

24th October 2017

For the attention of

Chairman Toyoshi Fuketa

Nuclear Regulation Authority (NRA)

We are writing to express our deep concern over Kobe Steel products widely used within the nuclear industry and are calling on the Nuclear Regulation Authority (NRA) to act with the urgency that this serious matter demands.

As a result of recent disclosures of deliberate falsification of production inspections records, and which are reported to have persisted for several decades, the implications for the safety of nuclear plant operations in Japan is potentially severely compromised. Investigations are expanding in Japan and worldwide into the supply, quality and safety of Kobe Steel components supplied to at least 500 companies. Confirmation that this includes Kobe Steel tubes supplied to the Tokyo Electric Power Company (TEPCO) for use in heat exchangers at the Fukushima Daini nuclear plant¹, underscores that this is an urgent issue of direct relevance to the nuclear industry in Japan, and therefore to the NRA.

Research has shown that Kobe Steel supplies metal products and services across the nuclear industry both in Japan and overseas.² Of particular concern are Kobe Steel materials that are used in the welding of Reactor Pressure Vessels (RPVs), cooling systems of both Pressurized Water Reactors (PWRs) and Boiling Water Reactors (BWRs), including Main and Auxiliary Feed Water pipework and Condensers,, zircalloy nuclear fuel cladding, and reactor fuel channels in BWRs. In addition Kobe Steel, in partnership with AREVA of France, is a designer and manufacturer of spent fuel and plutonium Mixed Oxide (MOX) transport casks widely used in Japan, as well as internationally. Kobe Steel is also a supplier of major pipework systems at the Rokkasho-mura reprocessing plant.

It is our understanding that Tokyo Electric Power Company, Kansai Electric Power Company, Chubu Electric Power Company, JAPCO, Tohoku Electric Power Company, Hokuriku Electric Power Company, Kyushu Electric Power Company, Hokkaido Electric Power Company, Shikoku Electric Power Company, Chugoku Electric Power Company, and J-Power are all likely customers of Kobe Steel together with Japan Nuclear Fuel Ltd, the operators of the Rokkasho-mura fuel cycle plant, as well as the Japan Nuclear Cycle Development Institute.

With evidence emerging that Kobe Steel have been falsifying inspection data and supplying components that did not meet customer specifications over many decades,³ it is of deep concern that Kobe Steel has been a supplier to the Japanese nuclear industry since the mid 1960's. The broad

1 Nikkei, "Shinko system, incomplete descriptions in unused nuclear plumbing TEPCO Fukushima No. 2", 13 October 2017, see <https://www.nikkei.com/article/DGXMZO2222131013102017000000/>

2 Link to table.

3 Nikkei Asian Review, "Kobe Steel plants faked quality data for decades" 17 October 2017, see <https://asia.nikkei.com/Spotlight/Kobe-Steel-data-scandal/Kobe-Steel-plants-faked-quality-data-for-decades>

range of Kobe Steel supply to the nuclear industry, and the failure of these components during reactor or fuel cycle operation has the potential to cause or exacerbate a severe nuclear accident, with major radiological consequences which would directly threaten the health and safety of millions of Japanese citizens and the environment.

You will be aware that this is not the first time in recent years that the quality control and inspection failures of the Japanese steel suppliers to the nuclear industry has been exposed. In the 2015/16 case of the supply of steam generator components by the Japan Casting and Forging Company (JCFC) and evidence of below specification steel by Japan Steel Works (JSW) to the French nuclear industry, the NRA failed to conduct a robust and comprehensive investigation.⁴ In contrast to the years of investigation by French authorities, which are on going, the NRA concluded its review within a matter of weeks and without a credible explanation of the multiple issues exposed by the crisis. Such an approach by the NRA in the case of the Kobe Steel scandal is not acceptable.

As a matter of urgency we are calling on the NRA to issue written instruction to Japanese nuclear reactor and nuclear fuel cycle plant owners:

*** to suspend delivery and installation of all Kobe Steel copper, steel and aluminium products for reactors and fuel cycle plants;**

*** for immediate public disclosure of complete supply chain of Kobe Steel products installed and used in existing Japanese reactors, MOX and spent fuel casks and JNFL reprocessing plant;**

*** for the public release of quality control, certification and customer specifications for all Kobe Steel components;**

*** public release of all inspection reports of Kobe Steel components, including evidence of degradation/corrosion/embrittlement and non compliance with standards;**

*** independent audit of quality control and assurance applied to all Kobe Steel components supplied to Japanese reactors and nuclear fuel cycle facilities and spent fuel casks;**

*** at the earliest opportunity the inspections of all Kobe Steel components. For operating reactors this means shutdown at the earliest opportunity, for reactors nearing completion of the NRA safety review as well as those due to restart in the coming months, the immediate suspension of NRA approval, pending comprehensive, verifiable and transparent inspection;**

In the case of the NRA, we call on the commission to:

*** call on the Japan Quality Assurance Organization to assess the compliance with legal industrial standards for all components supplied by Kobe Steel to the Japanese and overseas nuclear industry;**

*** initiate an urgent and publicly transparent review of the regulatory oversight of the manufacture, supply, certification and inspection of Kobe Steel components supplied to the**

⁴ Greenpeace, “Japanese Reactor Steel at Risk of Catastrophic Failure - JCFC, JSW and JFE Holdings under Suspicion”, 13 December 2016, see <http://www.greenpeace.org/japan/ja/news/press/2016/pr201612131/>

nuclear industry, including the role of its predecessor the Nuclear and Industrial Safety Agency.

Regulation of the safety of nuclear power in Japan is the responsibility of the NRA. The potentially severe consequences that would result from the failure of Kobe Steel components installed in nuclear reactors and fuel cycle facilities demands a robust, decisive and immediate response by the NRA. The required action by the NRA and its investigations need to be conducted in a transparent and publicly accountable manner if citizen confidence in the NRA is not to be further undermined.

We would appreciate at the earliest opportunity to meet with you discuss these matters with NRA officials.

Yours sincerely,

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