

TABLE 2.3 - ADDITIONAL GUIDANCE ON ASSESSING LEVELS OF COMPETENCE - EXPERT LEVEL

LEVEL	QUALIFYING CRITERIA	COMPETENCE CLUSTERS GROUPED INTO THREE EXPERIENCE FIELDS							
		NW1	NW2	NW8	NW3	NW6	NW7	NW4	NW5
	Time	>5 years as a Practitioner in this field			P&E - >3 years as a Practitioner in <u>User Community</u> . Central Customer experience desirable. <u>Design, Trials, Approvals & PM</u> - >5 years as a Practitioner in this field - but 10 years desirable.			>5 years as a Practitioner in this field	
	Location	As per Table 2.1 above			P&E - CSSE Corsham User Community. <u>Design, Trials, Approvals & PM</u> - Central Customer experience as well as experience in more than 1 location desirable.			As per Table 2.1 above (2 nd geographical location desirable)	
	Depth of knowledge required	National/International Peer recognition			P&E - Able to: 1. Develop techniques & tools to assist in assessment of performance & effectiveness <u>Design, Trials, Approvals & PM</u> - Able to: 1. Conduct wide-ranging reviews of various aspects of warhead programme. 2. Direct international collaborative programmes at a strategic level. 3. Apply nuclear engineering principles across all areas to critically assess safety aspects of current & potential weapon design.			May require Practitioner experience in >1 Experience Field sub-set	
	Qualifications required	As [per Table 2.2 above			TAMs, USA NW Wpn Effects Course, NWAC (desirable)			As per Table 2.2 above	
	Currency	Lost after 3 years outside Experience Field			Lost after 3 years outside Experience Field			Lost after 5 years outside Experience Field	

COMPETENCE CLUSTER	COMPETENCE	LEVEL	PERFORMANCE INDICATOR	OUTCOME
NW 5 Nuclear Weapon Tests, Trials and Commissioning: Knowledge, skills and experience of Nuclear Weapon Programme Tests, Trials and Commissioning, including Service Life Evaluation	NW5.1 Nuclear Weapon Tests, Trials and Commissioning: Knowledge, skills and experience to set-up, manage or conduct tests, trials and commissioning activities of nuclear weapons and associated equipment (including Service Life Evaluation) or supporting facilities. This includes the integration of operational equipment, surface support equipment, technical documentation and safety management arrangements using the Slow Run Through process.	Expert Practitioner Awareness	<p>NW5.1.1.1: Identifies the requirement for and the scope of a Nuclear Weapon Programme test, trial or commissioning activities in accordance with the requirements of the safety case or the design intent.</p> <p>NW5.1.1.2: Approves or certifies the procedures for tests, trials or commissioning activities for nuclear weapons and associated equipment (including Service Life Evaluation) or supporting facilities.</p> <p>NW5.1.1.3: Approves or certifies the assessment of results of tests, trials or commissioning activities for nuclear weapons and associated equipment (including Service Life Evaluation) or supporting facilities.</p> <p>NW5.1.2.1: Develops procedures for tests, trials or commissioning activities for nuclear weapons and associated equipment (including Service Life Evaluation) or supporting facilities.</p> <p>NW5.1.2.2: Assesses the results of tests, trials or commissioning activities for nuclear weapons and associated equipment (including Service Life Evaluation) or supporting facilities.</p> <p>NW5.1.2.3: Directs or manages tests, trials or commissioning activities for nuclear weapons and associated equipment (including Service Life Evaluation) or supporting facilities.</p> <p>NW5.1.3.1: Contributes to the development of procedures for tests, trials or commissioning activities for nuclear weapons and associated equipment (including Service Life Evaluation) or supporting facilities.</p> <p>NW5.1.3.2: Contributes to the assessment of the results of tests, trials or commissioning activities for nuclear weapons and associated equipment (including Service Life Evaluation) or supporting facilities.</p> <p>NW5.1.3.3: Conducts tests trials or commissioning activities for nuclear weapons and associated equipment (including Service Life Evaluation) or supporting facilities in accordance with approved documentation.</p>	NW5.1 Verification of the design intent of nuclear weapons, associated equipments or supporting facilities is maintained throughout the life cycle phases by a series of tests, trials and commissioning activities.

<u>COMPETENCE CLUSTER</u>	<u>COMPETENCE</u>	<u>LEVEL</u>	<u>PERFORMANCE INDICATOR</u>	<u>OUTCOME</u>	
NW 7: Performance and Effectiveness Assessment: Knowledge skills and experience of assessing the performance and effectiveness of nuclear weapons systems.	NW7.1: Nuclear Weapon Effects: Knowledge Skills and Experience of assessing the effects of nuclear weapons on equipment, facilities, people and infrastructure	Expert	NW7.1.1.1: Specifies and designs studies that answer questions posed by stakeholders on nuclear effects.	NW7.1 Nuclear weapon effects are assessed and verified against the design intent. <i>from USIA</i>	
			Awareness		NW7.1.1.2: Develops techniques and tools to aid the assessment of nuclear weapon effects.
			Practitioner		NW7.1.1.3: Provides expert advice on matters relating to nuclear weapon effects.
			Expert		NW7.1.1.4: Ensures that nuclear weapon effects assessment methodologies are fit for purpose and that caveats are appropriately applied.
Practitioner	NW7.1.1.5: Seeks new nuclear weapon effects assessment tools and informs stakeholders of their strengths and weaknesses.	NW7.1.2.1: Performs and reports on studies of nuclear weapon effects using computer based tools and or analytical methods.	NW7.1.2.2: Specifies requirements for nuclear weapon effect assessment tools.	NW7.1.2.3: Understands the limitations of nuclear weapons effects modelling.	
Awareness	Practitioner	Expert	NW7.1.3.1: Understands the basic damage mechanisms of nuclear weapons and their effects on equipment, people and infrastructure.		

<u>COMPETENCE CLUSTER</u>	<u>COMPETENCE</u>	<u>LEVEL</u>	<u>PERFORMANCE INDICATOR</u>	<u>OUTCOME</u>
NW 7 Performance and Effectiveness Assessment: Knowledge skills and experience of assessing the performance and effectiveness of nuclear weapons systems.	NW7.2 Nuclear Weapon Performance: Knowledge skills and experience of assessing the performance of nuclear weapon systems.	Expert	NW7.2.1.1: Provides expert advice on matters relating to SWS performance.	NW7.2 Nuclear weapon performance is assessed and verified against the design intent.
			Awareness	
Practitioner	Awareness	NW7.2.3.1: Understands the factors of accuracy, reliability, yield and weapon system information, which together describe the performance of a nuclear weapon system. NW7.2.3.2: Has a basic understanding of the relationship between aspects of nuclear weapon system performance. NW7.2.3.3: Understands the difference between SWS performance and SWS effectiveness.		

Review to confirm

COMPETENCE CLUSTER	COMPETENCE	LEVEL	PERFORMANCE INDICATOR	OUTCOME
NW 7 Performance and Effectiveness Assessment: Knowledge skills and experience of assessing the performance and effectiveness of nuclear weapons systems.	NW7.3 Nuclear Weapon Effectiveness: Knowledge skills and experience of assessing the effectiveness of nuclear weapon systems.	Expert	NW7.3.1.1: Specifies and designs studies which answer questions posed by stakeholders on nuclear weapon effectiveness.	NW7.3 Nuclear weapon effectiveness is assessed and verified against the design intent.
			NW7.3.1.2: Develops techniques to aid the assessment of SWS effectiveness.	
			NW7.3.1.3: Provides expert advice on matters relating to SWS effectiveness.	
			NW7.3.1.4: Certifies or approves <u>effectiveness data files</u> for use in <u>operational planning and study work</u> .	
			NW7.3.1.5: Develops SWS effectiveness techniques and tools to aid assessment of nuclear weapon effectiveness and informs stakeholders of their strengths and weaknesses and the caveats to be applied.	
			NW7.3.1.6: Seeks new SWS effectiveness assessment tools and informs stakeholders of their strengths and weaknesses.	
			NW7.3.2.1: Performs and reports on studies into the effectiveness of the SWS using <u>computer models and/or analytical methods</u> .	
			NW7.3.2.2: States requirements for SWS effectiveness assessment tools.	
			NW7.3.2.3: Understands the limitations of SWS effectiveness modelling.	
			NW7.3.2.4: Provides <u>data files</u> for use in operational planning and study work.	
NW7.3.3.1: Has a basic understanding of the areas of knowledge, skill and expertise, which together comprise nuclear weapons effectiveness assessment. (Including, <u>battle modelling</u> , <u>fratricide</u> , <u>weapon interactions with targets and collateral facilities</u>).				
NW7.3.3.2: Has a basic understanding of current and potential <u>threats</u> to the SWS.				
NW7.3.3.3: Understands the difference between SWS performance and SWS effectiveness.				

Real life + Effects → all relate to targets 24

Nu effectiveness
 → production of data files → ops plans
 → studies

98m *