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Russia’s decommissioning of historic reactor hobbled by bumbling secrecy

The reactor at Obninsk, Russia, long hailed as the first nuclear installation in the world ever used to commercially produce electricity, became another historic first when Moscow decided to close it and turn it into a museum to Soviet scientific achievement in 2002.

Charles Digges

Radiation symbol. (Photo : Nils Bhmer)

The reactor at Obninsk, Russia, long hailed as the first nuclear installation in the world ever used to commercially produce electricity, became another historic first when Moscow decided to close it and turn it into a museum to Soviet scientific achievement in 2002.

But a recent public hearing on the state of its decommissioning showed the reactor is still plagued by many of the same old Soviet-style obsessions with secrecy and Politburo-worthy bureaucratic screw ups that, try as it might, Russias nuclear industry cant seem to banish to the dustbin of history.

The hearing was convened early this month to review the reactors very long-term decommissioning strategy a process that began with its closure, gained steam with the initial unloading of its fuel in 2008, and is expected to last until 2080.

But it turned out that two things were lacking from the hearing, the absence of which meant that the discussion of this first-ever nuclear reactor decommissioning project in Russia didnt really mean anything at all.

First, it turned out that the company that owns the reactor doesnt have a license to decommission it in the first place. Second, any discussion of how much spent fuel accumulated after the reactor went online in 1954, and the condition of the storage structures where its is being housed after its removal is, technically speaking, not for public digestion.

Even if these things had been in evidence at the hearing, however, there probably wouldnt have been quite enough time to discuss them, and even fewer people interested in hearing about them. The hearing itself lasted all of a half an hour and fell, as so many public hearings about Russian nuclear plants do, in the midst of a busy working day.

As a result, only 25 people showed up, and almost all of them employees of Russia state nuclear corporation Rosatom, or its subsidiary responsible for tending to the reactor. No real effort was made to invite any members of the general public.

As is the case with many things about Obninsk reactor, these items were presented during the hearing as technicalities, and largely subject to argument.

The reactor, located at the Obninsk Institute for Nuclear Power Engineering, is a 5 megawatt graphite moderated prototype unit and it went into service the year that Nikita Khrushchev succeeded Josef Stalin. Between 1954 and 1957, the reactor was plugged into a local limited-scale grid and produced electricity for that time. But afterward, it was disconnected, and spent its remaining 45 years a research reactor.

As such, Russian authorities have long called it the worlds first nuclear power plant, although that title more accurately describes Sellafields Calder Hall reactor, which distributed 50 megawatts across a conventional grid in 1956.

Some in the Russian scientific community have argued that Obninsk wasnt ever a proper nuclear plant, but nonetheless was the first reactor used for electricity production. Yet that, too, is misleading. Americas EBR-1 unit in Idaho pumped out 100 kilowatt of electricity and lit several lightbulbs in 1951. Moreover, the first nuclear power plant used to generate electricity on a commercial scale was the Shippingport reactor in the American state of Pennsylvania. That plant went online in 1957 and was decommissioning in 1989.

Yet that same spirit of hairsplitting debate was alive at this months hearing on decommissioning the Obninsk reactor. Representatives of the reactor who revealed to the hearing that their license to decommission it has expired told Bellona that they had completed the necessary environmental impact studies in order for the decommissioning work to enter its third stage a stage they termed preservation and observation, which will last until 2080.

However, complete as those impact studies may be, the authorities in Obninsk told Bellona representatives who attended the hearing that they werent allowed to see them in their complete form, as much of the information they contains is not suited for public consumption.

Only one version of the document was available, and that was presented on an abbreviated basis in Obninsk itself, and those viewing it were forbidden from photographing its pages or copying from it in any way.

But the authorities assured the participants in the hearing that this was all perfectly legal, or at least as legal as they were required to be, and that, in any case, the environmental impact study would be

submitted to Russias environmental authorities in complete form.

Obninsks representatives were likewise wont to provide any information on how much nuclear waste the reactor has produced and how radioactive that waste is. The existence of the waste is teasingly referred to in the abbreviated environmental impact study on display in Obninsk, but authorities refused to disclose any specifics about its, saying such information was only for official use.

Another way to get at just what specifically these authorities are dealing with would have been a public review of the projected decommissioning costs. These, too, however, remain obscure though on this count not because the authorities withheld answers. Instead they furnished too many, all of them contradictory. Either the costs are provided for in Rosatoms budget, or they are provided for in the budget of the Rostaom subsidiary handling the decommissioning, or, most improbably of all, it isnt costing anything. In any event, authorities were unwilling to divulge their budget for fully decommissioning the unit.

The only fact seemingly not disputed by the authorities who are handling all of this is that Obninsk is the first nuclear reactor Russia has ever got around to decommissioning which is noteworthy in light of the advanced age most reactors in Russia, and indeed the world, are reaching.

As such, the long term decommissioning at Obninsk could offer a blueprint on bringing the worlds commercial nuclear reactors into a safe state as they slouch toward retirement age. Yet its clear that the authorities responsible for this have only incomplete information on how they are doing it, and that theyre hostile about sharing what they know.

If thats the case, then Russias legacy of retiring its old reactors is likely to look a lot like the history its had operating them : Secretive, incompetent, and shadowy. The only good news for those in Obninsk is that they have until 2080 to improve on their act.

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