



Risk Assessment & Method Statement (RAMS)

CEMS EN14181 Functional Testing

System Description	CEMS	Customer	Thalia MKEP
Work Start Date	17/11/25	Job No.	OPEN RAMS

Author	Name: XXXXXXXXXX	Date: 14/11/25
Revision	A	

Information included in RAMS submitted;	Yes	No	N/A	Comments (& Reviewer's initials)	Changes made (How are comments addressed & where in the document)
1) Details of key duty holders:			✓		
2) Start date:	✓			As above	
3) Project name or title:	✓			EN14181 Functional Testing	
4) Site address/location:			✓		
5) Describe task and key activities:	✓				
6) Describe arrangements for demarcation of works between various parties at site:			✓	Per site STL, Permitting	
7) Describe access & egress arrangements (inc. vehicle routes, pedestrian & vehicle segregation and parking)			✓	Customer to provide access equipment	
8) Describe access arrangements for work at height:	✓			RA attached	
9) Describe isolation arrangements (disconnection/reconnection of mechanical & electrical services)			✓	None Required	
10) Describe sequence of operations and/or the method the project or task must be carried out in sufficient detail:	✓			See method statement	
11) Lists details of plant, Equipment & Materials to be Installed or Used:	✓				
12) Describe known hazards and contains a suitable Risk Assessment	✓				

Information included in RAMS submitted;	Yes	No	N/A	Comments (& Reviewer's initials)	Changes made (How are comments addressed & where in the document)
13) Refer to site specific safety rules that apply (PTW required, responsible people, application/issue/acceptance)		✓		Per site STL	
14) Site Supervisor name:	✓				
15) Describe basic competence requirements for personnel (Role/Trade and how this is assured. e.g. CITB; CSCS; CPCS)	✓			Competency records on file at C&I Ltd	
17) Details of sub-contractors involved (company name & specialist discipline)			✓	N/A	
18) Tools & equipment needed to undertake the work (Include certification/calibration & any special training requirements required)	✓			Hand tools only	
19) Contingency plans should works or project not go to plan:	✓			Through Client discussion	
20) Include or reference plans to deal with, manage and dispose of waste from site:	✓			All waste to be disposed of using on site facilities	
21) Include or reference details of environmental, heritage, nature or SSSI, issues etc:			✓		
22) Reference to services to be provided by others/sub-contractors: (e.g. stand by man, facilities, scaffolding, etc)			✓		
23) Emergency procedures: (accidents, major spillages, terrorist alert. Include route to local A&E hospital)		✓		As per site induction	
24) Describe First Aid arrangements	✓			Seek assistance on site	

Information included in RAMS submitted;	Yes	No	N/A	Comments (& Reviewer's initials)	Changes made (How are comments addressed & where in the document)
25) Details of COSHH Risk Assessments:			✓	COSHH certs upon request	
26) Storage & disposal arrangements for COSHH materials			✓		
27) Describes Welfare facilities/arrangements:			✓	Site specific	
29) Details of any Occupational health assessments or health monitoring required:			✓	N/A	
30) Describes PPE Requirements	✓			Refer to Method Statement attached	

Risk Assessment / Method Statement Briefing Record

This document must be briefed to operatives, contractors, client employees and others as needed.

Briefing delivered by:

Position: Engineer

We (the undersigned) have been briefed on, we have read and understood the attached method statement and will comply with the specified requirements and control measures. If the work activity changes or deviates from that originally envisaged, we will seek further advice and request an amended method statement.

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Pre-Task Risk Assessment

Description of Work or Task:	CEMS & Rawgas Analyser Servicing/Fault Finding	Assessor Name:	Joe Ellerington
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Instructions for Use: As part of the risk management process the risk assessor must review the work task processes and environment. (1) Consider work tasks, identify and state the hazards. (2) Note the risk/incident that could occur and the likely injury or loss that may occur as a result (3) Use the 'Risk Rating Matrix' to assess each risk and enter the risk rating. (4) State controls to be put in place that will reduce the risk in order to prevent incidents and loss. (5) Use the 'Risk Rating Matrix' to identify the assessed 'Level of residual risk' after controls have been applied. The content of this document must be clearly communicated all persons involved with the work task or process.	Risk Rating Matrix - Indicate L, M, H, VH or N/A in columns (3) & (5)		
	Probability	x	Consequence
	Very Unlikely/Improbable Score = 1		No Injury or Incident Score = 1
	Unlikely Score = 2		Minor Injury/Minor Property Damage/Minor Environmental Impact Score = 2
	Likely/Not Unexpected Score = 3		Reportable Injury/Substantial Property or Environmental Damage Score = 3
	Very Likely/Not Unusual Score = 4		Major Injury/Major & Serious Property or Environmental Damage Score = 4
	Certain to Happen Score = 5		Fatality/Multiple Major Injuries/Environmental Catastrophe Score = 5
	The level of risk is Probability x Consequence The resulting figure gives the risk rating: 1-4 = L 5-9 = M 10-15 = H 16-25 = VH		

(1) Hazard	(2) Risk/incident that could occur and most likely injury or loss	(3) Level of uncontrolled risk	(4) Controls to reduce risk and prevent incidents and loss	(5) Level of residual risk
Working from Height –	Falling from height. Falling Material or objects. Tripping, access/ egress and weather	H	• Provide training for working at height • Remove unwanted materials or objects from the working level. • Raise any objects by a pulley / rope set or by crane for heavier or bulky objects • Ensure all raised levels and fitted with toe boards, hand rails and intermediate rails on all sides. • Ensure hand rail is 0.95m and intermediate rail is 0.475m above working platform. • Cordon off area below if working at or near the edge of the level • Ensure any scaffold has a current inspection certificate. • Ensure scaffold boarding is complete and secure and that each board has at least 3 supports. • Ensure that any scaffold appears to be on an adequate foundation. • Ensure that scaffolds are stable and secure. • Secure any electrical extension leads at the work level before connecting any equipment. • Daily tool box talks • Tool Tethers to be used - Buckets to be used to contain loose items	L

Calibration of Gas Analysers/ detectors	Asphyxiant gas release into working area. Gases used – N2, SO2, CO, CO2, NH3, C3H8, HCl, CH4, O2, H2	H	• Check valves and gauges for damage/wear & tear • Check for ample ventilation, if not available use a forced draught system. • Check all vents connected properly. • Check ppm/% concentration of toxic/flammable gas in bottle and refer to COSHH assessment. • Ensure tools are in good condition • Carry out a manual handling assessment for movement of gas bottles • ALL gases to be supplied with Material safety data sheets • Follow manufacturer's guidance as to procedures for calibration.	L
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Manual Handling	Musculoskeletal injuries, strains and sprains, crush injuries, WRULDS, cuts & abrasions	H	• Ensure those lifting have had adequate training • If lifting or carrying falls outside the Guidance to the Manual Handling Operations Regulations (L23 ISBN071762823X) then a specific Manual Handling risk assessment should be undertaken. • If possible avoid the need for lifting or carrying • Use mechanical or automatic devices if possible to lift loads	L
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Slips, Trips and Falls on The Level	Extension leads across floors, materials/equipment left in walkways, uncontrolled waste and detritus.	M	• Where practicable all work shall be done at, or adjacent to a designated workstation • Cables & leads shall be routed under or close to any available fixed objects or walls. • Where cables have to temporarily cross a walkway they should be if possible routed overhead. If not they should be marked and shall be clear for all to see and those at risk shall be informed of the hazard. • Cables obstructing routes shall be removed when not in use. • Materials & equipment use in the erection of panels and contents shall be positioned so as not to cause a hazard to others in the area. • Waste, banding and other detritus shall be placed in the appropriate bin upon generation. • Floors shall be swept or vacuumed daily. • Regular inspection of floors and walkways. • Wear appropriate footwear. • Report any floors that are damaged or could cause slip.	L
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Gas Testing of Installed Items	Gas at pressure and personal injury	H	• Permit to work • Permit acceptor - Supervisor • Only certificated persons shall carry out a system pressure test. • Use air where appropriate • Use non-flammable, non-toxic gas wherever possible. • Install appropriate warning signs of test. • If a system is installed inside a structure, then the structure must be provided with suitable ventilation before testing is undertaken. • Systems pressure indication calibrated. • Safe working pressure shall be prominently indicated on the system • Before pressure is applied the tester shall make a visual inspection of the system to identify any obvious failures. • Upon completion of the test the relevant certification shall be provided to the client. • In the event of an accident report to the nominated person on site and then to the C&I Ltd Office	L
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Removal of probes from stack	Hot surfaces, Hot gases, asphyxiant gases, toxic gases	M	• Permit to work • Only trained persons to remove blanks or probes from live plant • Keep clear of sample port when removing probes • Arms to be covered • Suitable overalls to be worn • Face mask suitable for the gases/dust in flue • Heat proof gloves to be worn • Allow probes to cool before commencing work	L
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CUSTOMER COMMENTS:

METHOD

Describe a step by step working method taking into account all aspects of the work to enable the activity to be completed safely.

1. On arrival make contact with customer.
2. Attend site induction (if required)
3. Obtain permit to work (if required)
4. Carry out POWRA
5. Check health of the system and detail findings
6. Check and record all Analyser Parameters
7. Conduct zero check on all Analysers and Sampling Probes – Record results
9. Conduct span check on all Analysers and Sampling Probes – Record results
9. Conduct 20,40,60 & 80% tests and record results
10. Clean and tidy area.
11. Handover to site contact.
12. Sign off permit to work

TASK SPECIFIC RISK ASSESSMENT

To ensure compliance with relevant statutory provisions of The Health and Safety at Work Act (1974) and The Management of Health and Safety at Work Regulations (1999) there must be a suitable procedure in place for the identification, control and recording of risk. This procedure includes the need to issue suitable and sufficient Risk Assessments to ensure staff have relevant information about the nature of the work and any potential hazards they face before starting work. To ensure this procedure is effective there should be a formal plan for review of Risk Assessments, this is a statutory obligation. The review of Risk Assessments is essential and individuals should be aware of the following information to ensure the Risk Assessment remains up to date and effective.

The Risk Assessment should be reviewed under the following circumstances

- Whenever the nature of the work changes
- A change in working practices
- An alteration or change to equipment or machinery
- A change of staff (some staff may be vulnerable due to age, disability, gender etc)
- A change in environmental conditions
- After an accident, occupational disease, dangerous occurrence or near miss
- After the identification of new or previously unidentified hazards
- Changes in technology
- Changes in legislation, guidance or best practices
- At a regular time interval, to be arranged at the time of writing and should be proportional to the degree of risk involved

RISK RATING = SEVERITY X LIKELIHOOD		
SEVERITY	LIKELIHOOD	RISK RATING
5 = Death of member of public. Multiple worker deaths	5 = Imminent	1-5 Low
4 = Single worker death. Multiple major injuries Significant irreversible disability	4 = Will happen	6-10 Medium
3 = Single major injury. Injury resulting in more than 3 days away from work.	3 = Likely to happen	11-25 High
2 = Minor injury. Injury resulting in 1 day away from work. Restricted work. Medical treatment beyond first aid.	2 = Possible	
1 = First aid case with no lost time. Negligible safety impact.	1 = Unlikely to happen	
RISK RATING	COMMENTS	RISK CONTROL PRIORITY
1 - 5	Operation or task OK to continue. Little or no risk residing	3
6 - 10	Operation or task OK to continue. Acceptable risk residing. Monitoring of controls should be carried out Permit to Work may apply. Supervision is required	2
11 - 25	Operation or task should cease until further analysis is carried out. Decide on alternative methods of work. Unacceptable risk resides. If operation or task continues monitoring at each stage of task should be carried out. Permit to Work will apply. Competent supervision must be in place during task	1

TASK/ACTIVITY: CEMS EN14181 Functional Testing

SITE/PROJECT: Thalia MKEP

AREA: CEMS, Raw Gas Analysers and Probes

PERSON(S) AT RISK: Workforce, other contractors on site, site visitors, public

ESTIMATED DURATION: 4 days.

Hazard Associated with Task/Activity	Severity	Likelihood	Risk Rating	Control Measures Needed to Reduce Risk	Severity	Likelihood	Residual Risk Rating
Work at Height	4	3	H	Certified persons to perform the task. Adhere to work procedure. Use PTW system. Use tool lanyards.	4	1	L
Calibration Of Sensors	5	3	H	Certified persons to perform the task. Adhere to work procedure. Adequate ventilation to be maintained.	5	1	L
Manual Handling	4	2	M	Minimise lifting, use mechanical aids as appropriate	4	1	L
Slips, Trips and Falls on the Level	5	2	M	Maintain good house keeping. Carry out POWRA each day.	5	1	L
Removal of probes	3	3	M	See detailed risk assessment above	3	1	L