

# **Site Inspection of Ship Recycling Facilities in India**

February 2016

Ship Recycling Team, ClassNK

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- ✓ Requirements of IMO Guidelines
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\*SOC: Statement of Compliance

# Process of Issuance of SOC

## 1. Examination of Ship Recycling Facility Plan (SRFP)

Check that the procedures written in SRFP comply with HKC based on IMO Guidelines



## 2. Site Inspection

Site Inspection is carried out by ClassNK surveyors to check that the procedures written in SRFP are actually taken place in the facility by interview, document check and site observation.



## 3. Issuance of SOC

After successful completion of examination of SRFP and site inspection, ClassNK issues Statement of Compliance (SOC) to the SRF.





## The Hong Kong Convention\* (HKC) was adopted on 15 May 2009

\* The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009

Ship Recycling Facilities are required to comply with the following regulations of HKC taking into account the guidelines developed by IMO.

- ✓ Ship Recycling Facility Plan (Reg. 18)
- ✓ Prevention of adverse effects to human health and the environment (Reg. 19)
  - Safe for entry, Safe for hot work, Prevent spills and emission, etc.
- ✓ Safe and environmentally sound management of Hazardous Materials (Reg. 20)
- ✓ Emergency preparedness and response (Reg. 21)
- ✓ Worker safety and training (Reg. 22)
  - PPE, Training programme, etc

As per the **ClassNK Check List** based on the requirements of the IMO Guidelines, document examinations and site inspections are carried out.



## 2012 Guidelines for Safe and Environmentally Sound Ship Recycling (Res. MEPC.210(63))

- ✓ Facility management
- ✓ Facility operation
- ✓ Worker safety and health compliance approach  
Safe for entry, Safe for hot work, etc.
- ✓ Environmental compliance approach  
Management of Hazardous Materials, etc.

# Facility Management

- ✓ Company information
- ✓ Training programme
- ✓ Worker management
- ✓ Record management



## Status of the SRF\*

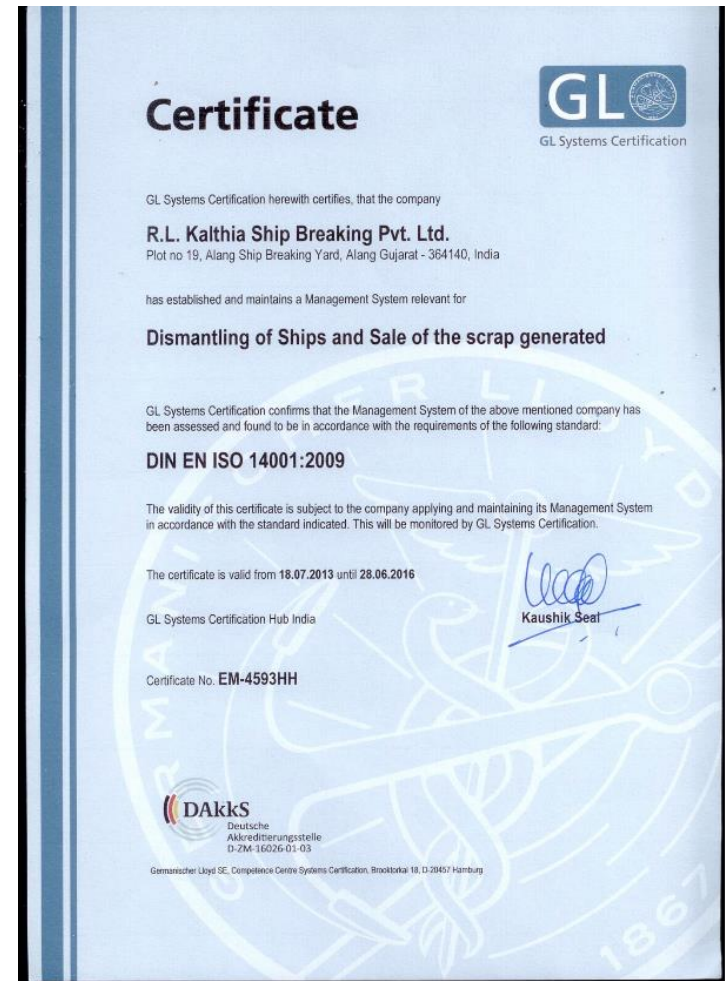
Necessary company information is provided in the SRFP.

- ✓ Operator of the SRF
- ✓ Land or facility owner
- ✓ The role, responsibilities and qualification of management personnel
- ✓ Environmental, occupational safety and health management system, etc.

## Confirmed by

Checking of documents

\*SRF: Ship Recycling Facility



Certification of Environmental Management System (ISO14001)

## Status of the SRF

Training plan is developed. The plan includes handling and management of hazardous materials, fire protection and prevention, first aid, oil spillage on sea and plot, gas cutting operation, working at height confined space entry, removal of ACM, crane and forklift operation, etc. Training records are properly developed and maintained.

## Confirmed by

Checking of training plan and records

### Example of Annual Training Plan

Priya Blue Industries Pvt. Ltd.													
Training plan Plan for the Period: April 15 to March 16										Format No.: IMS / F / 03			
Sr. No.	MONTHS	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16
1	General safety introduction	P											
	a) personal protective equipment b) Housekeeping	A	27/04/15										

## Status of the SRF

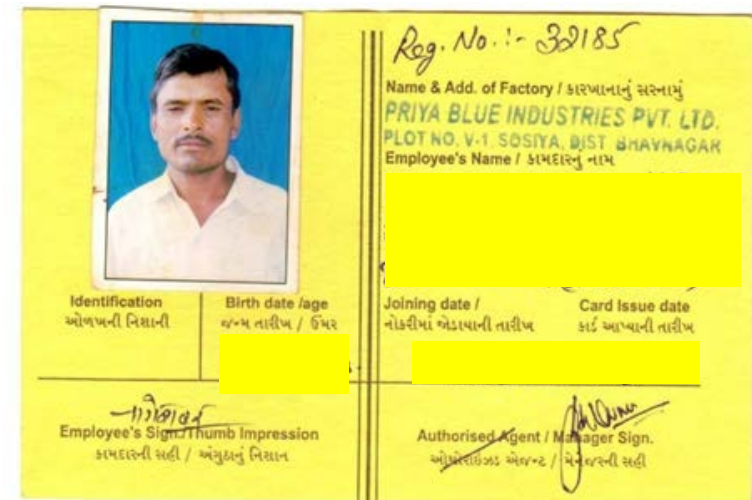
- ✓ Each employee is registered and insured according to national requirements.
- ✓ Each worker and staff receives an ID-card with important information from the SRF.
- ✓ The personal information, certificates, education, trainings, and licenses are maintained.



Certificate of training

## Confirmed by

Interview with HSE manager and checking of ID cards and training certificates



Example of ID card for workers

## Status of the SRF

- ✓ HSE related records, such as environmental monitoring reports, medical check reports, manifests for hazardous wastes, are kept at SRF for at least 5 years.
- ✓ Safe for entry permit and safe for hot work permit are kept for at least three month after finishing related work.

## Confirmed by

Interview with HSE manager and Checking of records

### Example of the list of records

Hyundai Blue Industries Pvt. Ltd.

List of Records				List No. : IMS / L / 12 Rev. No. & Date: 001 / 01-03-2015	
Sr. No.	Quality Records	Reference No.	Responsibility	Retention Period	Location
1	Significant Aspect / Impact and Risk Assessment Analysis	IMS / F / 01	MR	Continue	Works Office
2	Legal Register	IMS / F / 02	MR	Continue	Works Office
3	Annual Training Plan	IMS / E / 03	MR	Yearly	MR Office

# Facility Operation

- ✓ Facility information
- ✓ Permits, licenses and certification
- ✓ Acceptability of ships
- ✓ Ship recycling Plan (SRP) development
- ✓ Vessel arrival management
- ✓ Ship recycling methodology
- ✓ Reporting upon completion

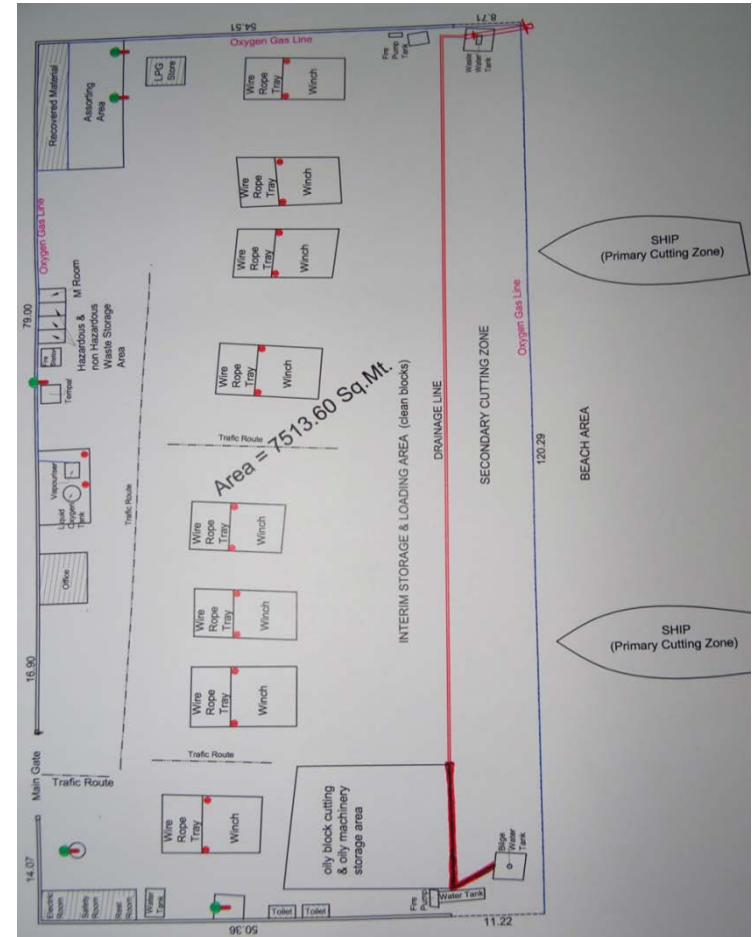
## Status of the SRF

Necessary facility information is provided in the SRFP.

- ✓ Maximum capacity of individual ship for recycling
- ✓ Maximum annual recycling capacity
- ✓ Acceptable ship types
- ✓ Location map
- ✓ Facility layout plan, etc.

## Confirmed by

Checking of documents  
Observation of site



Example of Facility Layout

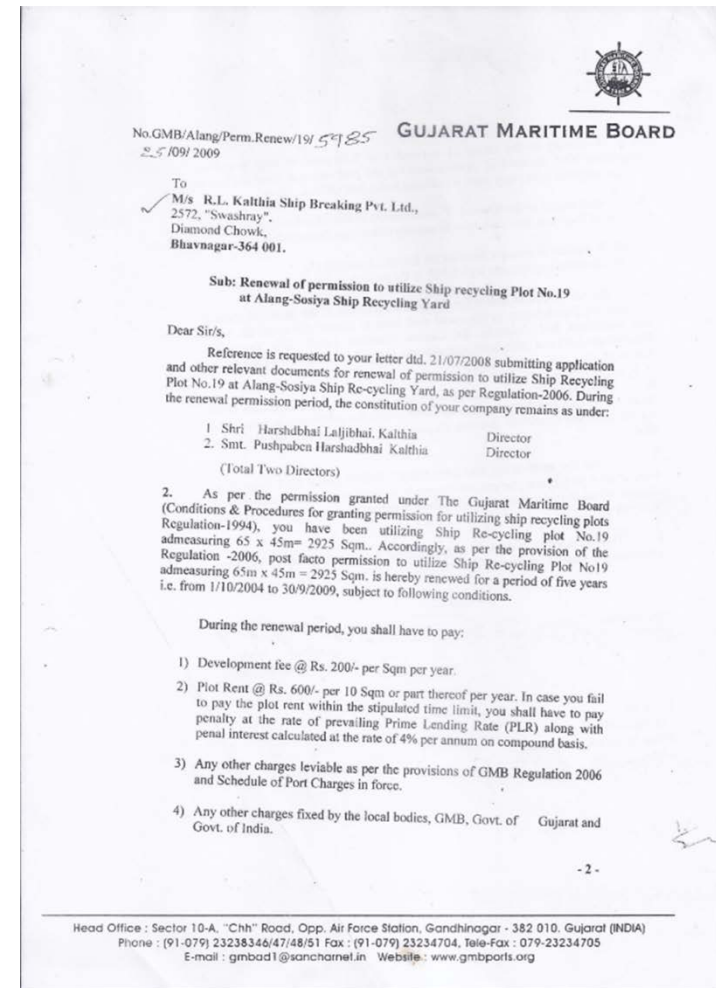
## Status of the SRF

Necessary permits, licenses and certification are kept in the SRF.


- ✓ Permission for utilizing shipbreaking plot
- ✓ GEPIL membership certificate
- ✓ Explosive license for LPG
- ✓ Certificates and licenses of subcontractors, etc.

## Confirmed by

- ✓ Checking of documents
- ✓ Interview with top management and HSE manager



No.GMB/Alang/Perm.Renew/19/59/85  
25/09/2009

  
**GUJARAT MARITIME BOARD**

To  
✓ M/s R.L. Kalthia Ship Breaking Pvt. Ltd.,  
2572, "Swashray",  
Diamond Chowk,  
Bhavnagar-364 001.

**Sub: Renewal of permission to utilize Ship recycling Plot No.19  
at Alang-Sosiya Ship Recycling Yard**

Dear Sir/s,

Reference is requested to your letter dtd. 21/07/2008 submitting application and other relevant documents for renewal of permission to utilize Ship Recycling Plot No.19 at Alang-Sosiya Ship Re-cycling Yard, as per Regulation-2006. During the renewal permission period, the constitution of your company remains as under:

1. Shri Harshdbhai Laljibhai, Kalthia Director  
2. Smt. Pushpaben Harshadbhai Kalthia Director  
(Total Two Directors)

2. As per the permission granted under The Gujarat Maritime Board (Conditions & Procedures for granting permission for utilizing ship recycling plots Regulation-1994), you have been utilizing Ship Re-cycling plot No.19 admeasuring 65 x 45m = 2925 Sqm.. Accordingly, as per the provision of the Regulation -2006, post facto permission to utilize Ship Re-cycling Plot No19 admeasuring 65m x 45m = 2925 Sqm. is hereby renewed for a period of five years i.e. from 1/10/2004 to 30/9/2009, subject to following conditions.

During the renewal period, you shall have to pay:

- 1) Development fee @ Rs. 200/- per Sqm per year.
- 2) Plot Rent @ Rs. 600/- per 10 Sqm or part thereof per year. In case you fail to pay the plot rent within the stipulated time limit, you shall have to pay penalty at the rate of prevailing Prime Lending Rate (PLR) along with penal interest calculated at the rate of 4% per annum on compound basis.
- 3) Any other charges leviable as per the provisions of GMB Regulation 2006 and Schedule of Port Charges in force.
- 4) Any other charges fixed by the local bodies, GMB, Govt. of Gujarat and Govt. of India.

- 2 -

Head Office : Sector 10-A, "Chh" Road, Opp. Air Force Station, Gandhinagar - 382 010, Gujarat (INDIA)  
Phone : (91-079) 23238346/47/48/51 Fax : (91-079) 23234704, Tele-Fax : 079-23234705  
E-mail : gmbad1@sanchamel.in Website : www.gmbports.org

Example of Permission for utilizing shipbreaking plot

## Status of the SRF

- ✓ Acceptability of ships, ship recycling plan (SRP), vessel arrival management, and ship recycling methodology are described in the SRFP.
- ✓ Reporting upon completion to the competent authority is not required at this moment.

## Confirmed by

- ✓ Checking of documents
- ✓ Observation on site
- ✓ Interview with top management and HSE manager



Process of ship recycling at the SRF



# Worker safety and health compliance approach

- ✓ Worker health and safety
- ✓ Key safety and health personnel
- ✓ Job hazard assessment
- ✓ Prevention of adverse effects to human health
  - Safe-for-entry and safe-for-hot-work procedures
  - Drums, containers and pressure vessels
  - Prevention of falling from heights
  - Gear and equipment for rigging and materials handling
  - Personal protective equipment, etc.
- ✓ Emergency preparedness and response plan
- ✓ Fire and explosion prevention, detection and response

## Status of the SRF

Qualification and responsibility of key safety and health personnel, such as general manager and HSE department, is described in the SRF.

## Confirmed by

- ✓ Checking of SRFP
- ✓ Interview with top management and HSE manager

Organizational Structure in the SRF



## Status of the SRF

Job hazard assessment (Risk Assessment) is carried out in the framework of OHSAS18001.

## Confirmed by

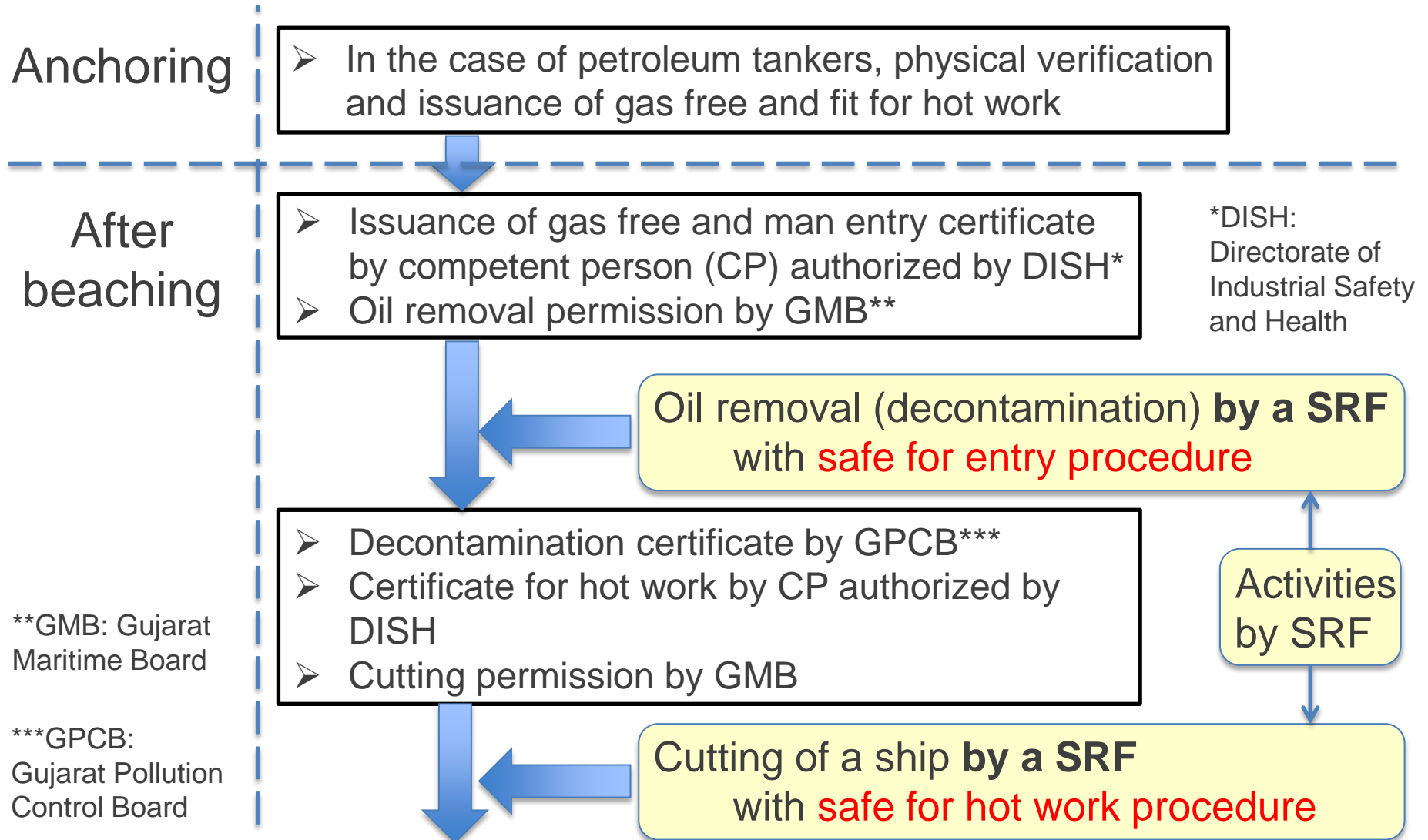
- ✓ Checking of the results of Risk Assessment
- ✓ Interview with top management and HSE manager

### Example of Risk Assessment based on OHSAS 18001

Priya Blue Industries Pvt. Ltd.

SIGNIFICANT ASPECT / IMPACT AND RISK ASSESSMENT ANALYSIS																						
Document No.: IMS / SAISRAAR / 01		Revision No. and Date: 004 / 01-07-2014			Annexure 1 - Significant Aspect / Impact and Risk Assessment Analysis - Guideline for Ranking													Form No.: IMS / F / 01				
Activity / Process	SIGNIFICANT ASPECT / IMPACT ANALYSIS										RISK ASSESSMENT ANALYSIS					MITIGATION PLAN / RECOMMENDED ACTION						
	Recycling Aspects	Recycling Impact	Control(Direct/Indirect)	Condition (N / A / E)	Legal Compliance	Scale	Severity	Probability of Occurrence	Control Mechanism	Duration	Overall Rating	Specific Hazard	Perceived Risk	Legal Compliance	Severity of Hazard	Probability of Occurrence	Control Mechanism	Overall Rating	Recommended Actions (Elimination/ Reduction/ Control/ Recycle/ Reuse when rating is > specified in Guidelines)	Responsibility	Time Frame	Remarks
Vessel Inspection at Outer Anchorage	---	---	D	N	Y	---	---	---	---	---	---	Health Hazard	Injury due to excessive floating of Tug due to bad weather	Y	5	3	3	45				
	---	---	D	N	Y	---	---	---	---	---	Falling / Slip - Health Hazard	Injury due to Falling from Height during climbing of ship through pilot ladder.	Y	5	3	3	45					
	---	---	D	N	Y	---	---	---	---	---	Falling / Slip - Health Hazard	Injury due to falling from Height or slip	Y	3	2	4	24					

## Procedure required by “Ship Breaking Code 2013” of India



## Status of the SRF

### Safe for entry criteria

- ✓ Oxygen in atmosphere is  $\geq 21\%$
- ✓ Oil gas in atmosphere is  $\leq 1\%$  of LEL)
- ✓ Toxic gaseous, i.e., CO and H<sub>2</sub>S, in the atmosphere are within permissible concentration (50% of OEL)
- ✓ The safe-for-entry label and appropriate warning signs are fixed before entering the room/space
- ✓ Stand-by of fire hoses and fire pumps

### Safe for hot work criteria

In addition to safe for entry criteria,

- ✓ Thorough Cleaning of residues or materials in the area
- ✓ Prevention of the spread of fire to adjacent spaces

PRIYA BLUE INDUSTRIES PVT. LTD. (PLOT NO. V3)  
Confined Space Check & Entry Permit Form

Inspector	<i>Chhail Kumar Singh</i>	Attendant	<i>Narenbasank Sengupta</i>	Time of check	07:00
Equipment	Manufacturer	Model	Serial Number	Calibrated on	Next calibration
	CROWCON DETECTION	TRIPLE PLUS +	2560027727	02/12/2014	01/06/2015
Ship and location					
Ship	Location <i>Starboard side cabin</i>				
Detector readings					
	07:00 am	10:30 am	01:30 pm	03:30 pm	
O <sub>2</sub> (%)	20.8	20.3	20.3	20.2	
LEL (%)	0	0	0	0	
CO (ppm)	0	0	0	0	
H <sub>2</sub> S (ppm)	0	0	0	0	
Safety Instructions & Equipment					
Further ventilation	Breathing Apparatus	Attendant	Comments/specification		
<input type="checkbox"/> Required	<input type="checkbox"/> Required	<input checked="" type="checkbox"/> Required	<i>Fire fighting equipments &amp; rescue equipment to be kept in place ready to use in emergency.</i>		
<input checked="" type="checkbox"/> Not required	<input checked="" type="checkbox"/> Not required	<input type="checkbox"/> Not required			
Communication	<input checked="" type="checkbox"/> Verbal	<input checked="" type="checkbox"/> Visual	<input type="checkbox"/> Life line		
Confined Space Entry & Safe for Hot Works Permit					
Date:	<i>04/07/15</i>	Time:	07:00	Time of expiry:	18:00
Label attached	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Comments	<i>Area is fit for work.</i>				
Signature Inspector	<i>Chhail Kumar Singh</i>				
Signature Attendant	<i>Narenbasank Sengupta</i>				
Signature Site Supervisor	<i>Narenbasank Sengupta</i>				
Permit cancelled / work completed	<i>Work completed.</i>				
COPY OF THE PERMIT MUST REMAIN AT THE SITE UNTIL WORK IS COMPLETED					

Example of safe for entry certificate by the SRF

## procedure

- ✓ Safe for hot work conditions are checked by the competent person (HSE Manager) for all areas and rooms prior to conducting hot works.
- ✓ Labeling/marking/postings are done.
- ✓ Validity of the Safe for hot work certificate/label is limited to eight hours.

## Confirmed by

- ✓ Checking of SRFP
- ✓ Checking of records (certificates, calibration records)
- ✓ Onboard observation (labelling)



Gas detector (CO,H2S,OXY, LEL)



Sticker for Gas Free for Hot Work

## Status of the SRF

Handling, transportation and storing of pressure vessels containing flammable gases, e.g., LPG and O<sub>2</sub> for cutting works is done in a safe manner in order to avoid risks and human injuries.

### Confirmed by

- ✓ Checking of SRFP
- ✓ Checking of records (record book of LPG cylinders)
- ✓ Site observation (condition of cylinders and tanks)



Taking care of LPG and O<sub>2</sub> cylinders

## Status of the SRF

In order to prevent slipping and falling of workers and dropping or scattering of objects, the procedure for guarding of deck openings and deck edges, preventive measures such as guard rails (iron wire rope) are carried out.

“Working aloft permit” is issued by HSE Manager for the working at height.

## Confirmed by

- ✓ Checking of records (working aloft permit)
- ✓ Onboard observation



Guard rail (iron wire rope) for fall prevention from height

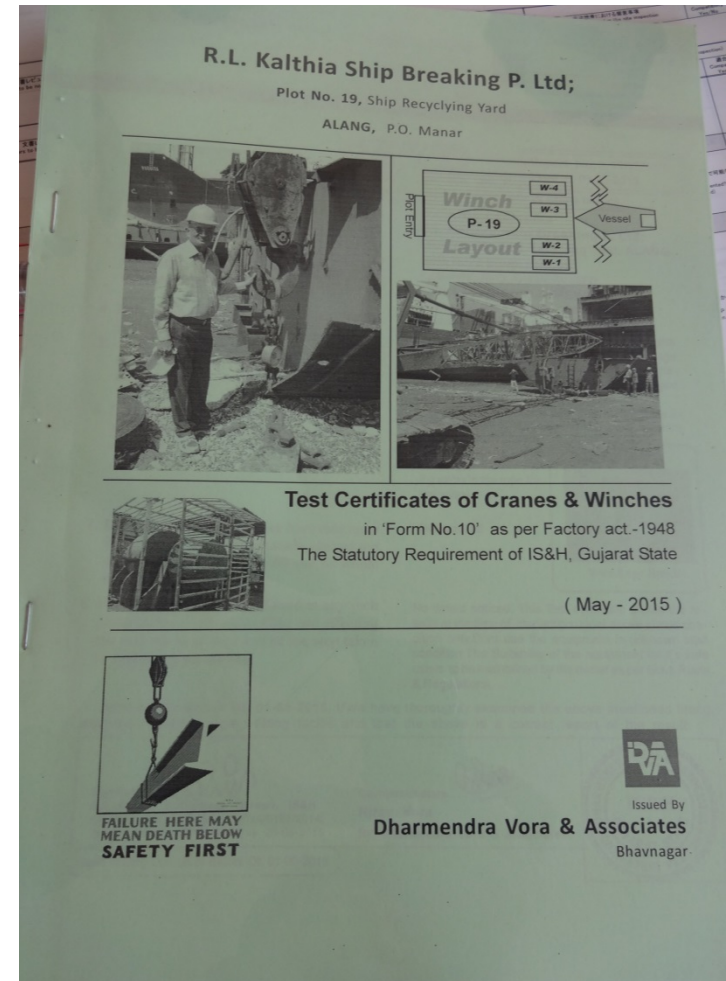


## Status of the SRF

- ✓ Workers operating lifting machines like cranes, forklifts, etc. are trained and qualified.
- ✓ Gear and equipment for rigging and material handling is tested annually.

## Confirmed by

Checking of records (training records, test certificates of equipment)



Example of Test Certificate of Cranes and Winches

## Status of the SRF

Workers in the SRF wearing proper PPEs, such as cover all, helmet, safety shoes, dust mask, goggles, etc.

## Confirmed by

Site observation

### PPE Selection by the type of work

PPE SELECTION BASED ON HAZARD ASSESMENTS										
TYPE OF WORK	COVER ALL	HELMET	SAFETY SHOE	DUST/FILTER MASK	SAFETY HARNESS	GOGGLES	CHEMICAL /NORMAL GLOVES	SCBA	DISPOSAL SUIT	BATTERY OPERATED RESPIRATOR
OIL REMOVAL	Red	Red	Red	Green	Blue	Green	Red	Green	Blue	Blue
OIL TANK CLEANING	Red	Red	Red	Green	Blue	Green	Red	Green	Blue	Blue
REMOVAL OF INSULATING MATERIAL(GLASS WOOL,PUFF etc.)	Red	Red	Red	Red	Green	Red	Red	Blue	Red	Green
ASBESTOS REMOVAL	Red	Red	Red	Green	Blue	Red	Red	Blue	Red	Red
PAINT CHIPS REMOVAL	Red	Red	Red	Red	Blue	Red	Red	Blue	Blue	Blue
CONFINED SPACE	Red	Red	Red	Green	Green	Red	Red	Green	Blue	Blue
GAS CUTTING	Red	Red	Red	Red	Blue	Red	Red	Blue	Blue	Blue
WELDING WORK	Red	Red	Red	Red	Blue	Red	Red	Blue	Blue	Blue
GRINDING WORK	Red	Red	Red	Red	Blue	Red	Red	Blue	Blue	Blue
MACHINARIES REMOVAL	Red	Red	Red	Green	Blue	Green	Red	Blue	Blue	Blue
CHEMICAL HANDLING	Red	Red	Red	Red	Blue	Red	Red	Blue	Green	Blue
WORKING AT HEIGHT	Red	Red	Red	Green	Red	Green	Red	Blue	Blue	Blue
COLOUR CODES: AT ALL TIMES <span style="color:red">■</span> AS REQUIRED <span style="color:green">■</span> NOT REQUIRED <span style="color:blue">■</span>										



Gas cutting worker with PPE

## **Status of the SRF**

- ✓ EPRP is developed and included in the SRF.
- ✓ Emergency contact details are posted.
- ✓ Training and mock drill are carried out.



First aid training at Red Cross

## **Confirmed by**

- ✓ Checking of SRF (EPRP)
- ✓ Checking of records (training records)
- ✓ Site observation (posting, assembly point, etc.)



Mock Drill

## Status of the SRF

- ✓ Firefighting equipment, such as fire pumps and fire extinguishers, are arranged in the SRF and stands by properly.
- ✓ Preventive measures, such as removal oils, are properly carried out.

## Confirmed by

- ✓ Checking of SRFP (EPRP)
- ✓ Checking of records (training records)
- ✓ Site observation (posting, assembly point, etc.)



Firefighting found ready inside the engine room



Fire pump on shore

# Environmental Compliance Approach

- ✓ Environmental monitoring
- ✓ Management of Hazardous Materials (HM)
- ✓ Environmentally sound management of HM
  - Asbestos
  - PCBs
  - Ozone-depleting substances (ODS)
  - Paint and coatings
  - Hazardous liquids, residues and sediments
  - Heavy metals
- ✓ Prevention of adverse effects to the environment
  - Spill prevention, control and countermeasures
  - Storm-water pollution prevention
  - Debris prevention and control
  - Incident and spills reporting procedures

## Status of the SRF

Environmental monitoring is carried out twice a year by the ship recycling facilities.

- ✓ Soil
- ✓ Sea Water
- ✓ Air
- ✓ Noise
- ✓ Drinking water

## Confirmed by

- ✓ Checking of records (monitoring records)

Excellence in Environmental Services

- ✓ Project Consultancy
- ✓ Impact Assessment
- ✓ Monitoring Program
- ✓ Laboratory
- ✓ Auditing

Ref. No. : Sosiya / 966

**SEA WATER ANALYSIS REPORT**

**Name of Party:** PRIYABLU INDUSTRIES PVT. LTD.  
Plot No. V 1, Ship Breaking Yard,  
Sosiya, Dist. Bhavnagar.

**Date of Sampling:** 20-09-2014

Sr. No	Parameters	Result
1.	pH	7.3
2.	Color	Colorless
3.	Chemical Oxygen Demand	239
4.	BOD 5 days at 20 c	82
5.	Oil & Grease	1.2
6.	Ammonical nitrogen	11.0
7.	Total nitrogen	18.0
8.	Total residual chlorine	Nil
9.	Arsenic	Nil
10.	Lead	Nil
11.	Cadmium	Nil
12.	Hexavalent Chromium	Nil
13.	Total Chromium	Nil
14.	Copper	Nil
15.	Zinc	Nil
16.	Selenium	Nil
17.	Nickel	Nil
18.	Sulphide	Nil
19.	Phenolic compound	Nil
20.	Iron	1 PPM
21.	Manganese	Nil
22.	Nitrite	BDL
23.	Nitrate	1.4
24.	Total Dissolve Solid	29,152
25.	Suspended Solid	345

All parameters except pH are in mg/Ltr.  
BDL: Below detectable limit 1 ppm.  
Sampling from sea water adjoining the plot

For, *Cherry Green Environment*

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301, Tanay Complex, Above Hotel Parkview, Atabhai Chowk, Bhavnagar - 364 002.  
Ph. : 0278 2225620 E-mail : cge2313@yahoo.com

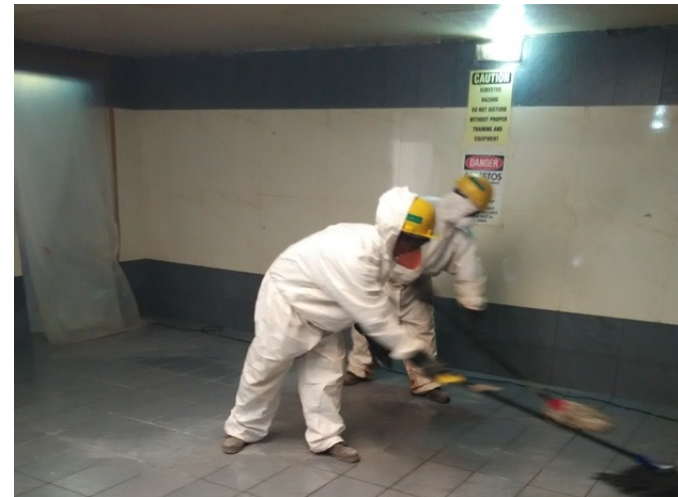
Example of water monitoring report

## Status of the SRF

- ✓ Identification and marking
- ✓ Trained and qualified workers
- ✓ Monitoring of fiber concentration
- ✓ Isolation of work area
- ✓ Installation of negative pressure area
- ✓ Utilize wet condition
- ✓ Wrapped by double package
- ✓ Interim storage area
- ✓ Disposal at GEPIL
- ✓ Appropriate PPEs



Packing of ACM in special bag



Cleaning of Asbestos handling room

## Confirmed by

- ✓ Checking of records (manifests by GEPIL)
- ✓ Interview with HSE manager and a subcontractor
- ✓ Monitoring of work



Double bagging of ACM

S No. 325-1/1, Village - Manar, Near Alang, Taluka - Talasia District - Bhavnagar.

Phone :  
Fax :  
E-mail : alang@ludhraindia.com  
CIN No is U74999GJ1999PLC035306

**GEPIL**  
PROTECTING FUTURE  
A Luthra Group Company

A Luthra Group Company  
**GUJARAT ENVIRO PROTECTION & INFRASTRUCTURE Ltd. (Unit - Alang)**  
(Information of Hazardous Waste for disposal) | As per rule 7(4) & (5) |

**Hazardous Waste Manifest (Form No. 13 [As Per Rule 21 (1)])** Copy 2 : Generator Copy

1. Occupier's Name and Mailing Address (Including Phone No.) <b>R.L.KALTHIA SHIP BREAKING P.L.</b> PLOT NO.19 SHIP RECYCLING YARD, ALANG Phone :		2. Occupier's Registration No. <b>CAIW1R0003</b>	3. Manifest Document No.  6 0 8 4 8
4. Transporter's Name & Address (Including Phone No.) <b>GYATRI TRANSPORT</b> AT & POST MAGDALLA BHAIYAI STREET Phone : 224797		5. Type of vehicle SPECIAL	6. Transporter's Registration No. 7. Vehicle Registration No. <b>GJ4U-9031</b>
8. Designated Facility Name & Site Address : GUJARAT ENVIRO PROTECTION & INFRASTRUCTURE Ltd. (Unit-Alang)		9. Facility's Registration No. HAZ / SRT - 551 / 14625	
11. Waste Description : <b>ASBESTOS</b>		12. Total Quantity of Waste M <sup>3</sup> M.T <b>0.090</b>	
Name of Ship : Type of Ship : <b>Container</b>		13. Consistency <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Tarry <input type="checkbox"/> Semi-Solid <input type="checkbox"/> Oily <input type="checkbox"/> Sludge <input type="checkbox"/> Slurry	
14. Transport Description of Waste	15. Containers No. Type	16. Total Quantity Wt./ Vol.	18. Waste Category No. (as per Act)
WITH COVERED TRANSPORT			
19. Special Handling Instruction & Other Information : Use Personal Protection Equipments while Handling.			
20. OCCUPIER'S CERTIFICATE : I hereby declares that contents of the consignment are fully and accurately described above by proper shipping name and are categorized, packed, marked and labeled, and are in all respect in proper condition for transport by road according to applicable national government regulation. Type, Name & Stamp of Unit Month Day Year <b>09 16 2014</b> Signature With Designation With Rubber Stamp			
21. Transporter's Acknowledgement of Receipt of Material : Type Name & Stamp of Transporter: Month Day Year <b>16 SEP 2014</b> Signature With Designation With Rubber Stamp			
22. Discrepancy Note Space :			
23. Facility Owner or Operator's Certification of Receipt of Hazardous Waste Month Day Year <b>16 SEP 2014</b> For, Gujarat Enviro Protection & Infrastructure Ltd. GUJARAT ENVIRO PROTECTION & INFRASTRUCTURE Ltd. (Unit - Alang) Authorized Signatory			

Hazardous Waste Manifest (Asbestos)



## Status of the SRF

- ✓ Procedure to treat PCBs in the SRF is described in SRFP, and training is carried out for workers.
- ✓ Cables, which may contain very small amount of PCBs, are disposed at GEPIL in accordance with national regulation.
- ✓ If equipment containing PCBs is found, it shall be stored without leakage under responsibility of HSE department of the SRF.

## Confirmed by

- ✓ Checking of SRFP (procedure and subcontractors information)
- ✓ Interview with top management and HSE manager



## Certificate of subcontractors

(PCB containing equipment may be exported for disposal to appropriate facilities in developed countries in accordance with the procedure stipulated by Basel Convention.)

## Status of the SRF

- ✓ ODS in bottles onboard is treated and surrendered to Custom Department in accordance with national regulation.
- ✓ Extraction of ODS from systems and equipment is carried out by trained personnel with adequate experience in industry along with their equipment.

## Confirmed by

- ✓ Checking of Records (receipt of surrender Freon cylinder information)
- ✓ Interview with top management and HSE manager

:: CUSTOMS OFFICE, NEW PORT, BHAVNAGAR ::

RECEIVED THE FOLLOWING ITEMS RELATED TO THE VESSELS COMING FOR BREAKING UP AT PLOT NO. 19, SBY - ALANG/SOSIYA, CUSTOMS DIVISION : BHAVNAGAR:

NAME OF THE VESSEL : .....

DATE OF DEPOSIT : 13/4/15 R.L. KATHIRAJ SHIP BREAKING PORT 13/4/15

Sr. No.	Description of Items/ Goods	Cylinder Capacity	No. of Empty Cylinders	No. of Partially filled Cylinders	No. of Fully filled in Sealed Condition Cylinders	Grand Total
1	Freon	57kg	04	—	1	05
2	"	20kg	04	—	—	04
3	"	12kg	02	—	—	02
4						11

Signature : M.V. LOBY  
 Name of the Officer : M.V. LOBY  
 Designation : H.HAV  
 Place : Customs, New Port, Bhavnagar

:: CUSTOMS OFFICE, NEW PORT, BHAVNAGAR ::

RECEIVED THE FOLLOWING ITEMS RELATED TO THE VESSELS COMING FOR BREAKING UP AT PLOT NO. 19, SBY - ALANG/SOSIYA, CUSTOMS DIVISION : BHAVNAGAR:

NAME OF THE VESSEL : .....

DATE OF DEPOSIT : 13/4/15 R.L. KATHIRAJ SHIP BREAKING PORT 13/4/15

Sr. No.	Description of Items/ Goods	Cylinder Capacity	No. of Empty Cylinders	No. of Partially filled Cylinders	No. of Fully filled in Sealed Condition Cylinders	Grand Total
1	Freon	57kg	04	—	01	05
2	"	20kg	04	—	—	04
3	"	12kg	02	—	—	02
4						11

Signature : M.V. LOBY

Example of Receipt of Surrender Freon Cylinder

## Status of the SRF

- ✓ If possible, coatings are removed at and around the cutting areas.
- ✓ If removal is not possible in cutting areas, appropriate PPE is selected and applied.
- ✓ Blocks falls on the double bottom of the ship as far as possible.
- ✓ Paint chips are collected and transported to GEPIL for disposal.

## Confirmed by


- ✓ Checking of Records (manifests of GEPIL)
- ✓ Interview with top management and HSE manager
- ✓ Monitoring

S.No. 325-1/1, Village - Manar, Near Alang,  
Taluka - Talasari District - Bhavnagar

Phone :  
Fax :  
E-mail : alang@luthrindia.com  
CIN No is U74999GJ1999PLC035306

**GEPIL**  
PROTECTING FUTURE  
A Luthra Group Company  
GUJARAT ENVIRO PROTECTION & INFRASTRUCTURE Ltd. (Unit - Alang)  
(Information of Hazardous Waste for disposal) | As per rule 7(4) & (5) |

**Hazardous Waste Manifest (Form No. 13 [As Per Rule 21 (1)])** Copy 2 : Generator Copy

1. Occupier's Name and Mailing Address (Including Phone No.) R.L.KALTHIA SHIP BREAKING P.L. PLOT NO.19 SHIP RECYCLING YARD, ALANG Phone :		2. Occupier's Registration No. CAIW1R0003	3. Manifest Document No.  6 2 1 4 1
4. Transporter's Name & Address (Including Phone No.) G.V.M.RI TRANSPORT AT & POST MAGDALLA BHAIYALI STREET Phone : 224797		5. Type of vehicle SPECIAL	6. Transporter's Registration No. 7. Vehicle Registration No. GJ550241
8. Designated Facility Name & Site Address : GUJARAT ENVIRO PROTECTION & INFRASTRUCTURE Ltd. (Unit-Alang)		9. Facility's Registration No. HAZ / SRT - 551 / 14625 10. Facility Phone : 09328261623,0937725517	
11. Waste Description PAINTS & COATINGS		12. Total Quantity of Waste M <sup>3</sup> M.T 0.180	
Name of Ship : Type of Ship : <i>Container</i>		13. Consistency <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Tarry <input type="checkbox"/> Semi-Solid <input type="checkbox"/> Oily <input type="checkbox"/> Sludge <input type="checkbox"/> Slurry	
14. Transport Description of Waste WITH COVERED TRANSPORT	15. Containers No. Type	16. Total Quantity	17. Unit Wt/ Vol.
			18. Waste Category No. (as per Act)
19. Special Handling Instruction & Other Information : Use Personal Protection Equipments while Handling.			
20. OCCUPIER'S CERTIFICATE : I hereby declares that contents of the consignment are fully and accurately described above by proper shipping name and are categorized, packed, marked and labeled, and are in all respect in proper condition for transport by road according to applicable national government regulation. Type Name & Stamp of Unit Month Day Year <i>11.13.14</i>			
21. Transporter's Acknowledgement of Receipt of Material : Type Name & Stamp of Transporter. Month Day Year <i>13 NOV 2014</i>			
22. Discrepancy Note Space :			
23. Facility Owner or Operator's Certification of Receipt of Hazardous Waste Month Day Year <i>13 NOV 2014</i>			

Signature With Designation With Rubber Stamp  
Signature With Designation With Rubber Stamp  
Signature With Designation With Rubber Stamp

Hazardous Waste Manifest  
(paints and coatings)

## Status of the SRF

- ✓ Lead acid batteries are transported to licensed subcontractors for recycling.
- ✓ Sand which may be contaminated by heavy metals is transported to GEPIL for disposal.

## Confirmed by

- ✓ Checking of Records (manifests of GEPIL, license of subcontractors)
- ✓ Interview with top management and HSE manager



Zinc Anode



Lead acid batteries

### Registration Certificate-cum-Pass Book for Re-refining/Recycling of Hazardous Wastes

Name and Address of the Industry with GPCB ID - 23752 : PLT. NO. 1649/1-2, GIDC ESTATE SARIGAM - 369155

Telephone / Fax No. : 09819268897  
 E-mail Address :  
 Registration No. : GPCB/HAZ-RC-200/24/2014  
 Date of Issue : 22/07/2014  
 Validity Period : 22/07/2014 TO 21/07/2019

Type & quantity of the Hazardous Waste(s) permitted for procurement and recycling :

S. No.	Hazardous Wastes (Lead Bearing) Type	Quantity (Tons Per Annum)
1.	LEAD SCRAP LEAD ACID BATTERY PLATES	800 MTPA (FOUR THOUSAND EIGHT HUNDREDS MTPA ONLY)

Authorised Signatory & Seal

*[Signature]*  
 22/7/14  
 Senior Environment Engineer  
 Unit Head-Hazardous Waste Cell,  
 Gujarat Pollution Control Board,  
 Paryavaran Bhavan, Sector-10-A,  
 Gandhinagar-382 010.



Authorization for handling of lead acid batteries

## Hazardous liquids, residues and sediments

### Status of the SRF

- ✓ Bunkers and oils are minimized prior to beaching
- ✓ All remaining bunker and lubricating oil are collected for recycling by a licensed subcontractor before commencement of cutting.
- ✓ This company sends specifically trained cleaning team for cleaning up and draining all slops into tank trucks.
- ✓ Residual oil storage tank is protected against leaking, overflow, fire and other potential accidents.
- ✓ Oily waste such as sludge is collected and transported to GEPIL for disposal.

### Confirmed by

- ✓ Site observation (oil storage tank)
- ✓ Interview with HSE manager



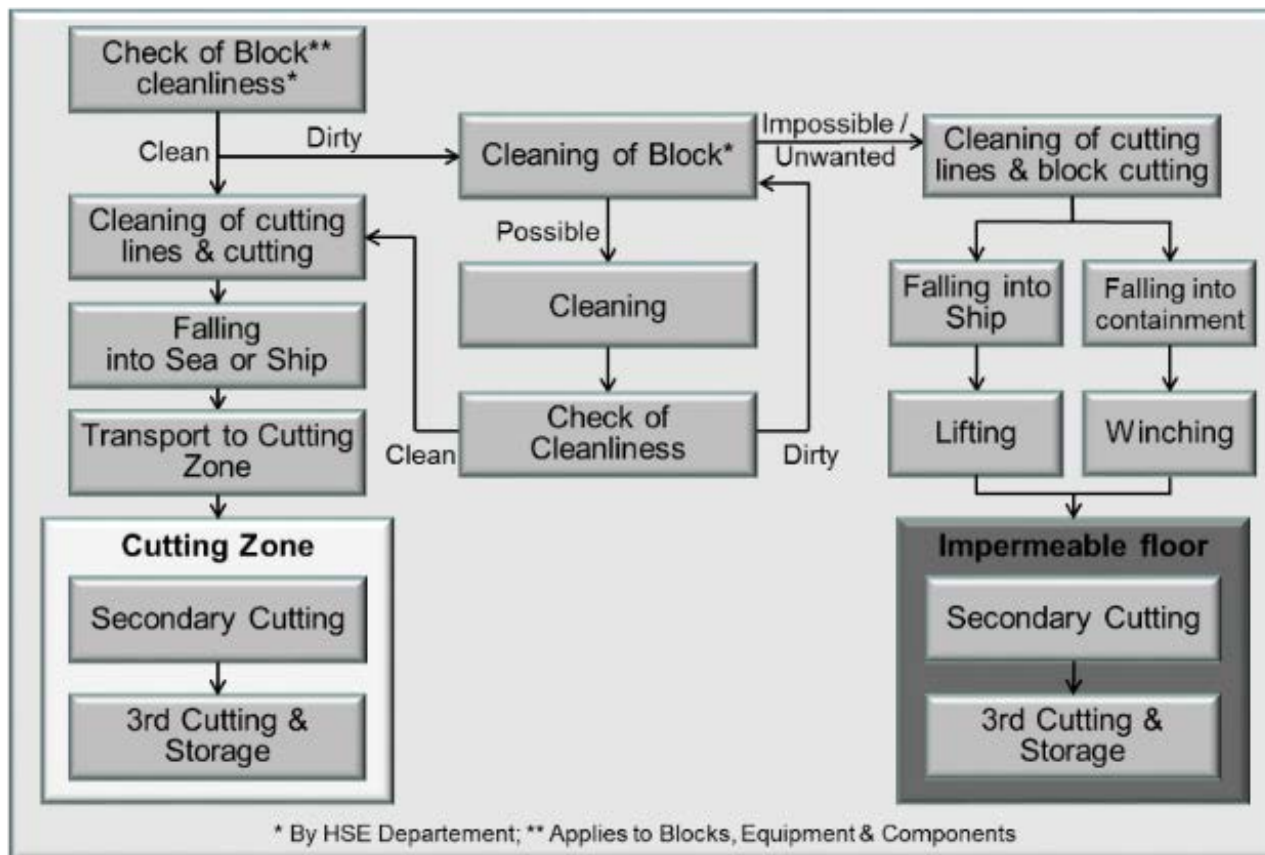
FO Tank before & after cleaning with saw dust

## Status of the SRF

Blocks are fall into a ship in principle.

Establishment of the system for dirty blocks and machinery

- ✓ Not to be placed at intertidal zone without cleaning
- ✓ To be transported to dirty block cutting area with proper spill prevention



Impermeable floor and drainage system



## Block falling process (controlled gravity process)

1. Prior written notice is given to neighbors for falling a block.
2. The hull is cut except for the final cutting line. (Preparation)
3. Workers are evacuated to outside of the dangerous area except for a minimum number of person onboard to cut the final line.
4. Tension is applied by a winch onshore in order to control direction.
5. The final line is cut off to let the block fall.

### Confirmed by

- ✓ Site observation (block falling process)
- ✓ Interview with HSE manager



Controlled block falling process

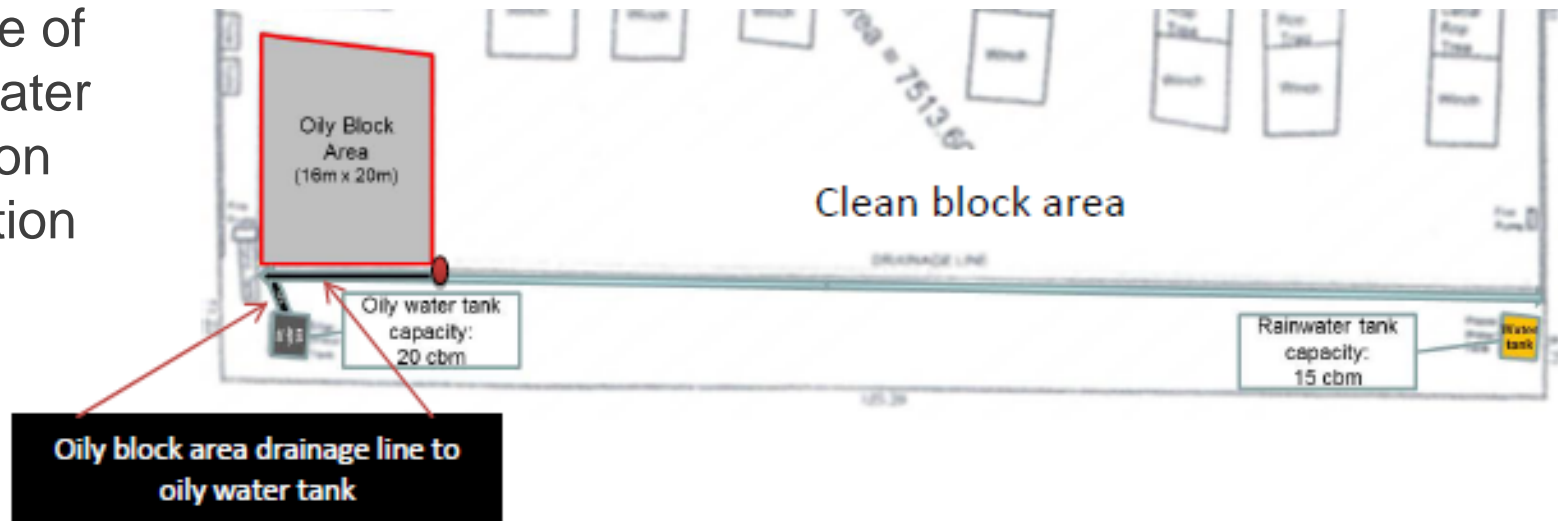
## Status of the SRF

- ✓ Dirty blocks and equipment is treated at oily block area with impermeable floor and drainage system.
- ✓ Rainwater from oily block area is collected in oily water tank and transported to GEPIL for disposal.
- ✓ Preventive measures for minimizing volume of contaminated water are taken

## Confirmed by

- ✓ Document examination of SRFP
- ✓ Site observation
- ✓ Interview with HSE manager

Example of storm water pollution prevention





## Status of the SRF

- ✓ It is very difficult to make fair judgement regarding prevention and control of debris at intertidal zones because many debris drifted ashore after every high tide.
- ✓ Continuous daily cleaning by the SRF is carried out.

## Confirmed by

- ✓ Document examination of SRFP
- ✓ Site observation (checking of daily cleaning activity)



Workers cleaning the intertidal zone



Debris collected from intertidal zone

- ✓ ClassNK carried out the document examination of SRFP and site inspection of four Indian SRFs in accordance with the internal checklist developed based on the IMO Guidelines (Res. MEPC.210(63)).
- ✓ As a result of the examinations and inspections, ClassNK concluded that the four SRFs are complying with HKC.
- ✓ ClassNK thinks that the important point for beaching facilities is whether the system is established or not to prevent harmful spills or emission in intertidal zones.
- ✓ Also, ClassNK thinks that following the system of continuous improvement is important and conducts annual inspection of the facilities.

# Annex: Information on Alang

- ✓ Downstream Waste Management
- ✓ Labor Welfare

- GMB has developed a dedicated TSDF\* for disposal of wastes generated from ship recycling facilities.
- GMB has contracted M/s Gujarat Enviro Protection and Infrastructure Limited (GEPIL) to operate the TSDF.

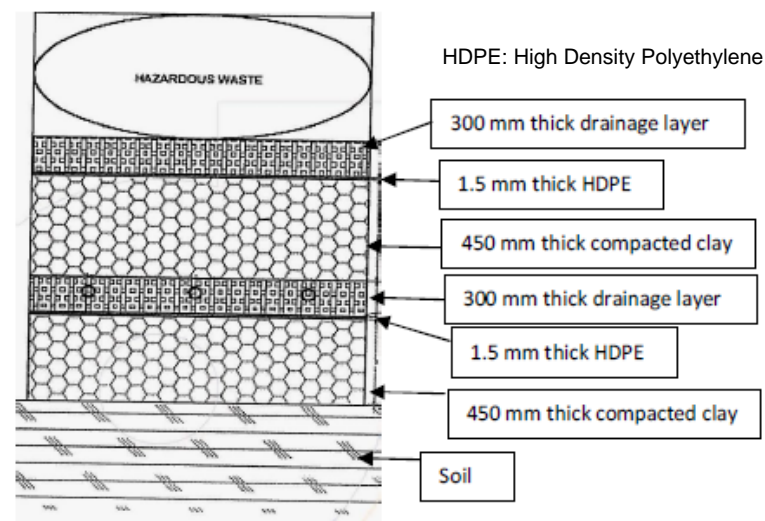
## Landfill

- ✓ Hazardous Waste Landfill Cell (Asbestos, ACM)
- ✓ Municipal Solid Waste Landfill Cell



Operating Hazardous Material Landfill

\*TSDF: Waste Treatment, Storage & Disposal Facility



Section of Bottom Liner of Hazardous Waste Landfill

## Incinerator

The incinerator handles:

- ✓ Oily sludge
- ✓ Oily rags / cloth and sand
- ✓ Paint & coatings
- ✓ Rubber gaskets & isolation mountings
- ✓ Insulation of damaged electrical cables
- ✓ Plastics, paper etc.



Incinerator at Alang TSDF

## Effluent Treatment Plant (ETP)

- ✓ The ETP has a capacity to treat 30 m<sup>3</sup>/day of oily waste waters from ships.
- ✓ The ETP also treats leachates from the TSDF's landfills and waste water generated from the incinerator's flue gas scrubbing system.



ETP at Alang TSDF

## Housing and Sanitation Facility

In order to provide proper housing and sanitation facilities, GMB in association with Ship Recycling Industries Association (SRIA) has taken the initiative to create a dormitory type housing facility for 1008 labourers in phase-I.



Under Construction Workers' Barracks as in April, 2015 (source: GMB)

**THANK YOU**

**for your kind attention**

