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Carbon dioxide capture, transportation and geological storage — Geological storage

National foreword

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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This document was prepared by Technical Committee ISO/TC 265, *Carbon dioxide capture, transportation, and geological storage*.

Introduction

Geological storage of carbon dioxide (CO₂) is recognized as a key technology for abatement of CO₂ emissions to the atmosphere or ocean and is an essential component in the process of carbon dioxide capture and storage (CCS) [1]. The objective of this document is to provide recommendations for the safe and effective storage of CO₂ in subsurface geologic formations through all phases of a storage project life cycle (see Figure 1). While CCS is a nascent industry, this document is supported by a wide range of operational experiences in pilot to commercial scale carbon dioxide storage projects that have used methods and technologies mostly developed and widely deployed by the oil and gas industry including CO₂-enhanced oil recovery (EOR). This document applies to injection of CO₂ into geologic units for the sole purpose of storage and does not apply to CO₂ injection for hydrocarbon recovery, or storage of CO₂ that occurs in association with carbon dioxide enhanced hydrocarbon recovery. [ISO 29716 is in development to address carbon dioxide storage using enhanced oil recovery (CO₂-EOR)]. This document is supplemented by recommended practice manuals for CO₂ storage and numerous standards and technical recommendations developed for the oil and gas industry. [See Bibliography for selected references (References [1] to [12])].