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International Federation of Inspection Agencies

# Petroleum inspector certification programme

## Inspector training requirement list

EDITION

# 1

Part of the International Certification Programme  
run in conjunction with the Energy Institute



# Petroleum Inspector Certification Programme Inspector Training Requirements List

International First Edition February 2009

Part of the Certification Programme run in conjunction with the Energy Institute

Training Record Book:

UK First Edition published February 2003

International First Edition published October 2004 (fully compatible)

Training Requirements List:

International First Edition published February 2009

(replaces Training Record Book)



### REQUIREMENTS FOR CERTIFICATION AS AN IFIA CERTIFIED INSPECTOR OF PETROLEUM

The candidate's employer must have completed the "IFIA Petroleum Inspector Certification Programme, Application for Certification" and must verify that all information contained in it is true and correct. The candidate must present the above Application for review at the time of the examination. The candidate must take and pass a qualifying examination administered by the Energy Institute, London. The minimum passing grade is 75%.

IFIA requires the employer to attest that each candidate:

- has completed all of the Training Tasks noted in this document
- is conversant with the petroleum inspection guidelines covered by publications such as the Energy Institute Hydrocarbon Management documents and the American Petroleum Institute Manual of Petroleum Measurement Standards Chapter 17.
- is aware and conversant with specific health and safety requirements laid down by national, regional or international regulatory bodies operative in the location of normal employment.
- has knowledge of the safety recommendations given in the International Safety Guide for Oil Tankers and Terminals (ISGOTT) - latest Edition published by Willerby and Co London.
- has received appropriate training in the use of respiratory apparatus should this be a normal working requirement.
- is qualified to work under such regulations as may be specified locally in the normal place of employment by such bodies as port or customs authorities.

### INSTRUCTIONS

Candidate's employers must ensure that each candidate has completed all of the Training Tasks in the following list. A record of that training must be maintained by the employer and shall be made available for review by independent auditor on request.

### CONTENTS

Health and Safety Training

Classroom Training

Field Training

- Equipment Calibration
- Use of Gauging Equipment
- Shore Tank Gauging
- Marine Vessel Gauging
- Temperature Measurement
- Manual Sampling Equipment
- Sample Containers
- Sampling General
- Sampling Procedures
- Sampling Ships and Barges
- Sample Handling
- Vessel Loading
- Vessel Discharge
- General Vessel Operations

## HEALTH AND SAFETY TRAINING

Item	
Hazard awareness and reporting	
Personal protective equipment	
Sample transportation	
Respiratory protection	
Drug/alcohol abuse awareness	
Static electricity awareness and precautions	
Material Safety Data Sheets	
Confined spaces awareness	

## CLASSROOM TRAINING

Item	
Ethics	
Tank entry procedures and permits	
Wall wash equipment and methods	

## FIELD TRAINING

Equipment Calibration	
Gauging tape verification	
Glass thermometer laboratory calibration	
Glass thermometer field check	
PET laboratory calibration	
PET field check	

Use of Gauging Equipment	
Manual gauging tapes	
Electronic gauging tapes (PEGDs)	
Ullage/Temperature/Interface equipment (UTIs)	
Operation of vapour control valves	

<b>Shore Tank Gauging</b>	
Dipping and ullaging	
Electronic gauge tapes (PEGDs and UTIs)	
Converting ullage to dip (innage)	
Reference height determination and comparison	
Free water measurement	
Line fill calculations	
Floating roof corrections	
Gauging temperature corrections (tank shell, gauge tape)	

<b>Marine Vessel Gauging</b>	
Manual gauging - open systems	
Manual gauging - restricted systems	
Manual gauging - closed systems	
Using automatic systems	
Gauging moving liquid	
OBQ and ROB Gauging	

<b>Tank Temperature Measurement</b>	
Liquid-in-glass thermometers	
PET/UTI equipment	

<b>Manual Sampling Equipment</b>	
Bottle & cage	
Closed and restricted system equipment	
Zone samplers	
Dead-bottom samplers (Bacon Bomb, Tube)	
Drum samplers	

<b>Sample Containers</b>	
Types of containers:	
Glass	
Polyethylene	
Polypropylene	
Metal cans	
Autosampler cans	

<b>Sampling General</b>	
Crude oil	
Refined products	

<b>Sampling Procedures</b>	
Care of equipment while sampling (cleanliness)	
Upper, middle, lower – position calculation	
Bottom sampling	
Interface sampling	
Tank side tap sampling	
All-levels samples	
Running samples	
Line samples	

<b>Sampling Ships and Barges</b>	
Vessel composites	
Blended cargoes (non-homogeneous)	
First-foot samples	
OBQ-ROB sampling	
Automatic samplers (portable and fixed)	
Closed and Restricted systems	
Vapour pressure samples	

<b>Sampling Handling</b>	
Sample tags/labels	
Sample receipts	
Transportation documents	
Transportation containers	
Sample segregation	
Sample security	
Sample distribution	

<b>Vessel Loading</b>	
Cargo history	
Non-cargo spaces	
Bunker measurement and sampling	
Sampling shore lines (jetty headers)	
Monitoring min/max cargoes	
Vessel Experience Factor (Load)	

<b>Vessel Discharge</b>	
Collecting load port samples	
ROB/Cargo retention statements	
Vessel Experience Factor (Discharge)	

<b>General Vessel Operations</b>	
Key meeting	
Deck inspection	
Time report/Statements of facts	
Sealing valves/hatches/lines	
Reading drafts	
Letters of protest	
Notice of apparent discrepancy	
Weight conversion factors	
Trim correction calculation	
Wedge formula calculation	
Using tank capacity tables	
Calculating cargo quantities	
Documentation	