



Savannah River Site Watch

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www.srswatch.org

Columbia, South Carolina

Plutonium Disposition/MOX Update – Savannah River Site, April 29, 2015



MOX plant at Savannah River Site in foreground, shuttered F-Canyon reprocessing plant in background, ©High Flyer, April 21, 2015 – more MOX plant aerial photos can be found on the SRS Watch website and can be used with credit

In this update:

SRS Watch Again Requests Validated MOX Cost Analysis from AREVA, No Response Expected

DOE Set to End Long-Delayed Plutonium Supplemental EIS Process with No Decision

FOIA Request Filed by SRS Watch for DOE Plutonium Cost Study Sent to Congress on April 22

Nuclear Regulatory Commission Alerted to Possibly Faulty Embed Plates for MOX plant

Rumors on MOX Plant Construction Problems Continue – With Only One (1) On-Site NRC Inspector, Who is Investigating and Who is Properly Monitoring Overall Construction?

Thanks to the Project on Government Oversight (POGO) for their thoughtful MOX blog of April 25, 2015: [“Cost Estimate on Useless Nuclear Facility Skyrockets”](#)

1. AREVA and CB&I AREVA MOX Services requested to release life-cycle cost assessment of plutonium fuel (MOX) program

SRS Watch has again requested that AREVA, the company designing the MOX plant at the Savannah River Site, release its validated life-cycle cost assessment for the MOX program. The request was also sent to CB&I AREVA MOX Services, the consortium that includes Chicago Bridge & Iron, the company building the MOX plant. AREVA has been allowed by the U.S. Department of Energy to continue its design of the MOX plant and to begin planning for the start-up of the MOX plant even though it has produced no public, validated cost estimate. Lack of a validated cost estimate for the MOX plant remains an on-going concern of the Government Accountability Office (GAO). In response to the release on April 23 of [a 1-page summary by Aerospace Corporation](#) on the cost of the MOX project - estimated to be \$52 billion or more - AREVA officials still refuse to release any cost estimate, thus severely crippling their ability to speak with any authority about any MOX costs.

Letters to AREVA officials here:

http://www.srswatch.org/uploads/2/7/5/8/27584045/srs_watch_letter_to_areva_ceo_for_mox_cost_april_27_2015.pdf

http://www.srswatch.org/uploads/2/7/5/8/27584045/srs_watch_to_areva_vp_for_mox_cost_report_april_27_2015.pdf

Letter to CB&I AREVA MOX Services here:

http://www.srswatch.org/uploads/2/7/5/8/27584045/letter_to_mox_services_for_mox_lifecycle_cost_april_28_2015.pdf

The letters request that the validated costs study include, among other things:

- Total cost of construction of the MOX plant at SRS, including sunk costs;
- Cost of start-up of the MOX plant (estimated by DOE in the Fiscal Year 2016 budget request to be \$1.8 billion);
- Yearly operating cost of the MOX plant (DOE estimated this to be \$340 million/year in the FY2012 request and it jumped to \$543 million/year in FY2015 to \$670 million/year in FY 2016);
- Payment to any utilities to irradiate the experimental MOX fuel (MOX fuel made from weapon-grade plutonium has never been used on a commercial scale);
- Administrative costs over the life of the project;

- Cost of decontamination and decommissioning of the MOX plant;
- Cost of operation of the Waste Solidification Building (WSB), which would receive liquid waste streams from the MOX plant and cost of disposal of those waste streams at DOE sites.

2. DOE to finally put Supplemental Environmental Impact Statement on plutonium disposition

The DOE's release of a Final Supplemental Environmental Impact Statement" (SEIS) on plutonium disposition, including MOX use in reactors owned by the Tennessee Valley Authority (TVA) has languished for almost two years given the growing problems with the MOX project. The notation by the draft SEIS on the [DOE's list of key EISs](#) has been "under departmental review" for over 18 months. Now, it appears that DOE will soon release the final SEIS but, to no surprise, it will not include "at this time" a "Preferred Alternative" for plutonium disposition. Earlier, DOE had indicated in the draft SEIS that its Preferred Alternative was MOX, though the draft document affirmed that TVA did not share that view. ([See SEIS website here.](#)) DOE's stepping back from MOX as the "Preferred Alternative" is another blow to the MOX project.

Text of email sent to congressional offices on April 27:

Within the next two weeks, the Notice of Availability for the Department of Energy's Final Surplus Plutonium Disposition Supplemental Environmental Impact Statement (SPD Supplemental EIS) will be announced in the Federal Register. An advanced copy is being sent to your office this week.

The Final SPD Supplemental EIS evaluates the potential environmental impact from alternatives for safe and timely disposition of 13.1 metric tons of surplus plutonium for which a disposition pathway is not yet assigned. This includes 7.1 metric tons of plutonium from pits that were declared excess to national defense needs, and 6 metric tons (6.6 tons) of surplus non-pit plutonium originally planned for immobilization.

In this Final SPD Supplemental EIS, DOE evaluated the No Action Alternative and four action alternatives for disposition of 13.1 metric tons of surplus plutonium. DOE has no Preferred Alternative at this time.

Consistent with the requirements of National Environmental Policy Act, once a Preferred Alternative is identified, DOE will announce its preference in a Federal Register Notice. DOE would publish a Record of Decision no sooner than 30 days after its announcement of a Preferred Alternative.

The Final SPD Supplemental EIS is expected to be available publicly on Friday, May 8, 2015. The Final SPD Supplemental EIS and related information will be available on the

SPD Supplemental EIS website (<http://nnsa.energy.gov/nepa/spdsupplementaleis>), the DOE National Environmental Policy Act website (<http://energy.gov/nepa/nepa-documents>), and the Savannah River Operations Office website (<http://www.srs.gov/general/pubs/envbul/nepa1.htm>).

3. SRS Watch files Freedom of Information Act (FOIA) request for plutonium disposition cost report

As it is unclear when DOE will release its cost study, by Aerospace Corporation, on the life-cycle cost of MOX and on the option to dispose of plutonium as waste, SRS Watch has gone ahead and filed a FOIA request for the document. The request addresses that DOE may need to provide a redacted copy. Given the importance of the April 22, 2015 report and that the “official use only” version of the report has already been delivered to Congress, there must be no delay in releasing a public version.

See the FOIA request filed by SRS Watch here:

http://www.srswatch.org/uploads/2/7/5/8/27584045/foia_request_for_doe_plutonium_disposition_cost_report_april_27_2015.pdf

4. Nuclear Regulatory Commission Alerted to Possibly Faulty Embed Plates for MOX plant by CB&I AREVA MOX Services

In an April 21 letter from CB&I AREVA MOX Services to the NRC, made public on April 28, MOX Services indicates that there may be problems with faulty welds in embed plates. The report, called a Part 21 interim report (referring to NRC regulations concerning vendors), states that there are "some identified circumstances of undersized welds" in embed plates made by SMCI vendor in Florida. The report does not mention if any faulty plates have been installed in the MOX plant or not. Installed plates must be removed if they have faulty welds. The report says that "Deviations in embed plate welds can impact the load bearing and structural capability of these components."

The report, not yet posted on the NRC’s Part 21 website, states that “MOX Services engineering anticipates completion of our Part 21 reportability evaluation by 16 September 2015.” It is unknown when the NRC will evaluate the matter and respond but allowing MOX Services to wait until September before more information is provided is unacceptable as construction continues. Likewise, an NRC assessment on the matter must be released as soon as possible.

[“Part 21 60-Day Interim Report Notification” linked here](#)

5. Rumors on MOX Plant Construction Problems Continue – Who is Investigating? NRC has Only One Resident Inspector at the MOX Plant, which is Unacceptable

A number of current and former workers at the MOX plant have pointed out construction problems at the facility to SRS watch. The reports from workers are consistent, including that work orders were improperly signed off on. If true, this could constitute fraud. The DOE's Office of Inspector General is aware of these reports but it is unclear if they are formally investigating. While CB&I may be conducting its own internal investigation, a broader investigation into construction problems – including improper installation of cable trays and piping, which the NNSA has acknowledged – is urgently needed.

It is clear that the Nuclear Regulatory Commission is only reviewing a small part of the construction of the project and is only inspecting a sample of key parts of construction. The NRC has confirmed to SRS that there is only one on-site resident inspector at the MOX plant. While other inspectors may come in as requested, having one inspector inspecting but a sample of "Quality Level-1" components is simply inadequate. (See [April 1, 2015 NRC admission to SRS Watch](#) that only certain aspects of MOX construction are being inspected and that known problems, admitted by the National Nuclear Security Administration, are not being inspected.)

The NRC must immediately assign additional inspectors to the MOX site. Further, the NRC's inspections must be expanded to review all aspects of construction and not leave the job up to CB&I or the NNSA, which may have a vested interest in not looking for problems.

If the NRC will not inspect the construction of the MOX plant properly, who will? Lack of adequate inspection is one reason that rumors about construction problems and possible fraud in improperly signing off on work orders are increasing.

[Update on DOE/NNSA's and CB&I AREVA MOX Services Problem-Plagued Plutonium Disposition Program, by SRS Watch, April 9: <http://tinyurl.com/lsgkxfa>](#)

[Alternatives to MOX: Direct-disposal Options for Stockpiles of Separated Plutonium, International Panel on Fissile Materials, April 13, 2015](#)

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