

Schedule

Issue date: 6 October 2016
Valid until: 27 July 2017



MS ISO/IEC 17025

NO: SAMM 213

(Issue 3, 6 October 2016 replacement of SAMM 213 dated 26 November 2015)

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LABORATORY LOCATION:
(PERMANENT LABORATORY)

CHEMVI LABORATORY SDN. BHD.
NO 22A, JALAN SUNGAI JELUH 32/129,
NOUVELLE KEMUNING INDUSTRIAL PARK
BUKIT RIMAU, SEKSYEN 32,
40460 SHAH ALAM
SELANGOR
MALAYSIA

This laboratory accredited under *Skim Akreditasi Makmal Malaysia* (SAMM) meets the requirements of MS ISO/IEC 17025:2005 'General requirements for competence of testing and calibration laboratories'. This Malaysian Standards is identical with ISO/IEC 17025:2005 published by the International Organization for Standardization (ISO).

FIELD OF TESTING: CHEMICAL

SCOPE OF ACCREDITATION:

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Potable and Domestic / Industrial Water, Effluent	pH	APHA 4500 H ⁺ B Electrometric Method
Surface Water	Total Suspended Solids	APHA 2540 D dried at (103 - 105 °C)
Ground Water	BOD ₅ at 20°C	APHA 5210 B & 4500-O G
Natural Water	COD	APHA 5220 C
Mineral Water	Cadmium as Cd	APHA 3111 B
Drinking Water	Chromium as Cr	APHA 3111 B
Portable Water	Lead as Pb	APHA 3111 B
River Water	Copper as Cu	APHA 3111 B
Raw Water	Manganese as Mn	APHA 3111 B
	Nickel as Ni	APHA 3111 B
	Zinc as Zn	APHA 3111 B
	Iron as Fe	APHA 3111 B
	Free-Cl ₂	APHA 4500 Cl-F
	Oil & Grease	APHA 5520 B
	Dissolved Oxygen	APHA 4500 O-G
	Preliminary Treatment of Samples for Metal Analysis	APHA 3030 E
	Sulphide	APHA 4500 S ² -F
	Boron	APHA 4500 B : C
	Phenol	APHA 5530 B&D
	Chromium, Trivalent	In House Method, SM059 Based on Spectroquant 14552 (by calculation)

The valid scope of accreditation is in www.ism.gov.my/cab-directories.

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Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Potable and Domestic / Industrial Water, Effluent	Fluoride	APHA 4500F D
Surface Water	Formaldehyde	HACH Method 8110
Ground Water	Color ADMI	APHA 2120 F
Natural Water	Ammonia Nitrogen	APHA 4500 NH3 B & F
Mineral Water	Chloride	APHA 4500 Cl- B
Drinking Water	Total Dissolved Solid	APHA 2540 C
Portable Water	Total Solid	APHA 2540 B
River Water	Hydrocarbon (Water)	APHA 5520 B & F
Raw Water	Nitrate (NO ₃)	HACH METHOD 8039
	Phosphate (PO ₄)	HACH METHOD 8048
	Hardness	APHA 2340 B (By Calculation)
	Silica as SiO ₂	HACH METHOD 8185
	Nitrite (NO ₂)	HACH METHOD 8507
	Sulfate (SO ₄)	HACH METHOD 8051
	Phosphorus	APHA 4500-P B(5)&C
	Nitrogen	APHA 4500-N (org) (B)
	Surfactants Anionic Detergents	HACH Method 8028
	Carbon Dioxide	HACH Method 8223
	O & G (Mineral Oil)	APHA 5520 B & F
	O & G (Emulsified)	APHA 5520 B
	Polychlorinated Biphenyls (PCBs) (Appendix 1)	USEPA Method 525.2
	Organochlorine Pesticides (Appendix 2)	USEPA Method 525.2

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FIELD OF TESTING: CHEMICAL**SCOPE OF ACCREDITATION:**

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Surface Water Ground Water Natural Water Mineral Water Drinking Water River Water Raw Water	Chlorinated Acid (Herbicides) 2,4-D (2,4-Dichlorophenoxyacetic acid)	USEPA 555
	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	USEPA 555
	2,4,5-TP (2,4,5- Trichlorophenoxypropionic acid)	USEPA 555
	Paraquat	USEPA 549.2
	Diquat	USEPA 549.2

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Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Potable and Domestic / Industrial Water, Effluent Surface Water Ground Water Natural Water Mineral Water Drinking Water Portable Water River Water Raw Water	Chromium Hexavalent as Cr ⁶⁺	APHA 3500 Cr B Colorimetric Method
	Cyanide as CN	OSRMA p.456 Photoelectric Method
	Arsenic as As	APHA 3114 C Continuous Hydride Generation/Atomic Absorption Spectrometric Method
	Tin as Sn	In-House Method: CV/002, (Based on APHA 3114 C Continuous Hydride Generation/Atomic Absorption Spectrometric Method)
	Mercury as Hg	APHA 3112 B Cold-Vapor Atomic Absorption
	Ammonical-Nitrogen (NH ₃ – N)	APHA 4500 NH ₃ B&C
	Preliminary Treatment of Sample	APHA 3030 F
	Aluminum as Al	} APHA 3120 B (ICP – OES)
	Boron as B	
	Barium as Ba	
	Cadmium as Ca	
	Chromium as Cr	
	Cobalt as Co	
	Copper as Cu	
	Iron as Fe	
	Lead as Pb	
Magnesium as Mg		
Manganese as Mn		
Nickel as Ni		
Silver as Ag		
Strontium as Sr		
Thallium as Tl		
Zinc as Zn		

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Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Marine Water Estuarine Water Coastal Water	TSS	APHA 2540 D
	Colour	APHA 2120 F
	Oil and Grease	APHA 5520 B
	Ammoniacal Nitrogen	APHA 4500- NH ₃ B & F
	Nitrite (NO ₂)	HACH 8507
	Nitrate (NO ₃)	HACH 8192
	Phenol	APHA 5530 B & D
	Arsenic	APHA 3120 B
	Cadmium	APHA 3120 B
	Chromium	APHA 3120 B
	Chromium(Cr 6+)	APHA 3500 Cr B
	Copper	APHA 3120 B
	Lead	APHA 3120 B
	Nickel	APHA 3120 B
	Mercury	In House Method SM064 (modify based on APHA 3120)
	Zinc	APHA 3120 B
	Phosphate	HACH METHOD 8048
	Total Organic Carbon (TOC)	APHA 5310 B
	Cyanide	OSRMA P.456
	Tributyltin (TBT)	APHA 6710 B
Polycyclic Aromatic Hydrocarbon (PAHs) (Appendix 3)	APHA 6410 B	
Organic Nitrogen	APHA 4500 N (ORG)	

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Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Marine Water Estuarine Water Coastal Water	Unionized Ammonia (NH ₃) Preliminary Treatment of Sample Low Level Metals Silver as Ag Aluminum as Al Arsenic as As Barium as Ba Beryllium as Be Cadmium as Cd Copper as Cu Cobalt as Co Chromium as Cr Cesium as Cs Iron as Fe Gallium as Ga Mercury as Hg Lithium as Li Manganese as Mn Nickel as Ni Lead as Pb Rubidium as Rb Selenium as Se Strontium as Sr Titanium as Ti Uranium as U Zinc as Zn	APHA 4500-NH ₃ F (Florida Department of Environmental Protection Chemistry Laboratory Methods Manual, Tallahassee) (Calculation method) APHA 3030 F In-house Method SM065 based on APHA 3125B with High Matrix Introduction (HMI) and Octopole ion guide, ICPMS

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Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Sediment, Sludge, Soil, Solid Samples	Preliminary Treatment of Samples: Acid Digestion	USEPA 3050 B (1996)
	Metal By Acid Digestion:	} USEPA 3050 B (1996) (ICP – OES)
	Aluminum as Al	
	Barium as Ba	
	Cadmium as Cd	
	Calcium as Ca	
	Chromium as Cr	
	Cobalt as Co	
	Copper as Cu	
	Iron as Fe	
Lead as Pb		
Magnesium as Mg	USEPA 3060 A (1996) & USEPA 7196 A (1992)	
Manganese as Mn		
Nickel as Ni	APHA 5520 E & F	
Silver as Ag		
Thallium as Tl		
Zinc as Zn		
Alkaline digestion and determination of Hexavalent Chromium as Cr ⁶⁺		
Total Hydrocarbon		
Solid Waste, Municipal Solid Waste (MSW), Refuse-Derived Fuel (RDF)	<u>Proximate Analysis</u>	
	Total Moisture Content	ASTM E 949-96
	Volatile Matter	ASTM E 897-93
	Ash Content	ASTM E 830-96
Fixed Carbon	In-House Method: CV/001, (Based on ASTM E 949-96, ASTM E 897-93 and ASTM E 830- 96)	

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Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Solid Waste, Municipal Solid Waste (MSW), Refuse-Derived Fuel (RDF) (continued)	<u>Ultimate Analysis</u>	
	Preliminary Treatment of Samples for Metal Analysis	ASTM E 926-94 (Practice B-Nitric-Sulphuric-Hydrofluoric Acid Digestion)
	Cadmium as Cd	ASTM E 885-96 (Direct Aspiration)
	Copper as Cu	ASTM E 885-96 (Direct Aspiration)
	Iron as Fe	ASTM E 885-96 (Direct Aspiration)
	Lead as Pb	ASTM E 885-96 (Direct Aspiration)
	Zinc as Zn	ASTM E 885-96 (Direct Aspiration)
	Chromium as Cr	ASTM E 885-96 (Direct Aspiration)
	Manganese as Mn	ASTM E 885-96 (Direct Aspiration)
	Nickel as Ni	ASTM E 885-96 (Direct Aspiration)
Tin as Sn	ASTM E 885-96 (Direct Aspiration)	
Mercury as Hg	ASTM E 885-96 (Cold Vapour)	
Sludge/ Sediment/ Refuse – Derived Fuel (RDF)/ Semi compose Fibre	Standard Test Method for Nitrogen in The Analysis Sample of Refuse-Derived Fuel	ASTM E 778-87 (Reapproved 1996)
	Ultimate Analysis	
	Potassium as K	ASTM E 926-94 (Practice B) Standard Practices For Preparing Refuse-Derived Fuel (RDF)
	Phosphorus as P	ASTM D 5198-92 (Reapproved 2003) Standard Practice for Nitric Acid Digestion of Solid Wastes

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Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Agricultural Products and Materials		
Foliar, Rachis, Plant	Dry Ashing and Preparation of Sample Extract Solution	MS 677 : Pt. II : 1980
	Nitrogen	MS 677 : Pt. III : 1980
	Phosphorus	In House Method SM085 (Modify based on MS 677: Pt.IV: 1980 (ICP))
	Potassium	In House Method SM085 (Modify based on MS677: Pt.V: 1980 (ICP))
	Magnesium	In House Method SM085 (Modify based on MS677: Pt.VII: 1980 (ICP))
	Calcium	In House Method SM085 (Modify based on MS677: Pt.VI: 1980 (ICP))
	Boron	In House Method SM085 (Modify based on MS417 Part VII: 2001)

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Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Industrial Hygiene Personal and Area Chemical Exposure Monitoring (Sampling and Analysis) In compliance to the OSHA Act 1994 and the USECHH Regulation 2000 (Use & Standards Of Exposure Of Chemical Hazardous To Health Regulations 2000).	Asbestos and Other Fiber by PCM Mercury Aluminium Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Molybdenum Nickel Tin Zinc	NIOSH 7400 NIOSH 6009 NIOSH 7303
Local Exhaust Ventilation (LEV), Fume hood. In compliance to the OSHA Act 1994 and the USECHH Regulation 2000 (Use & Standards Of Exposure Of Chemical Hazardous To Health Regulations 2000).	Face Velocity Capture Velocity Static Pressure (SP) Duct Velocity Revolution Per Minute (RPM)	In house method SM 063: Air Velocity Meter using Hot Wire Anemometer Air Velocity Meter using Pitot Tube Laser Tachometer

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Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Indoor Air Quality (IAQ) Assessment monitoring In compliance to The Indoor Air Quality as per Industry Code of Practice on Indoor Air Quality 2010 (ICOP IAQ 2010), Department Of Occupational Safety And Health, Ministry Of Human Resources, Malaysia, JKKP DP(S) 127/379/4-39.	Total Volatile Organic Compound Carbon Dioxide (CO ₂) Carbon Monoxide(CO) Relative Humidity Air Temperature Air movement Respirable Particulates Ozone Formaldehyde Total bacterial counts (Sampling and Analysis) Total fungal counts (Sampling and Analysis)	In House Method SM 062: VOC monitor using PID sensor Carbon dioxide monitor using non- dispersive infrared sensor Carbon monoxide monitor using electrochemical sensor Air Velocity Meter using hot wire anemometer Digital Dust Monitor using light scattering Ozone monitor using OZL sensor. Formaldemeter using electrochemical formaldehyde sensor NIOSH 0800 (Tryptic Soy Agar (TSA)) NIOSH 0800 (Malt Extract Agar (MEA))

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FIELD OF TESTING: CHEMICAL**SITE TESTING: CATEGORY I****SCOPE OF ACCREDITATION:**

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Effluent/ Water/ River Water/ Surface Water (Site Testing)	pH Temperature Dissolved Oxygen Turbidity	APHA 4500 H ⁺ B APHA 2550 B APHA 4500 O G APHA 2130 B
Noise Measurement/Acoustic	Description and Measurement of Environmental (Factory Boundaries) Noise Level (Intensity and Frequency) – Basic Quantities and Procedures	ISO 1996-1:2003 (E)
Vibration Measurement	Description and Measurement of Vibration Level on Construction and Open Site	BS 5228: Part 1:1997
Chimney/ Stack Air Emission – Flue Gas Sampling	Determination of Concentration and Mass Flow of Particulate Matter Using Isokinetic Method PCDDs and PCDF Dioxin and Furan (Sampling)	MS 1596: 2003 USEPA 23
Effluent/Water/River Water/ Surface Water Groundwater Marine water Estuarine water Coastalwater (Site Testing)	Flow rate Temperature Dissolved Oxygen Salinity Turbidity Conductivity pH	In house method SM 090 Based On Manufacturer Instruction Manual GLOBAL WATER APHA 2550B APHA 4500 O G APHA 2520 A APHA 2130 B APHA 2520 B APHA 4500 H ⁺ B

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FIELD OF TESTING: CHEMICAL

SITE TESTING: CATEGORY I

SCOPE OF ACCREDITATION:

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Ambient Air (Site Testing)	Measurement of CO ₂ , CO, Total Volatile Organic Compounds (VOC), Relative Humidity and Temperature Using Portable Indoor Air Quality Monitor Sulphur dioxide(SO ₂), Ozone (O ₃)	In-House Method CV01-01 based on Manufacturer's Measurement Procedures (KD Air Boxx) In house method SM 089. Based On Manufacturer Instruction Manual using B-smart sensor In house method SM 088 Ozone monitor using OZL sensor
Ambient Air	Sampling and Analysis of Particulate Matter (PM _{2.5}) in the Atmosphere by using High Volume sampler (Tisch International) Sampling and Analysis of Particulate Matter (PM ₁₀) in the Atmosphere by using High Volume sampler Sampling and Analysis of Particulate Matter (PM ₁₀) in the Atmosphere Using PM ₁₀ High Volume Sampler Determination of Suspended Particulate Matter (TSP) in the Atmosphere (High-Volume Method) Using High Volume Sampler (HVS) Lead (Pb) Cadmium (Cd) Calcium (Ca) Total Chromium (Cr) Copper (Cu) Iron (Fe) Mercury (Hg)	In house method SM 087 based on EPA code of federal regulations. Extension of USEPA 40 Part 50, Appendix J USEPA 40 Part 50, Appendix J ISC 501 (11101-01-70T) USEPA 40 Part 50, Appendix B NIOSH 7303 NIOSH 7303 NIOSH 7303 NIOSH 7303 NIOSH 7303 NIOSH 7303 NIOSH 7303

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FIELD OF TESTING: CHEMICAL**SITE TESTING : CATEGORY I****SCOPE OF ACCREDITATION:**

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Air Emission - Flue Gas Monitoring		
Dust/Particulate Emission	Determination of Particulate Emissions from Stationary Sources	USEPA Method - 5 (Isokinetic Stack Monitoring)
H ₂ SO ₄ , SO ₂	Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources	USEPA Method - 8 (Isokinetic Stack Monitoring)
Cu, Zn, As, Sb, Pb, Cd, Hg	Determination of Metals Emissions from Stationary Sources	USEPA Method - 29 (Isokinetic Stack Monitoring)
NO _x	Determination of Nitrogen Oxide Emissions from Stationary Sources	USEPA Method - 7E
Air Emission	Dark Smoke	BS 2742:2009 (Ringelmann Smoke Chart)

Note:

1. USEPA: United State Environmental Protection Agency, 2000 (5th Edition)
2. APHA: American Public Health Association, 2005 (21st Edition)
3. OSRMA: Official, Standardised & Recommended Methods of Analysis, 1973 (2nd Edition)
4. ISO : International Organization for Standardization
5. ASTM : American Society for Testing and Materials
6. BS : British & International Standards
7. ISC : Intersociety Committee Methods of Air Sampling and Analysis, 3rd ed., 1989
8. NIOSH - National Institute of Occupational Safety and Health.

Signatories:

- | | | |
|----|---|--|
| 1. | Dr. Shanmugam Suberamaniam (All) | IKM No.: AMIC 1095/2640/96/99 (All) |
| 2. | Punitha a/p Perumall | IKM No.: A2795/5536/2009 (Water/Effluent Only) |
| 3. | Indran a/l Thasarathan | (Noise, Vibration, Ambient Air Particulate Matter Only) |
| 4. | Kalaivani a/p Varadarajan | IKM No.: L/1892/6259/12 (Stack Monitoring Only) |
| 5. | Nur Najiha Ahmad | (Chemistry Under Supervision) |
| 6. | Siti Khairani Abdul Halim Azizi | (Chemistry Under Supervision) |
| 7. | Lea Nursyaryza Amira Sazari | (Environment Under Supervision) |

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Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water Waste Water Potable Water Drinking Water Industrial Water River Water	Heterotrophic Plate Count/ Total Plate Count Total Coliform Count Total Faecal Coliform Count <i>E. coli</i> count <i>Legionella spp</i> <i>Legionella pneumophila</i>	APHA 9215 B APHA 9222 B (Membrane Filtration Technique) APHA 9222 D (Membrane Filtration Technique) APHA 9222 G (Membrane Filtration Technique) USEPA 1603 (Membrane filtration Technique modified M-TEC agar APHA 9260J
Marine Water Estuarine Water Coastal Water	Total Coliform Count Total Faecal Coliform Count <i>E. coli</i> count <i>Enterococci spp</i> <i>Chlorophyll a</i>	APHA 9222 B (Membrane Filtration Technique) APHA 9222 D (Membrane Filtration Technique) APHA 9222 G (Membrane Filtration Technique) USEPA 1603 (Membrane filtration Technique modified M-TEC agar APHA 9230 C In-house Method, based on APHA 10200 H (SM066)

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FIELD OF TESTING: MICROBIOLOGICAL

SCOPE OF ACCREDITATION:

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Clean Room Assessment	Total bacterial counts (Sampling and Analysis)	NIOSH 0800 (Tryptic Soy Agar (TSA))
	Total fungal counts (Sampling and Analysis)	NIOSH 0800 (Malt Extract Agar (MEA))
Pharmaceutical Item/Traditional Medicines/Toiletries	Total Aerobic Microbial Count Total Yeast and Mold Count Bile Tolerant Gram Negative Bacteria <i>Escherichia coli</i> <i>Staphylococcus aureus</i> <i>Pseudomonas aeruginosa</i> <i>Salmonella spp</i>	BP (Harmonised Method) 2008 (Appendix XVI B A 391 – A 402)

Signatories:

1. Sivanesan Krishnan (Microbiology, Biology)
2. Thamayanthi a/p Rajendran (Microbiology)

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**APPENDIX 1
POLYCHLORINATED BIPHENYLS (PCBS)**

1. 2-Chlorobiphenyl (2051-60-7)
2. 2,3-Dichlorobiphenyl (16605-91-7)
3. 2,4,5-Trichlorobiphenyl (15862-07-4)
4. 2,2',4,4'-Tetrachlorobiphenyl (2437-79-8)
5. 2,2',3',4,6-Pentachlorobiphenyl (60233-25-2)
6. 2,2',4,4',5,6'-Hexachlorobiphenyl (60145-22-4)
7. 2,2',3,3',4,4',6-Heptachlorobiphenyl (52663-71-5)
8. 2,2',3,3',4,5',6,6'-Octachlorobiphenyl (40186-71-8)

**APPENDIX 2
ORGANOCHLORINE PESTICIDES**

1. 4,4'-DDD (72-54-8)
2. 4,4'-DDE (72-55-9)
3. 4,4'-DDT (50-29-3)
4. Aldrin (309-00-2)
5. alpha-BHC (319-84-6)
6. Beta-BHC (319-85-7)
7. Cis-Chlordane (5103-71-9)
8. Delta-BHC (319-86-8)
9. Dieldrin (60-57-1)
10. Endosulfan I (959-98-8)
11. Endosulfan II (33213-65-9)
12. Endosulfansulfate (1031-07-8)
13. Endrin (72-20-8)
14. Endrin aldehyde (7421-93-4)
15. Endrin ketone (53494-70-5)
16. gamma-BHC (Lindane) (58-89-9)
17. Heptachlor (76-44-8)
18. Heptachlorepoxyde (isomer B) (1024-57-3)
19. Methoxychlor (72-43-5)
20. Trans-Chlordane (5103-74-2)

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**APPENDIX 3
POLYAROMATIC HYDROCARBONS (PAHs)**

1. 2,4-Dinitrotoluene (121-14-2)
2. Acenaphthylene(208-96-8)
3. Benzo(a)pyrene(50-32-8)
4. Benzo(b)fluoranthene(205-99-2)
5. Benzo(g,h,i)perylene(191-24-2)
6. Benzo(k)fluoranthene(207-08-9)
7. Benzyl butyl phthalate(85-68-7)
8. Bis(2-ethylhexyl)phthalate (117-84-0)
9. Diethylphthalate(84-66-2)
10. Dimethylphthalate(131-11-3)
11. Di-n-butylphthalate(84-74-2)
12. Fluoranthene(206-44-0)
13. Fluorene(86-73-7)
14. Hexachlorobenzene(118-74-1)
15. Hexachlorocyclopentadiene(77-47-4)
16. Indeno(1,2,3-cd)pyrene (193-39-5)
17. Isophorone (CAS 78-59-1)
18. Phenanthrene(85-01-8)
19. Pyrene(129-00-0)

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APPENDIX 4**SEMIVOLATILE ORGANIC COMPOUNDS (SVOC)**

1. 1,2,4-Trichlorobenzene (120-82-1)
2. 1,2-Dichlorobenzene (95-50-1)
3. 1,3-Dichlorobenzene (541-73-1)
4. 1,4-Dichlorobenzene (106-46-7)
5. 2,4,6-Trichlorophenol (88-06-2)
6. 2,4-Dichlorophenol (120-83-2)
7. 2,4-Dimethylphenol (105-67-9)
8. 2,4-Dinitrophenol (51-28-5)
9. 2,4-Dinitrotoluene (121-14-2)
10. 2,6-Dinitrotoluene (606-20-2)
11. 2-Chloronaphthalene (91-58-7)
12. 2-Chlorophenol (95-57-8)
13. 2-Nitrophenol (88-75-5)
14. 4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) (534-52-1)
15. 4-Bromophenyl phenyl ether (101-55-3)
16. 4-Chloro-3-methylphenol (59-50-7)
17. 4-Chlorophenyl phenyl ether (7005-72-3)
18. 4-Nitrophenol (100-02-7)
19. Acenaphthene (83-32-9)
20. Acenaphthylene (208-96-8)
21. Anthracene (120-12-7)
22. Benz (a) anthracene (56-55-3)
23. Benzo (a) pyrene (50-32-8)
24. Benzo (b) fluoroanthene (205-99-2)
25. Benzo (g,h,i) perylene (191-24-2)
26. Benzo(k) fluoroanthene (207-08-9)
27. Benzyl butyl phthalate (85-68-7)
28. Bis (2-chloroethyl) ether (111-44-4)
29. Bis (2-chloroethoxy)methane (111-91-1)
30. Bis(2-chloroisopropyl) ether (108-60-1)
31. Bis(2-ethylhexyl)phthalate (117-81-7)
32. Chrysene (218-01-9)
33. Dibenz (a,h) anthracene (53-70-3)
34. Diethyl phthalate (84-66-2)
35. Dimethyl phthalate (131-11-3)
36. Di-n-butyl phthalate (84-74-2)
37. Di-n-octyl phthalate (117-84-0)
38. Diphenylamine (122-39-4)
39. Fluoranthene (206-44-0)
40. Fluorene (86-73-7)
41. Hexachlorobenzene (118-74-1)
42. Hexachlorobutadiene (87-68-3)
43. Hexachlorocyclopentadiene (77-47-4)

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44. Hexachloroethane (67-72-1)

(Continued)

45. Indeno (1,2,3-cd) pyrene (193-39-5)

46. Isophorone (78-59-1)

47. Naphthalene (91-20-3)

48. Nitrobenzene (98-95-3)

49. N-Nitrosodimethylamine (62-75-9)

50. N-Nitroso-di-n-propylamine (621-64-7)

51. Pentachlorophenol (87-86-5)

52. Phenanthrene (85-01-8)

53. Phenol (108-95-2)

54. Pyrene (129-00-0)