

# JCCS

Japan CCS Co., Ltd.

## Tomakomai CCS Demonstration Project, Hokkaido, Japan Marine Environmental Survey (Spring FY2016)

### May 30 2016

Japan CCS CO., Ltd. (JCCS) will be conducting a marine environmental survey in order to understand the sea and seabed conditions just above the storage point and surrounding sea areas after the commencement of CO2 storage, as part of the CCS Demonstration Project in Tomakomai, Hokkaido.

This survey is an on-site operation of the FY2016 Tomakomai CCS Demonstration Project that has been commissioned by the Ministry of Economy, Trade and Industry.

Outline of Survey:

#### 1. Outline of operation

Under the Tomakomai CCS Demonstration Project, JCCS will conduct a marine environmental survey within Tomakomai port area to verify that CO2 is being safely stored according to plan, in compliance with the regulations of the Act on Prevention of Marine Pollution and Maritime Disaster.

This operation is scheduled to be conducted at 12 points, as shown in the attached diagram, for a total of 6 days from June 1 (Wed.) to 3 (Fri.), and from June 6 (mon.) to 8 (Wed.), 2016, as the in Spring FY2016 Survey.

The marine environmental survey is to be conducted seasonally, and following the spring survey, JCCS plans to conduct the following:

Summer FY2016 Survey: August – September 2016

Autumn FY2016 Survey: Around November 2016

Winter FY2016 Survey: Around February 2017:

#### 2. Survey area

Within Tomakomai port area

#### 3. Scheduled date of operation

June 1 – 3 and June 6 – 8, 2016

\*Please note that dates are subject to change due to bad weather and/or sea conditions.

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### Japan CCS Co., Ltd. (JCCS)

Business Description:

- Implementation of demonstration projects for Carbon-dioxide Capture and Storage (CCS) in Japan.
- Comprehensive investigation of CCS technologies and related subject matter.

Address: Sapia Tower 19F, 1-7-12, Marunouchi, Chiyoda-ku, Tokyo, 100-0005, JAPAN

Date of Incorporation: May 26, 2008

Capital: 242,500,000 yen

Capital Reserves: 242,500,000 yen

URL: <http://www.japanccs.com/?lang=en>

# Tomakomai CCS Demonstration Project, Hokkaido, Japan: Marine Environmental Survey (Spring FY2016)

(Commissioned by the Ministry of Economy, Trade and Industry)

## 1. Outline

Under the Tomakomai CCS Demonstration Project, JCCS will conduct a marine environmental survey of the sea and seabed conditions just above the storage point and surrounding sea areas within the Tomakomai Port area from June this year to verify that CO<sub>2</sub> is being safely stored according to plan in compliance with the regulations of the Act on Prevention of Marine Pollution and Maritime Disaster.

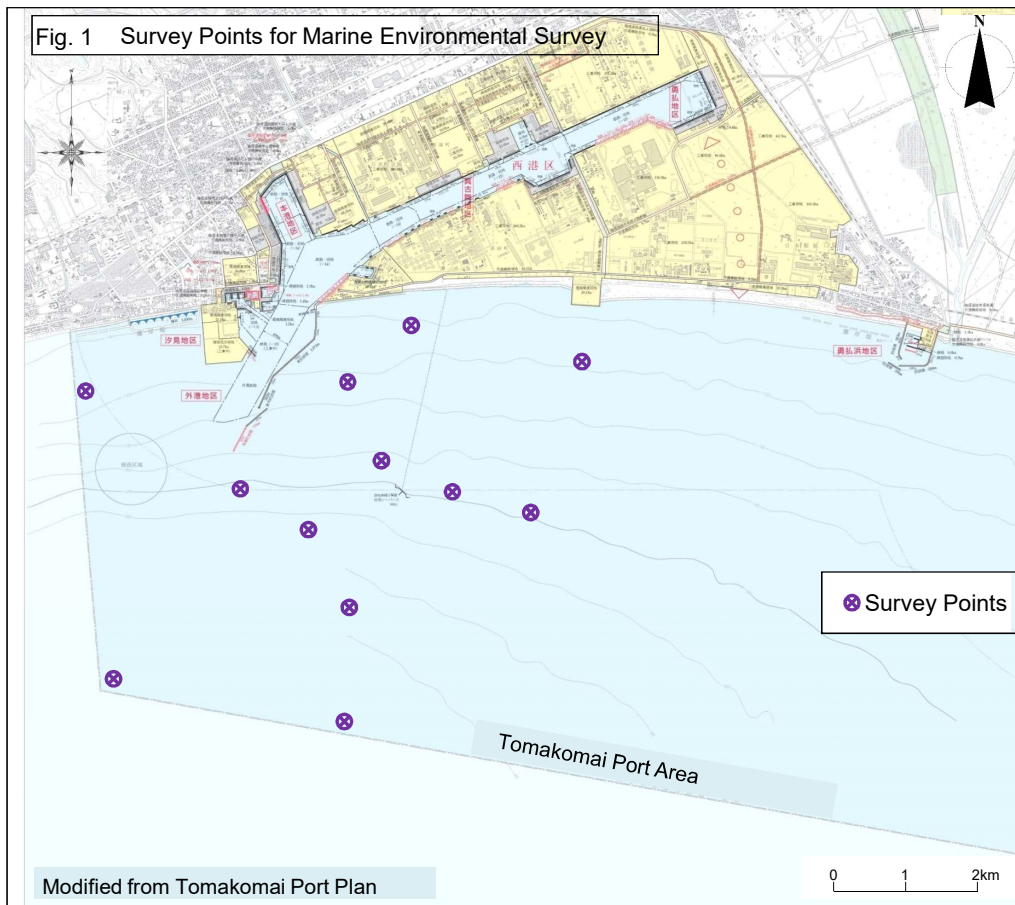
Under this Spring FY2016 Survey, JCCS will conduct a survey on seawater and marine organisms within a range of 100 meters in diameter at 12 points as shown in Fig. 1. Depending on the results, however, an additional survey may be conducted.

The marine environmental survey is to be conducted seasonally, and following the spring survey, JCCS plans to conduct the following:

Summer FY2016 Survey: August – September

Autumn FY2016 Survey: Around November 2016

Winter FY2016 Survey: Around February 2017



## 2. Survey Method

1. Survey direction and speed of seawater flow by current meter.
2. Survey oxygen saturation / carbon dioxide partial pressure by sampling seawater with Niskin sampler.
3. Survey status of phytoplankton by sampling seawater with Van Dorn water sampler; survey status of zooplankton by capturing using Kitahara's quantitative net.
4. Survey grain size composition, etc. by sampling seafloor surface with Smith-McIntyre bottom sampler.
5. Film the seafloor and benthos by ROV (Remotely Operated Vehicle).
6. The survey will be conducted by Marine Ecology Research Institute (MERI) under the supervision of JCCS.



Survey Vessel



Niskin Sampler



Van Dorn Water Sampler



Kitahara's Quantitative Net



Smith-McIntyre Bottom Sampler



ROV

## 3. Schedule for Spring FY2016 Survey (Plan)

Survey Items	June 2016													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Survey of direction / speed, water, plankton 1 2 3	█													
Survey of seafloor surface 4		█	█											
Survey of benthos 5						█	█	█						
Reserve days				█	█					█	█	█	█	█

\* Operating hours for this survey are in principle 8:00 – 17:00; there will be no operation at night.

\* Dates are subject to change due to bad weather and/or sea conditions.