270 D	DI-N-OCTYL PHTHALATE	OR	EPA 8270 D	DIALATE	OR
EPA 8270 D	DIBENZ(A, J) ACRIDINE	OR	EPA 8270 D	DIBENZO(A,H) ANTHRACENE	OR
EPA 8270 D	DIBENZOFURAN	OR	EPA 8270 D	DIETHYL PHTHALATE	OR
EPA 8270 D	DIMETHOATE	OR	EPA 8270 D	DIMETHYL PHTHALATE	OR
EPA 8270 D	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	OR	EPA 8270 D	DIPHENYLAMINE	OR
EPA 8270 D	DISULFOTON	OR	EPA 8270 D	ETHYL METHANESULFONATE	OR
EPA 8270 D	FAMPHUR	OR	EPA 8270 D	FLUORANTHENE	OR
EPA 8270 D	FLUORENE	OR	EPA 8270 D	HEXACHLOROBENZENE	OR
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	OR	EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	OR
EPA 8270 D	HEXACHLOROETHANE	OR	EPA 8270 D	HEXACHLOROPHENE	OR
EPA 8270 D	HEXACHLOROPROPENE	OR	EPA 8270 D	INDENO(1,2,3-CD) PYRENE	OR
EPA 8270 D	ISODRIN	OR	EPA 8270 D	ISOPHORONE	OR
EPA 8270 D	ISOSAFROLE	OR	EPA 8270 D	METHAPYRILENE	OR
EPA 8270 D	METHYL METHANESULFONATE	OR	EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	OR
EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	OR	EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	OR
EPA 8270 D	N-NITROSODIETHYLAMINE	OR	EPA 8270 D	N-NITROSODIMETHYLAMINE	OR
EPA 8270 D	N-NITROSODIPHENYLAMINE	OR	EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	OR
EPA 8270 D	N-NITROSOMORPHOLINE	OR	EPA 8270 D	N-NITROSOPIPERIDINE	OR
EPA 8270 D	N-NITROSOPYRROLIDINE	OR	EPA 8270 D	NAPHTHALENE	OR
EPA 8270 D	NITROBENZENE	OR	EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	OR
EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	OR	EPA 8270 D	PARATHION (PARATHION - ETHYL)	OR
EPA 8270 D	PENTACHLOROBENZENE	OR	EPA 8270 D	PENTACHLORONITROBENZENE	OR

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 D	PENTACHLOROPHENOL	OR	EPA 8270 D	PHENACETIN	OR
EPA 8270 D	PHENANTHRENE	OR	EPA 8270 D	PHENOL	OR
EPA 8270 D	PHORATE	OR	EPA 8270 D	PRONAMIDE (KERB)	OR
EPA 8270 D	PYRENE	OR	EPA 8270 D	SAFROLE	OR
EPA 8270 D	SULFOTEPP (TETRAETHYL DITHIOPYROPHOSPHATE)	OR	EPA 8270 D	THIONAZIN (ZINOPHOS)	OR
EPA 8270 D - EXTENDED	1,1'-BIPHENYL	OR	EPA 8270 D - EXTENDED	1,4-DIOXANE (P-DIOXANE /1,4- DIETHYLENEOXIDE)	OR
EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	OR	EPA 8270 D - EXTENDED	2,3,5,6-TETRACHLOROPHENOL	OR
EPA 8270 D - EXTENDED	3+4-METHYLPHENOL (M+P CRESOL)	OR	EPA 8270 D - EXTENDED	ATRAZINE	OR
EPA 8270 D - EXTENDED	BENZALDEHYDE	OR	EPA 8270 D - EXTENDED	CAPROLACTAM	OR
EPA 8270 D - EXTENDED	CARBAZOLE	OR	EPA 8270 D - EXTENDED	DIBENZ(A,H) ACRIDINE	OR
EPA 8270 D - EXTENDED	INDENE	OR	EPA 8270 D - EXTENDED	N-OCTADECANE	OR
EPA 8270 D - EXTENDED	PENTACHLOROETHANE	OR	EPA 8270 D - EXTENDED	PYRIDINE	OR
EPA 8270 D SIM	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	OR	EPA 8315 A	FORMALDEHYDE	OR
EPA 9012 A	CYANIDE	OR	EPA 9012 B	AMENABLE CYANIDE	OR
EPA 9012 B	TOTAL CYANIDE	OR	EPA 9023	EXTRACTABLE ORGANIC HALIDES (EOX)	OR
EPA 9030 B	PREP: SULFIDE	OR	EPA 9034	TOTAL SULFIDES	OR
EPA 9040 B	PH	OR	EPA 9040 C	PH	OR
EPA 9045 C	PH	OR	EPA 9045 D	PH	OR
EPA 9050 A	CONDUCTIVITY	OR	EPA 9056 A	BROMIDE	OR
EPA 9056 A	CHLORIDE	OR	EPA 9056 A	FLUORIDE	OR
EPA 9056 A	NITRATE AS N	OR	EPA 9056 A	NITRITE	OR
EPA 9056 A	SULFATE	OR	EPA 9065	TOTAL PHENOLICS	OR
EPA 9095 B	FREE LIQUID	OR	EPA 9251	CHLORIDE	OR



Draper Aden Associates

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Data Validation Summary

Fourth Quarter 2016

Semiannual Compliance Groundwater Monitoring Event for HWMU 16 and Corrective Action Semiannual Groundwater Monitoring Event for HWMU 5

Post Closure Care Permit Hazardous Waste Management Units 5 and 16

Radford Army Ammunition Plant, Radford, Virginia

EPA ID# VA1210020730

Draper Aden Associates performed data validation of the analytical results for the Fourth Quarter 2016 semiannual groundwater monitoring event at Hazardous Waste Management Units (HWMUs) 5 and 16 located at the Radford Army Ammunition Plant (RFAAP) in Radford, Virginia. Groundwater monitoring activities were conducted in accordance with the *Final Hazardous Waste Management Post-Closure Care Permit* (Permit) for HWMUs 5 and 16 (original effective date October 4, 2002, reissued August 16, 2014, Class 1 Permit Modification dated September 12, 2014 and Class 1 Permit Modification dated December 1, 2016). The Fourth Quarter 2016 event served as the semiannual Corrective Action (CA) groundwater monitoring event for HWMU-5 conducted in accordance with the Permit. The following information summarizes the findings of the Fourth Quarter 2016 semiannual activities at each Unit.

Sample Collection/Analytical Services

Draper Aden Associates, of Blacksburg, Virginia, collected groundwater samples during October 19 through October 25, 2016.

Samples were submitted for laboratory analysis via courier to Shealy Environmental Services (Shealy), of West Columbia, South Carolina; or Eurofins Lancaster Laboratories Environmental, (ELLE), of Lancaster, Pennsylvania. A summary table of the required analyses and identification of the analyzing laboratory is provided below. Each laboratory is a VELAP accredited laboratory for the analytes, methods, and matrix as listed on each certificate of analysis, except if noted below.

Receipt of Monitoring Event Data

On behalf of BAE, each laboratory submitted results to Draper Aden Associates in a final certificate of analysis which included analytical results as well as relevant documentation to verify and validate the results as discussed below. The revised final certificate of analysis for this event was received December 19, 2016.

Verification Events

No verification events were required.

Summary of Monitoring Event Data by Analytical Method

Certificates of analysis were received from each laboratory in the following sample delivery groups (SDGs):

Summary of Required Analytical Methods and SDGs

Analytical Method	Hazardous Waste Management Unit (HWMU)		Laboratory
	HWMU 5	HWMU 16	
8260C Volatiles	RAE73	RAE76	ELLE
8270D Semivolatiles	NA	RAE76	ELLE
6020A Inorganics, total	RAE74	RJ27005 (rev 12/9/2016)	ELLE(RAE74)/Shealy
7470A Mercury, total	NA	RJ27005 (rev 12/9/2016)	Shealy

NA - Denotes analysis not applicable/analysis not required.

Each final certificate of analysis was complete in its presentation and the data were of acceptable quality. Chains of custody and permit required target analyte lists are provided in each SDG.

Data Analysis and Validation

Samples were analyzed by *SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates)*. Data, except where noted below, were evaluated in accordance with:

- *Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates)*
- *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, August 2014, where applicable.*
- *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, August 2014, where applicable.*

Draper Aden Associates, of Blacksburg, Virginia, performed data validation as detailed in the attached data validation reports. For each HWMU, data validation reports and a summary table of data validation results are provided as an attachment.

Review was limited to the following items, where applicable:

- Data package completeness
- Chain of custody
- Holding time/preservation
- Initial and continuing calibrations
- Blanks
- Interference check sample (inorganics)
- Surrogates
- Matrix spike/matrix spike duplicate/(MS/MSD) samples
- Laboratory control samples (LCS)
- Internal standards
- Field duplicate
- Laboratory duplicate (inorganics)

- Serial dilution (inorganics)
- Target analyte identification and quantitation
- Other – as noted

Reporting of Results

HWMU-5 - results were reported to at or above the permit detection limit for the target analytes (constituents) (i.e., five volatile organics and cobalt, total) listed in Appendix J to Permit Attachment 2 of Module VI-Groundwater Corrective Action & Monitoring Program for Unit-5. Results reported between the detection limit and quantitation limit should be considered estimated concentrations. Note December 2016 Class 1 Permit Modification included a revision to the permit specified QL for antimony, lead, and zinc.

HWMU 16 - For this event, point of compliance well and plume well results for HWMU 16 were reported to at or above the permit QL, except where noted.

All wells were analyzed for the constituents listed in the semiannual compliance monitoring lists (Attachment 3 Appendix E rev 12-1-2016 Class 1 Permit Modification) consisting of 12 inorganics, 20 volatile organics and 3 semivolatile organics. Note December 2016 Class 1 Permit Modification included a revision to the permit specified QL for lead, and zinc. Additionally, tetrahydrofuran (volatile organic) was added to the semiannual compliance monitoring list, Attachment 3 Appendix E, and the groundwater protection standards list, Appendix G to Attachment 3). Other modification were made with the December 2016 Class Permit Modification, but not applicable to this semiannual event.

Additionally, a footnote presented in Appendix G of Permit Attachment 3 indicates that verification is required for constituents detected at concentrations less than the QL if their associated GPSs are equal to the QL and are greater than the applicable risk-based concentrations (i.e., ACL or RSL). In these instances, verification must be conducted using an alternate low-level analytical method in order to confirm or refute the observed initial detections if the QL achievable by that method is less than, or equal to, the ACL or RSL for the subject constituent. If a concentration greater than the low-level analytical method QL is observed, then the GPS for that constituent will be updated, if warranted. During Fourth Quarter 2016, no constituents with GPSs equal to their respective QLs and greater than the applicable risk-based concentrations were detected. This applied to 2,4-dinitrotoluene and 2,6-dinitrotoluene.

Summary of Data Validation Results

The data validation results are summarized below and on the attached reports and table. Each final certificate of analysis was complete in its presentation and the data were of acceptable quality. The chain of custody documentation was complete, except where noted below. The laboratory received the samples on ice and in good condition, with custody seals intact. Technical holding time and preservation criteria were met. The data set demonstrated the laboratory's ability to achieve the permit QL, unless noted below. The chain of custody noted 2015, instead of 2016 for this event. The COC was relinquished with the 2016 date.

SW-846 Method 8260C/5030C-Volatile Organic Analytes- 25 ml purge volume

Instrument calibration, blank, surrogate, MS/MSD, LCS, internal standards, sample/blind field sample duplicate results, and target analyte identification and quantitation were met, except where

noted below. The MS/MSD samples were analyzed on project samples as noted on the chain of custody. A trip blank was analyzed for each day of sample collection. A blind field duplicate was collected and analyzed for the required target analytes. No target analytes were detected in the sample/field duplicate sample unless noted below. Deviations from specific QA/QC criteria that were identified during the data review process are summarized below.

HWMU 5

- Sample/Blind Field Sample Duplicate results - 5WC21/5WDUP - Trichloroethene was reported above the QL in both the sample and blind field duplicate (2.56/2.60 µg/l). The RPD criteria were met.
- The bottle quantity was incorrectly listed on the COC as seven for sample 5W7B instead of 12; however, the laboratory received twelve bottles and no data qualification was required.
- The laboratory indicated a discrepancy between the sample collection time listed on bottle label for 5W8B versus the time listed on the COC. Discussions with field staff indicated that the time listed on the bottle label (12:05) is correct and the sample location/identification is 5W5B. The laboratory mistakenly interpreted 5W8B instead of 5W5B. The laboratory reported the correct sample identification and collection time and no data qualification was required.
- The laboratory indicated a discrepancy between the sample collection time listed on bottle label for 5B7B versus the time listed on the COC. Discussions with field staff indicated that the time listed on the bottle label was incorrect. The laboratory reported the sample collection time listed on the COC for 5W8B and no data qualification was required.
- Vinyl chloride recovered low in the LCS. Vinyl chloride was not detected at or above the detection limit or QL in any sample and sample results were validated and qualified "UJ" to note that the DL and QL were estimated due to the observed QC deficiency. The remaining LCS criteria were met.

HWMU 16

- Sample/Blind Field Sample Duplicate results – 16WC1A/16WDUP – chloroethane (1.12/1.11 µg/l), 1,1-dichloroethane (3.58/3.50 µg/l) and diethyl ether (23.76/23.39 µg/l) were reported above the QL in both the sample and blind field duplicate. The RPD criteria were met.
- Samples 16C1 and 16MW9 were analyzed in dilution to obtain the final result for diethyl ether.
- For all samples except 16MW8, 2-butanone, chloromethane, dichlorodifluoromethane, and tetrahydrofuran did not meet the calibration verification (CV) standard percent difference/drift requirement of ±20%. These analytes were not detected at or above the QL in any sample and sample results for these analytes were validated and qualified "UJ" to note that the QL was estimated due to the observed QC deficiency. The remaining CV criteria were met.
- The permit required QL is 12.5 µg/l for both diethyl ether and dimethyl ether. The laboratory reported the QL as 13 µg/l for diethyl ether and dimethyl ether due to the laboratory rounding policy. Draper Aden Associates revised the QL to 12.5 µg/l and no revision was requested.

SW-846 Method 8270D/3510C- Semivolatile Organic Analytes

Calibration, blank, surrogate, MS/MSD, LCS, internal standards, sample/field sample duplicate results, and target analyte identification and quantitation criteria were met. The MS/MSD samples were analyzed on project samples as noted on the chain of custody. No target analytes were detected at or above the permit QL in the sample/field duplicate sample unless noted below. Deviations from specific QA/QC criteria that were identified during the data review process are summarized below.

HWMU 16

- A footnote presented in Appendix G to Attachment 3, Groundwater Corrective Action Annual Monitoring List, of Permit Module V – *Groundwater Compliance Monitoring for Unit 16* indicates that verification is required for constituents detected at concentrations less than the Limit of Quantitation (LOQ)/QL if their associated groundwater protection standard (GPS) is based on the LOQ/QL. This footnote applies to 2,4-dinitrotoluene and 2,6-dinitrotoluene detected below the LOQ/QL only in compliance wells.

During Fourth Quarter 2016, results for 2,4-dinitrotoluene and 2,6-dinitrotoluene were evaluated to the MDL. These two constituents were not detected at or above the MDL or QL and no additional evaluation was required.

SW-846 Method 6020A/3005A–Inorganics-total

Calibration, blank, interference check sample, MS/MSD/DUP, LCS, internal standards, serial dilution, sample/field sample duplicate results, and target analyte quantitation were met, except where noted below or no data qualification was required. MS/MSD analyses were performed on project samples as noted on the chain of custody. Deviations from specific QA/QC criteria that were identified during the data review process are summarized below. The field duplicate/sample results exhibited acceptable precision, where applicable.

HWMU 5

- Sample/Blind Field Sample Duplicate results – 5WC21/5WDUP – Cobalt was reported above the QL in both the sample and blind field duplicate (71.6/69.1 µg/l). The RPD criteria were met.
- The laboratory indicated a discrepancy between the sample collection time listed on bottle label for 5W8B versus the time listed on the COC. Discussions with field staff indicated that the time listed on the bottle label (12:05) is correct and the sample location/identification is 5W5B. The laboratory mistakenly interpreted 5W8B instead of 5W5B. The laboratory reported the correct sample identification and collection time and no data qualification was required.
- The laboratory indicated a discrepancy between the sample collection time listed on bottle label for 5B7B versus the time listed on the COC. Discussions with field staff indicated that the time listed on the bottle label was incorrect. The laboratory reported the sample collection time listed on the COC for 5W8B and no data qualification was required.

HWMU 16

- Sample/Blind Field Sample Duplicate results – 16WC1A/16WDUP – Barium (310/320 µg/l), cobalt (6.0/6.3 µg/l), nickel (11/11 µg/l), and vanadium (11/11 µg/l) were reported above the QL in both the sample and blind field duplicate. The RPD criteria were met.
- The certificate of analysis was revised to correct the permit specified QLs. Note December 2016 Class 1 Permit Modification included a revision to the permit specified QL for lead, and zinc.
- Vanadium was reported below the QL in the method blank. Results for vanadium above the QL but less than 5 times the method blank concentration (< 45 µg/L) were considered influenced by the observed blank contamination and validated as “UN” to note that the result was detected above the QL but influenced by the laboratory contamination. The remaining blank criteria were met.

SW-846 Method 7470A– Mercury-total - (HWMU 16 only)

Calibration, blank, MS/MSD, LCS, sample/field sample duplicate results were within control limits. MS/MSD analyses were performed on project samples as noted on the chain of custody. Mercury was not detected in the sample/blind field duplicate sample. Deviations from specific QA/QC criteria that were identified during the data review process are summarized below.

- For sample 16WC1B only, the low level ICV (LLICV) recovered high. Mercury was not detected at or above the QL this sample and no data qualification was required. The remaining low level ICV criteria were met.
- The certificate of analysis was revised to reflect the permit specified QL (revision received 12/19/2016).

A. QC DELIVERABLES PACKAGE – SAMPLE PAPERWORK:

- | | | |
|----|--|---|
| 1. | Was the chain of custody included in the data deliverable package? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 2. | Was custody transfer between different parties dated and signed? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 3. | Did the chain of custody document sampler signature, sample locations, date and time of sampling and analyses requested? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 4. | Were the sample results included for each sample location? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| 5. | Did the laboratory report the required target analytes? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |

End of page

DATA EVALUATION FOR SW-846 METHOD 8260C (GC/MS) VOLATILE ORGANICS

- A. QC DELIVERABLES PACKAGE:**
- ☒ VELAP accredited (matrix, method and analyte)
- B. TECHNICAL HOLDING TIME AND PRESERVATION REVIEW CRITERIA:**
- ☒ 14-day sample holding time, pH <2
 - ☒ Samples received at $\leq 6^{\circ}\text{C}$, zero headspace
 - ☒ Preparation Method 5030C, 25 ml purge volume
- C. GC/MS INSTRUMENT PERFORMANCE CHECK REVIEW CRITERIA:**
- ☒ Instrument performance check solution was analyzed at the beginning of each 12-hour period of standard and/or sample analysis
- D. INITIAL GC/MS CALIBRATION REVIEW CRITERIA:**
- ☒ Target analytes included in the ICAL
 - ☒ ICAL consisted of 5 calibration standards (or more, as needed)
 - ☒ Lowest concentration calibration standard at or below the associated MCL, regulatory compliance, action limit, or required QL
 - ☒ No calibration standards were removed from curve that would negatively impact the data integrity
 - ☒ Each target analyte %RSD $\leq 20\%$
 - ☒ Correlation coefficient or coefficient of determination > 0.99 for target analytes with $\geq 20\%$ RSD
 - ☒ Initial calibration verification analytes have % Difference/Drift within $\pm 30.0\%$
- E. CALIBRATION VERIFICATION REVIEW CRITERIA:**
- ☒ Calibration verification standard analyzed at the beginning of each 12-hour period following the instrument performance check analysis and prior to the method blank and sample analysis
 - ☒ % Difference/Drift of target analytes within $\pm 20\%$
- F. BLANK REVIEW CRITERIA:**
- ☒ Method/extraction blank analyzed on each GC/MS system used for sample analysis
 - ☒ Trip Blank-one per day of collection.
- G. SURROGATE REVIEW CRITERIA:**
- ☒ The following surrogates (or others as allowed) were used and within the specified range
 - dibromofluoromethane (77-114%), 4-bromofluorobenzene (78-110%)
 - toluene- d_8 (77-110%), 1,2-dichloroethane- d_4 (74-113%)
- H. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD) / LABORATORY CONTROL SAMPLE (LCS) REVIEW CRITERIA:**
- ☒ MS/MSD and LCS analyzed; MS/MSD and LCS within range
 - ☒ Project specific analytes -%R 70-130%, RPD ≤ 20
 - ☒ Independent source (confirmed via email from B. Weyandt, ELLE to K. Olsen 1/9/2015)
- I. INTERNAL STANDARDS REVIEW CRITERIA:**
- ☒ The following internal standards (or others as allowed) were used
 - t-butyl alcohol- d_{10} , fluorobenzene, chlorobenzene- d_5 , 1,4-dichlorobenzene- d_4
 - ☒ Internal standard areas within $\pm 50\%$ of last calibration verification
 - ☒ Internal standard retention times within ± 30 seconds of last calibration verification
- J. TARGET ANALYTE IDENTIFICATION REVIEW CRITERIA:**
- ☒ Results were consistent with historical data. New detections evaluated as follows:
 - ☒ RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT
 - ☒ Sample spectra versus laboratory standard spectra criteria were evaluated:
 - Characteristic ions maximized in the same scan or within one scan of each other
 - Characteristic ions present in the standard spectra were present in the sample spectra for analytes detected above the QL
 - Relative intensities of the ions between the standard and sample spectra were within $\pm 30\%$.

DATA EVALUATION FOR SW-846 METHOD 8260C (GC/MS) VOLATILE ORGANICS

(Con't.)

K. TARGET ANALYTE QUANTITATION REVIEW CRITERIA:

- ☒ Results are consistent with historical data. New detections evaluated as follows:
 - If analyte %RSD was 20% or less, use average relative response factor for quantitation.
 - If analyte %RSD was greater than 20%, use first or higher order regression fit of five calibration points (6 calibration points for 2nd order)
- ☒ Results that exceed the initial calibration range were reanalyzed at a higher dilution
- ☒ Analyte concentrations recorded on the sample quantitation reports were accurately transferred to the sample summary sheets (laboratory report)

L. REPORTING:

- ☒ Detected analytes or results requiring validation are presented on the attached data validation report
- ☒ Results reported at or above permit QL (HWMU16)
- ☒ Results reported at or above permit DL and QL (HWMU5)
- ☒ Results reported within instrument calibration range
- ☒ Sample/blind field duplicate RPD <20, where applicable

DATA EVALUATION FOR SW-846 METHOD 8270D (GC/MS) SEMIVOLATILE ORGANICS

A. QC DELIVERABLES PACKAGE:

- ☒ VELAP accredited (matrix, method, target analytes)
- ☒ Electronic data file reviewed

B. TECHNICAL HOLDING TIME AND PRESERVATION REVIEW CRITERIA:

- ☒ Holding time: 7-day sample collection to extraction / 40-day extraction to analysis
- ☒ Samples received at $\leq 6^{\circ}\text{C}$
- ☒ Extraction Method 3510C used

C. GC/MS INSTRUMENT PERFORMANCE CHECK REVIEW CRITERIA:

- ☒ Instrument performance check solution analyzed at the beginning of each 12-hour period of standard and/or sample analysis

D. INITIAL GC/MS CALIBRATION REVIEW CRITERIA:

- ☒ Target analytes included in the ICAL
- ☒ ICAL consisted of a minimum of 5 calibration standards (or more, as needed)
- ☒ Lowest concentration calibration standard at or below the associated MCL, regulatory compliance, action limit, or permit QL
- ☒ No calibration standards were dropped to meet calibration criteria
- ☒ Each target analyte RSD $\leq 20\%$
- ☒ Correlation coefficient or coefficient of determination > 0.99 for target analytes with $\geq 20\%$ RSD
- ☒ Initial calibration verification analytes have % Difference/Drift within $\pm 30.0\%$

E. CALIBRATION VERIFICATION REVIEW CRITERIA:

- ☒ Calibration verification standard analyzed at the beginning of each 12-hour period following the instrument performance check analysis and prior to the method blank and sample analysis
- ☒ Analytes have % Difference/Drift within $\pm 20.0\%$

F. BLANK REVIEW CRITERIA:

- ☒ Method/extraction blank analyzed on each GC/MS system used for sample analysis

G. SURROGATE REVIEW CRITERIA:

- ☒ The following surrogates (or others, as allowed) were used and within the specified range
 - phenol - d_6 (10-94%), - 2-fluorophenol (21-100%), - 2,4,6-tribromophenol (10-123%),
 - nitrobenzene - d_5 (43-108%), - 2-fluorobiphenyl (43-116%), - terphenyl - d_{14} (33-141%)
 - For this event, only the three base surrogates were used and no data qualification was required.

H. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD) / LABORATORY CONTROL SAMPLE (LCS) REVIEW CRITERIA:

- ☒ MS/MSD and LCS analyzed with target analytes
- ☒ MS/MSD and LCS recovered at or above 45%, RPD < 40

I. INTERNAL STANDARDS REVIEW CRITERIA:

- ☒ The following internal standards were used (or others as allowed)
 - 1,4-Dichlorobenzene- d_4 , Naphthalene- d_8 , Acenaphthene- d_{10} , Phenanthrene- d_{10} , Pyrene- d_{10} , Perylene- d_{12}
- ☒ Internal standard areas within $\pm 50\%$ of last calibration verification
- ☒ Internal standard retention times within ± 30 seconds of last calibration verification

J. TARGET ANALYTE IDENTIFICATION REVIEW CRITERIA:

- ☒ Results were consistent with historical data. New detections evaluated as follows:
- ☒ RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT
- ☒ Sample spectra versus laboratory standard spectra criteria were evaluated:
Characteristic ions maximized in the same scan or within one scan of each other
 - Characteristic ions present in the standard spectra were present in the sample spectra for analytes detected above the permit QL
 - Relative intensities of the ions between the standard and sample spectra were within $\pm 30\%$.

K. TARGET ANALYTE QUANTITATION REVIEW CRITERIA:

- ☒ Results were consistent with historical data. New detections evaluated as follows:
 - If analyte %RSD was 20% or less, use average relative response factor for quantitation.
 - If analyte %RSD was greater than 20%, use first or higher order regression fit of five calibration points (6 calibration points for 2nd order).
- ☒ Results that exceed the initial calibration range were reanalyzed at a higher dilution.
- ☒ Analyte concentrations recorded on the sample quantitation reports were accurately transferred to the sample summary sheets (laboratory report).

L. REPORTING:

- ☒ Detected analytes or results requiring validation are presented on the attached data validation report
- ☒ Results reported at or above permit QL (HWMU16) except 2,4-DNT and 2,6-DNT reviewed and validated to at or above DL.
- ☒ Results reported at or above permit DL and QL (HWMU5)

DATA EVALUATION FOR INORGANICS BY SW-846 METHOD 6020A (ICP/MS)

A. QC DELIVERABLES PACKAGE:

- ☒ Sample results included for sample locations
- ☒ Target analyte QLs reported at permit required QL
- ☒ Sample digestion method: 3005A (for Unit 16) and 3020A (for Unit 5)
- ☒ Electronic data file reviewed
- ☒ VELAP accredited (matrix, method, target analyte)

B. TECHNICAL HOLDING TIMES / PRESERVATION REVIEW CRITERIA:

- ☒ 6 month holding time, pH<2 with Nitric Acid (HNO₃)

C. INSTRUMENT CALIBRATION/TUNE CRITERIA:

- ☒ Target analytes, 1 calibration blank and at least 1 standard or 1 calibration blank and at least 5 standards and
- ☒ Instrument calibrated for every analytical sequence, $r > 0.998$
- ☒ Instrument tuned prior to analysis (%RSD <5%)

D. INSTRUMENT CALIBRATION CRITERIA:

- ☒ 10 sample frequency
- ☒ Use of calibration blank and check standard
- ☒ Recovery within 90-110%
- ☒ LLICV and LLCCV within 70-130% recovery

E. BLANK CRITERIA:

- N/A Trip Blank (check only if analyzed)
- N/A Equipment Blank
- ☒ Method/Other Lab Blanks (check only if analyzed)
- ☒ Interference free
- ☒ CCB 10 sample frequency

F. INTERFERENCE CHECK SAMPLES (ICS) CRITERIA:

- ☒ At beginning of batch or every 12 hours (80-120%)

G. MATRIX SPIKE DUPLICATE (MSD) CRITERIA:

- ☒ One MSD or sample duplicate per batch of 20 samples
- ☒ $RPD \leq 20$ between MS and MSD results or sample and duplicate results
- ☒ Control limit is \pm QL when sample values are less than 5 times QL (sample duplicate).

H. MATRIX SPIKE (MS) CRITERIA:

- ☒ 75-125% recovery, all analytes
- ☒ All analytes, spiked prior to digestion
- ☒ One matrix spike per analytical batch
- ☒ No more than 20 samples per analytical batch

I. BLIND FIELD SAMPLE DUPLICATE CRITERIA:

- ☒ 20% RPD for concentrations > QL

J. SAMPLE RESULTS CRITERIA:

- ☒ Results reported within instrument linear range

K. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

- ☒ All target analytes, 1 LCS per 20 samples, (80-120% Recovery)

L. INTERNAL STANDARDS (IS) CRITERIA:

- ☒ IS intensities; 70-125% RI

M. SERIAL DILUTION CRITERIA:

- ☒ Similar matrix
- ☒ If concentration >10 times QL, %Difference must be within 10%

DATA EVALUATION FOR INORGANICS BY SW-846 METHOD 6020A (ICP/MS)

(Con't.)

N. REPORTING:

- ☒ Detected analytes or results requiring validation are presented on the attached data validation report
- ☒ Results reported at or above permit QL (HWMU16)
- ☒ Results reported at or above permit DL and QL (HWMU5)

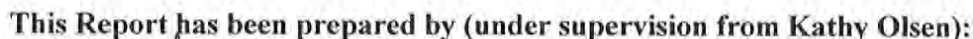
DATA EVALUATION FOR MERCURY BY SW-846 METHOD 7470A

- A. QC DELIVERABLES PACKAGE:**
- ☒ Mercury QL reported at permit required QL
 - ☒ Electronic data file reviewed
 - ☒ VELAP accredited (matrix, method, target analytes)
- B. TECHNICAL HOLDING TIME / PRESERVATION REVIEW CRITERIA:**
- ☒ 28 day holding time, Adjust pH <2 w/ HNO₃
- C. INSTRUMENT CALIBRATION CRITERIA:**
- ☒ 1 calibration blank and at least 5 standards
 - ☒ ICAL standards within 30% of true value
 - ☒ Instrument calibrated for every analytical sequence, $r > 0.995$
 - ☒ ICAL standard analyzed at the permit QL
 - ☒ QL standard (LLQC) analyzed at or less than the permit required QL (70-130%R)
 - ☒ QL standard analyzed at beginning of run, following ICV/ICB
- D. INITIAL / CONTINUING CALIBRATION VERIFICATION CRITERIA:**
- ☒ 10 sample frequency for CCV; recovery within 85-115%
- E. BLANK CRITERIA:**
- N/A Trip Blank (check only if analyzed)
 - N/A Equipment Blank (check only if analyzed)
 - ☒ Method/other laboratory blanks (check only if analyzed), Interference free
- F. MATRIX SPIKE DUPLICATE (MSD) CRITERIA:**
- ☒ One MSD or sample duplicate per batch of 20 samples
 - ☒ $RPD \leq 20$ between MS and MSD results or sample and duplicate results
 - ☒ Control limit is \pm QL when sample values are less than 5 times QL.
- H. MATRIX SPIKE (MS) CRITERIA:**
- ☒ 75-125% recovery
 - ☒ MS spiked prior to digestion, One MS per analytical batch of 20 samples
- H. FIELD SAMPLE DUPLICATE CRITERIA:**
- ☒ Target analyte: mercury, Difference <10RPD
- I. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:**
- ☒ Recovery within 80-120% range. Independent source from calibration standards.
- J. SAMPLE RESULTS CRITERIA:**
- ☒ Results reported within instrument calibration range
- K. REPORTING:**
- ☒ Detected analytes reported to at or above the permit QL. When applicable, results requiring validation are presented on the attached data validation report.

Draper Aden Associates prepared this document (which may include drawings, specifications, reports, studies and attachments) in accordance with the agreement between Draper Aden Associates and the client.

Conclusions presented are based upon a review of available information, the results of our field studies, and/or professional judgment. To the best of our knowledge, information provided by others is true and accurate, unless otherwise noted.

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1-18-2017 1/18/17
Date:

This Report has been subjected to technical and quality review by:

Date: 1-18-2017 11/18/17

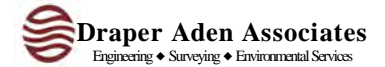
This Report has been subjected to technical and quality review by:

Date: 1-18-2017 1/18/2017

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-5 Groundwater Monitoring Event: Fourth Quarter 2016

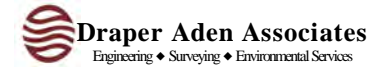


Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 6020A											
Laboratory: ELLE, Lancaster, PA											
Cobalt	5W8B	1	U	U		5	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	1	U	U		5	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	1.5		1.5	J	5	1	5	1	ug/l	Result < permit QL.
	5WC21	71.6		71.6		5	1	5	1	ug/l	No action taken. Blind field duplicate 5WDUP (69.1 ug/l). RPD < 10)
	5WC22	6.9		6.9		5	1	5	1	ug/l	No action taken.
	5WC23	2.2		2.2	J	5	1	5	1	ug/l	Result < permit QL.
	5WDUP	69.1		69.1		5	1	5	1	ug/l	No action taken. Blind field duplicate 5WC21.
	5W12A	1	U	U		5	1	5	1	ug/l	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-5 Groundwater Monitoring Event: Fourth Quarter 2016

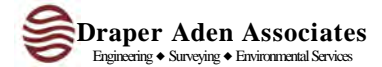


Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8260C											
Laboratory: ELLE, Lancaster, PA											
1,1-Dichloroethene	5W8B	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WDUP.
	5WC22	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WC21.
	5W12A	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
cis-1,2-Dichloroethene	5W8B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WDUP.
	5WC22	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WC21.
	5W12A	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
trans-1,2-Dichloroethene	5W8B	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WDUP.
	5WC22	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-5 Groundwater Monitoring Event: Fourth Quarter 2016

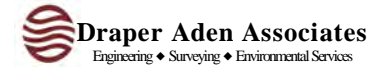


Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8260C											
Laboratory: ELLE, Lancaster, PA											
trans-1,2-Dichloroethene	5WDUP	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WC21.
	5W12A	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
Trichloroethene	5W8B	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.3	J	0.3	J	1	0.2	1	0.177	ug/l	Result < permit QL.
	5W7B	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	2.6		2.6		1	0.2	1	0.177	ug/l	No action taken. Blind field duplicate 5WDUP.
	5WC22	2.9		2.9		1	0.2	1	0.177	ug/l	No action taken.
	5WC23	3.1		3.1		1	0.2	1	0.177	ug/l	No action taken.
	5WDUP	2.6		2.6		1	0.2	1	0.177	ug/l	No action taken. Blind field duplicate 5WC21.
	5W12A	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	5W8B	0.1	U	U	J	1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. LCS recovered low (69%).
	5W5B	0.1	U	U	J	1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. LCS recovered low (69%).
Vinyl chloride	5W7B	0.1	U	U	J	1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. LCS recovered low (69%).
	5WC21	0.1	U	U	J	1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WDUP. LCS recovered low (69%).
	5WC22	0.1	U	U	J	1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. LCS recovered low (69%).
	5WC23	0.1	U	U	J	1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. LCS recovered low (69%).
	5WDUP	0.1	U	U	J	1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. Blind field duplicate 5WC21. LCS recovered low (69%).
	5W12A	0.1	U	U	J	1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. LCS recovered low (69%).
	Trip Blank 1	0.1	U	U	J	1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. LCS recovered low (69%).
	Trip Blank 2	0.1	U	U	J	1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. LCS recovered low (69%).

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-5 Groundwater Monitoring Event: Fourth Quarter 2016



Analyte	Sample ID	Lab Result	Validated Result	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Definitions: QL Denotes quantitation limit. DL Denotes detection limit Q Denotes data qualifier. U Denotes analyte not detected at or above Detection Limit (DL) or Quantitation Limit (QL). UA Denotes analyte not detected at or above adjusted sample DL or QL. J Denotes analyte reported at or above the DL and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not detected at or above DL and QL and DL and QL are estimated. When used with "UA" (i.e., "UAJ"), denotes analyte not detected at or above adjusted DL and QL and adjusted DL and QL are estimated. R Denotes result rejected. Laboratory Data Qualifiers , "U" and "<", denote not detected at or above the DL or QL.									

Comprehensive Data Validation Report

Sample/Blind Field Duplicate Results Greater Than the Quantitation Limit

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-5

Monitoring Event: Fourth Quarter 2016



Analyte	Sample ID	Laboratory Result (ug/L) Q	Validated Result (ug/L) Q	QL (ug/L)	Validation Notes
Method: 6020A					
Laboratory: ELLE, Lancaster, PA					
Cobalt	5WC21	71.6	71.6	5	No action taken. Blind field duplicate 5WDUP (69.1 ug/l). RPD < 10)
	5WDUP	69.1	69.1	5	No action taken. Blind field duplicate 5WC21.
Method: 8260C					
Laboratory: ELLE, Lancaster, PA					
Trichloroethene	5WC21	2.6	2.6	1	No action taken. Blind field duplicate 5WDUP.
	5WDUP	2.6	2.6	1	No action taken. Blind field duplicate 5WC21.

Definitions:

Data Validation Qualifiers:

QL Denotes permit quantitation limit. Q Denotes data qualifier.

J Denotes analyte reported at or above quantitation limit and associated result is estimated.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Fourth Quarter 2016

Analyte	Sample ID	Laboratory	Result	Validated	QL	Validation Notes
		(ug/L)	Q	(ug/L)	Q	
Method: 6020A						
Laboratory: Shealy Environmental Services, West Columbia, SC						
Arsenic	16C1	10	U	U	10	Analyte not detected at or above the QL.
	16MW8	10	U	U	10	Analyte not detected at or above the QL.
	16MW9	10	U	U	10	Analyte not detected at or above the QL.
	16WC1A	10	U	U	10	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	10	U	U	10	Analyte not detected at or above the QL.
	16WC2B	10	U	U	10	Analyte not detected at or above the QL.
	16-2	10	U	U	10	Analyte not detected at or above the QL.
	16-3	10	U	U	10	Analyte not detected at or above the QL.
	16-5	10	U	U	10	Analyte not detected at or above the QL.
	16SPRING	10	U	U	10	Analyte not detected at or above the QL.
	16WDUP	10	U	U	10	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
Barium	16C1	200		200	10	No action taken.
	16MW8	130		130	10	No action taken.
	16MW9	520		520	10	No action taken.
	16WC1A	310		310	10	No action taken. Blind field duplicate of 16WDUP. RPD<20.
	16WC1B	130		130	10	No action taken.
	16WC2B	110		110	10	No action taken.
	16-2	240		240	10	No action taken.
	16-3	770		770	10	No action taken.
	16-5	170		170	10	No action taken.
	16SPRING	210		210	10	No action taken.
	16WDUP	320		320	10	No action taken. Blind field duplicate of 16WC1A. RPD <20.
Beryllium	16C1	1	U	U	1	Analyte not detected at or above the QL.
	16MW8	1	U	U	1	Analyte not detected at or above the QL.
	16MW9	1	U	U	1	Analyte not detected at or above the QL.
	16WC1A	1	U	U	1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U	1	Analyte not detected at or above the QL.
	16WC2B	1	U	U	1	Analyte not detected at or above the QL.
	16-2	1	U	U	1	Analyte not detected at or above the QL.
	16-3	1	U	U	1	Analyte not detected at or above the QL.
	16-5	1	U	U	1	Analyte not detected at or above the QL.
	16SPRING	1	U	U	1	Analyte not detected at or above the QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Fourth Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020A							
Laboratory: Shealy Environmental Services, West Columbia, SC							
Beryllium	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	16C1	1	U	U		1	Analyte not detected at or above the QL.
Cadmium	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
Chromium	16C1	5	U	U		5	Analyte not detected at or above the QL.
	16MW8	5	U	U		5	Analyte not detected at or above the QL.
	16MW9	5	U	U		5	Analyte not detected at or above the QL.
	16WC1A	5	U	U		5	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	5	U	U		5	Analyte not detected at or above the QL.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
	16-5	5	U	U		5	Analyte not detected at or above the QL.
	16SPRING	5	U	U		5	Analyte not detected at or above the QL.
Cobalt	16WDUP	5	U	U		5	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	16C1	5	U	U		5	Analyte not detected at or above the QL.
	16MW8	5	U	U		5	Analyte not detected at or above the QL.
	16MW9	5	U	U		5	Analyte not detected at or above the QL.
	16WC1A	6		6		5	No action taken. Blind field duplicate of 16WDUP. RPD < 20.
	16WC1B	15		15		5	No action taken.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
	16-5	5	U	U		5	Analyte not detected at or above the QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Fourth Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Validated Result (ug/L)	QL (ug/L)	Validation Notes
Method: 6020A					
Laboratory: Shealy Environmental Services, West Columbia, SC					
Cobalt	16SPRING	5	U	5	Analyte not detected at or above the QL.
	16WDUP	6.3	6.3	5	No action taken. Blind field duplicate of 16WC1A. RPD < 20.
Copper	16C1	5	U	5	Analyte not detected at or above the QL.
	16MW8	31	31	5	No action taken.
	16MW9	5	U	5	Analyte not detected at or above the QL.
	16WC1A	5	U	5	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	5	U	5	Analyte not detected at or above the QL.
	16WC2B	5	U	5	Analyte not detected at or above the QL.
	16-2	5	U	5	Analyte not detected at or above the QL.
	16-3	5	U	5	Analyte not detected at or above the QL.
	16-5	5	U	5	Analyte not detected at or above the QL.
	16SPRING	5	U	5	Analyte not detected at or above the QL.
Lead	16WDUP	5	U	5	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	16C1	2	U	2	Analyte not detected at or above the QL.
	16MW8	2.7	2.7	2	No action taken.
	16MW9	2	U	2	Analyte not detected at or above the QL.
	16WC1A	2	U	2	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	2	Analyte not detected at or above the QL.
	16WC2B	2	U	2	Analyte not detected at or above the QL.
	16-2	2	U	2	Analyte not detected at or above the QL.
	16-3	2	U	2	Analyte not detected at or above the QL.
	16-5	2	U	2	Analyte not detected at or above the QL.
Nickel	16SPRING	2	U	2	Analyte not detected at or above the QL.
	16WDUP	2	U	2	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	16C1	10	U	10	Analyte not detected at or above the QL.
	16MW8	10	U	10	Analyte not detected at or above the QL.
	16MW9	14	14	10	No action taken.
	16WC1A	11	11	10	No action taken. Blind field duplicate of 16WDUP. RPD < 20.
	16WC1B	10	U	10	Analyte not detected at or above the QL.
	16WC2B	10	U	10	Analyte not detected at or above the QL.
	16-2	10	U	10	Analyte not detected at or above the QL.
	16-3	10	U	10	Analyte not detected at or above the QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Fourth Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020A							
<i>Laboratory: Shealy Environmental Services, West Columbia, SC</i>							
Nickel	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
	16WDUP	11		11		10	No action taken. Blind field duplicate of 16WC1A. RPD < 20.
Vanadium	16C1	11		U	N	10	No action taken. Blank contamination in the method blank (9.3 ug/L).
	16MW8	11		U	N	10	No action taken. Blank contamination in the method blank (9.3 ug/L).
	16MW9	11		U	N	10	No action taken. Blank contamination in the method blank (9.3 ug/L).
	16WC1A	11		U	N	10	No action taken. Blank contamination in the method blank (9.3 ug/L). Blind field duplicate of 16WDUP. RPD < 20.
	16WC1B	10		U	N	10	No action taken. Blank contamination in the method blank (9.3 ug/L).
	16WC2B	13		U	N	10	No action taken. Blank contamination in the method blank (9.3 ug/L).
	16-2	12		U	N	10	No action taken. Blank contamination in the method blank (9.3 ug/L).
	16-3	13		U	N	10	No action taken. Blank contamination in the method blank (9.3 ug/L).
	16-5	13		U	N	10	No action taken. Blank contamination in the method blank (9.3 ug/L).
	16SPRING	13		U	N	10	No action taken. Blank contamination in the method blank (9.3 ug/L).
Zinc	16WDUP	11		U	N	10	No action taken. Blank contamination in the method blank (9.3 ug/L). Blind field duplicate of 16WC1A. RPD < 20.
	16C1	30	U	U		30	Analyte not detected at or above the QL.
	16MW8	130		130		30	No action taken.
	16MW9	30	U	U		30	Analyte not detected at or above the QL.
	16WC1A	30	U	U		30	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	30	U	U		30	Analyte not detected at or above the QL.
	16WC2B	30	U	U		30	Analyte not detected at or above the QL.
	16-2	30	U	U		30	Analyte not detected at or above the QL.
	16-3	30	U	U		30	Analyte not detected at or above the QL.
	16-5	30	U	U		30	Analyte not detected at or above the QL.
	16SPRING	30	U	U		30	Analyte not detected at or above the QL.
	16WDUP	30	U	U		30	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Fourth Quarter 2016

Analyte	Sample ID	Laboratory Result		Validated Result		QL	Validation Notes
		(ug/L)	Q	(ug/L)	Q	(ug/L)	
Method: 7470A							
Laboratory: Shealy Environmental Services, West Columbia, SC							
Mercury	16C1	2	U	U		2	Analyte not detected at or above the QL.
	16MW8	2	U	U		2	Analyte not detected at or above the QL.
	16MW9	2	U	U		2	Analyte not detected at or above the QL.
	16WC1A	2	U	U		2	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	2	U	U		2	Analyte not detected at or above the QL. LLICV recovered high (141%).
	16WC2B	2	U	U		2	Analyte not detected at or above the QL.
	16-2	2	U	U		2	Analyte not detected at or above the QL.
	16-3	2	U	U		2	Analyte not detected at or above the QL.
	16-5	2	U	U		2	Analyte not detected at or above the QL.
	16SPRING	2	U	U		2	Analyte not detected at or above the QL.
	16WDUP	2	U	U		2	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Fourth Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Validated Result (ug/L)	QL (ug/L)	Validation Notes
Method: 8260C					
Laboratory: ELLE, Lancaster, PA					
Benzene	16C1	1	U	1	Analyte not detected at or above the QL.
	16MW8	1	U	1	Analyte not detected at or above the QL.
	16MW9	1	U	1	Analyte not detected at or above the QL.
	16WC1A	1	U	1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	1	Analyte not detected at or above the QL.
	16WC2B	1	U	1	Analyte not detected at or above the QL.
	16-2	1	U	1	Analyte not detected at or above the QL.
	16-3	1	U	1	Analyte not detected at or above the QL.
	16-5	1	U	1	Analyte not detected at or above the QL.
	16SPRING	1	U	1	Analyte not detected at or above the QL.
2-Butanone	16WDUP	1	U	1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	16C1	10	U	J	10 Analyte not detected at or above the QL. CV %D > +/-20% (-22%).
	16MW8	10	U	U	10 Analyte not detected at or above the QL.
	16MW9	10	U	J	10 Analyte not detected at or above the QL. CV %D > +/-20% (-22%).
	16WC1A	10	U	J	10 Analyte not detected at or above the QL. Blind field duplicate of 16WDUP. CV %D > +/-20% (-22%).
	16WC1B	10	U	J	10 Analyte not detected at or above the QL. CV %D > +/-20% (-22%).
	16WC2B	10	U	J	10 Analyte not detected at or above the QL. CV %D > +/-20% (-22%).
	16-2	10	U	J	10 Analyte not detected at or above the QL. CV %D > +/-20% (-22%).
	16-3	10	U	J	10 Analyte not detected at or above the QL. CV %D > +/-20% (-22%).
	16-5	10	U	J	10 Analyte not detected at or above the QL. CV %D > +/-20% (-22%).
Carbon tetrachloride	16SPRING	10	U	J	10 Analyte not detected at or above the QL. CV %D > +/-20% (-22%).
	16WDUP	10	U	J	10 Analyte not detected at or above the QL. Blind field duplicate of 16WC1A. CV %D > +/-20% (-22%).
	16C1	1	U	U	1 Analyte not detected at or above the QL.
	16MW8	1	U	U	1 Analyte not detected at or above the QL.
	16MW9	1	U	U	1 Analyte not detected at or above the QL.
	16WC1A	1	U	U	1 Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U	1 Analyte not detected at or above the QL.
	16WC2B	1	U	U	1 Analyte not detected at or above the QL.
	16-2	1	U	U	1 Analyte not detected at or above the QL.
	16-3	1	U	U	1 Analyte not detected at or above the QL.
	16-5	1	U	U	1 Analyte not detected at or above the QL.
	16SPRING	1	U	U	1 Analyte not detected at or above the QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Fourth Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Carbon tetrachloride	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	16C1	3.9		3.9		1	No action taken.
Chloroethane	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	2		2		1	No action taken.
	16WC1A	1.1		1.1		1	No action taken. Blind field duplicate of 16WDUP. RPD < 20.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1.1		1.1		1	No action taken. Blind field duplicate of 16WC1A. RPD < 20.
	16C1	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20% (-24%).
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
Dichlorodifluoromethane	16MW9	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20% (-24%).
	16WC1A	1	U	U	J	1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP. CV %D > +/-20% (-24%).
	16WC1B	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20% (-24%).
	16WC2B	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20% (-24%).
	16-2	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20% (-24%).
	16-3	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20% (-24%).
	16-5	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20% (-24%).
	16SPRING	1	U	U	J	1	Analyte not detected. CV %D > +/-20% (-24%).
	16WDUP	1	U	U	J	1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A. CV %D > +/-20% (-24%).
	16C1	6.7		6.7		1	No action taken.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	6.9		6.9		1	No action taken.
1,1-Dichloroethane	16WC1A	3.6		3.6		1	No action taken. Blind field duplicate of 16WDUP. RPD < 20.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Fourth Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,1-Dichloroethane	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	3.5		3.5		1	No action taken. Blind field duplicate of 16WC1A. RPD < 20.
1,1-Dichloroethene	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Diethyl ether	16C1	51		51		13
16MW8		13	U	U		13	Analyte not detected at or above the QL.
16MW9		54		54		13	Analyzed in dilution (1:4). Actual QL 50 ug/L. No action taken.
16WC1A		24		24		13	No action taken. Blind field duplicate of 16WDUP (23 ug/l). RPD < 20.
16WC1B		13	U	U		13	Analyte not detected at or above the QL.
16WC2B		13	U	U		13	Analyte not detected at or above the QL.
16-2		13	U	U		13	Analyte not detected at or above the QL.
16-3		13	U	U		13	Analyte not detected at or above the QL.
16-5		13	U	U		13	Analyte not detected at or above the QL.
16SPRING		13	U	U		13	Analyte not detected at or above the QL.
16WDUP		23		23		13	No action taken. Blind field duplicate of 16WC1A. RPD < 20.
Dimethyl ether		16C1	13	U	U		13
	16MW8	13	U	U		13	Analyte not detected at or above the QL.
	16MW9	13	U	U		13	Analyte not detected at or above the QL.
	16WC1A	13	U	U		13	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	13	U	U		13	Analyte not detected at or above the QL.
	16WC2B	13	U	U		13	Analyte not detected at or above the QL.
	16-2	13	U	U		13	Analyte not detected at or above the QL.
	16-3	13	U	U		13	Analyte not detected at or above the QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Fourth Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Dimethyl ether	16-5	13	U	U		13	Analyte not detected at or above the QL.
	16SPRING	13	U	U		13	Analyte not detected at or above the QL.
	16WDUP	13	U	U		13	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
Ethylbenzene	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
Chloromethane	16C1	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20% (-24%).
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20% (-24%).
	16WC1A	1	U	U	J	1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP. CV %D > +/-20% (-24%).
	16WC1B	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20% (-24%).
	16WC2B	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20% (-24%).
	16-2	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20% (-24%).
	16-3	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20% (-24%).
	16-5	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20% (-24%).
	16SPRING	1	U	U	J	1	Analyte not detected. CV %D > +/-20% (-24%).
	16WDUP	1	U	U	J	1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A. CV %D > +/-20% (-24%).
Methylene chloride	16C1	1.7		1.7		1	No action taken.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Fourth Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Methylene chloride	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
Tetrachloroethene	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
Tetrahydrofuran	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	16C1	25	U	U	J	25	Analyte not detected at or above the QL. CV %D > +/-20% (-23%).
	16MW8	25	U	U		25	Analyte not detected at or above the QL.
	16MW9	25	U	U	J	25	Analyte not detected at or above the QL. CV %D > +/-20% (-23%).
	16WC1A	25	U	U	J	25	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP. CV %D > +/-20% (-23%).
	16WC1B	25	U	U	J	25	Analyte not detected at or above the QL. CV %D > +/-20% (-23%).
	16WC2B	25	U	U	J	25	Analyte not detected at or above the QL. CV %D > +/-20% (-23%).
	16-2	25	U	U	J	25	Analyte not detected at or above the QL. CV %D > +/-20% (-23%).
	16-3	25	U	U	J	25	Analyte not detected at or above the QL. CV %D > +/-20% (-23%).
	16-5	25	U	U	J	25	Analyte not detected at or above the QL. CV %D > +/-20% (-23%).
Toluene	16SPRING	25	U	U	J	25	Analyte not detected. CV %D > +/-20% (-23%).
	16WDUP	25	U	U	J	25	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A. CV %D > +/-20% (-23%).
	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Fourth Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes	
Method: 8260C								
Laboratory: ELLE, Lancaster, PA								
Toluene	16-2	1	U	U		1	Analyte not detected at or above the QL.	
	16-3	1	U	U		1	Analyte not detected at or above the QL.	
	16-5	1	U	U		1	Analyte not detected at or above the QL.	
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.	
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.	
1,1,1-Trichloroethane	16C1	1	U	U		1	Analyte not detected at or above the QL.	
	16MW8	1	U	U		1	Analyte not detected at or above the QL.	
	16MW9	1	U	U		1	Analyte not detected at or above the QL.	
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.	
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.	
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.	
	16-2	1	U	U		1	Analyte not detected at or above the QL.	
	16-3	1	U	U		1	Analyte not detected at or above the QL.	
	16-5	1	U	U		1	Analyte not detected at or above the QL.	
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.	
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.	
	Trichloroethene	16C1	1	U	U		1	Analyte not detected at or above the QL.
		16MW8	1	U	U		1	Analyte not detected at or above the QL.
		16MW9	1	U	U		1	Analyte not detected at or above the QL.
		16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
16WC1B		1	U	U		1	Analyte not detected at or above the QL.	
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.	
	16-2	1	U	U		1	Analyte not detected at or above the QL.	
	16-3	1	U	U		1	Analyte not detected at or above the QL.	
	16-5	1	U	U		1	Analyte not detected at or above the QL.	
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.	
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.	
	Trichlorofluoromethane	16C1	1	U	U		1	Analyte not detected at or above the QL.
		16MW8	1	U	U		1	Analyte not detected at or above the QL.
		16MW9	1	U	U		1	Analyte not detected at or above the QL.
		16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
16WC1B		1	U	U		1	Analyte not detected at or above the QL.	

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Fourth Quarter 2016

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes	
Method: 8260C								
Laboratory: ELLE, Lancaster, PA								
Trichlorofluoromethane	16WC2B	1	U	U		1	Analyte not detected at or above the QL.	
	16-2	1	U	U		1	Analyte not detected at or above the QL.	
	16-3	1	U	U		1	Analyte not detected at or above the QL.	
	16-5	1	U	U		1	Analyte not detected at or above the QL.	
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.	
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.	
1,1,2-Trichloro-1,2,2-Trifluoroethane	16C1	1	U	U		1	Analyte not detected at or above the QL.	
	16MW8	1	U	U		1	Analyte not detected at or above the QL.	
	16MW9	1	U	U		1	Analyte not detected at or above the QL.	
	16WC1A	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.	
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.	
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.	
	16-2	1	U	U		1	Analyte not detected at or above the QL.	
	16-3	1	U	U		1	Analyte not detected at or above the QL.	
	16-5	1	U	U		1	Analyte not detected at or above the QL.	
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.	
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.	
	Xylenes (Total)	16C1	3	U	U		3	Analyte not detected at or above the QL.
		16MW8	3	U	U		3	Analyte not detected at or above the QL.
		16MW9	3	U	U		3	Analyte not detected at or above the QL.
16WC1A		3	U	U		3	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.	
16WC1B		3	U	U		3	Analyte not detected at or above the QL.	
16WC2B		3	U	U		3	Analyte not detected at or above the QL.	
16-2		3	U	U		3	Analyte not detected at or above the QL.	
16-3		3	U	U		3	Analyte not detected at or above the QL.	
16-5		3	U	U		3	Analyte not detected at or above the QL.	
16SPRING		3	U	U		3	Analyte not detected at or above the QL.	
16WDUP		3	U	U		3	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.	

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Fourth Quarter 2016

Analyte	Sample ID	Laboratory	Result	Validated	QL	Validation Notes
		(ug/L)	Q	(ug/L)	Q	
Method: 8270D						
Laboratory: ELLE, Lancaster, PA						
Diethyl phthalate	16C1	5	U	U	5	Analyte not detected at or above the QL.
	16MW8	5	U	U	5	Analyte not detected at or above the QL.
	16MW9	5	U	U	5	Analyte not detected at or above the QL.
	16WC1A	5	U	U	5	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	5	U	U	5	Analyte not detected at or above the QL.
	16WC2B	5	U	U	5	Analyte not detected at or above the QL.
	16-2	5	U	U	5	Analyte not detected at or above the QL.
	16-3	5	U	U	5	Analyte not detected at or above the QL.
	16-5	5	U	U	5	Analyte not detected at or above the QL.
	16SPRING	5	U	U	5	Analyte not detected at or above the QL.
2,4-Dinitrotoluene	16WDUP	5	U	U	5	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	16C1	10	U	U	10	Analyte not detected at or above the QL.
	16MW8	10	U	U	10	Analyte not detected at or above the QL.
	16MW9	10	U	U	10	Analyte not detected at or above the QL.
	16WC1A	10	U	U	10	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	10	U	U	10	Analyte not detected at or above the QL.
	16WC2B	10	U	U	10	Analyte not detected at or above the QL.
	16-2	10	U	U	10	Analyte not detected at or above the QL.
	16-3	10	U	U	10	Analyte not detected at or above the QL.
	16-5	10	U	U	10	Analyte not detected at or above the QL.
2,6-Dinitrotoluene	16SPRING	10	U	U	10	Analyte not detected at or above the QL.
	16WDUP	10	U	U	10	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	16C1	10	U	U	10	Analyte not detected at or above the QL.
	16MW8	10	U	U	10	Analyte not detected at or above the QL.
	16MW9	10	U	U	10	Analyte not detected at or above the QL.
	16WC1A	10	U	U	10	Analyte not detected at or above the QL. Blind field duplicate of 16WDUP.
	16WC1B	10	U	U	10	Analyte not detected at or above the QL.
	16WC2B	10	U	U	10	Analyte not detected at or above the QL.
	16-2	10	U	U	10	Analyte not detected at or above the QL.
	16-3	10	U	U	10	Analyte not detected at or above the QL.
	16-5	10	U	U	10	Analyte not detected at or above the QL.
	16SPRING	10	U	U	10	Analyte not detected at or above the QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Facility: HWMU-16

Monitoring Event: Fourth Quarter 2016

Analyte	Sample ID	Laboratory	Validated	QL	Validation Notes
		Result	Result		
		(ug/L)	Q	(ug/L)	Q
Method: 8270D					
Laboratory: ELLE, Lancaster, PA					
2,6-Dinitrotoluene	16WDUP	10	U	U	10
Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.					

Definitions:

Appendix IX monitoring events and compliance monitoring wells:

For Appendix IX monitoring events, all compliance well results evaluated to the project detection limit.

See separate table for Appendix IX monitoring event detection limits.

QL Denotes permit quantitation limit.

Q Denotes data qualifier.

U Denotes analyte not detected at or above laboratory detection limit (DL) or QL.

J Denotes analyte reported at or above laboratory detection limit and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not detected at or above laboratory detection limit and project required quantitation limit/detection limit is estimated.

UA Denotes analyte not detected at or above adjusted sample detection limit /QL.

UN Denotes analyte concentration is less than the quantitation limit and five times the blank concentration. Analyte was not reliably detected due to blank contamination.

R Denotes result rejected.

Laboratory Data Qualifiers,

"U" and "<", denote not detected at or above the detection limit or QL.

B or J denote result detected between DL and QL, associated value should be considered an estimated concentration.

Appendix IX monitoring events:

Third Quarter 2003, Second Quarter 2004, Second Quarter 2005, Third Quarter 2006, Second Quarter 2007, Second Quarter 2008, Second Quarter 2009, Second Quarter 2010, Second Quarter 2011, Second Quarter 2012, Second Quarter 2013. Second Quarter 2014, Second Quarter 2015, Second Quarter 2016

Definitions for Non-Appendix IX Monitoring Events and plume monitoring wells:

QL Denotes permit quantitation limit.

Q Denotes data qualifier.

U Denotes analyte not detected at or above QL.

UA Denotes analyte not detected at or above adjusted sample QL. See data validation report for further explanation.

UN Denotes analyte concentration is less than five times the blank concentration. Analyte was not reliably detected due to blank contamination.

J Denotes analyte reported at or above QL and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not detected at or above QL and QL is estimated. When used with "UA" (i.e., "UAJ"), denotes analyte not detected at or above adjusted QL and adjusted QL is estimated.

R Denotes result rejected. See data validation report for further explanation.

Laboratory Data Qualifiers, "U" and "<", denote not detected at or above the QL.

Comprehensive Data Validation Report

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Sample/Blind Field Duplicate Results Greater Than the Quantitation Limit

Facility: HWMU-16

Monitoring Event: Fourth Quarter 2016



Analyte	Sample ID	Laboratory Result (ug/L) Q	Validated Result (ug/L) Q	QL (ug/L)	Validation Notes
Method: 6020A					
Laboratory: Shealy Environmental Services, West Columbia, SC					
Barium	16WC1A	310	310	10	No action taken. Blind field duplicate of 16WDUP. RPD<20.
	16WDUP	320	320	10	No action taken. Blind field duplicate of 16WC1A. RPD <20.
Cobalt	16WC1A	6	6	5	No action taken. Blind field duplicate of 16WDUP. RPD < 20.
	16WDUP	6.3	6.3	5	No action taken. Blind field duplicate of 16WC1A. RPD < 20.
Nickel	16WC1A	11	11	10	No action taken. Blind field duplicate of 16WDUP. RPD < 20.
	16WDUP	11	11	10	No action taken. Blind field duplicate of 16WC1A. RPD < 20.
Method: 8260C					
Laboratory: ELLE, Lancaster, PA					
Chloroethane	16WC1A	1.1	1.1	1	No action taken. Blind field duplicate of 16WDUP. RPD < 20.
	16WDUP	1.1	1.1	1	No action taken. Blind field duplicate of 16WC1A. RPD < 20.
1,1-Dichloroethane	16WC1A	3.6	3.6	1	No action taken. Blind field duplicate of 16WDUP. RPD < 20.
	16WDUP	3.5	3.5	1	No action taken. Blind field duplicate of 16WC1A. RPD < 20.
Diethyl ether	16WC1A	24	24	13	No action taken. Blind field duplicate of 16WDUP (23 ug/l). RPD < 20.
	16WDUP	23	23	13	No action taken. Blind field duplicate of 16WC1A. RPD < 20.

Definitions:

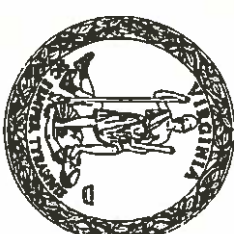
Data Validation Qualifiers:

QL Denotes permit quantitation limit. Q Denotes data qualifier.

J Denotes analyte reported at or above quantitation limit and associated result is estimated.



**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF GENERAL SERVICES
DIVISION OF CONSOLIDATED LABORATORY SERVICES**



Certifies that

VA Laboratory ID#: 460182

Eurofins Lancaster Laboratories Environmental, LLC

2425 New Holland Pike

Lancaster, PA 17601

Owner: EUROFINS SCIENTIFIC

Responsible Official: DUANE LUCKENBILL

Having met the requirements of 1 VAC 30-46

and the National Environmental Laboratory Accreditation Conference 2003 Standard

is hereby approved as an

Accredited Laboratory

As more fully described in the attached Scope of Accreditation

Effective Date: June 15, 2016

Expiration Date: June 14, 2017

Certificate # 8382

Continued accreditation status depends on successful ongoing participation in the program.

Certificate to be conspicuously displayed at the laboratory.

Not valid unless accompanied by a valid Virginia Environmental Laboratory Accreditation Program (VELAP)

Scope of Accreditation.

Customers are urged to verify the laboratory's current accreditation status.

**Denise M. Toney, Ph.D., HCLD
DGS Deputy Director for Laboratories**

A handwritten signature in black ink, appearing to read 'Denise M. Toney'.



Commonwealth of Virginia
Department of General Services
Division of Consolidated Laboratory Services



Scope of Accreditation

VELAP Certificate No.: 8382

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2016
Expiration Date: June 14, 2017

AIR

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 18	TOTAL GASEOUS ORGANIC COMPOUNDS	LA DEQ
EPA TO-14A 2nd Ed.	1,1,1-TRICHLOROETHANE	LA DEQ
EPA TO-14A 2nd Ed.	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE (FREON 113)	LA DEQ
EPA TO-14A 2nd Ed.	1,1-DICHLOROETHANE	LA DEQ
EPA TO-14A 2nd Ed.	1,2,4-TRICHLOROBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	LA DEQ
EPA TO-14A 2nd Ed.	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	LA DEQ
EPA TO-14A 2nd Ed.	1,3,5-TRIMETHYLBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	1,4-DICHLOROBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	BENZENE	LA DEQ
EPA TO-14A 2nd Ed.	CARBON TETRACHLORIDE	LA DEQ
EPA TO-14A 2nd Ed.	CHLOROETHANE (ETHYL CHLORIDE)	LA DEQ
EPA TO-14A 2nd Ed.	CIS-1,2-DICHLOROETHYLENE	LA DEQ
EPA TO-14A 2nd Ed.	ETHYLBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	M+P-XYLENE	LA DEQ
EPA TO-14A 2nd Ed.	METHYL CHLORIDE (CHLOROMETHANE)	LA DEQ
EPA TO-14A 2nd Ed.	O-XYLENE	LA DEQ
EPA TO-14A 2nd Ed.	TETRACHLOROETHENE (PERCHLOROETHENE)	LA DEQ
EPA TO-14A 2nd Ed.	TRANS-1,2-DICHLOROETHENE	LA DEQ
EPA TO-14A 2nd Ed.	TRICHLOROETHENE (TRICHLOROETHYLENE)	LA DEQ
EPA TO-14A 2nd Ed.	VINYL CHLORIDE	LA DEQ
EPA TO-14A 2nd Ed. - EXTENDED	BROMODICHLOROMETHANE	LA DEQ
EPA TO-14A 2nd Ed. - EXTENDED	METHYL TERT-BUTYL ETHER (MTBE)	LA DEQ
EPA TO-15 2nd Ed.	1,1,1-TRICHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE (FREON 113)	LA DEQ
EPA TO-15 2nd Ed.	1,1-DICHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	1,2,4-TRICHLOROBENZENE	LA DEQ
EPA TO-15 2nd Ed.	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	LA DEQ

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 25	TOTAL GASEOUS NONMETHANE ORGANIC COMPOUNDS (TGNMO)	LA DEQ
EPA TO-14A 2nd Ed.	1,1,2,2-TETRACHLOROETHANE	LA DEQ
EPA TO-14A 2nd Ed.	1,1,2-TRICHLOROETHANE	LA DEQ
EPA TO-14A 2nd Ed.	1,1-DICHLOROETHYLENE	LA DEQ
EPA TO-14A 2nd Ed.	1,2,4-TRIMETHYLBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	1,2-DICHLOROBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	1,2-DICHLOROPROPANE	LA DEQ
EPA TO-14A 2nd Ed.	1,3-DICHLOROBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	2-BUTANONE (METHYL ETHYL KETONE, MEK)	LA DEQ
EPA TO-14A 2nd Ed.	BROMOFORM	LA DEQ
EPA TO-14A 2nd Ed.	CHLOROBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	CHLOROFORM	LA DEQ
EPA TO-14A 2nd Ed.	CIS-1,3-DICHLOROPROPENE	LA DEQ
EPA TO-14A 2nd Ed.	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	LA DEQ
EPA TO-14A 2nd Ed.	METHYL BROMIDE (BROMOMETHANE)	LA DEQ
EPA TO-14A 2nd Ed.	METHYLENE CHLORIDE (DICHLOROMETHANE)	LA DEQ
EPA TO-14A 2nd Ed.	STYRENE	LA DEQ
EPA TO-14A 2nd Ed.	TOLUENE	LA DEQ
EPA TO-14A 2nd Ed.	TRANS-1,3-DICHLOROPROPENE	LA DEQ
EPA TO-14A 2nd Ed.	TRICHLOROFUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	LA DEQ
EPA TO-14A 2nd Ed. - EXTENDED	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	LA DEQ
EPA TO-14A 2nd Ed. - EXTENDED	CARBON DISULFIDE	LA DEQ
EPA TO-14A 2nd Ed. - EXTENDED	XYLENE (TOTAL)	LA DEQ
EPA TO-15 2nd Ed.	1,1,2,2-TETRACHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	1,1,2-TRICHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	1,1-DICHLOROETHYLENE	LA DEQ
EPA TO-15 2nd Ed.	1,2,4-TRIMETHYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	1,2-DICHLOROBENZENE	LA DEQ



Commonwealth of Virginia
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Eurofins Lancaster Laboratories Environmental, LLC
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Virginia Laboratory ID: 460182
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AIR

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA TO-15 2nd Ed.	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	LA DEQ
EPA TO-15 2nd Ed.	1,3,5-TRIMETHYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	1,3-DICHLOROBENZENE	LA DEQ
EPA TO-15 2nd Ed.	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	LA DEQ
EPA TO-15 2nd Ed.	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	LA DEQ
EPA TO-15 2nd Ed.	ACROLEIN (PROPENAL)	LA DEQ
EPA TO-15 2nd Ed.	ALLYL CHLORIDE (3-CHLOROPROPENE)	LA DEQ
EPA TO-15 2nd Ed.	BROMODICHLOROMETHANE	LA DEQ
EPA TO-15 2nd Ed.	CARBON DISULFIDE	LA DEQ
EPA TO-15 2nd Ed.	CHLOROBENZENE	LA DEQ
EPA TO-15 2nd Ed.	CHLOROFORM	LA DEQ
EPA TO-15 2nd Ed.	CIS-1,3-DICHLOROPROPENE	LA DEQ
EPA TO-15 2nd Ed.	ETHYL ACRYLATE	LA DEQ
EPA TO-15 2nd Ed.	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	LA DEQ
EPA TO-15 2nd Ed.	IODOMETHANE (METHYL IODIDE)	LA DEQ
EPA TO-15 2nd Ed.	M+P-XYLENE	LA DEQ
EPA TO-15 2nd Ed.	METHYL CHLORIDE (CHLOROMETHANE)	LA DEQ
EPA TO-15 2nd Ed.	METHYL TERT-BUTYL ETHER (MTBE)	LA DEQ
EPA TO-15 2nd Ed.	O-XYLENE	LA DEQ
EPA TO-15 2nd Ed.	STYRENE	LA DEQ
EPA TO-15 2nd Ed.	TOLUENE	LA DEQ
EPA TO-15 2nd Ed.	TRANS-1,3-DICHLOROPROPENE	LA DEQ
EPA TO-15 2nd Ed.	TRICHLOROFLUOROMETHANE (FLUOROTRICHOROMETHANE, FREON 11)	LA DEQ
EPA TO-15 2nd Ed.	VINYL CHLORIDE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	2-CHLOROTOLUENE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	4-ETHYLTOLUENE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	CHLORODIFLUOROMETHANE (FREON-22)	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	TERT-BUTYL ALCOHOL	LA DEQ

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA TO-15 2nd Ed.	1,2-DICHLOROPROPANE	LA DEQ
EPA TO-15 2nd Ed.	1,3-BUTADIENE	LA DEQ
EPA TO-15 2nd Ed.	1,4-DICHLOROBENZENE	LA DEQ
EPA TO-15 2nd Ed.	2-BUTANONE (METHYL ETHYL KETONE, MEK)	LA DEQ
EPA TO-15 2nd Ed.	ACETONITRILE	LA DEQ
EPA TO-15 2nd Ed.	ACRYLONITRILE	LA DEQ
EPA TO-15 2nd Ed.	BENZENE	LA DEQ
EPA TO-15 2nd Ed.	BROMOFORM	LA DEQ
EPA TO-15 2nd Ed.	CARBON TETRACHLORIDE	LA DEQ
EPA TO-15 2nd Ed.	CHLOROETHANE (ETHYL CHLORIDE)	LA DEQ
EPA TO-15 2nd Ed.	CIS-1,2-DICHLOROETHYLENE	LA DEQ
EPA TO-15 2nd Ed.	CYCLOHEXANE	LA DEQ
EPA TO-15 2nd Ed.	ETHYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	HEXACHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	ISOPROPYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	METHYL BROMIDE (BROMOMETHANE)	LA DEQ
EPA TO-15 2nd Ed.	METHYL METHACRYLATE	LA DEQ
EPA TO-15 2nd Ed.	METHYLENE CHLORIDE (DICHLOROMETHANE)	LA DEQ
EPA TO-15 2nd Ed.	PROPYLENE	LA DEQ
EPA TO-15 2nd Ed.	TETRACHLOROETHENE (PERCHLOROETHENE)	LA DEQ
EPA TO-15 2nd Ed.	TRANS-1,2-DICHLOROETHENE	LA DEQ
EPA TO-15 2nd Ed.	TRICHLOROETHENE (TRICHLOROETHYLENE)	LA DEQ
EPA TO-15 2nd Ed.	VINYL ACETATE	LA DEQ
EPA TO-15 2nd Ed.	XYLENE (TOTAL)	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	2-HEXANONE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	ACETONE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	NAPHTHALENE	LA DEQ



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DRINKING WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 200.7 REV 4.4	ALUMINUM	PA	EPA 200.7 REV 4.4	BARIUM	PA
EPA 200.7 REV 4.4	BERYLLIUM	PA	EPA 200.7 REV 4.4	CADMIUM	PA
EPA 200.7 REV 4.4	CALCIUM	PA	EPA 200.7 REV 4.4	CHROMIUM	PA
EPA 200.7 REV 4.4	COPPER	PA	EPA 200.7 REV 4.4	IRON	PA
EPA 200.7 REV 4.4	MAGNESIUM	PA	EPA 200.7 REV 4.4	MANGANESE	PA
EPA 200.7 REV 4.4	NICKEL	PA	EPA 200.7 REV 4.4	SILVER	PA
EPA 200.7 REV 4.4	SODIUM	PA	EPA 200.7 REV 4.4	ZINC	PA
EPA 200.8 REV 5.4	ANTIMONY	PA	EPA 200.8 REV 5.4	ARSENIC	PA
EPA 200.8 REV 5.4	BERYLLIUM	PA	EPA 200.8 REV 5.4	CADMIUM	PA
EPA 200.8 REV 5.4	CHROMIUM	PA	EPA 200.8 REV 5.4	COPPER	PA
EPA 200.8 REV 5.4	LEAD	PA	EPA 200.8 REV 5.4	NICKEL	PA
EPA 200.8 REV 5.4	SELENIUM	PA	EPA 200.8 REV 5.4	THALLIUM	PA
EPA 245.1 REV 3	MERCURY	PA	EPA 300.0 REV 2.1	CHLORIDE	PA
EPA 300.0 REV 2.1	FLUORIDE	PA	EPA 300.0 REV 2.1	NITRATE AS N	PA
EPA 300.0 REV 2.1	NITRITE AS N	PA	EPA 300.0 REV 2.1	SULFATE	PA
EPA 335.4 REV 1.0	CYANIDE	PA	EPA 353.2 REV 2	NITRATE AS N	PA
EPA 353.2 REV 2	NITRATE/NITRITE	PA	EPA 353.2 REV 2	NITRITE AS N	PA
EPA 504.1 REV 1.1	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA	EPA 504.1 REV 1.1	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 507 REV 2.1	ALACHLOR	PA	EPA 507 REV 2.1	ATRAZINE	PA
EPA 507 REV 2.1	SIMAZINE	PA	EPA 515.1 REV 4	2,4-D	PA
EPA 515.1 REV 4	DALAPON	PA	EPA 515.1 REV 4	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA
EPA 515.1 REV 4	PENTACHLOROPHENOL	PA	EPA 515.1 REV 4	PICLORAM	PA
EPA 515.1 REV 4	SILVEX (2,4,5-TP)	PA	EPA 524.2 REV 4.1	1,1,1-TRICHLOROETHANE	PA
EPA 524.2 REV 4.1	1,1,2-TRICHLOROETHANE	PA	EPA 524.2 REV 4.1	1,1-DICHLOROETHYLENE	PA
EPA 524.2 REV 4.1	1,2,4-TRICHLOROBENZENE	PA	EPA 524.2 REV 4.1	1,2-DICHLOROBENZENE	PA
EPA 524.2 REV 4.1	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA	EPA 524.2 REV 4.1	1,2-DICHLOROPROPANE	PA
EPA 524.2 REV 4.1	1,4-DICHLOROBENZENE	PA	EPA 524.2 REV 4.1	BENZENE	PA
EPA 524.2 REV 4.1	BROMODICHLOROMETHANE	PA	EPA 524.2 REV 4.1	BROMOFORM	PA
EPA 524.2 REV 4.1	CARBON TETRACHLORIDE	PA	EPA 524.2 REV 4.1	CHLOROBENZENE	PA
EPA 524.2 REV 4.1	CHLORODIBROMOMETHANE	PA	EPA 524.2 REV 4.1	CHLOROFORM	PA
EPA 524.2 REV 4.1	CIS-1,2-DICHLOROETHYLENE	PA	EPA 524.2 REV 4.1	ETHYLBENZENE	PA
EPA 524.2 REV 4.1	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA	EPA 524.2 REV 4.1	STYRENE	PA
EPA 524.2 REV 4.1	TETRACHLOROETHENE (PERCHLOROETHENE)	PA	EPA 524.2 REV 4.1	TOLUENE	PA
EPA 524.2 REV 4.1	TOTAL TRIHALOMETHANES	PA	EPA 524.2 REV 4.1	TRANS-1,2-DICHLOROETHENE	PA



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EPA 524.2 REV 4.1	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 524.2 REV 4.1	XYLENE (TOTAL)	PA
EPA 525.2 REV 2	ATRAZINE	PA
EPA 525.2 REV 2	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 525.2 REV 2	ENDRIN	PA
EPA 525.2 REV 2	HEPTACHLOR	PA
EPA 525.2 REV 2	HEXACHLOROBENZENE	PA
EPA 525.2 REV 2	METHOXYCHLOR	PA
EPA 531.1 REV 3.1	CARBOFURAN (FURADEN)	PA
SM 2130 B-2001	TURBIDITY	PA
SM 2510 B-1997	CONDUCTIVITY	PA
SM 4500-F ⁻ C-1997	FLUORIDE	PA
SM 4500-P E-1999	ORTHOPHOSPHATE AS P	PA
SM 9215 B-1994	HETEROTROPHIC PLATE COUNT	PA
SM 9223 COLILERT P/A	TOTAL COLIFORMS	PA

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 524.2 REV 4.1	VINYL CHLORIDE	PA
EPA 525.2 REV 2	ALACHLOR	PA
EPA 525.2 REV 2	BENZO(A)PYRENE	PA
EPA 525.2 REV 2	BIS(2-ETHYLHEXYL)ADIPATE (DI(2-ETHYLHEXYL)ADIPATE)	PA
EPA 525.2 REV 2	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 525.2 REV 2	HEPTACHLOR EPOXIDE	PA
EPA 525.2 REV 2	HEXACHLOROCYCLOPENTADIENE	PA
EPA 525.2 REV 2	SIMAZINE	PA
EPA 531.1 REV 3.1	OXAMYL	PA
SM 2320 B-1997	ALKALINITY AS CaCO ₃	PA
SM 2540 C-1997	RESIDUE-FILTERABLE (TDS)	PA
SM 4500-H ⁺ B-2000	PH	PA
SM 5540 C-2000	SURFACTANTS - MBAS	PA
SM 9223 COLILERT P/A	ESCHERICHIA COLI	PA

NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 1010	FLASHPOINT	PA
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	PA
EPA 1613 B	1,2,3,4,6,7,8,9-OCTACHLORODIBENZ O-P-DIOXIN (OCDD)	PA
EPA 1613 B	1,2,3,4,6,7,8-HEPTACHLORODIBENZ O-P-DIOXIN (1,2,3,4,6,7,8-HPCDD)	PA
EPA 1613 B	1,2,3,4,7,8,9-HEPTACHLORODIBENZ OFURAN (1,2,3,4,7,8,9-HPCDF)	PA
EPA 1613 B	1,2,3,4,7,8-HEXACHLORODIBENZOF URAN (1,2,3,4,7,8-HXCDF)	PA
EPA 1613 B	1,2,3,6,7,8-HEXACHLORODIBENZOF URAN (1,2,3,6,7,8-HXCDF)	PA
EPA 1613 B	1,2,3,7,8,9-HEXACHLORODIBENZOF URAN (1,2,3,7,8,9-HXCDF)	PA
EPA 1613 B	1,2,3,7,8-PENTACHLORODIBENZOF URAN (1,2,3,7,8-PCDF)	PA
EPA 1613 B	2,3,4,7,8-PENTACHLORODIBENZOF URAN	PA
EPA 1613 B	2,3,7,8-TETRACHLORODIBENZOFUR AN (2,3,7,8-TCDF)	PA

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	PA
EPA 160.4	RESIDUE-VOLATILE	PA
EPA 1613 B	1,2,3,4,6,7,8,9-OCTACHLORODIBENZ OFURAN (OCDF)	PA
EPA 1613 B	1,2,3,4,6,7,8-HEPTACHLORODIBENZ OFURAN (1,2,3,4,6,7,8-HPCDF)	PA
EPA 1613 B	1,2,3,4,7,8-HEXACHLORODIBENZO-P -DIOXIN (1,2,3,4,7,8-HXCDD)	PA
EPA 1613 B	1,2,3,6,7,8-HEXACHLORODIBENZO-P -DIOXIN (1,2,3,6,7,8-HXCDD)	PA
EPA 1613 B	1,2,3,7,8,9-HEXACHLORODIBENZO-P -DIOXIN (1,2,3,7,8,9-HXCDD)	PA
EPA 1613 B	1,2,3,7,8-PENTACHLORODIBENZO-P -DIOXIN (1,2,3,7,8-PCDD)	PA
EPA 1613 B	2,3,4,6,7,8-HEXACHLORODIBENZOF URAN (2,3,4,6,7,8-HXCDF)	PA
EPA 1613 B	2,3,7,8-TETRACHLORODIBENZO-P -DIOXIN (2,3,7,8-TCDD)	PA
EPA 1631 E	MERCURY	PA



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EPA 1664 A	OIL AND GREASE (AS HEM)	PA	EPA 1664 A	TOTAL PETROLEUM HYDROCARBONS (TPH) (AS NONPOLAR MATERIAL, SGT-HEM)	PA
EPA 1666 A	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA	EPA 1666 A	DHISOPROPYLETHYER (DIPE, ISOPROPYL ETHER)	PA
EPA 1666 A	ETHYL ACETATE	PA	EPA 1666 A	ISOBUTYRALDEHYDE	PA
EPA 1666 A	ISOPROPYL ACETATE	PA	EPA 1666 A	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 1666 A	* METHYL FORMATE	PA	EPA 1666 A	N-AMYL ACETATE	PA
EPA 1666 A	N-AMYL ALCOHOL	PA	EPA 1666 A	N-BUTYL-ACETATE	PA
EPA 1666 A	N-HEPTANE	PA	EPA 1666 A	N-HEXANE	PA
EPA 1666 A	TERT-BUTYL ALCOHOL	PA	EPA 1666 A	TETRAHYDROFURAN (THF)	PA
EPA 1666 A	XYLENE (TOTAL)	PA	EPA 1668 A	2,2',3,3',4,4',5,5'-NONACHLOROBIPHENYL (BZ-206)	PA
EPA 1668 A	2,2',3,3',4,4',5,5'-OCTACHLOROBIPHENYL (BZ-194)	PA	EPA 1668 A	2,2',3,3',4,4',5,5'-OCTACHLOROBIPHENYL (BZ-196)	PA
EPA 1668 A	2,2',3,3',4,4',5,6,6'-NONACHLOROBIPHENYL (BZ-207)	PA	EPA 1668 A	2,2',3,3',4,4',5,6,6'-OCTACHLOROBIPHENYL BZ-195)	PA
EPA 1668 A	2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL (BZ-170)	PA	EPA 1668 A	2,2',3,3',4,4',5,6,6'-OCTACHLOROBIPHENYL (BZ-197)	PA
EPA 1668 A	2,2',3,3',4,4',6-HEPTACHLOROBIPHENYL (BZ-171)	PA	EPA 1668 A	2,2',3,3',4,4'-HEXACHLOROBIPHENYL (BZ-128)	PA
EPA 1668 A	2,2',3,3',4,5,6'-HEPTACHLOROBIPHENYL (BZ-177)	PA	EPA 1668 A	2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL (BZ-201)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-175)	PA	EPA 1668 A	2,2',3,3',4,5'-HEXACHLOROBIPHENYL (BZ-130)	PA
EPA 1668 A	2,2',3,3',4,5,5,6'-OCTACHLOROBIPHENYL (BZ-199)	PA	EPA 1668 A	2,2',3,3',4,5,5,6,6'-NONACHLOROBIPHENYL (BZ-208)	PA
EPA 1668 A	2,2',3,3',4,5,5,6-OCTACHLOROBIPHENYL (BZ-198)	PA	EPA 1668 A	2,2',3,3',4,5,5'-HEPTACHLOROBIPHENYL (BZ-172)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-174)	PA	EPA 1668 A	2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL (BZ-200)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-173)	PA	EPA 1668 A	2,2',3,3',4,5-HEXACHLOROBIPHENYL (BZ-129)	PA
EPA 1668 A	2,2',3,3',4,6-HEXACHLOROBIPHENYL (BZ-132)	PA	EPA 1668 A	2,2',3,3',4,6,6'-HEPTACHLOROBIPHENYL (BZ-176)	PA
EPA 1668 A	2,2',3,3',4,6-HEXACHLOROBIPHENYL (BZ-131)	PA	EPA 1668 A	2,2',3,3',4-PENTACHLOROBIPHENYL (BZ-82)	PA
EPA 1668 A	2,2',3,3',5,5,6,6'-OCTACHLOROBIPHENYL (BZ-202)	PA	EPA 1668 A	2,2',3,3',5,5,6-HEPTACHLOROBIPHENYL (BZ-178)	PA
EPA 1668 A	2,2',3,3',5,5'-HEXACHLOROBIPHENYL (BZ-133)	PA	EPA 1668 A	2,2',3,3',5,6'-HEXACHLOROBIPHENYL (BZ-135)	PA
EPA 1668 A	2,2',3,3',5,6,6'-HEPTACHLOROBIPHENYL (BZ-179)	PA	EPA 1668 A	2,2',3,3',5,6-HEXACHLOROBIPHENYL (BZ-134)	PA
EPA 1668 A	2,2',3,3',5-PENTACHLOROBIPHENYL (BZ-83)	PA	EPA 1668 A	2,2',3,3',6,6'-HEXACHLOROBIPHENYL (BZ-136)	PA
EPA 1668 A	2,2',3,3',6-PENTACHLOROBIPHENYL (BZ-84)	PA	EPA 1668 A	2,2',3,3'-TETRACHLOROBIPHENYL (BZ-40)	PA



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EPA 1668 A	2,2',3,4',5',6'-HEXACHLOROBIPHENYL (BZ-149)	PA	EPA 1668 A	2,2',3,4',5'-PENTACHLOROBIPHENYL (BZ-97)	PA
EPA 1668 A	2,2',3,4',5,5',6'-HEPTACHLOROBIPHENYL (BZ-187)	PA	EPA 1668 A	2,2',3,4',5,5'-HEXACHLOROBIPHENYL (BZ-146)	PA
EPA 1668 A	2,2',3,4',5,6'-HEXACHLOROBIPHENYL (BZ-148)	PA	EPA 1668 A	2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL (BZ-188)	PA
EPA 1668 A	2,2',3,4',5,6-HEXACHLOROBIPHENYL (BZ-147)	PA	EPA 1668 A	2,2',3,4',5-PENTACHLOROBIPHENYL (BZ-90)	PA
EPA 1668 A	2,2',3,4',6-PENTACHLOROBIPHENYL (BZ-98)	PA	EPA 1668 A	2,2',3,4',6,6'-HEXACHLOROBIPHENYL (BZ-150)	PA
EPA 1668 A	2,2',3,4',6-PENTACHLOROBIPHENYL (BZ-91)	PA	EPA 1668 A	2,2',3,4'-TETRACHLOROBIPHENYL (BZ-42)	PA
EPA 1668 A	2,2',3,4',4',5',6'-HEPTACHLOROBIPHENYL (BZ-183)	PA	EPA 1668 A	2,2',3,4',4',5'-HEXACHLOROBIPHENYL (BZ-138)	PA
EPA 1668 A	2,2',3,4',4',5,5',6'-OCTACHLOROBIPHENYL (BZ-203)	PA	EPA 1668 A	2,2',3,4',4',5,5'-HEPTACHLOROBIPHENYL (BZ-180)	PA
EPA 1668 A	2,2',3,4',4',5,6'-HEPTACHLOROBIPHENYL (BZ-182)	PA	EPA 1668 A	2,2',3,4',4',5,6,6'-OCTACHLOROBIPHENYL (BZ-204)	PA
EPA 1668 A	2,2',3,4',4',5,6-HEPTACHLOROBIPHENYL (BZ-181)	PA	EPA 1668 A	2,2',3,4',4',5-HEXACHLOROBIPHENYL (BZ-137)	PA
EPA 1668 A	2,2',3,4',4',6'-HEXACHLOROBIPHENYL (BZ-140)	PA	EPA 1668 A	2,2',3,4',4',6,6'-HEPTACHLOROBIPHENYL (BZ-184)	PA
EPA 1668 A	2,2',3,4',4',6-HEXACHLOROBIPHENYL (BZ-139)	PA	EPA 1668 A	2,2',3,4',4'-PENTACHLOROBIPHENYL (BZ-85)	PA
EPA 1668 A	2,2',3,4',5,6-HEXACHLOROBIPHENYL (BZ-144)	PA	EPA 1668 A	2,2',3,4',5'-PENTACHLOROBIPHENYL (BZ-87)	PA
EPA 1668 A	2,2',3,4',5,5',6'-HEPTACHLOROBIPHENYL (BZ-185)	PA	EPA 1668 A	2,2',3,4',5,5'-HEXACHLOROBIPHENYL (BZ-141)	PA
EPA 1668 A	2,2',3,4',5,6'-HEXACHLOROBIPHENYL (BZ-143)	PA	EPA 1668 A	2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL (BZ-186)	PA
EPA 1668 A	2,2',3,4',5,6-HEXACHLOROBIPHENYL (BZ-142)	PA	EPA 1668 A	2,2',3,4',5-PENTACHLOROBIPHENYL (BZ-86)	PA
EPA 1668 A	2,2',3,4',6-PENTACHLOROBIPHENYL (BZ-89)	PA	EPA 1668 A	2,2',3,4',6,6'-HEXACHLOROBIPHENYL (BZ-145)	PA
EPA 1668 A	2,2',3,4',6-PENTACHLOROBIPHENYL (BZ-88)	PA	EPA 1668 A	2,2',3,4'-TETRACHLOROBIPHENYL (BZ-41)	PA
EPA 1668 A	2,2',3,5',6-PENTACHLOROBIPHENYL (BZ-95)	PA	EPA 1668 A	2,2',3,5'-TETRACHLOROBIPHENYL (BZ-44)	PA
EPA 1668 A	2,2',3,5,5',6'-HEXACHLOROBIPHENYL (BZ-151)	PA	EPA 1668 A	2,2',3,5,5'-PENTACHLOROBIPHENYL (BZ-92)	PA
EPA 1668 A	2,2',3,5,6'-PENTACHLOROBIPHENYL (BZ-94)	PA	EPA 1668 A	2,2',3,5,6,6'-HEXACHLOROBIPHENYL (BZ-152)	PA
EPA 1668 A	2,2',3,5,6-PENTACHLOROBIPHENYL (BZ-93)	PA	EPA 1668 A	2,2',3,5-TETRACHLOROBIPHENYL (BZ-43)	PA
EPA 1668 A	2,2',3,6'-TETRACHLOROBIPHENYL (BZ-46)	PA	EPA 1668 A	2,2',3,6,6'-PENTACHLOROBIPHENYL (BZ-96)	PA
EPA 1668 A	2,2',3,6-TETRACHLOROBIPHENYL (BZ-45)	PA	EPA 1668 A	2,2',3-TRICHLOROBIPHENYL (BZ-16)	PA
EPA 1668 A	2,2',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-153)	PA	EPA 1668 A	2,2',4,4',5,6'-HEXACHLOROBIPHENYL (BZ-154)	PA

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<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 1668 A	2,2',4,4',5-PENTACHLOROBIPHENYL (BZ-99)	PA	EPA 1668 A	2,2',4,4',5,6'-HEXACHLOROBIPHENYL (BZ-155)	PA
EPA 1668 A	2,2',4,4',6-PENTACHLOROBIPHENYL (BZ-100)	PA	EPA 1668 A	2,2',4,4'-TETRACHLOROBIPHENYL (BZ-47)	PA
EPA 1668 A	2,2',4,5',6-PENTACHLOROBIPHENYL (BZ-103)	PA	EPA 1668 A	2,2',4,5'-TETRACHLOROBIPHENYL (BZ-49)	PA
EPA 1668 A	2,2',4,5,5'-PENTACHLOROBIPHENYL (BZ-101)	PA	EPA 1668 A	2,2',4,5,6'-PENTACHLOROBIPHENYL (BZ-102)	PA
EPA 1668 A	2,2',4,5-TETRACHLOROBIPHENYL (BZ-48)	PA	EPA 1668 A	2,2',4,6'-TETRACHLOROBIPHENYL (BZ-51)	PA
EPA 1668 A	2,2',4,6,6'-PENTACHLOROBIPHENYL (BZ-104)	PA	EPA 1668 A	2,2',4,6-TETRACHLOROBIPHENYL (BZ-50)	PA
EPA 1668 A	2,2',4-TRICHLOROBIPHENYL (BZ-17)	PA	EPA 1668 A	2,2',5,5'-TETRACHLOROBIPHENYL (BZ-52)	PA
EPA 1668 A	2,2',5,6'-TETRACHLOROBIPHENYL (BZ-53)	PA	EPA 1668 A	2,2',5-TRICHLOROBIPHENYL (BZ-18)	PA
EPA 1668 A	2,2',6,6'-TETRACHLOROBIPHENYL (BZ-54)	PA	EPA 1668 A	2,2',6-TRICHLOROBIPHENYL (BZ-19)	PA
EPA 1668 A	2,2'-DICHLOROBIPHENYL (BZ-4)	PA	EPA 1668 A	2,3',4',5',6-PENTACHLOROBIPHENYL (BZ-125)	PA
EPA 1668 A	2,3',4',5'-TETRACHLOROBIPHENYL (BZ-76)	PA	EPA 1668 A	2,3',4',5,5'-PENTACHLOROBIPHENYL (BZ-124)	PA
EPA 1668 A	2,3',4',5-TETRACHLOROBIPHENYL (BZ-70)	PA	EPA 1668 A	2,3',4',6-TETRACHLOROBIPHENYL (BZ-71)	PA
EPA 1668 A	2,3',4'-TRICHLOROBIPHENYL (BZ-33)	PA	EPA 1668 A	2,3',4,4',5',6-HEXACHLOROBIPHENYL (BZ-168)	PA
EPA 1668 A	2,3',4,4',5'-PENTACHLOROBIPHENYL (BZ-123)	PA	EPA 1668 A	2,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-167)	PA
EPA 1668 A	2,3',4,4',5-PENTACHLOROBIPHENYL (BZ-118)	PA	EPA 1668 A	2,3',4,4',6-PENTACHLOROBIPHENYL (BZ-119)	PA
EPA 1668 A	2,3',4,4'-TETRACHLOROBIPHENYL (BZ-66)	PA	EPA 1668 A	2,3',4,5',6-PENTACHLOROBIPHENYL (BZ-121)	PA
EPA 1668 A	2,3',4,5'-TETRACHLOROBIPHENYL (BZ-68)	PA	EPA 1668 A	2,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-120)	PA
EPA 1668 A	2,3',4,5-TETRACHLOROBIPHENYL (BZ-67)	PA	EPA 1668 A	2,3',4,6-TETRACHLOROBIPHENYL (BZ-69)	PA
EPA 1668 A	2,3',4-TRICHLOROBIPHENYL (BZ-25)	PA	EPA 1668 A	2,3',5',6-TETRACHLOROBIPHENYL (BZ-73)	PA
EPA 1668 A	2,3',5'-TRICHLOROBIPHENYL (BZ-34)	PA	EPA 1668 A	2,3',5,5'-TETRACHLOROBIPHENYL (BZ-72)	PA
EPA 1668 A	2,3',5-TRICHLOROBIPHENYL (BZ-26)	PA	EPA 1668 A	2,3',6-TRICHLOROBIPHENYL (BZ-27)	PA
EPA 1668 A	2,3'-DICHLOROBIPHENYL (BZ-6)	PA	EPA 1668 A	2,3,3',4',5',6-HEXACHLOROBIPHENYL (BZ-164)	PA
EPA 1668 A	2,3,3',4',5'-PENTACHLOROBIPHENYL (BZ-122)	PA	EPA 1668 A	2,3,3',4',5,5',6-HEPTACHLOROBIPHENYL (BZ-193)	PA
EPA 1668 A	2,3,3',4',5,5'-HEXACHLOROBIPHENYL (BZ-162)	PA	EPA 1668 A	2,3,3',4',5,6-HEXACHLOROBIPHENYL (BZ-163)	PA
EPA 1668 A	2,3,3',4',5-PENTACHLOROBIPHENYL (BZ-107)	PA	EPA 1668 A	2,3,3',4',6-PENTACHLOROBIPHENYL (BZ-110)	PA



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EPA 1668 A	2,3,3',4'-TETRACHLOROBIPHENYL (BZ-56)	PA	EPA 1668 A	2,3,3',4,4',5',6-HEPTACHLOROBIPHE NYL (BZ-191)	PA
EPA 1668 A	2,3,3',4,4',5'-HEXACHLOROBIPHENY L (BZ-157)	PA	EPA 1668 A	2,3,3',4,4',5,5',6-OCTACHLOROBIPHE NYL (BZ-205)	PA
EPA 1668 A	2,3,3',4,4',5,5'-HEPTACHLOROBIPHE NYL (BZ-189)	PA	EPA 1668 A	2,3,3',4,4',5,6-HEPTACHLOROBIPHE NYL (BZ-190)	PA
EPA 1668 A	2,3,3',4,4',5-HEXACHLOROBIPHENYL (BZ-156)	PA	EPA 1668 A	2,3,3',4,4',6-HEXACHLOROBIPHENYL (BZ-158)	PA
EPA 1668 A	2,3,3',4,4'-PENTACHLOROBIPHENYL (BZ-105)	PA	EPA 1668 A	2,3,3',4,5',6-HEXACHLOROBIPHENYL (BZ-161)	PA
EPA 1668 A	2,3,3',4,5'-PENTACHLOROBIPHENYL (BZ-108)	PA	EPA 1668 A	2,3,3',4,5,5',6-HEPTACHLOROBIPHE NYL (BZ-192)	PA
EPA 1668 A	2,3,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-159)	PA	EPA 1668 A	2,3,3',4,5,6-HEXACHLOROBIPHENYL (BZ-160)	PA
EPA 1668 A	2,3,3',4,5-PENTACHLOROBIPHENYL (BZ-106)	PA	EPA 1668 A	2,3,3',4,6-PENTACHLOROBIPHENYL (BZ-109)	PA
EPA 1668 A	2,3,3',4-TETRACHLOROBIPHENYL (BZ-55)	PA	EPA 1668 A	2,3,3',5',6-PENTACHLOROBIPHENYL (BZ-113)	PA
EPA 1668 A	2,3,3',5-TETRACHLOROBIPHENYL (BZ-58)	PA	EPA 1668 A	2,3,3',5,5',6-HEXACHLOROBIPHENYL (BZ-165)	PA
EPA 1668 A	2,3,3',5,5'-PENTACHLOROBIPHENYL (BZ-111)	PA	EPA 1668 A	2,3,3',5,6-PENTACHLOROBIPHENYL (BZ-112)	PA
EPA 1668 A	2,3,3',5-TETRACHLOROBIPHENYL (BZ-57)	PA	EPA 1668 A	2,3,3',6-TETRACHLOROBIPHENYL (BZ-59)	PA
EPA 1668 A	2,3,3'-TRICHLOROBIPHENYL (BZ-20)	PA	EPA 1668 A	2,3,4',5,6-PENTACHLOROBIPHENYL (BZ-117)	PA
EPA 1668 A	2,3,4',5-TETRACHLOROBIPHENYL (BZ-63)	PA	EPA 1668 A	2,3,4',6-TETRACHLOROBIPHENYL (BZ-64)	PA
EPA 1668 A	2,3,4'-TRICHLOROBIPHENYL (BZ-22)	PA	EPA 1668 A	2,3,4,4',5,6-HEXACHLOROBIPHENYL (BZ-166)	PA
EPA 1668 A	2,3,4,4',5-PENTACHLOROBIPHENYL (BZ-114)	PA	EPA 1668 A	2,3,4,4',6-PENTACHLOROBIPHENYL (BZ-115)	PA
EPA 1668 A	2,3,4,4'-TETRACHLOROBIPHENYL (BZ-60)	PA	EPA 1668 A	2,3,4,5,6-PENTACHLOROBIPHENYL (BZ-116)	PA
EPA 1668 A	2,3,4,5-TETRACHLOROBIPHENYL (BZ-61)	PA	EPA 1668 A	2,3,4,6-TETRACHLOROBIPHENYL (BZ-62)	PA
EPA 1668 A	2,3,4-TRICHLOROBIPHENYL (BZ-21)	PA	EPA 1668 A	2,3,5,6-TETRACHLOROBIPHENYL (BZ-65)	PA
EPA 1668 A	2,3,5-TRICHLOROBIPHENYL (BZ-23)	PA	EPA 1668 A	2,3,6-TRICHLOROBIPHENYL (BZ-24)	PA
EPA 1668 A	2,3-DICHLOROBIPHENYL (BZ-5)	PA	EPA 1668 A	2,4',5-TRICHLOROBIPHENYL (BZ-31)	PA
EPA 1668 A	2,4',6-TRICHLOROBIPHENYL (BZ-32)	PA	EPA 1668 A	2,4'-DICHLOROBIPHENYL (BZ-8)	PA
EPA 1668 A	2,4,4',5-TETRACHLOROBIPHENYL (BZ-74)	PA	EPA 1668 A	2,4,4',6-TETRACHLOROBIPHENYL (BZ-75)	PA
EPA 1668 A	2,4,4'-TRICHLOROBIPHENYL (BZ-28)	PA	EPA 1668 A	2,4,5-TRICHLOROBIPHENYL (BZ-29)	PA
EPA 1668 A	2,4,6-TRICHLOROBIPHENYL (BZ-30)	PA	EPA 1668 A	2,4-DICHLOROBIPHENYL (BZ-7)	PA
EPA 1668 A	2,5-DICHLOROBIPHENYL (BZ-9)	PA	EPA 1668 A	2,6-DICHLOROBIPHENYL (BZ-10)	PA
EPA 1668 A	2-CHLOROBIPHENYL (BZ-1)	PA	EPA 1668 A	3,3',4,4',5,5'-HEXACHLOROBIPHENY L (BZ-169)	PA



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EPA 1668 A	3,3',4,4',5-PENTACHLOROBIPHENYL (BZ-126)	PA
EPA 1668 A	3,3',4,5'-TETRACHLOROBIPHENYL (BZ-79)	PA
EPA 1668 A	3,3',4,5-TETRACHLOROBIPHENYL (BZ-78)	PA
EPA 1668 A	3,3',5,5'-TETRACHLOROBIPHENYL (BZ-80)	PA
EPA 1668 A	3,3'-DICHLOROBIPHENYL (BZ-11)	PA
EPA 1668 A	3,4'-DICHLOROBIPHENYL (BZ-13)	PA
EPA 1668 A	3,4,4'-TRICHLOROBIPHENYL (BZ-37)	PA
EPA 1668 A	3,4-DICHLOROBIPHENYL (BZ-12)	PA
EPA 1668 A	3-CHLOROBIPHENYL (BZ-2)	PA
EPA 1668 A	4-CHLOROBIPHENYL (BZ-3)	PA
EPA 1671 A	2-METHOXYETHANOL (METHYL CELLOSOLVE)	PA
EPA 1671 A	DIETHYLAMINE	PA
EPA 1671 A	ETHANOL	PA
EPA 1671 A	N-PROPANOL (1-PROPANOL)	PA
EPA 180.1 REV 2	TURBIDITY	PA

EPA 200.7 REV 4.4	ALUMINUM	PA
EPA 200.7 REV 4.4	ARSENIC	PA
EPA 200.7 REV 4.4	BERYLLIUM	PA
EPA 200.7 REV 4.4	CADMIUM	PA
EPA 200.7 REV 4.4	CHROMIUM	PA
EPA 200.7 REV 4.4	COPPER	PA
EPA 200.7 REV 4.4	LEAD	PA
EPA 200.7 REV 4.4	MANGANESE	PA
EPA 200.7 REV 4.4	NICKEL	PA
EPA 200.7 REV 4.4	SELENIUM	PA
EPA 200.7 REV 4.4	SODIUM	PA
EPA 200.7 REV 4.4	TIN	PA
EPA 200.7 REV 4.4	VANADIUM	PA
EPA 200.8 REV 5.4	ALUMINUM	PA
EPA 200.8 REV 5.4	ARSENIC	PA
EPA 200.8 REV 5.4	BERYLLIUM	PA
EPA 200.8 REV 5.4	CHROMIUM	PA
EPA 200.8 REV 5.4	COPPER	PA

METHOD	ANALYTE	PRIMARY
EPA 1668 A	3,3',4,4'-TETRACHLOROBIPHENYL (BZ-77)	PA
EPA 1668 A	3,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-127)	PA
EPA 1668 A	3,3',4-TRICHLOROBIPHENYL (BZ-35)	PA
EPA 1668 A	3,3',5-TRICHLOROBIPHENYL (BZ-36)	PA
EPA 1668 A	3,4',5-TRICHLOROBIPHENYL (BZ-39)	PA
EPA 1668 A	3,4,4',5-TETRACHLOROBIPHENYL (BZ-81)	PA
EPA 1668 A	3,4,5-TRICHLOROBIPHENYL (BZ-38)	PA
EPA 1668 A	3,5-DICHLOROBIPHENYL (BZ-14)	PA
EPA 1668 A	4,4'-DICHLOROBIPHENYL (BZ-15)	PA
EPA 1668 A	DECACHLOROBIPHENYL (BZ-209)	PA
EPA 1671 A	ACETONITRILE	PA
EPA 1671 A	DIMETHYL SULFOXIDE	PA
EPA 1671 A	METHANOL	PA
EPA 1671 A	TRIETHYLAMINE	PA
EPA 200.2 REV 2.8	PREP. SAMPLE PREPARATION PROCEDURE FOR SPECTROCHEMICAL DETERMINATION OF TOTAL RECOVERABLE ELEMENTS	PA
EPA 200.7 REV 4.4	ANTIMONY	PA
EPA 200.7 REV 4.4	BARIUM	PA
EPA 200.7 REV 4.4	BORON	PA
EPA 200.7 REV 4.4	CALCIUM	PA
EPA 200.7 REV 4.4	COBALT	PA
EPA 200.7 REV 4.4	IRON	PA
EPA 200.7 REV 4.4	MAGNESIUM	PA
EPA 200.7 REV 4.4	MOLYBDENUM	PA
EPA 200.7 REV 4.4	POTASSIUM	PA
EPA 200.7 REV 4.4	SILVER	PA
EPA 200.7 REV 4.4	THALLIUM	PA
EPA 200.7 REV 4.4	TITANIUM	PA
EPA 200.7 REV 4.4	ZINC	PA
EPA 200.8 REV 5.4	ANTIMONY	PA
EPA 200.8 REV 5.4	BARIUM	PA
EPA 200.8 REV 5.4	CADMIUM	PA
EPA 200.8 REV 5.4	COBALT	PA

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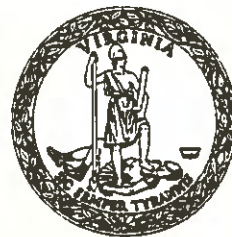
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EPA 200.8 REV 5.4	LEAD	PA	EPA 200.8 REV 5.4	MANGANESE	PA
EPA 200.8 REV 5.4	MOLYBDENUM	PA	EPA 200.8 REV 5.4	NICKEL	PA
EPA 200.8 REV 5.4	SELENIUM	PA	EPA 200.8 REV 5.4	SILVER	PA
EPA 200.8 REV 5.4	THALLIUM	PA	EPA 200.8 REV 5.4	VANADIUM	PA
EPA 200.8 REV 5.4	ZINC	PA	EPA 200.8 REV 5.4 - EXTENDED	BORON	PA
EPA 200.8 REV 5.4 - EXTENDED	CALCIUM	PA	EPA 200.8 REV 5.4 - EXTENDED	IRON	PA
EPA 200.8 REV 5.4 - EXTENDED	MAGNESIUM	PA	EPA 200.8 REV 5.4 - EXTENDED	POTASSIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	SODIUM	PA	EPA 200.8 REV 5.4 - EXTENDED	TIN	PA
EPA 200.8 REV 5.4 - EXTENDED	TITANIUM	PA	EPA 245.1 REV 3	MERCURY	PA
EPA 300.0 REV 2.1	BROMIDE	PA	EPA 300.0 REV 2.1	CHLORIDE	PA
EPA 300.0 REV 2.1	FLUORIDE	PA	EPA 300.0 REV 2.1	NITRATE AS N	PA
EPA 300.0 REV 2.1	NITRITE AS N	PA	EPA 300.0 REV 2.1	SULFATE	PA
EPA 3005 A	PREP: ACID DIGESTION OF WATERS FOR TOTAL RECOVERABLE OR DISSOLVED METALS	PA	EPA 3010 A	PREP: ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS	PA
EPA 3020 A	PREP: ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS	PA	EPA 335.4 REV 1.0	CYANIDE	PA
EPA 351.2 REV 2	KJELDAHL NITROGEN - TOTAL	PA	EPA 3510 C	PREP: LIQUID-LIQUID EXTRACTION	PA
EPA 3511	PREP: ORGANIC EXTRACTION AND SAMPLE PREPARATION	PA	EPA 3520 C	PREP: CONTINUOUS LIQUID-LIQUID EXTRACTION	PA
EPA 353.2 REV 2	NITRATE AS N	PA	EPA 353.2 REV 2	NITRATE/NITRITE	PA
EPA 353.2 REV 2	NITRITE AS N	PA	EPA 3620 B	PREP: FLORISIL CLEANUP	PA
EPA 3630 C	PREP: SILICA GEL CLEANUP	PA	EPA 365.1 REV 2	PHOSPHORUS, TOTAL	PA
EPA 365.3	ORTHOPHOSPHATE AS P	PA	EPA 410.4 REV 2	CHEMICAL OXYGEN DEMAND	PA
EPA 420.4 REV 1	TOTAL PHENOLICS	PA	EPA 5030	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	PA
EPA 6010 B	ALUMINUM	PA	EPA 6010 B	ANTIMONY	PA
EPA 6010 B	ARSENIC	PA	EPA 6010 B	BARIUM	PA
EPA 6010 B	BERYLLIUM	PA	EPA 6010 B	BORON	PA
EPA 6010 B	CADMIUM	PA	EPA 6010 B	CALCIUM	PA
EPA 6010 B	CHROMIUM	PA	EPA 6010 B	COBALT	PA
EPA 6010 B	COPPER	PA	EPA 6010 B	IRON	PA
EPA 6010 B	LEAD	PA	EPA 6010 B	LITHIUM	PA
EPA 6010 B	MAGNESIUM	PA	EPA 6010 B	MANGANESE	PA
EPA 6010 B	MOLYBDENUM	PA	EPA 6010 B	NICKEL	PA
EPA 6010 B	POTASSIUM	PA	EPA 6010 B	SELENIUM	PA



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Expiration Date: June 14, 2017

NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 6010 B	SILVER	PA	EPA 6010 B	SODIUM	PA
EPA 6010 B	STRONTIUM	PA	EPA 6010 B	THALLIUM	PA
EPA 6010 B	TIN	PA	EPA 6010 B	TITANIUM	PA
EPA 6010 B	VANADIUM	PA	EPA 6010 B	ZINC	PA
EPA 6010 B - EXTENDED	ZIRCONIUM	PA	EPA 6010 C	ALUMINUM	PA
EPA 6010 C	ANTIMONY	PA	EPA 6010 C	ARSENIC	PA
EPA 6010 C	BARIUM	PA	EPA 6010 C	BERYLLIUM	PA
EPA 6010 C	BORON	PA	EPA 6010 C	CADMIUM	PA
EPA 6010 C	CALCIUM	PA	EPA 6010 C	CHROMIUM	PA
EPA 6010 C	COBALT	PA	EPA 6010 C	COPPER	PA
EPA 6010 C	IRON	PA	EPA 6010 C	LEAD	PA
EPA 6010 C	LITHIUM	PA	EPA 6010 C	MAGNESIUM	PA
EPA 6010 C	MANGANESE	PA	EPA 6010 C	MOLYBDENUM	PA
EPA 6010 C	NICKEL	PA	EPA 6010 C	POTASSIUM	PA
EPA 6010 C	SELENIUM	PA	EPA 6010 C	SILVER	PA
EPA 6010 C	SODIUM	PA	EPA 6010 C	STRONTIUM	PA
EPA 6010 C	THALLIUM	PA	EPA 6010 C	TIN	PA
EPA 6010 C	TITANIUM	PA	EPA 6010 C	VANADIUM	PA
EPA 6010 C	ZINC	PA	EPA 6010 C - EXTENDED	ZIRCONIUM	PA
EPA 602	BENZENE	PA	EPA 602	ETHYLBENZENE	PA
EPA 602	TOLUENE	PA	EPA 602	XYLENE (TOTAL)	PA
EPA 6020 A	ALUMINUM	PA	EPA 6020 A	ANTIMONY	PA
EPA 6020 A	ARSENIC	PA	EPA 6020 A	BARIUM	PA
EPA 6020 A	BERYLLIUM	PA	EPA 6020 A	CADMIUM	PA
EPA 6020 A	CALCIUM	PA	EPA 6020 A	CHROMIUM	PA
EPA 6020 A	COBALT	PA	EPA 6020 A	COPPER	PA
EPA 6020 A	IRON	PA	EPA 6020 A	LEAD	PA
EPA 6020 A	MAGNESIUM	PA	EPA 6020 A	MANGANESE	PA
EPA 6020 A	NICKEL	PA	EPA 6020 A	POTASSIUM	PA
EPA 6020 A	SELENIUM	PA	EPA 6020 A	SILVER	PA
EPA 6020 A	SODIUM	PA	EPA 6020 A	THALLIUM	PA
EPA 6020 A	VANADIUM	PA	EPA 6020 A	ZINC	PA
EPA 6020 A - EXTENDED	BORON	PA	EPA 6020 A - EXTENDED	MOLYBDENUM	PA
EPA 6020 A - EXTENDED	STRONTIUM	PA	EPA 6020 A - EXTENDED	TIN	PA
EPA 6020 A - EXTENDED	TITANIUM	PA	EPA 608	4,4'-DDD	PA
EPA 608	4,4'-DDE	PA	EPA 608	4,4'-DDT	PA
EPA 608	ALDRIN	PA	EPA 608	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA



Commonwealth of Virginia
Department of General Services
Division of Consolidated Laboratory Services



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EPA 608	AROCLOR-1016 (PCB-1016)	PA	EPA 608	AROCLOR-1221 (PCB-1221)	PA
EPA 608	AROCLOR-1232 (PCB-1232)	PA	EPA 608	AROCLOR-1242 (PCB-1242)	PA
EPA 608	AROCLOR-1248 (PCB-1248)	PA	EPA 608	AROCLOR-1254 (PCB-1254)	PA
EPA 608	AROCLOR-1260 (PCB-1260)	PA	EPA 608	BETA-BHC (BETA-HEXACHLOROCYCLOHEXAN E)	PA
EPA 608	CHLORDANE (TECH.)	PA	EPA 608	DELTA-BHC	PA
EPA 608	DIELDRIN	PA	EPA 608	ENDOSULFAN I	PA
EPA 608	ENDOSULFAN II	PA	EPA 608	ENDOSULFAN SULFATE	PA
EPA 608	ENDRIN	PA	EPA 608	ENDRIN ALDEHYDE	PA
EPA 608	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXA NE)	PA	EPA 608	HEPTACHLOR	PA
EPA 608	HEPTACHLOR EPOXIDE	PA	EPA 608	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 622	AZINPHOS-METHYL (GUTHION)	PA	EPA 622	BOLSTAR (SULPROFOS)	PA
EPA 622	CHLORPYRIFOS	PA	EPA 622	DEMETON-O	PA
EPA 622	DEMETON-S	PA	EPA 622	DIAZINON	PA
EPA 622	DICHLOROVOS (DDVP, DICHLORVOS)	PA	EPA 622	DISULFOTON	PA
EPA 622	ETHOPROP	PA	EPA 622	FENSULFOTHION	PA
EPA 622	FENTHION	PA	EPA 622	MERPHOS	PA
EPA 622	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 622	MEVINPHOS	PA
EPA 622	NALED	PA	EPA 622	PHORATE	PA
EPA 622	STIROFOS	PA	EPA 624	1,1,1-TRICHLOROETHANE	PA
EPA 624	1,1,2,2-TETRACHLOROETHANE	PA	EPA 624	1,1,2-TRICHLOROETHANE	PA
EPA 624	1,1-DICHLOROETHANE	PA	EPA 624	1,2-DICHLOROBENZENE	PA
EPA 624	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA	EPA 624	1,2-DICHLOROPROPANE	PA
EPA 624	1,3-DICHLOROBENZENE	PA	EPA 624	1,4-DICHLOROBENZENE	PA
EPA 624	2-CHLOROETHYL VINYL ETHER	PA	EPA 624	ACROLEIN (PROPENAL)	PA
EPA 624	ACRYLONITRILE	PA	EPA 624	BENZENE	PA
EPA 624	BROMODICHLOROMETHANE	PA	EPA 624	BROMOFORM	PA
EPA 624	CARBON TETRACHLORIDE	PA	EPA 624	CHLOROBENZENE	PA
EPA 624	CHLORODIBROMOMETHANE	PA	EPA 624	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 624	CHLOROFORM	PA	EPA 624	CIS-1,3-DICHLOROPROPENE	PA
EPA 624	ETHYLBENZENE	PA	EPA 624	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 624	METHYL CHLORIDE (CHLOROMETHANE)	PA	EPA 624	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 624	TETRACHLOROETHENE (PERCHLOROETHENE)	PA			

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METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 624	TOLUENE	PA	EPA 624	TRANS-1,2-DICHLOROETHENE	PA
EPA 624	TRANS-1,3-DICHLOROPROPENE	PA	EPA 624	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 624	TRICHLOROFLUOROMETHANE (FLUOROTRICHOROMETHANE, FREON 11)	PA	EPA 624	VINYL CHLORIDE	PA
EPA 624 - EXTENDED	1,1-DICHLOROETHYLENE	PA	EPA 625	1,2,4-TRICHLOROBENZENE	PA
EPA 625	2,2'-OXYBIS(1-CHLOROPROPANE)	PA	EPA 625	2,4,6-TRICHLOROPHENOL	PA
EPA 625	2,4-DICHLOROPHENOL	PA	EPA 625	2,4-DIMETHYLPHENOL	PA
EPA 625	2,4-DINITROPHENOL	PA	EPA 625	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 625	2,6-DINITROTOLUENE (2,6-DNT)	PA	EPA 625	2-CHLORONAPHTHALENE	PA
EPA 625	2-CHLOROPHENOL	PA	EPA 625	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 625	2-METHYLPHENOL (O-CRESOL)	PA	EPA 625	2-NITROPHENOL	PA
EPA 625	3,3'-DICHLOROBENZIDINE	PA	EPA 625	4-BROMOPHENYL PHENYL ETHER	PA
EPA 625	4-CHLORO-3-METHYLPHENOL	PA	EPA 625	4-CHLOROPHENYL PHENYLETHER	PA
EPA 625	4-NITROPHENOL	PA	EPA 625	ACENAPHTHENE	PA
EPA 625	ACENAPHTHYLENE	PA	EPA 625	ANTHRACENE	PA
EPA 625	BENZIDINE	PA	EPA 625	BENZO(A)ANTHRACENE	PA
EPA 625	BENZO(A)PYRENE	PA	EPA 625	BENZO(B)FLUORANTHENE	PA
EPA 625	BENZO(G,H,I)PERYLENE	PA	EPA 625	BENZO(K)FLUORANTHENE	PA
EPA 625	BIS(2-CHLOROETHOXY)METHANE	PA	EPA 625	BIS(2-CHLOROETHYL) ETHER	PA
EPA 625	BIS(2-ETHYLHEXYL) PHTHALATE (D(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA	EPA 625	BUTYL BENZYL PHTHALATE	PA
EPA 625	CHRYSENE	PA	EPA 625	DI-N-BUTYL PHTHALATE	PA
EPA 625	DI-N-OCTYL PHTHALATE	PA	EPA 625	DIBENZO(A,H) ANTHRACENE	PA
EPA 625	DIETHYL PHTHALATE	PA	EPA 625	DIMETHYL PHTHALATE	PA
EPA 625	FLUORANTHENE	PA	EPA 625	FLUORENE	PA
EPA 625	HEXACHLOROBENZENE	PA	EPA 625	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 625	HEXACHLOROCYCLOPENTADIENE	PA	EPA 625	HEXACHLOROETHANE	PA
EPA 625	INDENO(1,2,3-CD) PYRENE	PA	EPA 625	ISOPHORONE	PA
EPA 625	N-NITROSODI-N-PROPYLAMINE	PA	EPA 625	N-NITROSODIMETHYLAMINE	PA
EPA 625	N-NITROSODIPHENYLAMINE	PA	EPA 625	NAPHTHALENE	PA
EPA 625	NITROBENZENE	PA	EPA 625	PENTACHLOROPHENOL	PA
EPA 625	PHENANTHRENE	PA	EPA 625	PHENOL	PA
EPA 625	PYRENE	PA	EPA 625 - EXTENDED	1,2-DIPHENYLHYDRAZINE	PA
EPA 625 - EXTENDED	4-METHYLPHENOL (P-CRESOL)	PA	EPA 625 - EXTENDED	ACETOPHENONE	PA
EPA 625 - EXTENDED	ANILINE	PA	EPA 625 - EXTENDED	CARBAZOLE	PA
EPA 625 - EXTENDED	N-DECANE	PA	EPA 625 - EXTENDED	N-OCTADECANE	PA



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EPA 625 - EXTENDED	PYRIDINE	PA	EPA 6850	PERCHLORATE	PA
EPA 7196 A	CHROMIUM VI	PA	EPA 7470 A	MERCURY	PA
EPA 8011	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA	EPA 8011	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	PA	EPA 8015 B	ETHANOL	PA
EPA 8015 B	ETHYLENE GLYCOL	PA	EPA 8015 B	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8015 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA	EPA 8015 B	METHANOL	PA
EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	PA	EPA 8015 C	ETHANOL	PA
EPA 8015 C	ETHYLENE GLYCOL	PA	EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8015 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA	EPA 8015 C	METHANOL	PA
EPA 8021 B	BENZENE	PA	EPA 8021 B	ETHYLBENZENE	PA
EPA 8021 B	ISOPROPYLBENZENE	PA	EPA 8021 B	M+P-XYLENE	PA
EPA 8021 B	NAPHTHALENE	PA	EPA 8021 B	O-XYLENE	PA
EPA 8021 B	TOLUENE	PA	EPA 8021 B	XYLENE (TOTAL)	PA
EPA 8021 B - EXTENDED	METHYL TERT-BUTYL ETHER (MTBE)	PA	EPA 8081 A	4,4'-DDD	PA
EPA 8081 A	4,4'-DDE	PA	EPA 8081 A	4,4'-DDT	PA
EPA 8081 A	ALDRIN	PA	EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	ALPHA-CHLORDANE [CIS-CHLORDANE]	PA	EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	CHLORDANE (TECH.)	PA	EPA 8081 A	DELTA-BHC	PA
EPA 8081 A	DIELDRIN	PA	EPA 8081 A	ENDOSULFAN I	PA
EPA 8081 A	ENDOSULFAN II	PA	EPA 8081 A	ENDOSULFAN SULFATE	PA
EPA 8081 A	ENDRIN	PA	EPA 8081 A	ENDRIN ALDEHYDE	PA
EPA 8081 A	ENDRIN KETONE	PA	EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	PA	EPA 8081 A	HEPTACHLOR	PA
EPA 8081 A	HEPTACHLOR EPOXIDE	PA	EPA 8081 A	METHOXYCHLOR	PA
EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	PA	EPA 8081 A - EXTENDED	KEPONE	PA
EPA 8081 B	4,4'-DDD	PA	EPA 8081 B	4,4'-DDE	PA
EPA 8081 B	4,4'-DDT	PA	EPA 8081 B	ALDRIN	PA
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA	EPA 8081 B	ALPHA-CHLORDANE [CIS-CHLORDANE]	PA



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EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA	EPA 8081 B	CHLORDANE (TECH.)	PA
EPA 8081 B	DELTA-BHC	PA	EPA 8081 B	DIELDRIN	PA
EPA 8081 B	ENDOSULFAN I	PA	EPA 8081 B	ENDOSULFAN II	PA
EPA 8081 B	ENDOSULFAN SULFATE	PA	EPA 8081 B	ENDRIN	PA
EPA 8081 B	ENDRIN ALDEHYDE	PA	EPA 8081 B	ENDRIN KETONE	PA
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA	EPA 8081 B	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	PA
EPA 8081 B	HEPTACHLOR	PA	EPA 8081 B	HEPTACHLOR EPOXIDE	PA
EPA 8081 B	METHOXYCHLOR	PA	EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 8081 B - EXTENDED	KEPONE	PA	EPA 8082 A	AROCLOR-1016 (PCB-1016)	PA
EPA 8082 A	AROCLOR-1221 (PCB-1221)	PA	EPA 8082 A	AROCLOR-1232 (PCB-1232)	PA
EPA 8082 A	AROCLOR-1242 (PCB-1242)	PA	EPA 8082 A	AROCLOR-1248 (PCB-1248)	PA
EPA 8082 A	AROCLOR-1254 (PCB-1254)	PA	EPA 8082 A	AROCLOR-1260 (PCB-1260)	PA
EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	PA	EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	PA
EPA 8141 A	ATRAZINE	PA	EPA 8141 A	BOLSTAR (SULPROFOS)	PA
EPA 8141 A	CHLORPYRIFOS	PA	EPA 8141 A	COUMAPHOS	PA
EPA 8141 A	DEMETON-O	PA	EPA 8141 A	DEMETON-S	PA
EPA 8141 A	DIAZINON	PA	EPA 8141 A	DICHLOROVOS (DDVP, DICHLORVOS)	PA
EPA 8141 A	DISULFOTON	PA	EPA 8141 A	ETHION	PA
EPA 8141 A	ETHOPROP	PA	EPA 8141 A	FAMPHUR	PA
EPA 8141 A	FENSULFOTHION	PA	EPA 8141 A	FENTHION	PA
EPA 8141 A	MALATHION	PA	EPA 8141 A	MERPHOS	PA
EPA 8141 A	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8141 A	MEVINPHOS	PA
EPA 8141 A	NALED	PA	EPA 8141 A	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 A	PHORATE	PA	EPA 8141 A	RONNEL	PA
EPA 8141 A	SIMAZINE	PA	EPA 8141 A	TETRACHLORVINPHOS (STIOPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 A	TOKUTHION (PROTHIOPHOS)	PA	EPA 8141 A	TRICHLORONATE	PA
EPA 8141 B	ATRAZINE	PA	EPA 8141 B	AZINPHOS-METHYL (GUTHION)	PA
EPA 8141 B	BOLSTAR (SULPROFOS)	PA	EPA 8141 B	CHLORPYRIFOS	PA
EPA 8141 B	COUMAPHOS	PA	EPA 8141 B	DEMETON-O	PA
EPA 8141 B	DEMETON-S	PA	EPA 8141 B	DICHLOROVOS (DDVP, DICHLORVOS)	PA
EPA 8141 B	DISULFOTON	PA	EPA 8141 B	EPN (PHOSPHONOTHIOIC ACID, PHENYL, O-ETHYL O- (P-NITROPHENYL) ESTER)	PA
EPA 8141 B	ETHION	PA	EPA 8141 B	ETHOPROP	PA

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EPA 8141 B	FAMPHUR	PA	EPA 8141 B	FENSULFOTHION	PA
EPA 8141 B	FENTHION	PA	EPA 8141 B	MALATHION	PA
EPA 8141 B	MERPHOS	PA	EPA 8141 B	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8141 B	MEVINPHOS	PA	EPA 8141 B	NALED	PA
EPA 8141 B	PARATHION (PARATHION - ETHYL)	PA	EPA 8141 B	PHORATE	PA
EPA 8141 B	RONNEL	PA	EPA 8141 B	SIMAZINE	PA
EPA 8141 B	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA	EPA 8141 B	TOKUTHION (PROTHIOPHOS)	PA
EPA 8141 B	TRICHLORONATE	PA	EPA 8151 A	2,4,5-T	PA
EPA 8151 A	2,4-D	PA	EPA 8151 A	2,4-DB	PA
EPA 8151 A	DALAPON	PA	EPA 8151 A	DICAMBA	PA
EPA 8151 A	DICHLOROPROP (DICHLORPROP)	PA	EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA
EPA 8151 A	MCPA	PA	EPA 8151 A	MCPP	PA
EPA 8151 A	PENTACHLOROPHENOL	PA	EPA 8151 A	PICLORAM	PA
EPA 8151 A	SILVEX (2,4,5-TP)	PA	EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	PA
EPA 8260 B	1,1,1-TRICHLOROETHANE	PA	EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	PA
EPA 8260 B	1,1,2-TRICHLOROETHANE	PA	EPA 8260 B	1,1-DICHLOROETHANE	PA
EPA 8260 B	1,1-DICHLOROETHYLENE	PA	EPA 8260 B	1,1-DICHLOROPROPENE	PA
EPA 8260 B	1,2,3-TRICHLOROBENZENE	PA	EPA 8260 B	1,2,3-TRICHLOROPROPANE	PA
EPA 8260 B	1,2,4-TRICHLOROBENZENE	PA	EPA 8260 B	1,2,4-TRIMETHYLBENZENE	PA
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA	EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8260 B	1,2-DICHLOROBENZENE	PA	EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 8260 B	1,2-DICHLOROPROPANE	PA	EPA 8260 B	1,3,5-TRIMETHYLBENZENE	PA
EPA 8260 B	1,3-DICHLOROBENZENE	PA	EPA 8260 B	1,3-DICHLOROPROPANE	PA
EPA 8260 B	1,4-DICHLOROBENZENE	PA	EPA 8260 B	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8260 B	1-BUTANOL (N-BUTANOL)	PA	EPA 8260 B	2,2-DICHLOROPROPANE	PA
EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA	EPA 8260 B	2-CHLOROETHYL VINYL ETHER	PA
EPA 8260 B	2-CHLOROTOLUENE	PA	EPA 8260 B	2-HEXANONE	PA
EPA 8260 B	2-NITROPROPANE	PA	EPA 8260 B	4-CHLOROTOLUENE	PA
EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYMENE)	PA	EPA 8260 B	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 8260 B	ACETONE	PA	EPA 8260 B	ACETONITRILE	PA
EPA 8260 B	ACROLEIN (PROPENAL)	PA	EPA 8260 B	ACRYLONITRILE	PA
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA	EPA 8260 B	BENZENE	PA
EPA 8260 B	BENZYL CHLORIDE	PA	EPA 8260 B	BROMOBENZENE	PA

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 B	BROMOCHLOROMETHANE	PA
EPA 8260 B	BROMOFORM	PA
EPA 8260 B	CARBON TETRACHLORIDE	PA
EPA 8260 B	CHLORODIBROMOMETHANE	PA
EPA 8260 B	CHLOROFORM	PA
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	PA
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	PA
EPA 8260 B	DIETHYL ETHER	PA
EPA 8260 B	ETHANOL	PA
EPA 8260 B	ETHYL METHACRYLATE	PA
EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 B	ISOPROPYL BENZENE	PA
EPA 8260 B	METHACRYLONITRILE	PA
EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8260 B	N-BUTYLBENZENE	PA
EPA 8260 B	N-PROPYLBENZENE	PA
EPA 8260 B	O-XYLENE	PA
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 B	STYRENE	PA
EPA 8260 B	TERT-BUTYLBENZENE	PA
EPA 8260 B	TOLUENE	PA
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE	PA
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 B	VINYL ACETATE	PA
EPA 8260 B	XYLENE (TOTAL)	PA
EPA 8260 B - EXTENDED	CYCLOHEXANE	PA
EPA 8260 B - EXTENDED	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA

METHOD	ANALYTE	PRIMARY
EPA 8260 B	BROMODICHLOROMETHANE	PA
EPA 8260 B	CARBON DISULFIDE	PA
EPA 8260 B	CHLOROBENZENE	PA
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 B	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA
EPA 8260 B	ETHYL ACETATE	PA
EPA 8260 B	ETHYLBENZENE	PA
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	PA
EPA 8260 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8260 B	M+P-XYLENE	PA
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 8260 B	METHYL METHACRYLATE	PA
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 8260 B	N-PROPYLAMINE	PA
EPA 8260 B	NAPHTHALENE	PA
EPA 8260 B	PENTACHLOROETHANE	PA
EPA 8260 B	SEC-BUTYLBENZENE	PA
EPA 8260 B	TERT-BUTYL ALCOHOL	PA
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 B	VINYL CHLORIDE	PA
EPA 8260 B - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE (FREON 113)	PA
EPA 8260 B - EXTENDED	DIISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 8260 B - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA



Commonwealth of Virginia
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<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8260 B - EXTENDED	METHYL ACETATE	PA	EPA 8260 B - EXTENDED	METHYLCYCLOHEXANE	PA
EPA 8260 B - EXTENDED	N-HEXANE	PA	EPA 8260 B - EXTENDED	T-AMYL ALCOHOL (TAA)	PA
EPA 8260 B - EXTENDED	T-AMYLMETHYLETHER (TAME)	PA	EPA 8260 B - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8260 C	1,1,1,2-TETRACHLOROETHANE	PA	EPA 8260 C	1,1,1-TRICHLOROETHANE	PA
EPA 8260 C	1,1,2,2-TETRACHLOROETHANE	PA	EPA 8260 C	1,1,2-TRICHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROETHANE	PA	EPA 8260 C	1,1-DICHLOROETHYLENE	PA
EPA 8260 C	1,1-DICHLOROPROPENE	PA	EPA 8260 C	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 C	1,2,3-TRICHLOROPROPANE	PA	EPA 8260 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 C	1,2,4-TRIMETHYLBENZENE	PA	EPA 8260 C	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 C	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA	EPA 8260 C	1,2-DICHLOROBENZENE	PA
EPA 8260 C	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA	EPA 8260 C	1,2-DICHLOROPROPANE	PA
EPA 8260 C	1,3,5-TRIMETHYLBENZENE	PA	EPA 8260 C	1,3-DICHLOROBENZENE	PA
EPA 8260 C	1,3-DICHLOROPROPANE	PA	EPA 8260 C	1,4-DICHLOROBENZENE	PA
EPA 8260 C	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA	EPA 8260 C	1-BUTANOL (N-BUTANOL)	PA
EPA 8260 C	2,2-DICHLOROPROPANE	PA	EPA 8260 C	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 8260 C	2-CHLOROETHYL VINYL ETHER	PA	EPA 8260 C	2-CHLOROTOLUENE	PA
EPA 8260 C	2-HEXANONE	PA	EPA 8260 C	2-NITROPROPANE	PA
EPA 8260 C	4-CHLOROTOLUENE	PA	EPA 8260 C	4-ISOPROPYLTOLUENE (P-CYMENE)	PA
EPA 8260 C	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA	EPA 8260 C	ACETONE	PA
EPA 8260 C	ACETONITRILE	PA	EPA 8260 C	ACROLEIN (PROPENAL)	PA
EPA 8260 C	ACRYLONITRILE	PA	EPA 8260 C	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA
EPA 8260 C	BENZENE	PA	EPA 8260 C	BENZYL CHLORIDE	PA
EPA 8260 C	BROMOBENZENE	PA	EPA 8260 C	BROMOCHLOROMETHANE	PA
EPA 8260 C	BROMODICHLOROMETHANE	PA	EPA 8260 C	BROMOFORM	PA
EPA 8260 C	CARBON DISULFIDE	PA	EPA 8260 C	CARBON TETRACHLORIDE	PA
EPA 8260 C	CHLOROBENZENE	PA	EPA 8260 C	CHLORODIBROMOMETHANE	PA
EPA 8260 C	CHLOROETHANE (ETHYL CHLORIDE)	PA	EPA 8260 C	CHLOROFORM	PA
EPA 8260 C	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA	EPA 8260 C	CIS-1,2-DICHLOROETHYLENE	PA
EPA 8260 C	CIS-1,3-DICHLOROPROPENE	PA	EPA 8260 C	CYCLOHEXANE	PA
EPA 8260 C	DIBROMOMETHANE (METHYLENE BROMIDE)	PA	EPA 8260 C	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 C	DIETHYL ETHER	PA	EPA 8260 C	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA
EPA 8260 C	ETHANOL	PA	EPA 8260 C	ETHYL ACETATE	PA



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<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8260 C	ETHYL METHACRYLATE	PA	EPA 8260 C	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 C	ETHYLBENZENE	PA	EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 C	HEXACHLOROETHANE	PA	EPA 8260 C	IODOMETHANE (METHYL IODIDE)	PA
EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA	EPA 8260 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8260 C	ISOPROPYLBENZENE	PA	EPA 8260 C	METHACRYLONITRILE	PA
EPA 8260 C	METHYL BROMIDE (BROMOMETHANE)	PA	EPA 8260 C	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 C	METHYL METHACRYLATE	PA	EPA 8260 C	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8260 C	METHYLCYCLOHEXANE	PA	EPA 8260 C	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 8260 C	N-BUTYLBENZENE	PA	EPA 8260 C	N-PROPYLBENZENE	PA
EPA 8260 C	NAPHTHALENE	PA	EPA 8260 C	PENTACHLOROETHANE	PA
EPA 8260 C	PROPIONITRILE (ETHYL CYANIDE)	PA	EPA 8260 C	SEC-BUTYLBENZENE	PA
EPA 8260 C	STYRENE	PA	EPA 8260 C	T-AMYL METHYLETHER (TAME)	PA
EPA 8260 C	TERT-BUTYL ALCOHOL	PA	EPA 8260 C	TERT-BUTYLBENZENE	PA
EPA 8260 C	TETRACHLOROETHENE (PERCHLOROETHENE)	PA	EPA 8260 C	TOLUENE	PA
EPA 8260 C	TRANS-1,2-DICHLOROETHENE	PA	EPA 8260 C	TRANS-1,3-DICHLOROPROPENE	PA
EPA 8260 C	TRANS-1,4-DICHLORO-2-BUTENE	PA	EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 C	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA	EPA 8260 C	VINYL ACETATE	PA
EPA 8260 C	VINYL CHLORIDE	PA	EPA 8260 C	XYLENE (TOTAL)	PA
EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	PA	EPA 8260 C - EXTENDED	CYCLOHEXANONE	PA
EPA 8260 C - EXTENDED	DIISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA	EPA 8260 C - EXTENDED	DIMETHYL ETHER	PA
EPA 8260 C - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA	EPA 8260 C - EXTENDED	METHYL ACETATE	PA
EPA 8260 C - EXTENDED	N-HEPTANE	PA	EPA 8260 C - EXTENDED	T-AMYL ALCOHOL (TAA)	PA
EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	PA	EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 C	1,2,4-TRICHLOROBENZENE	PA	EPA 8270 C	1,2-DICHLOROBENZENE	PA
EPA 8270 C	1,2-DIPHENYLHYDRAZINE	PA	EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 C	1,3-DICHLOROBENZENE	PA	EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 C	1,4-DICHLOROBENZENE	PA	EPA 8270 C	1,4-DINITROBENZENE	PA
EPA 8270 C	1,4-NAPHTHOQUINONE	PA	EPA 8270 C	1,4-PHENYLENEDIAMINE	PA
EPA 8270 C	1-CHLORONAPHTHALENE	PA	EPA 8270 C	1-NAPHTHYLAMINE	PA
EPA 8270 C	2,2'-OXYBIS(1-CHLOROPROPANE)	PA	EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	PA



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EPA 8270 C	2,4,5-TRICHLOROPHENOL	PA	EPA 8270 C	2,4,6-TRICHLOROPHENOL	PA
EPA 8270 C	2,4-DICHLOROPHENOL	PA	EPA 8270 C	2,4-DIMETHYLPHENOL	PA
EPA 8270 C	2,4-DINITROPHENOL	PA	EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8270 C	2,6-DICHLOROPHENOL	PA	EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8270 C	2-ACETYLAMINOFLUORENE	PA	EPA 8270 C	2-CHLORONAPHTHALENE	PA
EPA 8270 C	2-CHLOROPHENOL	PA	EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 8270 C	2-METHYLNAPHTHALENE	PA	EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	PA
EPA 8270 C	2-NAPHTHYLAMINE	PA	EPA 8270 C	2-NITROANILINE	PA
EPA 8270 C	2-NITROPHENOL	PA	EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8270 C	3,3'-DICHLOROBENZIDINE	PA	EPA 8270 C	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 C	3-METHYLCHOLANTHRENE	PA	EPA 8270 C	3-METHYLPHENOL (M-CRESOL)	PA
EPA 8270 C	3-NITROANILINE	PA	EPA 8270 C	4,4'-METHYLENEBIS(2-CHLOROANIL INE)	PA
EPA 8270 C	4-AMINOBIIPHENYL	PA	EPA 8270 C	4-BROMOPHENYL PHENYL ETHER	PA
EPA 8270 C	4-CHLORO-3-METHYLPHENOL	PA	EPA 8270 C	4-CHLOROANILINE	PA
EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	PA	EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 C	4-METHYLPHENOL (P-CRESOL)	PA	EPA 8270 C	4-NITROANILINE	PA
EPA 8270 C	4-NITROPHENOL	PA	EPA 8270 C	4-NITROQUINOLINE-1-OXIDE	PA
EPA 8270 C	5-NITRO-O-TOLUIDINE	PA	EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA
EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	PA	EPA 8270 C	ACENAPHTHENE	PA
EPA 8270 C	ACENAPHTHYLENE	PA	EPA 8270 C	ACETOPHENONE	PA
EPA 8270 C	ANILINE	PA	EPA 8270 C	ANTHRACENE	PA
EPA 8270 C	ARAMITE	PA	EPA 8270 C	BENZIDINE	PA
EPA 8270 C	BENZO(A)ANTHRACENE	PA	EPA 8270 C	BENZO(A)PYRENE	PA
EPA 8270 C	BENZO(B)FLUORANTHENE	PA	EPA 8270 C	BENZO(G,H,I)PERYLENE	PA
EPA 8270 C	BENZO(K)FLUORANTHENE	PA	EPA 8270 C	BENZOIC ACID	PA
EPA 8270 C	BENZYL ALCOHOL	PA	EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	PA	EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (D(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 C	BUTYL BENZYL PHTHALATE	PA	EPA 8270 C	CHLOROBENZILATE	PA
EPA 8270 C	CHRYSENE	PA	EPA 8270 C	DI-N-BUTYL PHTHALATE	PA
EPA 8270 C	DI-N-OCTYL PHTHALATE	PA	EPA 8270 C	DIALATE	PA
EPA 8270 C	DIBENZ(A, J) ACRIDINE	PA	EPA 8270 C	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 C	DIBENZOFURAN	PA	EPA 8270 C	DIETHYL PHTHALATE	PA
EPA 8270 C	DIMETHOATE	PA	EPA 8270 C	DIMETHYL PHTHALATE	PA
EPA 8270 C	DIPHENYLAMINE	PA	EPA 8270 C	DISULFOTON	PA
EPA 8270 C	ETHYL METHANESULFONATE	PA	EPA 8270 C	FAMPHUR	PA
EPA 8270 C	FLUORANTHENE	PA			

This Scope of Accreditation must accompany the Certificate issued by Virginia DCLS with the same Certificate Number indicated above.



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METHOD	ANALYTE	PRIMARY
EPA 8270 C	FLUORENE	PA
EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8270 C	HEXACHLOROETHANE	PA
EPA 8270 C	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 C	ISOPHORONE	PA
EPA 8270 C	KEPONE	PA
EPA 8270 C	METHYL METHANESULFONATE	PA
EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	PA
EPA 8270 C	N-NITROSODIETHYLAMINE	PA
EPA 8270 C	N-NITROSODIPHENYLAMINE	PA
EPA 8270 C	N-NITROSOMORPHOLINE	PA
EPA 8270 C	N-NITROSOPYRROLIDINE	PA
EPA 8270 C	NITROBENZENE	PA
EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 C	PENTACHLOROBENZENE	PA
EPA 8270 C	PENTACHLOROPHENOL	PA
EPA 8270 C	PHENANTHRENE	PA
EPA 8270 C	PHORATE	PA
EPA 8270 C	PRONAMIDE (KERB)	PA
EPA 8270 C	PYRIDINE	PA
EPA 8270 C	THIONAZIN (ZINOPHOS)	PA
EPA 8270 C	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA
EPA 8270 C SIM	ACENAPHTHENE	PA
EPA 8270 C SIM	ANTHRACENE	PA
EPA 8270 C SIM	BENZO(A)PYRENE	PA
EPA 8270 C SIM	BENZO(G,H,I)PERYLENE	PA
EPA 8270 C SIM	CHRYSENE	PA
EPA 8270 C SIM	FLUORANTHENE	PA
EPA 8270 C SIM	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 C SIM	PHENANTHRENE	PA
EPA 8270 C SIM - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 D	1,2-DIPHENYLHYDRAZINE	PA
EPA 8270 D	1,3-DICHLOROBENZENE	PA
EPA 8270 D	1,4-DICHLOROBENZENE	PA

METHOD	ANALYTE	PRIMARY
EPA 8270 C	HEXACHLOROBENZENE	PA
EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	PA
EPA 8270 C	HEXACHLOROPROPENE	PA
EPA 8270 C	ISODRIN	PA
EPA 8270 C	ISOSAFROLE	PA
EPA 8270 C	METHAPYRILENE	PA
EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 C	N-NITROSODIMETHYLAMINE	PA
EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 C	N-NITROSOPIPERIDINE	PA
EPA 8270 C	NAPHTHALENE	PA
EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA
EPA 8270 C	PARATHION (PARATHION - ETHYL)	PA
EPA 8270 C	PENTACHLORONITROBENZENE	PA
EPA 8270 C	PHENACETIN	PA
EPA 8270 C	PHENOL	PA
EPA 8270 C	PHTHALIC ANHYDRIDE	PA
EPA 8270 C	PYRENE	PA
EPA 8270 C	SAFROLE	PA
EPA 8270 C	THIOPHENOL (BENZENETHIOL)	PA
EPA 8270 C SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 C SIM	ACENAPHTHYLENE	PA
EPA 8270 C SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 C SIM	BENZO(B)FLUORANTHENE	PA
EPA 8270 C SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 C SIM	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 C SIM	FLUORENE	PA
EPA 8270 C SIM	NAPHTHALENE	PA
EPA 8270 C SIM	PYRENE	PA
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 D	1,2-DICHLOROBENZENE	PA
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 D	1,4-DINITROBENZENE	PA



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EPA 8270 D	1,4-NAPHTHOQUINONE	PA	EPA 8270 D	1,4-PHENYLENEDIAMINE	PA
EPA 8270 D	1-CHLORONAPHTHALENE	PA	EPA 8270 D	1-NAPHTHYLAMINE	PA
EPA 8270 D	2,2'-OXYBIS(1-CHLOROPROPANE)	PA	EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	PA
EPA 8270 D	2,4,5-TRICHLOROPHENOL	PA	EPA 8270 D	2,4,6-TRICHLOROPHENOL	PA
EPA 8270 D	2,4-DICHLOROPHENOL	PA	EPA 8270 D	2,4-DIMETHYLPHENOL	PA
EPA 8270 D	2,4-DINITROPHENOL	PA	EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8270 D	2,6-DICHLOROPHENOL	PA	EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8270 D	2-ACETYLAMINOFLUORENE	PA	EPA 8270 D	2-CHLORONAPHTHALENE	PA
EPA 8270 D	2-CHLOROPHENOL	PA	EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 8270 D	2-METHYLNAPHTHALENE	PA	EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	PA
EPA 8270 D	2-NAPHTHYLAMINE	PA	EPA 8270 D	2-NITROANILINE	PA
EPA 8270 D	2-NITROPHENOL	PA	EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8270 D	3,3'-DICHLOROBENZIDINE	PA	EPA 8270 D	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 D	3-METHYLCHOLANTHRENE	PA	EPA 8270 D	3-METHYLPHENOL (M-CRESOL)	PA
EPA 8270 D	3-NITROANILINE	PA	EPA 8270 D	4,4'-METHYLENEBIS(2-CHLOROANIL INE)	PA
EPA 8270 D	4-AMINOBIIPHENYL	PA	EPA 8270 D	4-BROMOPHENYL PHENYL ETHER	PA
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	PA	EPA 8270 D	4-CHLOROANILINE	PA
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	PA	EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 D	4-METHYLPHENOL (P-CRESOL)	PA	EPA 8270 D	4-NITROANILINE	PA
EPA 8270 D	4-NITROPHENOL	PA	EPA 8270 D	4-NITROQUINOLINE-1-OXIDE	PA
EPA 8270 D	5-NITRO-O-TOLUIDINE	PA	EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA
EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	PA	EPA 8270 D	ACENAPHTHENE	PA
EPA 8270 D	ACENAPHTHYLENE	PA	EPA 8270 D	ACETOPHENONE	PA
EPA 8270 D	ANILINE	PA	EPA 8270 D	ANTHRACENE	PA
EPA 8270 D	ARAMITE	PA	EPA 8270 D	BENZIDINE	PA
EPA 8270 D	BENZO(A)ANTHRACENE	PA	EPA 8270 D	BENZO(A)PYRENE	PA
EPA 8270 D	BENZO(B)FLUORANTHENE	PA	EPA 8270 D	BENZO(G,H,I)PERYLENE	PA
EPA 8270 D	BENZO(K)FLUORANTHENE	PA	EPA 8270 D	BENZOIC ACID	PA
EPA 8270 D	BENZYL ALCOHOL	PA	EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	PA	EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 D	BUTYL BENZYL PHTHALATE	PA	EPA 8270 D	CHLOROBENZILATE	PA
EPA 8270 D	CHRYSENE	PA	EPA 8270 D	DI-N-BUTYL PHTHALATE	PA
EPA 8270 D	DI-N-OCTYL PHTHALATE	PA	EPA 8270 D	DIALATE	PA
EPA 8270 D	DIBENZ(A, J) ACRIDINE	PA	EPA 8270 D	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 D	DIBENZOFURAN	PA	EPA 8270 D	DIETHYL PHTHALATE	PA
EPA 8270 D	DIMETHOATE	PA			



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EPA 8270 D	DIMETHYL PHTHALATE	PA	EPA 8270 D	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA
EPA 8270 D	DIPHENYLAMINE	PA	EPA 8270 D	DISULFOTON	PA
EPA 8270 D	ETHYL METHANESULFONATE	PA	EPA 8270 D	FAMPHUR	PA
EPA 8270 D	FLUORANTHENE	PA	EPA 8270 D	FLUORENE	PA
EPA 8270 D	HEXACHLOROBENZENE	PA	EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	PA	EPA 8270 D	HEXACHLOROETHANE	PA
EPA 8270 D	HEXACHLOROPROPENE	PA	EPA 8270 D	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 D	ISODRIN	PA	EPA 8270 D	ISOPHORONE	PA
EPA 8270 D	ISOSAFROLE	PA	EPA 8270 D	KEPONE	PA
EPA 8270 D	METHAPYRILENE	PA	EPA 8270 D	METHYL METHANESULFONATE	PA
EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	PA
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	PA	EPA 8270 D	N-NITROSODIETHYLAMINE	PA
EPA 8270 D	N-NITROSODIMETHYLAMINE	PA	EPA 8270 D	N-NITROSODIPHENYLAMINE	PA
EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	PA	EPA 8270 D	N-NITROSOMORPHOLINE	PA
EPA 8270 D	N-NITROSOPIPERIDINE	PA	EPA 8270 D	N-NITROSOPYRROLIDINE	PA
EPA 8270 D	NAPHTHALENE	PA	EPA 8270 D	NITROBENZENE	PA
EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA	EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 D	PARATHION (PARATHION - ETHYL)	PA	EPA 8270 D	PENTACHLOROBENZENE	PA
EPA 8270 D	PENTACHLORONITROBENZENE	PA	EPA 8270 D	PENTACHLOROPHENOL	PA
EPA 8270 D	PHENACETIN	PA	EPA 8270 D	PHENANTHRENE	PA
EPA 8270 D	PHENOL	PA	EPA 8270 D	PHORATE	PA
EPA 8270 D	PHTHALIC ANHYDRIDE	PA	EPA 8270 D	PRONAMIDE (KERB)	PA
EPA 8270 D	PYRENE	PA	EPA 8270 D	SAFROLE	PA
EPA 8270 D	THIONAZIN (ZINOPHOS)	PA	EPA 8270 D	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA
EPA 8270 D - EXTENDED	1,1'-BIPHENYL	PA	EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D - EXTENDED	ATRAZINE	PA	EPA 8270 D - EXTENDED	BENZALDEHYDE	PA
EPA 8270 D - EXTENDED	CAPROLACTAM	PA	EPA 8270 D - EXTENDED	CARBAZOLE	PA
EPA 8270 D - EXTENDED	PYRIDINE	PA	EPA 8270 D SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 D SIM	ACENAPHTHENE	PA	EPA 8270 D SIM	ACENAPHTHYLENE	PA
EPA 8270 D SIM	ANTHRACENE	PA	EPA 8270 D SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 D SIM	BENZO(A)PYRENE	PA	EPA 8270 D SIM	BENZO(B)FLUORANTHENE	PA
EPA 8270 D SIM	BENZO(G,H,I)PERYLENE	PA	EPA 8270 D SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 D SIM	CHRYSENE	PA	EPA 8270 D SIM	FLUORANTHENE	PA
EPA 8270 D SIM	FLUORENE	PA	EPA 8270 D SIM	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 D SIM	NAPHTHALENE	PA	EPA 8270 D SIM	PHENANTHRENE	PA

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EPA 8270 D SIM	PYRENE	PA	EPA 8270 D SIM - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D SIM - EXTENDED	DIBENZO(A,H) PYRENE	PA	EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZ O-P-DIOXIN (OCDD)	PA
EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZ OFURAN (OCDF)	PA	EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZ O-P-DIOXIN (1,2,3,4,6,7,8-HPCDD)	PA
EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZ OFURAN (1,2,3,4,6,7,8-HPCDF)	PA	EPA 8290 A	1,2,3,4,7,8,9-HEPTACHLORODIBENZ OFURAN (1,2,3,4,7,8,9-HPCDF)	PA
EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZO-P -DIOXIN (1,2,3,4,7,8-HXCDD)	PA	EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZOF URAN (1,2,3,4,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZO-P -DIOXIN (1,2,3,6,7,8-HXCDD)	PA	EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZOF URAN (1,2,3,6,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZO-P -DIOXIN (1,2,3,7,8,9-HXCDD)	PA	EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZOF URAN (1,2,3,7,8,9-HXCDF)	PA
EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZO-P -DIOXIN (1,2,3,7,8-PECDD)	PA	EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZOF URAN (1,2,3,7,8-PECDF)	PA
EPA 8290 A	2,3,4,6,7,8-HEXACHLORODIBENZOF URAN (2,3,4,6,7,8-HXCDF)	PA	EPA 8290 A	2,3,4,7,8-PENTACHLORODIBENZOF URAN	PA
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZO-P -DIOXIN (2,3,7,8-TCDD)	PA	EPA 8290 A	2,3,7,8-TETRACHLORODIBENZOFUR AN (2,3,7,8-TCDF)	PA
EPA 8315 A	ACETALDEHYDE	PA	EPA 8315 A	BENZALDEHYDE	PA
EPA 8315 A	BUTYLALDEHYDE (BUTANAL)	PA	EPA 8315 A	CROTONALDEHYDE	PA
EPA 8315 A	FORMALDEHYDE	PA	EPA 8315 A	HEXANALDEHYDE (HEXANAL)	PA
EPA 8315 A	ISOVALERALDEHYDE	PA	EPA 8315 A	M-TOLUALDEHYDE (1,3-TOLUALDEHYDE)	PA
EPA 8315 A	O-TOLUALDEHYDE (1,2-TOLUALDEHYDE)	PA	EPA 8315 A	P-TOLUALDEHYDE (1,4-TOLUALDEHYDE)	PA
EPA 8315 A	PENTANAL (VALERALDEHYDE)	PA	EPA 8315 A	PROPIONALDEHYDE (PROPANAL)	PA
EPA 8330 A	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA	EPA 8330 A	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8330 A	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	PA	EPA 8330 A	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8330 A	2,6-DINITROTOLUENE (2,6-DNT)	PA	EPA 8330 A	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	PA
EPA 8330 A	2-NITROTOLUENE	PA	EPA 8330 A	3-NITROTOLUENE	PA
EPA 8330 A	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	PA	EPA 8330 A	4-NITROTOLUENE	PA
EPA 8330 A	METHYL-2,4,6-TRINITROPHENYLNIT RAMINE (TETRYL)	PA	EPA 8330 A	NITROBENZENE	PA
EPA 8330 A	NITROGLYCERIN	PA	EPA 8330 A	OCTAHYDRO-1,3,5,7-TETRANITRO-1 ,3,5,7-TETRAZOCINE (HMX)	PA
EPA 8330 A	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5- TRIAZINE)	PA	EPA 9012 A	TOTAL CYANIDE	PA
EPA 9012 B	TOTAL CYANIDE	PA	EPA 9040 C	PH	PA
EPA 9050 A	CONDUCTIVITY	PA	EPA 9056 A	BROMIDE	PA
EPA 9056 A	CHLORIDE	PA	EPA 9056 A	FLUORIDE	PA
EPA 9056 A	NITRATE AS N	PA	EPA 9056 A	NITRITE	PA

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EPA 9056 A	SULFATE	PA
OIA-1677-09	AMENABLE CYANIDE	PA
RSK-175	ETHANE	PA
RSK-175	METHANE	PA
SM 2310 B-1997	ACIDITY, AS CaCO ₃	PA
SM 2340 C-1997	TOTAL HARDNESS AS CaCO ₃	PA
SM 2540 B-1997	RESIDUE-TOTAL	PA
SM 2540 D-1997	RESIDUE-NONFILTERABLE (TSS)	PA
SM 3500-CR B-2009	CHROMIUM VI	PA
SM 4500-F ⁻ C-1997	FLUORIDE	PA
SM 4500-NH ₃ D-1997	AMMONIA AS N	PA
SM 4500-P F-1999	PHOSPHORUS, TOTAL	PA
SM 4500-SiO ₂ C-1997	SILICA AS SiO ₂	PA
SM 5210 B-2001	CARBONACEOUS BOD, CBOD	PA
SM 5540 C-2000	SURFACTANTS - MBAS	PA

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 9066	TOTAL PHENOLICS	PA
OIA-1677-09	FREE CYANIDE	PA
RSK-175	ETHENE	PA
SM 2120 B-2001	COLOR	PA
SM 2320 B-1997	ALKALINITY AS CaCO ₃	PA
SM 2510 B-1997	CONDUCTIVITY	PA
SM 2540 C-1997	RESIDUE-FILTERABLE (TDS)	PA
SM 2540 F-1997	RESIDUE-SETTLABLE	PA
SM 4500-F ⁻ B-1997	FLUORIDE	PA
SM 4500-NH ₃ B-1997	AMMONIA AS N	PA
SM 4500-P E-1999	ORTHOPHOSPHATE AS P	PA
SM 4500-S ₂ ⁻ D-2000	SULFIDE	PA
SM 5210 B-2001	BIOCHEMICAL OXYGEN DEMAND	PA
SM 5310 C-2000	TOTAL ORGANIC CARBON	PA
SM 9222 D-1997	FECAL COLIFORMS	PA

SOLID AND CHEMICAL MATERIALS

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 1010 A	FLASHPOINT	PA
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	PA
EPA 1668 A	2,2',3,3',4,4',5,5'-OCTACHLOROBIPHENYL (BZ-194)	PA
EPA 1668 A	2,2',3,3',4,4',5,6,6'-NONACHLOROBIPHENYL (BZ-207)	PA
EPA 1668 A	2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL (BZ-170)	PA
EPA 1668 A	2,2',3,3',4,4',6-HEPTACHLOROBIPHENYL (BZ-171)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-177)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-175)	PA
EPA 1668 A	2,2',3,3',4,5,5',6-OCTACHLOROBIPHENYL (BZ-199)	PA
EPA 1668 A	2,2',3,3',4,5,5',6-OCTACHLOROBIPHENYL (BZ-198)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-174)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-173)	PA
EPA 1668 A	2,2',3,3',4,6-HEXACHLOROBIPHENYL (BZ-132)	PA

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	PA
EPA 1668 A	2,2',3,3',4,4',5,5',6-NONACHLOROBIPHENYL (BZ-206)	PA
EPA 1668 A	2,2',3,3',4,4',5,6-HEPTACHLOROBIPHENYL (BZ-196)	PA
EPA 1668 A	2,2',3,3',4,4',5,6-OCTACHLOROBIPHENYL (BZ-195)	PA
EPA 1668 A	2,2',3,3',4,4',6,6'-OCTACHLOROBIPHENYL (BZ-197)	PA
EPA 1668 A	2,2',3,3',4,4'-HEXACHLOROBIPHENYL (BZ-128)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-201)	PA
EPA 1668 A	2,2',3,3',4,5-HEXACHLOROBIPHENYL (BZ-130)	PA
EPA 1668 A	2,2',3,3',4,5,5',6-NONACHLOROBIPHENYL (BZ-208)	PA
EPA 1668 A	2,2',3,3',4,5,5'-HEPTACHLOROBIPHENYL (BZ-172)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-200)	PA
EPA 1668 A	2,2',3,3',4,5-HEXACHLOROBIPHENYL (BZ-129)	PA
EPA 1668 A	2,2',3,3',4,6,6'-HEPTACHLOROBIPHENYL (BZ-176)	PA



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EPA 1668 A	2,2',3,3',4,6-HEXACHLOROBIPHENYL (BZ-131)	PA
EPA 1668 A	2,2',3,3',5,5',6,6'-OCTACHLOROBIPHENYL (BZ-202)	PA
EPA 1668 A	2,2',3,3',5,5'-HEXACHLOROBIPHENYL (BZ-133)	PA
EPA 1668 A	2,2',3,3',5,6,6'-HEPTACHLOROBIPHENYL (BZ-179)	PA
EPA 1668 A	2,2',3,3',5-PENTACHLOROBIPHENYL (BZ-83)	PA
EPA 1668 A	2,2',3,3',6-PENTACHLOROBIPHENYL (BZ-84)	PA
EPA 1668 A	2,2',3,4',5,6-HEXACHLOROBIPHENYL (BZ-149)	PA
EPA 1668 A	2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL (BZ-187)	PA
EPA 1668 A	2,2',3,4',5,6-HEXACHLOROBIPHENYL (BZ-148)	PA
EPA 1668 A	2,2',3,4',5,6-HEXACHLOROBIPHENYL (BZ-147)	PA
EPA 1668 A	2,2',3,4',6-PENTACHLOROBIPHENYL (BZ-98)	PA
EPA 1668 A	2,2',3,4',6-PENTACHLOROBIPHENYL (BZ-91)	PA
EPA 1668 A	2,2',3,4,4',5,6-HEPTACHLOROBIPHENYL (BZ-183)	PA
EPA 1668 A	2,2',3,4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-203)	PA
EPA 1668 A	2,2',3,4,4',5,6'-HEPTACHLOROBIPHENYL (BZ-182)	PA
EPA 1668 A	2,2',3,4,4',5,6-HEPTACHLOROBIPHENYL (BZ-181)	PA
EPA 1668 A	2,2',3,4,4',6'-HEXACHLOROBIPHENYL (BZ-140)	PA
EPA 1668 A	2,2',3,4,4',6-HEXACHLOROBIPHENYL (BZ-139)	PA
EPA 1668 A	2,2',3,4,5,6-HEXACHLOROBIPHENYL (BZ-144)	PA
EPA 1668 A	2,2',3,4,5,5',6-HEPTACHLOROBIPHENYL (BZ-185)	PA
EPA 1668 A	2,2',3,4,5,6'-HEXACHLOROBIPHENYL (BZ-143)	PA
EPA 1668 A	2,2',3,4,5,6-HEXACHLOROBIPHENYL (BZ-142)	PA
EPA 1668 A	2,2',3,4,6-PENTACHLOROBIPHENYL (BZ-89)	PA
EPA 1668 A	2,2',3,4,6-PENTACHLOROBIPHENYL (BZ-88)	PA
EPA 1668 A	2,2',3,5,6-PENTACHLOROBIPHENYL (BZ-95)	PA

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EPA 1668 A	2,2',3,3',4-PENTACHLOROBIPHENYL (BZ-82)	PA
EPA 1668 A	2,2',3,3',5,5',6-HEPTACHLOROBIPHENYL (BZ-178)	PA
EPA 1668 A	2,2',3,3',5,6-HEXACHLOROBIPHENYL (BZ-135)	PA
EPA 1668 A	2,2',3,3',5,6-HEXACHLOROBIPHENYL (BZ-134)	PA
EPA 1668 A	2,2',3,3',6,6'-HEXACHLOROBIPHENYL (BZ-136)	PA
EPA 1668 A	2,2',3,3'-TETRACHLOROBIPHENYL (BZ-40)	PA
EPA 1668 A	2,2',3,4',5-PENTACHLOROBIPHENYL (BZ-97)	PA
EPA 1668 A	2,2',3,4',5,5'-HEXACHLOROBIPHENYL (BZ-146)	PA
EPA 1668 A	2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL (BZ-188)	PA
EPA 1668 A	2,2',3,4',5-PENTACHLOROBIPHENYL (BZ-90)	PA
EPA 1668 A	2,2',3,4',6,6'-HEXACHLOROBIPHENYL (BZ-150)	PA
EPA 1668 A	2,2',3,4'-TETRACHLOROBIPHENYL (BZ-42)	PA
EPA 1668 A	2,2',3,4,4',5'-HEXACHLOROBIPHENYL (BZ-138)	PA
EPA 1668 A	2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-180)	PA
EPA 1668 A	2,2',3,4,4',5,6,6'-OCTACHLOROBIPHENYL (BZ-204)	PA
EPA 1668 A	2,2',3,4,4',5-HEXACHLOROBIPHENYL (BZ-137)	PA
EPA 1668 A	2,2',3,4,4',6,6'-HEPTACHLOROBIPHENYL (BZ-184)	PA
EPA 1668 A	2,2',3,4,4'-PENTACHLOROBIPHENYL (BZ-85)	PA
EPA 1668 A	2,2',3,4,5-PENTACHLOROBIPHENYL (BZ-87)	PA
EPA 1668 A	2,2',3,4,5,5'-HEXACHLOROBIPHENYL (BZ-141)	PA
EPA 1668 A	2,2',3,4,5,6,6'-HEPTACHLOROBIPHENYL (BZ-186)	PA
EPA 1668 A	2,2',3,4,5-PENTACHLOROBIPHENYL (BZ-86)	PA
EPA 1668 A	2,2',3,4,6,6'-HEXACHLOROBIPHENYL (BZ-145)	PA
EPA 1668 A	2,2',3,4-TETRACHLOROBIPHENYL (BZ-41)	PA
EPA 1668 A	2,2',3,5'-TETRACHLOROBIPHENYL (BZ-44)	PA

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,2',3,5,5',6'-HEXACHLOROBIPHENYL (BZ-151)	PA
EPA 1668 A	2,2',3,5,6'-PENTACHLOROBIPHENYL (BZ-94)	PA
EPA 1668 A	2,2',3,5,6'-PENTACHLOROBIPHENYL (BZ-93)	PA
EPA 1668 A	2,2',3,6'-TETRACHLOROBIPHENYL (BZ-46)	PA
EPA 1668 A	2,2',3,6'-TETRACHLOROBIPHENYL (BZ-45)	PA
EPA 1668 A	2,2',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-153)	PA
EPA 1668 A	2,2',4,4',5'-PENTACHLOROBIPHENYL (BZ-99)	PA
EPA 1668 A	2,2',4,4',6'-PENTACHLOROBIPHENYL (BZ-100)	PA
EPA 1668 A	2,2',4,5',6'-PENTACHLOROBIPHENYL (BZ-103)	PA
EPA 1668 A	2,2',4,5,5'-PENTACHLOROBIPHENYL (BZ-101)	PA
EPA 1668 A	2,2',4,5-TETRACHLOROBIPHENYL (BZ-48)	PA
EPA 1668 A	2,2',4,6,6'-PENTACHLOROBIPHENYL (BZ-104)	PA
EPA 1668 A	2,2',4-TRICHLOROBIPHENYL (BZ-17)	PA
EPA 1668 A	2,2',5,6'-TETRACHLOROBIPHENYL (BZ-53)	PA
EPA 1668 A	2,2',6,6'-TETRACHLOROBIPHENYL (BZ-54)	PA
EPA 1668 A	2,2'-DICHLOROBIPHENYL (BZ-4)	PA
EPA 1668 A	2,3',4',5'-TETRACHLOROBIPHENYL (BZ-76)	PA
EPA 1668 A	2,3',4',5-TETRACHLOROBIPHENYL (BZ-70)	PA
EPA 1668 A	2,3',4'-TRICHLOROBIPHENYL (BZ-33)	PA
EPA 1668 A	2,3',4,4',5'-PENTACHLOROBIPHENYL (BZ-123)	PA
EPA 1668 A	2,3',4,4',5-PENTACHLOROBIPHENYL (BZ-118)	PA
EPA 1668 A	2,3',4,4'-TETRACHLOROBIPHENYL (BZ-66)	PA
EPA 1668 A	2,3',4,5'-TETRACHLOROBIPHENYL (BZ-68)	PA
EPA 1668 A	2,3',4,5-TETRACHLOROBIPHENYL (BZ-67)	PA
EPA 1668 A	2,3',4-TRICHLOROBIPHENYL (BZ-25)	PA

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,2',3,5,5'-PENTACHLOROBIPHENYL (BZ-92)	PA
EPA 1668 A	2,2',3,5,6,6'-HEXACHLOROBIPHENYL (BZ-152)	PA
EPA 1668 A	2,2',3,5-TETRACHLOROBIPHENYL (BZ-43)	PA
EPA 1668 A	2,2',3,6,6'-PENTACHLOROBIPHENYL (BZ-96)	PA
EPA 1668 A	2,2',3-TRICHLOROBIPHENYL (BZ-16)	PA
EPA 1668 A	2,2',4,4',5,6'-HEXACHLOROBIPHENYL (BZ-154)	PA
EPA 1668 A	2,2',4,4',6,6'-HEXACHLOROBIPHENYL (BZ-155)	PA
EPA 1668 A	2,2',4,4'-TETRACHLOROBIPHENYL (BZ-47)	PA
EPA 1668 A	2,2',4,5'-TETRACHLOROBIPHENYL (BZ-49)	PA
EPA 1668 A	2,2',4,5,6'-PENTACHLOROBIPHENYL (BZ-102)	PA
EPA 1668 A	2,2',4,6'-TETRACHLOROBIPHENYL (BZ-51)	PA
EPA 1668 A	2,2',4,6-TETRACHLOROBIPHENYL (BZ-50)	PA
EPA 1668 A	2,2',5,5'-TETRACHLOROBIPHENYL (BZ-52)	PA
EPA 1668 A	2,2',5-TRICHLOROBIPHENYL (BZ-18)	PA
EPA 1668 A	2,2',6-TRICHLOROBIPHENYL (BZ-19)	PA
EPA 1668 A	2,3',4',5,6'-PENTACHLOROBIPHENYL (BZ-125)	PA
EPA 1668 A	2,3',4',5,5'-PENTACHLOROBIPHENYL (BZ-124)	PA
EPA 1668 A	2,3',4',6-TETRACHLOROBIPHENYL (BZ-71)	PA
EPA 1668 A	2,3',4,4',5,6'-HEXACHLOROBIPHENYL (BZ-168)	PA
EPA 1668 A	2,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-167)	PA
EPA 1668 A	2,3',4,4',6-PENTACHLOROBIPHENYL (BZ-119)	PA
EPA 1668 A	2,3',4,5,6'-PENTACHLOROBIPHENYL (BZ-121)	PA
EPA 1668 A	2,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-120)	PA
EPA 1668 A	2,3',4,6-TETRACHLOROBIPHENYL (BZ-69)	PA
EPA 1668 A	2,3',5,6-TETRACHLOROBIPHENYL (BZ-73)	PA

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METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,3',5'-TRICHLOROBIPHENYL (BZ-34)	PA
EPA 1668 A	2,3',5-TRICHLOROBIPHENYL (BZ-26)	PA
EPA 1668 A	2,3'-DICHLOBIPHENYL (BZ-6)	PA
EPA 1668 A	2,3,3',4',5'-PENTACHLOROBIPHENYL (BZ-122)	PA
EPA 1668 A	2,3,3',4',5,5'-HEXACHLOROBIPHENYL (BZ-162)	PA
EPA 1668 A	2,3,3',4',5-PENTACHLOROBIPHENYL (BZ-107)	PA
EPA 1668 A	2,3,3',4'-TETRACHLOROBIPHENYL (BZ-56)	PA
EPA 1668 A	2,3,3',4',5'-HEXACHLOROBIPHENYL (BZ-157)	PA
EPA 1668 A	2,3,3',4',4',5'-HEPTACHLOROBIPHENYL (BZ-189)	PA
EPA 1668 A	2,3,3',4',4',5-HEXACHLOROBIPHENYL (BZ-156)	PA
EPA 1668 A	2,3,3',4',4'-PENTACHLOROBIPHENYL (BZ-105)	PA
EPA 1668 A	2,3,3',4',5'-PENTACHLOROBIPHENYL (BZ-108)	PA
EPA 1668 A	2,3,3',4',5,5'-HEXACHLOROBIPHENYL (BZ-159)	PA
EPA 1668 A	2,3,3',4',5-PENTACHLOROBIPHENYL (BZ-106)	PA
EPA 1668 A	2,3,3',4'-TETRACHLOROBIPHENYL (BZ-55)	PA
EPA 1668 A	2,3,3',5'-TETRACHLOROBIPHENYL (BZ-58)	PA
EPA 1668 A	2,3,3',5,5'-PENTACHLOROBIPHENYL (BZ-111)	PA
EPA 1668 A	2,3,3',5-TETRACHLOROBIPHENYL (BZ-57)	PA
EPA 1668 A	2,3,3'-TRICHLOROBIPHENYL (BZ-20)	PA
EPA 1668 A	2,3,4',5-TETRACHLOROBIPHENYL (BZ-63)	PA
EPA 1668 A	2,3,4'-TRICHLOROBIPHENYL (BZ-22)	PA
EPA 1668 A	2,3,4,4',5-PENTACHLOROBIPHENYL (BZ-114)	PA
EPA 1668 A	2,3,4,4'-TETRACHLOROBIPHENYL (BZ-60)	PA
EPA 1668 A	2,3,4,5-TETRACHLOROBIPHENYL (BZ-61)	PA
EPA 1668 A	2,3,4-TRICHLOROBIPHENYL (BZ-21)	PA

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,3',5,5'-TETRACHLOROBIPHENYL (BZ-72)	PA
EPA 1668 A	2,3',6-TRICHLOROBIPHENYL (BZ-27)	PA
EPA 1668 A	2,3,3',4',5',6-HEXACHLOROBIPHENYL (BZ-164)	PA
EPA 1668 A	2,3,3',4',5,5',6-HEPTACHLOROBIPHENYL (BZ-193)	PA
EPA 1668 A	2,3,3',4',5,6-HEXACHLOROBIPHENYL (BZ-163)	PA
EPA 1668 A	2,3,3',4',6-PENTACHLOROBIPHENYL (BZ-110)	PA
EPA 1668 A	2,3,3',4',4',5',6-HEPTACHLOROBIPHENYL (BZ-191)	PA
EPA 1668 A	2,3,3',4',4',5,5',6-OCTACHLOROBIPHENYL (BZ-205)	PA
EPA 1668 A	2,3,3',4',4',5,6-HEPTACHLOROBIPHENYL (BZ-190)	PA
EPA 1668 A	2,3,3',4',4',6-HEXACHLOROBIPHENYL (BZ-158)	PA
EPA 1668 A	2,3,3',4',5',6-HEXACHLOROBIPHENYL (BZ-161)	PA
EPA 1668 A	2,3,3',4',5,5',6-HEPTACHLOROBIPHENYL (BZ-192)	PA
EPA 1668 A	2,3,3',4',5,6-HEXACHLOROBIPHENYL (BZ-160)	PA
EPA 1668 A	2,3,3',4',6-PENTACHLOROBIPHENYL (BZ-109)	PA
EPA 1668 A	2,3,3',5',6-PENTACHLOROBIPHENYL (BZ-113)	PA
EPA 1668 A	2,3,3',5',5',6-HEXACHLOROBIPHENYL (BZ-165)	PA
EPA 1668 A	2,3,3',5,6-PENTACHLOROBIPHENYL (BZ-112)	PA
EPA 1668 A	2,3,3',6-TETRACHLOROBIPHENYL (BZ-59)	PA
EPA 1668 A	2,3,4',5,6-PENTACHLOROBIPHENYL (BZ-117)	PA
EPA 1668 A	2,3,4',6-TETRACHLOROBIPHENYL (BZ-64)	PA
EPA 1668 A	2,3,4,4',5,6-HEXACHLOROBIPHENYL (BZ-166)	PA
EPA 1668 A	2,3,4,4',6-PENTACHLOROBIPHENYL (BZ-115)	PA
EPA 1668 A	2,3,4,5,6-PENTACHLOROBIPHENYL (BZ-116)	PA
EPA 1668 A	2,3,4,6-TETRACHLOROBIPHENYL (BZ-62)	PA
EPA 1668 A	2,3,5,6-TETRACHLOROBIPHENYL (BZ-65)	PA



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EPA 1668 A	2,3,5-TRICHLOROBIPHENYL (BZ-23)	PA	EPA 1668 A	2,3,6-TRICHLOROBIPHENYL (BZ-24)	PA
EPA 1668 A	2,3-DICHLOROBIPHENYL (BZ-5)	PA	EPA 1668 A	2,4',5-TRICHLOROBIPHENYL (BZ-31)	PA
EPA 1668 A	2,4',6-TRICHLOROBIPHENYL (BZ-32)	PA	EPA 1668 A	2,4'-DICHLOROBIPHENYL (BZ-8)	PA
EPA 1668 A	2,4,4',5-TETRACHLOROBIPHENYL (BZ-74)	PA	EPA 1668 A	2,4,4',6-TETRACHLOROBIPHENYL (BZ-75)	PA
EPA 1668 A	2,4,4'-TRICHLOROBIPHENYL (BZ-28)	PA	EPA 1668 A	2,4,5-TRICHLOROBIPHENYL (BZ-29)	PA
EPA 1668 A	2,4,6-TRICHLOROBIPHENYL (BZ-30)	PA	EPA 1668 A	2,4-DICHLOROBIPHENYL (BZ-7)	PA
EPA 1668 A	2,5-DICHLOROBIPHENYL (BZ-9)	PA	EPA 1668 A	2,6-DICHLOROBIPHENYL (BZ-10)	PA
EPA 1668 A	2-CHLOROBIPHENYL (BZ-1)	PA	EPA 1668 A	3,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-169)	PA
EPA 1668 A	3,3',4,4',5-PENTACHLOROBIPHENYL (BZ-126)	PA	EPA 1668 A	3,3',4,4'-TETRACHLOROBIPHENYL (BZ-77)	PA
EPA 1668 A	3,3',4,5'-TETRACHLOROBIPHENYL (BZ-79)	PA	EPA 1668 A	3,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-127)	PA
EPA 1668 A	3,3',4,5-TETRACHLOROBIPHENYL (BZ-78)	PA	EPA 1668 A	3,3',4-TRICHLOROBIPHENYL (BZ-35)	PA
EPA 1668 A	3,3',5,5'-TETRACHLOROBIPHENYL (BZ-80)	PA	EPA 1668 A	3,3',5-TRICHLOROBIPHENYL (BZ-36)	PA
EPA 1668 A	3,3'-DICHLOROBIPHENYL (BZ-11)	PA	EPA 1668 A	3,4',5-TRICHLOROBIPHENYL (BZ-39)	PA
EPA 1668 A	3,4'-DICHLOROBIPHENYL (BZ-13)	PA	EPA 1668 A	3,4,4',5-TETRACHLOROBIPHENYL (BZ-81)	PA
EPA 1668 A	3,4,4'-TRICHLOROBIPHENYL (BZ-37)	PA	EPA 1668 A	3,4,5-TRICHLOROBIPHENYL (BZ-38)	PA
EPA 1668 A	3,4-DICHLOROBIPHENYL (BZ-12)	PA	EPA 1668 A	3,5-DICHLOROBIPHENYL (BZ-14)	PA
EPA 1668 A	3-CHLOROBIPHENYL (BZ-2)	PA	EPA 1668 A	4,4'-DICHLOROBIPHENYL (BZ-15)	PA
EPA 1668 A	4-CHLOROBIPHENYL (BZ-3)	PA	EPA 1668 A	DECACHLOROBIPHENYL (BZ-209)	PA
EPA 3050 B	PREP: ACID DIGESTION OF SEDIMENTS, SLUDGES, AND SOILS	PA	EPA 3540 C	PREP: SOXHLET EXTRACTION	PA
EPA 3546	PREP: MICROWAVE EXTRACTION	PA	EPA 3550 B	PREP: ULTRASONIC EXTRACTION	PA
EPA 3620 B	PREP: FLORISIL CLEANUP	PA	EPA 3630 C	PREP: SILICA GEL CLEANUP	PA
EPA 3640 A	PREP: GEL PERMEATION CLEANUP	PA	EPA 3660 B	PREP: SULFUR CLEANUP	PA
EPA 3665 A	SULFURIC ACID/PERMANGANATE CLEAN-UP	PA	EPA 5030 B	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	PA
EPA 5035	PREP: CLOSED-SYSTEM PURGE AND TRAP AND EXTRACTION	PA	EPA 6010 B	ALUMINUM	PA
EPA 6010 B	ANTIMONY	PA	EPA 6010 B	ARSENIC	PA
EPA 6010 B	BARIUM	PA	EPA 6010 B	BERYLLIUM	PA
EPA 6010 B	BORON	PA	EPA 6010 B	CADMIUM	PA
EPA 6010 B	CALCIUM	PA	EPA 6010 B	CHROMIUM	PA
EPA 6010 B	COBALT	PA	EPA 6010 B	COPPER	PA
EPA 6010 B	IRON	PA	EPA 6010 B	LEAD	PA
EPA 6010 B	MAGNESIUM	PA	EPA 6010 B	MANGANESE	PA
EPA 6010 B	MOLYBDENUM	PA	EPA 6010 B	NICKEL	PA
EPA 6010 B	POTASSIUM	PA	EPA 6010 B	SELENIUM	PA



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EPA 6010 B	SILVER	PA	EPA 6010 B	SODIUM	PA
EPA 6010 B	STRONTIUM	PA	EPA 6010 B	THALLIUM	PA
EPA 6010 B	TIN	PA	EPA 6010 B	TITANIUM	PA
EPA 6010 B	VANADIUM	PA	EPA 6010 B	ZINC	PA
EPA 6010 B - EXTENDED	ZIRCONIUM	PA	EPA 6010 C	ALUMINUM	PA
EPA 6010 C	ANTIMONY	PA	EPA 6010 C	ARSENIC	PA
EPA 6010 C	BARIUM	PA	EPA 6010 C	BERYLLIUM	PA
EPA 6010 C	BORON	PA	EPA 6010 C	CADMIUM	PA
EPA 6010 C	CALCIUM	PA	EPA 6010 C	CHROMIUM	PA
EPA 6010 C	COBALT	PA	EPA 6010 C	COPPER	PA
EPA 6010 C	IRON	PA	EPA 6010 C	LEAD	PA
EPA 6010 C	MAGNESIUM	PA	EPA 6010 C	MANGANESE	PA
EPA 6010 C	MOLYBDENUM	PA	EPA 6010 C	NICKEL	PA
EPA 6010 C	POTASSIUM	PA	EPA 6010 C	SELENIUM	PA
EPA 6010 C	SILVER	PA	EPA 6010 C	SODIUM	PA
EPA 6010 C	STRONTIUM	PA	EPA 6010 C	THALLIUM	PA
EPA 6010 C	TIN	PA	EPA 6010 C	TITANIUM	PA
EPA 6010 C	VANADIUM	PA	EPA 6010 C	ZINC	PA
EPA 6010 C - EXTENDED	ZIRCONIUM	PA	EPA 6020 A	ALUMINUM	PA
EPA 6020 A	ANTIMONY	PA	EPA 6020 A	ARSENIC	PA
EPA 6020 A	BERYLLIUM	PA	EPA 6020 A	CADMIUM	PA
EPA 6020 A	CALCIUM	PA	EPA 6020 A	CHROMIUM	PA
EPA 6020 A	COBALT	PA	EPA 6020 A	COPPER	PA
EPA 6020 A	IRON	PA	EPA 6020 A	LEAD	PA
EPA 6020 A	MAGNESIUM	PA	EPA 6020 A	MANGANESE	PA
EPA 6020 A	NICKEL	PA	EPA 6020 A	POTASSIUM	PA
EPA 6020 A	SELENIUM	PA	EPA 6020 A	SILVER	PA
EPA 6020 A	SODIUM	PA	EPA 6020 A	THALLIUM	PA
EPA 6020 A	VANADIUM	PA	EPA 6020 A	ZINC	PA
EPA 6020 A - EXTENDED	BORON	PA	EPA 6020 A - EXTENDED	STRONTIUM	PA
EPA 6020 A - EXTENDED	TIN	PA	EPA 6020 A - EXTENDED	TITANIUM	PA
EPA 6850	PERCHLORATE	PA	EPA 7196 A	CHROMIUM VI	PA
EPA 7471 A	MERCURY	PA	EPA 7471 B	MERCURY	PA
EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	PA	EPA 8015 B	ETHANOL	PA
EPA 8015 B	ETHYLENE GLYCOL	PA	EPA 8015 B	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8015 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA	EPA 8015 B	METHANOL	PA
EPA 8015 C	ETHANOL	PA	EPA 8015 C	ETHYLENE GLYCOL	PA



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EPA 8015 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA	EPA 8015 C	METHANOL	PA
EPA 8021 B	BENZENE	PA	EPA 8021 B	ETHYLBENZENE	PA
EPA 8021 B	ISOPROPYLBENZENE	PA	EPA 8021 B	M+P-XYLENE	PA
EPA 8021 B	NAPHTHALENE	PA	EPA 8021 B	O-XYLENE	PA
EPA 8021 B	TOLUENE	PA	EPA 8021 B	XYLENE (TOTAL)	PA
EPA 8021 B - EXTENDED	METHYL TERT-BUTYL ETHER (MTBE)	PA	EPA 8081 A	4,4'-DDD	PA
EPA 8081 A	4,4'-DDE	PA	EPA 8081 A	4,4'-DDT	PA
EPA 8081 A	ALDRIN	PA	EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	ALPHA-CHLORDANE (CIS-CHLORDANE)	PA	EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	CHLORDANE (TECH.)	PA	EPA 8081 A	DELTA-BHC	PA
EPA 8081 A	DIELDRIN	PA	EPA 8081 A	ENDOSULFAN I	PA
EPA 8081 A	ENDOSULFAN II	PA	EPA 8081 A	ENDOSULFAN SULFATE	PA
EPA 8081 A	ENDRIN	PA	EPA 8081 A	ENDRIN ALDEHYDE	PA
EPA 8081 A	ENDRIN KETONE	PA	EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	PA	EPA 8081 A	HEPTACHLOR	PA
EPA 8081 A	HEPTACHLOR EPOXIDE	PA	EPA 8081 A	METHOXYCHLOR	PA
EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	PA	EPA 8081 B	4,4'-DDD	PA
EPA 8081 B	4,4'-DDE	PA	EPA 8081 B	4,4'-DDT	PA
EPA 8081 B	ALDRIN	PA	EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	ALPHA-CHLORDANE (CIS-CHLORDANE)	PA	EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	CHLORDANE (TECH.)	PA	EPA 8081 B	DELTA-BHC	PA
EPA 8081 B	DIELDRIN	PA	EPA 8081 B	ENDOSULFAN I	PA
EPA 8081 B	ENDOSULFAN II	PA	EPA 8081 B	ENDOSULFAN SULFATE	PA
EPA 8081 B	ENDRIN	PA	EPA 8081 B	ENDRIN ALDEHYDE	PA
EPA 8081 B	ENDRIN KETONE	PA	EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	PA	EPA 8081 B	HEPTACHLOR	PA
EPA 8081 B	HEPTACHLOR EPOXIDE	PA	EPA 8081 B	METHOXYCHLOR	PA

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Commonwealth of Virginia
Department of General Services
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Scope of Accreditation

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2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2016
Expiration Date: June 14, 2017

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	PA	EPA 8081 B - EXTENDED	KEPONE	PA
EPA 8081 B - EXTENDED	MIREX	PA	EPA 8082 - OIL A	AROCLOR-1016 (PCB-1016)	PA
EPA 8082 - OIL A	AROCLOR-1221 (PCB-1221)	PA	EPA 8082 - OIL A	AROCLOR-1232 (PCB-1232)	PA
EPA 8082 - OIL A	AROCLOR-1242 (PCB-1242)	PA	EPA 8082 - OIL A	AROCLOR-1248 (PCB-1248)	PA
EPA 8082 - OIL A	AROCLOR-1254 (PCB-1254)	PA	EPA 8082 - OIL A	AROCLOR-1260 (PCB-1260)	PA
EPA 8082 A	AROCLOR-1016 (PCB-1016)	PA	EPA 8082 A	AROCLOR-1221 (PCB-1221)	PA
EPA 8082 A	AROCLOR-1232 (PCB-1232)	PA	EPA 8082 A	AROCLOR-1242 (PCB-1242)	PA
EPA 8082 A	AROCLOR-1248 (PCB-1248)	PA	EPA 8082 A	AROCLOR-1254 (PCB-1254)	PA
EPA 8082 A	AROCLOR-1260 (PCB-1260)	PA	EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	PA
EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	PA	EPA 8141 A	ATRAZINE	PA
EPA 8141 A	BOLSTAR (SULPROFOS)	PA	EPA 8141 A	CHLORPYRIFOS	PA
EPA 8141 A	COUMAPHOS	PA	EPA 8141 A	DEMETON-O	PA
EPA 8141 A	DEMETON-S	PA	EPA 8141 A	DIAZINON	PA
EPA 8141 A	DICHLOROVOS (DDVP, DICHLORVOS)	PA	EPA 8141 A	DISULFOTON	PA
EPA 8141 A	EPN (PHOSPHONOTHIOIC ACID, PHENYL-, O-ETHYL O-(P-NITROPHENYL) ESTER)	PA	EPA 8141 A	ETHION	PA
EPA 8141 A	ETHOPROP	PA	EPA 8141 A	FAMPHUR	PA
EPA 8141 A	FENSULFOTHION	PA	EPA 8141 A	FENTHION	PA
EPA 8141 A	MALATHION	PA	EPA 8141 A	MERPHOS	PA
EPA 8141 A	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8141 A	MEVINPHOS	PA
EPA 8141 A	NALED	PA	EPA 8141 A	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 A	PHORATE	PA	EPA 8141 A	RONNEL	PA
EPA 8141 A	SIMAZINE	PA	EPA 8141 A	TETRACHLORVINPHOS (STIOPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 A	TOKUTHION (PROTHIOPHOS)	PA	EPA 8141 A	TRICHLORONATE	PA
EPA 8141 B	ATRAZINE	PA	EPA 8141 B	BOLSTAR (SULPROFOS)	PA
EPA 8141 B	COUMAPHOS	PA	EPA 8141 B	DEMETON-O	PA
EPA 8141 B	DEMETON-S	PA	EPA 8141 B	DIAZINON	PA
EPA 8141 B	DICHLOROVOS (DDVP, DICHLORVOS)	PA	EPA 8141 B	DISULFOTON	PA
EPA 8141 B	EPN (PHOSPHONOTHIOIC ACID, PHENYL-, O-ETHYL O-(P-NITROPHENYL) ESTER)	PA	EPA 8141 B	ETHION	PA
EPA 8141 B	ETHOPROP	PA	EPA 8141 B	FAMPHUR	PA
EPA 8141 B	FENSULFOTHION	PA	EPA 8141 B	FENTHION	PA
EPA 8141 B	MALATHION	PA	EPA 8141 B	MERPHOS	PA
EPA 8141 B	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8141 B	MEVINPHOS	PA
EPA 8141 B	NALED	PA	EPA 8141 B	PARATHION (PARATHION - ETHYL)	PA

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Virginia Laboratory ID: 460182
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SOLID AND CHEMICAL MATERIALS

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8141 B	PHORATE	PA
EPA 8141 B	SIMAZINE	PA
EPA 8141 B	TOKUTHION (PROTHIOPHOS)	PA
EPA 8151 A	2,4,5-T	PA
EPA 8151 A	2,4-DB	PA
EPA 8151 A	DICAMBA	PA
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA
EPA 8151 A	MCPP	PA
EPA 8151 A	PICLORAM	PA
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	PA
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	PA
EPA 8260 B	1,1-DICHLOROETHANE	PA
EPA 8260 B	1,1-DICHLOROPROPENE	PA
EPA 8260 B	1,2,3-TRICHLOROPROPANE	PA
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	PA
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	PA
EPA 8260 B	1,3-DICHLOROPROPANE	PA
EPA 8260 B	1,4-DIOXANE (P-DIOXANE /1,4- DIETHYLENEOXIDE)	PA
EPA 8260 B	2,2-DICHLOROPROPANE	PA
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	PA
EPA 8260 B	2-HEXANONE	PA
EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYME)	PA
EPA 8260 B	ACETONE	PA
EPA 8260 B	ACROLEIN (PROPENAL)	PA
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA
EPA 8260 B	BENZYL CHLORIDE	PA
EPA 8260 B	BROMOCHLOROMETHANE	PA
EPA 8260 B	BROMOFORM	PA
EPA 8260 B	CARBON TETRACHLORIDE	PA
EPA 8260 B	CHLORODIBROMOMETHANE	PA

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8141 B	RONNEL	PA
EPA 8141 B	TETRACHLORVINPHOS (STIOPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 B	TRICHLORONATE	PA
EPA 8151 A	2,4-D	PA
EPA 8151 A	DALAPON	PA
EPA 8151 A	DICHLOROPROP (DICHLORPROP)	PA
EPA 8151 A	MCPA	PA
EPA 8151 A	PENTACHLOROPHENOL	PA
EPA 8151 A	SILVEX (2,4,5-TP)	PA
EPA 8260 B	1,1,1-TRICHLOROETHANE	PA
EPA 8260 B	1,1,2-TRICHLOROETHANE	PA
EPA 8260 B	1,1-DICHLOROETHYLENE	PA
EPA 8260 B	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 B	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 B	1,2-DICHLOROBENZENE	PA
EPA 8260 B	1,2-DICHLOROPROPANE	PA
EPA 8260 B	1,3-DICHLOROBENZENE	PA
EPA 8260 B	1,4-DICHLOROBENZENE	PA
EPA 8260 B	1-BUTANOL (N-BUTANOL)	PA
EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 8260 B	2-CHLOROTOLUENE	PA
EPA 8260 B	4-CHLOROTOLUENE	PA
EPA 8260 B	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 8260 B	ACETONITRILE	PA
EPA 8260 B	ACRYLONITRILE	PA
EPA 8260 B	BENZENE	PA
EPA 8260 B	BROMOBENZENE	PA
EPA 8260 B	BROMODICHLOROMETHANE	PA
EPA 8260 B	CARBON DISULFIDE	PA
EPA 8260 B	CHLOROBENZENE	PA
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	PA



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EPA 8260 B	CHLOROFORM	PA
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	PA
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	PA
EPA 8260 B	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA
EPA 8260 B	ETHYL ACETATE	PA
EPA 8260 B	ETHYLBENZENE	PA
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	PA
EPA 8260 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8260 B	M+P-XYLENE	PA
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 8260 B	METHYL METHACRYLATE	PA
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 8260 B	N-PROPYLBENZENE	PA
EPA 8260 B	O-XYLENE	PA
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 B	STYRENE	PA
EPA 8260 B	TERT-BUTYLBENZENE	PA
EPA 8260 B	TOLUENE	PA
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE	PA
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 B	VINYL ACETATE	PA
EPA 8260 B	XYLENE (TOTAL)	PA
EPA 8260 B - EXTENDED	CYCLOHEXANE	PA
EPA 8260 B - EXTENDED	DHSOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 8260 B - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8260 B - EXTENDED	METHYLCYCLOHEXANE	PA
EPA 8260 B - EXTENDED	T-AMYLMETHYLETHER (TAME)	PA
EPA 8260 C	1,1,1,2-TETRACHLOROETHANE	PA
EPA 8260 C	1,1,2,2-TETRACHLOROETHANE	PA

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 B	ETHANOL	PA
EPA 8260 B	ETHYL METHACRYLATE	PA
EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 B	ISOPROPYLBENZENE	PA
EPA 8260 B	METHACRYLONITRILE	PA
EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8260 B	N-BUTYLBENZENE	PA
EPA 8260 B	NAPHTHALENE	PA
EPA 8260 B	PENTACHLOROETHANE	PA
EPA 8260 B	SEC-BUTYLBENZENE	PA
EPA 8260 B	TERT-BUTYL ALCOHOL	PA
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 B	VINYL CHLORIDE	PA
EPA 8260 B - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE (FREON 113)	PA
EPA 8260 B - EXTENDED	CYCLOHEXANONE	PA
EPA 8260 B - EXTENDED	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 B - EXTENDED	METHYL ACETATE	PA
EPA 8260 B - EXTENDED	T-AMYL ALCOHOL (TAA)	PA
EPA 8260 B - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8260 C	1,1,1-TRICHLOROETHANE	PA
EPA 8260 C	1,1,2-TRICHLOROETHANE	PA



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SOLID AND CHEMICAL MATERIALS

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EPA 8260 C	1,1-DICHLOROETHANE	PA	EPA 8260 C	1,1-DICHLOROETHYLENE	PA
EPA 8260 C	1,1-DICHLOROPROPENE	PA	EPA 8260 C	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 C	1,2,3-TRICHLOROPROPANE	PA	EPA 8260 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 C	1,2,4-TRIMETHYLBENZENE	PA	EPA 8260 C	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 C	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA	EPA 8260 C	1,2-DICHLOROBENZENE	PA
EPA 8260 C	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA	EPA 8260 C	1,2-DICHLOROPROPANE	PA
EPA 8260 C	1,3,5-TRIMETHYLBENZENE	PA	EPA 8260 C	1,3-DICHLOROBENZENE	PA
EPA 8260 C	1,3-DICHLOROPROPANE	PA	EPA 8260 C	1,4-DICHLOROBENZENE	PA
EPA 8260 C	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA	EPA 8260 C	2,2-DICHLOROPROPANE	PA
EPA 8260 C	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA	EPA 8260 C	2-CHLOROETHYL VINYL ETHER	PA
EPA 8260 C	2-CHLOROTOLUENE	PA	EPA 8260 C	2-HEXANONE	PA
EPA 8260 C	4-CHLOROTOLUENE	PA	EPA 8260 C	4-ISOPROPYLTOLUENE (P-CYME)	PA
EPA 8260 C	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA	EPA 8260 C	ACETONE	PA
EPA 8260 C	ACETONITRILE	PA	EPA 8260 C	ACROLEIN (PROPENAL)	PA
EPA 8260 C	ACRYLONITRILE	PA	EPA 8260 C	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA
EPA 8260 C	BENZENE	PA	EPA 8260 C	BENZYL CHLORIDE	PA
EPA 8260 C	BROMOBENZENE	PA	EPA 8260 C	BROMOCHLOROMETHANE	PA
EPA 8260 C	BROMODICHLOROMETHANE	PA	EPA 8260 C	BROMOFORM	PA
EPA 8260 C	CARBON DISULFIDE	PA	EPA 8260 C	CARBON TETRACHLORIDE	PA
EPA 8260 C	CHLOROBENZENE	PA	EPA 8260 C	CHLORODIBROMOMETHANE	PA
EPA 8260 C	CHLOROETHANE (ETHYL CHLORIDE)	PA	EPA 8260 C	CHLOROFORM	PA
EPA 8260 C	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA	EPA 8260 C	CIS-1,2-DICHLOROETHYLENE	PA
EPA 8260 C	CIS-1,3-DICHLOROPROPENE	PA	EPA 8260 C	CYCLOHEXANE	PA
EPA 8260 C	DIBROMOMETHANE (METHYLENE BROMIDE)	PA	EPA 8260 C	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 C	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA	EPA 8260 C	ETHANOL	PA
EPA 8260 C	ETHYL ACETATE	PA	EPA 8260 C	ETHYL METHACRYLATE	PA
EPA 8260 C	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA	EPA 8260 C	ETHYLBENZENE	PA
EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA	EPA 8260 C	IODOMETHANE (METHYL IODIDE)	PA
EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA	EPA 8260 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8260 C	ISOPROPYLBENZENE	PA			

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EPA 8260 C	METHACRYLONITRILE	PA	EPA 8260 C	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 8260 C	METHYL CHLORIDE (CHLOROMETHANE)	PA	EPA 8260 C	METHYL METHACRYLATE	PA
EPA 8260 C	METHYL TERT-BUTYL ETHER (MTBE)	PA	EPA 8260 C	METHYLCYCLOHEXANE	PA
EPA 8260 C	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA	EPA 8260 C	N-BUTYLBENZENE	PA
EPA 8260 C	N-PROPYLBENZENE	PA	EPA 8260 C	NAPHTHALENE	PA
EPA 8260 C	PENTACHLOROETHANE	PA	EPA 8260 C	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 C	SEC-BUTYLBENZENE	PA	EPA 8260 C	STYRENE	PA
EPA 8260 C	T-AMYLMETHYLETHER (TAME)	PA	EPA 8260 C	TERT-BUTYL ALCOHOL	PA
EPA 8260 C	TETRACHLOROETHENE (PERCHLOROETHENE)	PA	EPA 8260 C	TOLUENE	PA
EPA 8260 C	TRANS-1,2-DICHLOROETHENE	PA	EPA 8260 C	TRANS-1,3-DICHLOROPROPENE	PA
EPA 8260 C	TRANS-1,4-DICHLORO-2-BUTENE	PA	EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 C	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA	EPA 8260 C	VINYL ACETATE	PA
EPA 8260 C	VINYL CHLORIDE	PA	EPA 8260 C	XYLENE (TOTAL)	PA
EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE (FREON 113)	PA	EPA 8260 C - EXTENDED	DIISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 8260 C - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA	EPA 8260 C - EXTENDED	METHYL ACETATE	PA
EPA 8260 C - EXTENDED	T-AMYL ALCOHOL (TAA)	PA	EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	PA	EPA 8270 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 C	1,2-DICHLOROBENZENE	PA	EPA 8270 C	1,2-DINITROBENZENE	PA
EPA 8270 C	1,2-DIPHENYLHYDRAZINE	PA	EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 C	1,3-DICHLOROBENZENE	PA	EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 C	1,4-DICHLOROBENZENE	PA	EPA 8270 C	1,4-DINITROBENZENE	PA
EPA 8270 C	1,4-NAPHTHOQUINONE	PA	EPA 8270 C	1,4-PHENYLENEDIAMINE	PA
EPA 8270 C	1-CHLORONAPHTHALENE	PA	EPA 8270 C	1-NAPHTHYLAMINE	PA
EPA 8270 C	2,2'-OXYBIS(1-CHLOROPROPANE)	PA	EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	PA
EPA 8270 C	2,4,5-TRICHLOROPHENOL	PA	EPA 8270 C	2,4,6-TRICHLOROPHENOL	PA
EPA 8270 C	2,4-DICHLOROPHENOL	PA	EPA 8270 C	2,4-DIMETHYLPHENOL	PA
EPA 8270 C	2,4-DINITROPHENOL	PA	EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8270 C	2,6-DICHLOROPHENOL	PA	EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8270 C	2-ACETYLAMINOFLUORENE	PA	EPA 8270 C	2-CHLORONAPHTHALENE	PA
EPA 8270 C	2-CHLOROPHENOL	PA	EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 8270 C	2-METHYLNAPHTHALENE	PA	EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	PA
EPA 8270 C	2-NAPHTHYLAMINE	PA	EPA 8270 C	2-NITROANILINE	PA

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EPA 8270 C	2-NITROPHENOL	PA	EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8270 C	3,3'-DICHLOROBENZIDINE	PA	EPA 8270 C	3,3'-DIMETHOXYBENZIDINE	PA
EPA 8270 C	3,3'-DIMETHYLBENZIDINE	PA	EPA 8270 C	3-METHYLCHOLANTHRENE	PA
EPA 8270 C	3-METHYLPHENOL (M-CRESOL)	PA	EPA 8270 C	3-NITROANILINE	PA
EPA 8270 C	4,4'-METHYLENEBIS(2-CHLOROANILINE)	PA	EPA 8270 C	4-AMINOBIIPHENYL	PA
EPA 8270 C	4-BROMOPHENYL PHENYL ETHER	PA	EPA 8270 C	4-CHLORO-3-METHYLPHENOL	PA
EPA 8270 C	4-CHLOROANILINE	PA	EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	PA
EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	PA	EPA 8270 C	4-METHYLPHENOL (P-CRESOL)	PA
EPA 8270 C	4-NITROANILINE	PA	EPA 8270 C	4-NITROPHENOL	PA
EPA 8270 C	4-NITROQUINOLINE-1-OXIDE	PA	EPA 8270 C	5-NITRO-O-TOLUIDINE	PA
EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA	EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	PA
EPA 8270 C	ACENAPHTHENE	PA	EPA 8270 C	ACENAPHTHYLENE	PA
EPA 8270 C	ACETOPHENONE	PA	EPA 8270 C	ANILINE	PA
EPA 8270 C	ANTHRACENE	PA	EPA 8270 C	ARAMITE	PA
EPA 8270 C	BENZIDINE	PA	EPA 8270 C	BENZO(A)ANTHRACENE	PA
EPA 8270 C	BENZO(A)PYRENE	PA	EPA 8270 C	BENZO(B)FLUORANTHENE	PA
EPA 8270 C	BENZO(G,H,I)PERYLENE	PA	EPA 8270 C	BENZO(K)FLUORANTHENE	PA
EPA 8270 C	BENZOIC ACID	PA	EPA 8270 C	BENZYL ALCOHOL	PA
EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	PA	EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	PA
EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (D(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA	EPA 8270 C	BUTYL BENZYL PHTHALATE	PA
EPA 8270 C	CHLOROBENZILATE	PA	EPA 8270 C	CHRYSENE	PA
EPA 8270 C	DI-N-BUTYL PHTHALATE	PA	EPA 8270 C	DI-N-OCTYL PHTHALATE	PA
EPA 8270 C	DIALATE	PA	EPA 8270 C	DIBENZ(A, J) ACRIDINE	PA
EPA 8270 C	DIBENZO(A,H) ANTHRACENE	PA	EPA 8270 C	DIBENZOFURAN	PA
EPA 8270 C	DIETHYL PHTHALATE	PA	EPA 8270 C	DIMETHOATE	PA
EPA 8270 C	DIMETHYL PHTHALATE	PA	EPA 8270 C	DIPHENYLAMINE	PA
EPA 8270 C	DISULFOTON	PA	EPA 8270 C	ETHYL METHANESULFONATE	PA
EPA 8270 C	FAMPHUR	PA	EPA 8270 C	FLUORANTHENE	PA
EPA 8270 C	FLUORENE	PA	EPA 8270 C	HEXACHLOROBENZENE	PA
EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA	EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	PA
EPA 8270 C	HEXACHLOROETHANE	PA	EPA 8270 C	HEXACHLOROPROPENE	PA
EPA 8270 C	INDENO(1,2,3-CD) PYRENE	PA	EPA 8270 C	ISODRIN	PA
EPA 8270 C	ISOPHORONE	PA	EPA 8270 C	ISOSAFROLE	PA
EPA 8270 C	KEPONE	PA	EPA 8270 C	METHAPYRILENE	PA
EPA 8270 C	METHYL METHANESULFONATE	PA	EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	PA

This Scope of Accreditation must accompany the Certificate issued by Virginia DCLS with the same Certificate Number indicated above.



Commonwealth of Virginia
Department of General Services
Division of Consolidated Laboratory Services



Scope of Accreditation

VELAP Certificate No.: 8382

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2016
Expiration Date: June 14, 2017

SOLID AND CHEMICAL MATERIALS

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	PA	EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 C	N-NITROSODIETHYLAMINE	PA	EPA 8270 C	N-NITROSODIMETHYLAMINE	PA
EPA 8270 C	N-NITROSODIPHENYLAMINE	PA	EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 C	N-NITROSOMORPHOLINE	PA	EPA 8270 C	N-NITROSOPIPERIDINE	PA
EPA 8270 C	N-NITROSOPYRROLIDINE	PA	EPA 8270 C	NAPHTHALENE	PA
EPA 8270 C	NITROBENZENE	PA	EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA
EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	PA	EPA 8270 C	PARATHION (PARATHION - ETHYL)	PA
EPA 8270 C	PENTACHLOROBENZENE	PA	EPA 8270 C	PENTACHLORONITROBENZENE	PA
EPA 8270 C	PENTACHLOROPHENOL	PA	EPA 8270 C	PHENACETIN	PA
EPA 8270 C	PHENANTHRENE	PA	EPA 8270 C	PHENOL	PA
EPA 8270 C	PHORATE	PA	EPA 8270 C	PHTHALIC ANHYDRIDE	PA
EPA 8270 C	PRONAMIDE (KERB)	PA	EPA 8270 C	PYRENE	PA
EPA 8270 C	PYRIDINE	PA	EPA 8270 C	SAFROLE	PA
EPA 8270 C	THIONAZIN (ZINOPHOS)	PA	EPA 8270 C	TRIS(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA
EPA 8270 C SIM	2-METHYLNAPHTHALENE	PA	EPA 8270 C SIM	ACENAPHTHENE	PA
EPA 8270 C SIM	ACENAPHTHYLENE	PA	EPA 8270 C SIM	ANTHRACENE	PA
EPA 8270 C SIM	BENZO(A)ANTHRACENE	PA	EPA 8270 C SIM	BENZO(A)PYRENE	PA
EPA 8270 C SIM	BENZO(B)FLUORANTHENE	PA	EPA 8270 C SIM	BENZO(G,H,I)PERYLENE	PA
EPA 8270 C SIM	BENZO(K)FLUORANTHENE	PA	EPA 8270 C SIM	CHRYSENE	PA
EPA 8270 C SIM	DIBENZO(A,H) ANTHRACENE	PA	EPA 8270 C SIM	FLUORANTHENE	PA
EPA 8270 C SIM	FLUORENE	PA	EPA 8270 C SIM	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 C SIM	NAPHTHALENE	PA	EPA 8270 C SIM	PHENANTHRENE	PA
EPA 8270 C SIM	PYRENE	PA	EPA 8270 C SIM - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	PA	EPA 8270 D	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 D	1,2-DICHLOROBENZENE	PA	EPA 8270 D	1,2-DINITROBENZENE	PA
EPA 8270 D	1,2-DIPHENYLHYDRAZINE	PA	EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 D	1,3-DICHLOROBENZENE	PA	EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 D	1,4-DICHLOROBENZENE	PA	EPA 8270 D	1,4-DINITROBENZENE	PA
EPA 8270 D	1,4-NAPHTHOQUINONE	PA	EPA 8270 D	1,4-PHENYLENEDIAMINE	PA
EPA 8270 D	1-CHLORONAPHTHALENE	PA	EPA 8270 D	1-NAPHTHYLAMINE	PA
EPA 8270 D	2,2'-OXYBIS(1-CHLOROPROPANE)	PA	EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	PA
EPA 8270 D	2,4,5-TRICHLOROPHENOL	PA	EPA 8270 D	2,4,6-TRICHLOROPHENOL	PA
EPA 8270 D	2,4-DICHLOROPHENOL	PA	EPA 8270 D	2,4-DIMETHYLPHENOL	PA
EPA 8270 D	2,4-DINITROPHENOL	PA	EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8270 D	2,6-DICHLOROPHENOL	PA	EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8270 D	2-ACETYLAMINOFLUORENE	PA	EPA 8270 D	2-CHLORONAPHTHALENE	PA

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Commonwealth of Virginia
Department of General Services
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Scope of Accreditation

VELAP Certificate No.: 8382

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2016
Expiration Date: June 14, 2017

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 D	2-CHLOROPHENOL	PA	EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 8270 D	2-METHYLNAPHTHALENE	PA	EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	PA
EPA 8270 D	2-NAPHTHYLAMINE	PA	EPA 8270 D	2-NITROANILINE	PA
EPA 8270 D	2-NITROPHENOL	PA	EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8270 D	3,3'-DICHLOROBENZIDINE	PA	EPA 8270 D	3,3'-DIMETHOXYBENZIDINE	PA
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	PA	EPA 8270 D	3-METHYLCHOLANTHRENE	PA
EPA 8270 D	3-METHYLPHENOL (M-CRESOL)	PA	EPA 8270 D	3-NITROANILINE	PA
EPA 8270 D	4,4'-METHYLENEBIS(2-CHLOROANIL INE)	PA	EPA 8270 D	4-AMINOBIIPHENYL	PA
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER	PA	EPA 8270 D	4-CHLORO-3-METHYLPHENOL	PA
EPA 8270 D	4-CHLOROANILINE	PA	EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	PA
EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	PA	EPA 8270 D	4-METHYLPHENOL (P-CRESOL)	PA
EPA 8270 D	4-NITROANILINE	PA	EPA 8270 D	4-NITROPHENOL	PA
EPA 8270 D	4-NITROQUINOLINE-1-OXIDE	PA	EPA 8270 D	5-NITRO-O-TOLUIDINE	PA
EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA	EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	PA
EPA 8270 D	ACENAPHTHENE	PA	EPA 8270 D	ACENAPHTHYLENE	PA
EPA 8270 D	ACETOPHENONE	PA	EPA 8270 D	ANILINE	PA
EPA 8270 D	ANTHRACENE	PA	EPA 8270 D	ARAMITE	PA
EPA 8270 D	BENZIDINE	PA	EPA 8270 D	BENZO(A)ANTHRACENE	PA
EPA 8270 D	BENZO(A)PYRENE	PA	EPA 8270 D	BENZO(B)FLUORANTHENE	PA
EPA 8270 D	BENZO(G,H,I)PERYLENE	PA	EPA 8270 D	BENZO(K)FLUORANTHENE	PA
EPA 8270 D	BENZOIC ACID	PA	EPA 8270 D	BENZYL ALCOHOL	PA
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	PA	EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	PA
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA	EPA 8270 D	BUTYL BENZYL PHTHALATE	PA
EPA 8270 D	CHLOROBENZILATE	PA	EPA 8270 D	CHRYSENE	PA
EPA 8270 D	DI-N-BUTYL PHTHALATE	PA	EPA 8270 D	DI-N-OCTYL PHTHALATE	PA
EPA 8270 D	DIALATE	PA	EPA 8270 D	DIBENZ(A, J) ACRIDINE	PA
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	PA	EPA 8270 D	DIBENZOFURAN	PA
EPA 8270 D	DIETHYL PHTHALATE	PA	EPA 8270 D	DIMETHOATE	PA
EPA 8270 D	DIMETHYL PHTHALATE	PA	EPA 8270 D	DIPHENYLAMINE	PA
EPA 8270 D	DISULFOTON	PA	EPA 8270 D	ETHYL METHANESULFONATE	PA
EPA 8270 D	FAMPHUR	PA	EPA 8270 D	FLUORANTHENE	PA
EPA 8270 D	FLUORENE	PA	EPA 8270 D	HEXACHLOROBENZENE	PA
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA	EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	PA
EPA 8270 D	HEXACHLOROETHANE	PA	EPA 8270 D	HEXACHLOROPROPENE	PA
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	PA	EPA 8270 D	ISODRIN	PA

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SOLID AND CHEMICAL MATERIALS

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8270 D	ISOPHORONE	PA	EPA 8270 D	ISOSAFROLE	PA
EPA 8270 D	KEPONE	PA	EPA 8270 D	METHAPYRILENE	PA
EPA 8270 D	METHYL METHANESULFONATE	PA	EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	PA	EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 D	N-NITROSODIETHYLAMINE	PA	EPA 8270 D	N-NITROSODIMETHYLAMINE	PA
EPA 8270 D	N-NITROSODIPHENYLAMINE	PA	EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 D	N-NITROSOMORPHOLINE	PA	EPA 8270 D	N-NITROSOPIPERIDINE	PA
EPA 8270 D	N-NITROSOPYRROLIDINE	PA	EPA 8270 D	NAPHTHALENE	PA
EPA 8270 D	NITROBENZENE	PA	EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA
EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	PA	EPA 8270 D	PARATHION (PARATHION - ETHYL)	PA
EPA 8270 D	PENTACHLOROBENZENE	PA	EPA 8270 D	PENTACHLORONITROBENZENE	PA
EPA 8270 D	PENTACHLOROPHENOL	PA	EPA 8270 D	PHENACETIN	PA
EPA 8270 D	PHENANTHRENE	PA	EPA 8270 D	PHENOL	PA
EPA 8270 D	PHORATE	PA	EPA 8270 D	PHTHALIC ANHYDRIDE	PA
EPA 8270 D	PRONAMIDE (KERB)	PA	EPA 8270 D	PYRENE	PA
EPA 8270 D	SAFROLE	PA	EPA 8270 D	THIONAZIN (ZINOPHOS)	PA
EPA 8270 D	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA	EPA 8270 D - EXTENDED	1,1'-BIPHENYL	PA
EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	PA	EPA 8270 D - EXTENDED	ATRAZINE	PA
EPA 8270 D - EXTENDED	BENZALDEHYDE	PA	EPA 8270 D - EXTENDED	BIS(2-ETHYLHEXYL)ADIPATE (D(2-ETHYLHEXYL)ADIPATE)	PA
EPA 8270 D - EXTENDED	CAPROLACTAM	PA	EPA 8270 D - EXTENDED	CARBAZOLE	PA
EPA 8270 D - EXTENDED	PYRIDINE	PA	EPA 8270 D SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 D SIM	ACENAPHTHENE	PA	EPA 8270 D SIM	ACENAPHTHYLENE	PA
EPA 8270 D SIM	ANTHRACENE	PA	EPA 8270 D SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 D SIM	BENZO(A)PYRENE	PA	EPA 8270 D SIM	BENZO(B)FLUORANTHENE	PA
EPA 8270 D SIM	BENZO(G,H,I)PERYLENE	PA	EPA 8270 D SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 D SIM	CHRYSENE	PA	EPA 8270 D SIM	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 D SIM	FLUORANTHENE	PA	EPA 8270 D SIM	FLUORENE	PA
EPA 8270 D SIM	INDENO(1,2,3-CD) PYRENE	PA	EPA 8270 D SIM	NAPHTHALENE	PA
EPA 8270 D SIM	PHENANTHRENE	PA	EPA 8270 D SIM	PYRENE	PA
EPA 8270 D SIM - EXTENDED	1-METHYLNAPHTHALENE	PA	EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZ O-P-DIOXIN (OCDD)	PA
EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZ OFURAN (OCDF)	PA	EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZ O-P-DIOXIN (1,2,3,4,6,7,8-HPCDD)	PA
EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZ OFURAN (1,2,3,4,6,7,8-HPCDF)	PA	EPA 8290 A	1,2,3,4,7,8,9-HEPTACHLORODIBENZ OFURAN (1,2,3,4,7,8,9-HPCDF)	PA
EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZO-P DIOXIN (1,2,3,4,7,8-HXCDD)	PA	EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZOF UAN (1,2,3,4,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZO-P DIOXIN(1,2,3,6,7,8-HXCDD)	PA			

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Commonwealth of Virginia
Department of General Services
Division of Consolidated Laboratory Services



Scope of Accreditation

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Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2016
Expiration Date: June 14, 2017

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN (1,2,3,6,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN (1,2,3,7,8,9-HXCDF)	PA
EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZOFURAN (1,2,3,7,8-PCDF)	PA
EPA 8290 A	2,3,4,7,8-PENTACHLORODIBENZOFURAN	PA
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZOFURAN (2,3,7,8-TCDF)	PA
EPA 8315 A	ACETALDEHYDE	PA
EPA 8315 A	BUTYLALDEHYDE (BUTANAL)	PA
EPA 8315 A	FORMALDEHYDE	PA
EPA 8315 A	ISOVALERALDEHYDE	PA
EPA 8315 A	O-TOLUALDEHYDE (1,2-TOLUALDEHYDE)	PA
EPA 8315 A	PENTANAL (VALERALDEHYDE)	PA
EPA 8330	NITROGLYCERIN	PA
EPA 8330 A	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8330 A	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8330 A	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	PA
EPA 8330 A	3-NITROTOLUENE	PA
EPA 8330 A	4-NITROTOLUENE	PA
EPA 8330 A	NITROBENZENE	PA
EPA 8330 A	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	PA
EPA 9045 C	PH	PA
EPA 9050 A	CONDUCTIVITY	PA
EPA 9066	TOTAL PHENOLICS	PA
EPA 9081	CATION EXCHANGE CAPACITY	PA

METHOD	ANALYTE	PRIMARY
EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZOP-DIOXIN (1,2,3,7,8,9-HXCDD)	PA
EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZOP-DIOXIN (1,2,3,7,8-PCDD)	PA
EPA 8290 A	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN (2,3,4,6,7,8-HXCDF)	PA
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZOP-DIOXIN (2,3,7,8-TCDD)	PA
EPA 8315 A	2,5-DIMETHYLBENZALDEHYDE	PA
EPA 8315 A	BENZALDEHYDE	PA
EPA 8315 A	CROTONALDEHYDE	PA
EPA 8315 A	HEXANALDEHYDE (HEXANAL)	PA
EPA 8315 A	M-TOLUALDEHYDE (1,3-TOLUALDEHYDE)	PA
EPA 8315 A	P-TOLUALDEHYDE (1,4-TOLUALDEHYDE)	PA
EPA 8315 A	PROPIONALDEHYDE (PROPANAL)	PA
EPA 8330 A	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8330 A	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	PA
EPA 8330 A	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8330 A	2-NITROTOLUENE	PA
EPA 8330 A	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	PA
EPA 8330 A	METHYL-2,4,6-TRINITROPHENYL NITRAMINE (TETRYL)	PA
EPA 8330 A	OCTAHYDRO-1,3,5,7-TETRAZOCINE (HMX)	PA
EPA 9012 A	CYANIDE	PA
EPA 9045 D	PH	PA
EPA 9060	TOTAL ORGANIC CARBON	PA
EPA 9071 B	OIL AND GREASE (AS HEM)	PA
EPA 9095 B	FREE LIQUID	PA



COMMONWEALTH OF VIRGINIA
DEPARTMENT OF GENERAL SERVICES
DIVISION OF CONSOLIDATED LABORATORY SERVICES



Certifies that

VA Laboratory ID#: 460193
Shealy Environmental Services, Inc.

106 Vantage Point Drive
Columbia, SC 29172

Owner: DAN WRIGHT
Responsible Official: DANIEL J. WRIGHT

Having met the requirements of 1 VAC 30-46 and
having been found compliant with the 2009 TNI Standard approved by The NELAC Institute
is hereby approved as an

Accredited Environmental Laboratory

As more fully described in the attached Scope of Accreditation

Effective Date: September 15, 2016

Expiration Date: September 14, 2017

Certificate # 86678

Continued accreditation status depends on successful ongoing participation in the program.

Certificate to be conspicuously displayed at the laboratory.

Not valid unless accompanied by a valid Virginia Environmental Laboratory Accreditation Program (VELAP)

Scope of Accreditation.

Customers are urged to verify the laboratory's current accreditation status.

Denise M. Toney, Ph.D., HCCLD
DGS Deputy Director for Laboratories

A handwritten signature in cursive script that reads "Denise M. Toney".



Commonwealth of Virginia
Department of General Services
Division of Consolidated Laboratory Services



Scope of Accreditation

VELAP Certificate No.: 8678

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Columbia, SC 29172

Virginia Laboratory ID: 460193
Effective Date: September 15, 2016
Expiration Date: September 14, 2017

NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 1010	FLASHPOINT	FL	EPA 120.1	CONDUCTIVITY	FL
EPA 1631 E	MERCURY	FL	EPA 1664 B	OIL AND GREASE (AS HEM)	FL
EPA 180.1 REV 2	TURBIDITY	FL	EPA 200.7 REV 4.4	ALUMINUM	FL
EPA 200.7 REV 4.4	ANTIMONY	FL	EPA 200.7 REV 4.4	ARSENIC	FL
EPA 200.7 REV 4.4	BARIUM	FL	EPA 200.7 REV 4.4	BERYLLIUM	FL
EPA 200.7 REV 4.4	BORON	FL	EPA 200.7 REV 4.4	CADMIUM	FL
EPA 200.7 REV 4.4	CALCIUM	FL	EPA 200.7 REV 4.4	CHROMIUM	FL
EPA 200.7 REV 4.4	COBALT	FL	EPA 200.7 REV 4.4	COPPER	FL
EPA 200.7 REV 4.4	IRON	FL	EPA 200.7 REV 4.4	LEAD	FL
EPA 200.7 REV 4.4	MAGNESIUM	FL	EPA 200.7 REV 4.4	MANGANESE	FL
EPA 200.7 REV 4.4	MOLYBDENUM	FL	EPA 200.7 REV 4.4	NICKEL	FL
EPA 200.7 REV 4.4	POTASSIUM	FL	EPA 200.7 REV 4.4	SELENIUM	FL
EPA 200.7 REV 4.4	SILVER	FL	EPA 200.7 REV 4.4	SODIUM	FL
EPA 200.7 REV 4.4	THALLIUM	FL	EPA 200.7 REV 4.4	TIN	FL
EPA 200.7 REV 4.4	VANADIUM	FL	EPA 200.7 REV 4.4	ZINC	FL
EPA 200.8 REV 5.4	ALUMINUM	FL	EPA 200.8 REV 5.4	ANTIMONY	FL
EPA 200.8 REV 5.4	ARSENIC	FL	EPA 200.8 REV 5.4	BARIUM	FL
EPA 200.8 REV 5.4	BERYLLIUM	FL	EPA 200.8 REV 5.4	CADMIUM	FL
EPA 200.8 REV 5.4	CHROMIUM	FL	EPA 200.8 REV 5.4	COBALT	FL
EPA 200.8 REV 5.4	COPPER	FL	EPA 200.8 REV 5.4	LEAD	FL
EPA 200.8 REV 5.4	MANGANESE	FL	EPA 200.8 REV 5.4	MOLYBDENUM	FL
EPA 200.8 REV 5.4	NICKEL	FL	EPA 200.8 REV 5.4	SELENIUM	FL
EPA 200.8 REV 5.4	SILVER	FL	EPA 200.8 REV 5.4	THALLIUM	FL
EPA 200.8 REV 5.4	VANADIUM	FL	EPA 200.8 REV 5.4	ZINC	FL
EPA 245.1 REV 3	MERCURY	FL	EPA 300.0 REV 2.1	BROMIDE	FL
EPA 300.0 REV 2.1	CHLORIDE	FL	EPA 300.0 REV 2.1	FLUORIDE	FL
EPA 300.0 REV 2.1	NITRATE AS N	FL	EPA 300.0 REV 2.1	NITRITE AS N	FL
EPA 300.0 REV 2.1	SULFATE	FL	EPA 335.4 REV 1.0	CYANIDE	FL
EPA 350.1 REV 2	AMMONIA AS N	FL	EPA 351.2 REV 2	KJELDAHL NITROGEN - TOTAL	FL
EPA 353.2 REV 2	NITRATE AS N	FL	EPA 353.2 REV 2	NITRATE/NITRITE	FL
EPA 353.2 REV 2	NITRITE AS N	FL	EPA 420.4 REV 1	TOTAL PHENOLICS	FL
EPA 6010 C	ALUMINUM	FL	EPA 6010 C	ANTIMONY	FL
EPA 6010 C	ARSENIC	FL	EPA 6010 C	BARIUM	FL
EPA 6010 C	BERYLLIUM	FL	EPA 6010 C	BORON	FL
EPA 6010 C	CADMIUM	FL	EPA 6010 C	CALCIUM	FL
EPA 6010 C	CHROMIUM	FL	EPA 6010 C	COBALT	FL
EPA 6010 C	COPPER	FL	EPA 6010 C	IRON	FL
EPA 6010 C	LEAD	FL	EPA 6010 C	MAGNESIUM	FL

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NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 6010 C	MANGANESE	FL
EPA 6010 C	NICKEL	FL
EPA 6010 C	SELENIUM	FL
EPA 6010 C	SODIUM	FL
EPA 6010 C	TIN	FL
EPA 6010 C	VANADIUM	FL
EPA 6020 A	ALUMINUM	FL
EPA 6020 A	ARSENIC	FL
EPA 6020 A	BERYLLIUM	FL
EPA 6020 A	CALCIUM	FL
EPA 6020 A	COBALT	FL
EPA 6020 A	IRON	FL
EPA 6020 A	MAGNESIUM	FL
EPA 6020 A	NICKEL	FL
EPA 6020 A	SELENIUM	FL
EPA 6020 A	SODIUM	FL
EPA 6020 A	VANADIUM	FL
EPA 6020 A - EXTENDED	BORON	FL
EPA 6020 A - EXTENDED	TIN	FL
EPA 608	4,4'-DDD	FL
EPA 608	4,4'-DDT	FL
EPA 608	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL
EPA 608	AROCLOR-1221 (PCB-1221)	FL
EPA 608	AROCLOR-1242 (PCB-1242)	FL
EPA 608	AROCLOR-1254 (PCB-1254)	FL
EPA 608	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL
EPA 608	DELTA-BHC	FL
EPA 608	ENDOSULFAN I	FL
EPA 608	ENDOSULFAN SULFATE	FL
EPA 608	ENDRIN ALDEHYDE	FL
EPA 608	HEPTACHLOR	FL
EPA 608	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 624	1,1,2,2-TETRACHLOROETHANE	FL
EPA 624	1,1-DICHLOROETHANE	FL

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 6010 C	MOLYBDENUM	FL
EPA 6010 C	POTASSIUM	FL
EPA 6010 C	SILVER	FL
EPA 6010 C	THALLIUM	FL
EPA 6010 C	TITANIUM	FL
EPA 6010 C	ZINC	FL
EPA 6020 A	ANTIMONY	FL
EPA 6020 A	BARIUM	FL
EPA 6020 A	CADMIUM	FL
EPA 6020 A	CHROMIUM	FL
EPA 6020 A	COPPER	FL
EPA 6020 A	LEAD	FL
EPA 6020 A	MANGANESE	FL
EPA 6020 A	POTASSIUM	FL
EPA 6020 A	SILVER	FL
EPA 6020 A	THALLIUM	FL
EPA 6020 A	ZINC	FL
EPA 6020 A - EXTENDED	MOLYBDENUM	FL
EPA 6020 A - EXTENDED	TITANIUM	FL
EPA 608	4,4'-DDE	FL
EPA 608	ALDRIN	FL
EPA 608	AROCLOR-1016 (PCB-1016)	FL
EPA 608	AROCLOR-1232 (PCB-1232)	FL
EPA 608	AROCLOR-1248 (PCB-1248)	FL
EPA 608	AROCLOR-1260 (PCB-1260)	FL
EPA 608	CHLORDANE (TECH.)	FL
EPA 608	DIELDRIN	FL
EPA 608	ENDOSULFAN II	FL
EPA 608	ENDRIN	FL
EPA 608	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL
EPA 608	HEPTACHLOR EPOXIDE	FL
EPA 624	1,1,1-TRICHLOROETHANE	FL
EPA 624	1,1,2-TRICHLOROETHANE	FL
EPA 624	1,2-DICHLOROBENZENE	FL



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EPA 624	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL
EPA 624	1,3-DICHLOROBENZENE	FL
EPA 624	2-CHLOROETHYL VINYL ETHER	FL
EPA 624	BROMODICHLOROMETHANE	FL
EPA 624	CARBON TETRACHLORIDE	FL
EPA 624	CHLOROETHANE (ETHYL CHLORIDE)	FL
EPA 624	CIS-1,3-DICHLOROPROPENE	FL
EPA 624	METHYL BROMIDE (BROMOMETHANE)	FL
EPA 624	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL
EPA 624	TOLUENE	FL
EPA 624	TRANS-1,3-DICHLOROPROPENE	FL
EPA 624	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	FL
EPA 624 - EXTENDED	1,1-DICHLOROETHYLENE	FL
EPA 625	1,2,4-TRICHLOROBENZENE	FL
EPA 625	2,4-DICHLOROPHENOL	FL
EPA 625	2,4-DINITROPHENOL	FL
EPA 625	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 625	2-CHLOROPHENOL	FL
EPA 625	2-NITROPHENOL	FL
EPA 625	4-BROMOPHENYL PHENYL ETHER	FL
EPA 625	4-CHLOROPHENYL PHENYLETHER	FL
EPA 625	ACENAPHTHENE	FL
EPA 625	ANTHRACENE	FL
EPA 625	BENZO(A)ANTHRACENE	FL
EPA 625	BENZO(B)FLUORANTHENE	FL
EPA 625	BENZO(K)FLUORANTHENE	FL
EPA 625	BIS(2-CHLOROETHYL) ETHER	FL
EPA 625	BUTYL BENZYL PHTHALATE	FL
EPA 625	DI-N-BUTYL PHTHALATE	FL
EPA 625	DIBENZO(A,H) ANTHRACENE	FL
EPA 625	DIMETHYL PHTHALATE	FL
EPA 625	FLUORENE	FL

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 624	1,2-DICHLOROPROPANE	FL
EPA 624	1,4-DICHLOROBENZENE	FL
EPA 624	BENZENE	FL
EPA 624	BROMOFORM	FL
EPA 624	CHLOROBENZENE	FL
EPA 624	CHLOROFORM	FL
EPA 624	ETHYLBENZENE	FL
EPA 624	METHYL CHLORIDE (CHLOROMETHANE)	FL
EPA 624	TETRACHLOROETHENE (PERCHLOROETHENE)	FL
EPA 624	TRANS-1,2-DICHLOROETHENE	FL
EPA 624	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL
EPA 624	VINYL CHLORIDE	FL
EPA 624 - EXTENDED	XYLENE (TOTAL)	FL
EPA 625	2,4,6-TRICHLOROPHENOL	FL
EPA 625	2,4-DIMETHYLPHENOL	FL
EPA 625	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 625	2-CHLORONAPHTHALENE	FL
EPA 625	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 625	3,3'-DICHLOROBENZIDINE	FL
EPA 625	4-CHLORO-3-METHYLPHENOL	FL
EPA 625	4-NITROPHENOL	FL
EPA 625	ACENAPHTHYLENE	FL
EPA 625	BENZIDINE	FL
EPA 625	BENZO(A)PYRENE	FL
EPA 625	BENZO(G,H,I)PERYLENE	FL
EPA 625	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 625	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL
EPA 625	CHRYSENE	FL
EPA 625	DI-N-OCTYL PHTHALATE	FL
EPA 625	DIETHYL PHTHALATE	FL
EPA 625	FLUORANTHENE	FL
EPA 625	HEXACHLOROBENZENE	FL



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EPA 625	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL	EPA 625	HEXACHLOROCYCLOPENTADIENE	FL
EPA 625	HEXACHLOROETHANE	FL	EPA 625	INDENO(1,2,3-CD) PYRENE	FL
EPA 625	ISOPHORONE	FL	EPA 625	N-NITROSODI-N-PROPYLAMINE	FL
EPA 625	N-NITROSODIMETHYLAMINE	FL	EPA 625	N-NITROSODIPHENYLAMINE	FL
EPA 625	NAPHTHALENE	FL	EPA 625	NITROBENZENE	FL
EPA 625	PENTACHLOROPHENOL	FL	EPA 625	PHENANTHRENE	FL
EPA 625	PHENOL	FL	EPA 625	PYRENE	FL
EPA 7196 A	CHROMIUM VI	FL	EPA 7470 A	MERCURY	FL
EPA 8011	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	FL	EPA 8011	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	FL
EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	FL	EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	FL
EPA 8081 B	4,4'-DDD	FL	EPA 8081 B	4,4'-DDE	FL
EPA 8081 B	4,4'-DDT	FL	EPA 8081 B	ALDRIN	FL
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL	EPA 8081 B	ALPHA-CHLORDANE [CIS-CHLORDANE]	FL
EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL	EPA 8081 B	CHLORDANE (TECH.)	FL
EPA 8081 B	DELTA-BHC	FL	EPA 8081 B	DIELDRIN	FL
EPA 8081 B	ENDOSULFAN I	FL	EPA 8081 B	ENDOSULFAN II	FL
EPA 8081 B	ENDOSULFAN SULFATE	FL	EPA 8081 B	ENDRIN	FL
EPA 8081 B	ENDRIN ALDEHYDE	FL	EPA 8081 B	ENDRIN KETONE	FL
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL	EPA 8081 B	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	FL
EPA 8081 B	HEPTACHLOR	FL	EPA 8081 B	HEPTACHLOR EPOXIDE	FL
EPA 8081 B	METHOXYCHLOR	FL	EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 8082 A	AROCLOR-1016 (PCB-1016)	FL	EPA 8082 A	AROCLOR-1221 (PCB-1221)	FL
EPA 8082 A	AROCLOR-1232 (PCB-1232)	FL	EPA 8082 A	AROCLOR-1242 (PCB-1242)	FL
EPA 8082 A	AROCLOR-1248 (PCB-1248)	FL	EPA 8082 A	AROCLOR-1254 (PCB-1254)	FL
EPA 8082 A	AROCLOR-1260 (PCB-1260)	FL	EPA 8151 A	2,4,5-T	FL
EPA 8151 A	2,4-D	FL	EPA 8151 A	2,4-DB	FL
EPA 8151 A	DICAMBA	FL	EPA 8151 A	DICHLOROPROP (DICHLOROPROP)	FL
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL	EPA 8151 A	PENTACHLOROPHENOL	FL
EPA 8151 A	SILVEX (2,4,5-TP)	FL	EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1,1-TRICHLOROETHANE	FL	EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1,2-TRICHLOROETHANE	FL	EPA 8260 B	1,1-DICHLOROETHANE	FL

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EPA 8260 B	1,1-DICHLOROETHYLENE	FL
EPA 8260 B	1,2,3-TRICHLOROBENZENE	FL
EPA 8260 B	1,2,4-TRICHLOROBENZENE	FL
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	FL
EPA 8260 B	1,2-DICHLOROBENZENE	FL
EPA 8260 B	1,2-DICHLOROPROPANE	FL
EPA 8260 B	1,3-DICHLOROBENZENE	FL
EPA 8260 B	1,4-DICHLOROBENZENE	FL
EPA 8260 B	2,2-DICHLOROPROPANE	FL
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	FL
EPA 8260 B	2-HEXANONE	FL
EPA 8260 B	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	FL
EPA 8260 B	ACETONITRILE	FL
EPA 8260 B	ACRYLONITRILE	FL
EPA 8260 B	BENZENE	FL
EPA 8260 B	BROMOBENZENE	FL
EPA 8260 B	BROMODICHLOROMETHANE	FL
EPA 8260 B	CARBON DISULFIDE	FL
EPA 8260 B	CHLOROBENZENE	FL
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	FL
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	FL
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	FL
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	FL
EPA 8260 B	ETHYL METHACRYLATE	FL
EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	FL
EPA 8260 B	METHACRYLONITRILE	FL
EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	FL
EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	FL
EPA 8260 B	N-BUTYLBENZENE	FL
EPA 8260 B	NAPHTHALENE	FL
EPA 8260 B	SEC-BUTYLBENZENE	FL

METHOD	ANALYTE	PRIMARY
EPA 8260 B	1,1-DICHLOROPROPENE	FL
EPA 8260 B	1,2,3-TRICHLOROPROPANE	FL
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	FL
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	FL
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	FL
EPA 8260 B	1,3-DICHLOROPROPANE	FL
EPA 8260 B	1,4-DIOXANE (P-DIOXANE / 1,4-DIETHYLENEOXIDE)	FL
EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	FL
EPA 8260 B	2-CHLOROTOLUENE	FL
EPA 8260 B	4-CHLOROTOLUENE	FL
EPA 8260 B	ACETONE	FL
EPA 8260 B	ACROLEIN (PROPENAL)	FL
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	FL
EPA 8260 B	BENZYL CHLORIDE	FL
EPA 8260 B	BROMOCHLOROMETHANE	FL
EPA 8260 B	BROMOFORM	FL
EPA 8260 B	CARBON TETRACHLORIDE	FL
EPA 8260 B	CHLORODIBROMOMETHANE	FL
EPA 8260 B	CHLOROFORM	FL
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	FL
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	FL
EPA 8260 B	DIETHYL ETHER	FL
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	FL
EPA 8260 B	ISOPROPYLBENZENE	FL
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	FL
EPA 8260 B	METHYL METHACRYLATE	FL
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL
EPA 8260 B	N-PROPYLBENZENE	FL
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	FL
EPA 8260 B	STYRENE	FL

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EPA 8260 B	TERT-BUTYLBENZENE	FL
EPA 8260 B	TOLUENE	FL
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE	FL
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL
EPA 8260 B	VINYL ACETATE	FL
EPA 8260 B	XYLENE (TOTAL)	FL
EPA 8270 D	1,2,4-TRICHLOROBENZENE	FL
EPA 8270 D	1,3-DICHLOROBENZENE	FL
EPA 8270 D	2,2'-OXYBIS(1-CHLOROPROPANE)	FL
EPA 8270 D	2,4,6-TRICHLOROPHENOL	FL
EPA 8270 D	2,4-DIMETHYLPHENOL	FL
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8270 D	2-CHLOROPHENOL	FL
EPA 8270 D	2-METHYLNAPHTHALENE	FL
EPA 8270 D	2-NITROANILINE	FL
EPA 8270 D	3,3'-DICHLOROBENZIDINE	FL
EPA 8270 D	3-NITROANILINE	FL
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	FL
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	FL
EPA 8270 D	4-NITROPHENOL	FL
EPA 8270 D	ACENAPHTHYLENE	FL
EPA 8270 D	ANILINE	FL
EPA 8270 D	BENZIDINE	FL
EPA 8270 D	BENZO(A)PYRENE	FL
EPA 8270 D	BENZO(G,H,I)PERYLENE	FL
EPA 8270 D	BENZOIC ACID	FL
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL
EPA 8270 D	CHRYSENE	FL
EPA 8270 D	DI-N-OCTYL PHTHALATE	FL
EPA 8270 D	DIBENZOFURAN	FL
EPA 8270 D	DIMETHYL PHTHALATE	FL
EPA 8270 D	FLUORENE	FL

METHOD	ANALYTE	PRIMARY
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	FL
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	FL
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	FL
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHOROMETHANE, FREON 11)	FL
EPA 8260 B	VINYL CHLORIDE	FL
EPA 8260 C	ETHYLBENZENE	FL
EPA 8270 D	1,2-DICHLOROBENZENE	FL
EPA 8270 D	1,4-DICHLOROBENZENE	FL
EPA 8270 D	2,4,5-TRICHLOROPHENOL	FL
EPA 8270 D	2,4-DICHLOROPHENOL	FL
EPA 8270 D	2,4-DINITROPHENOL	FL
EPA 8270 D	2,6-DICHLOROPHENOL	FL
EPA 8270 D	2-CHLORONAPHTHALENE	FL
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	FL
EPA 8270 D	2-NITROPHENOL	FL
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	FL
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER	FL
EPA 8270 D	4-CHLOROANILINE	FL
EPA 8270 D	4-NITROANILINE	FL
EPA 8270 D	ACENAPHTHENE	FL
EPA 8270 D	ACETOPHENONE	FL
EPA 8270 D	ANTHRACENE	FL
EPA 8270 D	BENZO(A)ANTHRACENE	FL
EPA 8270 D	BENZO(B)FLUORANTHENE	FL
EPA 8270 D	BENZO(K)FLUORANTHENE	FL
EPA 8270 D	BENZYL ALCOHOL	FL
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	FL
EPA 8270 D	BUTYL BENZYL PHTHALATE	FL
EPA 8270 D	DI-N-BUTYL PHTHALATE	FL
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	FL
EPA 8270 D	DIETHYL PHTHALATE	FL
EPA 8270 D	FLUORANTHENE	FL
EPA 8270 D	HEXACHLOROBENZENE	FL



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NON-POTABLE WATER

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8270 D	HEXACHLOROETHANE	FL
EPA 8270 D	ISODRIN	FL
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	FL
EPA 8270 D	N-NITROSODIPHENYLAMINE	FL
EPA 8270 D	NITROBENZENE	FL
EPA 8270 D	PHENANTHRENE	FL
EPA 8270 D	PYRENE	FL
EPA 8270 D - EXTENDED	CARBAZOLE	FL
EPA 9012 B	TOTAL CYANIDE	FL
EPA 9056 A	BROMIDE	FL
EPA 9056 A	FLUORIDE	FL
EPA 9056 A	NITRITE	FL
EPA 9065	TOTAL PHENOLICS	FL
SM 2320 B-2011	ALKALINITY AS CaCO ₃	FL
SM 2540 B-2011	RESIDUE-TOTAL	FL
SM 2540 D-2011	RESIDUE-NONFILTERABLE (TSS)	FL
SM 4500-S ₂ ⁻ F-2011	SULFIDE	FL
SM 5210 B-2011	CARBONACEOUS BOD, CBOD	FL
SM 5310 C-2011	TOTAL ORGANIC CARBON	FL

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	FL
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	FL
EPA 8270 D	ISOPHORONE	FL
EPA 8270 D	N-NITROSODIMETHYLAMINE	FL
EPA 8270 D	NAPHTHALENE	FL
EPA 8270 D	PENTACHLOROPHENOL	FL
EPA 8270 D	PHENOL	FL
EPA 8270 D - EXTENDED	CAPROLACTAM	FL
EPA 8270 D - EXTENDED	PYRIDINE	FL
EPA 9040 C	PH	FL
EPA 9056 A	CHLORIDE	FL
EPA 9056 A	NITRATE AS N	FL
EPA 9056 A	SULFATE	FL
SM 2120 B-2011	COLOR	FL
SM 2340 C-2011	TOTAL HARDNESS AS CaCO ₃	FL
SM 2540 C-2011	RESIDUE-FILTERABLE (TDS)	FL
SM 3500-CR B-2011	CHROMIUM VI	FL
SM 5210 B-2011	BIOCHEMICAL OXYGEN DEMAND	FL
SM 5220 D-2011	CHEMICAL OXYGEN DEMAND	FL

SOLID AND CHEMICAL MATERIALS

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 1010 A	FLASHPOINT	FL
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	FL
EPA 6010 C	ANTIMONY	FL
EPA 6010 C	BARIUM	FL
EPA 6010 C	BORON	FL
EPA 6010 C	CALCIUM	FL
EPA 6010 C	COBALT	FL
EPA 6010 C	IRON	FL
EPA 6010 C	MAGNESIUM	FL
EPA 6010 C	MOLYBDENUM	FL
EPA 6010 C	POTASSIUM	FL
EPA 6010 C	SILVER	FL
EPA 6010 C	THALLIUM	FL
EPA 6010 C	TITANIUM	FL

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	FL
EPA 6010 C	ALUMINUM	FL
EPA 6010 C	ARSENIC	FL
EPA 6010 C	BERYLLIUM	FL
EPA 6010 C	CADMIUM	FL
EPA 6010 C	CHROMIUM	FL
EPA 6010 C	COPPER	FL
EPA 6010 C	LEAD	FL
EPA 6010 C	MANGANESE	FL
EPA 6010 C	NICKEL	FL
EPA 6010 C	SELENIUM	FL
EPA 6010 C	SODIUM	FL
EPA 6010 C	TIN	FL
EPA 6010 C	VANADIUM	FL

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 6010 C	ZINC	FL
EPA 7471 B	MERCURY	FL
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	FL
EPA 8081 B	4,4'-DDE	FL
EPA 8081 B	ALDRIN	FL
EPA 8081 B	ALPHA-CHLORDANE [CIS-CHLORDANE]	FL
EPA 8081 B	CHLORDANE (TECH.)	FL
EPA 8081 B	DIELDRIN	FL
EPA 8081 B	ENDOSULFAN II	FL
EPA 8081 B	ENDRIN	FL
EPA 8081 B	ENDRIN KETONE	FL
EPA 8081 B	GAMMA-CHLORDANE [BETA-CHLORDANE, TRANS-CHLORDANE]	FL
EPA 8081 B	HEPTACHLOR EPOXIDE	FL
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 8082 A	AROCLOR-1221 (PCB-1221)	FL
EPA 8082 A	AROCLOR-1242 (PCB-1242)	FL
EPA 8082 A	AROCLOR-1254 (PCB-1254)	FL
EPA 8151 A	2,4,5-T	FL
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL
EPA 8151 A	SILVEX (2,4,5-TP)	FL
EPA 8260 B	1,1,1-TRICHLOROETHANE	FL
EPA 8260 B	1,1,2-TRICHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROETHYLENE	FL
EPA 8260 B	1,2,3-TRICHLOROBENZENE	FL
EPA 8260 B	1,2,4-TRICHLOROBENZENE	FL
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	FL
EPA 8260 B	1,2-DICHLOROBENZENE	FL
EPA 8260 B	1,2-DICHLOROPROPANE	FL
EPA 8260 B	1,3-DICHLOROBENZENE	FL
EPA 8260 B	1,4-DICHLOROBENZENE	FL

METHOD	ANALYTE	PRIMARY
EPA 7196 A	CHROMIUM VI	FL
EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	FL
EPA 8081 B	4,4'-DDD	FL
EPA 8081 B	4,4'-DDT	FL
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	DELTA-BHC	FL
EPA 8081 B	ENDOSULFAN I	FL
EPA 8081 B	ENDOSULFAN SULFATE	FL
EPA 8081 B	ENDRIN ALDEHYDE	FL
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	HEPTACHLOR	FL
EPA 8081 B	METHOXYCHLOR	FL
EPA 8082 A	AROCLOR-1016 (PCB-1016)	FL
EPA 8082 A	AROCLOR-1232 (PCB-1232)	FL
EPA 8082 A	AROCLOR-1248 (PCB-1248)	FL
EPA 8082 A	AROCLOR-1260 (PCB-1260)	FL
EPA 8151 A	2,4-D	FL
EPA 8151 A	PENTACHLOROPHENOL	FL
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROPROPENE	FL
EPA 8260 B	1,2,3-TRICHLOROPROPANE	FL
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	FL
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	FL
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	FL
EPA 8260 B	1,3-DICHLOROPROPANE	FL
EPA 8260 B	2,2-DICHLOROPROPANE	FL

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EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	FL
EPA 8260 B	2-CHLOROTOLUENE	FL
EPA 8260 B	4-CHLOROTOLUENE	FL
EPA 8260 B	ACETONITRILE	FL
EPA 8260 B	ACRYLONITRILE	FL
EPA 8260 B	BENZENE	FL
EPA 8260 B	BROMOBENZENE	FL
EPA 8260 B	BROMODICHLOROMETHANE	FL
EPA 8260 B	CARBON DISULFIDE	FL
EPA 8260 B	CHLOROBENZENE	FL
EPA 8260 B	CHLOROFORM	FL
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	FL
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	FL
EPA 8260 B	DIETHYL ETHER	FL
EPA 8260 B	ETHYLBENZENE	FL
EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	FL
EPA 8260 B	METHACRYLONITRILE	FL
EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	FL
EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	FL
EPA 8260 B	N-BUTYLBENZENE	FL
EPA 8260 B	NAPHTHALENE	FL
EPA 8260 B	SEC-BUTYLBENZENE	FL
EPA 8260 B	TERT-BUTYLBENZENE	FL
EPA 8260 B	TOLUENE	FL
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE	FL
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL
EPA 8260 B	VINYL ACETATE	FL
EPA 8260 B	XYLENE (TOTAL)	FL
EPA 8270 D	1,3-DICHLOROBENZENE	FL
EPA 8270 D	2,2'-OXYBIS(1-CHLOROPROPANE)	FL
EPA 8270 D	2,4,6-TRICHLOROPHENOL	FL
EPA 8270 D	2,4-DIMETHYLPHENOL	FL

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	FL
EPA 8260 B	2-HEXANONE	FL
EPA 8260 B	ACETONE	FL
EPA 8260 B	ACROLEIN (PROPENAL)	FL
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	FL
EPA 8260 B	BENZYL CHLORIDE	FL
EPA 8260 B	BROMOCHLOROMETHANE	FL
EPA 8260 B	BROMOFORM	FL
EPA 8260 B	CARBON TETRACHLORIDE	FL
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	FL
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	FL
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	FL
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	FL
EPA 8260 B	ETHYL METHACRYLATE	FL
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	FL
EPA 8260 B	ISOPROPYLBENZENE	FL
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	FL
EPA 8260 B	METHYL METHACRYLATE	FL
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL
EPA 8260 B	N-PROPYLBENZENE	FL
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	FL
EPA 8260 B	STYRENE	FL
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	FL
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	FL
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	FL
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	FL
EPA 8260 B	VINYL CHLORIDE	FL
EPA 8270 D	1,2-DICHLOROBENZENE	FL
EPA 8270 D	1,4-DICHLOROBENZENE	FL
EPA 8270 D	2,4,5-TRICHLOROPHENOL	FL
EPA 8270 D	2,4-DICHLOROPHENOL	FL
EPA 8270 D	2,4-DINITROPHENOL	FL

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EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8270 D	2-CHLOROPHENOL	FL
EPA 8270 D	2-METHYLNAPHTHALENE	FL
EPA 8270 D	2-NITROANILINE	FL
EPA 8270 D	3,3'-DICHLOOROBENZIDINE	FL
EPA 8270 D	3-NITROANILINE	FL
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	FL
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	FL
EPA 8270 D	4-NITROPHENOL	FL
EPA 8270 D	ACENAPHTHYLENE	FL
EPA 8270 D	ANTHRACENE	FL
EPA 8270 D	BENZO(A)ANTHRACENE	FL
EPA 8270 D	BENZO(B)FLUORANTHENE	FL
EPA 8270 D	BENZO(K)FLUORANTHENE	FL
EPA 8270 D	BENZYL ALCOHOL	FL
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	FL
EPA 8270 D	BUTYL BENZYL PHTHALATE	FL
EPA 8270 D	DI-N-BUTYL PHTHALATE	FL
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	FL
EPA 8270 D	DIETHYL PHTHALATE	FL
EPA 8270 D	FLUORANTHENE	FL
EPA 8270 D	HEXACHLOROENZENE	FL
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	FL
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	FL
EPA 8270 D	ISOPHORONE	FL
EPA 8270 D	N-NITROSODIPHENYLAMINE	FL
EPA 8270 D	NAPHTHALENE	FL
EPA 8270 D	PENTACHLOROPHENOL	FL
EPA 8270 D	PHENOL	FL
EPA 8270 D - EXTENDED	CAPROLACTAM	FL
EPA 8270 D - EXTENDED	PYRIDINE	FL
EPA 9045 D	PH	FL

METHOD	ANALYTE	PRIMARY
EPA 8270 D	2,6-DICHLOROPHENOL	FL
EPA 8270 D	2-CHLORONAPHTHALENE	FL
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	FL
EPA 8270 D	2-NITROPHENOL	FL
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	FL
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER	FL
EPA 8270 D	4-CHLOROANILINE	FL
EPA 8270 D	4-NITROANILINE	FL
EPA 8270 D	ACENAPHTHENE	FL
EPA 8270 D	ACETOPHENONE	FL
EPA 8270 D	BENZIDINE	FL
EPA 8270 D	BENZO(A)PYRENE	FL
EPA 8270 D	BENZO(G,H,I)PERYLENE	FL
EPA 8270 D	BENZOIC ACID	FL
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL
EPA 8270 D	CHRYSENE	FL
EPA 8270 D	DI-N-OCTYL PHTHALATE	FL
EPA 8270 D	DIBENZOFURAN	FL
EPA 8270 D	DIMETHYL PHTHALATE	FL
EPA 8270 D	FLUORENE	FL
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8270 D	HEXACHLOROETHANE	FL
EPA 8270 D	ISODRIN	FL
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	FL
EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	FL
EPA 8270 D	NITROBENZENE	FL
EPA 8270 D	PHENANTHRENE	FL
EPA 8270 D	PYRENE	FL
EPA 8270 D - EXTENDED	CARBAZOLE	FL
EPA 9045 C	PH	FL
EPA 9071 B	OIL AND GREASE (AS HEM)	FL