

13 April 2011

Effects on ships and seafarers sailing off the coast
from Fukushima Dai-ichi Nuclear Power Plant

Maritime Bureau,
Ministry of Land, Infrastructure, Transport and Tourism

The Nuclear Safety Commission (NSC) is evaluating the Environmental Monitoring Results of 20km or more far from Fukushima Dai-ichi Nuclear Power Plant (NPP), published by the Ministry of Education, Culture, Sports, Science and Technology (MEXT). According to the “Evaluation of Environment Radiation Monitoring Results” issued by the NSC on April 12, 2011, the NSC concludes that “The observation of ambient radiation dose rate at 20km or more far from Fukushima Dai-ichi NPP found a relatively higher dose rate locally at several measuring points. It however does not reach the level that affects people’s health” and “it is considered that the concentration of radioactive materials emitted into the seawater will be diluted since it is diffused along with the tidal current before actually ingested by marine life such as fish and seaweed.”

See: Nuclear Safety Commission: <http://www.nsc.go.jp/NSCenglish/mnt/index.htm>.

Ministry of Education, Culture, Sports, Science and Technology;

http://www.mext.go.jp/english/radioactivity_level/detail/1303962.htm

NAVTEX warnings including designated dangerous areas around the plant have been issued by the NAVAREA XI Coordinator (Japan) and also other precautionary warnings have been issued by other NAVAREA Coordinators. It states that “WITHIN 30 KILO METRES OF FUKUSHIMA NR 1 NUCLEAR POWER PLANT, 37-25.5N 141-02.0E. VESSELS ARE ADVISED TO KEEP ENOUGH DISTANCE CLEAR”

According to the readings of sea area monitoring at a post out of Fukushima Dai-ichi NPP conducted by the MEXT, readings at sea a distance of 30 kilometer off the coast from Fukushima Dai-ichi NPP on April 11 was about 0.04 $\mu\text{Sv/h}$. For your convenience, this means that the level of exposure of 24 hour sea travel, avoiding the designated dangerous area, would be calculated as 0.96 μSv . This number is rather low compared to the exposure of 200 μSv of a round air trip between Tokyo and New York.

Furthermore, the maximum readings for the radioactivity concentration of surface water on April 11 were 88.5 Bq/kg for I-131 and 71.0 Bq/kg for Cs-137. It is considered that the concentration of radioactive materials emitted into the seawater will be diluted since it is diffused along with the tidal current before actually ingested by marine life such as fish and seaweed.

The Maritime Bureau of MLIT has updated this information on MLIT’s homepage: http://www.mlit.go.jp/en/maritime/maritime_fr1_000007.html