

# RISK ASSESSMENT & DISASTER MANAGEMENT PLAN

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## 1.1 RISK ASSESSMENT

A major accident has the potential to cause serious injury or loss of life and extensive damage to environment or property or serious disruption outside the plant. It may require the assistance of outside emergency services to effectively handle the situation. Accidents are normally caused by a number of different factors, e.g. plant/system failure, human error, earthquake, vehicle crash or sabotage. An important element of risk mitigation is emergency preparedness, which is recognizing the potential situations & consequences and prepare on site emergency plan.

Kolkata Port Trust has proposed a Dock Project (Haldia Dock-II) by setting up of four jetties (two mechanised and two multipurpose jetties) with associate infrastructure like hardstanded stack yard, pipelines, Cargo handling equipment, mechanized wagon loaders, conveyor systems, railway sidings, fire fighting facilities, internal roads etc. at Mouza Shalukkhali & Rupnarayanchak, P.S. Sutahata, District East Mednipore in the state of West Bengal. The proposed project has lower risk potential than those project dealing with toxic and flammable chemicals. Off-site people are not exposed to any dangers, hence the societal risk is insignificant.

For hazard identification, maximum credible accident (MCA) scenarios have been assessed. The maximum credible accident has been characterized as an accident with a maximum damage potential and the occurrence of which is most probable. Based on MCA scenario, the following hazards were identified for this project.

- (a) Fire in coal storage yard
- (b) Mechanical injury to body parts

(a) Fire in coal yard: This is the most common accident known to occur in any project, storing and handling coal. Since such incident takes sufficient time to get widespread, enough response time is available for plant personnel to get away to safer distance. Appropriate fire fighting systems will be installed to mitigate the accidental risk. Water for fire fighting is available in the cooling water pond.

(c) Mechanical injury to body parts: In such dock project, there are several places where workers are likely to be involved with accidents

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resulting in injury to body parts. The places are main dock area, workshop, during mechanical repair work in different part of the dock area, during construction work, road accidents due to vehicular movement, etc. All machinery comprises of standard engineering designs meeting all quality specifications. Since most accidents occur due to human error and improper work practice, safety awareness workshop for the plant personnel are organized on regular basis. Workers are encouraged to wear and use appropriate safety devices like boots, gloves, helmets, aprons, goggles and safety belts.

#### RISK ASSESSMENT DUE TO COAL STORAGE

In Haldia DOC-II, mainly coal will be stored, which may cause risk to the environment due to fire.

Coal is typically stored on an outside stockpile. As significant amount of coal is stored, the risk of fire will exist.

Coal is a combustible material, making it susceptible to a variety of ignition scenarios. Coal may be susceptible to spontaneous combustion; provided it is exposed to the required heat in the presence of the oxygen necessary for heating. Spontaneous combustion has long been recognized as a fire hazard in stored coal. Spontaneous combustion fires usually begin as "hot spots" deep within the reserve of coal. The hot spots appear when coal absorbs oxygen from the air. Heat generated by the oxidation then initiates the fire.

The heat requirements to complete the fire triangle or the explosion pentagon can be in the form of temperature or energy. The ignition temperature of a coal dust cloud decreases as the volatile content increases. At about 150-300°F, it begins to give off minute, but measurable, quantities of gas -aerosols, hydrogen, and CO<sub>2</sub>, precursors of combustion. As the temperature increases further, at about 600-700°F, relatively, large, visible particulates are emitted. Soon, as the heating rate increases in intensity to about 750-800°F, incipient combustion, and ultimately self-ignition and flame, will occur. With dust layers on hot surfaces, the minimum ignition temperature decreases sharply as the thickness of the deposit is increased. This is due to the fact that thicker dust layers capture and hold heat more readily.

#### RECOMMENDATIONS

Preventing spontaneous combustion coal fires involves attention to many different factors. Among the most critical are the type, age, and composition of coal, the storage methods. Given the right kind of coal, oxygen, and a certain temperature and moisture content, coal will burn by itself.

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Such fires can be very stubborn to extinguish because of the amount of coal involved (often hundreds of tons) and the difficulty of getting to the seat of the problem. Moreover, coal in either the smoldering or flaming stage may produce copious amounts of methane and carbon monoxide gases. In addition to their toxicity, these gases are highly explosive in certain concentrations, and can further complicate efforts to fight this type of coal fire.

Following recommendations may be followed:

- (i) **Coal Storage Site Preparation:** The coal storage site must be properly chosen and prepared. The ground should be cleared of any vegetation and refuse. A hard packed clay or sandy soil is ideal; if not available, a concrete pad can be installed to keep dirt out of the coal. The site should be dry, level and well drained. If it doesn't drain naturally, drains should be installed around the storage pile, not underneath it as this may produce upward air currents through the pile aiding spontaneous combustion. Make sure the site is away from any external heat sources as combustion liability increases with a rise in temperature.
- (ii) **To know the type of coal:** Anthracite (sometimes called eastern coal) has a high carbon content and is much less combustible than low oxygen content bituminous (or western) coal. Freshly mined coal absorbs oxygen more quickly than coal mined at an earlier time, and is more likely to heat spontaneously.
- (iii) **Storing coal with low sulphur content is helpful.** Sulphur compounds in coal liberate considerable heat as they oxidize.
- (iv) **Air circulating within a coal pile should be restricted as it contributes to heating; compacting helps seal air out.**
- (v) **Moisture in coal contributes to spontaneous heating because it assists the oxidation process.** Coal having a high moisture content should be segregated as quickly as possible. Efforts should be made to keep stored coal from being exposed to moisture.
- (vi) **Following the "first in, first out" rule of using stock reduces the chance for hot spots by helping preclude heat buildup for portions of stock which remain undisturbed for a long term.** The design of coal storage is important in this regard.
- (vii) **A high ambient temperature aids the spontaneous heating process.**
- (viii) **Remove coal as quickly as practicable.** The longer large coal piles are allowed to sit, the more time the spontaneous process has to work.

(ix) The shape and composition of open stockpiles can help prevent fires.

Dumping coal into a big pile can lead to problems. Rather, coal should be packed in horizontal layer. This method helps distribute the coal evenly and thus avoids breakage and segregation of fine coal. Segregation of coal particles by size should be strenuously avoided, as it may allow more air to enter the pile and subsequent heating of finer sizes.

(x) The height of the coal pile is also important. Limit unlayered, uncompacted high grade coal to a height of 15' (10' for low grade coal); maximum height is 26' for layered and packed coal.

(xi) Properly inspect, test and maintain installed fire protection equipment.

(xii) Maintain an updated pre-fire plan and encourage regular visits to coal facilities by the site or local emergency response force.

## 1.2 ON-SITE DISASTER MANAGEMENT PLAN

This chapter contains arrangements, which are general in nature and will apply to all types of accidents/disasters and highlight the duties and responsibility of all participants including the various divisions of Haldia Dock Complex.

This Chapter contains the detailed action plans of various divisions like Marine, Shipping and Cargo Handling, Railway Operations, P&E, I&CF, Medical, Finance, Administration etc. of HDC-II and HDC.

The following table describes the certain key terminology used in DMP.

Control Room/ Base Control	The control room will be set up in the Office/ Administrative building from which the Management Group will operate. If, however, any disaster broke out at the said building itself, alternate site for control room will be at the CISF & Internal Security building.
Forward Control	The Action Team, which is at the scene of incidence and engage in combating it. The control room will be set up in the vehicle of Port Fire Service, engaged in the operation.
Watch Room	The Main Office of Dock Fire Service
Fire Service	All Fire Service stations
Signal Station	The Port control station situated at Marine office.

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The types of disaster as envisaged in this plan and areas that may become affected by each type of disaster are broadly classified as follows:

Fire/Explosion Hazard involving:

- Ships at the multipurpose jetties.
- Cargo storage area

Accidental Hazard involving:

- Collision and grounding of ships, lifting appliances, drowning of dockworkers, retrieval of transport equipment from dock basin, etc.
- Sinking of vessel.

Hazard due to Natural Calamities:

- Storm, Flood and Earthquake in Dock areas.

### 1.3 RAISING THE ALARM AND CONTROL OF OPERATIONS

During the disaster or any incidence having potential to turn into disaster situation, it is vital that the alarm should be raised immediately. The initial responsibilities for raising the alarm have been detailed in each section of the plan in subsequent sections.

Every time an alarm is raised information flow should be as detailed earlier. Upon receiving the information about the disaster the Fire Service and Administration division will contact West Bengal Fire Service and local police for their assistance, if necessary.

Each division will designate an officer who should be informed whenever a disaster occurs whether during office hours or on holidays. The nominated officer will directly supervise his division's allotted activities. In case of non-availability of nominated officer, his responsibilities will automatically devolve on the next officer available.

Each division will also draw a list of important files that should be saved from destruction in a disaster occurring in that building. All reasonable steps will be taken by those on the spot to render whatever aid is immediately available. Subsequent actions will be coordinated through the control room.

The fire service or other disaster services may be mobilized before a disaster is declared, to deal with the minor incident on a ship or jetty or

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elsewhere. The Manager (MO), the GM (OPS) must always be informed immediately of any such incidence.

## 1.4 CONTROL OF SHIPPING

All decisions regarding movement of ships during a disaster will be made by the Manager (MO) in consultation with Manager (SH & CH) &/or Manager (P&E) and wherever necessary he will decide the order in which the ships are to be moved. However, in all such cases GM (OPS) will always be kept informed about the movement of ships. In this context and through out the plan, Dy. Manager (MO) will have authority to act on behalf of the Manager (MO) in the event of his non-availability.

The Regulation of shipping movement will normally be executed through the Port control station (signal station).

No seagoing or cargo carrying vessels or dredgers or private launches etc. are to be moved from the jetties, buoys, docks or anchorage after the receipt of an alarm without prior concurrence of the Manager (MO) unless such vessel is in immediate danger of being affected by the disaster.

If conditions permit, vessels not involved in a disaster but staying close to a berth or ship where disaster has occurred will be moved to sea or to an anchorage at the first opportunity.

Under no circumstances may any vessel in danger of sinking or in any way endangering the Port be moved without specific permission of Manager (MO) who will fix the area to which the vessel will be moved and the route thereto.

Vessels in danger of sinking will not use or cross the fairway (shipping channel) unless specifically directed to do so.

During disaster involving ships or shipping activities the Dy. Manager (MO) will be the leader of Forward Control and in such circumstances GM (OPS) along with Manager (MO) will be at the base control.

## 1.5 FIRE-FIGHTING OPERATIONS

### 1.5.1 Personnel at Scene

In all cases, initial fire-fighting will be undertaken by all personnel on the spot with whatever appropriate equipment is available.

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For fires at berths and ships on berths, directions of all fire-fighting units, including tugs and other crafts will be exercised by JAM (Fire) in consultation with Dy. Manager (MO) and also with the Master of the ship concerned.

For fires on vessels moored or at anchorage direction of all fire-fighting units will be exercised by the Master of the ship concerned, until the arrival of the Dy. Manager (MO) or JAM (Fire).

Should any question concerning the safety or stability of a ship arise during the course of fighting the fire, the Manager (MO)/ Dy. Manager (MO) in-consultation with the Master of the vessel will take the steps necessary for the safety of the Port and the ship.

Where a fire occurs on a vessel alongside a berth, the vessel may, except in circumstances that threaten the Port and its installations, be kept alongside the berth to facilitate fire fighting operations and safety of the ship's crew and the fire-fighting personnel.

#### 1.5.2 Port Fire Service

On receipt of an alarm, the Port Fire Service (PFS) will dispatch required number of fire-fighting units immediately to the place of the incident. If necessary, arrangement will simultaneously be made with the West Bengal Fire Service to avail their fire fighting units. If necessary, strengthening of fire-fighting fleet may also be made from outside industries.

Further reinforcements will be moved up in readiness, as circumstances dictate.

The tug designated for fire-fighting duties for the day will proceed directly to the fire, notifying the Signal Station.

The fire-fighting operations of these tugs will be controlled by a senior officer in the tug until the arrival of the Dy. Manager (MO).

JAM (Fire) should arrange for required training of his fleet of Officials and staffs to fight chemical fire.

### 1.6 EVACUATION PLAN

Evacuation of affected people or neighboring endangered area will be done on specific instruction from the control room.

If evacuation has to be done, on specific instruction from control room, the berth-in-charge or the concerned Traffic Officer with active co-operation from CISF personnel will co-ordinate the evacuation of

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persons from the affected area. Also Port Fire personnel will extend their participation during evacuation of persons.

The on-duty officer at the berth will first assess the damage to men and material that has occurred in the area. Subsequently, he will inform the Control room/CISF control/ Fire Service stations of his assessment of damage and will seek necessary help required. On-duty officer and his team will render first aid to the affected persons and collect them at a suitable place and await help.

The Management Group, which will be by now having an overview of the disaster situation, will make adequate arrangements in consultation with mutual-aid agencies, if necessary to evacuate the affected areas. People from that area will be evacuated to a safe place. Haldia Municipality & Haldia Development Authority may be consulted in such cases. Care should be taken to ensure that no person is entrapped/ left at the affected area. A head count/ attendance may be done in such cases.

Steps leading to contingency planning involving evacuation:

1. Identification of the disaster
2. Ascertaining the extent of damage
3. Assessing the number of affected people
4. Arranging for coordinating the assembly of the affected people
5. Arranging for transportation of the people from the assembly point of safe shelters.
6. Conducting transport for transporting the children first followed by women and old people in that order.
7. Should there be a toxic release and the wind direction being towards cargo berth jetty launches could be used for evacuating people in up wind direction or away from the source of release. Should such an eventuality (toxic release) occur the PA system is to be used to inform the people at large to assemble and move towards the safety zone, which should be clearly declared.
8. In the event of an impending natural disaster, the residents of Port colonies should be moved out, by moving them to the railway station/ bus terminus/ any other decided area for further evacuation by the rail-road.



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9. The vehicle-carrying civilian should be given the first priority in traffic movement. Contractual labor at site should be given second priority and the Port officials the last priority.
- 10 Before undertaking evacuation of people by road a pilot survey should be undertaken by the security staff to ascertain that there is no road block or tankers parked blocking the road.
11. While on a survey for assessing the evacuation route, constant communication link should be maintained with the Main Emergency Control Room as well as with the individual assembly point station from where the evacuation is to be undertaken.
12. Assembly area should have a small room equipped with First aid box, Gas Mask, Wireless set, Stretchers, Oxygen Cylinders, Telephone / Alternative Communication equipment, Map of the area, List of telephone numbers, Staging area for food supplies.
13. Assembly area should be equipped with electricity and potable water.
14. Transportation should be primarily catered to by vehicles at disposal of the port – port owned and contracted. Manual Aid Agencies and local transporters may also be called in to supplement as per needs.
15. Management group may mobilize a vehicle pool during requirement. Database of Transporters, vehicles and drivers thereof for such vehicle pool would be mobilized shall be maintained.
16. Administration division should ensure the availability of the drivers and vehicles. All vehicles whether it is departmental or hired should be parked in the location as decided by Management group from where it can be taken for immediate use as soon as the people move into action.

## 1.7 CARGO OPERATIONS

The Manager (SH & CH)/ Manager (P&E) will ensure the following actions are taken by the concerned persons:

On receipt of an alarm regarding disaster at jetties, all landing/ shipment of cargo will stop immediately on all vessels and barges. Loading or discharging will not be resumed without the specific consent of the Manager (SH & CH)/ Manager (P&E).

A consolidated list of dangerous goods, in packaged form and bulk should be prepared and given to the Management Group whenever such places are involved in a disaster.

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Mobilization of available manpower and cargo handling equipment from C&F agents to segregate unaffected cargo in ships and storage shed and make arrangements to protect such cargo.

## 1.8 RAILWAY OPERATIONS

The Manager (Traffic Operations – Railway) will ensure that the concerned persons take the following actions.

On receipt of an alarm regarding disaster at any of the Railway Yards, all operation in that yard will cease. Movement of wagon from and to the affected yard will be stopped and resumption of operation shall not start without the specific permission of GM (Ops.). Manager (Rlys.) will consult with Manager (Sh. & Ch.) & Manager (P&E)

Manager (Rly.) will also instruct the in-charge of other yards to stop movement of wagon towards affected yard till the emergent situation at the yard is over.

An information indicating the type of cargo involved in a disaster, location of incident, nos. of wagon affected, and other dangerous goods wagon lying in the same yard, if any, etc. shall be prepared and forwarded to Management Group.

Manager (Rly.) will mobilize all resources like manpower, equipment to fight the disaster till the arrival of JAM (Fire). He will also contact respective port user and S.E. Railway Authority to arrange for empty wagons from transferring of Cargo, if required.

## 1.9 MARINE OPERATIONS

The Manager (M.O.) will ensure that the following actions are taken by the concerned persons:

On receipt of an alarm regarding disaster at jetties all loading, discharging and bunkering operations will cease. Hoses will be disconnected and all vessels prepared to go to anchorage. Operations will not be resumed without the specific approval of the Marine Officer. He will consult with Manager (MO) before issuing any directive in this regard.

Sufficient number of launches and tugs will be mobilized. All launches will be provided with a Talkie and will maintain listening watch to receive instructions from Signal Station.

Maintain continuous watch on VHF Channel on non marine VHF with fire service on walkie-talkie with tugs, launches and pilots and on telephones with other officers of the Marine.

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The Dy. Manager (M.O.) being in charge of the Action Team will mobilize the action team and initiate actions to combat the incident. He will keep in touch with the Management Group.

Pilots, Berthing Masters may be informed for availing their services in short notice for shifting/sailing out operations.

Assistance of H.M.(R)/ S.D.D.S in the event of grounding/collision of ships and towing of ships/tankers etc. may become inevitable and those officials should be informed accordingly with specific request for help.

In the event of fire involving chemical, gas leakages, expert services of Safety Officer (under DMD)/ Safety Officer (JR), P&IR Division may be requisitioned.

The General Manager (Ops) being a member of the Management Group will, after assessing the initial reports of an incident activate the Management Group and the Control Room. He will also arrange to collect meteorological data/tidal information and will forward the same to Action Team.

Efforts will be coordinated with all owners/agents of ships in Port specially those carrying, chemicals and other dangerous goods to prepare them to vacate harbor.

Arrange and supply wires, ropes etc. of specific size for towing purposes.

Mobilize diving personnel and equipment.

## 1.10 MEDICAL SERVICES

On receiving the message regarding a disaster the Medical Superintendent or the senior most Medical Office available will liaison with the mutual-aid hospitals and coordinate all medical services available.

The Medical division of the Dock Complex will be responsible for making arrangements to collect and transport all casualties from incident site and treat them at Port Hospital (in consultation with Administration division for arranging transport logistics, if required ambulances are not at its disposal).

It will alert all its ambulances and keep them in running condition and will set up a Casualty Receiving Cell at the Port Hospital.

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Once ambulances are alerted, one with the first doctor available and paramedical staff will be sent direct to the site affected unless the fire service has advised that it will not be possible to handle casualties at the site of the fire, in which case the ambulance will be sent to a place as specified by the Management Group (Control Room).

The first Doctor on the scene of incidence will become the Medical Officer-in-Charge until relieved and will act as liaison officer for all medical services employed by the mutual-aid services.

On arrival at the scene, the Medical Officer-in-Charge will Coordinate all medical services and also keep the police informed of casualties, if any. The Medical Officer-in-Charge will keep constant touch with Base Control and Port Hospital.

Medical Superintendent will prepare a list of anti-dotes for all types of toxic and dangerous substances that will be handled by the Haldia Dock II. He will keep updating such list whenever newer chemicals are allowed for handling through the Dock. A copy of such list should be supplied to the operations point at all the jetties & berths. A guideline for treatment of patients exposed to such hazardous chemicals need to be maintained with the Medical Superintendent. He should also prepare a DO's and DON'T's chart in poster form and supply to all operations point for everybody's knowledge. For preparation of such list he should consult respective Material Safety Data Sheet of all chemicals handled/ to be handled at the Dock and may also consult safety and anti-pollution officer of KoPT/ Safety Officer (Jr.), P&IR Division.

### 1.11 P&E SERVICES

The Manager (P&E) will ensure that following actions are taken by the concerned officer of his division:

Portable lighting arrangement should be kept ready and be transported to the accident site. This arrangement will consist of at least one generator and six numbers lights on portable stands, each stand not less than six feet high and capable of adequately illuminating the area of incident.

It will be the responsibility of the P&E division to gear up its repair section and lock gate in good working order and well attended.

In case of fire due to electrical short circuit, one responsible officer will ensure that such places be isolated and all live electrical wires be suitably guarded.

Arrangements should be made for auxiliary cutting/ welding equipments which may be required for rescuing people from entrapped area.

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Liaison is to be maintained with the Electricity Board for supply of power for running essential installations till disaster become over. Activate disaster generator in case of power cut/ failure so that the place of incident be supplied with continuous power.

Arrange for suitable equipments for removal of debris.

## 1.12 CIVIL ENGINEERING SERVICES

Depending on the type and extent of the disaster/accident, the I&CF Division of the Port will take the following actions:

Proper arrangements will be made to supply sufficient amount of water to fight any fire till it is extinguished.

Strengthening of shore line, buildings and other civil works, including housing colonies.

Ensure continuous supply of potable water to the incident site as well as evacuates camp.

Arrange for suitable equipments for removal of debris.

## 1.13 FINANCIAL SERVICES

Finance Division of HDC-II will process agreements and/or arrange payments to all departments of the HDC-II for all their requirements such as purchasing/leasing of equipment, hiring of specialist services, food, shelter and transport arrangements, as the situation demands.

It will depute a senior officer to each division involved in combating action to look after its needs. It will also monitor the expenditure and services rendered by outside agencies to the Port and vice versa to avoid disputes later and to facilitate smooth working of mutual aid.

A senior officer of this division assisted by an officer from the Admn. Dept. will be earmarked to document all events, damages and claims.

## 1.14 ADMINISTRATIVE SERVICES

The Administration division of HDC-II will be responsible for and will carry out the following actions:

One senior officer of the Administration division of the HDC-II will act as communication officer and will take charge of all communication systems of the Port either fixed or portable.

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He will maintain and supply sufficient numbers of electronic communication equipments to the Signal Station, the Base Control, the watch-room and anywhere else as necessary.

Coordinate evacuation of Dock areas with the State bodies such as the Haldia Municipality, Haldia Development Authority, the Relief and Rehabilitation Department, Govt. of West Bengal, Police Authority etc.

Assist in rehabilitation of the affected port personnel by either restoring them to their homes or by arranging for their medi-care through the Medical Services of the Port.

In the event of large scale evacuation, assist Management Group to coordinate with District Authority and the Police Authority for evacuation of the neighbouring population.

Liaison with the Haldia Municipality and the Civil Defense Organisation for arrangements of shelters for the evacuated persons, food for them and later for their rehabilitation.

Keep in close liaison with the evacuating authority and collect all details regarding the evacuated people. This will be necessary to settle claims, if any, at a later date.

Keep the Legal Adviser of the Dock informed of the situation at all times and obtain his advice for legalizing all the Dock's actions in collaboration with P&IR.

Mobilize all vehicles for the transportation needs of the Management Team, the action team and support services. Sufficient number of workshop personnel will be mobilized to keep all vehicles required to tackle a disaster in good condition during the course of disaster.

Draw lists of Port Personnel affected and involved in an incident, and keep their families in collaboration with P&IR informed correctly through Information Centre. Make proper arrangements for the Port's personnel engaged in combating a disaster for their food and rest.

Document all events and actions for future reference.

## 1.15 STORE SUPPLIES

The Materials Management Division will closely monitor the stocks of consumable items, especially diesel, petrol and such other oils, fire-fighting items such as foam, damage control stores such as cement and other stores required to keep plants, machineries, road vehicles and water-craft running. One senior officer should be designated to liaison with suppliers of all items mentioned above, so that they can procure

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as and when required. The Manager (M.M) will join Management Group to facilitate coordinated efforts. They will also arrange for supply and reception of any type of oil and mobilize, collect and distribute material to control damage.

## 1.16 CISF SERVICES

The Central Industrial Security Force (CISF), HDC-II unit will be responsible for the control of traffic in the port areas as well as the surrounding areas. In this, they will take help from the local Police Authority. Acting in conjunction, these two services will make sure that fire fighting operations and clearance of casualties are unhindered. They will take necessary action to control crowds and keep the roads clear.

On receipt of message from signal station or Watch Room or alarm, the CISF will mobilize the force to manage all the gates of entry and exit to the dock.

It will clear all the internal roads within the Dock area of all vehicular traffic and keep the roads free.

It will allow only HDC vehicles, Police and Fire Service vehicles and ambulances engaged in Disaster Action Plan.

No road vehicles engaged in cargo moving or other private vehicles will be allowed to use the gates or roads of HDC during a disaster.

They will join hand with State Authorities in a coordinated effort for evacuation operation. During a disaster within Dock Area they will assist fire service personnel in rescue operation and subsequent transportation of injured persons for medical care.

## 1.17 INFORMATION CENTRE

The Manager (Admn.) of HDC-II will set up an Information Center in the Administrative Building. The Information center will handle all the telephone calls of inquiry from outside agencies. He will liaison between the Control Room and outside agencies participating in the disaster.

This Information Center will be joined by a senior officer of the CISF, a police officer, representatives of the Shipping Company/ Port user concerned, if any, and other disaster services. This Information Center will appraise Chairman's cell at KoPT Head Office at Kolkata and the District Magistrate's office at Purba Medinipur with regular situation reports for appraisal of the Chairman, KoPT, State Govt. and public.

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Statements to the press will only be issued after due consultation with Management Group operating at Control Room and the Dy. Chairman. Press release should include among other, advice to the general public, that, if required, they may contact the D.M. (Purba Medinipur), ADM (Haldia), S.D.O. (Haldia) or SDPO (Haldia) for further information.

## 1.18 INDUSTRIAL RELATIONS SERVICES

The Manager (P&IR) of HDC-II will be responsible for and will carry out the following functions:

In the event of accident of dock workers, inform his/ their family members coordinate with Medical Division for providing quick medicare services, etc.

Disseminate correct information about the incident to the unions and to relevant statutory bodies.

Liaison with relevant labour unions to enlist their support in rescue operations and subsequent normal operation.

Take steps in accordance with statutory requirements of Dock Worker's Act, 1990 in the event of any disaster.

## 1.19 ON-SITE ACTION PLAN FOR MAJAOR DISASTER

This section describe the detail on-site action plan for major disaster likely to occur in jetties viz. fire and explosion hazards in ships or cargo storage yards, pollution hazards due to the spillage of chemical into the river, collision and grounding of ships, sinking of vessels, collapse of lifting appliance, drowning of dock workers and natural calamities like storm, cyclone, floods etc.

## 1.20 FIRE/EXPLOSION HAZARD AT SHIPS

This plan applies to ships berthed at riverine jetties.

### 1.20.1 Raising of Alarm

All ship fires will be treated as potentially dangerous and this plan will be activated. The decision to declare a full disaster will rest with the Dy. Chairman.



## Responsibility

The responsibility of raising the alarm in case of incidents, involving ships in riverine jetties rest with the Marine Officer, Haldia and also with the Security personnel posted on duty there. In an incident occurring on board a ship, the shipmaster is also bound to raise an alarm.

To avoid either false alarms or duplication of an alarm with consequent overloading (jamming) of the telephones at the Trust's fire service headquarters, herein after called the Watch Room, it is desirable that the alarm is raised by only those designated to do so.

Persons other than those on the terminals or on the ships may also raise an alarm, if they have any doubt whether the alarm has been raised.

## Method of Raising Alarm

- i) By personnel on terminal concerned, alarm should be raised by continuous sounding of disaster alarm.
- ii) Reporting to Watch Room on direct telephones or on non-marine VHF channel giving a short message stating where the fire is, and if possible, whether any casualties have occurred or are likely to occur.
- iii) If Watch Room cannot be contacted, the same message can be passed on to the Port Control by telephone or by VHF Channel.

By personnel on the ship, at the terminal concerned alarm should be raised by reporting the incident as follows:

- Informing responsible personnel on the jetty through public Address System or orally.
- Calling the Port Control or Watch Room on VHF Channel and giving a short and clear message.

### 1.20.2 Action by Personnel at Affected Jetty and Ship

The alarm having been raised, the responsibility for fighting the fire on the terminal will rest with the JAM (Fire)/ Dy. Manager (Marine Ops.) who shall be assisted by the Terminal-in-Charge.

The Master of a ship at the terminal or senior most officer-on-board will be responsible for taking all immediate steps to safeguard his ship and

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fight a ship-board fire with all available resources. The personnel on the terminal will render him all assistance.

The JAM (Fire) or his deputy or Dy. Manager (M.O.) whoever arrives first on the scene will take overall control of the fire fighting operations from the personnel on the terminal and on the ship. A senior officer of the vessel at the terminal will remain with the JAM (Fire) and provide detailed information of the ship, cargo and her equipment (see also General Arrangements).

The personnel on the terminal with the active cooperation of the ship's personnel, will stop all cargo operations and disconnect hoses/unloading arm.

The Terminal-in-Charge in consultation with the vessel alongside will inform the Forward Control the details, type and quantities of cargo on-board the vessel.

#### 1.20.3 Action at the Jetties not involved

On receipt of an alarm, all loading and discharging operations will cease, hoses/unloading arm will be disconnected and all vessels alongside prepared to leave the jetty.

The Officer/Terminal-in-Charge will on request, inform the Control Room (Base Control) of the quantities and type of cargo on board all the vessels alongside.

Terminal-in-Charge will maintain a continuous listening watch on VHF Channel and will ensure that the direct line telephone to the Base Control are properly manned throughout the period of a disaster in order to receive instructions from Control Room.

All jetties will be manned during a disaster whether or not there are vessels alongside.

#### 1.20.4 Action by Marine Division

In addition to actions already discussed to make sure that Floating Craft under their control are much away from the affected area and are manned.

To stop all cargo operations and or deballasting operation in and around the affected area.

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#### 1.20.5 Action by Infrastructure and Civic Facilities Division

As described earlier.

#### 1.20.6 Subsequent Action

After the alarm has been raised and all nominated officials are on the scene, future actions will be decided by the Control Room as circumstances dictate and measures affecting the Port will be made known to ships and other establishment not directly involved, through the Port Control and traffic officials.

### 1.21 FIRE/EXPLOSION HAZARD AT BULK CARGO STORAGE YARDS

This section is applicable to open stacking area of multipurpose reverine jetties.

#### 1.21.1 Raising of Alarm

##### Responsibility

The responsibility for raising the alarm in the case of an incident in cargo storage area of multipurpose reverine jetties will rest with the officer concerned. Shipping & Cargo Division may also raise the alarm.

CISF personnel who are assigned the responsibility of guarding the open stacks will also have the responsibility of raising the alarm.

Any person who notices a fire in a shed/berth can also raise the alarm, if he is reasonably sure that the alarm has not been raised yet.

##### False Alarm

To avoid either false alarms or duplication of an alarm with consequent over-loading of the telephones at the Watch Room it is desirable that alarm is raised by only those designated to do so

##### Method of Raising Alarm

By personnel on berth/ shed concerned, alarm should be raised by:

- Raising alarm by mouth
- Raising available fire bell or sound sirens or hooters, if available nearby.

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- Send a messenger by the quickest possible means to the nearest phone to make a call to the Watch Room.
- Reporting to Watch Room on direct telephone or through CJP Exchange or on VHF channel or through walkie talkie giving a short message stating where the fire is, and if possible whether any casualties have occurred or likely to occur.
- Send a messenger by quickest possible means directly to the Dock Fire Station and pass the message orally, Sh. & Ch. Division's official will also inform the incident to traffic control and Signal Station through VHF channel.

Note: If because of damage, the jetties affected are unable to initiate the alarm fully, personnel at other jetties can perform this duty.

#### 1.21.2 Action by Personnel, On-Site

It has been clearly stated in the General Arrangements that the officer concerned should mobilize his officers and men and fight the fire with the appliances readily available at the berth or adjacent berths, till the arrival of Fire tender. In case of a fire in the transit shed, cargo shed or container parking yard, he along with other officials of his division will mobilize all the work force, labor and cargo handling appliances available in the area to move/shift the unaffected cargo in such a manner that the fire does not spread. He should close/control ventilation so that the fire is starved of fresh winds. All electrical connectivity to the affected site should be switched off.

The details of types of cargo and quantity of cargo in the shed should be kept ready and be given to the officer of fire service who arrives first in the scene. He should also make a list of hazardous cargo stored in the affected shed.

The Port JAM (Fire), after arrival, will take over the charge of fire fighting from officer concerned.

The personnel on the berth with the active co-operations of the ship's personnel will stop all cargo-operations and disconnect hoses if any connected to ship.

#### 1.21.3 Action on Berths/Sheds not involved

On receiving or learning about the alarm, all cargo operations nearby the affected berth will cease and hoses will be disconnected. Ships adjacent to the affected berth will prepare to vacate the berths.

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#### 1.21.4 Action by Port Fire Service

- i) To listen to the calls carefully and note the incident.
- To record the incident in the occurrence book.
- To sound the alarm, inform the shift in-charge about the nature of incident and place of occurrence.
- On hearing the alarm or receiving the message the Fire Service will immediately turnout with at least two Fire tenders with available crew, equipments and appliances and rush to the place of occurrence.
- The other units will be set ready and keep on Standby.
- The Port JAM (Fire) or Dy. JAM (Fire) on arriving that place of occurrence will take over charge of operation from the shift in-charge.
- The Port JAM (Fire) will be responsible for fire fighting rescue and other disaster incidents. On arrival at the place of occurrence he would assume charge of operation from his junior officers. He will keep the incident informed time to time to the Management Group.
- The local fire station (W.B.) will be requested to standby with their units to be dispatched only on specific request.
- The local police station will also be informed.

#### 1.21.5 Action by P&E Division

As mentioned earlier.

#### 1.21.6 Action by SH & CH Division

In addition to the actions mentioned earlier issue instructions to stop all cargo operations in and around the affected jetties. Any hoses that are connected to ship will also be disconnected, and all ships should be advised to standby on VHF Marine Channel 16 for further instructions.

#### 1.21.7 Action by Other Divisions

All other departments will carry out assigned duties.

## 1.22 POLLUTIONAL HAZARD DUE TO SPILLAGE/LEAKAGE OF CHEMICALS

This plan applies to all cases of chemical pollution due to accidental spillage of cargo at riverine jetties.

### 1.22.1 Raising of Alarm

The responsibility for raising the alarm in case of pollution lies with the Dy. Dock Master as the case may be. The same shall be communicated to the Signal Station or Fire Watch. The Station on hearing the alarm will inform the General Manager (Op) and Manager (M.O) and inform the owner or agents of the ship(s) causing pollution.

### 1.22.2 Action by Marine Division

When a message is received from jetties regarding the pollution of river water by spillage/leakage of chemicals the vessel concerned will be instructed to anchor in the designated area for inspection.

The Dy. Manager (M.O.) will proceed to the concerned vessel, investigate and report to Manager (M.O.) and GM (Ops).

If the vessel is found leaking, the Manager Environment and Antipollution Officer will jointly assess and evaluate the extent of pollution that has occurred and formulate an attack plan for abatement for such pollution. The Safety Officer (Jr.), P&IR Division will assist the group.

When there is pollution of river water, its treatment will be based on the principle of utilizing the most appropriate means for the particular chemical type and concentration of the spill.

If the GM (Ops) considers that the pollution constitutes a fire hazard, he may take such steps that would be required to minimize the danger. He may decide to have a controlled fire to eliminate the danger of a spreading fire.

If in the opinion of the GM (Ops) the pollution may spread beyond the port limits and/or requires large scale assistance from the West Bengal Pollution Control Board and the Coast Guard such assistance will be asked for.

On the specific instruction from the GM (Ops) the in-charge of Anti-pollution vessel (Oil Recovery cum Garbage Collection Vessel) should proceed to the affected area with his vessel for collection of spilled chemicals etc.

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The contaminants (spill) that are collected will be disposed off in a manner agreed to between Coast Guard, the Pollution Control Board and the Dy. Chairman, HDC.

#### 1.22.3 Action by Ship's Master

In the case of chemical pollution, the ship responsible for the pollution, shall inform the Signal Station, either directly over VHF channel-16 or through the berth-in-Charge if she is at a berth, the following particulars:

- U.N. No. of chemicals
- I.M.O. Class of chemical, its flash points
- Quantity spilt
- Spill arrested or not
- If not, rate of spill
- Maximum quantity likely to spill and
- Action being taken to arrest the spill

The Master will take all precaution, as a prudent seaman against pollution. He will bear in mind that mobilization of any type of assistance from the shore is likely to take time. Therefore, he should assess the overall situation at frequent intervals and inform Port Authority time to time.

#### 1.22.4 Action by P&E Division

As mentioned earlier

#### 1.22.5 Action by Other Divisions

GM (Ops) asks the assistance from other divisions, if necessary for combating the pollution.

If such situation arises, head of the concerned division will mobilize his workmen and equipment to the affected site, on an urgent basis, for timely abating of the pollution.

#### 1.22.6 Action by Indian Navy and Coast Guard

Surveillance aircraft may be required to assist in assessing spillage amount, as well as in other disaster duties such as air-lifting personnel and equipment. Aircraft as required will be sent to the scene, and a coordinating officer will join the Management Group.

In addition, the Coast Guard will assist in other anti-pollution actions with men and material at its command. The Indian Coast Guard being

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the overall in-charge of all contingency plans for dealing with spills, through its regional headquarters render all assistance to the Port.

#### 1.22.7 Action by West Bengal Pollution Control Board

The Pollution Control Board will, on a request from the HDC, assist in inspection and cleaning of berth, if required.

Will assist the Port in collection of spilled chemicals, testing of the same, and recommend precautions and steps to recovery of disperse or otherwise deal with such spilled commodities.

Will also assist with their anti-pollution machinery and personnel for abatement of pollution.

#### 1.22.8 Action by West Bengal Fire Service

West Bengal Fire Service will, on being informed, assist by sending their Fire Fighting Units to the scene of the disaster. A senior officer will join the Base Control to coordinate the action of his units.

#### 1.22.9 Action by Police Department

The Police will help in the collection of the spill, cleaning operations and disposal of contaminants by coordinating off the necessary areas, and maintain law and order in and around the site.

#### 1.22.10 Action by Other Divisions

All other departments, whose responsibilities have been, detailed earlier will carryout assigned duties.

#### 1.22.11 Action by Respective Receiver of the Cargo

The organization/ agency who are consignee of the chemicals, which has spilled, should assist HDC official with their men and material as well as equipment for collection, dispersion and disposal of the spilt chemicals. They should also specify about the anti-dote of the concern chemical and supply the same to HDC medical unit for treatment of affected personnel. One senior officer of the concern organization will join the Base Control to co-ordinate the activities of his organization.

### 1.23 COLLISIONS AND GROUNDING OF SHIPS

The disasters that are envisaged under this section include collision at jetties, ship at anchorage, drifting and likely to run a ground.



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Collision/grounding by itself will constitute a disaster. It is also foreseen that collision/grounding may lead to other disaster, such as fire, explosion and flooding of ships holds/engine rooms. All these eventualities will be dealt with by actions envisaged in this section. When a vessel's hold/ engine room is flooded with water such vessels shall be moved to a designated area for examination.

#### 1.23.1 Raising of Alarm

The responsibility for raising the alarm in case of collision/grounding involving one or more ships lies with the ship's Master or Pilot on board. The same shall be communicated to the Signal Station. The Signal Station on hearing the alarm will inform the Director, Marine Deptt./Harbor Master (R) in case such collision takes place within fairway. For collision at jetties GM (Ops)/Manager (M.O.) shall be informed. Signal Station will also inform the owner or agents of the ship.

The official of the Marine Division on the vessel, which is involved in a collision/grounding, will be primarily responsible for raising an alarm.

#### 1.23.2 Action by Marine Division

In addition to the actions as detailed earlier.

When a message is received, from a ship approaching port informing about damage to the vessel, which may lead to leaking/flooding, the vessel will be instructed to anchor in the designated area for inspection.

The Harbor Master (River) or Manager (M.O.) as the case may be, will proceed to the concerned vessel, investigate and report to the DMD and GM (Ops).

If the vessel is leaking, the DMD/GM (Ops) will assess and evaluate the extent of damage and formulate an attack plan for collision, grounding and/or pollution as situation requires.

The measures for tackling the disaster are to be agreed to between the ship's Master and the Harbor Master (R)/ Manager (M.O.). These agreed measures are to be recorded in the ship's logbook also.

The GM (Ops) will inform the ship's agent and will require them to mobilize immediately all assistance such workshop facilities, surveyors and salvage experts, if necessary.

If the investigation by the Harbor Master (R)/Manager (M.O.) shows that the vessel is not leaking and the GM (Ops) is satisfied that it is safe

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to berth the vessel in order to carry out a thorough inspection and to facilitate disaster repairs, the vessel may be advised for berthing.

Before such a vessel is brought into the harbor, she must indemnify the port against all losses and damages to fixed and floating objects of the Trustees. The vessel will also have to be brought under coverage by Insurance for hull, machinery and wreck removal.

As long as the disaster exists the DMD/GM (Ops) will keep the situation under constant review and amend the action plan as the situation warrants.

On board a vessel, which is under a disaster, no cargo work shall commence. If on board a vessel alongside a berth cargo-work is in progress when she is involved in as collision, all cargo work shall stop forthwith and shall be resumed only on the exclusive permission of the Manager (M.O.)/ Manager (Sh. & Ch.)/ Manager (P&E) as the case may be.

Apart from the responsibilities mentioned earlier, the Marine Ops. Division should mobilize workforce and cargo handling equipments in readiness to handle cargo on the affected vessel, if needed.

The department will mobilize its diving personnel, equipment and material as may be required for rescuing persons from the flooded compartments of the affected ship and from under water, if any.

### 1.23.3 Action by Ship's Master

The Dy. Dock Master described as "Duty Officer" in the General Arrangements, will establish and maintain constant contact with the ship's Master and will endeavour to ensure that the following actions are taken.

A vessel that falls into any one category listed above will immediately inform the Port through the Signal Station of such incident, on VHF Channel-16, and shall maintain continuous contact till the disaster is over.

In the case of a ship running aground, the vessel will indicate the geographical location or relative position and the extent of the ship grounded and suspected damage.

In the case of a ship drifting at anchorage she will indicate her geographical or relative position.

In the case of a ship approaching harbour for refuge. She shall give the following information to the Signal Station:

Extent of damage  
Cause of damage  
Likely effects of damage, and  
Nature of assistance required at Port

The Master involved in a collision/ grounding shall check the following and inform the Signal Station of his findings and requirements:

- Tank and bilge soundings
- Suction for engine cooling
- The need of shore connection for lighting and machineries
- Preliminary survey to see where and how much of the hull is grounded.
- If double-bottom tanks (oil) are intact and cargo holds are open to sea, this may lead to a situation where the double bottom tanks will fill through broken/leaking sounding pipes. Such tanks may then overflow through air pipes, leading to oil pollution.
- Shoring facilities for bulkhead in engine room, if adjacent compartments are flooded.
- Condition of all water tight doors, and bulkheads.

The master will take all precautions as a prudent seaman against fire, explosion, pollution and sinking of the ship. He will bear in mind that mobilization of any type of assistance he may require from the shore is likely to take time. Therefore, he should assess the overall situation for safety at frequent intervals.

If a vessel is found impeding the navigation or is likely to impede navigation, the Port Authority may ask the vessel to shift from navigational channel to a designated area. Master of the vessel should carryout such order immediately.

#### 1.23.4 Action by P&E Division

In addition to the actions as detailed earlier, to arrange to supply power to a stricken ship and to attend to quayside cranes which may be have been affected.

Apart from the responsibilities mentioned earlier, the P&E division should mobilize workforce and cargo handling equipments in readiness to handle cargo on the affected vessel, if needed.

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#### 1.23.5 Action by the SH & CH Division

Apart from the responsibilities given in an earlier section, the shipping cargo handling division mobilizes workforce and cargo handling equipments in readiness to handle cargo on the affected vessel, if needed.

#### 1.23.6 Action by the I&CF Division

As mentioned earlier.

#### 1.23.7 Action by Other Division

All the other departments will take actions as envisaged earlier.

#### 1.23.8 Action by Public Relations Officer

Refer to action as detailed under Information Center.

#### 1.23.9 Action by the Indian Navy and Coast Guard

Surveillance aircraft may be required to assist in assessing spillage amount as well as in order disaster duties such as air lifting personnel and equipments. Aircraft as required will be sent to the scene and a coordinating officer will join the management group.

In addition, the coast guard will assist in other anti-pollution actions with men and material at its command. The Indian coast guard being the overall in-charge of all contingency plans for dealing with spills, through its regional head quarters rendered all assistants to the port.

#### 1.23.10 Action by the West Bengal Pollution Control Board

The WBPCB will on a request from HDC, assist in inspection and cleaning of jetties if required. WBPCB will also assist in collection of spilled chemicals, testing of the same and recommend precautions and steps to recovery of disperse or otherwise deals with spilled commodities. Board will also assist with their anti-pollution machineries and personnel for abatement of pollution.

### 1.24 SINKING OF VESSEL

This plan covers sinking of any vessels nearby the riverine jetties.

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#### 1.24.1 Raising of Alarm

In the event of sinking of a vessel the Master of the ship or Pilot on board will raise the alarm. The Signal Station on hearing the alarm will inform the owner or agent of the ship. In case of KoPT vessel, the official of the Marine Department on the vessel will be primarily responsible for raising the alarm.

#### 1.24.2 Method of Raising Alarm

First information should be given to the Signal Station through wireless and from there information should be given to the owner of the vessel and General Manager (Ops), GM (Ops) will then inform Manager (I&CF), Manager (P&E), Manager (Sh. & Ch.), Commandant CISF, JAM (Fire), Medical Superintendent, Manager (M.M.) and also to GM (M & S).

#### 1.24.3 Action by Marine Division

On receiving the message of sinking of a vessel Marine division will mobilize sufficient number of launches and tugs equipped with Walkie Talkie and maintain listening watch to receive instructions from Signal Station. The Dy. Manager (M.O.) being in-charge of the Action Team will mobilize the action team and initiate actions to combat the incident. He will keep in touch with the Management Group.

The GM (Ops) being a member of the Core Group will, after assessing the initial reports of the incident activate the Core Group and the Control Room also inform Chairman & Dy. Chairman, MMOH will collect Meteorological data, tidal information and will forward the same to the Action Team.

If the incident takes place in the Dock, GM (Ops) will contact outside agencies seeking for salvage operation. MMOH will also make arrangement of safe rescue of the crew members of the vessel. On receiving the message of sinking of a vessel the Manager (Marine) will mobilize its Port Divers' Unit. The Manager (Marine) will mobilize the workshop staff for proper maintenance of the crafts engaged in salvage/rescue operation.

#### 1.24.4 Action by P&E Division

The Manager (P&E) will also ensure uninterrupted electric supply for adequate illumination at the place of crisis. If necessary he will make arrangement of Portable lighting.

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#### 1.24.5 Action by Administration Division

Manager (Admn.) will also ensure proper maintenance of the communication system.

#### 1.24.6 Action by Central Industrial Security Force

The CISF with the help of local Police will control the crowd for peaceful salvage and rescue operation. If the incident has taken place in the mooring area the local police will guard the area to prevent theft of cargo from the ship.

#### 1.24.7 Action by Sh. & Ch. Division

Shipping and Cargo handling division will make proper arrangement for storage of the cargo salvaged and will keep proper account of the same.

#### 1.24.8 Action by Other Divisions

To carry out assigned duties as detailed earlier.

### 1.25 COLLAPSE OF LIFTING APPLIANCES

Disaster related to Collapse of lifting appliance like shore cranes, mobile cranes, yard cranes etc. come under the purview of this plan.

#### 1.25.1 Raising of Alarm

The responsibility of raising the alarm rests on the concerned Traffic Office of the berth/ yard where the lifting appliance has collapsed.

Method of raising the alarm:

First information of the incident should be reported to the watch room on direct telephone or through VHF giving a short message on location of the incident and if possible, whether any casualty has occurred or likely to occur. The official will also inform the incident to Shipping control through VHF for intimation to Manager (P&E) and Manager (SH & CH).

#### 1.25.2 Action by Port Fire Service

Port Fire Service will mobilize its personnel to the affected area for the purpose of rescue operation of affected persons.

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### 1.25.3 Action by P&E Division

On receiving the message of collapse of lifting appliance, the Manager (P&E) will arrange to deploy suitable carries for lifting of the ill-fated appliance. If the lifting appliance has collapsed into dock water, the P&E Division will arrange to deploy floating cranes for lifting the appliance. If the crane is electrically operated, arrangements shall be made to disconnect the electrical connection to the cranes.

### 1.25.4 Actions by Marine Operations Division

On receiving the message of collapse of a lifting appliance into dock water, Dy. Dock Master will deploy sufficient no. of launches and tugs etc. for the purpose of lifting the appliance from water. Launches and tugs shall be equipped with Walkie-Talkie for the purpose of quick and proper communication. Dy. Dock Master will deploy divers as per necessity to locate the lifting appliance in the water and fastening with the help of wire rope etc. for subsequent pulling operation of the lifting appliance from dock water.

### 1.25.5 Action by Medical Division

If any human injury has happened due to the disaster, the Medical Division will mobilize suitable medical personnel for setting up of First Aid Centres at the site of crisis. Medical Superintendent will also take steps for immediate hospitalization of the injured person to KoPT Hospital. He will also mobilize adequate no. of ambulance for the purpose of transporting the injured persons to the KoPT Hospital.

### 6.25.6 Action by Materials Management Division

The Materials Management Department will closely monitor the stock of consumable items especially diesel, petrol, and such other oils, which are required for the machineries deployed in lifting of the appliance, which has collapsed.

### 1.25.7 Action by Central Industrial Security Force

The Central Industrial Security Force will be responsible for control of traffic in the affected dock area as well as the surrounding areas. They will also take necessary action to control the crowd and keep the approach road clear.

The CISF will keep all the gates of the dock full open and free for the purpose of uninterrupted movement of vehicles engaged in Combating action. They will assist in rescue operation of injured person and for their subsequent transportation for medicine. They will also cordon off the affected areas for uninterrupted rescue/ restoration operation.

## 1.26 DROWNING OF DOCK WORKERS

### 1.26.1 Raising of Alarm

In the event of drowning of a dock worker, the alarm will be raised by the Officer-in-Charge of the section under whom the dock worker is employed. The same will be communicated to the CJP Exchange for onward transmission to Watch Room.

### 1.26.2 Action by Marine Operation Division

Marine Division will immediately deploy port divers for locating and searching for the dockworker is drowned in dock water. Marine Division will deploy suitable launches for the purpose of assisting searching operation of the Dockworker drowned in dock water.

### 1.26.3 Action by P&IR Division

Manager (P&IR) will arrange to communicate the message of accident to the family of affected dockworker. If necessary he will also inform respective Labour Union to solicit their support during rescue operation.

### 1.26.4 Action by Medical Division

Immediately on receiving the message of the accident the Medical Superintendent will send a team of medical personnel along with a Doctor and an ambulance for the purpose of rendering medical aid to the person drowned in the water. He will immediately arrange to transport the injured person to the port Hospital for proper treatment.

### 1.26.5 Action by P&E Division

If the incident took place during afternoon or night the Manager (P&E) will arrange for uninterrupted supply of electricity to the crisis area. He will also arrange for adequate numbers of portable lighting appliances to facilitate rescue operation.

### 1.26.6 Port Fire Service

Port Fire Service will extend all possible help during rescue operation of the dockworker.

## 1.27 NATURAL CALAMITIES

Type of disaster that have been covered under this action plan are:



- Severe Storm/ Cyclone, which may damage Port properties or personnel.
- Severe Floods which may disrupt normal functioning of Port
- Earthquake

Apart from southwest monsoon, which dominates Haldia region as well as the West Bengal State from June to October, local storms of great intensity known as Norwesters are also experienced from February to May in this region. Alipore Observatory of Indian Meteorological Department issues weather forecast, storm-warning signals and maintain weather bulletins to ships, fishing boats and marine interests through wireless broadcasts by Kolkata Radio.

#### 1.27.1 Raising of Alarm

Whenever Kolkata Radio the signal station has issued a storm signal would inform GM (Ops) & Manager (M.O.) and keep in close touch with the Alipore Observatory. In case of flood or earthquake restricted locally, the people working/ residing in the vicinity would inform the Fire Watch Room or Signal Station. In turn these stations will inform all concerned about the incident.

#### 1.27.2 Action by Marine Division

In addition to the actions mentioned earlier, DMD or GM (Ops) will issue directives to both Harbour Master (R) and Manager (M.O.) regarding steps to be taken to ensure safety of shipping in the River/Port areas as also of KoPT's crafts, navigable channel/buoys etc. Tugs, Mooring Launches along with their crew will be kept ready day & night to tackle any eventualities. One tug engineer will also be on duty round the clock. Manager (M.O.)'s office would monitor round the clock till the disaster is over.

DMD or GM (Ops) will also issue special instructions to the Master of the ships, regarding extra precautions to be taken by ships during inclement weather. Keep all divers under his control ready to join the combating team whenever required. All floating crafts under his control should be properly secured and manned.

#### 1.27.3 Actions by Ships at Port and at Anchorages

Every crew member should be on board and no shore leave to be granted.

Keep close watch on VHF marine channel for weather broadcast by Kolkata Radio and special instruction(s) issued by Port Authority. Mooring ropes should be doubled and all ship fenders should be put out.

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Master of all ships should follow the instructions, during stormy weather as detailed in “Appendix-B” of “TIDE TABALES FOR HUGLI RIVER” for each type of storm signal.

#### 1.27.4 Action by Port Fire Service

In addition to the actions given earlier.

Upon hearing the news of flood or earthquake, the Port JAM (Fire) will send his men for detail inspection.

Arrange for rescue of Port personnel from flood affected/quake hit areas to a safer place in consultation with Management Group.

#### 1.27.5 Action by I&CF Division

In addition to the duties as mentioned earlier.

Arrange for Bulldozer from state authorities for clearing debris at quake hit areas.

Arrange for uninterrupted supply of potable water to evacuees camp.

After the disaster become over carryout in-depth inquiry to assess the damage caused by the flood/earthquake and report to Dy. Chairman.

For clearing debris formed due to earthquake and pumping out water from waterlogged areas he should seek the help of Haldia Municipality through Base Control.

Arrange for heavy-duty pumps for pumping out water from flood-hit areas from State authorities.

#### 1.27.6 Action by P&E Division

To make sure that a team is always available to tackle failure of electricity and departmental vehicles during crisis hours.

All crane and other equipments should be firmly secured in their proper position.

Arrange for heavy-duty pumps for pumping out water from flood-hit areas from State authorities.

For clearing debris formed due to earthquake and pumping out water from waterlogged areas he should seek the help of Haldia Municipality through Base Control.

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Arrange for Bulldozer from state authorities for clearing debris at quake hit areas.

The divisions will carryout a detail survey, after the disaster become over to assess the total damage caused to its properties and equipments and send a report to Dy. Chairman.

This is in addition to the actions as stated earlier.

#### 1.27.7 Action by Other Divisions (Internal)

All the other departments whose duties have been enumerated earlier carryout their assigned support actions.

#### 1.27.8 Action by Mutual Aid Agencies

All the mutual aid agencies will carryout their assigned support actions as detailed earlier. In this type of disaster, the authorities of Haldia Municipality will join hand with combating team in rescue and relief operations to storm/flood/quake hit people. While carrying out the operations they will also take help from various departments of Govt. of West Bengal.

However, if entire Port areas are affected by any of the above natural calamities, the responsibility of rescue, relief & rehabilitation of affected people and restoration of normalcy within the Port area will rest on the Govt. of West Bengal.

#### 1.27.9 Action by Administration Division

Arrange for food and rest to evacutees camp.