

Subject

Issuance of “Certificate of Environmental Awareness”
for Ships with Reduced Environmental Impact

ClassNK

Technical Information

No. TEC-0735
Date 6 June 2008

To whom it may concern

In recent years, the increasing demands for environmental conservation have been felt by all industries, and the maritime industry is no exception.

Beyond the demands for greater corporate social responsibility, measures are being taken to prevent air and marine pollution, global warming, and the destruction of ecosystems. While adherence to international treaties and standards is only natural, there is an increasing demand to develop measures which go above and beyond these accepted standards.

As a means of evaluating these efforts, ClassNK has developed a new guideline for evaluating and certifying ships that have introduced environmental friendly measures in those areas in which international regulations do not yet exist or have not yet been made mandatory.

The guideline includes both a minimum set of requirements for the issuance of certificates and additional requirements for evaluating and providing additional characters to ships which make use of more advanced environmentally friendly measures and technologies.

Upon application by a ship's owner/operator, evaluation and certificate issuance will follow a thorough document review and onboard audit of each individual ship.

For any questions about the above, please contact:

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Attachment: Procedure for issuance of “Certificate of Environmental Awareness”

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ClassNK Technical Information No. TEC-0735

Procedure for Issuance of “Certificate of Environmental Awareness”

1 General

- 1. Issue the Certificate of Environmental Awareness to ships that have contributed to reducing the environmental impact (the so-called "environmentally-friendly ships).
- 2. Consider equipment and systems that take into account the ship's environmental measures including requirements of conventions for issuing the Certificate of Environmental Awareness.

2 Applicability and requirements

- 1. State requirements for issuance of the Certificate of Environmental Awareness to ships in the Guideline (Appendix I) for which environmental protection measures have been formulated.
- 2. The requirements are divided into measures related to preventing air pollution, measures related to preventing marine pollution and measures related to preventing destruction of the marine ecosystem, and consist of minimum requirements and requirements for additional characters for the issuance of the Certificate of Environmental Awareness.
- 3. Compliance with the minimum requirements is a condition for the issuance of the Certificate of Environmental Awareness, and the applicant selects each additional character optionally. The applicable categories of the Certificate of Environmental Awareness are according to Table 1 of the Guideline in which minimum requirements and additional characters are shown in left half and right half, respectively.
- 4. Issue the Certificate of Environmental Awareness to ships that comply with the minimum requirements.
- 5. In addition to -4. above, if the ship complies with the requirements for additional characters, enter clearly the items complied with as "Additional Characters" on the certificate.
- 6. See Appendix 2 for a sample of the certificate.

3 Kinds of Audits

- 1. Initial audit: Audit for issuance of the Certificate of Environmental Awareness for the first time.
- 2. Intermediate audit: Audit implemented during Intermediate Survey of a ship.
- 3. Renewal audit: Audit implemented during Special Survey of a ship.
- 4 Occasional audit: Audit implemented when a change is made to a system and/or equipment on a ship related to the requirements of the Certificate of Environmental Awareness.

4 Application for audit

- 1 Submit the application and documents requested in -2. below to Marine and Industrial Service Department of the Society.
- 2 Documents required to be submitted for audit
 - a) Application (Appendix 3)
 - b) Certificates (including Statements of Compliance), procedures and relevant documents

The documents submitted should comply with the applicable category mentioned in Table 1 and should be according to Table 3 of the Guideline.

Submit the documents during the initial audit, in principle.

After issuance of the certificate, if major modifications are made to equipment, maintenance procedures, and so on, related to the Certificate of Environmental Awareness, then request the submission of the relevant documents.

Documents submitted may be copies.

5 Implementing audit

- 1. The Society to confirm the ship complying with the minimum requirements and those for additional characters applied by reviewing the relevant documents submitted and auditing onboard the ship at the occasion of Initial, Intermediate and Renewal Audit respectively.
- 2. In case of Occasional Audit, the Society reviews the relevant documents for which changes are made to a system and/or equipment related to the requirements of the Certificate of Environmental Awareness.

The Society to audit onboard the ship, if necessary.

Appendices

- 1. Guideline for issuance of “Certificate of Environmental Awareness”
- 2. Certificate of Environmental Awareness (Example)
- 3. Application form

Appendix I Guideline for “Certificate of Environmental Awareness”

Guideline for “Certificate of Environmental Awareness”
June 2008 (Version 0.0)

Table 1 Categories applicable to the Certificate of Environmental Awareness

Minimum requirements Based on Convention requirements (including those not yet in force) and including additional requirements					Additional characters (optionally to be obtained by applicant) Environmentally friendly equipment / technology besides rules and Convention requirements			
Category 1	Category 2	Items	Requirements (Table 2)	Submission (Table 3)	Category 3	Items	Requirements (Table 2)	Submission (Table 3)
Marine pollution prevention	Oil	Compliance with MARPOL ANNEX I and additional requirements	1.1	1.1	BILGE CONTROL	Integrated Bilge Water Treatment System (IBTS)	2.1	2.1
						Oil content of bilge discharge below 5 ppm		
						All bilge water transferred to shore		
	Noxious liquid substances	Compliance with MARPOL ANNEX II and additional requirements	1.2	1.2	FO TANK PROTECTION	Protection of fuel oil tanks (Tank location from outer shell by specified minimum distance)	2.2	2.2
					STERN TUBE SEALING	Use of stern tube air seals		
	Sewage	Compliance with MARPOL ANNEX IV and additional requirements	1.3	1.3	GRAY WATER	Sewage treatment system	2.4	2.4
	Garbage	Compliance with MARPOL ANNEX V and additional requirements	1.4	1.4	N2 GENERATOR	Provision of N ₂ generating equipment in inert gas system of ships such as tankers	2.5	2.5
					GARBAGE	All garbage transferred to shore	2.6	NA

Air pollution prevention	Air	Compliance with MARPOL ANNEX VI and additional requirements	1.5	1.5	NOx	Reduction in NOx emissions (below 80%)	2.7	2.7
					SOx	Reduction in SOx content (Marine Gas Oil: Below 0.2%) (Heavy Fuel Oil: Below 1.5%)	2.8	NA
					VOCs	Provision of volatile organic compound emission control system	2.9	2.9
					SHORE POWER CONNECTION	High voltage shore power connection system (on or above 1kV)	3.0	3.0
Preventing destruction of ecosystem	AFS	Conformance to the AFS Convention	1.6	1.6	BIOCIDE FREE PAINT	Use of biocide-free paint	3.1	3.1
	BWM	Conformance to a part of the requirements of the BWM Convention	1.7	1.7	BALLAST WATER TREATMENT SYSTEM	Provision of ballast water treatment system	3.2	3.2
SOLAS	SMC	Conformance to the requirements of the convention	1.8	1.8				

Table 2 Requirements

Minimum requirements

Item	Description
1.1	Related to MARPOL ANNEX I Should maintain certificate or Statement of Compliance of MARPOL ANNEX I. Should comply with items 1 to 18 below. (Items 10-18 apply to oil tankers)
1	Oily mixtures should be discharged into the sea after passing through the system such that their oil content never exceeds 15 ppm under any circumstance. The system should also be provided with arrangements to ensure that any discharge of oily mixtures is automatically stopped when the oil content of the effluent exceeds 15 ppm.
2	All discharges of bilge should be recorded in the Oil Record Book.
3	Segregated waste oil tank should be installed in addition to sludge tank for onboard incineration of leaked oil and waste oil.
4	Ships that use only marine gas oil as fuel oil may use waste oil tanks as sludge tanks (,including bilge storage tanks approved as sludge tanks according to 2.2.1-2 of Chapter 2, Part 3 of the Rules for the Marine Pollution Prevention Systems).
5	The construction and piping arrangements of sludge tank and waste oil tank should be in accordance with the provisions of Section 2.2.2, Chapter 2, Part 3 of the Rules for the Marine Pollution Prevention Systems. Manholes or access holes in a sufficient size should be provided at such positions that each part of the tank can be cleaned without difficulties, and appropriate means to facilitate drawing and discharge of oil residues should be provided.
6	Fuel oil pipes should be entirely separate from other pipes including discharge piping from bilge storage tanks and sludge tanks. (13.2.2-1(1), Part D of the Rules)
7	Standard discharge connections should be provided in the discharge pipeline of the sludge tank and the bilge storage tank in accordance with the provisions of 2.2.3 and 2.3.4(4) of Chapter 2, Part 3 of the Rules for the Marine Pollution Prevention Systems.
8	High level alarm or overflow control device should be provided in the fuel oil tank.
9	Procedures related to handling oil and oily wastes should be prepared, and the handling work should be performed according to these procedures. The procedures should include descriptions of at least the following: ① Loading, shift, discharge or disposal of fuel oil, lubricating oil, and cargo oil ② Discharge or disposal of oil residues in sludge tank and waste tank, and oily mixtures included in bilge water of bilge storage tank and engine room ③ Procedure for recovery of oil that has leaked on to the deck.

Item	Description
	10 High level alarm or overflow control device should be provided in the cargo oil tank.
	11 Measures should be adopted to prevent inflow of oil that has leaked on to the deck into the accommodation space and working spaces, in accordance with 4.5.1-6, Chapter 4, Part R of the Rules for the Survey and Construction of Steel Ships.
	12 Sea suction pipes and discharge pipes for permanent ballast tanks should not be connected to the suction and discharge pipes of cargo tanks, in accordance with the provisions of 14.2.2-6 of Chapter 14, Part D of the Rules for the Survey and Construction of Steel Ships.
	13 Where sea suction pipes for ballasting purpose are connected to cargo oil pipes, stop valves should be provided between the sea suction valves and the cargo oil piping, in accordance with the provisions of 14.2.2-4 of Chapter 14, Part D of the Rules for the Survey and Construction of Steel Ships.
	14 Metallic drip trays with sufficient depth should be provided at the manifold connections of cargo pipes. The drain of the drip tray should be led to the drain tank or other suitable oil drainage equipment.
	15 Cargo manifold should be installed in accordance with OCIMF recommendations, as far as possible.
	16 Possession of approved ODM Manual and SOPEP.
	17 Work related to oil should be entered in the Oil Record Book.
	18 ETAS-related items Should be registered in the Society's Emergency Technical Assistance Service (ETAS) or equivalent scheme of other classification society. (when required by convention)
1.2	Related to MARPOL ANNEX II If applicable, should maintain the certificate or the Statement of Compliance of MARPOL Annex II. Should comply with items 1-2 below.
	1 Possession of approved P&A Manual and SMPEP
	2 Any cargo operation related to noxious liquid substance should be entered in the Cargo Record Book.
1.3	Related to MARPOL ANNEX IV Should maintain certificate or Statement of Compliance of MARPOL Annex IV. Should conform to items 1-4 below.
	1 Equipment for the prevention of pollution by sewage should be installed as prescribed in 2.2.1, Chapter 2, Part 7, Rules for the Marine Pollution Prevention Systems.
	2 The disinfectant feed location of sewage system should be easily accessible. The sampling location should also be easily accessible.
	3 Vent piping from the sewage system should be independent of other ventilation systems.

Item	Description
4	To ensure sewage treatment and discharge according to Regulation 11 of Annex IV of the MARPOL Convention, procedures related to sewage treatment should be established and implemented. The procedures should include the following items: ① When maintenance, repairs, modifications and feed of disinfectant have been performed, records for the same should be prepared and maintained. ② Restrictions on treatment substances according to sewage system ③ Date, location and quantity of discharge sewage from storage tank to a reception facility ④ Record of discharge location and ship's operating speed when discharge equipment (sewage comminuting and disinfecting system) according to 1.2 of regulation 9, Annex IV, MARPOL Convention, has been provided.
1.4	Related to MARPOL ANNEX V Should maintain certificate or Statement of Compliance of MARPOL Annex V. Should comply with items 1-4 below.
1	Procedures related to treatment of waste substances should be prepared and effectively implemented. Garbage management plan should be prepared and effectively implemented. The plan should provide a procedures for collecting, storing, processing and disposing of garbage (including use of shipboard equipment) in accordance with the provisions of (2), Regulation 9, Annex V of the MARPOL Convention.
2	The form of Garbage Record Book of Annex V of the MARPOL Convention should be provided. The following items should be entered in the Garbage Record Book: ① Each discharge operation, or completed incineration, shall be recorded in the Book and signed for on the date of the incineration or discharge by the officer in charge. ② The entry for each incineration or discharge shall include date and time, position of the ship, description of the garbage and the estimated amount incinerated or discharged. ③ In the event of discharge, escape or accidental loss, an entry shall be made in the Book of the circumstances of, and the reasons for, the loss.
3	When onboard incinerator is installed, then the said incinerator should satisfy the requirements of 2.4-1(2) (a) to (d) of Chapter 2, Part 8 of the Rules for the Marine Pollution Prevention Systems. The incinerator should be being of type approved one by the Administration or an organization representing the Administration.

Item	Description								
4	When an onboard incinerator is installed, work should be performed according to procedures that contain the items mentioned below. The procedures should contain the following: ① Incineration of substances specified in 1.2.3, Chapter 1, Part 8 of the Rules for the Marine Pollution Prevention Systems should be prohibited. ② If areas exist in which incineration is prohibited by the Administration of the coastal state where the ship is expected to ply, incineration should be prohibited in such areas. ③ Incineration work should be carried out according to the procedures in the onboard incinerator operation manual as specified in 2.4-2, Chapter 2, Part 8 of the Rules for the Marine Pollution Prevention Systems.								
1.5	Related to MARPOL ANNEX VI Should maintain certificate or Statement of Compliance of MARPOL ANNEX VI. Should comply with 1.5.1 (NOx related items), 1.5.2 (SOx related items) and 1.5.3 (Ozone depleting substances related items) below.								
1.5.1	<table border="1"> <tr> <td data-bbox="237 711 282 887">1</td><td data-bbox="297 711 2085 887"> NOx related items Applies to diesel engines exceeding 130 kW output excluding those mentioned in 2.1.1-2(1), Chapter 2, Part 8 of the Rules for the Marine Pollution Prevention Systems. </td></tr> <tr> <td data-bbox="237 895 282 1007">2</td><td data-bbox="297 895 2085 1007"> Diesel engines conforming to item 1 above should satisfy the requirements of 2.1.2, Chapter 2, Part 8 of the Rules for the Marine Pollution Prevention Systems. The ship shall possess either the Engine International Air Pollution Prevention (EIAPP) Certificate or Statement of Compliance issued by the Administration or a representative authority, as certification. </td></tr> <tr> <td data-bbox="237 1015 282 1094">3</td><td data-bbox="297 1015 2085 1094"> Diesel engines conforming to item 1 above should be provided with technical file and Record Book of Engine Parameters satisfying the requirements of 2.1.3, Chapter 2, Part 8 of the Rules for the Marine Pollution Prevention Systems. </td></tr> <tr> <td data-bbox="237 1102 282 1361">4</td><td data-bbox="297 1102 2085 1361"> When NOx reduction system is provided, the items below should be satisfied for the system in addition to the provisions of items 1-3 above. ① Even if a fault occurs in the NOx reduction system, the engine should operate safely and continuously without any hindrance ② The system should be operated in accordance with the manufacturer's instruction, if any. ③ The system should be designed, manufactured and fitted such that structural integrity and isolation from large vibrations are ensured. ④ For inspection and maintenance, adequate size of hatch should be provided. ⑤ Devices for recording of operation status should be provided. By the device operation and control levels should be recorded, and records are stored. </td></tr> </table>	1	NOx related items Applies to diesel engines exceeding 130 kW output excluding those mentioned in 2.1.1-2(1), Chapter 2, Part 8 of the Rules for the Marine Pollution Prevention Systems.	2	Diesel engines conforming to item 1 above should satisfy the requirements of 2.1.2, Chapter 2, Part 8 of the Rules for the Marine Pollution Prevention Systems. The ship shall possess either the Engine International Air Pollution Prevention (EIAPP) Certificate or Statement of Compliance issued by the Administration or a representative authority, as certification.	3	Diesel engines conforming to item 1 above should be provided with technical file and Record Book of Engine Parameters satisfying the requirements of 2.1.3, Chapter 2, Part 8 of the Rules for the Marine Pollution Prevention Systems.	4	When NOx reduction system is provided, the items below should be satisfied for the system in addition to the provisions of items 1-3 above. ① Even if a fault occurs in the NOx reduction system, the engine should operate safely and continuously without any hindrance ② The system should be operated in accordance with the manufacturer's instruction, if any. ③ The system should be designed, manufactured and fitted such that structural integrity and isolation from large vibrations are ensured. ④ For inspection and maintenance, adequate size of hatch should be provided. ⑤ Devices for recording of operation status should be provided. By the device operation and control levels should be recorded, and records are stored.
1	NOx related items Applies to diesel engines exceeding 130 kW output excluding those mentioned in 2.1.1-2(1), Chapter 2, Part 8 of the Rules for the Marine Pollution Prevention Systems.								
2	Diesel engines conforming to item 1 above should satisfy the requirements of 2.1.2, Chapter 2, Part 8 of the Rules for the Marine Pollution Prevention Systems. The ship shall possess either the Engine International Air Pollution Prevention (EIAPP) Certificate or Statement of Compliance issued by the Administration or a representative authority, as certification.								
3	Diesel engines conforming to item 1 above should be provided with technical file and Record Book of Engine Parameters satisfying the requirements of 2.1.3, Chapter 2, Part 8 of the Rules for the Marine Pollution Prevention Systems.								
4	When NOx reduction system is provided, the items below should be satisfied for the system in addition to the provisions of items 1-3 above. ① Even if a fault occurs in the NOx reduction system, the engine should operate safely and continuously without any hindrance ② The system should be operated in accordance with the manufacturer's instruction, if any. ③ The system should be designed, manufactured and fitted such that structural integrity and isolation from large vibrations are ensured. ④ For inspection and maintenance, adequate size of hatch should be provided. ⑤ Devices for recording of operation status should be provided. By the device operation and control levels should be recorded, and records are stored.								

Item	Description
1.5.2	1 SOx related items Sulfur content in fuel oil used in the ship should not exceed 3.5%.
	2 The sulfur content of fuel oil in ships engaged in a voyage in SOx Emission Control Areas should not exceed 1.5%. Or, the ships should be provided with exhaust gas cleaning system or method approved by the Society, by which the total emission of SOx from ships complying with 2.2-1, Chapter 2, Part 8 of the Rules for the Marine Pollution Prevention Systems does not exceed 6.0 g/kWh when converted to sulfur dioxide.
	3 Procedures for purchase of fuel are established.
	4 The Bunker Delivery Note specified in 1.2.2-2, Chapter 1, Part 8 of the Rules for the Marine Pollution Prevention Systems should be provided on the ship. The sample specified in 1.2.2-3, Chapter 1, Part 8 of the same rules should be attached to the Bunker Delivery Note. The method of taking the sample and the storage method should be in accordance with the requirements of 1.2.2, Chapter 1, Part 8 of the said procedures. The storage period for the Bunker Delivery Note is to be taken as 3 years minimum and for the sample as 1 year minimum.
1.5.3	1 Ozone depleting substances related items The provisions in items 2 to 7 apply to all refrigerating machinery, refrigerating facilities and air-conditioning equipment provided on the ship except independent refrigerators for domestic use in the galley, food provision store, bar and crew cabins.
	2 Refrigerating facilities and air-conditioning equipment should not use ozone depleting substances excluding hydro-chlorofluorocarbon (HCFCs) as refrigerants. After 1 January 2020, HCFCs cannot be used as refrigerant.
	3 When various kinds of refrigerants are being used, it should be designed and manufactured so that these refrigerants do not mix with each other.
	4 To prevent leaks, leak detectors should be fitted in the refrigerant facilities at appropriate locations such as locations where leaks are likely to occur and at location for maintenance of refrigerant. For refrigerants in which ammonia is used, gas detector alarm should be installed in accordance with the provisions of 4.6.1-1 of the Rules for Cargo Refrigerating Installations.
	5 Compressors in the refrigerating installation should be designed to discharge the filled refrigerant to some receivers.
	6 Procedures with methods to be implemented for controlling loss, leak, discharge and disposal of refrigerants should be prepared and implemented. These procedures should contain at least the following items: ① Measures to be adopted when leak has been confirmed from leak detector. ② Appropriate shut-off methods to prevent emitting refrigerants to the atmosphere during maintenance, overhauling or repair work. ③ Recovery equipment should be provided in order to discharge refrigerant to existing receivers or special cylinders during recovery of refrigerant. The adequate number of cylinders should be provided to store all the refrigerant between the shut-off points.

Item	Description
	7 During filling and disposal of refrigerants, and repairs and modifications to refrigerating installations, Statements entered with the following items should be retained: ① Refrigerant added to each system ② Leaks of refrigerant including corrective actions ③ Recovered refrigerant and storage location of it ④ Disposed-off refrigerants.
	8 Fixed fire extinguishing system should not include halon 1211, 1301, 2402 and perfluorohydrocarbons, in accordance with 10.4.1-3 of Part R of the Rules for the Survey and Construction of Steel Ships.
	9 The above item 8 is applied to portable fire extinguishing systems also.
1.6	1 AFS-related items Should conform to the AFS Convention (not yet entered into force) and should possess the Statement of Compliance issued by the Society or other approved organization.
1.7	1 BWM-related items Ballast Water Management Plan (BWMP) specified in the BWM Convention (not yet entered into force) should be approved by the Society or other approved organization.
	2 Ballast Water Record Book should be maintained and managed on board the ship.
1.8	1 SMC-related items Maintenance of Safety Management Certificate (SMC) according to the ISM Code should be maintained. (excluding ships for which SMC maintenance is not mandatory)

Requirements for Additional Characters

Item	Description
2.1	1 Marine pollution – bilge-related items Should conform to any of the items 2 to 4 below.
	2 Integrated Bilge Water Treatment System specified in "REVISED GUIDELINES FOR SYSTEMS FOR HANDLING OILY WASTES IN MACHINERY SPACES OF SHIPS INCORPORATING GUIDANCE NOTES FOR AN INTEGRATED BILGE WATER TREATMENT SYSTEM (IBTS)" of MEPC.1/Cir.511 should be installed.
	3 It is to be ensured the oil content of discharged bilge should be less than 5 ppm. IMO Resolution MEPC.107(49) should apply mutatis to the test standard for 5ppm equipment. If compliance with the resolution is difficult, then the system should comply with a method deemed by the Society as appropriate.
	4 All bilge water should be transferred to shore reception facilities.
2.2	1 Marine pollution – protection of fuel oil tanks Fuel oil tanks should comply with MARPOL Annex I Regulation 12A. Minimum protection distance should be 1.2 times as much as the required value based on provisions 6 to 8 of the regulation.
2.3	1 Marine pollution – stern tube air seal The air seal construction should be such that the stern tube lubricating oil doesn't contact with sea water because of air.
2.4	1 Marine pollution – gray water Either item 2 or item 3 below should be complied with.
	2 Gray water (water discharged from bathrooms and showers) should also be discharged using sewage treatment plant specified in Chapter 2, Part 7 of the Rules for the Marine Pollution Prevention Systems.
	3 The re-used or recycled gray water should be satisfied with the drinking water standards on shore of the flag state or port state. The quality of water is to be confirmed based on the standards of tests specified in the directives of the Ministry of Health, Labor and Welfare. If compliance with these standards is difficult, then the system should comply with a method deemed by the Society as appropriate.
2.5	1 Marine pollution – N₂ generator The inert gas system provided in ships such as tankers should use N ₂ generating equipment. However, all the gas in tanks should be replaced by the said generating equipment only.
2.6	1 Marine pollution - garbage All garbage generated on board the ship should be transferred to shore reception facilities. The records of such garbage should be maintained in the Garbage Record Book.

Item	Description
2.7	1 Air pollution - NOx According to items 2 to 6 below. 2 The NOx total emission value, NOx_{total} (equation 1) of emissions from all diesel engines (excluding special engines for emergency use) of output 130 kW and greater installed on the ship should not exceed 80% the NOx emission limit NOx_{limit} (equation 2) for the ship. $NOx_{total} = \sum_{i=1}^N (NOx_{Cert,i} \cdot P_i) \quad (\text{g/h}) \quad (1)$ $NOx_{limit} = \sum_{i=1}^N (NOx_{IMO,i} \cdot P_i) \quad (\text{g/h}) \quad (2)$ Here, N: Number of all diesel engines (excluding special engines for emergency use) of output 130 kW and greater installed on the ship Pi: Rated output of each diesel engine (kW) NOxCert,i: Weighted NOx emission value from each approved diesel engine (g/kWh) NOxIMO,i: NOx emission limit for each diesel engine (according to (3)(a), Part 13, MARPOL Annex VI) (g/kWh) 3 If each of the engines is in a family engine or a group engine in accordance with the NOx Technical Code, the emission value may be taken as the emission value of the parent engine. 4 Regardless of item 3, if measurements are performed on the actual ship, the method of performing measurements should be according to the on-board simplified measurement method and the onboard monitoring method in 2.1.1(2), Chapter 2, Part 8 of the Rules for Marine Pollution Prevention Systems. 5 In order to confirm that compliance with item 2 is maintained, verification should be performed during Class Maintenance Survey and Renewal Survey by the onboard NOx verification method specified in the approved technical file. 6 When NOx reduction equipment is provided, the provisions of 1.5.1.4 of these guidelines should be satisfied.

Item	Description
2.8	1 Air pollution – SO_x According to items 2 to 4 below.
	2 The sulfur content of all marine gas oils should not exceed 0.2%, and the sulfur content of all heavy fuel oils should not exceed 1.5%.
	3 The Bunker Delivery Note and sample should be in accordance with the requirements of 1.5.2.3 of these guidelines.
	4 Records of time and location should be maintained when marine gas oil and heavy fuel oil are switched over and used.
2.9	1 Air pollution – VOCs In ships carrying crude oil, petroleum products or chemicals with flash point below 60°C, either one of the items 2 or 3 as well as 4 below should be complied with.
	2 VOCs emission control system complying with IMO Circular 585 or USCG 46CFR39 should be provided, and should be approved and certified by the Society or an approved organization.
	3 The construction should be such that vapors of volatile organic compounds generated in the cargo tanks on board the ship are not discharged outside the ship by re-liquefaction process.
	4 Transfer procedure manual for equipment in item 2 or item 3 should be provided.
3.0	1 Air pollution – high voltage shore power connection system High voltage shore power connection system which is capable of supplying sufficient electrical power to the ship should be provided . (High voltage means 1kV or more.)
3.1	1 Preventing destruction of marine ecosystem – Biocide-free paint Bottom paints used in ships should be paints other than biocide paints.
3.2	1 Preventing destruction of the marine ecosystem - ballast water treatment system According to items 2 to 3 below.
	2 Ballast water treatment system complying with IMO Resolution MEPC.126 (53) should be provided. Type-approval Statements issued by the Administration or representative organization for the ballast water treatment system should be available.
	3 In addition to item 2 above, certificates issued by the IMO certifying compliance with IMO Resolution MEPC.126 (53) for ballast water treatment system using active substances should be available.

Table 3 Submissions

Item	Submissions
1.1	1 Certificate or Statement of Compliance
	2 Procedures containing measures to prevent pollution due to discharge of oil generated in the machinery space
	3 Procedures containing measures to prevent pollution due to discharge of oil generated in cargo spaces (for oil tankers only)
	4 Drawings, etc.
	① Capacity and piping arrangement of bilge water storage tank, waste oil tank and sludge tank ② Arrangement of contact points for loading and discharge of oils other than cargo oil and arrangement of drip trays and discharge systems ③ Particulars of oil discharge prevention system (May be ODM manual for systems related to cargo, and the bilge separator manufacturer's instruction manual for systems related to engine room bilges) ④ High level alarm/overflow system of fuel tank, fuel oil settling and service tank ⑤ Arrangement of cargo and ballast water tanks (only for tankers) ⑥ Plan views of cargo and ballast water arrangement systems, including systems to prevent overfilling of cargo tanks (tankers only) ⑦ Arrangement of tanker cargo manifolds and associated drip trays and discharge systems ⑧ ODM Manual ⑨ SOPEP ⑩ Membership certificate of emergency assistance system (NK ETAS or an equivalent service provided by other classification society)
1.2	1 Certificate or Statement of Compliance
	2 Procedure manuals listed below. ① P&A Manual ② SMPEP

Item		Submissions
1.3	1	Certificate or Statement of Compliance
	2	If sewage treatment plant is installed, then certificate issued by the Administration or representative organization certifying that the plant complies with the Resolution MEPC2(VI).
	3	Procedures containing measures for treatment of sewage
	4	Drawings, etc. ① Details of sewage treatment and disposal system ② Capacity of sewage storage and/or treatment system ③ Sewage piping system drawing ④ Maximum number of crew members and passengers
1.4	1	Certificate or Statement of Compliance
	2	Procedure containing measures for treatment of garbage (may be included in Garbage Management Plan)
	3	Procedure related to onboard incineration if onboard incinerator is provided
1.5		According to items 1.5.1 to 1.5.3 below.
1.5.1	1	The Engine International Air Pollution Prevention (EIAPP) Certificate or the Statement of Compliance of requirements related to NOx emission of MARPOL Annex VI
	2	Statements indicating engine model, rated output, application and NOX emission value
	3	If NOx post-treatment system is installed, details of the said system
	4	Certificate from the Administration or representative authority indicating that the incinerating equipment comply with Regulation 16, MARPOL Annex VI
1.5.2	1	Procedure containing control of sulfur content of fuel oil at the time of purchase of fuel
	2	If exhaust gas cleaning system to reduce SOx is installed, details of the said system
1.5.3	1	Procedure containing the work to be performed for controlling loss, leak, discharge and disposal of refrigerants
	2	Drawings, etc. ① Arrangement of refrigerating system ② Capacity of refrigerating system ③ Details of refrigerant used ④ Details of fire fighting medium used in fixed type and portable fire extinguishing systems

Item		Submissions
1.6	1	Statement of Compliance
1.7	1	Ballast Water Management Plan approved by the Society or other classification society
1.8	1	Certificate
2.1	1	Relevant drawings of integrated bilge system, if installed
	2	Statements certifying that the oil content of the discharged bilge is less than 5 ppm
2.2	1	Relevant drawings and Statements if the fuel oil tank arrangement complies with the requirement 2.2 (in Table 2) of the guideline
2.3	1	Stern tube air seal construction drawings
2.4	1	Details of treatment system and discharge water quality when gray water is treated
	2	Details of water quality and shore drinking water standards when gray water is re-utilized
2.5	1	Drawings of N ₂ generating system
2.6	1	NA
2.7	1	Statements certifying that the NO _x total emission value does not exceed 80% of the regulated NO _x emission value for the relevant ship
2.8		NA
2.9	1	Certificate from the Administration or representative organization indicating that VOCs emission control system, if provided, complies with the MSC Resolution 585 or USCG46CFR39 (MARPOL Annex VI Certificate Supplement)
	2	Details of re-liquefaction system, if provided
	3	Operating procedures of system to prevent emission of VOCs or re-liquefaction system
3.0	1	Details of electrical power consumption during in port and details of high voltage shore power connection system, if installed
3.1	1	Biocide-free paint Statements
3.2	1	If ballast water treatment system is installed, certificate from the Administration or representative organization certifying that the equipment complies with Regulation D-2 of the International Convention for the Control and Management of Ship's Ballast Water and Sediments, and certificate certifying that final approval of IMO has been received when the said system uses active substances.
	2	Details of ballast water treatment system (including types of active substances used), if installed.



NIPPON KAIJI KYOKAI

*CERTIFICATE OF
ENVIRONMENTAL AWARENESS*

No. KC08XXXX

Name of ship	:	NK Maru
Class Number	:	012345
IMO Number	:	01234567
Flag	:	Singapore
Distinctive Number/Letters	:	23456 / ZA012
Gross Tonnage	:	60,000
Type of Ship	:	Bulk Carrier
Builder, Where Built	:	Nippon Ship Yard Co., Ltd. Chiyoda-ku, Tokyo, Japan

THIS IS TO CERTIFY that at the request of Messrs. NK Kisen Kaisha, Ltd., Japan, the Nippon Kaiji Kyokai did verify the equipment and procedures which are in place on board this vessel, in order to actively protect the environment, and the vessel is regarded as a ship with low environmental impact in compliance with the guideline for issuing "Certificate of Environmental Awareness".

*This Certificate is valid until XX YY 2013
Subject to compliance with Intermediate Verification.*

*Date of Issue: XX YY 2008
Place of Issue: Tokyo*

NIPPON KAIJI KYOKAI

(Name)

General Manager

Marine & Industrial Service Department

This Report is issued subject to the condition that it is understood and agreed that neither the Society nor any of its Committees is under any circumstances whatever to be held responsible for any inaccuracy in any report or certificate issued by this Society or its Surveyors or in any entry in the Record or other publication of the Society or for any error of judgment, default or negligence of its Officers, Surveyors or Agents.



NIPPON KAIJI KYOKAI

ENDORSEMENT FOR PERIODICAL VERIFICATION

THIS IS TO CERTIFY THAT, at the periodical verification, the vessel was found to comply with the guideline for issuing “Certificate of Environmental Awareness”:

Due range for Intermediate Verification: within 3 months before or after *XX YY, 2010 or 2011*.

Intermediate Verification

Signed: _____

Surveyor to NIPPON KAIJI KYOKAI

Place: _____

Date: _____

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NIPPON KAIJI KYOKAI

Attachment of Certificate of Environmental Awareness

Applied additional characters other than minimum requirements are defined in the table with blacken circle.

Additional Character(s)

Characters	Applied
• Protective Bilge Control	
• Fuel Oil Tanks in Protective Location	●
• Oil Preventive Stern Tube Sealing	
• Preventive Gray Water Discharge	
• N2 Generator (No Scrubber Water)	
• Prevention of Garbage Disposal	
• NOx Reduction	
• SOx Reduction	●
• VOCs Reduction	
• Shore Power Connection	
• Biocide Free Paint	
• Ballast Water Treatment System	●

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Appendix 3 Application

No.

Date:

TO: NIPPON KAIJI KYOKAI

APPLICATION FOR TECHNICAL SERVICE FOR ISSUING THE CERTIFICATE OF "ENVIRONMENTAL AWARENESS"

We acknowledge the provisions of "REGULATIONS FOR TECHNICAL SERVICES" of NIPPON KAIJI KYOKAI (NK) and request you to carry out technical service for issuing the certificate of "Environmental Awareness".

Name of *Ship /*Object: _____

Particulars:

(For Ship) Classification Number _____ Official Number: _____
Gross Tonnage: _____ Flag: _____
Port of Registry: _____ Type of Ship: _____
Name and Address of Owner: _____

Type of Services:

1. Issuing the certificate of "Environmental Awareness"
2. Additional Character(s) (the applicant ticks each applicable box optionally):
 - ☐ Protective Bilge Control (at least one of the followings is required to apply)
 - ☐ Integrated Bilge Water Treatment System
 - ☐ Oil content of bilge discharge below 5ppm
 - ☐ All bilge water transferred to shore
 - ☐ Fuel Oil Tank in Protective Location
 - ☐ Oil Preventive Stern Tube Sealing
 - ☐ Preventive Gray Water Discharge
 - ☐ NOx Reduction
 - ☐ SOx Reduction
 - ☐ VOCs Reduction
 - ☐ Shore Power Connection
 - ☐ Biocide Free Paint
 - ☐ Ballast Water Treatment System

Date and Place of Services:

From _____ to _____ at _____

Name of Agent _____

(Tel.: _____ Fax: _____)

We agree to pay all survey fees and expenses incurred as a result of the above-mention services regardless of whether the results of the services are acceptable or not.

Name of Company: _____

Address: _____

Tel.: _____ Fax: _____

Signature of Applicant: _____

If this form is unsuitable for the service desired, please use the application form prescribed separately