Data Processor Grade I

S20 and S24

The following should be read and used in conjunction with the information pack 'Competence Assurance & Assessment: Introduction for Experienced Freelance Personnel'.

Evidence Required

Competence appraisal:
- at Data Processor Grade I level

Work records:
- copy of one safety related document such as, risk assessment form, toolbox talk sheet or safety briefing which clearly shows that the candidates was involved in the process
- copy of data processing progress logbook/sheet completed by the candidate
- copy of chart quality control check sheet completed by the candidate
- copy of final drawing prepared that met project specification

Witness testimonies:
- one example of the candidate maintaining a safe working environment for self and others
- two examples of candidate processing raw survey data through all stages up to production of client deliverables

Essential knowledge:
- written answers to Data Processor Grade I questions

Curriculum Vitae
- Detailing offshore trips, work scope, clients, regions etc.

IMCA Framework Requirements

The competence assurance and assessment framework developed by IMCA (the International Marine Contractors Association) sets out a number of elements for each safety-critical position. The following table shows how competence can be demonstrated against each element.

Code	Demonstration	Covered by
S/S20/000/01 **Safety**	Ability to adhere to offshore safety standards and maintain a safe working environment	CA (a) Q2, WT
	Ability to follow company safety procedures	CA (a) Q 4,5
	Ability to participate in risk assessment process	Q3
	Ability to recognise hazards in the work place	Q1,2 CA(a)
	Demonstrate a knowledge of how to react to safety critical situations and what immediate action can be taken to minimise/eliminate them	WT
S/S20/000/02 **Emergency Procedures**	Ability to recognise a potential or actual emergency situation and report it appropriately	Q 1,4
S/S20/000/03 **Behavioural Factors**	Ability to give and receive handovers at start and end of shift	CA (b)
	Ability to maintain clear and concise logbooks and records	Q 6
	Ability to use concise and unambiguous writing skills and the ability to handle written language effectively	WT
	Ability to communicate effectively with marine crew using correct descriptive terms for direction, vessel locations and relevant seamanship terms	Q 6, WT
S/S20/000/05 **Seamanship**	Demonstrate knowledge of practical seamanship and basic rigging skills	WT
	Demonstrate knowledge of how weather conditions affect ship handling and its impact on the safe handling of survey systems	Q 7
S/S24/000/06 **Data Acquisition**	Demonstrate understanding of what data formats are being logged by a standard data logging system	WT
	Ability to correct depths for tide and create tide files	Q 12-16, 9
	Ability to apply tidal reduction parameters to bathymetric data	CA (c)
	Ability to carry out quality control checks on tidally reduced depths	Q 12-16, 9
	Demonstrate an understanding of sensor location offsets and vessel reference framework	CA (d)

Code	Demonstration	Covered by
S/S24/000/07 **Data Processing**	Demonstrate an understanding of company processing procedures and how they are used to meet different project requirements	CA (e)– (h)
	Demonstrate a working knowledge of full suite of processing software functionality	WT
	Ability to identify and remove spurious observations, extraneous noise etc.	WT
	Ability to identify and apply smoothing algorithms suitable for specific data type and survey objectives	WT
	Ability to check raw data for quality and against documented acceptance criteria	CA (g)
	Ability to check processed data against project requirements/specifications	CA (e)
	Demonstrate an understanding of survey data interpretation process (data editing, de-spiking, controlled data decimation etc.)	WT
	Ability to perform manual checks on data to validate automated processes	WT
S/S24/000/08 **Data Presentation**	Ability to import survey line data and QC data	WT
	Ability to export survey line data and background graphics for use online	WT
	Ability to produce a chart to a specified company design	CA (f)
	Demonstrate an understanding of the relationship between chart scale, area covered and chart sheet size	Q 18
	Ability to present survey data in tabular format (e.g. incident or DCC listings)	WT
	Ability to present survey data in graphical format (e.g. time series plot or calibration residual plots)	CA (g)
	Ability to explain the information depicted in tabular or graphical format	WT
	Ability to carry out quality control checks on charts produced against company chart standards, reported results and processed data	CA (g)
	Ability to complete all chart quality control records	WT
S/S24/000/09 **Data Management**	Demonstrate an understanding of the company data management procedures	WT
	Demonstrate an understanding of file types, storage locations and file extensions	WT
	Ability to maintain an unambiguous data processing log over a sustained period	WT,R
	Ability to maintain all hard copy data records and quality control records	CA(h) WT

Q Question (written answer required) CA Competence Appraisal Form

R Record of work; document or product WT Witness Testimony

Sample Achievement Record

Candidate name: .....

First assessor name: .....

	Assessment Decision	Approval of Internal Verifier/ Competence Focal Point
Safety		
Emergency Procedures		
Behavioural Factors		
Seamanship		
Data Acquisition		
Data Processing		
Data Presentation		
Data Management		

Comments:

First assessor signature: ..... Date: .....

Verifier signature: ..... Date: .....

Sample Competence Appraisal

The appraiser must have observed the appraisee completing the task before completing the relevant section. Where necessary a number of different appraisers may be used to complete the form fully.

Appraisee name: .....

Task	**Feedback to Appraisee**	**Appraiser** *(Print name, sign and date)*
a) Demonstrate safety and emergency awareness, familiarisation with worksite and ability to identify hazards. Performance is exceptional ☐ Performance is competent and dependable ☐ Additional skills or experience required ☐		
b) Maintain effective teamwork and communication. Performance is exceptional ☐ Performance is competent and dependable ☐ Additional skills or experience required ☐		
c) Understand tidal theory, create tide files and correctly apply to depths. Performance is exceptional ☐ Performance is competent and dependable ☐ Additional skills or experience required ☐		
d) Understand the use of offsets and CRP's on survey sensors, the ROV and the vessel. Performance is exceptional ☐ Performance is competent and dependable ☐ Additional skills or experience required ☐		
e) Process acquired survey data in accordance with standard and / or project specific procedures. Performance is exceptional ☐ Performance is competent and dependable ☐ Additional skills or experience required ☐		
f) Produce survey charts in accordance with standard and / or project specific procedures. Performance is exceptional ☐ Performance is competent and dependable ☐ Additional skills or experience required ☐		

Task	Feedback to Appraisee	Appraiser *(Print name, sign and date)*
g) QC and validate raw data, processed data and survey charts using progress and QA/QC logs. Performance is exceptional ☐ Performance is competent and dependable ☐ Additional skills or experience required ☐		
h) Present survey data for inclusion in reports in accordance with standard and / or project specific procedures. Performance is exceptional ☐ Performance is competent and dependable ☐ Additional skills or experience required ☐		
Projects **Indicate which Projects you have participated in during the last 12 months. Specify Project Workscope**		
Projects Performance is exceptional ☐ Performance is competent and dependable ☐ Additional skills or experience required ☐	N.B. Feedback should be based on projects detailed above	
Hardware/Software **Indicate which Hardware/Software you have used during the last 12 months**		
Hardware/Software Performance is exceptional ☐ Performance is competent and dependable ☐ Additional skills or experience required ☐	N.B. Feedback should be based on software / hardware detailed above	

Appraisee comments:

Appraisee signature: ..... Date: .....

Essential Knowledge – Sample Questionnaire

1 What is the definition of a 'near miss' incident?

.....

2 List the most important hazards encountered when working offshore and the benefits of toolbox talks.

.....

3 What is the TRA process (task risk assessment) and how does it apply to typical tasks carried out in your work environment?

.....

4 For your worksite describe in detail how any safety incidents are reported.

.....

5 Where can you find the company emergency procedure documents for your worksite?

.....

6 Explain the importance of good communications.

.....

7 What is the difference between sea, swell and current and explain their effect on the deployed ROV/towed vehicle bearing in mind the safe working limits for the launch of ROV/towed vehicle?

.....

8 How would you QC event data against survey data?

.....

9 Explain how to check that the correct offset and tide ratios have been applied.

.....

10 Define a processing workflow for a specific type of survey task.

.....

11 What are the important factors to consider when setting up a data processing system?

.....

12 Where would you find the standard port to use for the project and which data would you extract from the Admiralty Tide Tables for input to the tidal databases?

.....

13 What would be the outcome of incorrectly applied tidal data on a section of survey data adjoining a correctly reduced section of data?

.....

14 What would be the effect on the reduced tidal data of applying the wrong time zone?

.....

15 On a long route survey (e.g. 100nm) at what frequency would you calculate time difference and ratio given a standard port to work from?

.....

16 Why would a project have more than one standard port, and what QC checks can be carried out to ensure correct co-tidal data is applied to depth data?

.....

17 What effect would the height of the towed fish have on the records in respect of range and determining the height of features?

.....

18 What is the relationship between chart scale, area covered and the chart sheet size?

.....

.....

.....