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**west virginia** department of environmental protection

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Division of Water and Waste Management  
601 57th Street SE  
Charleston, WV 25304-2345  
Phone: (304) 926-0495  
Fax: (304) 926-0497

Earl Ray Tomblin, Governor  
Randy C Huffman, Cabinet Secretary  
[www.wv.dep.gov](http://www.wv.dep.gov)

31 May 2011

Lab # 343 [12-4-7]  
Helen M MacMinn, Quality Assurance / Quality Control Manager  
ALS Environmental – (ALSI Middletown, PA)  
34 Dogwood Lane  
Middletown, Pennsylvania 17057

Dear Helen:

I have enclosed the **ATTACHMENT I** recertifying your facility through, **31 July 2012**.

Please do not hesitate to contact me, if you have any questions or concerns. I can be contacted by phone at: 304-472-5124, by fax at: 304-473-4203, by e-mail at: [davidfwolfe@frontier.com](mailto:davidfwolfe@frontier.com), or by e-mail at: [david.f.wolfe@wv.gov](mailto:david.f.wolfe@wv.gov).

Sincerely,



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David F Wolfe, PhD  
Quality Assurance Officer

Division of Water and Waste Management  
28 Hickory Flat Road  
Buckhannon, West Virginia 26201-8541

Phone: 304-472-5124  
Fax: 304-473-4203

dfw

Enclosure:

**WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF WATER AND WASTE MANAGEMENT**

**Annual Certified Parameter List**

**for**

**ALS ENVIRONMENTAL – (ALSI MIDDLETOWN, PA)  
MIDDLETOWN, PENNSYLVANIA**

**PARAMETERS CERTIFIED**

**NONPOTABLE WATER INORGANIC NONMETALS**

<u>ANALYTE</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Acidity	SM20th2310 B	Titrimetric
Alkalinity	SM20th2320 B	Titrimetric
Ammonia	ASTM D6919-03	IC
Bromide	EPA300.0	IC
Bromide	SW9056	IC
Chloride	EPA300.0	IC
Chloride	SW9056	IC
Chromium, Hexavalent	SM21th3500-Cr <sup>6+</sup> B	Spectrometric
Conductance, Specific	EPA120.1	Probe
Conductance, Specific	SM20th2510 B	Probe
Conductance, Specific	SW9050A	Probe
Cyanide, Weak Acid Dissociable	SM20th4500-CN <sup>-</sup> I	Spectrometric
Cyanide, Free	EPA335.4	Spectrometric
Fluoride	EPA300.0	IC
Fluoride	SW9056	IC
Kjeldahl, Total Nitrogen	SM20th4500-N <sub>org</sub> B	Titrimetric
Nitrate	EPA300.0	IC
Nitrate	SW9056	IC
Nitrate-Nitrite	EPA300.0	IC
Nitrite	EPA300.0	IC
Oil & Grease	EPA1664A	Gravimetric
Organic Carbon, Total	SM21th5310 B	Oxidation
pH(Field Test)	SM20th4500-H B	Probe
Solids, Dissolved	SM21th2540 C	Gravimetric
Solids, Settleable	SM21th2540 F	Gravimetric
Solids, Suspended	SM21th2540 D	Gravimetric
Sulfate	EPA300.0	IC
Sulfate	SW9056	IC
Temperature(Field Test)	SM21st2550 B	Probe

## NONPOTABLE WATER TRACE METALS

<u>METAL</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Aluminum	EPA200.7 Rev 4.4-1994	ICP
Antimony	EPA200.7 Rev 4.4-1994	ICP
Arsenic	EPA200.7 Rev 4.4-1994	ICP
Barium	EPA200.7 Rev 4.4-1994	ICP
Beryllium	EPA200.7 Rev 4.4-1994	ICP
Boron	EPA200.7 Rev 4.4-1994	ICP
Cadmium	EPA200.7 Rev 4.4-1994	ICP
Calcium	EPA200.7 Rev 4.4-1994	ICP
Cesium	EPA200.7 Rev 4.4-1994	ICP
Chromium	EPA200.7 Rev 4.4-1994	ICP
Cobalt	EPA200.7 Rev 4.4-1994	ICP
Copper	EPA200.7 Rev 4.4-1994	ICP
Iron	EPA200.7 Rev 4.4-1994	ICP
Lead	EPA200.7 Rev 4.4-1994	ICP
Lithium	EPA200.7 Rev 4.4-1994	ICP
Magnesium	EPA200.7 Rev 4.4-1994	ICP
Manganese	EPA200.7 Rev 4.4-1994	ICP
Molybdenum	EPA200.7 Rev 4.4-1994	ICP
Nickel	EPA200.7 Rev 4.4-1994	ICP
Potassium	EPA200.7 Rev 4.4-1994	ICP
Selenium	EPA200.7 Rev 4.4-1994	ICP
Silver	EPA200.7 Rev 4.4-1994	ICP
Sodium	EPA200.7 Rev 4.4-1994	ICP
Strontium	EPA200.7 Rev 4.4-1994	ICP
Thallium	EPA200.7 Rev 4.4-1994	ICP
Tin	EPA200.7 Rev 4.4-1994	ICP
Titanium	EPA200.7 Rev 4.4-1994	ICP
Vanadium	EPA200.7 Rev 4.4-1994	ICP
Zinc	EPA200.7 Rev 4.4-1994	ICP
Aluminum	EPA200.8 Rev 5.4-1994	ICP-MS
Antimony	EPA200.8 Rev 5.4-1994	ICP-MS
Arsenic	EPA200.8 Rev 5.4-1994	ICP-MS
Barium	EPA200.8 Rev 5.4-1994	ICP-MS
Beryllium	EPA200.8 Rev 5.4-1994	ICP-MS
Cadmium	EPA200.8 Rev 5.4-1994	ICP-MS
Chromium	EPA200.8 Rev 5.4-1994	ICP-MS
Cobalt	EPA200.8 Rev 5.4-1994	ICP-MS
Copper	EPA200.8 Rev 5.4-1994	ICP-MS
Lead	EPA200.8 Rev 5.4-1994	ICP-MS
Manganese	EPA200.8 Rev 5.4-1994	ICP-MS
Mercury	EPA200.8 Rev 5.4-1994	ICP-MS
Molybdenum	EPA200.8 Rev 5.4-1994	ICP-MS
Nickel	EPA200.8 Rev 5.4-1994	ICP-MS
Selenium	EPA200.8 Rev 5.4-1994	ICP-MS
Silver	EPA200.8 Rev 5.4-1994	ICP-MS
Thallium	EPA200.8 Rev 5.4-1994	ICP-MS
Vanadium	EPA200.8 Rev 5.4-1994	ICP-MS
Zinc	EPA200.8 Rev 5.4-1994	ICP-MS
Mercury	EPA245.1	CVAA
Mercury	EPA1631	CVAA/Low Level
Mercury	SW7470A	CVAA

<u>METAL</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Aluminum	SW6010	ICP
Antimony	SW6010	ICP
Arsenic	SW6010	ICP
Barium	SW6010	ICP
Beryllium	SW6010	ICP
Boron	SW6010	ICP
Cadmium	SW6010	ICP
Calcium	SW6010	ICP
Chromium	SW6010	ICP
Cobalt	SW6010	ICP
Copper	SW6010	ICP
Iron	SW6010	ICP
Lead	SW6010	ICP
Magnesium	SW6010	ICP
Manganese	SW6010	ICP
Molybdenum	SW6010	ICP
Nickel	SW6010	ICP
Potassium	SW6010	ICP
Selenium	SW6010	ICP
Silver	SW6010	ICP
Sodium	SW6010	ICP
Strontium	SW6010	ICP
Thallium	SW6010	ICP
Tin	SW6010	ICP
Titanium	SW6010	ICP
Vanadium	SW6010	ICP
Zinc	SW6010	ICP
Aluminum	SW6020	ICP/MS
Antimony	SW6020	ICP/MS
Arsenic	SW6020	ICP/MS
Barium	SW6020	ICP/MS
Beryllium	SW6020	ICP/MS
Cadmium	SW6020	ICP/MS
Calcium	SW6020	ICP/MS
Cesium	SW6020	ICP/MS
Chromium	SW6020	ICP/MS
Cobalt	SW6020	ICP/MS
Copper	SW6020	ICP/MS
Iron	SW6020	ICP/MS
Lead	SW6020	ICP/MS
Lithium	SW6020	ICP/MS
Magnesium	SW6020	ICP/MS
Manganese	SW6020	ICP/MS
Molybdenum	SW6020	ICP/MS
Nickel	SW6020	ICP/MS
Potassium	SW6020	ICP/MS
Selenium	SW6020	ICP/MS
Silicon	SW6020	ICP/MS
Silver	SW6020	ICP/MS
Sodium	SW6020	ICP/MS
Strontium	SW6020	ICP/MS
Thallium	SW6020	ICP/MS
Tin	SW6020	ICP/MS
Titanium	SW6020	ICP/MS
Vanadium	SW6020	ICP/MS
Zinc	SW6020	ICP/MS

## NONPOTABLE WATER VOLATILE ORGANICS

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Purgeables	EPA624	GC/MS
Total Petroleum Hydrocarbons (GRO)	SW8015B	GC/FID
Volatile Organics	SW8260	GC/MS

## NONPOTABLE WATER EXTRACTABLE & SEMI-VOLATILE ORGANICS

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Pesticides & PCBs	EPA608	GC/ECD
Base/Neutrals & Acids	EPA625	GC/MS
Total Petroleum Hydrocarbons (DRO)	SW8015	GC/FID
Organochlorine Pesticides	SW8081	GC/ECD
Polychlorinated Biphenyls	SW8082	GC/ECD
Chlorinated Herbicides	SW8151A	GC/ECD
Semi-Volatile Organics	SW8270	GC/MS

## SOLID & CHEMICAL INORGANICS

<u>ANALYTE</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Sulfate	SW9056A	IC

## SOLID & CHEMICAL TRACE METALS

<u>METAL</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Aluminum	SW6010C	ICP
Antimony	SW6010C	ICP
Arsenic	SW6010C	ICP
Barium	SW6010C	ICP
Beryllium	SW6010C	ICP
Boron	SW6010C	ICP
Cadmium	SW6010C	ICP
Calcium	SW6010C	ICP
Chromium	SW6010C	ICP
Cobalt	SW6010C	ICP
Copper	SW6010C	ICP
Iron	SW6010C	ICP
Lead	SW6010C	ICP
Magnesium	SW6010C	ICP
Manganese	SW6010C	ICP
Molybdenum	SW6010C	ICP
Nickel	SW6010C	ICP
Potassium	SW6010C	ICP
Selenium	SW6010C	ICP
Silver	SW6010C	ICP
Sodium	SW6010C	ICP
Strontium	SW6010C	ICP
Thallium	SW6010C	ICP
Tin	SW6010C	ICP
Titanium	SW6010C	ICP
Vanadium	SW6010C	ICP
Zinc	SW6010C	ICP

<u>METAL</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Aluminum	SW6020A	ICP-MS
Antimony	SW6020A	ICP-MS
Arsenic	SW6020A	ICP-MS
Barium	SW6020A	ICP-MS
Beryllium	SW6020A	ICP-MS
Cadmium	SW6020A	ICP-MS
Chromium	SW6020A	ICP-MS
Cobalt	SW6020A	ICP-MS
Copper	SW6020A	ICP-MS
Lead	SW6020A	ICP-MS
Magnesium	SW6020A	ICP-MS
Manganese	SW6020A	ICP-MS
Mercury	SW6020A	ICP-MS
Molybdenum	SW6020A	ICP-MS
Nickel	SW6020A	ICP-MS
Potassium	SW6020A	ICP-MS
Selenium	SW6020A	ICP-MS
Silver	SW6020A	ICP-MS
Sodium	SW6020A	ICP-MS
Strontium	SW6020A	ICP-MS
Thallium	SW6020A	ICP-MS
Tin	SW6020A	ICP-MS
Titanium	SW6020A	ICP-MS
Vanadium	SW6020A	ICP-MS
Zinc	SW6020A	ICP-MS
Mercury	SW7471B	CVAA

### **SOLID & CHEMICAL VOLATILE ORGANICS**

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Total Petroleum Hydrocarbons (GRO)	SW8015B	GC/FID
Volatile Organic Compounds	SW8260B	GC/MS

### **SOLID & CHEMICAL EXTRACTABLE & SEMI-VOLATILE ORGANICS**

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Total Petroleum Hydrocarbons (DRO)	SW8015B	GC/FID
Organochlorine Pesticides	SW8081B	GC/ECD
Polychlorinated Biphenyls	SW8082A	GC/ECD
Chlorinated Herbicides	SW8151A	GC/ECD
Semivolatile Organic Compounds	SW8270D	GC/MS

**EXTRACTION, DIGESTION, CLEANUP, & PREPARATORY METHODS**

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Metals digestion	SW3015	Microwave
Metals digestion	SW3050B	Acid
Metals digestion	SW3051A	Microwave
Extraction	SW3510C	Separatory Funnel (LL)
Extraction	SW3545	Pressurized Fluid (PFE)
Extraction	SW3550B	Ultrasonic (UE)
Cleanup	SW3620C	Florisil
Cleanup	SW3660B	Sulfur
Cleanup	SW3665A	Acid/Permanganate

This laboratory may test **ONLY** for those environmental parameters listed above for compliance reporting purposes. All testing must be by the test method cited in the current application for certification.

This Certification Expires On, **31 July 2012.**

Certificate No. **343 .**

 Issued On, 31 May 2011.

David F Wolfe, PhD  
Quality Assurance Officer