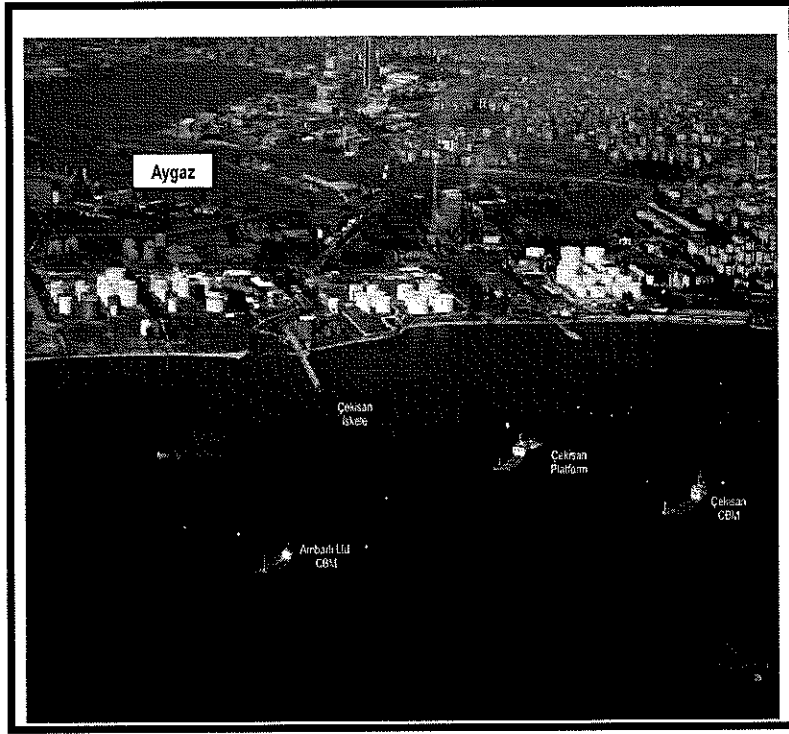


AYGAZ

AYGAZ AMBARLI TERMINAL DANGEROUS CARGO HANDLING GUIDE



PREPARATION DATE: 12.01.2026 (REV8)
(Refer to the Revised Revised Page)

PREPARED BY:

AYGAZ A.Ş.
AMBARLI TERMINAL MANAGEMENT

SIGNATURE 
Ambarlı Terminal Yöneticiliği
Yakuplu Mah. Geni Duman Cad.
No: 6 Beşikdüzü / İSTANBUL

INDEX

1	ENTRY	1-1
1.1	General information of the port facility.....	1-2
1.2	Loading/unloading, handling and storage procedures for dangerous cargoes handled and temporarily stored at the port facility	1-5
1.2.1	General.....	1-5
1.3	Procedures for safe handling of liquid bulk (LPG) dangerous cargoes. 1-6	
1.3.1	Application	1-6
1.3.2	Requirements	1-6
1.3.3	Pipe installations used for liquid bulk dangerous cargoes.....	1-10
1.3.4	The liquid cargo foreman will do the following:	1-10
1.3.5	Sources of ignition.....	1-10
1.3.6	Handling.....	1-11
1.3.7	Preliminary precautions.....	1-11
1.3.8	Pumping.....	1-12
1.3.9	Completion of operation.....	1-14
1.3.10	In LPG Operations, additionally:	1-14
2	RESPONSIBILITIES	2-14
2.1	General Responsibilities.....	2-14
2.2	Responsibilities of the shipper	2-15
2.3	Responsibilities of the Shore Facility Operator	2-15
2.4	Responsibilities of the Ship's Master	2-17
2.5	Responsibilities of the Dangerous Cargo Safety Advisor (DCSA).....	2-17
3	POLICIES/APPLIED RULES AND MEASURES TO BE FOLLOWED BY PORT FACILITY	3-1
3.1	Berthing.....	3-1
3.2	Supervision.....	3-1
3.3	Identification, packing, marking, labelling or placarding and certification	3-1
3.4	Safe handling and segregation	3-1
3.5	Emergency procedures	3-1
3.6	Emergency information.....	3-2
3.7	Fire precautions	3-3
3.8	Fire fighting.....	3-3
3.9	Environmental precautions	3-3
3.10	Pollution combating (5312 REGULATIONS)	3-4
3.11	Reporting of incidents.....	3-4
3.12	Inspections	3-4
3.13	Hot work and other repair or maintenance work.....	3-5
3.14	Entry into confined or enclosed spaces	3-6
3.15	Contaminated wastes.....	3-6
3.16	Alcohol and drug abuse.....	3-6
3.17	Weather conditions.....	3-6
3.18	Lighting.....	3-6
3.19	Handling equipment	3-7
3.20	Protective equipment.....	3-7
3.21	Signals	3-7
3.22	Communications.....	3-8
3.23	Areas.....	3-8
3.23.1	Dangerous cargo areas	3-8
3.23.2	Lorry parking areas.....	3-8

3.23.3	Special areas for damaged dangerous cargoes and wastes contaminated with dangerous cargoes	3-9
3.23.4	Repairing/cleaning facilities.....	3-9
3.23.5	Reception facilities	3-9
3.24	Training.....	3-9
4	CLASSIFICATION OF DANGEROUS GOODS, HANDLING, LOADING / UNLOADING, HANDLING, SEPARATION, STACKING AND STORING	4-1
4.1	Classification of Dangerous Goods.....	4-1
4.2	Dangerous Goods Packing and Packages	4-1
4.3	Dangerous Goods Marking, Labels, Placards.	4-1
4.4	Tehlikeli maddelerin işaretleri ve paketleme grupları.....	4-2
4.5	Segregation and Separation	4-2
4.6	Dangerous Goods Documentation	4-2
5	HANDBOOK OF DANGEROUS GOODS.....	5-1
6	PROCEDURES FOR THE OPERATION	6-1
6.1	Procedure of ships carrying dangerous goods safely Berthing, loading / unloading, shelter or anchorage during the day and at night.....	6-1
6.2	Procedure of according to the seasonal conditions additional measures that Loading/Unloading, limbo operation of dangerous goods should be taken by port facilities	6-2
6.3	Procedures on keeping any inflammable, combustible and explosive materials away from operations which cause or are likely to cause sparking and abstaining from operating any tools, apparatus or device which cause or are likely to cause sparking in areas where hazardous materials are handled, stowed and stored.....	6-2
7	Documentation, Control And Record	7-1
7.1	Procedures regarding to all necessary documents, information and certification relating to dangerous substances and their procurement and control by the relevant persons.....	7-1
7.2	Procedures of keeping a regular and accurate current list of all hazardous substances in the coastal facility area and other relevant information.....	7-2
7.3	Procedures regarding to appropriate identification of hazardous substances delivered to the facility, correct use of shipping names of dangerous cargo, certification, packaging, labeling and declaration, inspection on loading and transport of dangerous goods in the certified and proper package, container or cargo unit in a safety way and reporting of inspection results.....	7-3
7.4	Procedures related to procurement of the Hazardous materials safety information sheets (SDS).....	7-3
7.5	Procedures for records and statistics of dangerous goods.....	7-3
7.6	Information about the Quality Management System.	7-4
8	EMERGENCY SITUATION, EMERGENCY SITUATION PREPAREDNESS AND RESPONSE	8-1
8.1	Response procedures for hazardous substances that are dangerous for life, property and/or environment and hazardous situations involving hazardous materials.....	8-1
8.1.1	Decision making;.....	8-1
8.1.2	Protective Actions and Response.....	8-2
8.1.3	Evacuate.....	8-2
8.1.4	Shelter In-Place.....	8-2

8.2	Information on resource, capability and capacity of the port facilities regarding to respond to emergencies.....	8-5
8.3	Regulations related to the the first aid for accidents involving dangerous substances (first aid procedures, first aid resources and capabilities and so on.).	8-5
8.4	On-site and off site Notifications required to be made in case of emergency.....	8-6
8.5	The procedures for reporting accidents.....	8-6
8.5.1	Communication.....	8-6
8.5.2	Reports.....	8-7
8.6	Coordination, support and cooperation method with authorities.	8-7
8.7	Emergency evacuation plan for the evacuation of the ship and vessels from the coastal facility in case of emergency.....	8-8
8.7.1	Preparation for Emergency Separation System.....	8-8
8.7.2	Realization of Emergency Separation.....	8-8
8.7.3	Post Emergency Separation.....	8-9
8.8	Procedures for handling and disposal of the damaged hazardous goods and wastes contaminated with hazardous goods.....	8-10
8.8.1	Waste Collecting and Handling.....	8-10
8.8.2	Waste disposal.....	8-10
8.8.3	Contaminated Packages;.....	8-10
8.9	Emergency drills and their records.....	8-11
8.9.1	Implementation of Practices;.....	8-11
8.9.2	Practice Scenarios;.....	8-11
8.9.3	Emergency Practices which will be performed within the facility; ..	8-11
8.10	Information on fire protection systems.....	8-12
8.11	Procedures for approval, inspection, testing, maintenance and availability of the fire protection system.....	8-12
8.11.1	Fire-Protection Water Tanks and Fire-Protection Water.....	8-12
8.11.2	Fire-Protection Water Pumps.....	8-12
8.11.3	Sprinkler System.....	8-13
8.11.4	Fire Protection Hydrant Installation.....	8-13
8.11.5	Portable Extinguishers.....	8-14
8.11.6	Protection against freezing.....	8-14
8.12	The measures to be taken in case of failure on fire protection systems.	8-14
8.13	Other risk prevention equipments.....	8-13
9	SAFETY AND HEALTH AT WORK MEASURES	9-1
9.1	Occupational health and safety measures.	9-1
9.1.1	Risk assessment.....	9-1
9.1.2	Emergencies.....	9-3
9.1.3	Workers' education and informing them.....	9-3
9.2	Information about the personal protective clothes and procedures to use them	9-4
9.3	Enclosed space Entrance.	9-5
10	OTHER POINT	10-1
10.1	Validity of the Hazardous Substances Compliance Certificate.	10-1
10.2	Responsibilities of the Dangerous Goods Safety Consultant.....	10-1
10.3	Matters for carriers of the hazardous substances arriving/leaving coastal facility by land (matters on required documents that must be available in the road vehicle at the entrance/exit of port or coastal facility area, equipment and tools required for this vehicles, speed limits in the port area etc.).	10-1
10.3.1	Bulk dangerous cargoes.....	10-1

10.3.2	Necessary certificates	10-1
10.3.3	Speed Limit in Port Facility	10-1
10.4	Matters for carriers of the hazardous substances arriving/leaving coastal facility by sea (matters on day/night signals to be shown by ships carrying hazardous goods and vessels, cold and hot work procedures in ships and so on.)	10-2
10.4.1	Arrival by Sea	10-2
10.4.2	Departure by Sea	10-2
10.5	Additional points will be added by the port facility.	10-3
10.5.1	Training	10-3
10.5.2	Training content	10-3
10.6	Accident Prevention Policy.....	10-4
10.7	Hot Work Procedure	10-5
10.8	Responsibilities of Personnel in Operation.....	10-1
10.8.1	Operation Officer.....	10-1
10.8.2	Shift Supervisor	10-1
10.8.3	HSE Responsibility	10-2
10.9	Safe Handling of Dangerous Goods Operation Procedure Checklist	10-2
10.10	Procedures for safe handling of liquid bulk dangerous cargoes Checklist 10-3	
10.11	EmS (Emergency Procedures for Vessels carrying Dangerous Goods) and MFAG (Medical First Aid Guide)	10-4
10.11.1	EmS	10-4
10.11.2	MFAG.....	10-5
11	ATTACHMENTS	11-6
11.1	Layout.....	11-6
11.2	General View Photos of The Coastal Facility	11-7
11.3	Emergency Calls.....	11-8
11.4	Dangerous Goods Layout.....	11-9
	(Filling Plant Layout Plan)	11-9
11.5	Dangerous Goods Fire Plans	11-10
	(Filling Plant Fire System Layout Plan)	11-10
11.6	Site Fire Systems.....	11-11
11.7	Emergency Response Plans	11-12
11.8	Emergency Meeting Point	11-13
11.9	Emergency Response Plan Scheme.....	11-14
11.10	Dangerous Goods Manual.....	11-15
11.11	Leak Areas and Equipment for CTU and Packages, Entry/Exit Drawings.....	11-15
11.12	Inventory of Port Service Ships.....	11-15
11.13	Sea coordinates of the administrative borders of the Port Authority, anchorage areas and the pilot's disembarkation/embarkation points	11-15
A)	Port administrative area border	11-15
B)	Anchorage areas.....	11-15
C)	Pilot pick-up and drop off location.....	11-16
11.14	Emergency Response Equipment Against Marine Pollution in the Port Facility	11-16
11.15	PPE Map	11-16
11.16	Hazardous Substance Incidents Notification Form.....	11-16
11.17	Control Results Notification Form for Dangerous Goods Transport Units (CTUs)	11-17
11.18	Other required annexes.....	11-18

11.19	Dangerous Goods Handling Guide Additional Cargo Notification (When necessary) (Newly added)	11-18
12	Abbreviation	Error! Bookmark not defined.
13	INTRODUCTION	13-1
14	DEFINITIONS	14-1

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
			1.1.2016	7	21.08.2023
DANGEROUS CARGO HANDLING GUIDE					

1 ENTRY

1.1. The entry and presence of dangerous cargoes in port areas and any consequential handling should be controlled to ensure the general safety and security of the area, the containment of the cargoes, the safety of all persons in or near the port area, and the protection of the environment.

1.2. The safety of life at sea and the safety and security of a ship, its cargo and its crew in a port area are directly related to the care which is taken with dangerous cargoes prior to loading or unloading, and during their handling.

1.3. These Recommendations are confined to dangerous cargoes which are in a port area as part of the transport chain. These Recommendations do not apply to dangerous substances which are used in a port area or are for general storage in the port area, but Governments may wish to control such use and storage by national legal requirements. Should a substance covered by either of these exclusions subsequently be shipped, these Recommendations should then be applied, even though the substance is already in the port area.

1.4. An essential pre-requisite for the safe transport and handling of dangerous cargoes is their proper identification, containment, packaging, packing, securing, marking, labelling, placarding and documentation. This applies whether the operation takes place in a port area or at premises away from a port area.

1.5. Whilst the total transport chain includes inland, port and marine elements, it is essential that every care is taken by those responsible for the matters in 1.4 and that all relevant information is passed to those involved in the transport chain and to the final consignee. Attention should be paid to the possible differing requirements for different modes of transport.

1.6. The safe transport and handling of dangerous cargoes is based on correct and accurate application of regulations for transport and handling of such cargoes and depends on appreciation by all persons concerned of the risks involved and on the full and detailed understanding of the regulations. This can only be achieved by properly planned and carried out training and retraining of persons concerned.

1.7. The codes and guides are under continuous review and are regularly revised. It is essential that only the most up-to-date editions are used. The contents of these codes and guides have been repeated in these Recommendations only to the extent necessary.

1.8. In preparing this guide IMDG CODE, ERG 2016 and IMO 1216 CR. documents have been applied to and the informations are used.

1.9. Liquid Cargo Supervisor is Loading Master for foreign ships, and Ship's Captain for ships that are AYGAZ has.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	1-2
	DANGEROUS CARGO HANDLING GUIDE				

1.1 General information of the port facility

General information about the facility:

FACILITY INFORMATION FORM

1	Name of The Facility operator	AYGAZ A.Ş.		
2	Information of the facility operator (adres, telefon, faks, e-posta ve web sayfası)	Addres: Büyükdere Street 145-1 Zincirlikuyu 34394 İstanbul Phone: +90 (212) 354 1515 Fax: +90 (212) 288 3963 www.aygaz.com.tr		
3	Name of The Facility	Aygaz A.Ş Ambarlı Terminal Management		
4	Where the facility is located	İstanbul		
5	Contact information of the facility (adres, phone, faks, email and web page)	Addres: Yakuplu Neighbourhood Genç Osman Street Nu:6 34315 Beylikdüzü Phone: +90 (212) 876 2300 Fax: +90 (212) 876 2315		
6	Geographic area where the facility is located	Marmara Area		
7	Contact details of the Port Authority to which the facility is affiliated	Ambarlı Regional Port Authority Phone: +90 (212) 875 6848 Fax: +90 (212) 875 6849		
8	Contact information of the municipality to which the facility is affiliated	Beylikdüzü Mayor Addres: Büyükşehir Neighbourhood Enver Adakan Street Nu: 2 Beylikdüzü İstanbul Phone: +90 (212) 866 7000 Fax: +90 (212) 873 0114		
9	Name of the free zone or organized industrial zone where the facility is located	Ambarlı Filling Plants		
10	Validity date of Coastal Facility Operation Permit	30.06.2028		
11	Operation status of the facility (X)	Own load and additional third party (X)	Own Load (...)	Third Party (...)

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	1-3
	DANGEROUS CARGO HANDLING GUIDE				

12	Name and surname of the facility manager, and contact information (phone, faks, email)	Volkan AKŞAHİN Terminal Manager Tel: +90 (212) 876 2300 / 2200 +90 (535) 344 84 74 Fax: +90 (212) 876 2315 volkan.aksahin@aygaz.com.tr
13	Name and surname of the facility's dangerous cargos operation officer, contact details (phone, faks, email)	Oğuzhan KARAMAN Plant Engineer Tel: +90 (212) 876 2300 / 2213 +90 (533) 270 72 11 Fax: +90 (0212) 876 2315 oguzhan.karaman@aygaz.com.tr
14	Name and Surname of the Dangerous Goods Safety Advisor of the facility, contact details (phone, faks, email)	Çiğdem KOÇ Tel : +90 533 386 84 87 cigdem.koc@tmgddanismanlik.com htyuyucu@hotmail.com
15	Sea coordinates of the facility	Latitude : 40° 57.711 N Longitude : 28° 42.001 E
16	Types of dangerous cargos handled at the facility (Cargoes covered by MARPOL Ek-I, IMDG Kod, IBC Code, IGC Code, IMSBC Code, Grain Code, TDC Code and asphalt/bitumen and scrap loads)	LPG (mix butane/propane) - UN1965 Propane LPG - UN1965
17	Types of ships that can approach the facility	LPG Ships
18	Distance of the facility to the main road	2,5 km
19	Distance of the facility to the railway or railway connection	No
20	Name of the nearest airport and its distance from the property	Atatürk Airport – 15 km
21	Load handling capacity of the facility (Ton/Year; TEU/Year; Vehicle/Year)	120.000 ton/year - 50 Ship/year
22	Is scrap handling done at the facility?	Not done
23	Is there a border gate? (Yes/Nor)	No

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	1-4
	DANGEROUS CARGO HANDLING GUIDE				

24	Is there a bonded field? (Yes/No)		No			
25	Cargo handling equipment		LPG Pipelines			
26	Storage Tank Capacity		14.100 m ³			
27	Open Storage Area		Due to the nature of the product, open storage is not possible			
28	Semi-closed storage area		-			
29	Closed storage area		14.100 m ³			
30	Designated fumigation and/or de-fumigation area		-			
31	Name/Title contact details of pilotage and tugboat services provider		UZMAR Uzmanlar Denizcilik Tic. ve San. Ltd. Şti. MarinTug Marin Römorkör ve Kılavuzluk A.Ş.			
32	Has a Security Plan been created?		Yes			
33	Waste Reception Facility Capacity (This section will be arranged separately according to the waste accepted by facility)		Type of Waste	Capacity (m ³)		
			EXEMPT			
34	Doch/pier etc. Properties of fields					
	Dock/Pier Nu	Size (meter)	Width (meter)	Maximum depth (metre)	water Minimum water depth (meter)	The Largest ship tonnage and length to bert (DWT or GRT - meter)
	Floating platform	7	7		34	40000 DWT
	Pipeline Name (if available on site)		Number (piece)	Length (meter)	Diameter (inç)	
	LPG Pipeline 14"		1	1400	14"	
	LPG Pipeline 10"		1	1400	10"	

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	1-5
	DANGEROUS CARGO HANDLING GUIDE				

1.2 Loading/unloading, handling and storage procedures for dangerous cargoes handled and temporarily stored at the port facility

1.2.1 General

1.2.1.1 Liquid cargoes (Flammable Gases class 2.1) Hydrocarbon Gas Mixture (UN 1965) within the scope of IBC code are handled at the port facility within the scope of IBC code.

1.2.1.2 Fulfillment of the conditions specified below will be ensured as regards handling the dangerous cargoes coming to the port facility, keeping them temporarily at the port facility, making their stowage and segregation and storage for safety of the port facility, employees and ships at the port facility.

1.2.1.2.1 In case of need A coordination meeting will be held at least 1 day prior to the acceptance of dangerous cargoes to the port facility and the representatives of operation, Field planning, HSE unit, TMGD and other related persons shall participate to the meeting.

1.2.1.2.2 Following issues will be discussed during the coordination meeting with regard to the dangerous cargo (es) to be accepted to the port:

1. Risk arising from dangerous cargo
2. Interaction with dangerous cargoes existing at the port facility,
3. Interaction with cargoes planned to be accepted to the port facility in the near future,
4. Requirement of materials and equipment with respect to emergency response
5. Sufficiency of emergency response equipments
6. Interaction with the neighboring area (s)

The issues mentioned herein above will be discussed within the scope of current IMDG CODE documents and a management decision for accepting/rejecting will be taken.

1.2.1.2.3 If a decision is taken at the meeting in favor of accepting the dangerous cargo, management, operation, storage, safety and emergency response departments shall be notified and the necessary preparations and acceptance process will be commenced.

1.2.1.2.4 If it is required to notify the Port authority, the situation shall be notified to the Port authority in writing by specifying the reasons.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
			1.1.2016	7	21.08.2023
DANGEROUS CARGO HANDLING GUIDE					

1.3 Procedures for safe handling of liquid bulk (LPG) dangerous cargoes

1.3.1 Application

1.3.1.1 Liquid bulk dangerous cargoes are handled at platform systems within our port facility.

1.3.1.2 The equipment, number of shifts and team are determined during the operations meeting held one day before. SDS of the cargo in ship notification is provided to HSE unit by the agency 3 days before.

1.3.1.3 After the ship is safely tied to platform system by the help of pilot and mooring boat, safety investigation is carried out on the ship. If any unsafe situations are observed, notifications are made to the persons responsible for the ship and measures are taken accordingly. Unloading equipment and appropriate pipe selection are made by the person responsible with operations. International Safety Guide for Oil Tankers and Terminals (ISGOTT) Ship/Port Safety Control List is undersigned mutually. A communication network is built between the ship and the port facility.

1.3.1.4 Employees wait beside the flexible hoses which will be connected to the ship. They work in cooperation with the ship personnel for the connection of liquid cargo to entry/exit manifolds of the ship.

1.3.1.5 Appropriate pressure adjustment is made to the ship. Overflow of tanks is avoided and the ship personnel are provided with required information and the line is cut under dangerous situations.

1.3.2 Requirements

1.3.2.1 Gas detectors which will detect gas leakages to occur at the port facility will be kept ready being calibrated and made ready to use.

1.3.2.2 The vehicles coming to the loading or unloading platform at the port facility will be eliminated from static electricity, flame arrestor apparatus will be placed at their exhausts and their earthing shall be made during the loading or unloading at the port facility. Flame arrestor apparatus will be provided by the Ground Tanker Operations Unit. Ground tankers which don't have flame arrestors shall not be taken to the port facility. This will not be required for tankers having ADR standards.

1.3.2.3 Required notices and warning signs will be placed around the area where handling is done. Related personnel will wear personal protective clothing and outfit in accordance with work health and safety requirements at dangerous places and under dangerous conditions. Personnel who don't have protective clothing and adequate equipment in line with their job descriptions and their working areas will not be employed.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	1-7
DANGEROUS CARGO HANDLING GUIDE					

- 1.3.2.4 Periodic repair/maintenance and calibration works of devices to be used will be made and certificates, journals or ledgers of records will be kept updated.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	1-8
DANGEROUS CARGO HANDLING GUIDE					

1.3.2.5 First aid equipments to be used during intervention will be placed at a place known by the personnel which is easily accessible in case of emergency or accidents.

1.3.2.6 Communication equipments to be used at the port facility will be wireless equipments which can be used safely during loading or unloading operations of liquid bulk dangerous cargoes in flammable or explosive environments.

1.3.2.7 Flexible hoses used in loading or unloading of liquid bulk dangerous cargoes should have a certificate specifying the approval of type as well as pipe type, maximum working pressure of the pipe and production month and year of the pipe. Repair and maintenance works and testing of the said pipes will be carried out as per the criteria stated in ISGOTT and relevant records shall be kept. Hoses to be used in loading or unloading operations which are not in service will be kept according to the criteria specified by ISGOTT.

1.3.2.8 Adequate number of electrical insulation flanges for the flexible hoses used in loading or unloading operations of liquid bulk dangerous cargoes.

1.3.2.9 The operators of port facility where liquid bulk dangerous cargoes are handled are responsible of notifying issues as regards additional safety and safety measures which have to be taken at port facility to liquid cargo foreman, superintendent, supervisor and workers.

1.3.2.10 Liquid cargo foreman, superintendent and supervisor are responsible from handling of liquid bulk cargoes at our port facility and their duties are specified in quality management system and they will act in accordance with the said quality management system.

1.3.2.11 The master of a ship and the liquid cargo foreman, within their respective areas of responsibility, should have immediately make available the following information with respect to each liquid bulk cargo transported in cargo operations and emergency cases to the port authority and other involved parties:

1.3.2.11.1 Information to be provided by the ship master;

1.3.2.11.1.1 The product name of the dangerous cargo, the UN number (where available) and a description of the relevant physical and chemical properties (including reactivity).

1.3.2.11.1.2 Procedures for cargo transfer, slop transfer, gas-freeing, inerting, ballasting, de-ballasting and tank cleaning.

1.3.2.11.2 Information to be provided by liquid cargo foreman, superintendent and supervisor;

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
			1.1.2016	7	21.08.2023
DANGEROUS CARGO HANDLING GUIDE					

1.3.2.11.2.1 Information as to specific equipment required for safe handling and loading or unloading of certain cargoes and emergency response procedures including the following issues:

- 1) Steps to be taken in cases of pouring or leakage as specified in Emergency Plans,

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	1-10
	DANGEROUS CARGO HANDLING GUIDE				

- 2) Measures to be taken to avoid people from contacting dangerous cargoes accidentally within the scope of Emergency Plan and Work Health and Security,
3) Fire fighting procedures as specified in Emergency Plan and the appropriate communication systems to be used in cases of fire.

1.3.2.12 It should be ensured that, before and during handling and loading or unloading operations of liquid bulk dangerous cargoes at any area, appropriate warning notices, preferably pictograms, are placed at all entrances.

1.3.2.13 Continuous communication will be ensured during the handling and loading or unloading of dangerous liquid bulk cargos, through Sea Band Channel 16 and from the work channel specified in the protocol and effectiveness of communication will be ensured during the cargo operations.

1.3.3 Pipe installations used for liquid bulk dangerous cargoes

1.3.3.1 Flexible hoses:

1.3.3.1.1 Flexible hoses will be used for cargo by considering the temperature and suitability and not be used for other than these cargoes.

1.3.3.1.2 If they are prone to be damaged by impact they will be protected accordingly.

1.3.3.1.3 The pipe will be electrically continuous except for the inclusion of an insulating flange or non-conductive spool piece when used for the transfer of a flammable liquid. The pipeline on the seaward side of the insulating section should be electrically continuous to the ship, and that on the landward side should be electrically continuous to the jetty earthing system. The insulating flange should be tested in accordance with chapter 17 of ISGOTT.

1.3.4 The liquid cargo foreman will do the following:

1.3.4.1 He will take adequate precautions are taken to prevent a short-circuit of the insulating section

1.3.4.2 He will inspect and test the insulating and earthing systems at appropriate intervals to ensure their effectiveness.

1.3.4.3 He will ensure that any other metallic connections between the berth and the ship are protected or arranged so as to ensure that there is no possibility of incentive sparking where a flammable atmosphere may be present.

1.3.4.4 He will take actions in accordance with appropriate checklists in the International Safety Guide for Oil Tankers and Terminals (ISGOTT).

1.3.5 Sources of ignition

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	1-11
	DANGEROUS CARGO HANDLING GUIDE				

1.3.5.1 Liquid cargo foreman should ensure that the master of a ship is notified of any conditions which may require precautions to be taken for avoidance of sources of ignition on the ship such as galley stoves or cooking appliances with non-immersed elements.

1.3.6 Handling

1.3.6.1 Flexible hoses

1.3.6.1.1 The master of a ship and the person responsible with operation within their respective areas of responsibility should ensure that:

1. No Flexible hose is used for cargoes other than those for which it is suitable, having regard to the temperature and compatibility of such cargoes, or at any working pressure for which it is unsuitable.
2. Each type of Flexible hose complete with end fittings has been prototype tested and a certificate provided to show the bursting pressure. Prototype hoses may not be used in service.
3. Before being placed in service, each Flexible hose supplied should be hydraulically tested in accordance with the requirements of the regulatory authority
4. Before being put into use on any day a Flexible hose is visually inspected. Flexible hoses should be inspected at frequent intervals during operations.
5. Documents showing the type of hose, its specified maximum working pressure and its month and year of manufacture will be kept at the facility.
6. It will be ensured that there are adequate electrical insulation flanges and the length of each Flexible hose is sufficient to satisfactorily operate within the defined operating envelope without overstressing the terminal connections
7. A Flexible hose rigged for the handling of liquid bulk dangerous cargoes is kept under adequate supervision
8. It will be ensured that there are adequate procedures for the disconnection of the Flexible hose in the event of an emergency, to protect the environment, personnel safety and equipment.

1.3.7 Preliminary precautions

1.3.7.1 The master of a ship and berth operator within their respective areas of responsibility, should ensure that cargo handling controls, gauging systems, emergency shutdown and alarm systems, where applicable, have been tested and found to be satisfactory before cargo handling operation begins

1.3.7.2 The master of a ship and berth operator should before liquid bulk dangerous cargoes are pumped into or out of a ship from or into a shore installation agree in writing on the handling procedures including the maximum loading or unloading rates taking into account:

1.3.7.2.1 The arrangement, capacity and maximum allowable pressure of the ship's cargo lines and the shore pipelines;

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	1-12
	DANGEROUS CARGO HANDLING GUIDE				

- 1.3.7.2.2 The arrangement and capacity of the vapor venting system;
- 1.3.7.2.3 The possible pressures increase due to emergency shut-down procedures;
- 1.3.7.2.4 The possible accumulation of electrostatic charge; and
- 1.3.7.2.5 The presence of responsible persons during start up operations on board ship and ashore
- 1.3.7.3 Complete and sign an appropriate safety check list showing the main safety precautions to be taken before and during such handling operations
- 1.3.7.4 Agree in writing the action to be taken and the signals to be used in the event of an emergency during handling operations; and
- 1.3.7.5 Ensure appropriate safety equipment and clothing are used.
- 1.3.7.6 The berth operator should ensure that starter controls on all bulk liquid transfer pumps are locked in the “off” position, or located at a facility accessible only to authorized personnel
- 1.3.7.7 The berth operator should ensure that starter controls on all bulk liquid transfer pumps are locked in the “off” position, or located at a facility accessible only to authorized personnel.
- 1.3.7.8 “Ship/Shore Safety checklist” in International Safety Guide for Oil Tankers and Terminals (ISGOTT) shall be completed and signed according to “Guidelines for completing Ship/ Shore Safety checklist”.

1.3.8 Pumping

- 1.3.8.1 The master of a ship and berth operator within their respective areas of responsibility should ensure that:
 - 1.3.8.1.1 Frequent checks are made to ensure that the agreed back-pressures and loading or unloading rates are not exceeded;
 - 1.3.8.1.2 All reasonable care is taken to prevent all relevant pipelines, loading arms, Flexible hoses and associated equipment on board the ship and ashore from developing a leak, and that they are kept under adequate supervision during the handling of liquid bulk dangerous cargoes;
 - 1.3.8.1.3 Effective communication between the ship and the shore installations is maintained throughout the handling operations;
 - 1.3.8.1.4 The safety check list is available for inspection throughout the handling operations;
 - 1.3.8.1.5 During the handling of liquid bulk dangerous cargoes, arrangements are made for the gauging of ships’ tanks to ensure that no tank is overfilled;

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	1-13
	DANGEROUS CARGO HANDLING GUIDE				

1.3.8.1.6 Responsible persons are present during operations on board ship and ashore; and

1.5.9.1.7 Appropriate safety equipment and clothing are used.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	2-14
	DANGEROUS CARGO HANDLING GUIDE				

1.3.9 Completion of operation

1.3.9.1 The master of a ship and berth operator within their respective areas of responsibility should ensure that after the completion of every transfer of liquid bulk dangerous cargoes the valves of the discharging and receiving cargo spaces and tanks are closed and any residual pressure in the relevant pipelines and Flexible hoses is released, They should also ensure that:

- 1.3.9.1.1 Prior to the disconnection of the flexible pipelines from the ship it is drained of liquids and the pressure is relieved;
- 1.3.9.1.2 All safety precautions are taken, including the blanking off of the ship manifold connection and the shore pipeline; and
- 1.3.9.1.3 Appropriate safety equipment and clothing are used.

1.3.10 In LPG Operations, additionally:

1.3.10.1. The ship's master and the shore facility operator shall carry out the loading/unloading operation of low-temperature liquefied gases within their areas of responsibility only if the following conditions are met:

1.3.10.1.1. The LPG pipeline circuits and storage tanks of Aygaz Ambarlı Terminal are designed and manufactured to operate between (-10) and (+50) degrees Celsius.

If the vessel is carrying refrigerated product, the cargo heating systems shall be activated before unloading, ensuring that the product temperature does not fall below (-5) degrees Celsius during the entire unloading process.

The product temperature shall be continuously monitored by the Marine Systems Operator through the meter control systems, and if needed, the Liquid Cargo Supervisor shall be informed so that necessary corrections can be made.

1.3.10.1.2. All automatic controls, gas detectors, and other related equipment must be kept in operational condition.

1.3.10.1.3. A sufficient number of personal protective clothing and equipment must be kept ready for use.

2 RESPONSIBILITIES

All parties within the dangerous goods transportation activities are obliged to take all necessary measures to transport safely, securely and environmentally friendly, to avoid accidents and to reduce the damage as little as possible, if an accident occurs.

2.1 General Responsibilities

The general responsibilities of all parties involved in dangerous goods transport activities are outlined below:

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	2-15
	DANGEROUS CARGO HANDLING GUIDE				

- a) They are obliged to take all necessary measures to ensure that transportation is carried out safely, securely, and without harming the environment, to prevent accidents, and to minimize damage as much as possible when an accident occurs.
- b) In case of emergencies such as fire, leakage, or spillage during the transport of dangerous goods, they shall make use of the EmS Guide, which contains Emergency Response Procedures and Emergency Schedules for Ships Carrying Dangerous Goods.
- c) To ensure that necessary medical first aid can be properly provided to individuals affected by the hazards of dangerous goods and to those suffering health problems resulting from accidents involving such goods, they shall make use of the Medical First Aid Guide (MFAG) included in the IMDG Code.

2.2 Responsibilities of the shipper

- 2.2.1** Prepare or have prepared the mandatory documents, information, and certificates related to dangerous goods, and ensure that these documents accompany the cargo throughout the transport operation.
- 2.2.2** Ensure that dangerous goods are correctly classified, packaged, marked, labelled, and placarded in accordance with their type.
- 2.2.3** Ensure that dangerous goods are loaded, stowed, and safely secured in approved packaging and cargo transport units in compliance with regulations.
- 2.2.4** Ensure that all relevant personnel receive training on the risks of dangerous goods transported by sea, safety precautions, safe working practices, emergency procedures, security, and related topics; and maintain records of such training.
- 2.2.5** Ensure that necessary safety measures are taken for dangerous goods that are non-compliant, unsafe, or pose a risk to persons or the environment.
- 2.2.6** Provide necessary information and support to relevant parties in case of an emergency or accident.
- 2.2.7** Report dangerous goods accidents occurring within their area of responsibility to the administration.
- 2.2.8** Provide the information and documents requested during inspections conducted by official authorities, and ensure necessary cooperation.

2.3 Responsibilities of the Shore Facility Operator

- 2.3.1** Shall not berth ships carrying dangerous goods at the facility without the permission of the Regional Port Authority.
- 2.3.2** Provides written information to the ship that will berth at the facility regarding facility rules, cargo-handling rules, and relevant legislation.
- 2.3.3** Shall not handle dangerous goods for which handling permission has not been obtained from the Administration, and shall plan operations in a manner that does not cause delays for arriving ships.
- 2.3.4** Requests all mandatory documents, information, and certificates related to dangerous goods from the shipper and ensures that these accompany the cargo. If such documents, information, or certificates are not provided by the shipper, the operator is not obliged to accept or handle the dangerous goods at the facility.
- 2.3.5** Shares all necessary data related to cargo characteristics with the ship's responsible personnel and conducts loading or unloading operations based on the agreed plan.
- No operational changes shall be made without informing the ship's representative.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	2-16
	DANGEROUS CARGO HANDLING GUIDE				

2.3.6 Determines operating limits by considering the facility's safe working capacity and weather forecasts, and takes necessary measures to ensure that the ship remains safely moored and that handling operations are safely conducted.

2.3.7 Checks transport documents indicating that dangerous goods arriving at the facility have been properly classified, packaged, marked, labelled, placarded, and safely loaded into the cargo transport unit.

2.3.8 Ensures that personnel involved in handling or planning the handling of dangerous goods have received the required training and certification, and does not assign uncertified personnel to these operations.

2.3.9 Ensures that dangerous goods handling equipment at the facility is operational, and that personnel are trained and certified to use such equipment.

2.3.10 Implements occupational safety measures and ensures that personnel use personal protective equipment suitable for the physical and chemical properties of the dangerous goods.

2.3.11 Carries out dangerous goods-related activities at piers, docks, and storage areas specifically established and suitable for such operations.

2.3.12 Equips piers and docks designated for ships loading or unloading dangerous liquid bulk cargo with appropriate installations and equipment.

2.3.13 Maintains an up-to-date list of all dangerous goods on ships berthed at the facility and within all closed and open areas of the facility, and provides this information to relevant parties upon request.

2.3.14 Reports the instantaneous risk posed by dangerous goods handled or temporarily stored at the facility, along with measures taken, to the Regional Port Authority.

2.3.15 Shall not berth ships and marine vessels carrying dangerous goods at the facility without the permission of the Regional Port Authority.
(Note: This appears to be a repetition of 2.3.1.)

2.3.16 Reports accidents related to dangerous goods, including accidents occurring during entry into enclosed spaces, to the Regional Port Authority.

2.3.17 Provides necessary support and cooperation during inspections and audits conducted by the Administration and the Regional Port Authority.

2.3.18 Ensures immediate removal from the facility of dangerous goods that are not permitted for temporary storage—Class 1 (except Class 1 Compatibility Group 1.4S), Class 6.2, and Class 7.
If temporary storage is unavoidable, applies to the Administration for permission.

2.3.19 Temporarily stores cargo transport units carrying dangerous goods according to segregation and stowage rules, and implements fire, environmental, and other safety measures appropriate for the class of dangerous goods in the storage area. Keeps fire-fighting systems and first-aid units in areas where dangerous goods are handled in a constant state of readiness and performs periodic inspections.

2.3.20 Obtains permission from the Regional Port Authority before conducting any hot-work activities in areas where dangerous goods are handled or temporarily stored.

2.3.21 Prepares an emergency evacuation plan for the removal of ships from the facility in emergency situations, submits it to the Regional Port Authority, and informs relevant personnel about the plan approved by the authority.

2.3.22 Ensures that the internal loading of cargo transport units at the facility is carried out in accordance with cargo loading safety rules.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	2-17
	DANGEROUS CARGO HANDLING GUIDE				

2.4 Responsibilities of the Ship's Master

2.4.1 Ensures that the cargo to be transported is certified as suitable for carriage, and that cargo holds, cargo tanks, and cargo-handling equipment are in proper condition for cargo transportation.

2.4.2 Requests all mandatory documents, information, and certificates related to dangerous goods from the shipper and ensures that these accompany the cargo throughout the transport operation.

2.4.3 Ensures that all documents, information, and certificates required on board the vessel regarding dangerous goods under legislation and international conventions are valid and up to date.

2.4.4 Checks the transport documentation confirming that the cargo transport units loaded onto the vessel are correctly marked, placarded, and safely loaded.

2.4.5 Informs relevant ship personnel about the risks of dangerous goods, safety procedures, security and emergency precautions, response methods, and related matters.

2.4.6 Maintains up-to-date lists of all dangerous goods on board and provides them to relevant parties upon request.

2.4.7 Ensures that the cargo loading software, if present on the vessel, is approved, certified, and kept operational.

2.4.8 Reports the instantaneous risk posed by dangerous goods on the vessel berthed at the shore facility, along with the measures taken, to the Regional Port Authority and the shore facility.

2.4.9 Does not accept dangerous goods for carriage if leakage is present or suspected.

2.4.10 Reports dangerous goods accidents occurring on the vessel, whether during navigation or while alongside a shore facility, to the Regional Port Authority.

2.4.11 Provides necessary support and cooperation during inspections and audits conducted by the Administration and the Regional Port Authority.

2.4.12 Does not accept for carriage any dangerous goods that are not included in the ship certificates issued by relevant authorities and organizations.

2.4.13 Ensures that ship personnel involved in dangerous goods handling use personal protective equipment appropriate to the physical and chemical properties of the cargo during handling operations.

2.4.14 Ensures that all requirements related to cargo loading safety for the cargo loaded onto the vessel are met.

2.5 Responsibilities of the Dangerous Cargo Safety Advisor (DCSA)

2.5.1 Monitor compliance with international agreements and regulations (ADR/IMDG) in the transport of dangerous goods.

2.5.2 Provide recommendations to the company regarding the transport of dangerous goods in accordance with ADR/IMDG requirements.

2.5.3 Prepare the company's annual activity report related to the transport of dangerous goods within the first four months following the end of the year, and submit it electronically to the Administration.

2.5.4 Identify the dangerous goods to be transported and determine the mandatory requirements and conformity procedures under IMDG/ADR for these materials.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
			1.1.2016	7	21.08.2023
DANGEROUS CARGO HANDLING GUIDE					

2.5.5 Provide guidance during the purchase of transport vehicles that will be used for transporting dangerous goods related to the company's operational activities.

2.5.6 Establish procedures for the inspection of equipment used in the transport, loading, and unloading of dangerous goods.

2.5.7 Provide or ensure training for company personnel regarding national and international legislation and amendments, and maintain training records.

2.5.8 Establish emergency procedures to be applied in case of an accident or incident affecting safety during the transport, loading, or unloading of dangerous goods.

2.5.9 Ensure that drills related to these procedures are conducted periodically and maintain records of the drills.

2.5.10 Ensure measures are implemented to prevent the recurrence of accidents or serious violations.

2.5.11 Ensure that special requirements prescribed by legislation on the transport of dangerous goods are taken into consideration when selecting and employing subcontractors or third parties.

2.5.12 Ensure that employees involved in the transport, filling, or unloading of dangerous goods are knowledgeable about operational procedures and instructions.

2.5.13 Take measures to increase awareness among relevant personnel to ensure preparedness for potential risks during the transport, loading, or unloading of dangerous goods.

2.5.14 Develop instructions ensuring that required documents and safety equipment related to the class of dangerous goods being transported are present on the transport vehicle.

2.5.15 Record all work performed—including training, inspections, and controls—keep these records for five years, and present them to the Administration upon request.

2.5.16 Prepare and implement the company's security plan as required by ADR/IMDG.

2.5.17 Establish procedures related to packaging, labeling, marking, and loading of cargo loaded onto the transport vehicle in accordance with IMDG/ADR requirements.

2.5.18 During inspections related to their duties, record the date and time of inspections as well as details of inspected personnel and operations.

2.5.19 Suspend operations when any hazard is identified, keep operations halted until the hazard is eliminated, and restart operations only with their approval.

Report all stages of the process to the company or relevant authorities in writing.

2.5.20 If an accident involving dangerous goods during transport, loading, or unloading results in damage to people, property, or the environment, collect information and submit an accident report to the company management or the Administration.

This report must be submitted by the company or the DCSA to the Administration via www.turkiye.gov.tr within one month.

This report does not replace reports mandated under national or international legislation.

2.5.21 Prepare the company's annual activity report on the transport of dangerous goods in the format determined by the Administration, within the first four months following the end of the year, and submit it to the DCSA organization and the company for submission to the Administration via www.turkiye.gov.tr upon request.

2.5.22 DCSAs authorized under the IMDG Code prepare quarterly reports for the shore facilities they work for or provide services to, regarding the responsibilities outlined in

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	2-19
	DANGEROUS CARGO HANDLING GUIDE				

the Regulation on the Transport of Dangerous Goods and Cargo Loading Safety by Sea. They submit these reports to the Administration.

2.5.23 Except for shore facilities receiving a Dangerous Cargos Conformity Certificate (DCCC) for the first time, the DCSA must be present during DCCC inspections and participate actively.

2.5.24 Prepare, verify, and sign the sections of the shore facility's Dangerous Goods Handling Guide related to the handling and/or temporary storage of dangerous goods, together with the shore facility operator.

2.5.25 Be knowledgeable about the IBC Code, IGC Code, IMSBC Code, and MARPOL 73/78 provisions, in addition to IMDG Code requirements, for dangerous goods handled at the shore facility.

Provide written assessments to the shore facility operator—at intervals not exceeding six months—regarding whether dangerous goods are being handled in compliance with regulations.

2.6 Responsibilities of Third Parties, Cargo/Ship Agents, and Other Entities Operating at the Shore Facility

2.6.1 Ensure that personnel who will work at the port facility receive the trainings specified in the Administration's Circular dated 27.03.2013 and numbered 79462207/315.

2.6.2 Act in accordance with the rules specified in the IMDG Code while operating within the port facility.

2.6.3 Comply with the procedures and the Dangerous Goods Handling Guide prepared by the shore facility regarding the handling of dangerous goods.

2.6.4 Report any non-conformity detected in the handling, transport, or storage of dangerous goods within the port facility to the relevant facility authorities.

2.6.5 Provide the Safety Data Sheet (SDS), which contains the hazards, risks, and other relevant information regarding dangerous goods and serves as a key element of occupational health and safety measures during the use and storage of such goods, to the shore facility operator and the Administration.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	3-1
	DANGEROUS CARGO HANDLING GUIDE				

3 POLICIES/APPLIED RULES AND MEASURES TO BE FOLLOWED BY PORT FACILITY

The rules and measures given in this chapter are elaborated in Chapters 1,4,6,7,8,9 and 10 under Hazardous Material Emergency Plan and Accident Prevention Policy. The requirement for infrastructure is met by our port facilities.

3.1 Berthing

- 3.1.1 Adequate and safe mooring facilities are provided; and
3.1.2 Adequate safe access is provided between the ship and the shore.

3.2 Supervision

3.2.1 The port operator should ensure that areas where packages or cargo transport units are kept are properly supervised and packages or cargo transport units are regularly inspected for leakage or damage. Any leaking package or cargo transport units should only be handled under the supervision of a responsible person.

3.2.2 The port operator should ensure that no person, without reasonable cause, opens or otherwise interferes with any freight container, tank-container, portable tank or vehicle containing dangerous cargoes. When a freight container, tank-container, portable tank or vehicle is opened by a person authorized to examine its contents, the port operator should ensure that the person concerned is aware of the possible hazards arising from the presence of the dangerous cargoes.

3.2.3 Any equipment which is used for handling and stowing processes and driven with or without power shall be checked and inspected to ensure that it is manufactured in accordance with the manufacturer's instructions and exists in good operating conditions and in compliance with proper standards.

3.3 Identification, packing, marking, labelling or placarding and certification

3.3.1 The port operator should ensure that dangerous cargoes entering his premises have been duly certified or declared by the cargo interests as being properly identified, packed, marked, labelled or placarded so as to comply with the appropriate provisions of the IMDG Code or, alternatively, with appropriate national or international legal requirements applicable to the relevant mode of transport.

3.4 Safe handling and segregation

3.4.1 A port operator transporting or handling dangerous cargoes should appoint at least one responsible person who has adequate knowledge of the national or international legal requirements concerning the transport and handling of dangerous cargoes, including the segregation of incompatible cargoes.

3.5 Emergency procedures

3.5.1 The port operator should ensure that appropriate emergency arrangements are made and brought to the attention of all concerned. These arrangements should include:

- 3.5.1.1 the provision of appropriate emergency alarm operating points;
3.5.1.2 procedures for notification of an incident or emergency to the appropriate emergency services within and outside the port area;
3.5.1.3 procedures for notification of an incident or emergency to the port authority and port area users both on land and water;

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
			1.1.2016	7	21.08.2023
DANGEROUS CARGO HANDLING GUIDE					

3.5.1.4 the provision of emergency equipment appropriate to the hazards of the dangerous cargoes to be handled;

3.5.1.5 co-ordinated arrangements for the release of a ship in the case of an emergency; and

3.5.1.6 arrangements to ensure adequate access/egress at all times.

3.5.2 The port operator should consider the necessity of arrangements for a safe and quick emergency escape, taking into account the nature of the dangerous cargoes and any special conditions.

3.5.3 The "Medical First Aid Guidelines (MFAG)" annexed to IMDG Code shall be used to provide with those persons effected from damages caused by hazardous loads with medical first aid in case of any health issues occurring in consequence of accidents involving such loads.

3.5.4 "Emergency Schedules (EmS)" annexed to IMDG Code shall be used for any emergencies involving hazardous loads.

3.5.5 In case of any emergencies or accidents, the first aid material to be used for response shall be kept in easily accessible locations known to personnel.

3.6 Emergency information

3.6.1 The port operator should ensure that a list of all dangerous cargoes in the warehouses, sheds or other areas, including the quantities, and if appropriate Proper Shipping Names, correct technical names (if applicable), UN numbers, classes or, when assigned, the division of the goods, including for class 1, the compatibility group letter, subsidiary hazard classes (if assigned), packing group (where assigned) and exact location is held readily available for the emergency services.

3.6.2 The port operator should ensure that the responsible person for a warehouse, shed or area, where dangerous cargoes are handled, is as far as possible aware of the status of occupancy with the dangerous cargoes in his area and is available in case of emergencies.

3.6.3 The port operator should ensure that the person responsible for cargo handling operations involving dangerous cargoes has the necessary information on measures to be taken to deal with incidents involving dangerous cargoes and that it is available for use in emergencies.

3.6.4 Electronic or other automated information processing or transmission techniques shall be employed to provide access to information.

3.6.5 Data sheets of hazardous materials shall normally be kept by the manufacturers of chemicals. Emergency response information and electronic databases shall be available and used in case of direct access to information.

3.6.6 The port operator should ensure that the port or berth emergency response procedures and port or port emergency telephone numbers are placed at prominent locations within or at warehouses, sheds or areas where dangerous cargoes are transported or handled.

3.6.7 The port operator should ensure that fire-fighting and pollution-combating equipment and installations are clearly marked as such and notices drawing attention to them are clearly visible at all appropriate locations.

3.6.8 The port operator should inform the master of any ship carrying or handling dangerous cargoes of the emergency procedures in force and the services available at the port.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
			1.1.2016	7	21.08.2023
DANGEROUS CARGO HANDLING GUIDE					

3.7 Fire precautions

3.7.1 The port operator should ensure that:

3.7.1.1 All parts of the port and any ship moored to it are at all times accessible to emergency services;

3.7.1.2 Audible or visual alarms for emergency use are installed in the area or other means of rapid communication with emergency services are available;

3.7.1.3 The handling of dangerous cargoes are kept clean and tidy;

3.7.1.4 Before dangerous cargoes are handled, the master of a ship is informed of the location of the nearest means of summoning emergency services; and

3.7.1.5 the lighting and other electrical equipment in areas where dangerous cargoes are present on the port is of a type safe for use in a flammable or explosive atmosphere.

3.7.1.6 Places where smoking is prohibited are designated; and

3.7.1.7 Notices in a pictogram form prohibiting smoking are clearly visible at all locations and at a safe distance from places where smoking would constitute a hazard.

3.7.1.8 The port operator should ensure that equipment used in an area or space where a flammable or explosive atmosphere may exist or develop, is of a type safe for use in a flammable or explosive atmosphere and used in such a manner that no fire or explosion can be caused.

3.7.1.9 The port operator should ensure that only portable electrical equipment of a type safe for use in a flammable atmosphere is used in an area or space in which a flammable atmosphere may occur.

3.7.1.10 The port operator should ensure that electrical equipment on a wandering lead is not used in areas or spaces where a flammable atmosphere may occur.

3.8 Fire fighting

3.8.1 The port operator should ensure that adequate and properly tested fire-fighting equipment and facilities are provided and readily available in accordance with the requirements of the regulatory authority in areas where dangerous cargoes are transported or handled.

3.8.2 The port operator should ensure that personnel involved in the handling or transport of dangerous cargoes are trained and practised in the use of fire-fighting equipment in accordance with the requirements of the regulatory authority.

3.9 Environmental precautions

3.9.1 The port operator should ensure that dangerous cargoes are only handled in areas which comply with the requirements of the regulatory authority.

3.9.2 The port operator should ensure that any damaged package, unit load or cargo transport unit containing dangerous cargoes is dealt with in accordance with the requirements of the regulatory authority and is not transported or handled unless the dangerous cargoes have been properly repacked and are in all respects fit and safe for further transport and handling.

3.9.3 The port operator should ensure that, if necessary, any damaged package, unit load or cargo transport unit containing dangerous cargoes is removed to a designated area for such cargoes.

sweeping or flushing. The said loads shall not be allowed to move into sea by rainwater.

3.9.4 During the loading and unloading of bulk cargo to and from the vessel, necessary actions shall be taken to prevent the dumping of any load from the vessel or the dock into sea. In addition, these actions shall be taken for transshipment operations.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	3-4
	DANGEROUS CARGO HANDLING GUIDE				

3.9.5 Necessary actions shall be taken so that soil, water or areas of water discharge is/are not contaminated with any hazardous materials handled at onshore facilities. Additionally, these actions shall be applied for the piping line used during the handling of hazardous materials and for areas with conveyor system.

3.9.6 The capability to remove any contaminated bilge water, dirty ballast, sludge, slope and load waste from the vessel shall be provided.

3.10 Pollution combating (5312 REGULATIONS)

3.10.1 The port operator should ensure that adequate equipment is available to minimize the damage in case of a spillage of dangerous cargoes.

3.10.2 The equipment includes petroleum dispersion preventive fences, condensate lids, absorbing and neutralizing agents as well as cleaning agents and portable collection basins.

3.10.3 The port operator should ensure that personnel involved in the transport and handling of dangerous cargoes are trained and practised in the use of pollution combating equipment and facilities in accordance with the requirements of the regulatory authority.

3.11 Reporting of incidents

3.11.1 The port operator, within his area of responsibility, should ensure that, if an incident occurs during the handling of dangerous cargoes which may endanger the safety or security of persons, of ships within the port, of the port or of any other property, or the environment, the person having charge of the handling immediately causes the operation to be stopped, if it is safe to do so, and prevents it being resumed until appropriate safety measures have been taken. The port operator should require every member of his personnel to report, to the person having charge of the operation, any such incident they see to occur during the handling of dangerous cargoes.

3.11.2 For the purposes of responding quickly and effectively; the short and proper description of the event should be communicated to the emergency center as soon as possible to treat the injured personnel and mitigate any potential damage.

3.11.3 The port operator should ensure that any incident involving dangerous cargoes which may endanger the safety or security of persons, or of ships within the port or of the port or of any other property or the environment is reported immediately to the port authority.

3.11.4 The port operator should ensure that any damaged or leaking package, unit load or cargo transport unit containing dangerous cargoes is reported immediately to the port authority and that suitable remedial action is taken

3.12 Inspections

3.12.1 The port operator, where appropriate, should:

3.12.1.1 Check documents and certificates concerning the safe transport, handling, packing and stowage of dangerous cargoes in the port area at the time of receipt;

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	3-5
	DANGEROUS CARGO HANDLING GUIDE				

3.12.1.2 Check, where practicable, packages, unit loads and cargo transport units containing dangerous cargoes to verify that they are marked, labelled or placarded in accordance with the provisions of the IMDG Code and the appropriate national or international legal requirements applicable for the mode of transport and that unnecessary labels, placards and marks have been removed and that the cargo transport units have been loaded, packed and secured in accordance with the IMO/ILO/UN ECE Guidelines for Packing of Cargo Transport Units (CTUs);

3.12.1.3 Check freight containers, tank-containers, portable tanks and vehicles containing dangerous cargoes to ensure that they have a current safety approval plate in accordance with the International Convention for Safe Containers (CSC), 1972, as amended, when applicable, or have been approved in accordance with the relevant provisions of the IMDG Code or by a certification or approval system of an appropriate authority; and

3.12.1.4 Check, by external examination, the physical condition of each freight container, tank-container, portable tank or vehicle containing dangerous cargoes for obvious damage affecting its strength or packaging integrity and for the presence of any sign of leakage of contents.

3.12.2 The port operator should make such checks regularly to ensure implementation of the safety precautions in the port area and the safety of transport.

3.12.3 If any of the checks mentioned above reveal deficiencies which may affect the safe transport or handling of dangerous cargoes the port operator should immediately advise all parties concerned and request them to rectify all deficiencies prior to any further transport or handling of dangerous cargoes.

3.12.4 The port operator should ensure that every necessary support will be given to the port authority or any other person or institution entitled to carry out inspections when they intend to carry out an inspection of dangerous cargoes.

3.13 Hot work and other repair or maintenance work

3.13.1 The port operator should ensure that no repair or maintenance work resulting in non-availability of the emergency/fire equipment required by these Recommendations is carried out at the port without prior permission of the port authority.

3.13.2 The port operator and the company carrying out the repairs, after having consulted the master of a ship, where appropriate, should ensure that they are in possession of a permit to proceed issued by the port authority before any repair or maintenance work involving hot work, or any other such work which may lead to a hazard because of the presence of dangerous cargoes, is carried out.

3.13.3 A prior notice to be served for the estimated duration of hot work or the lack of equipment as a result of the need for permission shall allow all emergency response authorities, such as fire department, to make a satisfactory announcement to express their objection and recommend additional measures. In case of particular circumstances, such as any hot work to be performed in a hold or closed areas near a hold, the skilled personnel capable of determining whether specific safety measures are necessary shall perform a detailed field survey.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	3-6
	DANGEROUS CARGO HANDLING GUIDE				

3.14 Entry into confined or enclosed spaces

3.14.1 The port operator should ensure that no person enters any enclosed space such as, for example, a cargo space, cargo tank, void space around such tank, cargo handling space, or other confined or enclosed space which has contained or may contain dangerous vapour or oxygen depleting cargoes, unless the space is free of dangerous vapour and not deficient in oxygen, and is certified to that effect by a responsible person trained in the use of the relevant equipment and sufficiently knowledgeable to interpret correctly the results obtained. The responsible person should record the measurements taken.

3.14.2 Where it is necessary for operational purposes to enter a space which cannot be freed of dangerous vapour within a reasonable time and which, therefore, can not be certified, or it is unlikely that the space will remain free of dangerous vapour, then entry should only be made by persons wearing a self-contained breathing apparatus and any other necessary protective equipment and clothing. The entire operation should be carried out under the direct supervision of a responsible person who should be provided with self-contained breathing apparatus, protective equipment and rescue harness. The breathing apparatus, protective and rescue equipment should not be of a type that could introduce a source of ignition into the space.

3.14.3 The port operator should ensure that entry into a space follows carefully established procedures which are contained in international codes and guides.

3.15 Contaminated wastes

3.15.1 The port operator should ensure that wastes contaminated with dangerous cargoes are immediately collected and disposed of in accordance with the requirements of the regulatory authority.

3.16 Alcohol and drug abuse

3.16.1 The port operator, within his area of responsibility, should ensure that no person under the influence of alcohol or drugs is allowed to participate in any operation involving the handling of dangerous cargoes.

3.16.2 Any such persons should always be kept clear of the immediate areas where dangerous cargoes are being transported or handled.

3.17 Weather conditions

3.17.1 The port operator, within his area of responsibility, should not permit dangerous cargoes to be handled in weather conditions which may seriously increase the risk.

3.18 Lighting

3.19.1 The port operator, within his area of responsibility, should ensure that areas where dangerous cargoes are handled or where preparations are being made to handle dangerous cargoes and access to such areas are adequately illuminated.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	3-7
DANGEROUS CARGO HANDLING GUIDE					

3.19 Handling equipment

3.20.1 The port operator, within his area of responsibility, should ensure that all equipment used in the handling of dangerous cargoes is suitable for such use and used only by skilled persons.

3.20.2 The port operator, within his area of responsibility, should ensure that all cargo handling equipment is of an approved type where appropriate, properly maintained and tested in accordance with national and international legal requirements.

3.20 Protective equipment

3.21.1 The port operator, within his area of responsibility, should ensure, when necessary, that a sufficient quantity of appropriate protective equipment is available to all personnel involved in the handling of dangerous cargoes.

3.21.2 Such equipment should provide adequate protection against the hazards specific to the dangerous cargoes handled and should be of an approved type or made in conformity with an approved standard.

3.21 Signals

3.21.1 The regulatory authority should decide if and when a ship engaged in the transport or handling of certain specified dangerous cargoes in the port area, should exhibit by day or by night any special visual signals.

3.21.2 The specified dangerous cargoes should include:

3.21.2.1 bulk liquids with a flashpoint below 60°C closed cup;

3.21.2.2 bulk flammable and/or toxic gases; and

3.21.2.3 explosives (other than division 1.4S), liquid desensitized explosives assigned to class 3 and solid desensitized explosives assigned to class 4.1; to the degree specified by the regulatory authority.

3.21.3 The reason for exhibiting a day or night signal is to advise maritime traffic and personnel within the port area about an increased hazard created by the presence of the dangerous cargoes. Vessels exhibiting such signals may be subject to the special requirements and special instructions of the port authority.

3.21.4 The following four scenarios should be considered:

3.21.4.1 the ship is moored or at anchor by day;

3.21.4.2 the ship is moored or at anchor at night;

3.21.4.3 the ship is under way by day; or

3.21.4.4 the ship is under way at night.

3.21.5 When practicable, a dedicated anchorage or port should be provided for vessels carrying dangerous cargoes requiring the exhibition of such signals. Special restrictions may be applied to:

3.21.5.1 access to the vessels;

3.21.5.2 radio and radar transmissions;

3.21.5.3 transiting the anchorage; and

3.21.5.4 passing of ships moored or anchored.

3.21.6 Port authorities should give consideration to the separation of ships under way exhibiting the signals. The port authority may also impose specific separation distances and regulate the movement of vessels to avoid the passing of such ships in narrow channels or at bends. Where signals are to be exhibited, they should be:

3.21.6.1 by day flag "B" of the International Code of Signals; and

3.21.6.2 by night an all-round fixed red light.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	3-8
	DANGEROUS CARGO HANDLING GUIDE				

3.22 Communications

3.22.1 The port authority should ensure that every ship engaged in the transport of dangerous cargoes can maintain effective communications with the port authority. When appropriate and practicable such communications should be carried out by VHF in accordance with the provisions of SOLAS regulation IV/7 and complying with the performance standards set out in IMO Assembly resolution A.609(15) and the requirements of the regulatory authority.

3.23 Areas

3.23.1 Dangerous cargo areas

3.23.1.1 Dangerous cargo areas should, where possible, be located so that management and/or security personnel may keep them under continuous observation. Otherwise, an alarm system may be provided or the spaces inspected at frequent intervals.

3.23.1.2 The spaces should enable an adequate segregation of dangerous cargoes in accordance with the legal requirements of the regulatory authority.

3.23.1.3 Dangerous cargo areas should have separate areas with all necessary facilities appropriate to the hazards emanating from the cargoes to be kept. Where appropriate these facilities should include separate ventilation, drainage, fire resisting walls, ceilings, etc.

3.23.1.4 Those areas where hazardous materials are handled shall be furnished with necessary equipment and devices to prevent potential harmful effects of such hazardous materials.

3.23.1.5 The areas where hazardous materials are handled shall be provided with facilities of entrance to and exit from the same to allow for response to emergencies or the access roads to those units carrying loads that contain hazardous materials shall be kept open, if any hazardous materials are stowed or stored on the entire site and the site shall be furnished with systems that are capable of providing emergency facilities for rapid response.

3.23.2 Lorry parking areas

3.23.2.1 Separate areas may be designated for specific dangerous cargoes.

3.23.2.2 Segregation requirements of the regulatory authority should be met when designating areas.

3.23.2.3 Care should be taken that, in case of an emergency, adequate access is provided for handling equipment, emergency services, etc.

3.23.2.4 Adequate emergency facilities should be provided. These should be appropriate to the hazards of the dangerous cargoes to be handled.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	3-9
	DANGEROUS CARGO HANDLING GUIDE				

3.23.3 Special areas for damaged dangerous cargoes and wastes contaminated with dangerous cargoes

3.23.3.1 Special areas for damaged dangerous cargoes and wastes contaminated with dangerous cargoes should be provided, where damaged dangerous cargoes may be kept and repacked or contaminated wastes separated and kept until their disposal.

3.23.3.2 Such areas should, where appropriate, be covered, have a sealed floor or ground, separate drainage systems with shut-off valves, sumps or basins and means to discharge contaminated water to special facilities in order to safeguard the port area and the environment.

3.23.3.3 Such areas should be fenced off to prevent the entry of unauthorized persons and should have facilities for watchmen. The facilities should include adequate means of communication.

3.23.4 Repairing/cleaning facilities

3.23.4.1 Where repair or cleaning facilities for ships or cargo transport units are provided, they should be situated well away from any area where dangerous cargoes are transported or handled. This should not preclude the carrying out of minor voyage repairs on ships at cargo handling ports or cleaning of cargo tanks at tanker terminals.

3.23.4.2 Cleaning facilities should be designated and constructed to protect the environment when environmentally hazardous substances are used or are otherwise involved, in the cleaning process.

3.23.5 Reception facilities

3.23.5.1 Facilities should be provided for the reception and disposal of bilge water, wastes, ballast and slops, contaminated with dangerous cargoes, as appropriate.

3.24 Training

3.24.1 The personnel who are in charge of actions and operations for the loading/unloading of hazardous materials at the onshore facility shall be provided with training on emergencies (fire, explosion, leakage etc.) and response, occupational health and safety, ISPS code security awareness and safety in line with their job descriptions and fields of work.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	4-1
	DANGEROUS CARGO HANDLING GUIDE				

4 CLASSIFICATION OF DANGEROUS GOODS, HANDLING, LOADING / UNLOADING, HANDLING, SEPARATION, STACKING AND STORING

4.1 Classification of Dangerous Goods


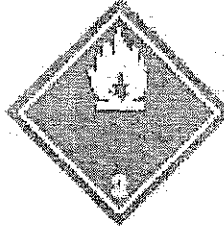
NAME OF THE PRODUCT	UN CODE	CLASS
Propane	UN 1965	2
Butane	UN 1965	2

4.2 Dangerous Goods Packing and Packages

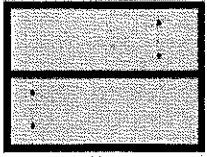

We handle hazardous material as liquied bulk cargo in our facility.

4.3 Dangerous Goods Marking, Labels, Placards.

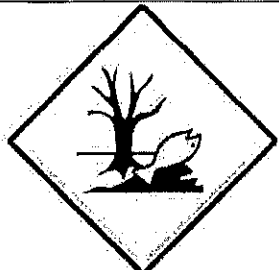
Class 3 – Flammable Liquids

 (No.2.1)		Symbol – flame in black and white color Background – red color Text – Flammable Liquid (optional) Number 2 – in the bottom corner
--	--	--

Other labels

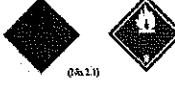
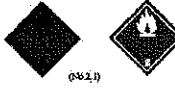
	Orange-colored plates, with hazard-identification number and UN Number
	Black and red directional arrows

Placards for Marine Pollutants

	Packages and cargo transport units containing dangerous substances which are classified by the IMDG Code as "marine pollutants", must have the markings shown here, which must be durable. They must be placed close to the risk labels or risk placards of the goods. The dimensions of the marine pollutant markings must be a minimum of 10 cm per side for packages and 25 cm per side for cargo transport units.
---	---

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	4-2
	DANGEROUS CARGO HANDLING GUIDE				

4.4 Tehlikeli maddelerin işaretleri ve paketleme grupları.

NAME OF THE PRODUCT	UN CODE	CLASS	Marking
Propan	UN 1965	2	
Bütan	UN 1965	2	

4.5 Segregation and Separation

Only Class 2 products are handled. Segregation and Separation are not applied.

4.6 Dangerous Goods Documentation

Information which must be included in the Dangerous Goods Transportation Document:

The shipping name or correct technical name (no commercial names will be accepted)

The Class and Division when applicable. The Class or Division can be included in the risk class number. The compatibility group will also be indicated in goods from class 1; and in the case of gases involving secondary risks, information will be extended to indicate such risks

The United Nations number preceded by the letters UN

The packing group when assigned

The number and types of bundles, as well as the total quantity of dangerous goods per volume or mass

The flashpoint for materials having a flashpoint the same or lower than 61o C

The subsidiary risks not indicated in the shipping name

When applicable, the goods shall be identified as "Marine Pollutant"

Empty means of containment, which contain the residue of dangerous goods shall be described as such, for example, by placing the words "Empty", "Uncleaned" or "Residue Last Contained" before or after the proper shipping name

For dangerous goods in limited quantities, the phrase "Dangerous Goods in Limited Quantity" shall be included

A statement signed in the name of the consignor, saying that the goods are correctly described, classified, packed, marked and labeled and that its conditions are appropriate for transport

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	5-1
	DANGEROUS CARGO HANDLING GUIDE				

5 HANDBOOK OF DANGEROUS GOODS

Dangerous cargo shipment / discharge with handling and port facilities in the temporary storage activities in order to contribute to the fulfillment of these activities in a safe manner;

- Dangerous Goods classes,
- Packages of dangerous substances,
- Packaging,
- Labels,
- Signs and packaging group,
- Ship and port separation table according to the class of dangerous goods,
- Warehouse / port separation distance of dangerous goods storage,
- Separation terms,
- Dangerous cargo documentation,
- Loads containing dangerous emergency action flowchart issues,

Prepared as Hazardous Material Handbook in the size of a pocketbook and given as annexed hereto

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	6-1
	DANGEROUS CARGO HANDLING GUIDE				

6 PROCEDURES FOR THE OPERATION

6.1 Procedure of ships carrying dangerous goods safely Berthing, loading / unloading, shelter or anchorage during the day and at night

6.1.1 Direct when and where a ship, having any dangerous cargoes on board, should anchor, moor, berth or remain within the port area, taking into consideration relevant matters such as the quantity and nature of the dangerous cargoes involved, the environment, the population, the weather conditions;

6.1.2 Direct, in an emergency, a ship having any dangerous cargoes on board to be moved within the port area, or to be removed from the port area having due regard to the safety of the ship and its crew; and

6.1.3 Attach such requirements to any such directions as are appropriate to local circumstances and the quantity and nature of the dangerous cargoes involved.

6.1.4 The port operator should ensure that:

6.1.4.1 adequate and safe mooring facilities are provided; and

6.1.4.2 adequate safe access is provided between the ship and the shore.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	6-2
	DANGEROUS CARGO HANDLING GUIDE				

6.2 Procedure of according to the seasonal conditions additional measures that Loading/Unloading, limbo operation of dangerous goods should be taken by port facilities

6.2.1 Liquid bulk dangerous cargoes should not be handled during thunderstorms

6.3 Procedures on keeping any inflammable, combustible and explosive materials away from operations which cause or are likely to cause sparking and abstaining from operating any tools, apparatus or device which cause or are likely to cause sparking in areas where hazardous materials are handled, stowed and stored

6.3.1 Before starting any hot work, on board a ship or on a port, the responsible person of the company to carry out the hot work shall be in possession of a written authorization to carry out such hot work issued by the port authority. Such authorization should include details of the specific location of the hot work as well as the safety precautions to be followed.

6.3.2 In addition to the safety precautions required by the port authority, before starting any hot work, the responsible person of the company to carry out the hot work together with the responsible person(s) of the ship and/or port, should add any additional safety precautions required by the ship and/or port.

6.3.3 These should include:

6.3.3.1 the examination, and frequency of re-examination of local areas and adjacent areas, including tests, carried out by accredited testing establishments, to ensure the areas are free, and continue to be free, of flammable and/or explosive atmospheres and, where appropriate, are not deficient in oxygen;

6.3.3.2 the removal of dangerous cargoes and other flammable substances and objects away from the working and adjacent areas. This includes scale, sludge, sediment and other possible flammable material;

6.3.3.3 efficient protection of flammable structural members, e.g. beams, wooden walls, floors, doors, wall and ceiling coverings against accidental ignition; and

6.3.3.4 the sealing of open pipes, pipe lead-throughs, valves, joints, gaps and open parts to prevent the transfer of flames, sparks and hot particles from the working areas to adjacent or other areas.

6.3.4 A duplicate of the hot work authorization and safety precautions should be posted adjacent to the work area as well as at each entrance to the work area. The authorization and safety precautions should be readily visible to, and clearly understood by, all persons engaged in the hot work.

6.3.5 While carrying out hot work it is essential that:

6.3.5.1 checks are carried out to ensure that conditions have not changed; and

6.3.5.2 at least one suitable fire extinguisher, or other suitable fire-extinguishing equipment is readily available for immediate use at the location of the hot work.

6.3.6 During hot work, on completion and for a sufficient time after completion of such work, an effective fire-watch should be maintained in the area of the hot work as well as adjacent areas where a hazard resulting from the transfer of heat may be created.

6.3.7 Additional valuable guidance on hot work procedures may be found. In particular, the International Safety Guide for Oil Tankers and Terminals (ISGOTT) should be consulted.

6.3.8 In addition, Port Facility Occupational Safety Procedures shall be followed

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	7-1
	DANGEROUS CARGO HANDLING GUIDE				

7 Documentation, Control And Record

7.1 Procedures regarding to all necessary documents, information and certification relating to dangerous substances and their procurement and control by the relevant persons

7.1.1 The following documents related to hazardous substances are kept up to date.
IMDG Code International Maritime Dangerous Goods Code
MARPOL 73/78 International Convention for the Prevention of Pollution from Ships, 1973/78 as amended
S O L A S 74 International Convention for the Safety of Life at Sea, 1974 as amended
IBC Code International Code for the Construction and Equipment of Vessels Carrying Hazardous Chemicals in Bulk

7.1.2 The Operational Division for Hazardous Materials handled by our Port shall develop all records fully and keep the same for submission upon request regarding any hazardous materials
arriving at the port,
shipped from the port,
stored at the port, and
stored at the port on a temporary basis.

The records of hazardous materials are limited to the personnel who need to know the same.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
			1.1.2016	7	21.08.2023
DANGEROUS CARGO HANDLING GUIDE					

7.2 Procedures of keeping a regular and accurate current list of all hazardous substances in the coastal facility area and other relevant information.

7.2.1 Records of dangerous cargo handled in our port will be kept by the Operations department to include the following information.

- Number,
- PSN name (Proper Shipping Name,
- Class (with lower hazards)
- Marine Pollutant or otherwise
- Receiver,
- Shipper,
- Seal number
- Additional Information (ignition temperature, viscosity, etc.)
- Storage location in the Port Area
- Duration of stay in the Port

7.2.2 This information is recorded on computer or in the file layout so that only authorized personnel can access and presented upon request.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
			1.1.2016	7	21.08.2023
DANGEROUS CARGO HANDLING GUIDE					

7.3 Procedures regarding to appropriate identification of hazardous substances delivered to the facility, correct use of shipping names of dangerous cargo, certification, packaging, labeling and declaration, inspection on loading and transport of dangerous goods in the certified and proper package, container or cargo unit in a safety way and reporting of inspection results.

7.3.1 Coordinately with the Operation, Planning checks the accuracy of the following information through the dangerous cargo documents delivered to the Port and organized by the Shipper;

- Number,
- PSN name (Proper Shipping Name,
- Class (with lower hazards)
- Marine Pollutant or otherwise,
- Seal number
- Additional Information (ignition temperature, viscosity, etc.)
- Storage location in the Port Area

7.3.2 This information is delivered to the tally clerk, Field Supervisor, Warehouse officer, HSE, and authorized staff through Terminals / Documents and security of the dangerous goods is provided.

7.4 Procedures related to procurement of the Hazardous materials safety information sheets (SDS).

7.4.1 According to the Laws of our country as of January 1st, 2014, Dangerous Goods Safety Data Sheet (SDS) with the following information must be present with the dangerous goods to be transported through all transport modes (by road, rail, air and marine).

- Number,
- PSN name (Proper Shipping Name,) (required for marine transport)
- Class (with lower hazards)
- Marine Pollutants or otherwise,
- Tunnel Restriction Code (required for road transport.

7.4.2 It is checked that if this document is available with the Dangerous substance for the all Dangerous goods to be accepted in the port.

7.5 Procedures for records and statistics of dangerous goods.

7.5.1 Administration, it is required that a report including the information of dangerous goods handled in our Port Facility will be reported to the Port Authority in by 3-month periods. The report sample issued by the Operation Department are shown below.

7.5.2 Statistical evaluation of records of dangerous goods handled in our port is carried out by our Trade, operation departments.

7.5.3 Monthly inventory and control reports of Dangerous goods stocked in our Port Area is organized by the operation department and submitted to Administration.

7.5.4 Records and reports are archived by department by 5-year periods

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	7-4
	DANGEROUS CARGO HANDLING GUIDE				

7.6 Information about the Quality Management System.

ISO 9001 is implemented and the procedures and forms and review processes related to the handling of dangerous goods will be integrated into the quality management system within one year.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	8-1
	DANGEROUS CARGO HANDLING GUIDE				

8 EMERGENCY SITUATION, EMERGENCY SITUATION PREPAREDNESS AND RESPONSE

8.1 Response procedures for hazardous substances that are dangerous for life, property and/or environment and hazardous situations involving hazardous materials

8.1.1 Decision making;

The choice of protective actions for a given situation depends on a number of factors. For some cases, evacuation may be the best option; in others, sheltering in-place may be the best course. Sometimes, the set of actions may be used in combination. In any emergency, officials need to quickly give the public instructions. The public will need continuing information and instructions while being evacuated or sheltered in-place.

Proper evaluation of the factors listed below will determine the effectiveness of evacuation or in-place protection (shelter in-place). The importance of these factors can vary with emergency conditions. In specific emergencies, other factors may need to be identified and considered as well. This list indicates what kind of information may be needed to make the initial decision.

The Dangerous Goods

Degree of health hazard
 Chemical and physical properties
 Amount involved
 Containment/control of release
 Rate of vapor movement

The Population Threatened

Location
 Number of people
 Time available to evacuate or shelter in-place
 Ability to control evacuation or shelter in-place
 Building types and availability
 Special institutions or populations, e.g., nursing homes, hospitals, prisons

Weather Conditions

Effect on vapor and cloud movement
 Potential for change
 Effect on evacuation or shelter in-place

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	8-2
	DANGEROUS CARGO HANDLING GUIDE				

8.1.2 Protective Actions and Response

Protective Actions are those steps taken to preserve the health and safety of emergency responders and the public during an incident involving releases of dangerous goods and Appendix-5 produced according to specified hazardous substances in the feature act according to the Emergency Response Table.

Isolate Hazard Area and Deny Entry means to keep everybody away from the area if they are not directly involved in emergency response operations. Unprotected emergency responders should not be allowed to enter the isolation zone.

8.1.3 Evacuate

Evacuate means to move all people from a threatened area to a safer place. To perform an evacuation, there must be enough time for people to be warned, to get ready, and to leave an area. If there is enough time, evacuation is the best protective action.

Begin evacuating people near by and those outdoors in direct view of the scene. When additional help arrives, expand the area to be evacuated downwind and crosswind to at least the extent recommended in measures specified in the Emergency Response Table referred to in Annex-5. Even after people move to the distances recommended, they may not be completely safe from harm.

They should not be permitted to congregat at such distances. Send evacuees to a definite place, by a specific route, far enough away so they will not have to be moved again if the wind shifts.

In the case of an emergency, the areas to which the persons are to be assembled in the Terminal are identified and marked as "Emergency Assemble Points".

8.1.4 Shelter In-Place

Shelter In-Place means people should seek shelter inside a building and remain inside until the danger passes. Sheltering in-place is used when evacuating the public would cause greater risk than staying where they are, or when an evacuation cannot be performed. Direct the people inside to close all doors and windows and to shut off all ventilating, heating and cooling systems.

In-place protection (shelter in-place) may not be the best option if

- the vapors are flammable;
- if it will take a long time for the gas to clear the area; or
- if buildings cannot be closed tightly.

It is vital to maintain communications with competent persons inside the building so that they are advised about changing conditions. Persons protected-in-place should be warned to stay far from windows because of the danger from glass and projected metal fragments in a fire and/or explosion.

Every dangerous goods incident is different. Each will have special problems and concerns. Action to protect the public must be selected carefully.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	8-3
	DANGEROUS CARGO HANDLING GUIDE				

BLEVE(Boiling Liquid Expanding Vapor Explosion)

Background information on BLEVEs and includes a chart that provides important safety-related information to consider when confronted with this type of situation involving Liquefied Petroleum Gases (LPG), UN1075. LPGs include the following flammable gases; Butane, UN1011; Butylene, UN1012; Isobutylene, UN1055; Propylene, UN2077; Isobutane, UN1969; and Propane, UN1978.

What are the main hazards from a BLEVE?

The main hazards from a propane or LPG BLEVE are:

- fire
- thermal radiation from the fire
- blast
- projectiles

BLEVE –SAFETY PRECAUTIONS

Use with caution. The following table gives a summary of tank properties, critical times, critical distances and cooling water flowrates for various tank sizes. This table is provided to give responders some guidance but it should be used with caution.

Tank dimensions are approximate and can vary depending on the tank design and application.

Minimum time to failure is based on severe torchfire impingement on the vapour space of a tank in good condition, and is approximate. Tanks may fail earlier if they are damaged or corroded. Tanks may fail minutes or hours later than these minimum times depending on the conditions. It has been assumed here that the tanks are not equipped with thermal barriers or water spray cooling.

Minimum time to empty is based on an engulfing fire with a properly sized pressure relief valve. If the tank is only partially engulfed then time to empty will increase (i.e., if tank is 50% engulfed then the tanks will take twice as long to empty). Once again, it has been assumed that the tank is not equipped with a thermal barrier or water spray.

Tanks equipped with thermal barriers or water spray cooling significantly increase the times to failure and the times to empty. A thermal barrier can reduce the heat input to a tank by a factor of ten or more. This means it could take ten times as long to empty the tank through the Pressure Relief Valve (PRV).

Fireball radius and emergency response distance is based on mathematical equations and is approximate. They assume spherical fireballs and this is not always the case.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	8-4
	DANGEROUS CARGO HANDLING GUIDE				

Two safety distances for public evacuation. The minimum distance is based on tanks that are launched with small elevation angle (i.e., a few degrees above horizontal). This is most common for horizontal cylinders. The preferred evacuation distance has more margin of safety since it assumes the tanks are launched at a 45 degree angle to the horizontal. This might be more appropriate if a vertical cylinder is involved.

It is understood that these distances are very large and may not be practical in a highly populated area. However, it should be understood that the risks increase rapidly the closer you are to a BLEVE. Keep in mind that the furthest reaching projectiles tend to come off in the zones 45 degrees on each side of the tank ends.

Water flow rate is based on $5\sqrt{\text{capacity}}$ (USgal) = usgal/min needed to cool tank metal. Warning: the data given are approximate and should only be used with extreme caution. For example, where times are given for tank failure or tank emptying through the pressure relief valve— these times are typical but they can vary from situation to situation. Therefore, never risk life based on these times.

BLEVE (USE WITH CAUTION)													
Capacity	Diameter	Length		Propane Mass	Minimum time to failure for severe torch	Approximate time to empty for engulfing fire	Fireball radius	Emergency response distance	Minimum evacuation distance	Preferred evacuation distance	Cooling water flow rate		
Litres (Gallons)	Meters (Feet)	Meters (Feet)	Meters (Feet)	Kilograms (Lbs)	Minutes	Minutes	Meters (Feet)	Meters (Feet)	Meters (Feet)	Meters (Feet)	Litres/min	USgal/min	
100 (39.8)	0.3 (1)	1.5 (4.9)		40 (88)	4	8	10 (33)	90 (295)	154 (505)	307 (1007)	94.6	25	
400 (164.4)	0.51 (2)	1.5 (4.9)		160 (353)	4	12	16 (53)	90 (295)	244 (801)	488 (1601)	189.3	50	
2000 (772)	0.96 (3.2)	3 (9.8)		800 (1764)	5	18	28 (92)	111 (364)	417 (1368)	834 (2736)	424	112	
4000 (1544)	1 (3.3)	4.9 (16.1)		1600 (3527)	5	20	35 (115)	140 (459)	525 (1722)	1050 (3445)	598	158	
8000 (3088)	1.25 (4.1)	6.5 (21.3)		3200 (7055)	6	22	44 (144)	176 (577)	661 (2169)	1323 (4341)	848	224	
22000 (8492)	2.1 (6.9)	6.7 (22)		8800 (19400)	7	28	62 (203)	247 (810)	926 (3038)	1852 (6076)	1404	371	
42000 (16212)	2.1 (6.9)	11.8 (38.7)		16800 (37037)	7	32	77 (253)	306 (1004)	1149 (3770)	2200 (7218)	1938	512	
82000 (31662)	2.75 (9)	13.7 (45)		32800 (72310)	8	40	96 (315)	383 (1257)	1435 (4708)	2200 (7218)	2710	716	
140000 (54040)	3.3 (10.8)	17.2 (56.4)		56000 (123457)	9	45	114 (374)	457 (1499)	1715 (5627)	2200 (7218)	3539	935	

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	8-5
	DANGEROUS CARGO HANDLING GUIDE				

8.2 Information on resource, capability and capacity of the port facilities regarding to respond to emergencies.

8.2.1 The facility features an approved fire plan. Firefighting teams shall be created for each shift. Demonstrations and exercises, either scheduled or unscheduled, shall be provided for training purposes within the scope of various scenarios at indefinite times. The firefighting equipment stipulated by the approved plan shall be made available fully and maintenance, inspection and test activities shall be conducted for the same.

8.2.2 The facility has an approved action plan against Environmental and Marine Pollution. For each shift, pollution-fighting teams are created. Demonstrations and exercises shall be provided twice a year within the scope of a scheduled scenario, and the reports and records of the same shall be kept. The equipment relating to Environmental and Marine Pollution shall be stored at the facility with counting and inspections in place. Additionally, the facility shall have a protocol for materials stored in the area to ensure support in case of circumstances with inadequate means.

8.2.3 The response teams shall be appointed against the spillage of hazardous materials in line with this guideline and pursuant to IMDG Code.

8.3 Regulations related to the the first aid for accidents involving dangerous substances (first aid procedures, first aid resources and capabilities and so on.).

The "Medical First Aid Guide (MFAG)" in the IMDG Code appendix and Emergency Plans (EmS) in the IMDG Code appendix are used for emergency situations involving dangerous cargoes.

At the same time, Emergency Response tables are also used in Annex-5 of the Dangerous Goods Emergency Plan.

In the event of an accident or fire involving cargo handled at the port facility, the following points from the IMDG Code Supplement tables shall be taken into consideration.

UN	Proper Shipping Name / Description	EMS	Notes
UN1965	HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S.	F-D	(Flammable Gases)

In case of leakage / spillage / discharge involving cargo handled at the port facility, the following references from the IMDG Code Supplement tables shall be taken into consideration:

UN	Proper Shipping Name / Description	EMS	Notes
UN1965	HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S.	S-U	(Flammable, Toxic and Corrosive Gases)

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	8-6
	DANGEROUS CARGO HANDLING GUIDE				

First aid equipments as below:

a) Stethoscope, b) Blood pressure monitor, c) Otoscope, ç) Bed, d) Thermometer, e) Light source, f) Small surgery set, g) Screen, curtain, etc., ğ) Examination table, h) Reflex hammer, ı) Weighing instrument, i) Height gauge, j) Dressing set, k) Necessary consumables such as tongue depressor, injector, gauze, l) Sharp waste container, m) Oxygen tube with manometer (portable), n) Portable lamp, o) Refrigerator, ö) Medicine and material cabinet, p) Wheelchair r) Fully equipped first aid kit s)C-19 diagnostic kit

8.4 On-site and off site Notifications required to be made in case of emergency

- a) Time of accident occurrence,
 - b) How the accident occurs and its reason, if known,
 - c) Place where the accident occurs (onshore facility and/or vessel) and its position and impact area,
 - ç) Details of vessels involved in the accident, if any (name, flag, IMO no, owner, operator, cargo and its content, full name of the captain and similar details),
 - d) Meteorological conditions,
 - e) UN number of hazardous material and description of proper handling (the legislation provided in the description of hazardous materials shall apply) and quantity,
 - f) Hazard class and sub-hazard class, if any, of hazardous materials,
 - g) Packaging group of hazardous materials,
 - ğ) Additional risks posed by hazardous materials, if any, such as marine pollutant,
 - h) Marking and labelling details of hazardous materials,
 - ı) Properties and number of packing, cargo handling unit and container by which hazardous materials are carried, if any,
 - i) Manufacturer, shipper, transporter and recipient of hazardous materials,
 - j) Extent of resulting damage/pollution,
 - k) Number of casualties, injuries and loss, if any,
- Emergency response practices performed at the onshore facility regarding the accident.

8.5 The procedures for reporting accidents.

8.5.1 Communication

8.5.1.1 Communication channels for the determination of the on-site and off-site communication methods and an effective management of the emergency in case of possible emergency cases in the Port Facility are specified as follows;

- Mobile Phones and the satellite phone, if available
- Computers
- Radio
- Siren
- Messengers

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	8-7
DANGEROUS CARGO HANDLING GUIDE					

8.5.1.2 Internal communication is primarily provided by the radio and intercom for the emergencies occurred in the port. The communication between the Port and Ship is carried out by radio or VFH marine band radio provided by the Port.

8.5.1.3 Secure communication with the Official authorities, adjacent facilities and relevant authorities are provided as soon as possible in case of any emergency that may occur in the Port.

8.5.2 Reports

8.5.2.1 EMC shall operate a reporting system that correctly notifies Emergencies to the relevant authorities as soon as possible. EMC including the information required to be notified in an emergency case shall create this reports in a proper way.

8.5.2.2 Hazardous goods accidents must be reported to the Port Authority. The report format shall be free-form and include 8.4 details in full.

8.6 Coordination, support and cooperation method with authorities.

8.6.1 All accidents related to hazardous materials will primarily be coordinated with Port Authority. Aid units of city / County Fire Department, DEMP and adjacent facilities will provide support and cooperation by informing the Port Authority.

8.6.2 In case of any signs of explosion, fire or emergency noticed at an adjacent facility;
Measures shall be tightened at the facility in the first place,
Teams shall be caused to get prepared for providing with the adjacent facility with assistance

8.6.3 Assistance and support teams shall be assigned for responding to any event in consideration of the urgency of situation and the severity of hazard, if there is no possibility to request help or time.

8.6.4 Preparations shall be in place for measures such as unloading and reduction of loads and removal of the vessel to anchorage site in case of any interface vessel in consideration of class, quantity and hazard risk of loads available at hazardous cargo site and on site.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	8-8
	DANGEROUS CARGO HANDLING GUIDE				

8.7 Emergency evacuation plan for the evacuation of the ship and vessels from the coastal facility in case of emergency

8.7.1 Preparation for Emergency Separation System

8.7.1.1 All emergencies should be reported to the Port Authority.

8.7.1.2 If the emergency separation of ship is decided, the safe places that the ship can be transferred under controlled conditions must be specified by the Port Authority..

8.7.1.3 In case of an emergency situation that requires emergency separation, the ship's captain and port facilities shall initiate the emergency separation by mutual agreement and inform the situation to the Port Authority as as soon as possible. A representative from Port Authority or Port Master, Terminal Manager / Business Officer, Ship Captain, Guide Captain shall come to a mutual agreement on the time and type of the separation before the immediate action where the severity and time of the emergency allow.

8.7.1.4 The ship's machinery, steering gear and Marine Systems equipment shall be ready for use immediately.

8.7.1.5 All cargo discharge, ballast discharge process must be stopped and shall be prepared for the separation process.

8.7.1.6 Salt water system of the ship must be watered and water mist must be used for strategic departments..

8.7.1.7 If the atmosphere needs vent operation, the engine room staff must be ready, all unnecessary receiver entrance must be closed, all the necessary safety measures relating to the normal operation must be fulfilled and and a warning notice must be published.

8.7.1.8 If the necessary responds are over the terminal resources for all emergencies, local police or fire department must be reported immediately.

8.7.1.9 The decision to depart the ship under control is set out on the safety principle and it should cover the following requirements.

- The adequacy of the Trailers
- The ships's ability to depart with its own power
- The availability of a safe place that a ship can or will be taken in an emergency case.
- Fire-fighting competence
- The proximity of other vessels
- Fire Ropes

8.7.1.10 Fire ropes shall be kept on the top and shoulder of the ships as long as the ship is at Port Facility. The eye of the rope should be wound down to the sea level and the section on the board must be tight with at least five rounds to the bollard. Part of the top board of the rope must be stretched from the bollard. A cord that can carry the rope must be tied right before the eyes of the rope and the eye of the rope must be located in a way that it is three meters above the sea level. The eye of rope must be kept at this level while the ship is at Port Facility.

8.7.2 Realization of Emergency Separation

8.7.2.1 If all the preparations above examined and deemed appropriate, the ship will be immediately departed.

8.7.2.2 Emergency separation will be provided by the fulfillment of the following processes in order.

8.7.2.3 A close coordination and cooperation between Terminal, Ship and Port Authorities is required for each phase.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	8-9
	DANGEROUS CARGO HANDLING GUIDE				

8.7.2.4 Emergency Separation Process is as below.

- Activating an alarm
- Inform about the emergency by VHFphone
- Making the first official assessment of the situation between the ship's captain and officer of Port Facility.
- Suspension of operation
- Implementing Port facility and ship emergency plan measures
- Removal of the flexible hose connection.
- The deterioration of the current situation and availability of the aforementioned emergency separation.
- Making the assessment of the situation between the ship's captain, port facility officer, port authority or port master, guide captain
- The decision to the emergency separation
- Inform the adjacent facilities and other vessels
- The deployment of Trailers around the ship for an emergency separation, complement of the preparation and announcement of the situation
- Completing the preparations for the ship by the captain and indicating that it is ready.
- Granting approval for the opening of the release hook by the competent person.

ATTENTION!

**THE IMPLEMENTATION OF EMERGENCY SEPARATION PROCESS
MUST BE CONSIDERED AS THE LAST RESORT AND SEPARATION
HOOKS MUST NOT BE RELEASED BEFORE TAKING ALL NECESSARY
MEASURES AND FULFILLING THE CONDITIONS ABOVE.**

8.7.3 Post Emergency Separation

8.7.3.1 –Declaration of the decision on vessel back up and navigation route after the separation process of vessel.

8.7.3.2 –Transition / mooring of the vessel to designated area in company with towboats or its own machine

8.7.3.3 –Port Facility: Determining possible damages or deficiencies through examining the port facility

8.7.3.4 –Consideration of the time when the vessel and port facility become available for freight handling

8.7.3.5 -Sharing problems, if any, occurred during emergency separation

An agreement is reached by and between pilotage and towage organizations and onshore facility authorities regarding any fire, explosion or similar emergencies which are likely to arise during loading/unloading.

Adequate towing boats having satisfactory towing power as furnished with necessary equipment to fight fire in line with weather and marine conditions shall reach the scene as soon as possible in case of emergencies pursuant to the protocol executed with the authorized company to remove the vessel away from the facility and move it to a safe location.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
			1.1.2016	7	21.08.2023
DANGEROUS CARGO HANDLING GUIDE					

8.8 Procedures for handling and disposal of the damaged hazardous goods and wastes contaminated with hazardous goods.

8.8.1 Waste Collecting and Handling

8.8.1.1 Consequential waste are collected to waste bins taxonomically and handled to be stored properly. Waste occurred as a result of the maintenance process are handled in that scope.

8.8.1.2 Additional waste classes, if available, are provided to be integrated into the current waste classes.

8.8.2 Waste disposal

8.8.2.1 According to the hazardous or non-hazardous properties, the waste collected are isolated from the facility by selling them or using contracted organizations which are in conformity with legal recycling/disposal methods.

8.8.2.2 Opportunities of all contractors and carriers within the body of waste management in terms of appropriate methods of waste handling and/or disposal are examined.

8.8.2.3 In case of any contracting service received for handling, selling and/or disposal of the waste, those contracting companies are observed whether they fulfill their legal liabilities or perform recycling or disposal without damaging the environment.

8.8.2.4 It is an obligation to keep all the records concerning waste disposal.

8.8.3 Contaminated Packages;

8.8.3.1 These waste are empty barrels. If occurred, should be left to the contaminated package area in the dump site and Environmental Consulting Firm and Environmental Management System Supervisor contact with contracted and licensed company to send those contaminated packages through filling up the National Waste Handling Form within the time specified in the laws and regulation. Relevant documents of National Waste Handling Form and other documents are stored in environment folder.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	8-11
	DANGEROUS CARGO HANDLING GUIDE				

8.8.3.2 Contaminated Waste; are used gloves, waste cottons and work uniforms. When occurred, should be collected at the waste barrel which is located at the exit of the production-warehouse department and then moved to the waste area. Within the time specified in the laws and regulation, Environmental Consulting Firm and Environmental Management System Supervisor contact with contracted and licensed company to send those contaminated packages through filling up the National Waste Handling Form. Relevant documents of National Waste Handling Form and other documents are stored in environment folder.

8.9 Emergency drills and their records.

8.9.1 Implementation of Practices;

Emergency organization personnel should get various trainings to get ready for their duties with the purpose of providing against emergencies within the facility. If necessary, such trainings must be organized through specialized agencies. In that scope, relevant personnel have received trainings on IMDG CODE regarding Hazardous cargos and have been certified. Practices, which shall be performed in an effort to examine the efficiency of Emergency Plans and be prepared for facts, have to be planned in a way that they will be performed considering the worst scenario likelihood within the facility.

8.9.2 Practice Scenarios;

Planning practices needs two anticipations one of which is a single incident that the port experience and the other is the worst scenario with the combination of these single incidents. In accordance with the scenarios prepared, practices are ensured to be performed in the fastest and most efficient way possible.

8.9.3 Emergency Practices which will be performed within the facility;

8.9.3.1 Have to be indicated within annual training plans.

8.9.3.2 May be planned as local or general responses,

8.9.3.3 Safety, Spillage, etc. may be combined in practice scenarios,

8.9.3.4 Practices can be performed with or without notices.

8.9.3.5 Practices are based upon different emergency scenarios.

8.9.3.6 A practice may be actually performed as it can be negotiated as a desk work or a seminary,

8.9.3.7 Each practice is prepared with scenarios of different hours, days, seasons and incidents.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	8-12
	DANGEROUS CARGO HANDLING GUIDE				

8.10 Information on fire protection systems.

Emergency and fire equipment is given as follows:

Fire hydrants, Fire extinguishers, Fire cabinets and Fire hoses, On-site fire alarm detectors, Electrical and diesel fire pumps

The fire inventory is as in the Emergency Plan.

8.11 Procedures for approval, inspection, testing, maintenance and availability of the fire protection system.

8.11.1 Fire-Protection Water Tanks and Fire-Protection Water

8.11.1.1 The storeroom should be cleaned up at least once a year by discharging the content in order to prevent possible hazards from moss and mud built up in the bottom and sides in the event of fire. Inlet valves, check valve and filters are maintained during the discharge process of pondages.

8.11.1.2 In case of sudden drawdown on water level, it must be checked for a seep or leakage and repaired if necessary.

8.11.1.3 Following the annual check, if necessary, internal and external cleaning and maintenance should be performed in sealed stores.

8.11.2 Fire-Protection Water Pumps

8.11.2.1 Points to take into consideration regarding operation of pumps and troubleshooting in addition to scheduled maintenance are specified below.

8.11.2.1.1 Pumps, stuffing boxes, pressure bolts are checked interrelated and it is ensured whether the pump can be turned up manually with ease or not. Water drops from stuffing box during the operation of the pump is typical. In order to prevent such water flow to the ground, the threaded opening under the stuffing box must be connected to the drainage with a tube.

8.11.2.1.2 Fire-protection water pumps must be operated and recorded at least 1 hour a week.

8.11.2.1.3 Pump and suction pipe are ensured to be completely full of water. If it is not, water filling plug and bleed valve must be opened and such parts mentioned must be filled up with water until they overflow and when the water stops at the plug level, the plug must be tightened properly.

8.11.2.1.4 Pump motor will draw excessive current because of the starting current at the early stages of the operation. As a result of the simultaneous operation of all pumps, cutout switches may be tripped or diesel generators may be broken down seriously because of the heavy current. Therefore, limit relays that regulates the transition -from the star located at the shielded switch which drives the pump motors to triangle- must be arranged according to the number of pumps and the amount of pumps to be operated simultaneously and with respect to different and appropriate time intervals and timely initiation of pumps is provided.

8.11.2.1.5 After performing aforesaid preliminaries and checks, pumps are operated by pressing the drive switches. During the operation, electric motor voltage and the ampere driven must be checked from time to time. If the ampere driven is high at normal operation, a troubleshooting is needed. There may be a mechanical

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	8-13
	DANGEROUS CARGO HANDLING GUIDE				

breakdown or force at the pump or motor. Substandard voltages may be hazardous for motor.

8.11.2.1.6 Monometers must be checked regularly and one or more pumps must be stopped in case of excess pressure increases.

8.11.2.1.7 Delivery pipes of pumps must be equipped with valves initially and check valves thereon.

8.11.2.1.8 If the check valve of the failed pump on the delivery pipe is blocked by materials such as paper, garbage, pieces, moss, mud and interrupts the proper close of the check valve, a part of the water pumped by the other pumps is pumped to the pool while passing through this failed pumps and suction pipes. This failure blocking the water discharge must be fixed in condition of fire occurrence. If a spinning is detected on some of the couplings of failed pumps during the operation of a part of the pumps, it must be interpreted as a sign for the above mentioned failure.

8.11.2.1.9 It must be ensured that the pump and the engine are at the right direction during the operation. For that reason, return path must be drawn on the coupling and control must be performed accordingly.

8.11.2.1.10 The bearings of the pump and engine must not be hotter than hands can resist. If the heat is high, it may be resulted from an internal mechanical forcing or coupling maladjustment. In such situations pump must be stopped and the failure must be corrected immediately.

8.11.2.1.11 For pumps driven by diesel engine, starting the engine must be carried out in line with the instructions.

8.11.2.1.12 In condition that a deficiency or malfunction is detected as a result of control, it is fixed by the responsables.

8.11.3 Sprinkler System

8.11.3.1 The most important point and maintenance to do about sprinkler installation is preventing sprinkler head to be congested. To supply this; sprinkler should be worked according to standards/legislations and should be sure that it is working. Sufficient sprinkler head should be keep in every facility and in case of failure, it should be replaced with new ones, broken ones should be towed by repairing.

8.11.4 Fire Protection Hydrant Installation

8.11.4.1 Entering rain water into fire-protection hydrant hose closets should be prevented; hoses should be without fracture, solid and constricted enough. At least one of the hoses should be maintained as always connected to fire protection valve.

8.11.4.2 Fire-protection valves should be impermeable and working. Broken nozzles, valves and hoses should be replaced immediately and faults should be repaired and towed. Therefore, sufficient hose, nozzle, fire-protection valve, clamp, sleeve and spare materials belong to those should be kept. Waiting the failure is not allowed with any reason at firefighting equipment.

8.11.4.3 While determined failures were fixing after drills, running fire-protection hoses shouldn't be put into closet with water in it. Facilities should supply proper hose suspension to drain the water off in hoses and to be dry and facilities shouldn't replace before ensuring that hose is quite dry. If sea water was ejaculated by hoses, firstly inside of them should be washed by fresh water and then they should be dried at a windy place.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	8-14
DANGEROUS CARGO HANDLING GUIDE					

8.11.4.4 All pipes belong to installation of sprinkler and fire-protection hydrants are has to be controlled in general every three months, rusty parts should be painted, decayed parts should be replaced, valves and retched valves should be controlled and failure should be fixed.

8.11.4.5 If any lack or malfunction is determined as a result of all fire-protection hydrants, hoses, and nozzles control it is fixed by related liable.

8.11.5 Portable Extinguishers

8.11.5.1 Sufficient quantity of spare device should always be in facility storages for failure, control and maintenance. Instead of extinguishers those were used for purposes above should be replaced with reserves.

8.11.5.2 All extinguishers are had visual test monthly and inspected. After control, extinguishers' upper surface is marked. During the control, especially extinguishers with dry powder are turned down and slightly hit the base, so powder in pipe is allowed to move. Otherwise, powder in extinguishers stays at same location for a long time can be hardened by subsiding to base. After the result of control; if any lack or malfunction is determined, it is fixed by related liable.

8.11.5.3 Extinguishers are inspected annually in general by firm according to TS ISO 11602-2 Fire Protection: Portable and wheeled extinguisher standard. Extinguishers are tested by related firm in ten years most intervals, chemical powder is inspected at the end of the 4th year.

8.11.6 Protection against freezing.

8.11.6.1 Protection of Generators

8.11.6.1.1 By outside temperature's decreasing under +4C, water may start to freeze. Therefore, radiator's generators with water-cooled motor should be ensured with antifreeze.

8.11.6.2 Protection fire-protection water pumps.

8.11.6.2.1 Fire-protection water pumps and absorption pipes are always full with water. So ambient temperature shouldn't be under +4 C.

8.11.6.3 Protecting of fire-protection distribution pipes.

8.11.6.3.1 Main pipes and branch pipes are had to be protected against the freezing about hydrant sinks. So, lines are protected against freezing by isolation or being floored underground.

8.12 The measures to be taken in case of failure on fire protection systems.

8.12.1 The facility is a system with established alternative competency which backs up firefighting equipment.

8.12.2 The support of adjacent facilities, Fire departments and AFAD (Disaster and Emergency Management Directorate) shall be sought in cases where the facility's own fire fighting equipment is inadequate or out of service.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	8-15
DANGEROUS CARGO HANDLING GUIDE					

8.12.3 Other hazardous and combustible materials / vehicles, which are likely to be affected from fire, shall be removed away from the area, if possible.

8.12.4 A necessity may arise to determine under which conditions assistance and support are provided and their scope.

8.12.5 The capabilities of towing boats or marine vehicles featuring marine fire extinguishing system available in the area should be taken into consideration.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	9-1
	DANGEROUS CARGO HANDLING GUIDE				

9 SAFETY AND HEALTH AT WORK MEASURES

9.1 Occupational health and safety measures.

Harbor Structure Management is obligated to take all necessary measures to prevent employees to be affected of these substances, if this is not possible; minimizing it and to protect employees from the danger of these substances when working with chemical substances.

9.1.1 Risk assessment

9.1.1.1 Harbor Structure Management is obligated to do a risk assessment in accordance with 29/12/2012 dated, 28512 numbered Occupational Health and Safety Regulation provisions published at official gazette to determine if there is dangerous chemical substance at Harbor Structure and if there is; determining negative effects in terms of employees' health and safety.

9.1.1.2 Following details are specifically considered at risk assessment to be made at studies with chemical substances:

9.1.1.2.1 Danger and harms of chemical substance in terms of health and safety.

9.1.1.2.2 Turkish material safety verse form (SDS) to be provided from sellers, manufacturers or importers.

9.1.1.2.3 Duration, type and level of contagion.

9.1.1.2.4 Quantity, conditions of usage and frequency of usage of chemical substance.

9.1.1.2.5 Vocational exposition limit values and biological limit values given at annexes of this regulation

9.1.1.2.6 . Effect of preventive measures to be taken or taken.

9.1.1.2.7 If available, results of last health surveillance.

9.1.1.2.8 Each of these substances and their interactions with each other at works that was worked in with more than one chemical substances.

9.1.1.3 Harbor Structure Management obtains extra information from supplier or other sources that is necessary for risk assessment. This information also includes special risk assessments involved in current regulations if available intended for users.

9.1.1.4 A new activity includes dangerous chemical substance is only started after taking all types of measures those were specified by doing risk assessment.

9.1.1.5 Measures to be taken at studying when dangerous chemical substances.

9.1.1.5.1 Risks in terms of employees health and safety when studying with dangerous chemical substances are disabled or minimized with following measures:

9.1.1.5.2 Proper regulation and organization of work are done at Harbor Structure.

9.1.1.5.3 Studies with dangerous chemical substances are made with minimum number of employees.

9.1.1.5.4 Substance quantity and exposition period employees will be exposed is allowed to be at minimum level.

9.1.1.5.5 Chemical substance quantity to be used at Harbor Structure is kept at minimum level.

9.1.1.5.6 Work place building and extensions are always kept clean and neat.

9.1.1.5.7 Proper and sufficient conditions are provided for employees' personnel cleaning.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	9-2
	DANGEROUS CARGO HANDLING GUIDE				

9.1.1.5.8 Necessary regulations are made to store, transport, use and process dangerous chemical substances, waste and residuals properly at Harbor Structure.

9.1.1.5.9 Safe or less dangerous chemical substance is used instead of dangerous substance in terms of employees' health by using substitution method. If substitution method can't be used because of specification of the work, according to risk assessment result and with order of precedence, following measures are taken and risk is reduced:

9.1.1.5.10 Proper process and engineering control systems are chosen by also considering technological developments at studying with dangerous chemical substances involving maintenance and repair works those can be hazardous in terms of employees' health and safety.

9.1.1.5.11 Block protection measures like installing sufficient ventilation system and proper work organization are taken to prevent risk at its source.

9.1.1.5.12 In case of taken measures for protecting employees collectively against chemical substances' negative effects are not sufficient, personnel protection methods are adopted with these measures.

9.1.1.6 Sufficient control, supervision and inspection is made to allow taken measures to be active and perpetual.

9.1.1.7 Harbor Structure Management provides analysis and measurements of chemical substances regularly those could be hazardous for employees health. If any changing is realized at conditions those can effect Harbor Structure employees' exposition to chemical substances, these measurements are repeated. Measurement results are assessed by considering vocational exposition limit values specified in this Regulation annexes.

9.1.1.8 Harbor Structure Management, also considers specified measurement results. Every situation vocational exposition limit values are crossed, Harbor Structure Management takes protective and preventive measures to fix this as soon as possible.

9.1.1.9 On condition of remaining Regulation Provision about Protecting Employees from Dangers of Explosive Places secret, Harbor Structure Management makes administrative arrangements and takes technical measurements according to following order of precedence in accordance with turnover's specification involving to process, store and transport chemical substances, to prevent interacting chemical substances' touching each other mutually on the purpose of protecting employees from dangers which originate from chemical substances' physical and chemical feature, by basing results of risk assessment and risk avoidance principles:

9.1.1.9.1 For inflammable and explosive substances to reach dangerous concentration and having dangerous quantity of chemically unstable substances are prevented at Harbor Structure. If this is not possible,

9.1.1.9.2 Having inflammable sources those can cause fire or explosion at Harbor Structure. Conditions those can cause harmful effect of chemically unstable substances and mixtures are disabled. If this is also not possible,

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	9-3
	DANGEROUS CARGO HANDLING GUIDE				

9.1.1.9.3 . Required measures are taken to minimize or prevent employees to be effected by chemically unstable substances' and mixture's harmful effects in case of fire or explosion originate from inflammable or explosive substances.

9.1.1.10 Protective systems those were provided for protecting work equipment and employees, are designed, produced and supplied in accordance with legislation in force in terms of health and safety. Harbor Structure Management provides all equipment and protective systems to be used at explosive places, to be in accordance with provisions of Regulation About Equipment an Protective Systems Used at Probable Explosive Places (94/9/AT) published at 26392 4 repeated numbered and 30/12/2006 dated official gazette

9.1.1.11 Arrangements to reduce effect of explosion pressure are made.

9.1.1.12 Facility, machine and equipment are allowed to be always under control.

9.1.2 Emergencies

9.1.2.1 Especially following details are considered in case of emergencies originate from dangerous chemical substances at Harbor Structure on condition of keeping details specified in Regulation about Emergencies at Workplaces published 28681 numbered and 18/6/2013 dated Official Gazette as a secret :

9.1.2.1.1 Preventive measures to reduce negative effects of emergencies are taken immediately and employees are informed about the situation. Necessary studies are done to return emergency to normal and only employees assigned at emergencies to do maintenance, repair and compulsory works and teams came to scene from another place are let to get into effected area

9.1.1.1.2 Personal protective equipment and special security equipment is given to the people allowed to enter the affected area and it is being sure that they are using them as long as the emergency situation goes on. People who do not have personal protective equipment and special security equipment are not allowed to enter the affected area.

9.1.2.1.3 Information about the Dangerous chemicals and emergency situation intervention and evacuation procedures are all ready for use. Workers employed for the cases of emergency at the Port Facility and the establishments active in first aid, emergency medical attention, saving and firefighting outside the work place should be provided with these information and procedures easily. These information include;

9.1.2.3.1 For the workers employed for the cases of emergency at the Port Facility and the establishments active in first aid, emergency medical attention, saving and firefighting outside the work place to be ready beforehand and so they can practice the appropriate attention, the danger resulting from the work done, precautions to take and works to be done,

9.1.2.3.2 A special danger or information about the works needed to be done that are likely to happen in an emergency situation,

9.1.3 Workers' education and informing them

9.1.3.1 Port Facility Management, provided that the provisions mentioned on the Regulation 15/5/2013 dated 28648 numbered Occupational Health and Safety Education Procedures and Principles remain hidden, ensures the workers' and their representative's training and informing. This training and informing especially include the aspects mentioned below;

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	9-4
	DANGEROUS CARGO HANDLING GUIDE				

- 9.1.3.1.1** Information gained as a result of the risk evaluation.
- 9.1.3.1.2** Information about the dangerous substances that may occur or taking place at the Port Facility and about the recognition of these substances, health and security risks, occupational diseases, occupational exposure level values and other legal regulations.
- 9.1.3.1.3** Necessary precautions and things to do so that the worker's do not danger themselves or the other workers.
- 9.1.3.1.4** Information on the Turkish material safety data sheets supplied from the manufacturer for the dangerous chemical substances.
- 9.1.3.1.5** Information on labelling/locking the parts, covers, pumping system and suchlike instalment where the dangerous chemical substances are according to the regulations
- 9.1.3.2** The training and information to the workers and their representatives on the works with the dangerous substances are a training supported by a verbal or written instruction due to the risk degree resulting from the risk evaluation done and its type. These instructions changes according to the changing conditions.

9.2 Information about the personal protective clothes and procedures to use them

Personal Protective Devices of the Response Teams

Level A

Usage area : Situations where the skin, breathing, eyes and etc. need to be protected in a high standard – gas proof

Positive pressured Tube Breathing Apparatus– SCBA

Protective clothing against the chemicals

Gloves which are chemical proof from inside.

Gloves which are chemical proof from outside.

Boots or long boots, chemical proof, with steel heels.

Thermal underwear, long sleeve and cuffed

Hard Cover

Long sleeved

Double sided wireless connection (No spreading sparks)

Level B

The minimum level needed for the entry and exit to the scene, rather for the liquids to be spilled or scattered.

Positive pressured Tube Breathing Apparatus– SCBA

Protective clothing against the chemicals

Gloves which are chemical proof from inside.

Gloves which are chemical proof from outside.

Boots or long boots, chemical proof, with steel heels.

Hard Cover

Double sided wireless connection (No spreading sparks)

Face mask

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	9-5
DANGEROUS CARGO HANDLING GUIDE					

Level C

Used when the chemicals in environment are known, when the concentration is decided, when it is decided that the skin and eyes will not get harmed. However continuous measure should be done.

- Full mask, air cleaning filter
- Protective clothing against the chemicals
- Gloves which are chemical proof from inside.
- Gloves which are chemical proof from outside.
- Boots or long boots, chemical proof, with steel heels.
- Hard Cover
- Double sided wireless connection (No spreading sparks)
- Face mask

Level D

Work clothes (emergency intervention team). Requires long sleeved and security shoes/boot. Other Personal protection equipment changes due to the condition of the event. If a problem is to occur about the skin, entries to the scene with these kinds of clothes should not be done.

9.3 Enclosed space Entrance.

Health and Safety Procedures is exist.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	10-1
	DANGEROUS CARGO HANDLING GUIDE				

10 OTHER POINT

10.1 Validity of the Hazardous Substances Compliance Certificate.

Official and current document date will be taken as basis.

10.2 Responsibilities of the Dangerous Goods Safety Consultant

As in section 2.5.

10.3 Matters for carriers of the hazardous substances arriving/leaving coastal facility by land (matters on required documents that must be available in the road vehicle at the entrance/exit of port or coastal facility area, equipment and tools required for this vehicles, speed limits in the port area etc.).

10.3.1 Bulk dangerous cargoes

10.3.1.1 Name of the consignor (shipper) and date of delivery to the port area, normally not less that 24 hours before arrival;

10.3.1.3 for bulk dangerous cargoes: the product name and any other information required by the relevant IMO code; and

10.3.1.4 the name of the ship into which the dangerous cargoes are to be loaded (if applicable), the ship's agent and the port.

10.3.2 Necessary certificates

Hazardous Cargo Declaration, Hazardous Cargo Transport Dispatch, Multi Mode Hazardous Cargo Form, Hazardous Cargo Manifest, Packaging and Container/Vehicle Loading Certificate, Safety Data Sheet, carrying certificate showing exemption for the shipping under ADR/RID/IMDG Code 3.4 and 3.5, SRC 5 certificate appropriate and valid for transport with regard to shipping under ADR, ADR written instruction, Vehicle Conformity Certificate appropriate and valid for carriage, transport document, CSC Certificate for the shipping made with container, the certificate showing eligibility of the tree in case of using heat treated tree with regard to transport or loading safety and cargo transport unit (CTU), cargo safety certificate signifying that container or the cargos in vehicle are secured within the scope of IMDG Code,

As regards the cargos to which fumigation application is made or contain hazardous gas in the cargo transport unit leaving port facility and the cargo transport units arriving port facility, the result of risk evaluation or transport conformity certificate if gas measurement is done,

Without lack of compulsory documents regarding the transport listed above, hazardous cargo that arrives port facility and leaves port facilities cannot be shipped. The cargos not taken under security in appropriate way within the scope of IMDG Code is treated as hazardous cargo too.

10.3.3 Speed Limit in Port Facility

Speed limit in our port facility is 20 km.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	10-2
	DANGEROUS CARGO HANDLING GUIDE				

10.4 Matters for carriers of the hazardous substances arriving/leaving coastal facility by sea (matters on day/night signals to be shown by ships carrying hazardous goods and vessels, cold and hot work procedures in ships and so on.)

10.4.1 Arrival by Sea

10.4.1.2 Hazardous bulk cargo (liquid or solid);

10.4.1.2.1 name and IMO number of ship, agency and estimated time of arrival (ETA), 24 hours at the latest from arrival normally;

10.4.1.2.2 a list showing product name of hazardous cargos and other information necessitated with related IMO Code

10.4.1.2.3 A valid International Conformity Certificate for Bulk Transport of Hazardous Chemicals or a valid Conformity Certificate for Transport of Bulk Hazardous Chemical, whichever is appropriate, International Pollution Prevention Certificate for Liquid Bulk Substances hazardous for Health (NLS Certificate) and/or International Fuel Pollution Prevention Certificate should be made available for cargo;

10.4.1.2.4 Hazardous cargos to be left in ship should be indicated in a way to refer the numbers in list;

10.4.2 Departure by Sea

10.4.2.1 hazardous bulk cargos (solid):

10.4.2.1.1 name of ship and IMO number of ship, agency and estimated time of departure (ETD) as necessitated by regulatory boards;

10.4.2.1.2 a list showing product name of hazardous bulk cargos and other information necessitated by related IMO Code

10.4.2.1.3 A valid International Conformity Certificate for Bulk Transport of Hazardous Chemicals or a valid Conformity Certificate for Transport of Bulk Hazardous Chemical, whichever is appropriate, International Pollution Prevention Certificate for Liquid Bulk Substances hazardous for Health (NLS Certificate) and/or International Fuel Pollution Prevention Certificate should be made available for cargo;

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	10-3
	DANGEROUS CARGO HANDLING GUIDE				

10.5 Additional points will be added by the port facility.

10.5.1 Training

10.5.1.1 Management

10.5.1.1.1 Management should ensure that all shipboard and shore personnel involved in the transport or handling of dangerous cargoes or in the supervision thereof are adequately trained, commensurate with their responsibilities within their organization.

10.5.1.1.2 Management at all levels should exercise day-to-day responsibility for health and safety. In order to draw up safe operational procedures for the transport and handling of dangerous cargoes, management should carry out an assessment of the risks involved. In certain cases a quantified risk assessment may be necessary.

10.5.1.2 Personnel (cargo interests, port operators and ships)

10.5.1.2.1 Every person engaged in the transport or handling of dangerous cargoes should receive training on the safe transport and handling of dangerous cargoes, commensurate with his responsibilities.

10.5.1.3 Shore-based personnel

Should receive general awareness/familiarization training, function-specific training and safety training

10.5.2 Training content

10.5.2.1 General awareness/familiarization training

10.5.2.1.1 Every person should receive training on the safe transport and handling of dangerous cargoes, commensurate with his duties. The training should be designed to provide familiarity with the general hazards of relevant dangerous cargoes and the legal requirements. Such training should include a description of the types and classes of dangerous cargoes; marking, labelling and placarding, packing, segregation and compatibility requirements; a description of the purpose and content of the transport documents; and a description of available emergency response documents.

10.5.2.2 Function-specific training

10.5.2.2.1 Every person should receive detailed training concerning specific requirements for the transport and handling of dangerous cargoes which are applicable to the function that he performs.

10.5.2.3 Safety training

10.5.2.3.1 Each person should receive training commensurate with the risks in the event of a release of dangerous cargoes and the functions he performs, on:

10.5.2.3.2 Such training should be provided or verified upon employment in a position involving the transport or handling of dangerous cargoes and should be periodically supplemented with retraining, as deemed appropriate by the regulatory authority.

10.5.2.3.3 Records of all safety training undertaken should be kept by the employer and made available to the employee if requested.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	10-4
	DANGEROUS CARGO HANDLING GUIDE				

10.6 Accident Prevention Policy

AYGAZ A.Ş. management, we are aware of that the operations realized in our port have the potential that will lead to accidents inherently. However, we believe all accidents may be prevented. Therefore, we undertake to manage operation ideally to protect subcontractors, visitors, neighbours and environment at the highest level through preventing accidents.

With the aim of preventing accidents and mitigate the effects in the direction of AYGAZ A.Ş. Quality Management Systems, as Aygaz Dörtyol Port, we will apply the policies about

- taking high level security measures for human and environment around Port facility and procuring all resources for this purpose,
- making the risk evaluation based on quantitative analysis related to ordinary and extraordinary operation and keeping these evaluations updated continuously with the purpose of determining and assessing accidents
- having performed the arrangements covering maintenance, repair and temporary stopping related to detected risks and preparation of requisite procedures
- following technological development and providing support required for continuous improving of security measures in facilities with the aim of preventing accidents and mitigate the effects
- making necessary arrangements required for design of new facility, process along with planned changes and having performed risk evaluations absolutely before realization and assessing acceptability
- determining emergencies that will be detected before with systematic analysis, preparing emergency plans for these emergencies and reviewing with drills following realization of audit regularly
- tracking performance of system within the framework of procedures to evaluate conformity to the targets identified with Quality Management Systems, in case of failing to provide conformity, searching corrective activities
- evaluating efficiency and conformity of Quality Management Systems periodically and systematically, documentation, certification, performing review by us as top management and giving support for continuous improvement of Quality Management Systems
- employing the personnel who have knowledge, education and experience convenient for the positions that will affect safety and security of operational job processes within organization,
- ensuring that our employees in charge develop themselves constantly by means of giving trainings,
- adhering to national and international law, regulation, bylaws and standards
- ensuring health and securities of employees, contractors, visitors and neighbours and protection of environment whereby preventing accidents and eliminating the effects systematically through taking necessary measures and searching potential incompatibilities with policy

AS MANAGEMENT AND ALL EMPLOYEES.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	10-5
	DANGEROUS CARGO HANDLING GUIDE				

10.7 Hot Work Procedure

1. No permit is given for the hot works to be done aboard ship. However, in necessary cases, after taking permits in the direction of legal legislations by ship agency, it will ve realized under the control of port facility.
2. Before starting to hot works and procedures in our port facility, written permit regarding applicability of hot works in question will be taken from port presidency. With abovementioned permit,the place where hot work and procedures will be performed and related detailes and additionally safety measures to be applied will be specified on Hot work form.
3. Hot Work Form covers the following.
 - a) with the aim of being sure about that the areas on which work is to be done is no burning and/or explosive environment and insufficient in terms of ventilation and oxygen, auditing frequently the area and adjacent areas where work is to be carried out including the tests applied by accredited testing organizations,
 - b) removing hazardous cargos and other combustible materials from working area and adjacent areas (lime, sludge, residue and other combustible materials are included in the substances to be removed from the area in question)
 - c) protecting efficiently against accidental ignition of combustible building materilas (i.e., girders, wooden partitions, floors, doors, wall and ceiling coatings)
 - ç) sealing and ensuring impermeability of open pipes, pipe transitions, valves, joints, gapes and open parts with the purpose of preventing spreading of flame, spark and hot particles from working areas to adjacent areas or other areas
4. warrant of the hot work to be done and a plate on which the safety measures to be taken are written will be hanged in working area and entrances of all working area. Warrant and safety measures should be visible easily and will be understadable clearly by everyone who will conduct hot works.
5. While doing hot works, attention should be paid to the following matters:
 - a) controls will be carried out with the aim of confirming that no current condition have changed in working environment.
 - b) While hot works are performed, at least one fire tube or other fire entinguising equipment shall be made ready , so as to be used instantly with their all apparatus in a venue to be reached easily.
6. In the course of hot work and procedures, when the works in question are completed and during enough time following completion , efficient fire control shall be made in the area on which hot work is conducted and the adjacent areas where hazard will emerge owing to heat transfer.
- 7.Necessity of applying for the document titled “International Safety Guide for Oil Tankers and Terminals (ISGOTT) “ particularly for additional more detailed information and procedures pertaining to hot works and procedures will be taken into consideration every time.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	10-6
	DANGEROUS CARGO HANDLING GUIDE				

Risk Assessment																																										
Location of hot work: Area / Location: _____																																										
Special access restrictions (due to the task involving a specific welding type or the location being a hazardous area, confined space, etc): _____																																										
Reason for hot work: Work activity description: _____																																										
Likely ignition source type(s): <input type="checkbox"/> Flame (welding, soldering, brazing, etc) <input type="checkbox"/> Spark or slag (grinding, cutting, friction tools, welding, etc) <input type="checkbox"/> Hot Object (metal surface, plate, etc) <input type="checkbox"/> Other: _____																																										
Hazard identification, risk analysis and control measure selection: Add an additional page if the space below is insufficient.																																										
Specific Hot Work Issues: (tick appropriate)		<input type="checkbox"/> The hot work is to be solely undertaken by a contracted party personnel and a detailed work method statement / risk assessment has been previously prepared, reviewed by is attached to this Form.		Attach documentation & proceed to Section 2 on the following page.																																						
		<input type="checkbox"/> The hot work is to be solely undertaken by personnel as per the specific hot work issues detailed below.		Complete the Risk Assessment below.																																						
Risk Assessment Guide																																										
Step 1 – Consider Consequences		Step 2 – Consider Likelihood		Step 3 – Calculate Risk																																						
What are the consequences of this hazard occurring? Consider what is the most probable consequence (below) with respect to this work hazard.		What is the likelihood (below) of the hazard consequence in Step 1 occurring.		1. Take Step 1 rating and select the correct column. 2. Take Step 2 rating and select the correct line. 3. Use the risk score where the two ratings cross on the matrix below. H = High, S = Serious, M = Medium, L = Low																																						
Extreme Multiple fatalities or permanent injuries Critical Single fatality or permanent injury Major Medical treatment or lost time injury Minor First aid treatment Insignificant Incident or near miss – no treatment		Almost Certain Is expected to occur in most circumstances Likely Will probably occur at least once Possible Event might occur at some time Unlikely / Rare Event not expected to occur or only in exceptional circumstances		<table border="1" style="font-size: x-small; text-align: center;"> <thead> <tr> <th colspan="2" rowspan="2"></th> <th colspan="5">Consequences</th> </tr> <tr> <th>Ins</th> <th>Min</th> <th>Maj</th> <th>Crit</th> <th>Ext</th> </tr> </thead> <tbody> <tr> <th rowspan="4" style="writing-mode: vertical-rl; transform: rotate(180deg);">Likelihood</th> <th>Almost Certain</th> <td>M</td> <td>S</td> <td></td> <td></td> <td></td> </tr> <tr> <th>Likely</th> <td>M</td> <td>M</td> <td>S</td> <td></td> <td></td> </tr> <tr> <th>Possible</th> <td>L</td> <td>M</td> <td>M</td> <td>S</td> <td>R</td> </tr> <tr> <th>Unlikely / Rare</th> <td>L</td> <td>L</td> <td>M</td> <td>M</td> <td>S</td> </tr> </tbody> </table>				Consequences					Ins	Min	Maj	Crit	Ext	Likelihood	Almost Certain	M	S				Likely	M	M	S			Possible	L	M	M	S	R	Unlikely / Rare	L	L	M	M	S
		Consequences																																								
		Ins	Min	Maj	Crit	Ext																																				
Likelihood	Almost Certain	M	S																																							
	Likely	M	M	S																																						
	Possible	L	M	M	S	R																																				
	Unlikely / Rare	L	L	M	M	S																																				
				<table border="1" style="font-size: x-small; text-align: center;"> <thead> <tr> <th colspan="2" rowspan="2"></th> <th colspan="5">Consequences</th> </tr> <tr> <th>Ins</th> <th>Min</th> <th>Maj</th> <th>Crit</th> <th>Ext</th> </tr> </thead> <tbody> <tr> <th rowspan="4" style="writing-mode: vertical-rl; transform: rotate(180deg);">Likelihood</th> <th>Almost Certain</th> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <th>Likely</th> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <th>Possible</th> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <th>Unlikely / Rare</th> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				Consequences					Ins	Min	Maj	Crit	Ext	Likelihood	Almost Certain						Likely						Possible						Unlikely / Rare					
		Consequences																																								
		Ins	Min	Maj	Crit	Ext																																				
Likelihood	Almost Certain																																									
	Likely																																									
	Possible																																									
	Unlikely / Rare																																									
Hazard (List the hazards relating to the work)		Controls (List the controls to manage each of the hazards)		Personal Protective Wears																																						
Responsible Party (List the role, contractor, competency &/or prescribed occupation responsible for implementing the controls)		Risk Assessment (With controls in place: High, Serious, Medium or Low)																																								
Risk Assessment Personnel:																																										
Risk Assessment Completed by:																																										
Name: _____		Employer: _____		Date: _____																																						
Name: _____		Employer: _____		Date: _____																																						

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	10-7
	DANGEROUS CARGO HANDLING GUIDE				

Section 2 – Hot Work Permit				
As per the method of hot work and location described in Section 1, identify control requirements in the relevant parts below.				
General Hot Work / Ignition Controls				
Identify those general hot work and ignition controls required to be undertaken as part of the hot work: (identify as yes or not applicable)	Yes	NA	Control	
	<input type="checkbox"/>	<input type="checkbox"/>	Fire extinguishers supplied by the workgroup / contractor are to be located immediately adjacent to the hot work area and within 10m (building / fixed location fire extinguishers are not to be relied upon)	
	<input type="checkbox"/>	<input type="checkbox"/>	Catch mats or boards are to be positioned over grid-mesh, flooring, grates to catch sparks or slag	
	<input type="checkbox"/>	<input type="checkbox"/>	Combustible and flammable materials or fuel sources are required to be cleared from the area (consider a 15m area around the hot work where practicable and include surfaces below & above the work area)	
	<input type="checkbox"/>	<input type="checkbox"/>	Drains, cable racks, electrical cables and other heat/fire sensitive items are to be covered (consider a 15m area and use fireproof blankets, catch boards and approved covers as applicable)	
	<input type="checkbox"/>	<input type="checkbox"/>	A water hose is to be run to the job location and primed ready for use (where appropriate for work locations outdoors and in areas clear of electrical equipment)	
<input type="checkbox"/>	<input type="checkbox"/>	A Fire Watcher is required to watch the area during and/or post work to monitor fire risk, sparks, slag, hot objects (consider for work that is arc welding, oxy-cutting or likely to present an ignition hazard post work, and for work in hazardous areas, in confined spaces, outdoors, in windy conditions): <input type="checkbox"/> During Work, and/or <input type="checkbox"/> Post Work for a time period of _____ minutes		
Specific Hot Work / Ignition Controls		Yes	NA	If Yes, Include Additional Control Details to be Used:
The hot work is to be undertaken on or adjacent to plant that will require an isolation (such as services, pipes, tanks, pressure vessels)		<input type="checkbox"/>	<input type="checkbox"/>	
A fixed fire protection or detection system will need to be taken out of service (approval is required for the impairment and the Fire System Log Book is to be filled in – see also BAC Authorisation below; approval contacts include:		<input type="checkbox"/>	<input type="checkbox"/>	
The work area will require specific cleaning, purging, ventilating or pre-work atmospheric monitoring (due to flammable/explosive vapours, dusts, liquids or solid residues in the work area / location)		<input type="checkbox"/>	<input type="checkbox"/>	
The work area will require pre-work cleaning, stripping, surface preparation, or atmospheric monitoring during works (as a result of surfaces / coatings that may create harmful emissions when heated or cut)		<input type="checkbox"/>	<input type="checkbox"/>	
The nature of the work requires specific respiratory protection to be worn		<input type="checkbox"/>	<input type="checkbox"/>	
The nature of the work requires specific controls to be implemented to protect gas leads or other sensitive plant items involved in the work		<input type="checkbox"/>	<input type="checkbox"/>	
The hot work involves arc-welding whereby specific controls relating to ensuring electrical safety will be required		<input type="checkbox"/>	<input type="checkbox"/>	
Additional Hot Work Controls within Confined Spaces			<input type="checkbox"/> NA (Not Applicable)	
Controls:			Yes	NA
Locate equipment outside the space where practicable (such as gas cylinders, hoses, etc unless involved with respiratory devices)			<input type="checkbox"/>	<input type="checkbox"/>
Extraction fan inlet is to be located as close as practicable to the contamination source			<input type="checkbox"/>	<input type="checkbox"/>
Contaminants are to be expelled from the space (so that they cannot be recirculated and will not harm other workers)			<input type="checkbox"/>	<input type="checkbox"/>
As arc-welding activities are to be suspended for substantial periods, power sources will need to be de-energised, electrodes removed from holders and holders placed so that accidental contact or arcing cannot occur			<input type="checkbox"/>	<input type="checkbox"/>
As gas welding/cutting activities are to be suspended for substantial periods, torch and cylinder valves are to be closed with the torch and hose connections removed from the space and depressurised			<input type="checkbox"/>	<input type="checkbox"/>
Completion Hot Work			<input type="checkbox"/> NA (Not Applicable)	
Controls:			Yes	N/A
After the end of the job is controlled area for at least half an hour.			<input type="checkbox"/>	<input type="checkbox"/>
Field is checked for at least eight hours and one hour intervals.			<input type="checkbox"/>	<input type="checkbox"/>
There is no need to do control after hot working.			<input type="checkbox"/>	<input type="checkbox"/>
Permit Request:				
Name: _____	Signature: _____	Date: _____	Time: _____	
Approved				
Name: _____	Signature: _____	Date: _____	Time: _____	

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
			1.1.2016	7	21.08.2023
DANGEROUS CARGO HANDLING GUIDE					

10.8 Responsibilities of Personnel in Operation

10.8.1 Operation Officer

10.8.1.1 Acts according to the checklists in 10.9.

10.8.1.2 A coordination meeting will be held at least 1 day prior to the acceptance of dangerous cargoes to the port facility and the representatives of operation, Field planning, HSE unit, TMGD and other related persons shall participate to the meeting.

10.8.1.3 If a decision is taken at the meeting in favor of accepting the dangerous cargo, management, operation, storage, safety and emergency response departments shall be notified and the necessary preparations and acceptance process will be commenced.

10.8.1.4 If it is required to notify the Port authority, the situation shall be notified to the Port authority in writing by specifying the reasons.

10.8.1.5 Number of equipments and cranes, teams and shifts to be used shall be specified at this meeting.

10.8.1.6 Organize the work order with the 2nd Cap.

10.8.1.7 Ensure that the cargo handling is made according to the approved cargo plan With the Planning Specialist

10.8.1.8 Every person engaged in the handling of dangerous cargoes exercises reasonable care to avoid damage to cargo transport units.

10.8.1.9 Whilst dangerous cargoes are being handled, precautions are taken to prevent unauthorized access to handling areas.

10.8.1.10 If there is any loss of containment of dangerous cargo, every practical step is taken to minimize risks to persons and adverse effects to the environment.

10.8.2 Shift Supervisor

10.8.2.1 Acts according to the checklists in 10.9.

10.8.2.2 The personnel equipped with the necessary protective equipment check before the operation.

10.8.2.3 The shift superintendent will be responsible from controlling the work security, control of equipments, entry and exit of outsiders, safe handling of the cargo, environmental cleaning and duly performance of these works.

10.8.2.4 Organize the work order with the 2nd Cap.

10.8.2.5 Ensure that the cargo handling is made according to the approved cargo plan.

10.8.2.6 If there is any loss of containment of dangerous cargo, every practical step is taken to minimize risks to persons and adverse effects to the environment.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	10-2
DANGEROUS CARGO HANDLING GUIDE					

10.8.3 HSE Responsibility

10.8.3.1 Acts according to the checklists in 10.10

10.8.3.2 The worker at the operation informs about the danger of load and equips it with the necessary protective equipment.

10.8.3.3 Environmental safety is ensured.

10.8.3.4 Take necessary fire precautions and control system operation.

10.8.3.5 Controls the presence of the required warning and warning signs.

10.9 Safe Handling of Dangerous Goods Operation Procedure Checklist

GENERAL

S.NO	Eylem	SEÇ	OP. SOR	VAR. AMR.
ACCEPTANCE CARGO				
1.	A coordination meeting will be held at least 1 day prior to the acceptance of dangerous cargoes to the port facility		X	
2.	The MSDS form about load is provided.		X	
3.	The Certificate of Conformity for the ship carrying the dangerous cargoes will be checked.		X	
4.	Approved cargo handling / evacuation plan requested		X	
5.	The dangerous cargo (es) to be accepted to the port: 1. Risk arising from dangerous cargo 2. Interaction with dangerous cargoes existing at the port facility, 3. Interaction with cargoes planned to be accepted to the port facility in the near future, 4. Conditions for stowage 5. Conditions for segregation 6. Requirement of materials and equipment with respect to emergency response 7. Sufficiency of emergency response equipments 8. Interaction with the neighboring area (s) The issues mentioned herein above will be discussed within the scope of current IMDG CODE documents and a management decision for accepting/rejecting will be taken.		X	
6.	If a decision is taken at the meeting in favor of accepting the dangerous cargo, management, operation, storage, safety and emergency response departments shall be notified and the necessary preparations and acceptance process will be commenced.		X	
7.	Number of equipments and cranes, teams and shifts shall be specified.		X	
8.	The personnel who will work in the operation will be provided with information as regards the risks of the cargo and they will be equipped with the necessary protective outfit.		X	
9.	Required warnings, warning signs are provided around the area being handled.		X	
P.S. : In standard handled loads, meeting is optional. Previous meeting resolutions may apply.				

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	10-3
DANGEROUS CARGO HANDLING GUIDE					

10.10 Procedures for safe handling of liquid bulk dangerous cargoes Checklist

S.NO	Action	HSE	OP. RES.	SHIFT RES.
HANDLING				
1.	Unloading equipment and appropriate pipe selection are made by the person responsible with operations. International Safety Guide for Oil Tankers and Terminals (ISGOTT) Ship/Port Safety Control List is undersigned mutually. A communication network is built between the ship and the port facility.	X	X	X
2.	Employees wait beside the flexible hoses which will be connected to the ship. They work in cooperation with the ship personnel for the connection of liquid cargo to entry/exit manifolds of the ship.	X	X	X
3.	Appropriate pressure adjustment is made to the ship. Overflow of tankers is avoided and the ship personnel are provided with required information and the line is cut under dangerous situations	X	X	X
4.	The vehicles coming to the loading or unloading platform at the port facility will be eliminated from static electricity, flame arrestor apparatus will be placed at their exhausts and their earthing shall be made during the loading or unloading at the port facility. Flame arrestor apparatus will be provided by the Ground Tanker Operations Unit. Ground tankers which don't have flame arrestors shall not be taken to the port facility. This will not be required for tankers having ADR standards.	X	X	X
5.	It is checked that the communication equipment used in the operation area is exprof.	X	X	X
6.	Flexible hoses used in loading or unloading of liquid bulk dangerous cargoes should have a certificate specifying the approval of type as well as pipe type, maximum working pressure of the pipe and production month and year of the pipe.		X	X
7.	Adequate number of electrical insulation flanges for the flexible hoses and loading arms used in loading or unloading operations of liquid bulk dangerous cargoes.		X	X
8.	The master of a ship and berth operator should before liquid bulk dangerous cargoes are pumped into or out of a ship from or into a shore installation agree in writing on the handling procedures including the maximum loading or unloading rates taking into account and undersigned mutually. 1. The arrangement, capacity and maximum allowable pressure of the ship's cargo lines and the shore pipelines; 2. The arrangement and capacity of the vapor venting system; 3. The possible pressures increase due to emergency shut-down procedures; 4. The possible accumulation of electrostatic charge; and 5. he presence of responsible persons during start up operations on board ship and ashore		X	X
9.	Agree in writing the action to be taken and the signals to be used in the event of an emergency during handling operations		X	X
10.	All due care will be taken to circumvent all relevant pipes, flexible hoses and connected equipment on board and on shore, and adequate supervision will be exercised during the transfer of dangerous bulk liquid cargoes.		X	X

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	10-4
DANGEROUS CARGO HANDLING GUIDE					

S.NO	Action	HSE	OP. RES.	SHIFT RES.
HANDLING				
11.	Effective communication between the ship and the shore installations is maintained throughout the handling operations		X	X
12.	Necessary arrangements will be made for measuring tankers to be discharged to ensure that the tanker is not overfilled.		X	X
Shift Supervisors				
1.	He will take adequate precautions are taken to prevent a short-circuit of the insulating section			
2.	He will inspect and test the insulating and earthing systems at appropriate intervals to ensure their effectiveness			
3.	He will ensure that any other metallic connections between the berth and the ship are protected or arranged so as to ensure that there is no possibility of incentive sparking where a flammable atmosphere may be present			
4.	He will take actions in accordance with appropriate checklists in the International Safety Guide for Oil Tankers and Terminals (ISGOTT)			
5.	He should ensure that the master of a ship is notified of any conditions which may require precautions to be taken for avoidance of sources of ignition on the ship such as galley stoves or cooking appliances with non-immersed elements.			
6.	He should ensure that all drain holes and pipes and all other drains of any kind on the jetty, where liquid bulk dangerous cargoes might escape in case of an accident, are closed before handling commences and are kept closed during the whole of the period of the handling of liquid bulk dangerous cargoes.			

10.11 EmS (Emergency Procedures for Vessels carrying Dangerous Goods) and MFAG (Medical First Aid Guide)

In emergencies, it is important to use IMSBC, IBC or IGC Codes for bulk cargo as well as all available IMDG Code, EMS and MFAG information.

10.11.1 EmS

EmS contains procedures for the actions that can be taken if there is a fire or spill of dangerous goods.

It contains general procedures applicable to an entire substance class as well as procedures specific to certain products.

Examples of the information found in the specific "emergency schedules" are necessary protective equipment and the types of extinguishing agents that can be used to put out fires involving dangerous goods.

EmS is divided into EmS for fires and EmS for spills. There will be EmS numbers for every UN number in column 15 of the Dangerous Goods List. EmS number does not have to be specified in the Dangerous Goods Declaration.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	10-5
	DANGEROUS CARGO HANDLING GUIDE				

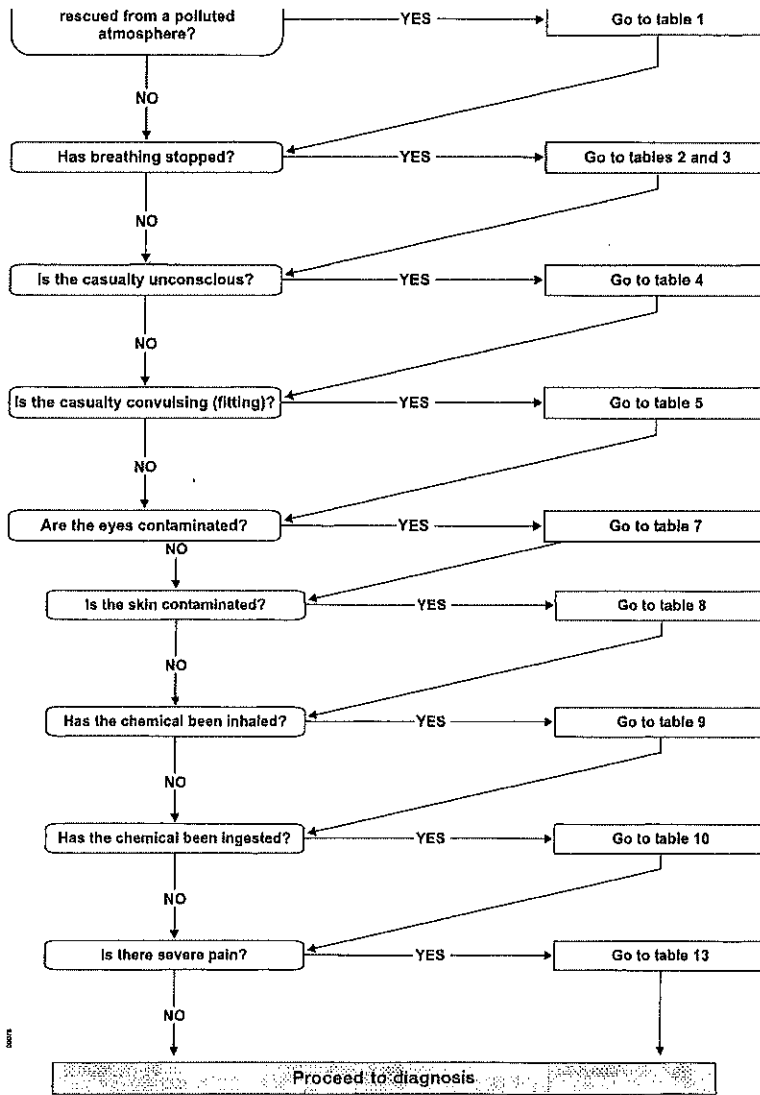
10.11.2 MFAG

MFAG table numbers do not have to be stated on the Dangerous Goods Declaration.

MFAG consists of a flow chart which shows what actions should be taken, based on the situation and symptoms, when a person has been exposed to dangerous goods of some kind. However, it is important that the person has been trained to use MFAG in advance so that it will work in an emergency.

The person can also get in touch with a doctor to get assistance treating an injured person.

Usage information below.



AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
			1.1.2016	7	21.08.2023
DANGEROUS CARGO HANDLING GUIDE					

11.2 General View Photos of The Coastal Facility



AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	11-8
	DANGEROUS CARGO HANDLING GUIDE				

11.3 Emergency Calls

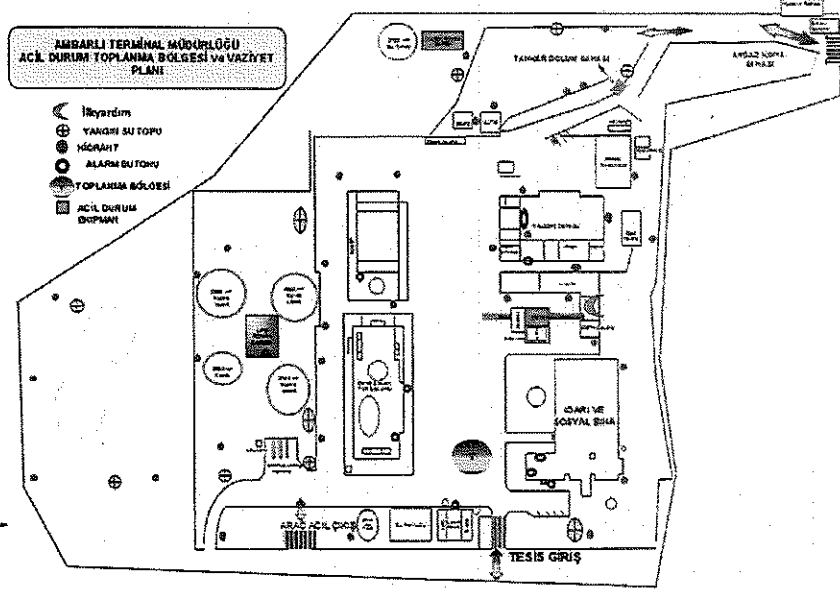
EMERGENCY PHONE LIST

AYGAZ I.C.	Document Number:	AYG-S36-P46-EK52	Revision Number: 2	Revision Date: 23/07/2013
FACILITY AUTHORITIES				
AMBARLI SATELLITE PHONE NUMBER	00 882 16 5500 3604			
Volkan AKŞAHİN	HOME	-	CEP	0 535 344 84 74
Oğuzhan KARAMAN	HOME	-	CEP	0 532 270 72 11
Serkan HATİPOĞLU	HOME	-	CEP	0 532 238 92 48
NEIGHBORING COMPANIES				
PETROL OFISI	0 2125919519 - 59195 27			
ÇEKİSAN	0 212 591 01 06 - 591 00 76			
AMBARLI LTD.	0 212 876 23 53			
TP	0 212 875 91 00			
EÜAŞ	0 212 875 91 00			
SHELL	0 212 876 23 40			
GÜMRÜK	0 212 591 12 32			
AMBARLI REGIONAL PORT MANAGEM.	0 212 875 68 48 - 875 68 53			
FIRE DEPARTMENT	112			
TRAFFIC	112			
POLICE IMMEDIATE	112			
GENDARME IMMEDIATE	112			
BEYLİKDÜZÜ SECURITY DIRECTORATE	0 212 879 10 22			
AVCILAR POLICE STATION	0 212 591 39 93			
TERROR OFFICE	0 212 590 95 49			
AMBARLI STATION	0 212 591 39 93			
TEAMS DEPARTMENT	0 212 590 09 66			
RESOURCE OFFICE	0 212 509 23 51			
EMERGENCY SERVICE	112			
HEALTH ADVICE LINE	184			
BAKIRKÖY PUBLIC HOSPITAL	0 212 542 44 91			
İSTANBUL TRAINING HOSPITAL (SAMATYA)	0 212 588 44 00(30 HAT)			
AKSARAY VATAN HOSPITAL	0 212 534 86 00			
P.AVCILAR HOSPITAL	0 212 591 10 00			
P.ANADOLU HOSPITAL	0 212 690 23 53			
P.HAYAT HOSPITAL (MEDICAINO)	0 212 695 48 30			
POISON ADVICE CENTER	0 312 433 70 01			
CERRAHPAŞA MEDICAL FACULTY	0 212 588 48 00			
İSTANBUL MEDICAL FACULTY /ÇAPA	0 212 534 00 00			
ÇAPA BLOOD CENTER	0 212 534 69 73			
WATER FAULT LINE	185			
İSKİ	0 212 588 39 10			
DISASTER COORDINATION CENTER	0 212 321 17 39			
ROAD MAINTENANCE REPAIR CENTER	0 212 613 19 69			
BEYAZ MASA	153			
ELECTRIC FAULT LINE	186			
PHONE FAULT LINE	121			
PROVINCIAL DIRECTORATE OF ENVIRONMENT AND URBANIZATION	0 212 262 57 56 - 0 212 262 11 37			

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	11-9
DANGEROUS CARGO HANDLING GUIDE					

11.4 Dangerous Goods Layout

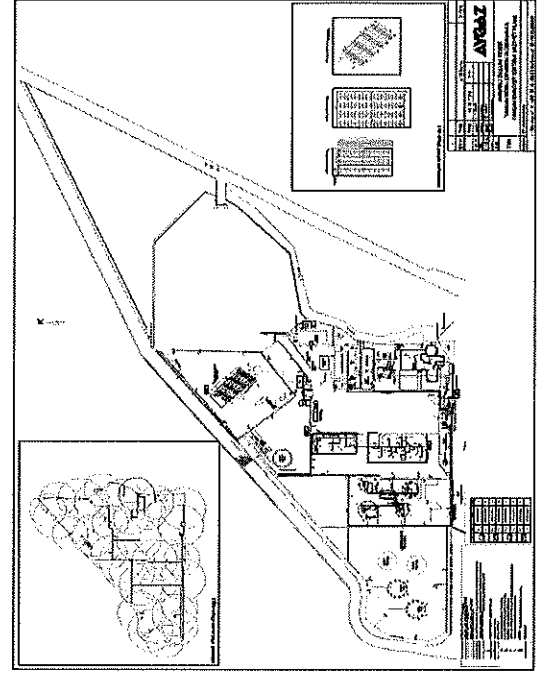
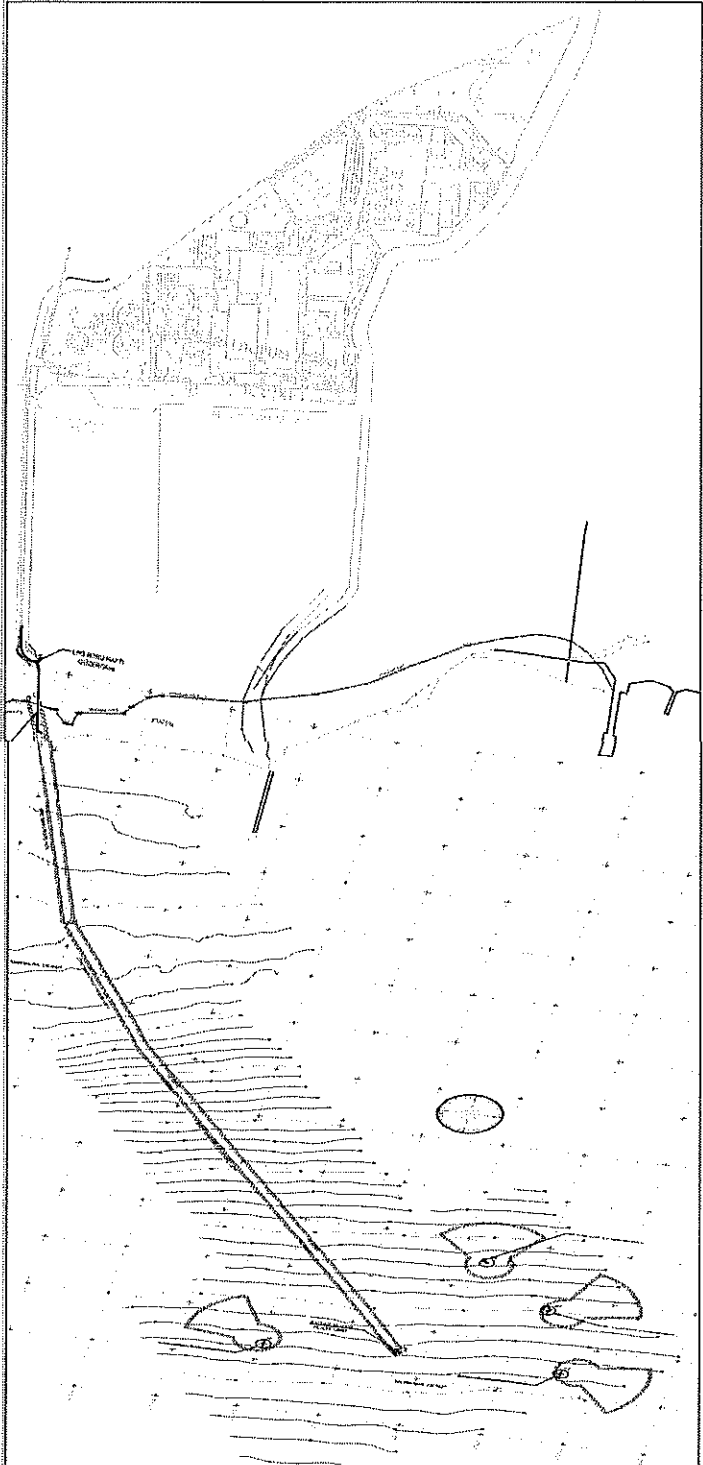
(Filling Plant Layout Plan)



AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
			1.1.2016	7	21.08.2023
DANGEROUS CARGO HANDLING GUIDE					

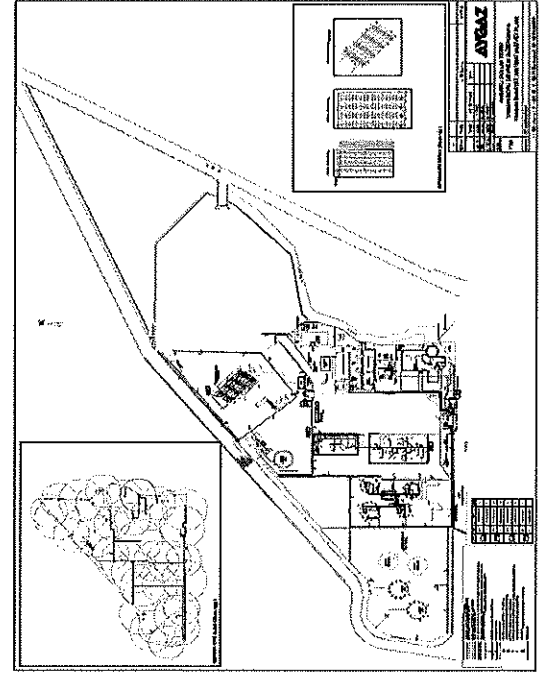
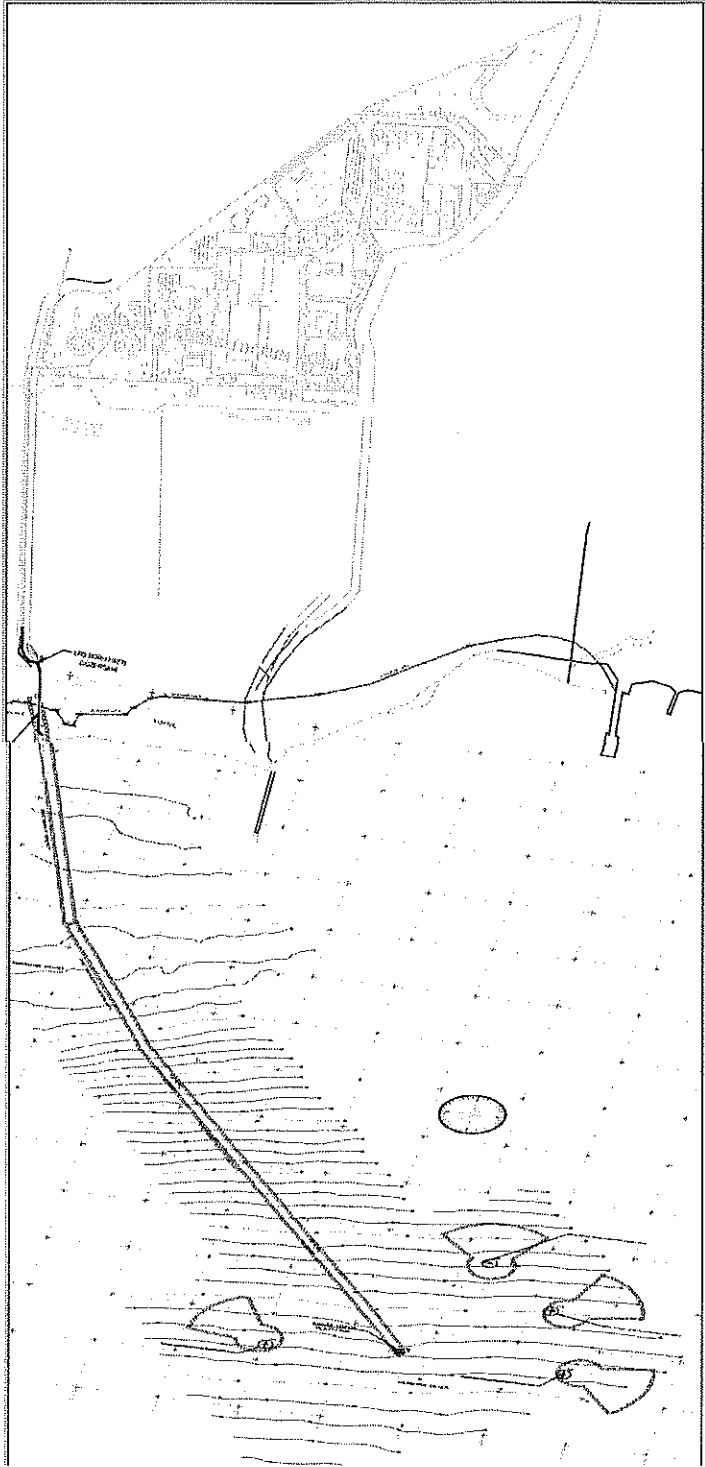
11.5 Dangerous Goods Fire Plans

(Filling Plant Fire System Layout Plan)



AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
			1.1.2016	7	21.08.2023
DANGEROUS CARGO HANDLING GUIDE					

11.6 Site Fire Systems



AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
			1.1.2016	7	21.08.2023
DANGEROUS CARGO HANDLING GUIDE					

11.7 Emergency Response Plans

It is kept as a separate document in the coastal facility and is renewed at least every 3 years. Emergency Plan details are as follows.

emergency procedures,

Emergency response organization chart

Name, title and contact details of the person/organization that prepared the emergency procedures,

Name, title and contact information, duties and responsibilities of the authorized person appointed to coordinate emergency response activities that may occur at the coastal facility,

Name, title and contact information, duties and responsibilities of the facility officer who will contact the relevant Port Authority and other relevant institutions and organizations in case of emergency,

The names and duties of the teams designated for emergency response, and the names, duties and responsibilities of the personnel assigned to these teams,

The nature and capacities of the resources, equipment and equipment to be used by the coastal facility for emergency response,

The measures to be taken and the actions to be taken in order to keep the serious conditions that can be foreseen to cause the occurrence of emergencies under control and to minimize the negative effects that may arise from them, and the existing facilities, capabilities and capacity of the facility,

In case of an emergency, the nature and announcement methods of the precautions and warnings to be taken in order to prevent or minimize the possible risks to the people in the coastal facility, and the regulations regarding what people should do in the face of a warning,

In case of emergency, the first notification procedures to be made to the Port Authority, the content of the information to be made in this notification, and the procedures for transmitting this information to the Port Authority as new information is obtained,

Trainings required for the personnel to be assigned in emergency situations,

Coordination methods to be provided with emergency teams outside the coastal facility in emergencies,

The nature and period of the drills to be made for emergencies,

Arrangements for providing support for measures taken outside the coastal facility in emergencies.

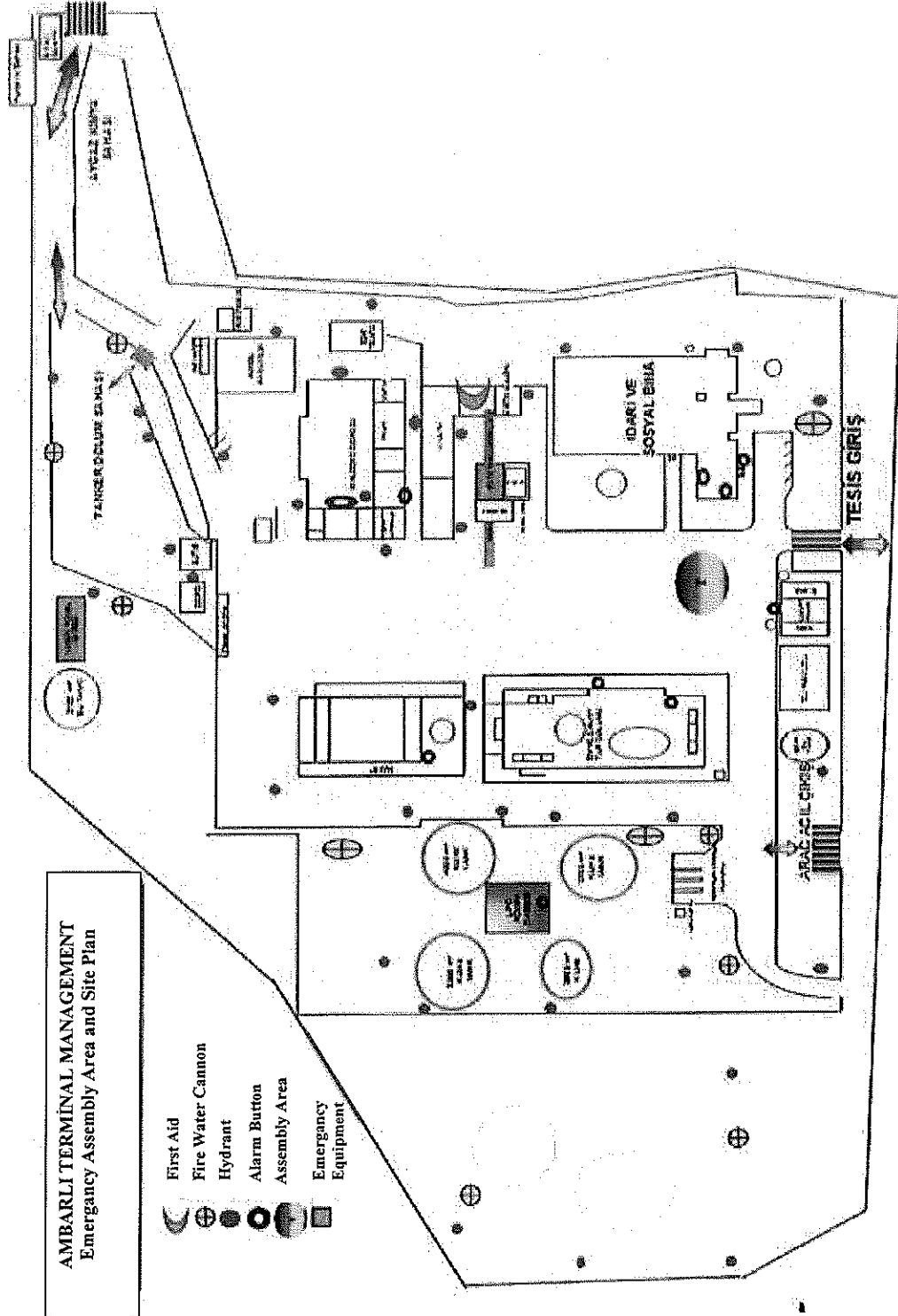
Contingency plans must cover each of the following emergencies:

- a) Facility, equipment and field fires,
- b) Load fires belonging to each dangerous load class and sub-hazard classes allowed to be handled at the port,
- c) Ship fires,
- ç) Explosion,
- d) Accidental death and serious injury,
- e) Natural disasters such as earthquakes, floods, landslides, tsunami waves,
- f) Adverse weather conditions such as very strong winds, storms, excessive snow or icing,
- g) Leakage, flow or spillage of dangerous goods belonging to each hazard class or sub-hazard classes allowed to be handled at the facility,
- ğ) Marine pollution (for example: oil/fuel leakage or dangerous cargo or environmentally harmful substance spilling/falling into the sea),
- h) Gas leak,

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	11-13
	DANGEROUS CARGO HANDLING GUIDE				

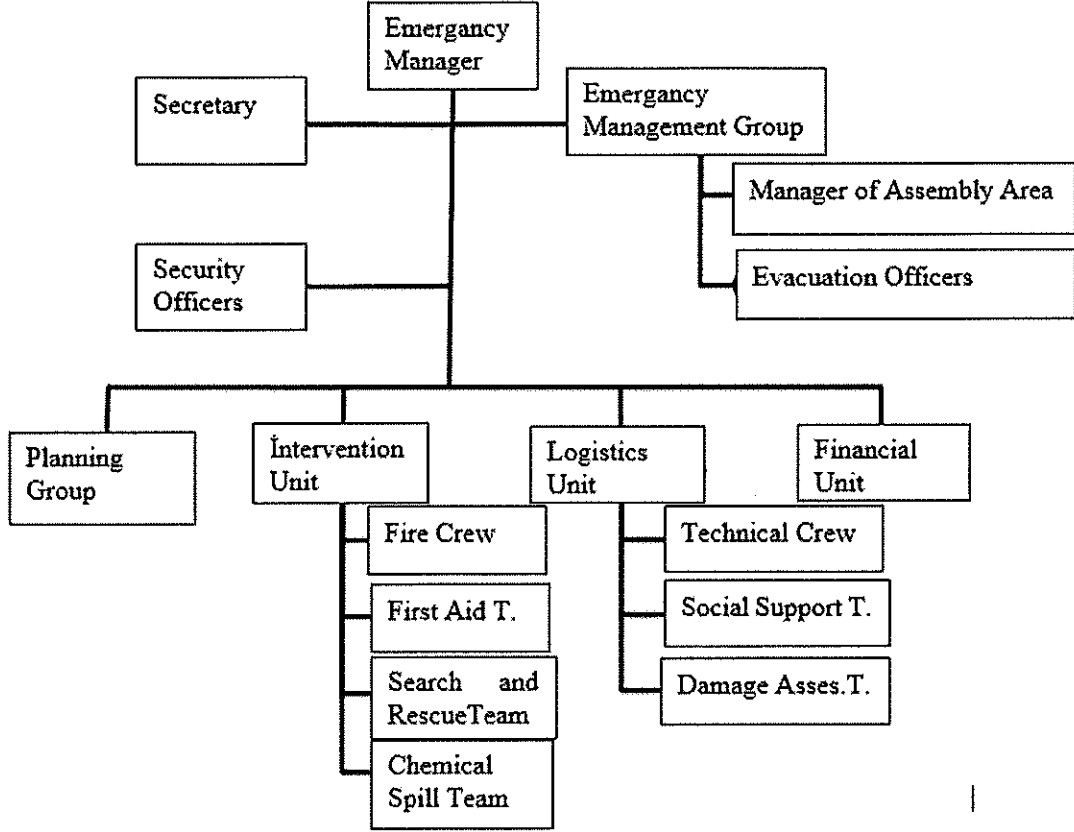
i) Power outage.

11.8 Emergency Meeting Point



AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	11-14
	DANGEROUS CARGO HANDLING GUIDE				

11.9 Emergency Response Plan Scheme



(Official Contacts and Contacts in this organization are currently registered.)

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
			1.1.2016	7	21.08.2023
DANGEROUS CARGO HANDLING GUIDE					

11.10 Dangerous Goods Manual

Dangerous Goods manual exists.

11.11 Leak Areas and Equipment for CTU and Packages, Entry/Exit Drawings

As shown Layout.

11.12 Inventory of Port Service Ships

Supplied 3. Party

11.13 Sea coordinates of the administrative borders of the Port Authority, anchorage areas and the pilot's disembarkation/embarkation points

A) Port administrative area border

The port administrative area of Ambarlı Port Authority is the sea and coastal area within the line formed by the following coordinates.

- a) 41° 02' 54" N – 028° 24' 00" E (Güvercinlik Cape)
- b) 40° 43' 30" N – 028° 24' 00" E
- c) 40° 43' 30" N – 028° 43' 24" E
- d) 40° 58' 18" N – 028° 43' 24" E (Multiple Dalyan Cape)

B) Anchorage areas

a) The anchorage area of ships that do not carry dangerous goods is Büyük Çekmece Bay, which is to the north of the line connecting the following coordinates. Ships; In accordance with their length and draft, they cannot anchor at this anchorage area closer than 4 cables from the shore.

- 1) 40° 59' 05" N – 028° 32' 30" E (Father's Nose)
- 2) 40° 58' 25" N – 028° 35' 42" E (Manda Nose)

b) Anchorage area no. 2: Anchorage area of naval ships is the sea area formed by the following coordinates.

- 1) 40° 58' 00" N – 028° 32' 33" E
- 2) 40° 57' 06" N – 028° 32' 33" E
- 3) 40° 56' 45" N – 028° 34' 00" E
- 4) 40° 58' 00" N – 028° 34' 00" E

c) Anchorage area no. 3: The anchorage area of ships carrying dangerous goods, nuclear powered military ships, ships to be quarantined and ships that will carry out degassing is the sea area formed by the following coordinates.

- 1) 40° 57' 30" N – 028° 35' 30" E
- 2) 40° 56' 24" N – 028° 35' 30" E
- 3) 40° 55' 54" N – 028° 37' 30" E
- 4) 40° 57' 15" N – 028° 37' 30" E

ç) Anchorage area no. 4: The anchorage area of 1600 GT and above ships that do not carry dangerous goods is the sea area formed by the following coordinates.

- 1) 40° 57' 15" N – 028° 37' 30" E

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	11-16
	DANGEROUS CARGO HANDLING GUIDE				

- 2) 40° 55' 54" N – 028° 37' 30" E
- 3) 40° 55' 18" N – 028° 40' 00" E
- 4) 40° 56' 30" N – 028° 40' 00" E
- 5) 40° 57' 24" N – 028° 39' 18" E

C) Pilot pick-up and drop off location

40° 56' 00" N – 028° 40' 39" E

11.14 Emergency Response Equipment Against Marine Pollution in the Port Facility

As in the Approved Marine Pollution Emergency Response Plan

11.15 PPE Map

The personal protective equipment and usage standards are specified in the document
AYG-S36-P48-T615-EK222

11.16 Hazardous Substance Incidents Notification Form

Number - Date		
Company/ Organisation		
Sender		Contact Information
Required		
PORT FACILITY		
"HAZARDOUS MATERIALS WASTE NOTIFICATION"		
DATE:		
1. When the accident occurs,		
2. How the accident occurred and the cause of the accident,		
3. Where the accident occurred (shore facility/ship, What is accident's area, ç) information of the ship involved in the accident (name, flag, IMO nu, owner, operated by, load and amount of load, the nam of captain and similar information)		
4. Meteorological conditions,		
5. UN number of the dangerous substance, proper transport name (based on the legislation specified in the definition of dangerous substance) and amount,		
Hazard class of dangerous substance or sub-hazard division,if any,		
Packing group of dangerous substance, if any,		
Additional risks of the dangerous substance, such as marine pollutants,if any,		

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	11-17
DANGEROUS CARGO HANDLING GUIDE					

Sign and label details of dangerous substance,
The characteristics and number of the package, cargo transport unit and container in which the dangerous substance is transported, if any,
Manufacturer, shipper, carrier and consignee of dangerous substance

6. The extent of the damage/pollution,

7. Number of dead and injured (if any),

8. How the accident was handled,

9. Which organizations to seek help from,

10. Other ship or adjacent facilities that may be affected by the accident,

PREPARING THE FORM :

Name Surname :

Position/Duty :

Signature :

11.17 Control Results Notification Form for Dangerous Goods Transport Units (CTUs)

The form containing the CTU control results requested by the Administration to be sent quarterly to the port authorities is below.

Year/Period /	Number	Percentile
Checked Packages			
Defective Packages;			
<ul style="list-style-type: none"> • Total • Filled in the country • Filled abroad 			
Flaws:			
Documentation:			
<ul style="list-style-type: none"> • Dangerous Cargo Declaration • Container/Vehicle Packaging Certificate 			
Plating and Marking			
Container security agreement approval sheet			
Serious Structural Defects			
Land Tankers mooring attachments			
Portable Tank or Land Tanker (unsuitable or damaged)			
Labeling (for packages)			

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	11-18
DANGEROUS CARGO HANDLING GUIDE					

Packaging (unsuitable or damaged)		
Segregation of the load		
Stacking/Bİnding the inside of the package		

11.18 Other required annexes

11.19 Dangerous Goods Handling Guide Additional Cargo Notification (When necessary) (Newly added)

The cargo notification that is not specified in the current Dangerous Goods Guide of the facility and is planned to be handled at the facility is made to the relevant Port Authority by filling out the form below. According to the code to which the load in question is subject and the attached safety data sheet, the coastal facility must indicate that there is equipment to be found in the facility, first aid, fire, safety, etc. to be obtained. must show that all necessary precautions have been taken and necessary updates have been made in the Dangerous Goods Handling Guide and other procedures.

Proper shipping name		
UN Number and groups in class ID/Characteristic table, if any		
Yükün türü ve tabii olduğu kod	Dangerous Liquid Bulk Cargoes (Petroleum and Petroleum Derivatives - MARPOL -Additional 1)	
	Dangerous Liquid Bulk Cargoes (Chemical and Chemical Likes -IBC Code)	
	Dangerous Liquid Bulk Cargoes (Liquefied Gas-IGC Code)	
	Packaged Dangerous Cargoes (IMDG Code)	
	Dangerous Solid Bulk Cargoes (IMSBC Kod)	

Annex: (MSDS)

Dangerous Cargoes Safety Advisor
Name/Surname/Signature

Coastal Facility Manager
Name/Surname/Signature

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	14-1
	DANGEROUS CARGO HANDLING GUIDE				

12 ABBREVIATION

- VHF**, Marine Band Radio
CTU, Cargo Transport Unit
IMDG, International Danderous Cargoes Handling Guide
IMO, International Maritime Organization
ILO, International Workers Organization
UN, United Nations
PEAR, Harmful to People, Environment, Property and Reputation
MOTAT, Waste Management Application
AFAD, Disaster and Emergency Management Presidency
SDS, Safety Data Sheet

13 INTRODUCTION

This Guide applies to the entry and presence of dangerous goods in port areas, both on board and on shore. These are intended to be made applicable to all ships visiting a port, regardless of their flag. It should not be applied to ships' stores and equipment, or to troop transports and warships.

It is to help the persons and institutions that prepare the national legal requirements to ensure that these requirements are made as effective as possible by specifying all possible situations of dangerous goods in the cargo areas, but without creating validity for exceptional situations.

It is important that definitions are carefully studied and used to avoid misunderstanding.

14 DEFINITIONS

Interface means a dock, pier, breakwater, quay, wharf, marine terminal or similar structure (floating or not) to which a ship can be moored. This includes any facility or property other than a ship that is used directly or indirectly to load or unload dangerous cargo.

Shore Facility means any person or institution that controls the operation of a port on a daily basis.

Bulk means cargoes intended to be transported in a tank permanently fixed on or inside the Ship or without a bulkhead for storage in the cargo area that is a structural part of a ship.

Cargo companies means a shipper (shipper), carrier, forwarder, groupage agent, packing center or any person, company or institution involved in any of the following activities: identification, containment, packaging, packaging, securing of dangerous

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	14-2
DANGEROUS CARGO HANDLING GUIDE					

cargoes, Receiving cargo in port, transporting it by sea and always have control over the cargo in relation to its labeling, placarding or documentation.

Certificate of Conformity means a document issued by or on behalf of the Administration in accordance with the relevant laws for the ship's structure and equipment, certifying that the ship's structure and equipment are suitable for the dangerous cargoes to be transported on the ship.

Dangerous goods, within the scope of the following documents, means any of the following cargoes, whether they are packaged, packaged or transported in bulk:

- Oils covered by Annex I of MARPOL 73/78;
- Gases covered by the Laws for the structure and equipment of ships carrying Liquefied Gases in bulk;
- Toxic liquid substances/chemicals, including waste, covered by law for the construction and equipment of ships carrying MARPOL 73/78 Annex II and Bulk Hazardous Chemicals;
- Solid materials in bulk containing chemical hazards and solid hazardous materials in bulk (MHBs), including wastes covered by group B annexes in the safety practices for solid bulk cargoes (BC Code);
- Harmful substances in packaged form (covered by Annex III of MARPOL 73/78); and
- Hazardous substances, materials or substances (covered by the IMDG Code).

The term dangerous goods also includes any uncleaned packaging that has previously been transported dangerous cargo (tank-container casing, bulk compartment intermediate containers) if it has been filled with a substance that is not classified as dangerous or has been purged of gases to neutralize any dangerous goods and if the residues of the dangerous cargoes have not been sufficiently removed (IBCs), bulk packagings, portable tanks or tank vehicles).

Certificate of Conformity means a document issued by or on behalf of the Administration to a ship carrying dangerous goods in bulk in solid form or in packaged form under SOLAS regulation II-2/19.4, which proves that the structure and equipment comply with the requirements of the regulation.

Flexible conduit means flexible hose and end connections containing sealed end means used for the transfer of dangerous cargoes.

Handling, including interim holding operations such as the temporary storage of dangerous cargoes in the port area during their transport from the point of origin to the destination route for the purpose of changing the means and methods of transport and movement within the port, which forms part of the transport supply chain for cargoes, and from a ship, rail car, vehicle, freight It includes loading or unloading operations from a container or another transport vehicle, intermediate transport between ships or other modes of transport, or transfer within a ship or in a warehouse or terminal area.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	14-3
	DANGEROUS CARGO HANDLING GUIDE				

This term has been expanded to include all operations related to dangerous goods in the port area. .

Hot work means any open fire and flame, power tools or hot rivets, grinding, welding, burning, cutting, welding or other repair work involving heat or causing sparks, which may become dangerous due to the presence or proximity of dangerous loads.

Captain means the person in command of a ship. Pilot is not included.

Packing refers to the packaging, loading and loading of dangerous cargoes to recipients, intermediate containers for bulk transport (IBCs), freight containers, tank containers, portable tanks, railroad wagons, bulk containers, vehicles, ship barges or other cargo transport units.

Pipeline means all pipes, connections, valves and other auxiliary facilities, apparatus and equipment in a port related to or used for the loading of dangerous cargoes, but any pipe, apparatus or equipment of the ship excluding the ends of the parts of the pipe, apparatus or equipment of the ship to which the flexible pipes are connected. shall not include the piece of equipment, the flexible pipe, the loading arm.

Floating Platform area means the land and sea area determined by the legislation.

Note: Some port areas may overlap and legal requirements must be taken into account. When establishing the definition of the port area in legal regulations, care must be taken to ensure that the law applies to all facilities that may be involved.

Port Authority means any person or institution authorized to implement effective control in the port area.

Administration(s) means the national, regional or local administration that has the power to enforce the legal requirements and is empowered to enforce the legal requirements in relation to a port area.

Person Responsible means a master of a ship or a person appointed by a shoreside employer, who is certified or otherwise recognized by the Regulatory Authority as required, has sufficient knowledge and experience for that purpose, and is empowered to make all decisions regarding a specific assignment.

Ship means any watercraft, whether or not suitable for seagoing, used for the carriage of dangerous cargoes, including those used in inland waters.

Ship's stores means materials on board for the maintenance, containment, safety, use or navigation of the ship (excluding fuel and compressed air used for the ship's primary propulsion machinery or fixed auxiliary equipment) or for the safety or comfort of the ship's passengers or crew.

It is stated that the ship's stores contain these items, including those for the comfort of passengers and crew, that a ship may need for its normal operation, but not those items that a ship may carry for the performance of its specialist functions, eg. explosives carried by a deep-sea rescue vessel or dangerous goods used by a well propulsion vessel.

Responsible person means a person who has up-to-date knowledge, experience and competence to perform a specific task.

AYGAZ	Document Nu.	Release Date	Rev. No	Revision Date	Page Nu.
		1.1.2016	7	21.08.2023	14-4
DANGEROUS CARGO HANDLING GUIDE					

Stacking means the positioning of packages, intermediate bulk containers (IBCs), freight containers, tank containers, portable tanks, bulk containers, vehicles, onboard barges, other cargo transport units, and bulk cargoes on the ship's deck, holds, sheds or other areas. is coming.

Shipping means moving in port areas by one or more means of transport.

Unstable substance means a substance that, due to its chemical structure, tends to polymerize or otherwise give dangerous reactions under certain temperature conditions or when in contact with a catalyst. Reducing this tendency can be accomplished through special shipping conditions or by using sufficient quantities of chemical inhibitors or stabilizers in the product.