CS ENERGY PROCEDURE FOR

CONDUCTING CRITICAL CONTROL AUDITS
CS-OHS-60

Responsible Officer: Health and Safety Specialist
Responsible Executive: Group Manager Safety Environment and Quality

DOCUMENT HISTORY

Key Changes	Prepared By	Checked By	Approved By	Date
Draft	K Ussher			
Draft – Reviewed and amended by Taskforce *(15 May 2012)*	K Ussher	H&S Taskforce		
Draft – Updated the 15 High & Significant Risks following Taskforce Steering Committee meeting *(10 September 2012)*	K Ussher	H&S Taskforce		
Original Release	K Ussher	H&S Taskforce	J Judge	12/10/2012

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1 PURPOSE

CS Energy has developed several tools and processes to provide safe systems of work when performing work activities. The tools and processes to minimise the risk to "as low as reasonably practicable" (ALARP) vary depending on the level of control measures for the risk categories.

The Critical Control audits are a tool to ensure the adequacy of prescribed controls in managing hazards that have an inherent risk that is "significant" or "high" risk, consistent with the hierarchy of control.

This procedure shall be used in conjunction with the Procedure for Health and Safety Life Savers, CS-OHS-49 and Minimum Health and Safety Standards for Critical Risks, CS-OHS-48.

2 CONTEXT

The CS Energy Critical Control audits are a systematic and proactive approach to the auditing of CS Energy's Critical Controls to ensure the protection of the company's people, assets, reputation and for the protection of the environment that the company operates within.

The audits take into account numerous criteria, including information collected by the person/s performing the audit following site inspection, review of documentations and discussions with individuals.

The Critical Controls apply as either "preventative control measure" to prevent the hazard being released or "mitigation / recovery control measures" to reduce the severity of the hazard consequences if released.

The following diagram demonstrates the relationship between the hazard threats and controls, escalation factors, controls, consequences, recovery, preparedness measures and Critical Controls.

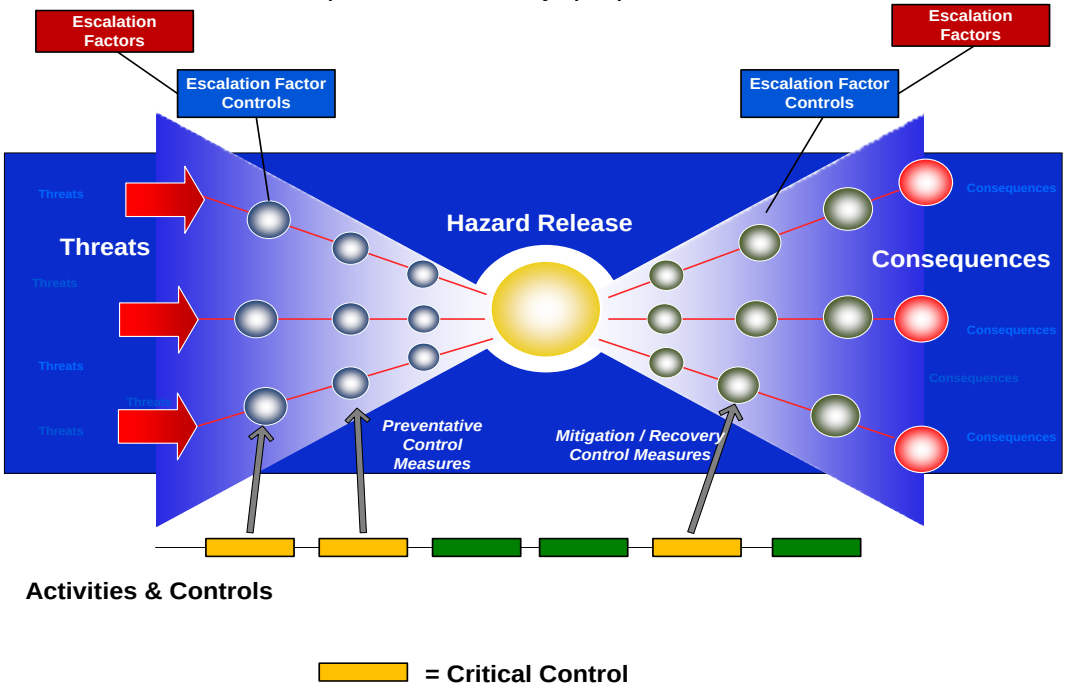


Diagram 1. Bow Tie-Diagram

CS Energy has identified these inherent significant or high risks based on the company Incident Management System data and in consultation with management and employee representatives. These risks have been categorised as the following:

	Short Description of Risk	Long Description
1.	**Interaction with Plant - Uncontrolled exposure to energy sources**	Interaction with plant that contains live energies (Electrical and Mechanical plant isolation verified and effective for work)
2.	**Plant / Structure failure**	Plant failure causing release of substance or energy under pressure
3.	**Penetration of underground or building services.**	Excavation, digging and building works with the potential to interact with underground and building services.
4.	**Confined Space**	Confined Space Entry
5.	**Working At Heights**	Working at heights with the potential to fall. This may include working with unprotected edge with the potential to fall.
6.	**Falling Objects**	Falling objects from above ground level
7.	**Hazardous Substances and Dangerous Goods**	Transport, storage, handling and use of hazardous substances and dangerous goods.
8.	**Working in a remote / isolated location**	Workers completing remote or isolated work activities off site.
9.	**Fire and Explosion**	Plant fire or explosion. This risk could originate from hot work, ignition sources, impaired fire systems or impaired detection systems.
10.	**Vehicle Interaction (heavy/light and pedestrian)**	Worker interaction with heavy vehicle and other vehicles on site or off site (vehicle collision with other vehicle or person while on site or travelling to and from work or other site.
11.	**Travel**	Travelling to / from sites. This includes travelling to other sites or company assets off site as well as travelling home.
12.	**Fit for Duty**	Worker not fit for duty to site or conduct work on site.
13.	**Hazardous Manual Tasks**	Person developing musculoskeletal disorder (MSD) from performing hazardous manual tasks.
14.	**Crane / complex lifts**	Falling loads from ineffective lift plans (crane lifts, complex crane lifts)
15.	**Working on or near water**	Performing tasks in or around dams, streams, water ways

3 SCOPE

This procedure applies to all employees and contractors working for CS Energy and its associated activities.

4 RESPONSIBILITIES AND ACCOUNTABILITIES

4.1 Group Managers / Site Managers

Managers are responsible for:

- Implementation of this procedure;

- Ensuring sufficient resources are provided to effectively conduct the Critical Control audits;
- Assisting with the development of the 2 year schedule for the audits to be performed;
- Conducting Critical Control audits where required;
- Actioning and tracking corrective actions that may arise following the audit to ensure they are completed appropriately;
- Provision of appropriate training;
- Providing site statistics to be included in CS Energy Health and Safety performance reports;
- Ensuring that all corrective actions following Critical Control Audits are recorded in the OHS Risk Registers and monitored until completion;
- Ensuring quality and effective Critical Control audits are carried out; and
- Conducting periodic reviews of the process and reporting on the effectiveness and application.

4.2 Superintendents / Supervisors

Superintendents and Supervisors are responsible for:

- Ensuring compliance with this procedure by all employees and contractors;
- Assisting with the development of the 2 year schedule for the audits to be performed;
- Conducting Critical Control audits where required;
- Assisting management in tracking corrective actions that may arise following the audit; and
- Provision of appropriate training and support to all personnel in application of this procedure.

4.3 Site Health and Safety Department

The Site Health and Safety Department is responsible for:

- Providing support and advice to personnel;
- Conducting Critical Control audits where required;
- Assisting with the development of the 2 year schedule for the audits to be performed;
- Monitoring and review of completed forms;
- Providing site statistics to be included in CS Energy Health and Safety performance reports;
- Assisting with entry of any outstanding corrective actions / deficiencies into the OHS Risk Register;
- Assisting management in tracking corrective actions that may arise following the audit; and
- Maintaining records for monitoring and review purposes.

4.4 Employees / Contractors

Employees and contractors shall:

- Comply with the requirements of this procedure;
- Be involved in the audit program when requested to by their supervisor; and
- Attend appropriate training and awareness sessions as directed by their supervisor or manager.

4.5 H&S / PTW Committee Members

Employees that are members of the site Health and Safety (H&S) Committee or Permit to Work (PTW) Committee shall:

- Comply with the requirements of this procedure;
- Assisting with the development of the 2 year schedule for the audits to be performed;
- Be involved in the audit program when requested to by the management team; and
- Attend appropriate training and awareness sessions as directed by their supervisor or manager.

5 APPLICATION

5.1 Performing Critical Control Audits

(Refer to Appendix 1 for an example)

To effectively conduct a Critical Control audit, the following criteria are to be applied:

(i) The desktop component of the audit is to examine the Safety Management System and the evidence of records kept, to support the use of the system in relation to the Critical Controls being audited. Copies of documents reviewed are to be referred to on the audit form (also attach a copy where appropriate for future reference).

(ii) The site or field observation component of the audit is to examine actual operational activities to verify that procedures are being followed.

(iii) Prior to commencing the field observation component of the Critical Control audit and if people are in the area, inform the person or workgroup that an audit is going to be carried out.

(iv) Conduct the Critical Control audit by assessing the specific area and/or activities detailed on the relative Critical Control audit form and record whether it is compliant, non-compliant or not applicable with a tick (✓) in the appropriate box. The following abbreviations are to assist the auditor in determining confirmation.

V – Visual Confirmation;

D – Document Confirmation; and

C – Conversation with person (s) for confirmation.

(v) Include on the Critical Control audit form all deficiencies, action taken and/or required, and whether notification has been provided in SAP (maintenance planning database), where applicable.

(vi) Following each audit, any outstanding actions and deficiencies are to be correlated by the audit leader and reported to the site management to address non-conformities.

(vii) All outstanding actions following the completion of the audit are to be rectified immediately where possible. Where this cannot be performed immediately they are to be included in the OHS Risk Register and managed in accordance with the CS Energy's OHS Risk Register procedure.

(viii) If, during an audit, a serious safety breach/event (i.e. has high potential to cause serious injury and/or property damage such as breaking a life saver rule.) is observed, the audit is to cease and the breach/event be reported as an incident. The incident management process (CS-IM-01) shall be initiated. All other deficiency identified are to be managed as per section (vii)

5.2 Frequency

The Critical Control audits are to be performed over a 2 year period at all operational sites to provide management with a clear “targeted snap-shot” of CS Energy’s performance in terms of health and safety management for each of the Critical Controls.

The site management team, H&S Committee and PTW Committee are to develop the 2 year schedule for the audits to be performed.

Selected Critical Controls may be monitored every three months depending on the sites health and safety risk profile and performance history.

As part of overhaul activities, the Overhaul Manager shall set a specific frequency and the elements to be audited for the duration of the overhaul.

6 RECORDING AND MEASURING

Each Critical Control audit checklist is to derive a percentage of compliance to the minimum standards for the Critical Risk.

A summary of the audit findings and corrective actions are to be presented to the site manager following the completion of each audit by the lead auditor.

These actions are to be included in the OHS Risk Register and managed in accordance with the CS Energy’s OHS Risk Register procedure.

The monthly Health and Safety Statistic Report is to include an overview of the audits performed and outstanding actions.

7 MONITORING AND REVIEW

Periodic monitoring and review of the Critical Control audit process shall be performed to determine and maintain the quality and effectiveness.

Monitoring and review shall be conducted at each site:

- At a frequency nominated by the site manager; and
- By senior staff nominated by the site manager.

This will also be supplemented with periodic monitoring and review by CS Energy Health and Safety department.

A checklist for quality monitoring and review performed on conducting Critical Control audits is detailed in Appendix 3.

8 REFERENCE DOCUMENTATION

Reference No	Reference Title	Author
"B/D/11/30977"	CS-OHS-M-01 - CS Energy Health and Safety Manual	CS Energy
"B/D/11/30970"	CS-OHS-48 - Minimum Health and Safety Standards for Critical Risks	CS Energy
"B/D/11/30939"	CS-OHS-11 - Procedure for a Job Safety and Environmental Analysis	CS Energy

9 DEFINITIONS

Term	Definition
Critical Control	Where a prescribed control is put in place to manage a hazard with inherent *significant* or *high* risk.
Hazard	A source of potential harm to personnel, plant or the environment.
Risk	Effect of uncertainty on objectives.

10 APPENDICES

10.1 Appendix 1 – Critical Control Audit Form (Example)

Critical Control Audit – Fire and Explosion (Hot Work)
Form S2069
Ver. 3 (01.10.12)

This critical control audit is to be performed on activities containing ignition sources and/or fuels. The audit will include interaction with working parties and review of documentation and records to assist in determining compliance for the critical elements for activities with ignition source or fuels. The following abbreviations are to assist the auditor in determining confirmation. V – Visual Confirmation; D – Document Confirmation; C – Conversation with person (s) for confirmation. Reference Documentation: WHS Regulation 2011, CS-PTW-HAZ-01 – Procedure for Hot Work & AS 1674 Safety in Welding and Allied Processes.

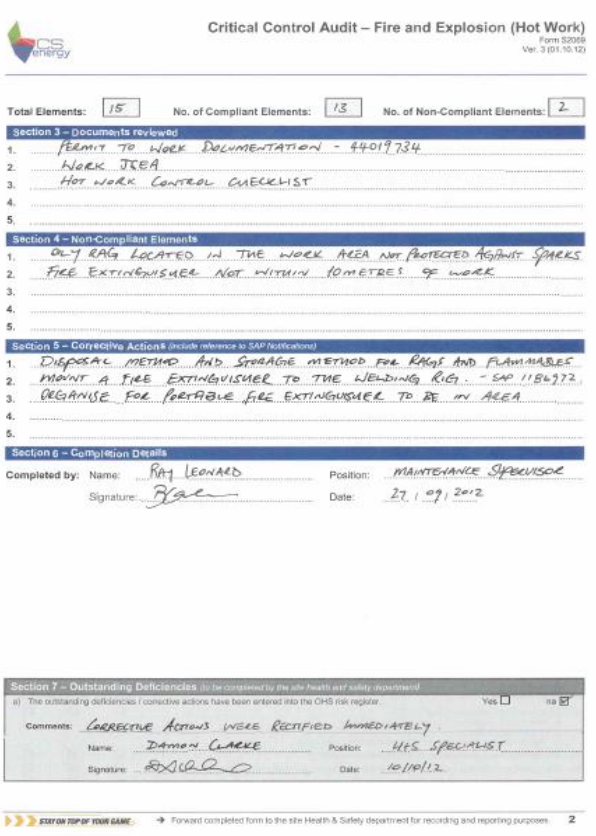
Section 1 – Details

Site: KOGAN CREEK PS. PTW Number/s: 4019734
Job Description: WELDING IN MILL 'D'
Date: 27 / 09 / 2012 Time: 14 : 40 hrs
Audit Leader: RAY LEONARD
Other Team Members: 1. BARRY BOTTLE 2. SAM TAYLOR

Section 2 – Fire and Explosion (Hot Work) Tick ✓ appropriate boxes

		Compliant	Non-compliant	N/A
1.	**Hot Work - Hazard Identification**			
(a)	Listed on the PTW under hazards is "Hot Work" **or** is the work performed in a designated hot work area? (V, D)	☑	☐	☐
(b)	Is the Hot Work Control Checklist (form S0010) correctly filled out including the following: (D)	☑	☐	☐
	• Work area, item to be worked on and scope; ✓			
	• Sources of ignition listed; ✓			
	• Special precautions and conditions; ✓			
	• Is gas atmospheric testing required; ✓			
	• Checklist of item prior to work commencing; and ✓			
	• Hot Work Risk Assessment. ✓			
(c)	Persons performing welding activities are not working alone? (V)	☑	☐	☐
(d)	Are the flash back arrestors suitable for the types of equipment used? (V)	☑	☐	☐
(e)	If no hot work, fuels and potential ignition sources have been identified and managed in JSEA for work (D, C)	☐	☐	☑
(f)	Are there fire and emergency provisions in place and adequate for the risk? E.g. ERT required? (D, V)	☑	☐	☐
	Comments: JSEA + SCORED HOT WORK CHECKLIST COMPLETED THOROUGHLY			
2.	**Hot Work – Training & Authorisation**	Compliant	Non-compliant	N/A
(a)	If a PTW is required, has been signed by all work party members? (D)	☑	☐	☐
(b)	If a PTW is required, have all workers signed and understood the Hot Work Control Checklist? (D)	☑	☐	☐
(c)	Have all work party members signed onto and understood the JSEA? (D, C)	☑	☐	☐
	Comments: WORK PARTY SIGNED ONTO TASK SPECIFIC JSEA			
3.	**Gas Testing**	Compliant	Non-compliant	N/A
(a)	Has gas testing been completed for all source and potential sources where there is a likelihood of the presence of flammable gas and/or flammable vapour? (D)	☑	☐	☐
(b)	Has the testing been performed as late as practical before the hot work has commenced? [maximum 2 hours] (D)	☑	☐	☐
	Comments: WELDING STARTED WITHIN 2 HOURS OF SHIFT STARTING.			
4.	**Fire Protection**	Compliant	Non-compliant	N/A
(a)	Does the person on fire watch know: (D, C)	☐	☐	☑
	• Where the fire equipment is located and how to use it?			
	• How to raise the alarm?			
	• How to use a fire extinguisher [or other fire fighting equipment]? ✓			
(b)	Are fire extinguishers located within 10 metres of the work area? (V)	☐	☑	☐
(c)	Combustible materials (e.g. ply, rags, oil) removed or protected against sparks, slag and molten metal	☐	☑	☐
(d)	Has an inspection been completed after the hot work has been completed? (D)	☑	☐	☐
	Comments: ONLY RAGS NEXT TO WELDER + FIRE EXTINGUISHER NOT WITHIN 10METRES			

STAY ON TOP OF YOUR GAME → Forward completed form to the site Health & Safety department for recording and reporting purposes. 1



Critical Control Audit – Fire and Explosion (Hot Work)
Form S2069
Ver. 3 (01.10.12)

Total Elements: 15 No. of Compliant Elements: 13 No. of Non-Compliant Elements: 2

Section 3 – Documents reviewed

1. PERMIT TO WORK DOCUMENTATION - 4019734
2. WORK JSEA
3. HOT WORK CONTROL CHECKLIST
4.
5.

Section 4 – Non-Compliant Elements

1. ONLY RAG LOCATED IN THE WORK AREA NOT PROTECTED AGAINST SPARKS
2. FIRE EXTINGUISHER NOT WITHIN 10METRES OF WORK
3.
4.
5.

Section 5 – Corrective Actions (include reference to SAP Notifications)

1. DISPOSAL METHOD AND STORAGE METHOD FOR RAGS AND FLAMMABLES
2. MOUNT A FIRE EXTINGUISHER TO THE WELDING RIG. - SAP 11847772
3. ORGANISE FOR PORTABLE FIRE EXTINGUISHER TO BE IN AREA
4.
5.

Section 6 – Completion Details

Completed by: Name: RAY LEONARD Position: MAINTENANCE SUPERVISOR
Signature: Date: 27 / 09 / 2012

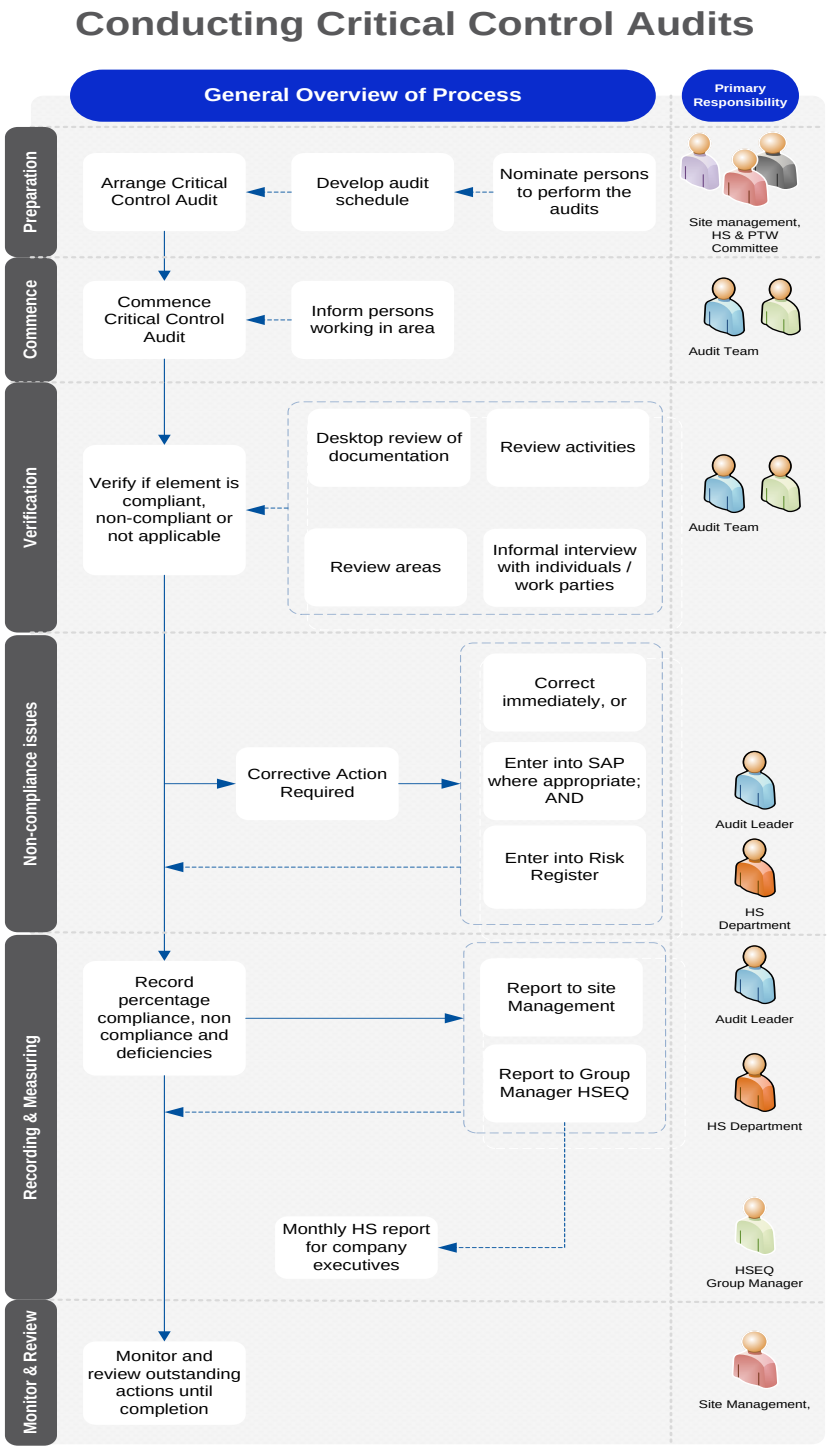
Section 7 – Outstanding Deficiencies (to be completed by the site health and safety department)

a) The outstanding deficiencies / corrective actions have been entered into the OHS risk register. Yes ☐ na ☑

Comments: CORRECTIVE ACTIONS WERE RECTIFIED IMMEDIATELY
Name: DAMON CLARKE Position: HES SPECIALIST
Signature: Date: 10/10/12

STAY ON TOP OF YOUR GAME → Forward completed form to the site Health & Safety department for recording and reporting purposes. 2

10.2 Appendix 2 – Process for Performing Critical Control Audits



Critical Controls

They are prescribed control put in place to manage a hazard with inherent *significant* or *high* risk.

2 Year

The site management team, HS Committee and PTW Committee are to develop the 2 – Year schedule for the audits to be performed.

Selected Critical Controls may be monitored every three months depending on the sites health and safety risk profile and performance history.

As part of overhaul activities, the Overhaul Manager shall set a specific frequency and the elements to be audited for the duration of the overhaul.

10.3 Appendix 3 – Conducting Critical Control Audits Quality Checklist and Score

Checklist against CS Energy Procedure for Conducting Critical Control Audits, CS-OHS-60

Effectiveness Measure: 1 = Not established, not effective ➔ 5 = fully established, fully effective

Critical Control Audit Quality Elements	Effectiveness (1 to 5)	Comments
1. The site management team, H&S Committee and PTW Committee have developed the 2 year schedule for the audits to be performed.		
2. The desktop component of the audit examined the Safety Management System and the evidence of records kept to support the use of the system.		
3. Copies of documents reviewed are referred to on the Critical Control audit form.		
4. Following each audit, corrective actions or deficiencies have been noted on the Critical Control audit form.		
5. These corrective actions are included in the OHS Risk Register.		
6. There is evidence of these actions being monitored, actioned and / or completed.		

Total Score : _____

% Effectiveness : _____ (100 x Score / 30)