



**forestry, fisheries
& the environment**

Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

Ref: O2/1/5/2

NATIONAL ASSEMBLY

(For written reply)

QUESTION NO. 302 {NW313E}

INTERNAL QUESTION PAPER NO. 2 of 2022

DATE OF PUBLICATION: 18 February 2022

Mr P Mey (FF Plus) to ask the Minister of Forestry, Fisheries and the Environment:

- (1) What were the deciding factors that determined the dumping of the toxic cargo of the NS Qingdao only 250km from the coast of the Republic and not further out to sea;
- (2) what compound(s) has she found were released during the chemical reactions from the ship in the concentrated toxic gases due to the combustion that took place on board the ship in the incidents at (a) Durban and (b) Saldanha Bay;
- (3) what has she found (a) will the chemical reaction of the waste have with seawater and (b) will the impact of these compounds have on ocean life in the vicinity of the dump sites?

302. THE MINISTER OF FORESTRY, FISHERIES AND THE ENVIRONMENT REPLIES:

(1)

Two candidate sites were initially identified and assessed based on the following criteria: safety of life and property, weather/sea conditions, and environmental sensitivity.

One of the potential sites was located outside of South African waters. Should that site have been utilised, the dumping would have been outside of South Africa's jurisdiction and would have constituted a breach of international law. Due to safety concerns for the vessel and crew, and in order for the

department to be in a legal position to exercise its powers in issuing an emergency dumping permit with appropriate conditions, the dumpsite closer to the shore (259 km offshore) was authorised.

It should be noted that the South African Maritime Safety Authority (SAMSA), as the entity mandated under the country's maritime transport legislation, is currently leading an investigation into the circumstances that led to the cargo becoming unstable onboard and subsequently a maritime emergency.

(2)(a)(b)

The cargo consisted of the following chemicals:

- Sodium metabisulfite (estimated 161 tonnes): $\text{Na}_2\text{S}_2\text{O}_5$: A reducing agent, sensitive to water and air, and should be kept away from oxidisers, for example, nitrates. Generates fumes if in contact with acids.
- Ammonium sulphate (estimated 371 tonnes): Incompatible with oxidising agents, nitrates, chlorates, copper and zinc. Generates ammonia, nitrogen oxides (NO_x) and sulphur oxides on decomposition.
- Carboxymethyl cellulose (estimated 221 tonnes): A combustible material, to be kept away from oxidisers, for example, nitrates. Produces CO and CO_2 on decomposition.
- Calcium formate (estimated 202 tonnes): A combustible material, produces CO and should be kept away from oxidisers.
- Electrode paste (estimated 148 tonnes): This material is combustible but will not ignite readily. Burning produces heavy smoke. Generates NO_x ; SO_x & CO_x .
- Magnesium nitrate hexahydrate (estimated 360 tonnes): $\text{Mg}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$. An oxidiser, to be kept away from combustible materials and reducing agents.
- Caustic calcinated magnesite (estimated 121 tonnes). Non-combustible. Reacts with acids. Water will react with magnesium oxide to form magnesium hydroxide and release heat and steam.

Gases released were nitrogen oxide, sulfur dioxide, hydrogen sulphide and ammonia in various concentrations.

(3)(a)

The scientific advice received suggested that the possible impacts as a result of the disposal activity would consist of:

- possible short-term, localised algal blooms;
- localised acute effects on organisms and ecosystems;
- further offshore transport and dissipation of fertiliser blooms, subject to current and wind dynamics; and
- the advice received was utilised to impose monitoring obligations on the vessel owner.

(3)(b)

No immediate impacts were observed during dumping and none of the possible impacts indicated above have been observed. The Department of Forestry, Fisheries and the Environment is currently liaising with the ship owner to undertake a medium (1 year) to long term (3 years) monitoring and assessment programme for any potential impacts.

Regards



.....
MS B D CREECY, MP
MINISTER OF FORESTRY, FISHERIES AND THE ENVIRONMENT

DATE: 25/02/2022