



CS ENERGY PROCEDURE FOR  
**ENVIRONMENTAL MONITORING & MEASUREMENT**  
**CS-EMSP-6**

Responsible Officer: Portfolio Environment Manager

Approved: GM Portfolio Services

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## 1. Purpose

- To ensure that monitoring is carried out in a consistent manner and in accordance with relevant standards.
- To ensure that all monitoring requirements are collated as monitoring programs.

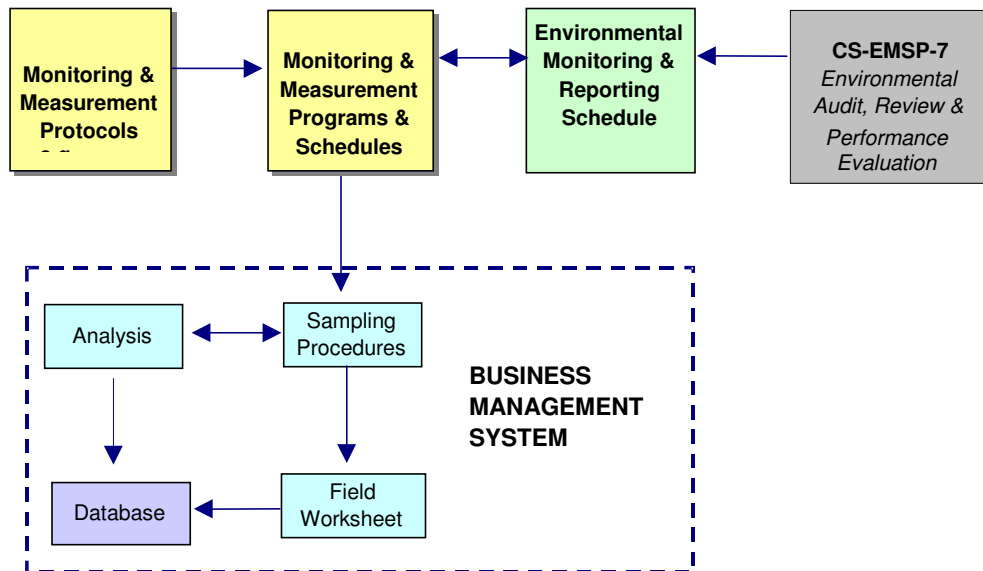


Figure EMSP-6: Environmental Monitoring & Measurement flow diagram

## 2. Scope

This procedure applies to any environmental monitoring associated with CS Energy environmental performance reporting.

## 3. Actions

### 3.1 Monitoring Programs

Monitoring programs are formulated from environmental approval requirements, emerging issues, due diligence considerations and issues where monitoring is identified as an operational control through the Environmental Issues Register process (see CS-EMSP-2 Developing Environmental Planning).

A monitoring and measurement program is a document which details the site specific monitoring to be performed to provide detailed information on the Environmental Indicators listed in the Environmental Monitoring and Reporting Schedule (refer CS-EMSP-7: Environmental Audit Review & Performance Evaluation). Monitoring and measurement programs shall contain:

- Basis for and scope monitoring program;
- Description of impact being monitored;
- Parameters to be measured based on environmental approval(s), policy, NPI, etc.

- Monitoring site locations and relevant information for carrying out monitoring.
- Sampling procedures or defined provider (Sections 3.3 and 4.4).
- Analysis procedures or defined provider (Section 3.4).
- Reporting requirements including relevant Environmental Monitoring and Reporting Schedule requirements, timing, recipient (who requires the report), circulation, file for storage, electronic or hard copy monitoring record storage and description of specific environmental approval or other requirements.
- References.

### **3.2 Develop Monitoring Schedule**

Monitoring schedules applicable to programs are to be developed. These will contain information on:

- Applicable program title/name;
- Sampling point & location;
- Limits according to environmental approval(s);
- Parameter to be measured (based on program requirements);
- Frequency of measurement;
- Required measurement units; and
- Date schedule last reviewed/updated.

Monitoring schedules are usually held within the monitoring program.

### **3.3 Sampling Work Instructions**

These are to be prepared if a service provider is not used, or if it is agreed that these are to be supplied to the service provider.

In most cases, sampling would be carried out in accordance with the Department of Environment and Resource Management (DERM) Sampling and Analysis Manuals published for water quality, air quality and noise measurements, particularly where this was an environmental approval requirement.

Work instructions are to contain at least the following information:

- Parameter(s) being sampled;
- Reference standard or protocol on which it is based;
- Sample preparation and preservation technique;
- Sample storage, handling and labelling requirements; and
- Instructions regarding observations, abnormal conditions, etc.

### **3.4 External Providers - Monitoring & Measurement Requirements**

External providers of monitoring and measurement services are to be supplied with the appropriate monitoring program(s) and additional information to reflect the requirements including:

- Scope of work in terms of sites, parameters, frequency.
- Analysis and sampling methodology, i.e. preferred methods to be suggested. These methods can be from Australian Standards,

Government Authorities or company developed. In most cases, sampling would be carried out in accordance with DERM Sampling and Analysis Manuals published for water quality, air quality and noise measurements, particularly where this was an environmental approval requirement.

- Calibration requirements such as frequency of calibration tests and reference/standards used.
- Third party certification required for analysis.
- Any requirements for prior approval (e.g. DERM) of specific methodologies.
- Specified units for reporting.
- Notification requirements e.g. reporting exceedances within designated time period and supplying other information such as method used, confidence limits, etc.

### **3.5 Monitoring and Measurement Records**

Retention times for monitoring records shall be established to be consistent with the Public Records Act and the associated General Retention and Disposal Schedule and Energy Sector Retention and Disposal Schedule. Legal requirements for environmental record storage and retention are also specified in site environmental approval(s).

## **4. Responsibilities**

### **4.1 General Managers & Site Managers**

- Responsible for ensuring that resources are available for carrying out the environmental measurement programs.

### **4.2 Site Environmental Coordinator**

- Responsible for collating information and the preparation of protocols, measurement programs.
- Review of site monitoring and measurement programs.

## **5. Review**

### **5.1 Monitoring & Measurement Program**

These programs will be reviewed periodically but generally at least once per year by the Site Environmental Coordinator and reported through the Environmental Coordinators group as to their suitability to CS Energy operations. The review will assess:

- Quality of data and suitability of programs at sites.
- Legal requirements, Policy requirements and ability to determine Environmental Performance.

All of the above must be updated as required, for example after environmental approval changes etc.

Recommendations from reviews should be documented.

The EMS Audit Program (refer CS-EMSP-7 – Environmental Audit, Review and Performance Evaluation) encompasses the checking of this document.

## 6. Auditable Outputs

- Environmental monitoring programs and schedules.
- Environmental monitoring records.

## 7. Definitions

Definitions to the following are found in the EMS Manual Glossary: protocol.

## 8. Reference Documentation

CS Energy / General	QA Doc No.	Location
EMS Procedure – Environmental Audit, Review & Performance Evaluation	EMSP-7.doc	K:\Corprocs1\Environment

## 9. Attachments

None

## 10. Document History

Issue Date	Nature of Changes
27.1.1999	Original Issue
17.5.2000	Updated responsibilities
3.7.2000	Minor editing
28.8.2000	Added diagram
17.11.2000	Added Review and Auditable Outputs
24.11.2000	Minor editorial changes. Reference EPA methods in Section 3.3. New Section 3.5.
16.02.2001	Updated document history
18.11.2002	Removal of reference to EMRO, rewording of Section 3.4 including inclusion of scope of work, minor changes to titles, minor editing.
25/11/2003	Updated procedure to reflect current practice with respect to programs and schedules.
06/06/2005	Document owner; minor editing; updated Reference Documentation including reference to CPM Env Mgt Implementation Plan.
19/04/2006	Clarification and amendment of processes detailed in Sections 3.1 and 5.1; responsibility to review monitoring programs added to Section 4.2; update organisational titles; minor editing.
6/07/2009	EPA replaced with DERM; references to site-specific documentation removed; references to 'licence' or 'authority' changed to 'approval'; update organisational titles; Section 3.5 & 8 deletion of reference to CS-QR-1 Business Records and Section 3.5 new reference to Public Records Act; minor editing.