Sultanate of Oman
Ministry of Regional Municipalities,
Environment & Water Resources
Minister's Office
Muscat

Ministerial Decision No: 159/2005
Promulgating the bylaws to discharge liquid waste in the marine environment

Based on the law to monitor marine pollution, promulgated by Royal Decree No: 34/74, and

The environment protection and pollution control law, promulgated by Royal Decree No: 114/2001, and

The decision No: 7/84 issued by the Council for Environment Protection and Pollution Control, concerning the rules and measures to discharge flowing liquid materials into the marine environment, and

The approval of the Ministry of Finance, and

For the public interest

It was decided

Article one: Concerning the discharge of liquid wastes in the marine environment, the enclosed bylaws shall be implemented.

Article two: The said decision No: 7/84 is hereby cancelled. Also is cancelled whatever violates the enclosed bylaws or contradicts with its provisions

Article three: This decision shall be published in the Official Gazette and implemented from this date.

Signature & stamp:

Abdullah Salem Amer Al-Rawas
Minister

Issued on: 12 Jamad Awal 1426 AH
Corresponding to: 19 June 2005 AD

The bylaws to discharge liquid waste in the marine environment

Chapter One
Definitions & general provisions

Article 1: In implementing the provisions of the bylaws, the words and expressions mentioned therein shall have the same meaning as stipulated in the said Marine Protection & Pollution Control Law. The following words and expressions shall have the meaning specified against each, unless otherwise stipulated by the text:

The Directorate:	The Directorate General of Environment Affairs at the Ministry
The Department:	The Department of Inspection & Environment Control at the Ministry
Liquid Waste;	Any liquid containing environmental pollutants discharged into the marine environment from land or sea sources
Marine Environment:	The coastal area extending from the sea's highest tide line up to the Omani regional marine borders, including the special zone, together with vegetable or animal creatures living in it or on the seabed, including pearls and coral reefs
Benthic Marine Life:	Any marine plant or animal connected with the seabed or living in it
Marine Pollution:	Direct or indirect introduction by human activities of wastes or any other materials in the sea that can result in harmful effects to the living resources and marine environmental systems, or hazard to the human health, or obstruction to marine activities, including fishing and other legitimate use of the sea, and damage the special quality by using the sea water or reducing its suitability
Discharge:	Throwing, leakage, emission, pumping, pouring, discharging or sinking any of the marine pollutants directly or indirectly in the marine environment
Special Zone:	The marine area requiring the application of special mandatory procedures to prevent marine pollution for technical reasons related to its environmental and marine status and the nature of navigation therein
License:	The approval issued by the Department of Inspection & Environment Control and includes permission to discharge liquid waste in the marine environment

Article 2: Any beneficiary may complain to the minister against any decision or procedure taken by the ministry of the directorate, within one month from being notified or confirmed knowledge.

The minister has the authority to withdraw, amend or suspend the decision or procedure.

Article 3: The government authorities are exempted from the license fees, also exempted are the parties or individuals discharging for research or scientific purposes.

Article 4: Environmental inspectors concerned may enter, inspect and monitor any liquid waste discharge in order to execute their assignments.

Chapter two
Procedure to discharge liquid waste into the marine environment

Article 5: No liquid waste shall be directly or indirectly discharged in the marine environment without obtaining prior license.

Article 6: The license shall be issued against annual fees as follows:

- (15) Omani Rial fifteen for less than 100 m^3/hour
- (50) Omani Rial fifty if more than 100 m^3/hour
- (75) Omani Rial seventy-five for more than 1000 m^3/hour

In the event of not holding a valid permit, a fine shall be collected for the said categories.

Article 7: License applicant undertakes to reuse or recycle the liquid waste, or destroy the hazardous contents of such waste, or mitigate it by using proper environmental treatment.

The ministry may refuse awarding the license if it considers it possible to reuse, recycle or treat such waste without causing any hazard to the human or environment health.

Article 8: The detailed description and the description of the characteristics of the liquid are fundamental conditions to consider awarding the license.

The initial appraisal of the liquid material should include all the related elements that may result from it at any time, provided that such appraisal is conducted in the coastal waters.

Article 9: The quality of liquid waste should be within the limits specified in annex (1).

Article 10: To obtain a license the following information should be submitted concerning the discharge location:

a) Physical, chemical and biological characteristics of the water column and the seabed in an area of (2 km) diameter from the discharge point, especially for the seabed seaweed, alga and corals.

b) Recreation areas and other usage of the marine are concerned.

c) Evaluation of the contents of liquid waste currently discharged in the area, especially phosphate and nitrate.

Article 11: The license holder undertakes to:

1. Set the end of the liquid waste discharge pipe at a depth of not less than one meter from the lowest tide line.

2. The temperature of liquid waste at the discharge point should not exceed 10 degrees centigrade over the temperature of the water surrounding the seawater intake, if any. The ministry may request continuous monitoring of the water temperature at the discharge inlet and outlet, in the form of monthly reports. The ministry may also request, every now and then, continuous monitoring to ensure that the temperature of the inlet is equal to the temperature of the surrounding water.

3. Set the end of the discharge pipe whereby will not allow the liquid waste to hit the corals and seaweeds at the seabed.

4. The special utilities and equipment should be maintained by taking samples of the seawater and liquid waste in accordance with the conditions set by the ministry.

5. Specify a circular area of 300 meter diameter, with the point of liquid waste discharge as its center, as the initial mitigating area, whereby the discharge of liquid waste in this area should not result in the followings:

   a) Increase of the temperature of surrounding water for more than one degree centigrade (weekly average)

   b) Reduction of average dissolved oxygen for more than 10% (weekly average).

   c) Changes in the surrounding hydrogen exponent for more than 0.2 unit.

   d) Increase or decrease in rate of salinity for more than 2 saline unite (2 per thousand) of the daily surrounding averages.

Article 12: The discharge should be in the form of three-dimensional modelling covering one seasonal year and high and low tides cycles. Provided that this modelling shall be applied in the worst initial mitigation conditions, i.e. the lowest wind speed concurrent with the diminishing high and low tides, the lowest recorded current speed in the location and the tidal reflection in view of such conditions, unless otherwise decided by the ministry.

Article 13: The said modelling, stipulated in the preceding article, should include the following data & information:

   a) Meteorology measurements: Wind speed and direction for at least one month during the southwestern and northeastern seasonal winds (winter and summer).

   b) Marine currents measurements: High and low tide currents and the currents resulting from wind action on the surface, the central and seabed waters covering an area of (1) km on either sides of the discharging point and for (1) km into the sea.

   c) Seabed topography: Depth contours covering an area of (1) km on either sides of the discharging point and for (1) km into the sea.

d) Multi-vents dispersers should be used at the pipe-end, provided it is gradual dispersers to assist in preventing the liquid from reverting to the beach area.

The ministry shall have the right to set modules concerning the discharge dimensions.

Article 14: It is prohibited to destroy any seabed marine life within 300 meters radius from the discharge outlet in the initial mitigation area.

Article 15: Facilities and equipment should be provided and maintained in accordance with the ministry's requirements to take samples and analyze seawater and liquid materials. Other parties may carry out similar analysis after the ministry's approval of such parties' laboratories.

Article 16: Liquid waste discharge from the vessels, ships, stationary and floating rigs and other platforms should be in accordance with the International Marine Organization's agreement, and its protocols and annexures, within the limits clarified in the enclosed annexures from (2) to (7).

Chapter Three
Penalties

Article 17: Without prejudice to any harsher penalty stipulated in other law, anyone violating the provisions of these bylaws shall be subjected to the penalties stipulated in the said Environment Protection & Pollution Control Law.

Annexure (1)

Concerning the discharge of liquid waste in the marine environment – maximum limit for quality (milligram/liter unless otherwise stipulated)Add pH: between 6 - 9

PARAMETER	**Standard**
pH	Between 6 - 9
Temperature	<10 ºC above ambient temp
Biochemical Oxygen Demand (BOD) (5d@20degrees centigrade)	20.0
Chemical oxygen demand (COD)	200.0
Total Suspended Solids	30.0
Aluminium (as Al)	5.0
Arsenic (as As)	0.100
Barium (as Ba)	2.0
Beryllium (as Be)	0.300
Boron (as B)	1.0
Cadmium (as Cd)	0.010
Chromium (as Cr)	0.050
Cobalt (as Co)	0.050
Copper (as Cu)	0.200
Cyanide (total as CN)	0.100
Flouride (as F)	2.0
Iron (as Fe)	1.5
Lead (as Pb)	0.08
Lithium (as Li)	0.070
Mercury (as Hg)	0.001
Molybdenum (as Mo)	0.05
Nickel (as Ni)	0.100
Nitrogen: Ammoniacal (as N)	1.0
Nitrogen: Nitrate (as N)	15.0
Nitrogen: Organic (Kjeldahl) (as N)	5.0
Total-Nitrogen	15.0
Oil & Grease	15.0
Phenols (total)	0.002
Phosphorus (total as P)	2.0
Selenium (as Se)	0.020
Silver (as Ag)	0.010
Sulphide (total as S)	0.100
Total chlorine (as Cl_2)	0.4
Vanadium (as V)	0.100
Zinc (as Zn)	1.0
Faecal Coliform Bacteria (per litre)	1,000
Viable Nematode Ova (per litre)	<1
Organo halogens	<0.001
Pesticides or their by-products	<0.001
Organosilicon compounds	<0.001
Organocopper compounds	<0.001
Organotin compounds	0.00002

Annexure (2)
Concerning the discharge of oil from the tankers' holding tanks

Marine zone	Discharge criteria
Within 50 nautical miles from land	No discharge shall be permitted other than clean and separate balance water.
Outside the special zone or more than 50 nautical miles from land	It is prohibited to discharge other than the following conditions: a) Clean and separate balancing water b) When: 1. The tankers are sailing 2. The instant average of discharge should not exceed 30 liter per nautical mile. 3. Total quantity of discharged oils should not exceed 1:15.000 "for existing tankers" or 1:30.000 "for new tankers" of the total merchandize from which the waste was a part from. 4. The tankers should be fitted with a system to monitor and control the discharge of oils, and arranging the waste oil tanks according to the bylaws 15 of annexure (1) of the International Marine Organization agreement.
Inside the special zone	No discharge shall be permitted other than the clean and separate balancing waters.

Annexure (3)
Concerning the criteria of discharging oil from the machine rooms of all the vessels

Marine zone	Vessel's type and size	Criteria of discharge
Anywhere outside the special zone	Oil tankers of all sizes and other vessels with total loading capacity of 400 tons and more.	No discharge shall be permitted with the exception of the following cases: 1. The vessel should be sailing. 2. If the oil content in liquid waste is 15 parts per million or less. 3. The vessel is equipped with oil discharge monitor and control system, and equipment to separate oily waters, or oil filters or any other equipment according to the requirements of bylaws (16) of annexure (1) of the International Marine Organization agreement. 4. The waste collected in the tanker's bilge is not originating from the merchandize pumping rooms or mixed with the oil cargo waste.
Any other place or zone	Stationary and floating rigs and other platforms	No discharge shall be permitted with the exception of the following cases: 1. If the oil content in liquid waste is 15 parts per million or less. 2. The rigs/platforms are equipped with oil discharge monitor and control system, and equipment to separate oily waters, or oil filters or any other equipment according to the requirements of bylaws (16) of annexure (1) of the International Marine Organization agreement. 3. Maintain a log for all operations related to oily waters. 4. The rigs/platforms are equipped with tanks to hold oil waste according to the requirements of bylaws (17/1) of annexure (1) of the International Marine Organization agreement. 5. Return waste to the shore for treatment.

Annexure (4)
Concerning the criteria of discharging oil from the machine rooms of all the vessels inside the special zone

Marine zone	**Vessel type & size**	**Criteria of discharge**
Special zone	Oil tankers of all sizes and other vessels with total loading capacity of 400 tons and more.	No discharge shall be permitted with the exception of the following cases: 1. The vessel should be sailing. 2. If the oil content in liquid waste is 15 parts per million or less. 3. The vessel is equipped with oil filters, alarm system and automatic discharge suspension mechanism 15< parts per million. 4. The waste collected in the tanker's bilge is not originating from the merchandize pumping rooms or mixed with the oil cargo waste.
	Vessels, other than oil tankers, with total loading capacity of less than 400 tons.	No discharge shall be permitted unless when the oil contents of the liquid waste, without mitigation, is less than 15 parts per million.

Annexure (5)
Concerning discharging liquid waste containing hazardous liquids outside the special zone

Liquid wastes that expose the marine environment to hazard, divided into four categories ("A", "B", "C" & "D") listed in the second annexure of bylaws (2) of the International Marine Organization agreement

Condition	**Category A**	**Category B**	**Category C**	**Category D**
Maximum concentration level on discharge		1 part per million in the vessel's path	10 parts per million in the vessel's path	One part of the material in 10 parts of water in the mixture of liquid wastes
Maximum level of the load discharged from each tank	Transport waste resulting from cleaning the tanks to the reception facility	1 M^3 or 1:300 of the tank's capacity	3 M^3 or 1:1000 of the tank's capacity	Unlimited
Discharge of liquid waste		Under the waterline	Under the waterline	Unlimited
Minimum water depth		25 meters	25 meters	No minimum depth
Minimum distance from land		12 nautical miles	12 nautical miles	12 nautical miles
Minimum ship speed		7 knots	7 knots	7 knots

Annexure (6)
Concerning discharging liquid waste containing hazardous liquids inside the special zone

Condition	Category A	Category B	Category C	Category D
Maximum concentration level on discharge	-	-	10 parts per million in the vessel's path	One part of the material in 10 parts of water in the mixture of liquid wastes
Maximum level of the load discharged from each tank	Transport waste resulting from cleaning the tanks to the reception facility	Transport waste resulting from cleaning the tanks to the reception facility	1 M^3 or 1:300 of the tank's capacity	Unlimited
Discharge of liquid waste	-	-	Under the waterline	Unlimited
Minimum water depth	-	-	25 meters	No minimum depth
Minimum distance from land	-	-	12 nautical miles	12 nautical miles
Minimum ship speed	-	-	7 knots	7 knots

Annexure (7)
Concerning discharging swage water from the ships

The following provisions are applicable on the vessels with total load capacity over 200 tons and/or carrying more than 10 persons

Marine zone	Criteria for discharge
Within 4 nautical miles from land	No discharge shall be permitted unless from accredited treatment plants
Between 4 and 12 nautical miles from land	No discharge shall be permitted unless from: a) Accredited treatment plant b) Accredited network to fragmentize and sterilize sewage water.
More than 12 nautical miles from land	Discharge from the said network of un-fragmented or un-sterilized sewage water as long as the vessel is sailing at a speed of not less than 4 knots.