

To

Prime Minister
Dr Manmohan Singh

19 September, 2007

Subject: "Judgement Order I.A. No.34 of 2006 in Writ Petition No.657 of 1995 *Permission for dismantling of ship BLUE LADY*"

Mr. Prime Minister,

My name is Tom Haugen and I am expert in fire detection system installations within the marine field, specializing in cruise ships and larger ferries. My reason for writing to you today is to share with you and your Supreme Court information I believe to be crucial in maintaining the factual and legal integrity of recent rulings made by the Indian Supreme Court.

In the past few days I have been contacted by numerous journalists from the Indian and international media, as well as several individuals and groups concerned with the fate (and conservation) of the former cruise vessel known variously known as the 'SS France', 'SS Norway' and now, 'SS Blue Lady'. I understand this vessel is currently beached at Alang and awaiting demolition.

From what I have been told and, from inquiries I have made independently, the Supreme Court has effectively given permission for the 'Blue Lady' to be dismantled.

To quote Supreme Court 'O R D E R - I.A. No. 34 of 2006 IN WRIT PETITION (CIVIL) NO. 657 OF 1995' issued September 11th, 2007:

“Taking into account the contours of TEC report dated 10.5.2007 and the opinion of TEC that the recycler M/s Priya Blue Industries Pvt. Ltd. has complied with the norms regarding dismantling and recycling, we accept the report of the TEC dated 10.5.2007 and we accordingly grant permission to the said recycler to dismantle the said ship "Blue Lady" as recommended by TEC”

With the greatest of respect for India's legal system and for its sovereign courts, my great concern is that the court has unwittingly made this ruling based on inaccurate and even misleading evidence concerning the presence of radioactive material within the vessel's fire detection and suppression systems.

I state this not only as an acknowledged expert in the field of (cruise) ship fire detection and suppression systems, but also as the person directly responsible as project manager for the installation of the fire detection and suppression systems currently aboard the 'Blue Lady'.

In 1990, I fulfilled a contract with Norwegian Cruise Line (NCL), then the owner of 'SS Norway', for a complete upgrading and installation to a new fire detection system. This was to comply the SOLAS regulation Chapter.13 for the requirement to have smoke detectors installed all over the vessel. During a three month period, my company did a turn-key delivery for upgrading and installation of the new fire detection system with approximately 5,500 detection points: 4,300 optical smoke detectors, which detect large particles of combustion gases and, 1,100 ion smoke detectors, installed in technical spaces such as engine rooms, ventilation rooms, engine casing, all other technical rooms.

We still have in our possession extensive documentation (over 200 charts and deck schematics) showing the exact locations of all these devices and their radioactive components.

It is practically and logistically inconceivable that these devices have been removed, given the ships' extensively documented history to date.

Furthermore, it must be brought to direct attention of the Prime Minister and the Court that beyond the radioactive elements contained in the 1990 system, an earlier fire suppression system installed in 1960 is also still intact.

Both systems contain significant quantities of the radioactive element "Americium 241" (also known as Am-241), a synthetic (man-made) element (classified as a metal) that is made from plutonium. AM-241 emits gamma rays, the most dangerous form of radiation. Gamma radiation passes straight through human skin and causes the eventual destruction of DNA within human (and animal) cells.

According to the U.S. Environmental Protection Agency:

“Americium-241 poses a significant risk if ingested (swallowed) or inhaled. It can stay in the body for decades and continue to expose the surrounding tissues to both alpha and gamma radiation, increasing the risk of developing cancer. Americium-241 also poses a cancer risk to all organs of the body from direct external exposure to its gamma radiation.”

The Department for Disease Control and Protection (CDC), says of Americium 241:

“As a dust or fine powder, Am-241 can cause certain cancers. When Am-241 powder is swallowed, absorbed through a wound, or inhaled it can stay in the body for decades. Am-241 concentrates in the bones, liver, and muscles, exposing these organs to alpha particles.”

Avoiding exposure to Am-241 during the breaking of the Blue Lady is inconceivable – probably impossible – unless the removal of these fire detection devices is performed under the supervision of accredited expert technicians. Given the relatively aggressive activity required in breaking up a vessel as complex and large as the Blue Lady, I deeply fear that workers and the environment will be subject to radioactive contamination caused by the cumulative effect of many fire detectors being inadvertently broken open and their Am-241 released into the open environment.

Upon reviewing court and other reports, the assertion by the Atomic Regulatory Board and the Gujarat Maritime Board that the Blue Lady contains *no* radioactive presence is grossly wrong.

With the greatest of respect to both the Gujarat Technical Committee and the salvage company that currently control this vessel, it is my professional opinion that the work required to remove this system cannot be undertaken at Alang without exposing workers and the community at large to internationally notifiable levels of radioactive contamination.

In most cases, the fire detection systems in question are not labeled or indicated in any way, as they are typically 'buried' out of sight. Due to the risk of hazardous radioactive exposure, they should only be handled by professionals or certified technicians.

Any upgrades, changes, removing or dismantling involving the radioactive detector elements on board

the vessel is restricted by law (in the EU and US) and must follow regulations for handling radioactive and dangerous waste. Our normal procedure when dismantling and handling any radioactive detector elements is to pack them (complete detector head) in special bags, mark them as radioactive materials and then ship them to a certified laboratory for disposal.

I must stress again that, regardless of the reports of recent inspections, these systems containing Am-241 must still be aboard and are embedded along the length and breadth of the vessel, and from its top to its bottom.

The system and its detectors are very subtly placed and virtually completely hidden in most parts, so it is totally understandable that a non-expert team might miss it during a broader inspection of the vessel.

In summary, my concerns are thus:

- The fire detection and suppression system containing Am-241 remains in place
- If the ship is dismantled by non-expert workers and companies ignorant of both the system's precise location and technical layout, then radioactive exposure (and asbestos exposure – much of the system used asbestos to protect heat sensitive components) in the dismantling process is guaranteed.

There are only a small number of companies in the world that can safely and conclusively locate, disable, remove and finally dispose of the radioactive devices embedded in this vessel.

To reiterate, the following issues must be emphasized:

- The vessel Blue Lady currently contains the systems installed in 1960 and they contain Americium 241, and asbestos.
- The vessel Blue Lady currently contains the systems installed in 1990 and over 1100+ devices contain Americium 241.
- Only qualified expert removal of such systems can diminish fatal exposure, as both knowledge of the specific system, its precise locations and its potential dangers are needed in order to mitigate the risk of significant health issues.

I therefore humbly ask that the Prime Minister and the Supreme Court to reconsider the ruling of September 9th, 2007, and in particular the report(s) of the Committee of Technical Experts on Ship Breaking Activities in Section 12 of the Ruling.

Finally, I must also point out that although this letter could be perceived as self-interested - as I could potentially be seen to profit from any ruling made as a consequence of the information I am willing to provide to the court and other interested parties – I must inform you that my 'going public' actually stands to harm myself and my business as it inevitably could be interpreted as reflecting negatively on the very industry I rely on for my living. Please be under no illusion: I stand to lose more from publicizing this information that I can possibly gain.

But, as an honorable citizen with concern for the state and future of my industry, profession and the environment that we must all co-habit, I feel duty-bound to directly communicate what I know with

you. It would be a travesty of Indian and international law for a ruling to be enforced and then profited from if that ruling was based on incomplete or even misleading evidence.

I hope the information contained in this letter can be of assistance to you in future deliberations.

Yours faithfully,

Tom Haugen