There has been good news for the F-35 Joint Strike Fighter. No longer are top Department of Defense (DOD) officials covering their bets by casting aspersions at it, especially on the galvanizing matter of cost, previously described—by them—as unaffordable.

In April, Secretary of Defense Chuck Hagel told Congress that F-35 costs “are coming down,” and F-35 Program Manager Lt. Gen. Christopher Bogdan reaffirmed that “cost continues to come down” as the “Lot 5” buy costs less than the previous one. The Navy’s commander of the Naval Air Systems Command, Vice Admiral David Dunaway, characterized the F-35 as basically a done deal, declaring it to be a “fairly mature air vehicle.”

In some controversial assertions, even the Government Accountability Office (GAO) described the program in a March report as making “considerable progress,” a characterization that Lockheed consultant Loren Thompson celebrated, saying GAO now has “no new advice...on how to manage [the F-35 program] better.” The ultimate gesture came in May, when DOD released its most recent Selected Acquisition Report (SAR) announcing a $4.5 billion reduction in the total program cost of the F-35.

Gone are the days when the top DOD acquisition official (Frank Kendall) described the F-35 program as “acquisition malpractice.” Joining the new vogue, Kendall has subsequently stated, “I feel much more comfortable” about the F-35.

The real test of whether the F-35 is making “considerable progress” is two-fold: 1) How does the aircraft perform? 2) Are the costs really “coming down?”

The flight-test program is hardly mature. The plane is about 40 percent through its scripted, contract-specification verification (developmental) flight testing, which, according to GAO, will probe only 17 percent of the F-35’s capabilities. The more rigorous battlefield testing will not start until 2018; when the results of those tests are available in 2019, we will be able to use actual data to assess just what performance characteristics the F-35 has.

The assertions that F-35 costs are coming down are the critical assurances right now. Expense, which has doubled from $81 million per aircraft in 2001 to $161 million in 2012, is the biggest roadblock to the program’s future. But DOD and others are saying the corner has been turned.

We shall see. In the next article, we will take a look at how the Pentagon manipulates the cost of weapon systems.
The Pentagon’s F-35 Pricing Dodges

BY WINSLOW WHEELER, DIRECTOR, STRAUS MILITARY REFORM PROJECT

The cost of an F-35 is currently increasing, more than likely to remain high, and very unlikely to even approach the low levels being articulated by Pentagon managers and documents.

But F-35 unit costs are clouded by the calculating ways the Pentagon reports them. The applicable empirical data have been obscured, and it is they which are the most informative.

DOD’s Selected Acquisition Report (SAR) on the F-35, considered the definitive statement of the program’s cost, is a typical example. It cites three forms of the cost to buy an F-35.

The Program Acquisition Unit Cost (PAUC) divides the total acquisition expense, including research and development, procurement, and military construction, by the total number of planned test and operational aircraft (2,457). The total acquisition expense is stated in either “base-year” ($319 billion) or “then-year” ($391 billion) dollars. Base-year dollars means every dollar is adjusted to match the inflation value for the year when the program was last “restructured” to address problems. In the case of the F-35, that year is 2012. Then-year dollars are the amounts actually appropriated or expected to be appropriated in the future; they are adjusted to the inflation value of the year in question. Base-year dollars are usually from an earlier year when they had higher purchasing power; thus, they frequently calculate to a lower number that dissembling advocates prefer.

The SAR reports the base-year PAUC for the F-35 as $108.2 million, and the then-year (actual appropriation) PAUC as $133.0 million.

That’s fine as far as it goes, except for one thing: those amounts do not include the engine. The SAR considers it separately. If you want a fighter with an engine, add $21.8 million to the base-year PAUC, and $26.2 million to the then-year PAUC. That makes the Program Acquisition Unit Cost for each F-35 $130.0 million in obsolete 2012 dollars or $159.2 million in actual appropriations, past, present, and future.

If all this is not confusing enough, the SAR also calculates the Average Procurement Unit Cost (APUC). This divides the total F-35 procurement budget (not including R&D and Military Construction) by the number of operational aircraft actually to be fielded (2,443). The F-35 APUC (with an engine) is $104.8 million in base-year (2012) dollars and $135.7 million in then-year dollars.

For some, however, the base year APUC numbers for the F-35 are still too high for marketing. The DOD SAR lists something called Unit Recurring Flyaway (URF) costs. But the URF does not include the support and training equipment, technical data, initial spare parts, or even the gas and lubricants to make an F-35 usable. The URF cost will not get you an F-35 you can fly away, not for combat, not for training, not even for the delivery hop.

A favorite of F-35 lobbyists and marketers, the URF for the F-35 varies from $76.8 million to $103.6 million, depending on the model. Lockheed likes to cite the URF, but no flyable, usable F-35 in any operable force will ever be bought for those prices.

In fact, all of these numbers are grounded in analytical quicksand.

First, the PAUC’s numbers depend on amortizing $55.2 billion then-year dollars of R&D across the officially predicted production of 2,457 F-35 units. The planned number has already come down from 2,866, and as DOD insiders routinely predict, they will come down further.

More importantly, both the PAUC and the APUC projections depend on a “learning curve” that shrinks unit cost for each future F-35 produced based on assumptions of progressively increasing efficiency and economies of scale in F-35 fabrication that is supposed to occur after the design stabilizes and procurement lots double and even triple.

The problem is that the learning curve never occurs as predicted. This has been reported in great detail by Pentagon insider Chuck Spinney in “Defense Death Spiral” and his final testimony to Congress. The aircraft’s design never actually stabilizes, even after full-rate production starts: the need to redesign and fix a progression of failures exposed in tests and operations, an unending stream of add-ons imposed by the procuring bureaucracy, plus labor problems and unforeseen economic and budgetary changes mean that the learning curve is mostly fantasy. (We have just seen one example of unanticipated budget changes in the form of the reductions mandated by the Budget Control Act, also known as the Sequester.)

As a result, unit costs remain significantly higher; then, to “save money” and fit under budget limits,
production lots are reduced causing even more growth in unit cost—the so-called “death spiral,” the constantly recurring phenomena of DOD finding itself buying a smaller inventory of equipment for an increasing amount of money.

This recurring phenomenon is alive and well in the F-35 program. In the SAR released last year, the F-35 program projected production to ramp up to 110 units in 2018 and 130 in 2021; the SAR released in 2013 quietly reduced the 2018 buy to 100 aircraft and the 2021 buy to 120. Only a 9 percent reduction for 2018, it would nonetheless incur some increase in F-35 unit cost in 2018 and, therefore, also in both the APUC and the PAUC

for the entire fleet.

However, both the APUC and PAUC for the F-35 in the new 2013 SAR are lower. And, there are other questionable numbers in that document. The total—36-year—program acquisition cost is predicted to be $4.5 billion lower: decreasing from $395.7 billion estimated in 2012 to $391.2 billion estimated this year. The basis of this $4.5 billion reduction is a predicted savings in prime and subcontractor labor rates out to the year 2037 for aircraft—but strangely not engine—production.

That such fantastically long-term estimates are recalculated to form the basis of “savings” stresses credibility to the breaking point. The most recent SAR’s statement that “we project that it is equally likely that the estimates will prove too low or too high for execution of the program described” only reinforces justifiable skepticism.

PAUCs based on unachievable production numbers, APUCs derived from learning curves that never happen, URFs that assume that purchasers want to buy airplanes they cannot operate, prices translated into obsolete dollars, convenient declarations of savings to be realized 25 years from now, predictions proclaimed to be as reliable as a coin flip—these and other dodges add up to a snake pit of misinformation about what an F-35 costs, past, present and future.
The Deadly Empirical Data

BY WINSLOW WHEELER, DIRECTOR, STRAUS MILITARY REFORM PROJECT

Objective observers need reliable data for measuring F-35 unit cost: the empirical count of the dollars Congress and DOD have jointly directed at the F-35 program each year, divided by the number of aircraft actually bought that year. The math is simple, and calculation is straightforward, devoid of gimmicks. It brings a level of empirical reality to the cost calculation that the swamis of DOD cost-gimmickry hate and avoid.

These numbers are readily available in a convenient format, going all the way back to the beginning of the F-35 program in 1994 as a part of the DOD Comptroller’s annual budget materials titled Program Acquisition Costs by Weapon System. However, as with almost all DOD financial information, there is an important caveat: the numbers displayed are estimates; they have not been audited. We have no independent assurance that all the money displayed was actually spent for F-35-related activities, nor that other monies from outside the F-35 program weren’t spent on the F-35. The annual spending totals in these reports frequently do not conform to the amounts in DOD’s Selected Acquisition Report (SAR). The number of aircraft purchased in one year, 2011, do not even agree between these two documents. An audit to conform them is clearly needed. That said, given that these weapon-cost materials are in the DOD’s Chief Financial Officer’s annual reports to Congress and the public, the data are also what we have every right to expect to be DOD’s best effort at accuracy.

They tell an interesting story.

From 1994 up to 2014, $46.2 billion will have been spent on R&D for the F-35; $39.5 billion will have been spent on Procurement, and $1.8 billion will have been spent on separately accounted initial spare parts. That’s a grand total of $87.5 billion (then-year dollars; that is to say actual appropriations) to have been spent by the end of 2014. Total F-35 spending has actually been decreasing since 2010 even though procurement spending has increased to more than $6 billion per year and has stabilized at roughly that level since 2010: it is R&D spending that has been declining, albeit somewhat erratically thanks to the chaos in the F-35 program.

R&D spending is projected after 2014 to continue to ramp down to less than $50 million in 2018 as procurement spending increases to as much as $16 billion in 2021. Both the Air Force and Navy have other expanding acquisition priorities competing for this same money. With DOD budgets projected to grow only modestly, if at all, will the Air Force and Navy be able to more than double F-35 procurement spending from the current level of $8 billion to $16 billion, as is currently planned? It is not at all likely.

If the F-35 unit price fails to get as low as $85 million in the next decade, as predicted by General Bogdan, the Pentagon may find itself having to pay even more to acquire a smaller number of aircraft. This has happened many times in the past; a relevant example is the F-22, which shrunk dramatically in numbers bought but ballooned to well over $400 million per aircraft.

Up through 2014, 182 aircraft will have been authorized for purchase; 106 for the Air Force; 76 for the Navy and Marine Corps. According to GAO, as of the end of 2012, 52 of these aircraft have been delivered. But in May 2013, Lockheed asserted that 81 aircraft had been “rolled out” of the factory in Fort Worth, and the new SAR from DOD states that only 50 have been delivered “to date” (which is not specified). The discrepancies are unexplained. Also, GAO reports that 179, not 182, aircraft will have been authorized by the end of 2014.

Even with the uncertainties in the authorized and delivered aircraft, we can calculate what it has cost each year to buy an F-35. Figure 1 shows the procurement unit cost of each annual batch of F-35’s since 2008—that is,
annual procurement cost divided by the number of aircraft authorized by Congress to be purchased in that year.

First, contemporary F-35 unit costs are today in excess of $200 million, well above the Average Procurement Unit Costs (APUCs) and Program Acquisition Unit Costs (PAUCs) that DOD SARs report. It should also be noted that contemporary unit costs are literally a multiple of the commonly cited Unit Recurring Flyaway (URF) cost ($78.7 million for the Air Force’s F-35A) or of the $85 million envisioned in the future by the program manager, General Bogdan. The program has a very, very long way to go to even begin to approach these learning curve reductions.

Second, by the end of 2014 the F-35 will have been produced in significant annual amounts for seven years. There has been ample opportunity for the learning curve to have demonstrated some level of decreasing unit cost. But it hasn’t.

Third, there is a discernible trend in F-35 fabrication costs: they are increasing. As Figure 1 clearly shows, they have been increasing since 2011.

Moreover, the unit costs have increased significantly: by $19.5 million or 9.7 percent since the $199.8 million from the Comptroller’s data for 2011, and by $14.5 million or 7.2 percent since 2012.

Reasons for the increase in the already high unit costs are becoming clear. A remarkable number of significant F-35 components, even the airframe, have shown problems serious enough to require redesign. Thus, aircraft configuration is in continuing flux. Paying for the fixes and changes in fabrication on the production line is clearly proving to cost more than whatever efficiencies might be achieved on assemblies that—so far—do not require modification. As long as the F-35 configuration continues to change, there can be no meaningful learning curve.

Future years may prove even more costly: the more stringent testing is still in the future and will not finish until 2019 at the earliest. And, still more issues may occur even after that as the aircraft enters the operational forces—flying often reveals still more problems, as has been the case with the F-22.

What are we to make of the statements from Secretary Hagel and General Bogdan that F-35 costs are “coming down”? Reductions did occur two years ago, but to say the unit costs “are coming down” is—to put it as politely as possible—grammatically incorrect. They came down then; they are going up now. ■
Where Do We Go from Here?

By Winslow Wheeler, Director, Straus Military Reform Project

The evidence for rising F-35 unit costs is not essentially different if one takes a more detailed look and separates out the costs of the Air Force and Navy variants of the F-35. See Figure 2 below.

Since 2012, the unit costs of Navy models of the F-35 (the Marine Corps’ STOVL B variant and the aircraft-carrier capable C version for the regular Navy) have increased, on average for the two very different models, from $216.6 million per aircraft to $277.9 million, an increase of $61.3 million or 28.3 percent. (Unfortunately, the Comptroller’s data do not provide separate B and C costs.) The Air Force’s A model actually decline in cost from 2012 to 2013: from $195.5 million per aircraft in 2012 to $187.7 million in 2013, a decline of $7.6 million or 3.9 percent. However, the decline reversed in 2013, and the 2014 budget request shows an increase, albeit minor, up $0.8 million or 0.4 percent to $188.5 million.

The statements of General Bogdan and Secretary Hagel that F-35 unit costs are “coming down” remain false. There are years in the graph in Figure 2 where a specific year is lower than the preceding year, but that is not the current trend—for the F-35 program as a whole (as shown in Figure 1 in the previous article) or for either the Air Force or Navy variants separately (in Figure 2 below). Moreover, the Navy variants will cost in 2014 even more than they did early in their procurement history; the “learning curve” for the Navy variants of the F-35 has been a negative curve.

On the other hand, Air Force models of the F-35 have shown an overall unit cost decline since production in 2008, but the most recent trend is an increase.

Beyond the year-to-year trends, the most prominent characteristic of F-35 costs is how high they are. In the eighth year of production—after significant opportunity for learning curve efficiencies to occur—the Air Force’s A model appears to be stabi-
lizing at approximately $190 million per copy. The Navy models’ unit cost has not stabilized; it is climbing dramatically, and is now projected for 2014 to be above $270 million each.

If one selects to add the continuing costs of R&D ($1.9 billion that accompanies the purchase authorization for 29 aircraft for the Air Force and Navy in 2014), the unit cost would be still higher.

Even though the Air Force F-35A unit cost is stubbornly hovering at about $190 million per copy in the eighth year of production, DOD documentation for the F-35A program is predicting that it will plummet to $107.1 million in 2018 when a purchase of 60 for $6.4 billion is scheduled. In other words, they are predicting that the unit cost will decline by 43 percent in just four years, after it has come down only 20 percent in eight years and has remained stable at $190 million per aircraft for at least three years.

Learning curve predictions for the Navy’s models are even more problematic. The B and C variants are both more complex and, therefore, more expensive than the A model, and they have been showing dramatic unit cost increases in the last three years; they now cost even more than they did when their production started in 2008. Prognostications that they will achieve anything approaching what Congress today considers “affordable,” especially as soon as 2015 when the Marines are declaring (actually pretending) their F-35Bs will achieve combat capability, go beyond implausible to fantastic.

In case you were wondering what unit cost is “affordable,” be aware that no one in Congress or the Pentagon has specified the number: to do so would establish an accountable number that, when breached, will cause no end of excuse-making and too-obvious stretching of what Pentagon wags call the “rubber baseline.”

Other factors further cast low unit-cost projections into even greater doubt.

First, the program faces additional cost and production line learning to address modifications to the aircraft imposed by the developmental and operational test programs. These incorporate many modifications, including to all three variants (e.g. to prevent heat damage to the tail sections from the afterburner), and they embrace modifications unique to individual variants (e.g. the changes now being attempted in the arrestor hook of the Navy’s C model to enable aircraft carrier landings or the redesign of multiple doors on the Marines’ B model). Those costs are being identified and will mount up as the test program proceeds; the appropriate changes in production line fabrication techniques will be introduced in time, with their commensurate learning curve disruption. These costs—some already identified and funded, some identified but not yet funded, and others not yet identified—are estimated by GAO to exceed $2 billion.

There will be still further costs for capabilities that everyone will expect the F-35 to possess but which are not yet a part of the official program. For example, the Air Force plans for the F-35A to have a nuclear weapons delivery capability, but the costs of making the F-35A nuclear capable have not yet been included in the system development or production of the F-35. There are other predictable costs, such as to upgrade F-35 software, improvements to obsolete parts designed in the early years of the program, expanding the F-35’s connectivity to a wider range of communication equipment, and needed upgrades to the capabilities of the aircraft’s sensors. In fact, the Pentagon may even be planning on a follow-on (and separate) development program (with commensurate production alterations) comprising multiple billions of dollars beyond the baseline F-35 program.

The F-22, also produced by Lockheed Martin, provides a prime example: Since the F-22 was declared to be operationally capable in late 2005, GAO has identified almost $12 billion in upgrades and fixes to sensors, communications, stealth coatings, and other elements. The cost and extent of such fixes and upgrades for the F-35 are currently unknown, but the need for them is recognized. The costs will add to both total program and unit costs, even if they are not a formal part of the F-35 program today.

The appropriate question is not how much the F-35 unit cost will shrink but how much it will grow: the Secretary of Defense and the F-35 program manager should be asked to explain just what they meant and what data they employed when they said F-35 costs “are coming down.” Also, the Defense Department’s SAR and its prediction that the F-35’s total program costs are coming down should be audited by an independent and competent party. Moreover, because GAO’s latest report on the F-35 sided so clearly with the new hopefulness for the F-35 (and because, for example, GAO described the dubious new SAR cost “savings” as reflecting “the improvements that we found in manufacturing”), it should be questioned whether it, or rather its current management, should be the one to conduct such an audit.
Each year the public and Congress have a right to expect DOD’s Chief Financial Officer reports, titled *Program Acquisition Costs by Weapon System*, to be complete and accurate. These reports show that a total of $87.5 billion will have been spent on the F-35 program by the end of 2014: $46.2 billion for R&D; $39.5 billion for Procurement; and $1.8 billion for initial spare parts. The reports also identify a total of 182 F-35 aircraft that will have been authorized for production by the end of fiscal year 2014.

The breakdown of each year’s procurement spending and authorized production yields an annual F-35 unit production cost. For 2014, F-35As will cost $188.5 million each; F-35Bs and Cs will average $277.9 million each; and all F-35s will cost, on average, $219.3 million.

Having been in production for eight years, it is reasonable to characterize the F-35 production line as reasonably mature for whatever components have not already required modification. We can expect additional costs on the production line as it attempts to address problems yet to be discovered in the 60 percent of developmental testing and 100 percent of operational testing yet to occur—particularly in view of the fact that future testing will be more stringent than past testing. Unit costs are also likely to be impacted—upwards—by upgrades and other modifications not now a part of F-35 system development. While some economies of scale may be achieved in larger production lots in the future, it is also reasonable to expect those economies to be offset, if not more than offset, by additional production and budgetary disruptions yet to come.

The very large size of procurement budgets scheduled for the F-35 in the future, as much as $16 billion in 2021 (an increase of almost $10 billion from the procurement budget for 2014), call into serious question whether such large sums will actually be available in an era of lesser overall defense spending. Reductions in future F-35 procurement budgets to adjust to overall budget realities, combined with pressures from other Air Force and Navy spending demands, make even more likely retrenchment—and still higher F-35 unit costs. All of the above factors make a very real possibility of a total production run for the F-35 that is significantly reduced from the 2,443 operational aircraft planned today.

It is not unreasonable to expect future F-35 unit procurement costs to approximate what they are today: over $200 million per aircraft, on average. It is not reasonable to expect that F-35 unit costs—for a complete, operable F-35 force—to decline significantly, especially to a point anywhere close to the amounts currently projected for 2018 and beyond, said to be $85 million by General Bogdan.

The appropriate question is not how much F-35 unit costs may decrease from their current levels, but how
much they might increase. The history of combat aircraft acquisition warns us that F-35 unit costs will be much higher than are currently projected by the Pentagon and Lockheed Martin and will remain well above what can be characterized as affordable.

The data reported to the public and Congress on F-35 costs and production from the Defense Department’s Comptroller do not conform to the data in other DOD reports. Even the number of F-35 units authorized to be produced and the number delivered are in dispute. Without a complete and independent audit of the F-35 program, including any costs that may not now be a formal part of the program as reported in Selected Acquisition Reports, it is impossible to discern which DOD F-35 cost reports, if any, are accurate, and precisely what F-35 costs are today and will be in the future. In addition, DOD’s more recent wishful declarations of long term cost savings need thorough, independent scrutiny. That GAO’s latest report on the F-35 has sided so clearly with the new hopefulness for the F-35 calls into serious question whether GAO, or rather its current management, should be the party to conduct the needed audit.

American taxpayers, the U.S. military services, and foreign purchasers—who have been promised F-35 aircraft for as little as $85 million per copy—are in for a rude awakening: when real F-35 purchase prices unfold in the future, they may be as much as they are today.

It remains inevitable that as actual costs sink in, fewer aircraft will be purchased for increased cost, both in the U.S. and abroad. Given the hugely disappointing performance of the F-35 and its continuing design problems—which have been discussed in previous issues of the Defense Monitor and other POGO and Straus Military Reform Project publications—future deterioration in American and allied air forces, at higher expense, will only persist if F-35 production continues.
The Pentagon’s Newfound Interest in Slimming Down

When even the Secretary of Defense asks for cuts to the Department of Defense (DoD), it’s time to make those cuts. Unfortunately, the Secretary cannot make that change on his own—Congress holds the pen on authorization and allocation of defense spending. In response to a letter to Defense Secretary Hagel from Representative Keith Ellison (D-MN) and eleven other Representatives that applauds the Secretary’s commitment to a leaner military, Comptroller Robert Hale asked Congress for help as the DOD seeks “to hold down defense costs while also meeting national security needs.”

The bipartisan group of Representatives told Secretary Hagel they support his pledge to “reshape the Department of Defense to better reflect 21st century threats and fiscal realities.” The letter references both a call from former senior national security officials to assess ways Congress and the Administration can make smart cuts to the defense budget and the overwhelming public opinion in favor of reducing Pentagon spending as reasons to commend Secretary Hagel’s leadership on the issue.

Comptroller Hale’s response outlines cuts the DOD has already made—reductions in military modernization, force structure, personnel costs, and overhead expenditures—and what it’s doing now to address fiscal constraints. Specifically, he asks these Members of Congress to support DOD’s proposed cuts. Lower-priority weapons programs and lower-priority military force structure are two areas he mentions to illustrate his point.

This newfound concern with Pentagon spending came with the new leadership at the DOD—Secretary Hagel has been reiterating its importance at every opportunity. In his first major policy address this April, he came out swinging and put the bloated Pentagon budget on notice. Secretary Hagel bemoaned the increasing age and enormous rise in expense of the military since 9/11, noting that “the biggest long-term fiscal challenge facing the Department is not the flat or declining top-line budget, it is the growing imbalance in where that money is being spent internally.”

Secretary Hagel seems prepared to act on these concerns. “It is already clear to me that any serious effort to reform and reshape our defense enterprise must confront the principal drivers of growth in the Department’s base budget—namely acquisitions, personnel costs, and overhead,” he said. He sharply criticized the growing top-heaviness at the Pentagon, which the Project On Government Oversight has repeatedly documented, and acknowledged an overall need to look long and hard at the current personnel system.

Regarding acquisitions, he said:

We need to continually move forward with designing an acquisition system that responds more efficiently, effectively and quickly to the needs of troops and commanders in the field. One that rewards cost-effectiveness and efficiency, so that our programs do not continue to take longer, cost more, and deliver less than initially planned and promised.

Continuing in that vein, Secretary Hagel addressed specific programs the DOD has been trying—unsuccessfully—to cut. While testifying at a House Armed Services Committee hearing in April, he mentioned seven Aegis cruisers and two amphibious ships that should be retired at the end of FY 2014, more than 70 National Guard and Reserve aircraft that are no longer needed to maintain national security, and a number of other programs ripe for elimination. With enormous price tags attached to each defense system, the question seems obvious—why does Congress keep funding programs the Pentagon doesn’t want?

Pork-barrel politics, of course, seems to be the answer—pet projects that benefit influential constituents in a Member’s district are at the heart of these seemingly nonsensical failures to cut unwanted and unneeded programs.

POGO and advocacy groups from across the political spectrum have been working tirelessly to cut the fat in Pentagon spending, urging Congress to make the right choices for smarter military spending to make us safer. We are pleased to have the Pentagon reminding Congress of some of the low-hanging fruit for taxpayer savings.

Now, will Congress listen?
Mismanagement of New Nuclear Facility Will Cost Hundreds of Millions More

By Lydia Dennett, POGO Research Associate

Since the last Defense Monitor article on the cost of the Mixed Oxide Fuel Fabrication (MOX) Facility at the Savannah River Site in March 2013, the cost of the facility has increased by $700 million.

The facility continues to be a classic case study in Department of Energy (DOE) contractor mismanagement and how it can cost the taxpayer billions of unnecessary dollars.

The MOX project, run by a private contractor called Shaw AREVA MOX Services (Shaw), is part of the National Nuclear Security Administration’s (NNSA) plutonium disposition program. Once complete, the facility’s mission will be to convert weapons-grade plutonium into MOX fuel for use in nuclear energy reactors. The program lacks even a single customer.

But perhaps the most troubling aspect of the MOX program is its never-ending cost overruns and delays. In April, the Government Accountability Office (GAO) reported that the price tag for this impractical facility would be $7.7 billion—a 381 percent increase from the original estimate of $1.6 billion. And the project has fallen ten years behind schedule.

But even $7.7 billion is far from the bottom line. An independent life-cycle cost estimate done by local Savannah River Site expert and the Southeastern nuclear campaign coordinator for Friends of the Earth, Tom Clements, shows just how expensive this program is. Incorporating construction costs as well as “a host of other expenses, including administrative buildings and administrative costs, yearly MOX plant operating costs, MOX plant start-up costs, plutonium feedstock preparation, a facility to treat MOX waste (Waste Solidification Building) and waste disposal costs, payment to utilities to use MOX fuel in their nuclear reactors and decommissioning of facilities,” Clements found that the MOX facility is much more likely to cost a staggering $22.1 billion.

Although this is not an official number, neither the NNSA nor the DOE has refuted it or released their own life-cycle cost estimates.

These massive cost overruns and schedule delays are not the only failure of Shaw. A May 2013 DOE Inspector General (IG) report found that the contractor overbilled the NNSA by about $3.7 million from 2007 and 2011 in order to reimburse its subcontractors for living expenses they were not eligible to receive.

Inspector General Gregory H. Friedman found that the NNSA “had not effectively monitored” Shaw. “As a result, NNSA unnecessarily paid as much as $3.7 million...that could have been devoted to other critical mission areas or returned to the taxpayers,” Friedman wrote. He also found that the contractor lifted spending caps that could have kept costs down and didn’t regularly enforce reimbursement eligibility requirements.

The DOE IG has been concerned about MOX since a 2005 audit investigation revealed that MOX mismanagement was going to cost the agency major money. The cost overruns had already begun and the audit found that “adequate attention was not given to establishing an appropriate performance baseline or ensuring that reporting mechanisms to monitor progress and track costs were in place.” These failings, along with a lack of oversight, contributed to a ten-year delay and a price tag that just keeps growing.

There is some good news, however. In the DOE’s FY 2014 budget request, MOX funding was reduced by about 75 percent over the next five years to slow construction in 2014 and explore alternative plutonium disposition strategies. But the roof of the facility has already been completed, and some are concerned that the funds will merely keep the project on life support when it should be killed. Thus, it’s still too early for celebration. Senator Lindsay Graham (R-SC), who represents the county hosting the MOX facility, has continued to pledge his support for it. Hopefully this effort will prove futile and that other policymakers will continue to move in the right direction and zero out funding for this unnecessary facility.
The Project On Government Oversight is a nonpartisan independent watchdog that champions good government reforms. POGO's investigations into corruption, misconduct, and conflicts of interest achieve a more effective, accountable, open, and ethical federal government.

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**Why the Envelope?**

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