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|---|--|-----------------------|-------------|
| <b>Document Name:</b>   | <b>Procedure for Monitoring and Measurement</b>                                    |                       |             |
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| <b>Document Owner:</b>  | <b>Approval:</b>   |                       |             |
|   |  |                       |             |
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### 1 BACKGROUND

Monitoring of key operations such as the water treatment facility, range management, renovations, and utilities will continue to be performed by the existing management structure and through the EQCC, CFT, and EMSR. This monitoring will highlight any change in environmental aspects of operations and therefore allow the EMSR and CFT to remain confident those current environmental objectives and targets are appropriate and support the environmental policy.

Monitoring and calibration of testing and measurement methods will fluctuate as the USAGH-JMRC works towards and achieves specific objectives and targets. Specific monitoring and testing should be identified as new objectives and targets are developed.

For example, if the USAGH-JMRC decides that solid waste minimization is an objective, then the solid waste plan should address how solid waste is measured and include any calibrations that may be required to assess progress towards the goal of minimizing solid waste generation and/or increasing recycling rates. In this example, the tons of solid waste generated per capita may be identified as an appropriate measurement of the success of waste minimization.

### 2 PURPOSE

The purpose of this procedure is to define standard methods for monitoring and measuring parameters related to the significant aspects of USAGH-JMRC operations using the following characteristics:

- Recording information to track system performance,
- Following relevant operational controls,
- Conforming with the environmental objectives and targets, and
- Periodically evaluating compliance with relevant environmental legislation and regulations.

### 3 APPLICABILITY



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This procedure applies to all organizations including contracted organizations within the USAGH-JMRC footprint involved in the EMS; this includes, but is not limited to: Environmental Management Program Managers (EMP Managers), Division Chiefs and supervisors as well as personnel working with monitoring and measuring equipment/tools.

#### 4 DEFINITIONS

A comprehensive list of terms and definitions used in and related to the EMS Hohenfels provides the Glossary of EMS Terms and Definitions (EMS410\_002\_Glossary.doc).

**Environmental Management Program (EMP) – Environmental Management Program (EMP)** – An EMP relates to one significant environmental aspect only. Thus, for each significant aspect identified, one EMP must be developed in order to conform with ISO 14001. EMPs include but are not limited to spill prevention, air, groundwater, surface water, soil, cultural resources, pollution prevention, etc.

**Environmental Management Program Manager (EMP Manager)** – An individual appointed by the EMSR to manage a specific environmental management program (EMP).

**EMS Management Representative (EMSR)** — An individual appointed by the Commander to be responsible for managing and overseeing the EMS.

**Environmental Management Program Team Members** – Individuals appointed by the Environmental Program Manager to support during preparation, implementation, review and revision of Environmental Management Programs.

**Environmental Objective** – An overall environmental goal that is consistent with the environmental policy, and that an organization sets itself to achieve.

**Environmental Target** – Detailed performance requirement, quantified where practicable, applicable to the organization or parts thereof, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives.

**Legal Requirements** – All laws, regulations and guidance documents, permits, and memorandums of agreement applicable to the USAGH-JMRC activities, products and/or services. (see Other Requirements)

**Monitoring and measuring** — Methods and procedures utilized to determine and evaluate the performance of the key operations that may have significant impacts on the environment, and the operations relevant to the installation's objectives and targets.

**Operating Instruction (German: Betriebsanweisung)** – is a work-place specific instruction that provides information on handling hazardous substances, as well as information on risks for human health and the environment associated with hazardous substances handled at each specific workplace. It describes activities, which could pose a health risk to people and/or have a significant impact onto the environment.

**Operational Controls** – include Operating Instructions and Standard Operating Procedures (SOPs). Many operational Controls are already in place at USAGH-JMRC, but not all are presently identified or appropriately managed. Those controls will be reviewed in support of EMS but will continue to be managed by the operational groups directly involved in each directorate or process.

**Other Requirements** - Requirements not identified under Legal Requirements, and standard industry practices (e.g. ANSI, ASTM, MILSPECs) to which USAGH-JMRC subscribes.



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**Standard Operating Procedure (SOP) (German: Standardarbeitsanweisung)** - Detailed, written instruction describing a process or workflow by clearly defining responsibilities for each task in order to achieve uniformity of the performance of a specific function (see Operating Instruction).

**5 SUPPORTING DOCUMENTS**

| Document ID                      | Title  |
|----------------------------------|--|
| AR 200-1                         | Environmental Protection and Enhancement   |
| ISO 14001: 2004                  | Environmental Management Systems – Specification with Guidance for Use   |
| ISO 14004: 2004                  | Environmental Management Systems – General Guidelines on Principles, Systems and Support Techniques  |
| Implementers Guide               | US Army Environmental Management System Implementers Guide, <b>latest Version</b>  |
| EMS420_000_Policy.doc            | United States Army Garrison Hohenfels (USAGH) and Joint Multinational Readiness Center (JMRC) Hohenfels Joint Environmental Policy, September 2005 |
| <b>EMS410_001_ImplemPlan.doc</b> | <b>EMS Implementation Plan, US Army Garrison Hohenfels (USAGH) and Joint Multinational Readiness Center (JMRC) Hohenfels, Germany, Oct 2005</b>    |
| EMS432_000_Legal.doc             | Procedure for Legal and Other Requirements Identification  |
| EMS433_000_ObjTarEmp.doc         | Procedure for setting up Environmental Objectives and Targets, and establishing Environmental Management Programs (EMP)                            |
| EMS454_000_Records.doc           | Procedure for the Control of Records   |
| Available at the workplace       | Equipment calibration  |
| Available                        | Inventory of monitoring and measurement equipment  |
| EMS400_000_TOC.doc               | Table of Contents of the USAG Hohenfels EMS Manual   |

**6 PROCESS**

| Responsible  | No. | Action |
|--|-----|--------|
| <b>MONITORING AND MEASUREMENT OF SIGNIFICANT ASPECTS</b> |     |        |



**USAG Hohenfels - JMRC Hohenfels Environmental Management System**



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| <b>Responsible</b>   | <b>No.</b> | <b>Action</b>  |
|--|------------|--|
| EMP Managers<br><br>(Not limited to Environmental Division personnel)    | 1          | <p>Establish a program for monitoring and measurement of significant aspect characteristics and activities of associated EMPs. The program should, if appropriate include details about:</p> <ul style="list-style-type: none"> <li>• Type of monitoring and measuring;</li> <li>• Scope of monitoring and measuring;</li> <li>• Type of equipment and/or tools required;</li> <li>• Costs for equipment and/or tool purchase;</li> <li>• Training;</li> <li>• Maintenance of equipment and/or tools.</li> </ul> |
|  | 2          | <p>Conduct or coordinate ongoing monitoring and measurement(s) based on relevant operating instructions (or work instructions, SOPs etc). The frequency will be as appropriate and practical to the environmental objective / target.</p>  |
|  | 3          | <p>Provide the EMSR annually with a summary report of monitoring or measurement results and activities for EMS management review meetings. The summary shall consist of the following:</p> <ul style="list-style-type: none"> <li>• Description of type, period and scope of monitoring and measuring;</li> <li>• Records of monitoring (protocols);</li> <li>• Environmental performance indicators;</li> <li>• EMP objectives and targets.</li> </ul>  |
| EMP Team members   | 1          | <p>Prepare operating instruction(s) for monitoring and measuring efforts including equipment calibration for each significant aspect and associated EMP in association with the EMP Manager.</p>   |
| Division Chiefs  | 1          | <p>Ensure that applicable monitoring and measuring requirements including documentation are followed.</p>  |
|  | 2          | <p>Submit pertinent data to the EMS Management Representative when requested for management review meetings.</p>   |
|  | 3          | <p>Review, approve and sign operating instructions related to monitoring and measuring.</p>  |
| EMSC   | 1          | <p>Present pertinent monitoring and measurement data for significant aspects at EMS Management Reviews.</p>  |
|  |            | <i>End of activity</i>   |
| <b>MAINTENANCE AND CALIBRATION OF MONITORING AND MEASURING EQUIPMENT</b> |            |  |



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| Responsible  | No. | Action   |
|--|-----|--|
| Division Chiefs / Supervisors (operating measuring equipment that requires periodic maintenance, and/or calibration) | 1   | Identify division measuring equipment requiring calibration and/or maintenance, and prepare a division equipment inventory, including: <ul style="list-style-type: none"> <li>▪ Relevant operating instructions,</li> <li>▪ SOPs for maintenance and calibration, and</li> <li>▪ Maintenance and calibration intervals.</li> </ul> |
|  | 2   | Ensure that the division measuring equipment requiring calibration is maintained and calibrated according to the relevant operating instructions   |
|  |     | <i>End of activity</i>   |

### 7 DOCUMENT REVISION SUMMARY

| Revision Number | Date of Revision | Revision Summary   |
|-----------------|------------------|--|
| 1.0             | 28 Nov 2007      | - Revised filename/document ID IAW new EMS Manual format/concept;<br>- updated hyperlinks<br>- updated Supporting Documents table. |
| 2.0             | 18 Feb 2009      | No changes   |
| 3.0             | 25 Aug 2009      | List of supporting documents has been updated  |