

TABLE NDE-46-1
NORTH ANNA UNIT 2
REGENERATIVE HEAT EXCHANGER
2-CH-E-3 EXAMINATIONS
MAN-REM ESTIMATE FOR THE ENTIRE HEAT EXCHANGER

Work Task	Man-Hours (hrs)	Dose Rate (R/hr)	Man-Rem
Insulation Remove/Install	5.3	0.50	2.650
Scaffolding Install/Remove	2.0	0.30	0.600
Clamp Remove/Install	2.0	0.85	1.700
Weld Prep.	1.25	0.85	1.063
HP Coverage	6.25	0.02	0.125
Nozzle-to-Vessel Inspection (UT) (Welds 13, 14, 15, 16, 17 and 18)	3.0	0.70	2.100
Nozzle Inside Radius Inspection (UT) (Welds 13NIR, 14NIR, 15NIR, 16NIR, 17NIR and 18NIR)	2.25	0.85	1.913
Circumferential Head Inspection (UT) (Class 1 Welds 2, 4 and 6, and Class 2 Welds 1, 3 and 5)	0.75	0.30	0.225
Tube Sheet to Head Inspection (UT) (Welds 8, 10 and 12)	0.54	0.50	0.270
Tube Sheet to Shell Inspection (UT) (Welds 7, 9 and 11)	0.54	0.85	0.459
Welded Attachment Inspection (PT) (Welds WS-1, 2 and 3)	0.5	0.70	0.350
Terminal End Inspection (PT) (Welds 1A, 19, 20, 21, 22 and 46)	0.75	0.30	0.225

Total Estimate = 11.68

TABLE NDE-46-2
NORTH ANNA UNIT 2
REGENERATIVE HEAT EXCHANGER
2-CH-E-3 EXAMINATIONS
MAN-REM ESTIMATE FOR THE LOWER HEAT EXCHANGER

Work Task	Man-Hours (hrs)	Dose Rate (R/hr)	Man-Rem
Insulation Remove/Install	1.8	0.50	0.900
Scaffolding Install/Remove	0.0	0.30	0.00
Clamp Remove/Install	2.0	0.85	1.700
Weld Prep.	0.5	0.85	0.425
HP Coverage	2.0	0.02	0.040
Nozzle-to-Vessel Inspection (UT) (Welds 17 and 18)	1.0	0.70	0.700
Nozzle Inside Radius Inspection (UT) (Welds 17NIR and 18NIR)	0.75	0.85	0.638
Circumferential Head Inspection (UT) (Class 1 Weld 6, and Class 2 Weld 5)	0.25	0.30	0.075
Tube Sheet to Head Inspection (UT) (Weld 12)	0.18	0.50	0.090
Tube Sheet to Shell Inspection (UT) (Weld 11)	0.18	0.85	0.153
Welded Attachment Inspection (PT) (Welds WS-1, 2 and 3)	0.5	0.70	0.350
Terminal End Inspection (PT) (Welds 22 and 46)	0.25	0.30	0.075

Total Estimate = 5.15