



## **KIMO RESOLUTION 1/96**

### **TRANSPORTATION OF NUCLEAR WASTE BY AIR AND SEA**

The grounding of the "MV Braer" would be seen as a minor environmental incident compared to a ship releasing a nuclear cargo. If a similar incident to the Braer was to occur involving a ship carrying nuclear waste along the coast of Europe the consequences could be extreme. There would be widespread and continued impacts for a considerable period of time with significant effects on the economy and health of the communities involved.

There have been concerns and doubts raised both within the UK and internationally by governments, the European Parliament, seafarers organisations such as the International Transport Federation, and other bodies about the current arrangements for the transportation of nuclear materials both by sea and by air:

- Concerns have been raised that there will be a two-fold increase in plutonium nitrate shipments from Dounreay, and High Level Waste and Plutonium Oxide shipments from the UK. More shipments from Germany, Australia and Japan are planned to the UK and France.
- There has been no discussion of the emergency planning in the event of a marine accident involving nuclear materials and the need to involve the relevant local coastal/port authorities.
- Plutonium nitrate shipments from Scabster (near Dounreay) to Workington, (near Sellafield) are routed via the Minch rather than the Deep Water Route west of the Western. The argument that The Minch is the shortest and most direct route and offers less risk in the more sheltered waters compared with the Deep Water Route is not sound. Ships experience Deep Water conditions at both ends of the Minches and are presumably not at risk then.
- The transportation of irradiated fuel on roll-on / roll-off freight and passenger vessels is unsatisfactory.
- The integrity of the flasks used to transport irradiated fuel is questionable. There is evidence that ship-borne fires last longer on average and at a more intense heat than the safety criteria used in flask stress tests. The current effectiveness of flask stress tests is also taken for granted.
- The International Atomic Energy Agency and the International Maritime Organisation (IMO) agreed standards for flasks needs to be reviewed and

strengthened. Evidence does exist which causes concern to many countries and organisations. A recent report by a US physicist, Dr Lyman addresses the shipments of Vitrified High Level Radioactive Waters from France and Japan. The new IMO Code of Practice for carrying irradiated fuel, plutonium and high level wastes concerns a number of IMO members in that this only codifies existing industry practice.

- The question of liability and compensation in the event of a nuclear accident is of concern. The potential damage of a major maritime accident involving nuclear materials is reflected in the insurance industries refusal to insure such shipments, thus shifting the burden to the taxpayer.
- The laws governing liability and compensation for nuclear accidents are highly complex and are presently being reviewed, primarily as a result of the Chernobyl accident.
- The insurance industry views the prospect of an accident in the southern North Sea contaminating offshore installations, other vessels and the coastlines of several counties as too expensive even to contemplate providing coverage.
- the design criteria for nuclear transport flasks do not meet realistic accident conditions. The type B flask used for air transports can withstand an impact of only 30 mph while mid-air collisions can occur at around 1,000 knots. The whole idea behind the flask design was that no matter what the accident or transport mode no radioactivity would be released. Clearly that cannot be the case with the obsolete type B flask.
- there are no regulatory provisions instructing flight operators to avoid routes over heavily populated areas;
- many established flight routes are "advisory routes". This means that pilots are not required to obey the instructions of air traffic control nor are there any guarantees that "the airspace does not contain other traffic which has not informed air traffic services of its presence.";
- radar cover on advisory routes is not 100%, and information cannot be given on traffic which enters the airspace unannounced. A typical example would be "low flying military jet aircraft climbing out suddenly from low-level due to deteriorating weather.";
- some airports which receive nuclear shipments have no radar;
- some flights take place during military exercises, implying no account is taken of the increased risks during these periods;
- military flights in some areas are expected to increase;

The transportation of nuclear and toxic waste by sea and air is an issue of great concern to members of KIMO as the communities they represent all depend on a

clean environment and perhaps more importantly a perception of a pristine marine environment which produces clean raw materials. This is, in many cases, the basis of survival for many small remote rural and island communities. The irreparable damage to this image which could arise as a result of an accident involving a ship or aircraft carrying nuclear waste could have disastrous consequences on local economies.

## **KIMO**

**Recognising that, in the event of an accident, the transportation of nuclear materials by air or sea presents real dangers to the marine environment and consequently to the sustainable viability of coastal and other communities**

**urges;**

**1) the Governments of Europe, the European Commission and other agencies to meet their responsibilities to protect the people and environment of Europe and call a halt to these dangerous and potentially deadly transports.**

**2) the International Atomic Energy Agency's to reverse its decision to allow nuclear materials to be transported in outdated nuclear flasks and to upgrade its standards to reflect current safety specifications.**

**3) that these materials are stored above the ground, at the point of production, in depositories where they can be more safely monitored and checked.**

**KIMO members:**

**1) agree to submit this Resolution to all National Governments, the European Commission and other agencies.**

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