


Architectural Descriptions and Design Reports

CO₂ Capture Facility

Kårstø, Norway

Bechtel Proprietary and Confidential

© 2008 Bechtel Power Corporation. All rights reserved. Bechtel Confidential. Contains information that is confidential and proprietary to Bechtel and may not be used, reproduced or disclosed in any format without Bechtel's prior written permission. This document is prepared exclusively for Gassnova in connection with the preparation of the FEED study for the CO₂ Capture Facility at Karsto, Norway, and is not to be relied upon by others or used in connection with any other project.

0	20 Nov 08	Issued for comments						
Rev.	Date	Reason for Revision	By	Check	App	App		
 Bechtel Power Corporation			Job No. 25474				Document No.	
			25474 -000-3YD-A01G-00001				Rev. 0	
			PAGE 1 of 2					
GASSNOVA			Project No. - Originator - Disc Code - Doc Type - Serial No. 10112936 -PB-C-DOC-0001					

ARCHITECTURAL DESCRIPTIONS AND DESIGN REPORTS

The CO₂ capture facility is located on the existing Karsto site. Proposed buildings are designed to house the need of CO₂ capture plant equipments and to accommodate staff for the full operations of plant. The Plant consists of mainly equipment buildings and Control/workshop/Store building.

1. CONTROL/WORKSHOP/STORE BUILDING

The Control/Workshop/Store building is designed to provide safe and secure space for plant staffs who are responsible for operating the facility.

The design approach for this single-story, 1,400 square meters structure includes considerations of flexibility of workspace, plant views from the building, and explosion resistant design. This building shall continue its function even during emergency evacuation. The building occupancy is estimated to be 30 persons. 60% of the building space is dedicated for use of office/administration and central control facilities including kitchen and dining room, and remaining for storage and workshop use.

Workshop and storage area will have building height of 9.5 m. and control and office area will have building height of 5.0 m. The horizontal bands of concrete block give a sense of horizontality and also blend with the existing NaturKraft building at the site.

The corridors are wide and exits are designed in simple linear formation to make easier for emergency evacuation. The control building is designed in full compliance with accessibility requirements. The office space and control room are designed with permanent partition which will be used by permanent staff and open offices are designed with system furniture for plant employee and visitors. The office floor will have carpet and tile and Control room will have recessed access flooring. Kitchen, restrooms, showers and lockers will have ceramic tile flooring. The workshop and store area, mechanical room will have sealed concrete flooring with hardener.

The proposed building materials for this facility will be compatible with and compliment the existing NaturKraft building at site. The building is designed with steel frames, precast concrete panels and concrete roof meeting the requirements of explosion criteria. Membrane roofing will be used to protect against moisture penetration and leaks.

2. EQUIPMENT BUILDINGS

The equipment buildings are designed for enclosure of the equipments. These buildings are steel framed and enclosed with insulated metal panels and insulated metal roof, which is traditional material for industrial building. The flooring for equipment buildings will be sealed concrete with hardener.