ANNEXURE A

SCHEDULE OF ACCREDITATION

Facility Number: **T0775**

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Mrs T Tagari

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Material or Products Tested	Type of Tests / Properties Measured, Range of Measurement	Standard Specifications, Techniques / Equipment Used
CHEMICAL		
Water (Ground, surface drinking, waste, leachates, Total recoverable, as received and dissolved metals)	ICP-OES: Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Se, Si, Sn, Sr, Ti, Tl, V, Zn, Cu	ME-AN-027 Based on USEPA 200.2 USEPA 200.7 APHA 3120
	ICP-MS: Ag, Al, As, B, Ba, Be, Cd, Co, Cr, Cu, Hg, Fe, Mn, Mo, Nb, Ni, P, Pb, Sb, Se, Sn, Sr, Ti, Tl, U, V, Zn	ME-AN-026 Based on USEPA 200.2 USEPA 200.8 APHA 3030
Solid type samples such as sediments, sludges and soils (with the exception of silica)	Recoverable Metals by Aqua Regia by ICP-OES: Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Se, Sn, Sr, Ti, Tl, V, Zn	ME-AN-027 Based on USEPA 200.2 USEPA 2007.7 APHA3120
	Recoverable Metals by Aqua Regia by ICP-MS: Hg, U	ME-AN-026 Based on USEPA 200.2 USEPA 200.8 APHA 3030
Filters	Recoverable Metals by Aqua Regia by ICP-OES: Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Se, Si, Sn, Sr, Ti, Tl, V, Zn	ME-AN-027 Based on NIOSH Methods 7301 2003 & 7082:1994 and US EPA 200.7:1994 APHA 3120
	Recoverable Metals by Aqua Regia by ICP-MS: Ag, Al, As, B, Ba, Be, Cd, Co, Cr, Cu, Fe, Hg, Mn, Mo, Ni, P, Pb, Sb, Se, Sn, Sr, Ti, Tl, U, V, Zn	ME-AN-026 Based on NIOSH Methods 7301:2003, 7082:1994 and USEPA 200.8:1994 APHA 3030
Water (Potable, ground , surface, industrial waste, leachates and industrial suitability)	Determination of pH @ 25°C	ME-AN-016 Based on APHA 4500-H+B

	Determination of Electrical Conductivity @ 25°C	ME-AN-007 Based on APHA 2510 B
	Determination of Solids – Total Suspended @ 105°C	ME-AN-009 Based on APHA 2540 D
	Determination of Solids – Total Dissolved @105°C	ME-AN-011 Based on APHA 2540 C
	Determination of Alkalinity – Total Carbonate, Bicarbonate and Hydroxide as $CaCO_3$ plus Carbonate and Hydroxide as Individual Species	ME-AN-001 Based on APHA 2320
	Determination of Hardness – Total, Calcium and Magnesium by calculation from ICP-OES Results	ME-AN-013 Based on APHA 2340 B
	Determination of Fluoride by ISE	ME-AN-021 Based on APHA 4500-FC
	Cation – Anion Balance by Calculation using results from ICP-OES, Alkalinity and Anion analysis	ME-AN-012 Calculation -In house spread sheet
Water (Potable, ground , surface , air filters, industrial waste, leachates and industrial suitability)	Anions – Fluoride, Chloride, Nitrite, Nitrate, and Sulphate	ME-AN-014 Based on APHA 4110B, NIOSH 7903, NIOSH 6013 and RADIELLO F1, Radiello J1, Radiello K1
Water (Potable, ground surface , industrial waste, leachates and industrial suitability)	Ammonia by Continuous Flow Analyser	ME-AN-032 Based on ISO 11732:2005 (E) & APHA 4500-NH3
	Total Cyanide by Continuous Flow Analyser	ME-AN-031 Based on ISO 14403:2002 (E) ASTM D6696-10
	Total Nitrogen by Continuous Flow Analyser	ME-AN-033 Based on ISO 29441:2010 (E) & APHA 4500-N
	Total Kjehldahl Nitrogen (Calculation from total Nitrogen by CFA & Nitrate/Nitrite by IC	ME-AN-037 Based on ISO 29441:2010 (E) & APHA 4110
	Free Cyanide by Continuous Flow Analyser	ME-AN-054-Based on ISO 14403:2002(E)
	WAD Cyanide by Continuous Flow Analyser	ME-AN-055 Based on ASTM D4374
Water (Potable , ground , surface, industrial waste and industrial suitability)	Volatile Organic Compounds by GC MS Purge & Trap (Including BTEX, THM,MTBE & TAME)	ME-AN-034 Based on :USEPA 5030C & USEPA 8260C
	Total Recoverable Petroleum Hydro-Carbons by GC FID (TPH/TRH including Bandings)	ME-AN-035 Based on USEPA 8015
	PAH by GC MS	ME-AN-036 Based on USEPA 8270
	Determination of Poly Chlorinated Biphenyls by GC MS	ME-AN-038 Based on USEPA 689 USEPA 3510C, USEPA 3550C
Solid type samples such as sediments, sludges and soil	Volatile Organic Compounds by GC MS Purge & Trap (including BTEX,	ME-AN-034 Based on USEPA 5035A & USEPA 8260C

	THM,MTBE & TAME)	
	Total Recoverable Petroleum Hydro-carbons by GC FID (TPH/TRH including bandings)	ME-AN-035 Based on USEPA 8015
	PAH by GC MS	ME-AN-036 Based on USEPA 8270
	Determination of Poly Chlorinated Biphenyls by GC MS	ME-AN-038 Based on USEPA 689 USEPA 3510C, USEPA 3550C
Tailings, waste rock, sludge and soil	Modified Acid Base Accounting	ME-AN-025 Based on MEND Acid Rock Drainage Prediction Manual, MEND, 1991
	Determination of Paste pH	ME-AN-024 Based on MEND Acid Rock Drainage Prediction Manual,MEND, 1991
Solid, liquids and multiphase wastes	Toxicity Characterization Leachate Procedure	ME-AN-022 Based on USEPA TCLP 1311
Water (Solids Leachates)	Discrete Analyser:	
	Determination of Colour	ME-AN-039 Based on Standard Methods for the examination of water and waste water 18th edition, 1992 Methods 2120C Spectrophotometric Methods
	Determination of Ortho Phosphate	ME-AN-042 Based on USEPA 365.1
	Determination of Hexavalent Chromium	ME-AN-040 Based on APHA 71969,DIN EN ISO23913;2009, APHA 3500Cr-B
	Determination of Ammonia	ME-AN-041-Based on ISBN 011-7516139 & ISO-DIS 15923-1, Radiello I
	Determination of Total Phenols	ME-AN-052 Based on USEPA 420.1
	Determination of Sulphide	ME-AN-056 Based on APHA4500S^2-D, Radiello H
	Determination of Nitrite	ME-AN-048-Based on APHA 4500.NO_2-B
	Determination of Chloride	ME-AN-049-Based on APHA 4500.C1
	Determination of Alkalinity	ME-AN-043-Based on ISBN 011751605 & USEPA 310.2
	Determination of Sulphate	ME-AN-046-Based on USEPA 375-4
Stationary Emission Source/Air Emission	Determination of Sulphur Dioxide and Sulphuric Acid from Stationary sources	ME-AN-004 & ME-AN-017 Based on us EPA 6 & 8
	Determination of Dust Fallout by Gravimetric Analysis	ME-AN-062 Based on ASTM D 1739
	Particulate Matter in Stationary	ME-AN-059 Based on EN 13284-

	Source by Gravimetric Analysis	1, US EPA 5, USEPA 17
	Recoverable Metal by ICP-OES & MS: Ag, As, Ba, Be, Cd, Cr, Co, Cu, Hg, Mn, Ni, P, Pb, Sb, Se, TI, V, Zn	ME-AN-057 Based on US EPA 29, EN 13211, EN 14385
	Hydrogen Halides and Halogens: Hydrogen, Bromide, Hydrogen Chloride, Hydrogen Floride, Chorine & Bromine	ME-AN-015 Based on US EPA 26, 26A, EN 1911 (chlorides only)
Volatile Organic Compounds	Volatile Organic Compounds by Thermal Desorption GC-MS (BTEX)	ME-AN-061 Based on US EPA Method TO 017 and NIOSH 2549-VOC, Radiello E1
Ammonia in Emission Sources	Ammonia by DA	ME-AN-063 Based on US EPA CTM 027, Radiello I

Original Date of Accreditation: 01 March 1999

ISSUED BY THE SOUTH AFRICAN NATIONAL ACCREDITATION SYSTEM

Accreditation Manager