

ICS 13.020.70; 13.080.01

English version

Environmental technology verification - Soil and groundwater site characterization, monitoring and remediation technologies

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties, the constitution of which is indicated in the foreword of this Workshop Agreement.

The formal process followed by the Workshop in the development of this Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN Management Centre can be held accountable for the technical content of this CEN Workshop Agreement or possible conflicts with standards or legislation.

This CEN Workshop Agreement can in no way be held as being an official standard developed by CEN and its Members.

This CEN Workshop Agreement is publicly available as a reference document from the CEN Members National Standard Bodies.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

Page

Foreword.....	3
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 Prerequisite and general requirements	8
5 Procedure	8
6 Test process and test report	9
6.1 General.....	9
6.2 Short explanation of kind and purpose of the technology.....	10
6.3 Schematic overview of the technology or method.....	11
6.4 Technology description	11
6.5 Claim specification	12
6.6 Testing strategy and test description.....	13
6.7 Documentation of the test results.....	14
6.8 Interpretation.....	15
7 Verification	15
7.1 Review report	15
7.2 Verification report.....	17
8 Data dissemination.....	17
9 Liability	17
Bibliography	18

Foreword

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties on 01 July 2008, the constitution of which was supported by CEN following the public call for participation made on (22 April 2008).

A list of the individuals and organizations which supported the technical consensus represented by the CEN Workshop Agreement is annexed below. These organizations were drawn from the following economic sectors: suppliers offering environmental technologies, consultants, institutions and authorities dealing with environmental issues.

The formal process followed by the Workshop in the development of the CEN Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN Management Centre can be held accountable for the technical content of the CEN Workshop Agreement or possible conflict with standards or legislation. This CEN Workshop Agreement can in no way be held as being an official standard developed by CEN and its members.

The final review/endorsement round for this CWA was started on 15 July 2008 and was successfully closed on 08 August 2008. The final text of this CWA was submitted to CEN for publication on 03 September 2008.

This CEN Workshop Agreement is publicly available as a reference document from the National Members of CEN: AENOR, AFNOR, ASRO, BSI, COSMT, DIN, DS, ELOT, IBN/BIN, IPQ, MSZT, NEN, NSAI, NSF, ON, SEE, SIS, SFS, SNV, STRI, SUTN, UNI.

Comments or suggestions from the users of the CEN Workshop Agreement are welcome and should be addressed to the CEN Management Centre.

This CEN Workshop Agreement (CWA) has mainly been proposed by the PROMOTE consortium, which is conducting a Specifically Targeted Research Project for developing an Environmental Technology Verification (ETV) system for the site characterization, monitoring and remediation of soil and groundwater systems. PROMOTE is supported under the 6th Framework Programme of the EU, Priority 1.1.6.3, Global Change and Ecosystems.

The CEN Workshop members who have supported the document are (in alphabetical order):

Consejo Superior de Investigaciones Científicas, 08034 Barcelona, Spain

CL:AIRE, LS25 5HG Leeds, Great Britain

DECHEMA Gesellschaft für Chemische Technik und Biotechnologie e.V., 60486 Frankfurt, Germany

DHI, 2970 Horsholm, Denmark

IMW INNOVATIVE MESSTECHNIK, 72074 Tübingen, Germany

Isodetect GmbH, 85764 Neuherberg, Germany

Miasto Bydgoszcz, 85-102 Bydgoszcz, Poland

NHBC (National House Building Council) HP6 5AP Amersham, Great Britain

Panstwowy Instytut Geologiczny – Polish Geological Institute, 00-975 Warszawa, Poland

Sachverständigen-Büro Dr. Thomas Ertel, 73730 Esslingen, Germany

SKB, 2800 AK Gouda, The Netherlands

SLANDI Sp. z.O.O., 05-816 Michalowice, Poland

Stichting Deltares, 2600 MH Delft, The Netherlands

Umweltbundesamt GmbH, 1090 Vienna, Austria

Universität Stuttgart, VEGAS, 70569 Stuttgart, Germany

Université Louis Pasteur Strasbourg, 67070 Strasbourg, France

VITO Vlaamse Instelling voor Technologisch Onderzoek N.V., 2400 Mol, Belgium

CEN Comité Européenne de Normalisation, 1050 Bruxelles, Belgium.

This CEN Workshop Agreement is publicly available as a reference document from the National Members of CEN : AENOR, AFNOR, ASRO, BDS, BSI, CSNI, CYS, DIN, DS, ELOT, EVS, IBN, IPQ, IST, LVS, LST, MSA, MSZT, NEN, NSAI, ON, PKN, SEE, SIS, SIST, SFS, SN, SNV, SUTN and UNI.

Comments or suggestions from the users of the CEN Workshop Agreement are welcome and should be addressed to the CEN Management Centre.

Introduction

This CEN Workshop Agreement (CWA) consists of three parts:

- a) set of terms and definitions to be used consistently for all verifications in the fields of environmental technologies within the scope of this CWA;
- b) standard reporting system specifying particular contents, graphs and tables that are mandatory for all verifications;
- c) requirements for the contents of a verification report.

1 Scope

This CEN Workshop Agreement (CWA) provides guidelines for the verification of technologies for site characterization, monitoring and remediation of soil and groundwater systems. In particular, it specifies a reporting structure for verified vendor-claims of the site characterization, monitoring and remediation technology. The technology can comprise hardware (devices, apparatus and tools) and physical, chemical and biotechnological processes with their adaptation to site-specific conditions.

This CWA describes a procedure which will result in a report containing verified elements. This report in turn provides a standardized set of key information about the characterization of a site, plus any monitoring or remediation technology which has been applied to the site. The report aims to illustrate the performance of the technology and can therefore be used to help all stakeholders (e.g. experts, regulators, administrators and landowners) in their decision making, i.e. to evaluate if a particular technology is suitable for the site specific pollutant(s) and conditions of a soil and groundwater system.

This CWA provides substantial input to a future European Environmental Technology Verification (ETV) system. The CWA gives guidance on technology verification on a voluntary basis to bridge the time until a European ETV system is established.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 45020:2006, *Standardization and related activities - General vocabulary (ISO/IEC Guide 2:2004)*

EN ISO/IEC 17000:2004, *Conformity assessment - Vocabulary and general principles (ISO/IEC 17000:2004)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 45020:2006, EN ISO/IEC 17000:2004 and the following apply.

3.1 application
<environmental technology> use of an environmental technology (see 3.5) with specifications given in respect to matrix, target, effect and limitations