UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA

AIKEN DIVISION

STATE OF SOUTH CAROLINA, Plaintiff, v. UNITED STATES UNITED STATES DEPARTMENT OF ENERGY; RICK PERRY, in his official capacity as Secretary of Energy; NATIONAL NUCLEAR SECURITY ADMINISTRATION; and LISA E. GORDON-HAGERTY, in her official capacity as Administrator of the National Nuclear Security Administration and Undersecretary for Nuclear Security. Defendants.	Case No. 1:18-cv-1431-JMC

DECLARATION OF ROBERT B. RAINES

EXHIBIT 1

I, Robert B. Raines, make the following declaration pursuant to the provisions of 28 U.S.C. § 1746.

I am employed by the United States Department of Energy (DOE) at 1000 Independence Ave. SW, Washington DC as the Associate Administrator for Acquisition and Project Management. I have served in this capacity from August 2011 until the present.

1. As part of my responsibilities, I am responsible for overseeing construction of large capital construction projects. The information contained in this declaration is based upon my personal knowledge and information that I have obtained in my official capacity.
2. The MOX construction project, was baselined in August 2007. It was originally budgeted at $4.8 B and scheduled for completion in 2016. In 2012 the Department began to question the cost and schedule performance of this project. The Department performed several comprehensive reviews, some internal and some by independent organizations as directed by the Congress. All of these reviews concluded that the project was over budget and behind schedule, that the performing contractor's, MOX Services, cost and schedule to complete were unrealistic. The Department proposed an alternative approach to meet its Plutonium disposition mission called Dilute and Dispose (D&D). This approach was assessed by the Department, Aerospace Corp. (an independent federally funded research and development center review) mandated by Congress, and an independent peer review led by the Oak Ridge National Laboratory director as being less costly, faster, and a lower risk option. Specific details of the history of this project follow.
3. The MOX project was baselined in 2007 at a cost of $4.8 Billion and a completion date of Sept 2016. The project was managed by the Deputy Administrator for Defense

Nuclear Nonproliferation. The contractor's cost estimate was based upon two reference plants constructed by one of the contractor's LLC partners in France several decades ago and did not consider the changes in codes and standards in adapting the French design to modern U.S. building codes and safety standards. The contractor also underestimated the cost and risks associated with reconstituting the atrophied industrial base necessary to design and construct a major nuclear project in the U.S. The Department accepted the contractor's assertions that they could perform on the budget and schedule they proposed. The Dept. requested funds in accordance with the approved project baseline every year. With the exception of FY 2008 the Congress appropriated funds as requested.

4. In August 2011 the NNSA realigned its major construction project delivery strategy shifting construction oversight responsibilities to the Office of Acquisition and Project Management (APM). In January of 2012 APM performed a project review which raised significant concerns about project performance and an updated cost and schedule estimate was requested. A subsequent review held in June of 2012 came to the conclusion that the project could not be delivered within the approved budget and schedule. In Sept 2012 the contractor submitted a new cost estimate of $7.7 Billion and a November 2019 completion date predicated upon an annual budget of $630 M/year for the next four years. This annual budget allowance was significantly higher than that requested by MOX Services in their original project cost estimate and was identified as the basis in which to update their project cost in order to minimize schedule delays.

5. Departmental Orders and Title 50 USC 2753 require the Department to make a determination on whether to proceed with a project when it is determined that it cannot be completed within the approved cost and schedule baseline. DOE Order 413.3, page

A-19 states "When a deviation occurs the approving authority must make a specific determination whether to terminate the project or establish a new PB (Performance Baseline) by requesting the FPD (Federal Project Director) to submit a BCP (Baseline Change Proposal)." https://www.directives.doe.gov/directives-documents/400-series/0413.3-BOrder-b. As part of this process the Department established a Plutonium Disposition Working Group (PDWG) to perform an analysis of the costs, schedule, and performance of the project and to explore alternatives to decide if the project should proceed. This report, completed in April 2014, determined that the MOX approach was significantly more expensive than the Dilute and Dispose approach and was used to inform the FY 2015 budget submission. Attachment A, *PWG on the Analysis of Surplus Plutonium Disposition Options.*

6. In 2014 the on-site federal team questioned the accuracy of the contractors project controls system reports, specifically, their reporting on work completion. This led to a full inspection by the contractor that took approximately a year that confirmed the governments concerns as the contractor's report demonstrated that they had over reported work completion for most major commodities such as pipe, pipe supports, electrical tray, conduit, and electrical equipment by more than 50%.

7. As part of the FY 2015 budget submission the Department notified Congress that the MOX project should be placed in a cold standby status while developing a detailed implementation plan for more efficient plutonium disposition options. This would allow the contractor to maintain critical engineering staff while the Department completed its analysis on continuing or terminating this project. The Congress in the FY 2015 Defense Authorization and Energy and Water Appropriations Act directed the Department to

continue construction and required an independent assessment of the two approaches to plutonium disposition be performed by a federally funded research and development center. This assessment, completed in April 2015 by Aerospace Corp. determined that the Dilute and Dispose alternative was less expensive, faster, and less risky than the MOX approach. Attachment B, *Plutonium Disposition Study Options Independent Assessment Phase 1 Report*. They performed several comparisons, all of which showed the MOX alternative as more than double the cost of the Dilute and Dispose alternative. Their summary stated that "There is no cost-risk confidence level in the assessment where the MOX Fuel Option lifecycle cost-to-go is less than the Downblend Option." *Id.*

8. Subsequently the Secretary of Energy chartered a "Red Team" review of the dilute and dispose approach. Led by the Oak Ridge National Laboratory Director, this team substantially agreed with the earlier reports. Attachment C, *Final Report of the Plutonium Disposition Red Team* dated August 13, 2015. Congress requested two subsequent reports be accomplished; in 2016 an updated performance baseline and in 2017 a review of the contracting methods to determine whether a lower risk contracting strategy should be put into place. The Department updated the performance baseline in collaboration with the USACOE and determined that the MOX project would cost $17.2 B and complete in 2048. Attachment D, *2016 Updated Performance Baseline for the Mixed Oxide Fuel Fabrication Facility at the Savannah River Site: Overview of DOE's 2016 Updated Performance Baseline with a Comparison to the Contractor's Estimates and Data* – dated August 2016. This estimate was reviewed by the GAO who determined that the estimate substantially met best practices and can be considered reliable. Attachment E, *Plutonium Disposition: Proposed Dilute and Dispose Approach*

Highlights Need for More Work at the Waste Isolation Pilot Plant – GAO-17-390, dated September 2017. The USACOE review of the contract structure concluded that the contract could be converted to a Fixed Price Incentive Firm Target contract meeting the goals of reducing risk to the government while being reasonable to the contractor. Attachment F, *U.S. Army Corps of Engineers Report Assessment of the MOX Facility Contract* – dated February 2017. The Department requested MOX Services provide a fixed price proposal as recommended in this report. MOX Services did not provide a proposal, and subsequently indicated that they believed some of the work was not appropriate for a fixed price contract. Attachment G, letter from Rex Norton to Lance Nyman "Contract No. DE-AC02-99CH10888, MOX Fuel Fabrication Facility Project, USACE Contract Recommendations" dated June 13, 2017.

9. The FY 2018 NDAA gave the Secretary the authority to waive the requirement to carry out construction and project support activities relating to the MOX facility.

10. The FY 2018 OMNIBUS Appropriations Act supported the NSAA with an additional provision requiring the Secretary to submit to the Appropriations Committees the life cycle cost estimate used for his certification and stipulated that funds provided for the project may not be used for elimination until 30 days after submission of the lifecycle cost estimate. The Secretary exercised the authorities given to him by the Congress on May 10, 2018 and on May 14 2018 a partial stop work order was issued to minimize cos to the government during the 30 day period leading up to an eventual full stop work order and termination letter expected to be issued on June 11, 2018.

11. The NNSA Partial Stop Work Order issued on May 14, 2018, will have minimal impact to the scheduled work activities per the Contractor's 2018 Execution Plan. Attached as Attachment H.

The Plan outlines the work scope that MOX Services intends to perform in FY 2018. That is the same work scope that MOX Services is expected to perform in the next 30-45 days, that is, during the period of time covered by the partial stop work order. The FY18 Execution Plan focused on finishing the large volumes of unfinished legacy work in engineering, construction, and testing, and developing a detailed resource loaded schedule and work plan for design, construction, and testing of all support activities necessary to obtain a high confidence plan to complete the Project. In other words, MOX Services is to focus its attention on installing pipe, electrical conduit, HVAC duct, and other similar construction activities appropriate for this stage of the Project.

12. The partial stop work order applies only to: "costs associated with hiring new staff, initiating new or awarding in-process procurements, replacing non-manual and manual staff renewal of expiring leases, and/or initiation of new construction activities". Motion for Reconsideration, Raines at ¶ 8, Attachment E, ECF No. 12-1. NNSA has been responsive to MOX Services' requests for clarification about various aspects of the partial stop work order. For instance, NNSA issued a letter of clarification on May 21, 2018 addressing numerous MOX Services questions. *Id.*, Attachment F, ECF No. 12-1. By and large, the impact to the State of South Carolina based on the partial stop work order is limited in nature.

13. Personnel. The partial stop work order applies only to new hires, and does not apply to job offers accepted by employees prior to issuance of the partial stop work letter. *Id.* Based on data provided by the contractor, over the last 6 months, an average of 59 contractor employees depart each month. This is comprised of 13 CB&I Project Services Group (CSPG -- affiliated subcontractor) non-craft employees, 3 AREVA (affiliated subcontractor) non-craft employees, 5 "staff augmentation" (i.e., temporary) non-craft

employees, and 38 CPSG craft employees. Accordingly, the number of personnel vacancies that will not be back-filled is limited and is, at the most, 59 compared to the estimated 1,800 overall MFFF site employees. Attachment I, March 2018 NNSA Human Capital Management Monthly Report.

14. Procurements. The great majority of the major equipment and materials necessary to complete the MFFF have already been procured. There are approximately 40 acres and 300,000 square feet of previously procured equipment and materials awaiting installation. Much of this material has been on hand for years. As such, the majority of the cost at the current phase and future phases of the Project is related to labor. The contractor submits any new procurements for NNSA approval in accordance with the contract. Currently there are only 8 procurements, with an estimated value of $18,822,016, awaiting NNSA approval. 7 of the 8 were submitted prior to May 2018. Only 3 of the requests are for new awards (estimated value $665,214), whereas the remainder are in the pre-award planning phase and, even absent the partial stop work order, these remaining subcontracts would most likely not have been awarded during this period given their preliminary status. Motion for Reconsideration, Raines at ¶ 8, Attachment F, ECF No. 12-1.

15. Construction Activities. As described further below, the nature of ongoing construction activities remains consistent with the contractor's fiscal year (FY) 2018 work Execution Plan. NNSA clarified on May 21, 2018, that the partial stop work applicable to "new construction activities" was only for those not identified in the contractor's FY18 work Execution Plan. *Id.* In other words, the contractor's construction activities as it planned to complete in the current fiscal year are unaffected by the partial stop work order.

16. All other activities not covered by the partial stop work. The partial stop work order did not have any impact to the functional areas not addressed by the order. This includes the majority of the contractor's functions, such as engineering, construction management & support, quality assurance, property management, finance, accounting, on-site materials maintenance and preparation, IT services, license-related activities, security, safety, and other functions necessary to perform the MFFF contract.

17. Work on the Site at the MOX Project is progressing in the same fashion as before the issuance of the partial stop work order. This includes continuation of construction with a focus on completion of work for the MFFF, including installation of pipe, electrical conduit, HVAC duct, and other similar construction activities appropriate for this stage of the Project. Also included is construction support such as engineering, quality assurance, procurement of materials. These activities are consistent with the contractor's FY18 work Execution Plan, although it should be noted that the contractor's progress is significantly slower and more costly than anticipated in the Execution Plan.

18. On June 11, 2018, issuance of the NNSA Contract Termination Notice will have a minimal immediate impact on the staffing for at least 60 calendar days, according to the contractor's representations. Motion for Reconsideration, Raines at ¶'s 9-10, ECF No. 12-1. Specifically, discussions with the contractor's Executive Management Team indicate that the contractor will begin issuance of WARN notices on June 11 and expect to complete such issuance a week later. It is expected that the majority of staff (which total approximately 1,800) will receive WARN notices advising of potential termination in 60 days.

19. This will ensure that all employees will benefit from at least 60 days of full pay and benefits after the termination notice date, based on the contractor's representations. Subsequent lay-offs will affect employees located in both South Carolina and Georgia; however, such impacts are inherent to the nature of construction work.
20. Under the contemplated stop work order no physical changes will be made to the MOX facility except for steps needed to preserve the structure in its current condition for at least the next six months and most likely more than a year.
21. The NNSA will suffer irreparable harm to its vital national security mission if termination of the MOX Project is put on hold. The FY 2018 NDAA directed the Department to select a Site to produce plutonium pits to ensure that the strategic nuclear deterrent remained safe, capable, and credible. After a rigorous process that included input from the United States national laboratories, one of the largest design and construction firms in the country, and experts from the NNSA, repurposing of the MOX facility at the Savannah River Site was selected as the lowest risk alternative to meeting this important mission. The Department of Energy has a statutory requirement to produce 80 plutonium pits per year, 50 of which will be produced in the repurposed MOX facility. See 50 U.S.C. section 2538a and section 3141 of the National Defense Authorization Act for FY18. This mission will be jeopardized if plans to immediately stop work on the MOX facility, ensure the project's critical engineering documents and design calculations are archived and preserved for reuse, cease construction to prevent additional work to convert the facility to its new mission, and ensure critical engineering staff knowledgeable of the design and current construction status is available to immediately start the new design effort. Specific harm includes but is not limited to:

additional costs to the pit production project to remove construction installed that has no value to the new building configuration, loss of use of materials such as pipe, electrical conduit, wire, duct work and other construction materials and equipment that can to be reassigned to other projects, delay in offering employment to and hiring current MOX project engineers and technicians to begin design work on the new mission, increasing the risk of completing the new facility on schedule as design work will be the critical path for project completion, increasing the cost of the new facility by requiring more overtime and/or shift work to complete construction on an accelerated basis to meet the congressionally mandated date for producing plutonium pits.

22. Using a conservative approach based on actual annual invoiced amounts from MOX Services from October 5, 2017 through May 17, 2018 divided by the number of work days, continuation of the MOX Project involves taxpayer expenditures of approximately $1.2 million/work day to keep all project staff constructing a facility for which the Secretary of Energy, under the authorities given to him by the FY 2018 NDAA and Omnibus Appropriations Acts, has decided to cease construction.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 1st day of June, 2018.

ROBERT RAINES