

Special Job Task Analysis and Competency Review for Expert Level Competencies

Chemical Processing FAQs

August 2010

STEP 1: Job Task Analysis for Tasks

Task (and Number)	Source	Importance	Frequency
Critically analyze system design-basis documentation and related safety documentation to ensure application of the principle of safety in design as described in DOE O 413.3-1 (2006), <i>Project Management for the Acquisition of Capital Assets</i> and associated guides.	FAQS Duties and Responsibilities Paragraph A	3	2
Evaluate DOE facility and program-related chemical processes for safe and efficient process startup, operation, maintenance, and testing, including emergency systems.	FAQS Duties and Responsibilities Paragraph D	5	4
Verify the application of quality assurance, configuration management, and safety requirements to chemical processes.	FAQS Duties and Responsibilities Paragraph G	4	2

Importance Scale	Frequency
How important is this task to the job?	How often is the task performed?
0 = Not Performed	0 = Not Performed
1 = Not Important	1 = Every few months to yearly
2 = Somewhat Important	2 = Every few weeks to monthly
3 = Important	3 = Every few days to weekly
4 = Very Important	4 = Every few hours to daily
5 = Extremely Important	5 = Hourly to many times each hour

Step2: Job Analysis Worksheet for Competencies

Competency	Source	Importance	Need at Entry
Chemical processing personnel must demonstrate an expert level knowledge of mass transfer and mass balances.	FAQS Competency #2	5	1
Chemical processing personnel must demonstrate an expert level knowledge of stoichiometry and a working level knowledge of chemical kinetics.	FAQS Competency #3	3	1
Chemical processing personnel must demonstrate an expert level knowledge of process safety.	FAQS Competency #4	4	Q

Importance Scale	Need At Entry Scale
How important is this competency for effective job performance?	When is this competency needed for effective job performance?
1 = Not Important	1 = Needed the first day
2 = Somewhat Important	2 = Must be acquired within the first 3 months
3 = Important	3 = Must be acquired within the first 4-6 months
4 = Very Important	4 = Must be acquired after the first 6 months
5 = Extremely Important	Q = Must be acquired before full qualification, within 18 months

Step 3: Job Analysis Worksheet for Task and Competency Linkage

Task Number	Competency Number					
	2	3	4			
1	4	2	4			
2	5	4	4			
3	3	2	5			

Linkage Scale

How important is this competency for effective task performance?

1 = Not Important

2 = Somewhat Important

3 = Important

4 = Very Important

5 = Extremely Important

N/A = Not Applicable

Step 4: Sponsor Recommendation of Appropriate Competency Level

Competency	Recommended Level	Justification
Chemical processing personnel must demonstrate an expert level knowledge of mass transfer and mass balances.	Expert	Required fundamentals of chemical processing. Candidate will be required to know and apply this knowledge from day one.
Chemical processing personnel must demonstrate an expert level knowledge of stoichiometry and a working level knowledge of chemical kinetics.	Working	Required knowledge for stoichiometry is basic in nature and the gap between working level and expert level is not appreciable. Candidate does not require expert level of knowledge to perform job tasks efficiently.
Chemical processing personnel must demonstrate an expert level knowledge of process safety.	Working	Expert level knowledge for this competency is gained primarily through experience. It is not reasonable to expect entry-level candidates to have a pre-existing expert level of knowledge of process safety. Process safety requirements are driven by DOE regulations, standards, and lessons learned and should not necessitate expert level knowledge.