



Investigation Process and Methods in Handling Hazardous Chemical related to accidents

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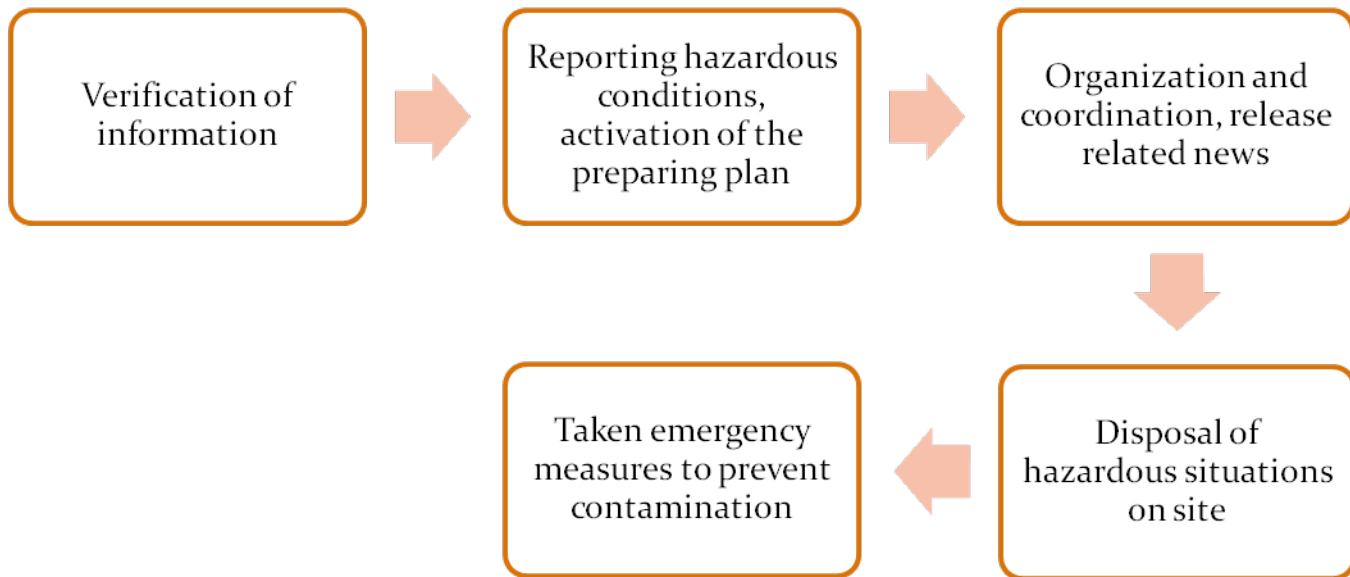
Maritime Safety Administration of the People's Republic of China

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Dangerous
Goods
Emergency
Response

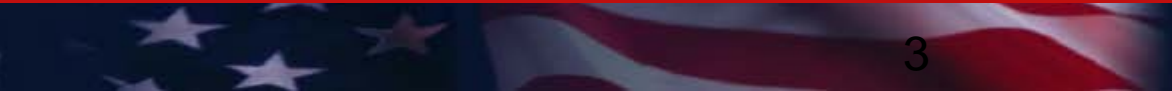




2001 “4.17” Yangtze River Estuary styrene Spill Case



- Time: April 17th 08:00 2001
- Location: The Yangtze River Estuary
- Meteorology: Heavy fog
- Vessls: “Da Yong” 、 “Da Wang”
- Accident: Collision occurred
- Consequence: Vessel damaged, leading to contamination





Pollution status

Data monitoring at the accident site

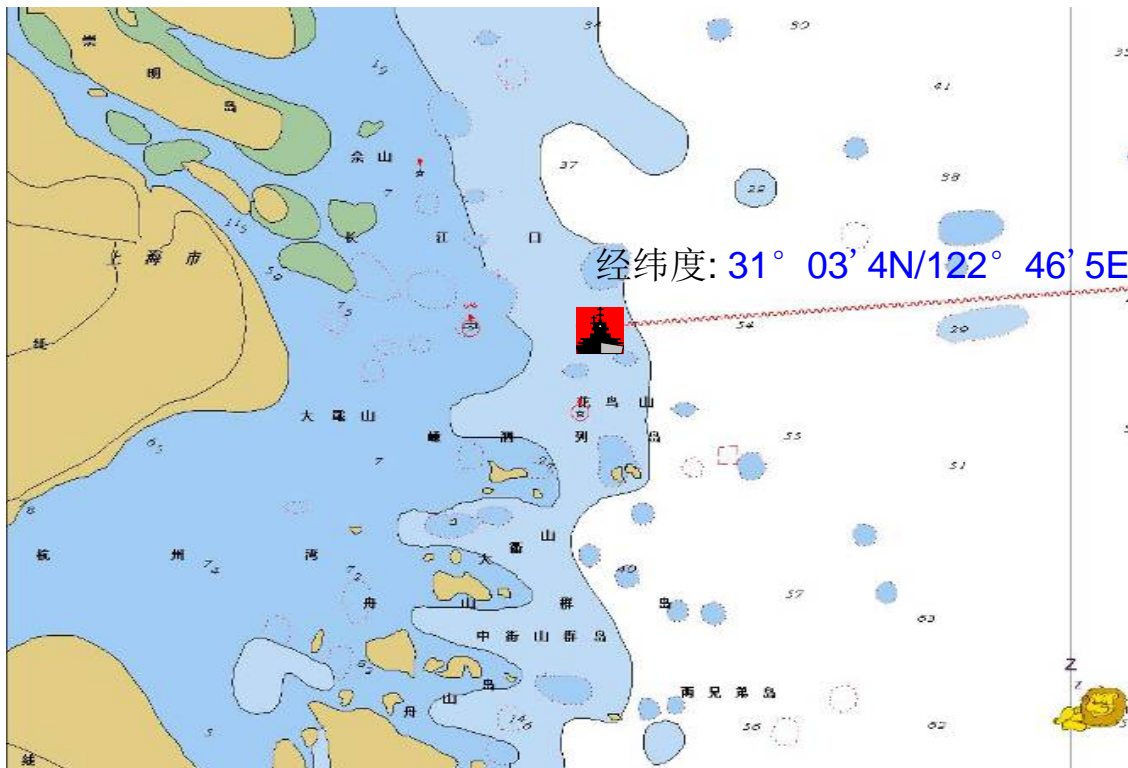
638.806M/
T Styrene
leak into
the sea

Air styrene content of 55 mg / m

--- Allowable concentration of 3 mg / m

Seawater styrene content of 40.5 mg / l

--- Far beyond the normal population and the environment's withstanding the upper limit



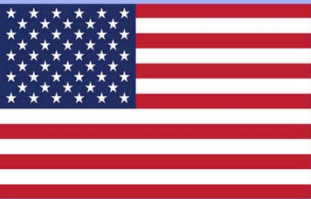


Phase of pollution control and clean-up



- Starting "Shanghai Sea oil / chemical spill rescue emergency plan"
- Berths shifting with the rescue tug's assistance
- Site environmental monitoring
- Chemical rescue team stations for special care, Chemical rescue medical team stationed for medical assistance
- Emergency resources and personnel deploy in the rescue scene
- Safety and pollution hazards convene accident expert assessment





Stage of Styrene barge



Purpose: Eliminate the hidden dangers

Specific task measures:

- Urge the ship owner to submit the program to eliminate hazards
- Organize experts to evaluate the program
- Develop barge-barge on site emergency plans
- Organize and implement the plan





The stage of ship temporary repair



- Ship - owner submit 《“Da Yong” temporary repair plan》
- Organize experts to review the proposals
- CCS measure the explosion point and issue 《vesse combustible gas clearance certification》
- “Da Yong” ship repair and reinforcement
- Develop “Da Yong” returning route by tug boat
- CCS verify the tugboat plan
- “Da Yong” completed the departure procedures
- “Da Yong” return to South Korea by South Korean flagged tugboat





“4.17” accident emergency relief last for a month

- **Successfully removed a broad security risk**
- **Minimize the degree of pollution and damage**





Investigation of the shipwreck accident

Contents of the survey

- Cause of the accident
- Pollution and damage status
- Emergency response: emergency investigative powers and the right at different level
- Compensation status





reports link to the accident

Investigation of the shipwreck accident

- 《Ship accident and pollution confirmation report》
- 《Investigation report》
- 《Ecological Environment Impact Assessment 》





Thank you

