

// X-RAY

FLOURESENCE

SPECTROMETER

(XRF) ANALYSIS

WATERCOLOUR

DATA

1 H Hydrogen																	2 He Helium						
3 Li Lithium	4 Be Beryllium																	5 B Boron	6 C Carbon	7 N Nitrogen	8 O Oxygen	9 F Fluorine	10 Ne Neon
11 Na Sodium	12 Mg Magnesium																	13 Al Aluminum	14 Si Silicon	15 P Phosphorus	16 S Sulfur	17 Cl Chlorine	18 Ar Argon
19 K Potassium	20 Ca Calcium	21 Sc Scandium	22 Ti Titanium	23 V Vanadium	24 Cr Chromium	25 Mn Manganese	26 Fe Iron	27 Co Cobalt	28 Ni Nickel	29 Cu Copper	30 Zn Zinc	31 Ga Gallium	32 Ge Germanium	33 As Arsenic	34 Se Selenium	35 Br Bromine	36 Kr Krypton						
37 Rb Rubidium	38 Sr Strontium	39 Y Yttrium	40 Zr Zirconium	41 Nb Niobium	42 Mo Molybdenum	43 Tc Technetium	44 Ru Ruthenium	45 Rh Rhodium	46 Pd Palladium	47 Ag Silver	48 Cd Cadmium	49 In Indium	50 Sn Tin	51 Sb Antimony	52 Te Tellurium	53 I Iodine	54 Xe Xenon						
55 Cs Cesium	56 Ba Barium																	81 Tl Thallium	82 Pb Lead	83 Bi Bismuth	84 Po Polonium	85 At Astatine	86 Rn Radon
87 Fr Francium	88 Ra Radium	104 Rf Rutherfordium	105 Db Dubnium	106 Sg Seaborgium	107 Bh Bohrium	108 Hs Hassium	109 Mt Meitnerium	110 Ds Darmstadtium	111 Rg Roentgenium	112 Cn Copernicium	113 Nh Nihonium	114 Fl Flerovium	115 Mc Moscovium	116 Lv Livermorium	117 Ts Tennessine	118 Og Oganesson							

57 La Lanthanum	58 Ce Cerium	59 Pr Praseodymium	60 Nd Neodymium	61 Pm Promethium	62 Sm Samarium	63 Eu Europium	64 Gd Gadolinium	65 Tb Terbium	66 Dy Dysprosium	67 Ho Holmium	68 Er Erbium	69 Tm Thulium	70 Yb Ytterbium	71 Lu Lutetium
89 Ac Actinium	90 Th Thorium	91 Pa Protactinium	92 U Uranium	93 Np Neptunium	94 Pu Plutonium	95 Am Americium	96 Cm Curium	97 Bk Berkelium	98 Cf Californium	99 Es Einsteinium	100 Fm Fermium	101 Md Mendelevium	102 No Nobelium	103 Lr Lawrencium

DATE: 05/07/2018, TIME: 07:56:02, READING: #1, SEA: CALIBRATION, MODE: CAL CHECK,
PASS/FAIL, ELAPSED TIME: 14.99, ELAPSED TIME 2, ELAPSED TIME 3, ELAPSED TIME TOTAL: 14.99.
FE IRON (26) PPM %, FE +/- IRON (26) PPM %, AL ALUMINIUM (13) PPM %, AL +/- ALUMINIUM (13)
PPM %, SI SILICON (14) PPM %, SI +/- SILICON (14) PPM %, P PHOSPHURS (15) PPM %, P +/-
PHOSPHURS (15) PPM %, S SULFUR (16) PPM %, S +/- SULFUR (16) PPM %, CL CHLORINE (17) PPM
%, CL +/- CHLORINE (17) PPM %, K POTASSIUM (19) PPM %, K +/- POTASSIUM (19) PPM %, CA
CALCIUM (20) PPM %, CA +/- CALCIUM (20) PPM %, TI TITANIUM (22) PPM %, TI +/- TITANIUM (22)
PPM %, V VANADIUM (23) PPM %, V +/- VANADIUM (23) PPM %, CR CHROMIUM (24) PPM %, CR +/-
CHROMIUM (24) PPM %, MN MAGANESE (25) PPM %, MN +/- MAGANESE (25) PPM %, CO COBALT
(27) PPM %, CO +/- COLBALT (27) PPM %, NI NICKEL (28) PPM %, NI +/- NICKEL (28) PPM %, CU
COPPER (29) PPM %, CU +/- COPPER (29) PPM %, ZN ZINC (30) PPM %, ZN +/- ZINC (30) PPM %, AS
ARSENIC (33) PPM %, AS +/- ARSENIC (33) PPM %, SE SELENIUM (34) PPM %, SE +/- SELENIUM (34)
PPM %, RB REBIDIUM (37) PPM %, RB +/- REDIDIUM (37) PPM %, SR STRONTIUM (38) PPM %, SR+/-
STRONTIUM (38) PPM %, Y YTTERBIUM (39) PPM %, Y +/- YTTERBIUM (39) PPM %, ZR ZIRCONIUM
(40) PPM %, ZR +/- ZIRCONIUM (40) PPM %, NB NIOBIUM (41) PPM %, NB +/- NIOBIUM (41) PPM %, MO
MOLYBDENUM (42) PPM %, MO +/- MOLYBDENUM (42) PPM %, AG SILVER (47) PPM %, AG +/-
SILVER (47) PPM %, CD CADMINUM (48) PPM %, CD +/- CADMINUM (48) PPM %, SN TIN (50) PPM %, SN +/-
TIN (50), SB ANTIMONY (51) PPM %, SB +/- ANTIMONY (51) PPM %, BA BARIUM (56) PPM %, BA +/-
BARIUM (56) PPM %, LA LANTHANUM (57) PPM %, LA +/- LANTHANUM (57) PPM %, CE
CERIUM (58) PPM %, CE +/- CERIUM (58) PPM %, PR PRASEODYMIUM (59) PPM %, PR +/-
PRASEODYMIUM (59) PPM %, ND NEODYMIUM (60) PPM %, ND +/- NEODYMIUM (60) PPM %, HF
HAFNIUM (72) PPM %, HF +/- HAFNIUM (72) PPM %, TA TANTALUM (73) PPM %, TA +/- TANTALUM
(73) PPM %, W TUNGSTEN (74) PPM %, W +/- TUGSTEN (74) PPM %, HG MURCURY (80) PPM %, HG
+/- MURCURY (80) PPM %, PB LEAD (82) PPM %, PB +/- LEAD (82) PPM %, BI BISMUTH (83) PPM %, BI +/-
BISMUTH (83) PPM %, TH THORIUM (90) PPM %, TH +/- THORIUM (90) PPM %, U URANIUM
(92) PPM %, U +/- URANIUM (92) PPM %, LE LIGHT ELEMENTS PPM %, LE +/- LIGHT ELEMENTS
PPM %, INSTRUMENT SN 550084, MODEL Delta Premium-50KV, TUBE ANODE Au, UNIT % PPM

DATE: 05/07/2018, TIME: 08:01:44, READING: #2-1, SEA: YELLOW SEA, MODE: SOIL, PASS/FAIL:
PASS, ELAPSED TIME: 59.51, ELAPSED TIME 2: 59.05, ELAPSED TIME 3:59.63, ELAPSED TIME TOTAL:
178.19: FE IRON (26) 89 PPM %, FE +/- IRON (26) 10 PPM %, P PHOSPHURS (15) ND PPM %, S
SULFUR (16) 3971 PPM %, S +/- SULFUR (16) 489 PPM %, CL CHLORINE (17) 56337 PPM %, CL +/-
CHLORINE (17) 660 PPM %, K POTASSIUM (19) 2013 PPM %, K +/- POTASSIUM (19) 90 PPM %, CA
CALCIUM (20) 215983 PPM%, CA +/- CALCIUM (20) 1766 PPM %, TI TITANIUM (22) 43 PPM %, TI +/-
TITANIUM (22) 6 PPM %, V VANADIUM (23) 6.3 PPM %, V +/- VANADIUM (23) 1.2 PPM %, CR
CHROMIUM (24) 22 PPM %, CR +/- CHROMIUM (24) 3 PPM %, MN MAGANESE (25) 100 PPM %, MN
+/- MAGANESE (25) 5 PPM %, CO COBALT (27) ND PPM %, NI NICKEL (28) ND PPM %, CU COPPER
(29) ND PPM %, ZN ZINC (30) ND PPM %, AS ARSENIC (33) ND PPM %, SE SELENIUM (34) ND PPM %,
RB REBIDIUM (37) 15.8 PPM %, RB +/- REBIDIUM (37) 1.1 PPM %, SR STRONTIUM (38) 71 PPM %, SR
+/- STRONTIUM (38) 3 PPM %, Y YTTERBIUM (39) ND PPM %, ZR ZIRCONIUM (40) ND PPM %, NB
NIOBIUM (41) 40.3 PPM %, NB +/- NIOBIUM (41) 1.4 PPM %, MO MOLYBDENUM (42) 8.2 PPM %, MO
+/- MOLYBDENUM (42) 1.8 PPM %, CD CADMINUM (48) ND PPM %, SN TIN (50) ND PPM %, SB
ANTIMONY (51) ND PPM %, BA BARIUM (56) ND PPM %, LA LANTHANUM (57) ND PPM %, CE
CERIUM (58) ND PPM %, PR PRASEODYMIUM (59) ND PPM %, TA TANTALUM (73) 4.8 PPM %, TA +/-
TANTALUM (73) 1 PPM %, W TUNGSTEN (74) ND PPM %, HG MURCURY (80) ND PPM %, PB LEAD
(82) 12 PPM %, PB +/- LEAD (82) 2 PPM %, BI BISMUTH (83) ND PPM %, TH THORIUM (90) ND PPM
%, U URANIUM (92) ND PPM %, INSTRUMENT SN 550084, MODEL DELTA PREMIUM-50KV, TUBE
ANODE Au, UNIT % PMM.

DATE: 05/07/2018, TIME: 08:04:52, READING: #2-2, SEA: YELLOW SEA, MODE: SOIL, PASS/FAIL: PASS, ELAPSED TIME: 59.5, ELAPSED TIME 2: 59.01, ELAPSED TIME 3: 59.65, ELAPSED TIME TOTAL: 178.15. FE IRON (26) 126 PPM %, FE +/- IRON (26) 10 PPM %, P PHOSPHURS (15) ND PPM %, S SULFUR (16) 4551 PPM %, S +/- SULPHUR (16) 502 PPM %, CL CHLORINE (17) 57775 PPM %, CL CHLORINE (17) 673 PPM %, K POTASSIUM (19) 1747 PPM %, K +/- POTASSIUM (19) 87 PPM %, CA CALCIUM (20) 218630 PPM %, CA +/- CALCIUM (20) 1793 PPM %, TI TITANIUM (22) 41 PPM %, TI +/- TITANIUM (22) 6 PPM %, V VANADIUM (23) 6.4 PPM %, V +/- VANADIUM (23) 1.2 PPM %, CR CHROMIUM (24) 18 PPM %, CR +/- CHROMIUM (24) 3 PPM %, MN MAGANESE (25) 99 PPM %, MN +/- MAGANESE (25) 5 PPM %, CO COBALT (27) ND PPM %, NI NICKEL (28) ND PPM %, CU COPPER (29) ND PPM %, ZN ZINC (30) ND PPM %, AS ARSENIC (33) ND PPM %, SE SELENIUM (34) ND PPM %, RB REBIDIUM (37) 15.9 PPM %, RB +/- REBIDIUM (37) 1.1 PPM %, SR STRONTIUM (38) 72 PPM %, SR +/- STRONTIUM (38) 3 PPM %, Y YTTERBIUM (39) ND PPM %, ZR ZIRCONIUM (40) ND PPM %, NB NIOBIUM (41) 38.3 PPM %, NB +/- NIOBIUM (41) 1.4 PPM %, MO MOLYBDENUM (42) 7.8 PPM %, MO +/- MOLYBDENUM (42) 1.8 PPM %, AG SILVER (47) ND PPM %, CD CADMINUM (48) ND PPM %, SN TIN (50) ND PPM %, SB ANTIMONY (51) ND PPM %, SB +/- ANTIMONY (51) ND PPM %, BA BARIUM (56) ND PPM %, LA LANTHANUM (57) ND PPM %, CE CERIUM (58) ND PPM %, PR PRASEODYMIUM (59) ND PPM %, ND NEODYMIUM (60) ND PPM %, TA TANTALUM (73) 4.7 PPM %, TA +/- TANTALUM (73) 0.9 PPM %, W TUNGSTEN (74) ND PPM %, HG MURCURY (80) ND PPM %, PB LEAD (82) 12 PPM %, PB +/- LEAD (82) 2 PPM %, BI BISMUTH (83) ND PPM %, TH THORIUM (90) ND PPM %, U URANIUM (92) ND PPM %, U +/- URANIUM (92) ND PPM %, INSTRUMENT SN 550084, MODEL DELTA PREMIUM-50KV, TUBE ANODE Au, UNIT % PMM.

DATE: 05/07/2018, TIME: 08:01:44, READING: #2-Avg, SEA: YELLOW SEA, MODE: SOIL, PASS/FAIL: PASS, ELAPSED TIME, ELAPSED TIME 2, ELAPSED TIME 3, ELAPSED TIME TOTAL. FE IRON (26) 108 PPM %, FE +/- IRON (26) 10 PPM %, P PHOSPHURS (15) ND PPM %, S SULFUR (16) 4261 PPM %, S +/- SULPHUR (16) 495 PPM %, CL CHLORINE (17) 57156 PPM %, CL +/- CHLORINE (17) 667 PPM %, K POTASSIUM (19) 1880 PPM %, K +/- POTASSIUM (19) 89 PPM %, CA CALCIUM (20) 217307 PPM %, CA +/- CALCIUM (20) 1779 PPM %, TI TITANIUM (22) 42 PPM %, TI +/- TITANIUM (22) 6 PPM %, V VANADIUM (23) 6.4 PPM %, V +/- VANADIUM (23) 1.2 PPM %, CR CHROMIUM (24) 20 PPM %, CR +/- CHROMIUM (24) 3 PPM %, MN MAGANESE (25) 100 PPM %, MN +/- MAGANESE (25) 5 PPM %, CO COBALT (27) ND PPM %, NI NICKEL (28) ND PPM %, CU COPPER (29) ND PPM %, ZN ZINC (30) ND PPM %, AS ARSENIC (33) ND PPM %, SE SELENIUM (34) ND PPM %, RB REBIDIUM (37) 15.9 PPM %, RB +/- REBIDIUM (37) 1.1 PPM %, SR STRONTIUM (38) 72 PPM %, SR +/- STRONTIUM (38) 3 PPM %, Y YTTERBIUM (39) ND PPM %, Y +/- YTTERBIUM (39) ND PPM %, ZR ZIRCONIUM (40) ND PPM %, NB NIOBIUM (41) 39.3 PPM %, NB +/- NIOBIUM (41) 1.4 PPM %, MO MOLYBDENUM (42) 3 PPM %, MO +/- MOLYBDENUM (42) 1.8 PPM %, AG SILVER (47) ND PPM %, CD CADMINUM (48) ND PPM %, SN TIN (50) ND PPM %, SB ANTIMONY (51) ND PPM %, BA BARIUM (56) ND PPM %, LA LANTHANUM (57) ND PPM %, CE CERIUM (58) ND PPM %, PR +/- PRASEODYMIUM (59) ND PPM %, ND NEODYMIUM (60) ND PPM %, TA TANTALUM (73) 4.8 PPM %, TA +/- TANTALUM (73) 0.9 PPM %, W TUNGSTEN (74) ND PPM %, HG MURCURY (80) ND PPM %, PB LEAD (82) 12 PPM %, PB +/- LEAD (82) 2 PPM %, BI BISMUTH (83) ND PPM %, TH THORIUM (90) ND PPM %, U URANIUM (92) ND PPM %, INSTRUMENT SN 550084, MODEL DELTA PREMIUM-50KV, TUBE ANODE Au, UNIT % PMM.

DATE: 05/07/2018, TIME: 08:10:31, READING: #3-1, SEA: WHITE SEA, MODE: SOIL, PASS/FAIL: PASS, ELAPSED TIME: 59:47, ELAPSED TIME 2: 59:08, ELAPSED TIME 3: 59:62, ELAPSED TIME TOTAL: 178.18. FE IRON (26) 131 PPM %, FE +/- IRON (26) 11 PPM %, P PHOSPHURS (15) ND PPM %, S SULFUR (16) 5213 PPM %, S +/- SULPHER (16) 568 PPM %, CL CHLORINE (17) 29170 PPM %, CL +/- CHLORINE (17) 444 PPM %, K POTASSIUM (19) 1025 PPM %, K +/- POTASSIUM (19) 89 PPM %, CA CALCIUM (20) 331217 PPM %, CA +/- CALCIUM (20) 1779 PPM %, TI TITANIUM (22) 42 PPM %, TI +/- TITANIUM (22) 6 PPM %, V VANADIUM (23) 5.2 PPM %, V +/- VANADIUM (23) 1.2 PPM %, CR CHROMIUM (24) 21 PPM %, CR +/- CHROMIUM (24) 3 PPM %, MN MAGANESE (25) 101 PPM %, MN +/- MAGANESE (25) 5 PPM %, CO COBALT (27) ND PPM %, NI NICKEL (28) ND PPM %, CU COPPER (29) ND PPM %, ZN ZINC (30) ND PPM %, AS ARSENIC (33) ND PPM %, SE SELENIUM (34) ND PPM %, RB REBIDIUM (37) 8.4 PPM %, RB +/- REBIDIUM (37) 1.1 PPM %, SR STRONTIUM (38) 157 PPM %, SR +/- STRONTIUM (38) 5 PPM %, Y YTTERBIUM (39) ND PPM %, ZR ZIRCONIUM (40) ND PPM %, NB NIOBIUM (41) 38.8 PPM %, NB +/- NIOBIUM (41) 1.5 PPM %, MO MOLYBDENUM (42) 19 PPM %, MO +/- MOLYBDENUM (42) 2 PPM %, AG SILVER (47) ND PPM %, CD CADMINUM (48) ND PPM %, SN TIN (50) ND PPM %, SB ANTIMONY (51) ND PPM %, BA BARIUM (56) ND PPM %, LA LANTHANUM (57) ND PPM %, CE CERIUM (58) ND PPM %, PR PRASEODYMIUM (59) ND PPM %, ND NEODYMIUM (60) ND PPM %, TA TANTALUM (73) 6.6 PPM %, TA +/- TANTALUM (73) 1.1 PPM %, W TUNGSTEN (74) ND PPM %, HG MURCURY (80) ND PPM %, PB LEAD (82) 10 PPM %, PB +/- LEAD (82) 2 PPM %, BI BISMUTH (83) ND PPM %, TH THORIUM (90) ND PPM %, U URANIUM (92) ND PPM %, INSTRUMENT SN 550084, MODEL DELTA PREMIUM-50KV, TUBE ANODE Au, UNIT % PMM.

DATE: 05/07/2018, TIME: 08:13:41, READING: #3-2, SEA: WHITE SEA, MODE: SOIL, PASS/FAIL: PASS,
ELAPSED TIME: 59:51, ELAPSED TIME 2: 59.08, ELAPSED TIME 3: 59.63, ELAPSED TIME TOTAL:
178.23. FE IRON (26) 130 PPM %, FE +/- IRON (26) 11 PPM %, P PHOSPHURS (15) ND PPM %, S
SULFUR (16) 3880 PPM %, S +/- SULPHUR (16) 555 PPM %, CL CHLORINE (17) 29242 PPM %, CL +/-
CHLORINE (17) 450 PPM %, K POTASSIUM (19) 1031 PPM %, K +/- POTASSIUM (19) 91 PPM %, CA
CALCIUM (20) 332430 PPM %, CA +/- CALCIUM (20) 2820 PPM %, TI TITANIUM (22) 38 PPM %, TI +/-
TITANIUM (22) 6 PPM %, V VANADIUM (23) 5.8 PPM %, V +/- VANADIUM (23) 1.3 PPM %, CR
CHROMIUM (24) 24 PPM %, CR +/- CHROMIUM (24) 3 PPM %, MN MAGANESE (25) 98 PPM %, MN +/-
MAGANESE (25) 5 PPM %, CO COBALT (27) ND PPM %, NI NICKEL (28) ND PPM %, CU COPPER (29)
ND PPM %, ZN ZINC (30) ND PPM %, AS ARSENIC (33) ND PPM %, SE SELENIUM (34) ND PPM %, RB
REBIDIUM (37) 8.6 PPM %, RB +/- REBIDIUM (37) 1.1 PPM %, SR STRONTIUM (38) 139 PPM %, SR +/-
STRONTIUM (38) 5 PPM %, Y YTTERBIUM (39) ND PPM %, ZR ZIRCONIUM (40) ND PPM %, NB
NIOBIUM (41) 42.3 PPM %, NB +/- NIOBIUM (41) 1.5 PPM %, MO MOLYBDENUM (42) 15 PPM %, MO
+/- MOLYBDENUM (42) 2 PPM %, AG SILVER (47) 9 PPM %, AG +/- SILVER (47) 3 PPM %, CD
CADMINUM (48) ND PPM %, SN TIN (50) ND PPM %, SB ANTIMONY (51) ND PPM %, BA BARIUM (56)
ND PPM %, LA LANTHANUM (57) ND PPM %, CE CERIUM (58) ND PPM %, PR PRASEODYMIUM (59)
ND PPM %, ND NEODYMIUM (60) ND PPM %, TA TANTALUM (73) 5.1 PPM %, TA +/- TANTALUM (73)
1.1 PPM %, W TUNGSTEN (74) ND PPM %, HG MURCURY (80) ND PPM %, PB LEAD (82) 14 PPM %,
PB +/- LEAD (82) 2 PPM %, BI BISMUTH (83) ND PPM %, TH THORIUM (90) ND PPM %, U URANIUM
(92) ND PPM %, INSTRUMENT SN 550084, MODEL DELTA PREMIUM-50KV, TUBE ANODE Au, UNIT %
PMM.

DATE: 05/07/2018, TIME: 08:10:31, READING: #3-Avg, SEA: WHITE SEA, MODE: SOIL, PASS/FAIL:
PASS, ELAPSED TIME, ELAPSED TIME 2, ELAPSED TIME 3, ELAPSED TIME TOTAL. FE IRON (26) 11
PPM %, P PHOSPHURS (15) ND PPM %, S SULFUR (16) 4546 PPM %, S +/- SULPHUR (16) 562 PPM %,
CL CHLORINE (17) 29206 PPM %, CL +/- CHLORINE (17) 447 PPM %, K POTASSIUM (19) 1028 PPM %,
K +/- POTASSIUM (19) 90 PPM %, CA CALCIUM (20) 331824 PPM %, CA +/- CALCIUM (20) 2799 PPM
%, TI TITANIUM (22) 36 PPM %, TI +/- TITANIUM (22) 6 PPM %, V VANADIUM (23) 5.5 PPM %, V +/-
VANADIUM (23) 1.2 PPM %, CR CHROMIUM (24) 23 PPM %, CR +/- CHROMIUM (24) 3 PPM %, MN
MAGANESE (25) 100 PPM %, MN +/- MAGANESE (25) 5 PPM %, CO COBALT (27) ND PPM %, NI
NICKEL (28) ND PPM %, CU COPPER (29) ND PPM %, ZN ZINC (30) ND PPM %, AS ARSENIC (33) ND
PPM %, SE SELENIUM (34) ND PPM %, RB REBIDIUM (37) 8.5 PPM %, RB +/- REBIDIUM (37) 1.1 PPM
%, SR STRONTIUM (38) 148 PPM %, SR +/- STRONTIUM (38) 5 PPM %, Y YTTERBIUM (39) ND PPM %, ZR
ZIRCONIUM (40) ND PPM %, NB NIOBIUM (41) 40.5 PPM %, NB +/- NIOBIUM (41) 1.5 PPM %, MO
MOLYBDENUM (42) 17 PPM %, MO +/- MOLYBDENUM (42) 2 PPM %, AG SILVER (47) ND PPM %, CD
CADMINUM (48) ND PPM %, SN TIN (50) ND PPM %, SB ANTIMONY (51) ND PPM %, BA BARIUM (56)
ND PPM %, LA LANTHANUM (57) ND PPM %, CE CERIUM (58) ND PPM %, PR PRASEODYMIUM (59)
ND PPM %, ND NEODYMIUM (60) ND PPM %, TA TANTALUM (73) 5.9 PPM %, TA +/- TANTALUM (73)
1.1 PPM %, W TUNGSTEN (74) ND PPM %, HG MURCURY (80) ND PPM %, PB LEAD (82) 12 PPM %, PB +/-
LEAD (82) 2 PPM %, BI BISMUTH (83) ND PPM %, TH THORIUM (90) ND PPM %, U URANIUM
(92) ND PPM %, INSTRUMENT SN 550084, MODEL DELTA PREMIUM-50KV, TUBE ANODE Au, UNIT %
PMM.

DATE: 05/07/2018, TIME: 08:17:55, READING: #4-1, SEA:BLACK SEA, MODE: SOIL, PASS/FAIL: PASS,
ELAPSED TIME: 58.1, ELAPSED TIME 2: 56.69, ELAPSED TIME 3: 59.523, ELAPSED TIME TOTAL:
174.31. FE IRON (26) ND PPM %, P PHOSPHURS (15) ND PPM %, S SULFUR (16) 1033 PPM %, S +/-
SULPHUR (16) 214 PPM %, CL CHLORINE (17) 11029 PPM %, CL +/- CHLORINE (17) 173 PPM %, K
POTASSIUM (19) 676 PPM %, K +/- POTASSIUM (19) 41 PPM %, CA CALCIUM (20) 87770 PPM %, CA
+/- CALCIUM (20) 535 PPM %, TI TITANIUM (22) 18 PPM %, TI +/- TITANIUM (22) 3 PPM %, V
VANADIUM (23) ND PPM %, CR CHROMIUM (24) ND PPM %, MN MAGANESE (25) 44 PPM %, MN +/-
MAGANESE (25) 3 PPM %, CO COBALT (27) ND PPM %, NI NICKEL (28) ND PPM %, CU COPPER (29)
ND PPM %, ZN ZINC (30) ND PPM %, AS ARSENIC (33) 2.6 PPM %, AS +/- ARSENIC (33) 0.6 PPM %, SE
SELENIUM (34) ND PPM %, RB REBIDIUM (37) 6.6 PPM %, RB +/- REBIDIUM (37) 0.5 PPM %, SR
STRONTIUM (38) 138 PPM %, SR +/- STRONTIUM (38) 2 PPM %, Y YTTERBIUM (39) ND PPM %, ZR
ZIRCONIUM (40) 6.9 PPM %, ZR +/- ZIRCONIUM (40) 1 PPM %, NB NIOBIUM (41) 17.9 PPM %, NB +/-
NIOBIUM (41) 0.7 PPM %, MO MOLYBDENUM (42) ND PPM %, AG SILVER (47) ND PPM %, CD
CADMINUM (48) ND PPM %, SN TIN (50) ND PPM %, SB ANTIMONY (51) ND PPM %, BA BARIUM (56)
31 PPM %, BA +/- BARIUM (56) 10 PPM %, LA LANTHANUM (57) ND PPM %, CE CERIUM (58) ND
PPM %, PR PRASEODYMIUM (59) ND PPM %, ND NEODYMIUM (60) ND PPM %, TA TANTALUM (73)
ND PPM %, TA +/- TANTALUM (73) ND PPM %, W TUNGSTEN (74) ND PPM %, HG +/- MURCURY (80)
ND PPM %, PB +/- LEAD (82) ND PPM %, BI +/- BISMUTH (83) ND PPM %, TH THORIUM (90) ND
PPM %, U URANIUM (92) ND PPM %, INSTRUMENT SN 550084, MODEL DELTA PREMIUM-50KV,
TUBE ANODE Au, UNIT % PMM.

DATE: 05/07/2018, TIME: 08:21:03, READING: #4-2, SEA: BLACK SEA, MODE: SOIL, PASS/FAIL: PASS,
ELAPSED TIME: 58.41, ELAPSED TIME 2:56.73, ELAPSED TIME 3: 59.55, ELAPSED TIME
TOTAL:174.42. FE IRON (26) ND PPM %, P PHOSPHURS (15) ND PPM %, S SULFUR (16) 1426 PPM %,
S +/- SULPHUR (16) 221 PPM %, CL CHLORINE (17) 11806 PPM %, CL +/- CHLORINE (17) 178 PPM %,
K POTASSIUM (19) 642 PPM %, K +/- POTASSIUM (19) 40 PPM %, CA CALCIUM (20) 90093 PPM %,
CA +/- CALCIUM (20) 543 PPM %, TI TITANIUM (22) 25 PPM %, TI +/- TITANIUM (22) 3 PPM %, V
VANADIUM (23) ND PPM %, CR CHROMIUM (24) ND PPM %, MN MAGANESE (25) 38 PPM %, MN +/-
MAGANESE (25) 2 PPM %, CO COBALT (27) ND PPM %, NI NICKEL (28) ND PPM %, CU COPPER (29)
ND PPM %, AS ARSENIC (33) ND PPM %, SE SELENIUM (34) ND PPM %, RB REBIDIUM (37) 6.9 PPM
%, RB +/- REBIDIUM (37) 0.5 PPM %, SR STRONTIUM (38) 137 PPM %, SR +/- STRONTIUM (38) 2 PPM
%, Y YTTERBIUM (39) ND PPM %, ZR ZIRCONIUM (40) 7.8 PPM %, ZR +/- ZIRCONIUM (40) 1 PPM %,
NB NIOBIUM (41) 17.2 PPM %, NB +/- NIOBIUM (41) 0.7 PPM %, MO MOLYBDENUM (42) ND PPM %,
AG SILVER (47) ND PPM %, CD CADMINUM (48) ND PPM %, SN TIN (50) ND PPM %, SB ANTIMONY
(51) ND PPM %, BA BARIUM (56) ND PPM %, LA LANTHANUM (57) ND PPM %, CE CERIUM (58) ND
PPM %, PR PRASEODYMIUM (59) ND PPM %, ND NEODYMIUM (60) ND PPM %, TA TANTALUM (73)
5.9 PPM %, TA +/- TANTALUM (73) 1.1 PPM %, W TUNGSTEN (74) ND PPM %, HG MURCURY (80) ND
PPM %, PB LEAD (82) ND PPM %, BI BISMUTH (83) ND PPM %, TH THORIUM (90) ND PPM %, U
URANIUM (92) ND PPM %, INSTRUMENT SN 550084, MODEL DELTA PREMIUM-50KV, TUBE ANODE
Au, UNIT % PMM.

DATE: 05/07/2018, TIME: 08:17:55, READING: #4-Avg, SEA:BLACK SEA, MODE: SOIL, PASS/FAIL:
PASS, ELAPSED TIME, ELAPSED TIME 2, ELAPSED TIME 3, ELAPSED TIME TOTAL. FE IRON (26) ND
PPM %, P PHOSPHURS (15) ND PPM %, S SULFUR (16) 1229 PPM %, S +/- SULPHUR (16) 217 PPM %,
CL CHLORINE (17) 11417 PPM %, CL +/- CHLORINE (17) 175 PPM %, K POTASSIUM (19) 659 PPM %,
K +/- POTASSIUM (19) 41 PPM %, CA CALCIUM (20) 88931 PPM %, CA +/- CALCIUM (20) 539 PPM %,
TI TITANIUM (22) 21 PPM %, TI +/- TITANIUM (22) 3 PPM %, V VANADIUM (23) ND PPM %, CR
CHROMIUM (24) ND PPM %, MN MAGANESE (25) 41 PPM %, MN +/- MAGANESE (25) 3 PPM %, CO
COBALT (27) ND PPM %, NI NICKEL (28) ND PPM %, CU COPPER (29) ND PPM %, ZN ZINC (30) ND
PPM %, AS ARSENIC (33) 2.2 PPM %, AS +/- ARSENIC (33) 0.6 PPM %, SE SELENIUM (34) ND PPM %,
RB REBIDIUM (37) 6.7 PPM %, RB +/- REBIDIUM (37) 0.5 PPM %, SR STRONTIUM (38) 138 PPM %, SR
+/- STRONTIUM (38) 2 PPM %, Y YTTERBIUM (39) ND PPM %, ZR ZIRCONIUM (40) 7.4 PPM %, ZR +/-
ZIRCONIUM (40) 1 PPM %, NB NIOBIUM (41) 17.5 PPM %, NB +/- NIOBIUM (41) 0.7 PPM %, MO
MOLYBDENUM (42) ND PPM %, AG SILVER (47) ND PPM %, CD CADMINUM (48) ND PPM %, SN TIN
(50) ND PPM %, SB ANTIMONY (51) ND PPM %, BA BARIUM (56) ND PPM %, LA LANTHANUM (57) ND
PPM %, CE CERIUM (58) ND PPM %, PR PRASEODYMIUM (59) ND PPM %, ND NEODYMIUM (60) ND
PPM %, TA TANTALUM (73) ND PPM %, W TUNGSTEN (74) ND PPM %, HG +/- MURCURY (80) ND
PPM %, PB +/- LEAD (82) ND PPM %, BI +/- BISMUTH (83) ND PPM %, TH THORIUM (90) ND PPM %, U
URANIUM (92) ND PPM %, INSTRUMENT SN 550084, MODEL DELTA PREMIUM-50KV, TUBE
ANODE Au, UNIT % PMM.

DATE: 05/07/2018, TIME: 08:26:17, READING: #5-1, SEA:BLANK PAPER, MODE: SOIL, PASS/FAIL:
PASS, ELAPSED TIME: 59.49, ELAPSED TIME 2: 59.06, ELAPSED TIME 3: 59.63, ELAPSED TIME
TOTAL: 178.17. FE IRON (26) 49 PPM %, FE +/- IRON (26) 10 PPM %, P PHOSPHURS (15) ND PPM %, S
SULFUR (16) ND PPM %, CL CHLORINE (17) 684 PPM %, CL +/- CHLORINE (17) 132 PPM %, K
POTASSIUM (19) ND PPM %, CA CALCIUM (20) 311199 PPM %, CA +/- CALCIUM (20) 2592 PPM %, TI
TITANIUM (22) 64 PPM %, TI +/- TITANIUM (22) 6 PPM %, V VANADIUM (23) 7.1 PPM %, V +/-
VANADIUM (23) 1.3 PPM %, CR CHROMIUM (24) 18 PPM %, CR +/- CHRONIUM (24) 3 PPM %, MN
MAGANESE (25) 87 PPM %, MN +/- MAGANESE (25) 5 PPM %, CO COBALT (27) ND PPM %, NI
NICKEL (28) ND PPM %, CU COPPER (29) ND PPM %, ZN ZINC (30) ND PPM %, AS ARSENIC (33) 2.2
PPM %, SE SELENIUM (34) ND PPM %, RB REBIDIUM (37) ND PPM %, SR STRONTIUM (38) 101 PPM
%, SR +/- STRONTIUM (38) 4 PPM %, Y YTTERBIUM (39) ND PPM %, ZR ZIRCONIUM (40) 73 PPM %, ZR +/- ZIRCONIUM (40) 4 PPM %, NB NIOBIUM (41) 39.2 PPM %, NB +/- NIOBIUM (41) 1.5 PPM %, MO MOLYBDENUM (42) 7 PPM %, MO +/- MOLYBDENUM (42) 2 PPM %, AG SILVER (47) 10 PPM %, AG +/- SILVER (47) 3 PPM %, CD CADMINUM (48) ND PPM %, SN TIN (50) ND PPM %, SB ANTIMONY (51) ND PPM %, BA BARIUM (56) ND PPM %, LA LANTHANUM (57) ND PPM %, CE CERIUM (58) ND PPM %, PR PRASEODYMIUM (59) ND PPM %, ND NEODYMIUM (60) ND PPM %, TA TANTALUM (73) 3.4 PPM %, TA +/- TANTALUM (73) 1 PPM %, W TUNGSTEN (74) ND PPM %, HG +/- MURCURY (80) ND PPM %, PB LEAD (82) 11 PPM %, PB +/- LEAD (82) 2 PPM %, BI +/- BISMUTH (83) ND PPM %, TH THORIUM (90) ND PPM %, U URANIUM (92) ND PPM %, INSTRUMENT SN 550084, MODEL DELTA PREMIUM-50KV, TUBE ANODE Au, UNIT % PMM.

DATE: 05/07/2018, TIME: 08:29:25, READING: #5-2, SEA:BLANK PAPER, MODE: SOIL, PASS/FAIL:
PASS, ELAPSED TIME: 59.51, ELAPSED TIME 2: 59.13, ELAPSED TIME 3: 59.65, ELAPSED TIME
TOTAL: 178.29. FE IRON (26) 42 PPM %, FE +/- IRON (26) 10 PPM %, P PHOSPHURS (15) ND PPM %, S
SULFUR (16) 1567 PPM %, S+/- SULPHER (16) 474 PPM %, CL CHLORINE (17) 607 PPM %, CL +/-
CHLORINE (17) 131 PPM %, K POTASSIUM (19) ND PPM %, CA CALCIUM (20) 309699 PPM %, CA +/-
CALCIUM (20) 2588 PPM %, TI TITANIUM (22) 69 PPM %, TI +/- TITANIUM (22) 7 PPM %, V
VANADIUM (23) 7.3 PPM %, V +/- VANADIUM (23) 1.3 PPM %, CR CHROMIUM (24) 16 PPM %, CR +/-
CHROMIUM (24) 3 PPM %, MN MAGANESE (25) 92 PPM %, MN +/- MAGANESE (25) 5 PPM %, CO
COBALT (27) ND PPM %, NI NICKEL (28) ND PPM %, CU COPPER (29) ND PPM %, ZN ZINC (30) ND
PPM %, AS ARSENIC (33) ND PPM %, SE SELENIUM (34) ND PPM %, RB REBIDIUM (37) ND PPM %, SR
STRONTIUM (38) 95 PPM %, SR +/- STRONTIUM (38) 4 PPM %, Y YTTERBIUM (39) ND PPM %, ZR
ZIRCONIUM (40) 77 PPM %, ZR +/- ZIRCONIUM (40) 4 PPM %, NB NIOBIUM (41) 41.2 PPM %, NB +/-
NIOBIUM (41) 1.5 PPM %, MO MOLYBDENUM (42) ND PPM %, AG SILVER (47) 11 PPM %, AG +/-
SILVER (47) 3 PPM %, CD CADMINUM (48) ND PPM %, SN TIN (50) ND PPM %, SB ANTIMONY (51) ND
PPM %, BA BARIUM (56) ND PPM %, LA LANTHANUM (57) ND PPM %, CE CERIUM (58) ND PPM %, PR
PRASEODYMIUM (59) ND PPM %, ND NEODYMIUM (60) ND PPM %, TA TANTALUM (73) ND PPM
%, WTUNGSTEN (74) ND PPM %, HG MURCURY (80) ND PPM %, PB LEAD (82) 7 PPM %, PB +/-
LEAD (82) 2 PPM %, BI +/- BISMUTH (83) ND PPM %, TH THORIUM (90) ND PPM %, U URANIUM (92)
ND PPM %, INSTRUMENT SN 550084, MODEL DELTA PREMIUM-50KV, TUBE ANODE Au, UNIT %
PMM.

DATE: 05/07/2018, TIME: 08:26:17, READING: #5-Avg, SEA:BLANK PAPER, MODE: SOIL, PASS/FAIL: PASS, ELAPSED TIME, ELAPSED TIME 2, ELAPSED TIME 3, ELAPSED TIME TOTAL. FE IRON (26) 46 PPM %, FE +/- IRON (26) 10 PPM %, P PHOSPHURS (15) ND PPM %, S SULFUR (16) 1431 PPM %, S +/- SULPHUR (16) 472 PPM %, CL CHLORINE (17) 646 PPM %, CL +/- CHLORINE (17) 131 PPM %, K POTASSIUM (19) ND PPM %, CA CALCIUM (20) 310449 PPM %, CA +/- CALCIUM (20) 2590 PPM %, TI TITANIUM (22) 67 PPM %, TI +/- TITANIUM (22) 7 PPM %, V VANADIUM (23) 7.2 PPM %, V +/- VANADIUM (23) 1.3 PPM %, CR CHROMIUM (24) 17 PPM %, CR +/- CHRONIUM (24) 3 PPM %, MN MAGANESE (25) 89 PPM %, MN +/- MAGANESE (25) 5 PPM %, CO COBALT (27) ND PPM %, NI NICKEL (28) ND PPM %, CU COPPER (29) ND PPM %, ZN ZINC (30) ND PPM %, AS ARSENIC (33) ND PPM %, SE SELENIUM (34) ND PPM %, RB REBIDIUM (37) ND PPM %, SR STRONTIUM (38) 98 PPM %, SR +/- STRONTIUM (38) 4 PPM %, Y YTTERBIUM (39) ND PPM %, ZR ZIRCONIUM (40) 75 PPM %, ZR +/- ZIRCONIUM (40) 4 PPM %, NB NIOBIUM (41) 40.2 PPM %, NB +/- NIOBIUM (41) 1.5 PPM %, MO MOLYBDENUM (42) ND PPM %, AG SILVER (47) 11 PPM %, AG +/- SILVER (47) 3 PPM %, CD CADMINUM (48) ND PPM %, SN TIN (50) ND PPM %, SB ANTIMONY (51) ND PPM %, BA BARIUM (56) ND PPM %, LA LANTHANUM (57) ND PPM %, CE CERIUM (58) ND PPM %, PR PRASEODYMIUM (59) ND PPM %, ND NEODYMIUM (60) ND PPM %, TA TANTALUM (73) 3 PPM %, TA +/- TANTALUM (73) 0.9 PPM %, W TUNGSTEN (74) ND PPM %, HG MURCURY (80) ND PPM %, PB LEAD (82) 9 PPM %, PB +/- LEAD (82) 2 PPM %, BI +/- BISMUTH (83) ND PPM %, TH THORIUM (90) ND PPM %, U URANIUM (92) ND PPM %, INSTRUMENT SN 550084, MODEL DELTA PREMIUM-50KV, TUBE ANODE Au, UNIT % PMM.

