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Senate Compromise Got it Right on NASA : by Ted Ankrum

As a former Assistant to the first Astronaut to be the Head of NASA, Admiral Richard Truly, before he was fired by Vice-President Quayle for refusing to gut the Space Shuttle program to fund Space Station cost over runs; I think I can speak with some knowledge on this subject. The folly of VP Quayle's decision was seen later in Texas skies when a shuttle and its crew were destroyed. However, back to NASA's current budget.

When President Obama assumed office, NASA was moving ahead with a plan to build new heavy lift rockets, new rockets to service the space station, and new rockets for a return to the moon. As frequently happened when developing the space station, there simply wasn't enough money appropriated to do all of these jobs. The all-too-familiar path lay ahead: discover a cost over run, patch the program with short term fixes that would eventually be more costly than the original because government "cost-plus" contractors would milk every change for lots of dollars, and stretch out the program. The President proposed cancelling the return to the moon effort, the new crew transfer module, and a move to place space station re-supply as a turn-key private contractor effort.

The Senate compromise, which the House agreed to with great reluctance, was to preserve the President's idea to move re-supply of the space station to private contractors, agree to cancellation of the return to the moon; but in return, to preserve the development of a heavy lift rocket for a mission to Mars or an asteroid and a crew transfer module. This was the right decision. While this will result in the loss of some jobs in the Houston community, it will not be as many as the President's original decision. Had we continued with the original plan, it would have resulted in a great waste of taxpayer's dollars. If we are to be serious about balancing the budget, we cannot take the attitude of "not in my backyard". The new plan will result in savings and is a good compromise by preserving the most important goals, and jobs with a long-term future.

The new designs for the new spacecraft are greatly superior to the space shuttle in both operational efficiency and safety. The shuttle was a flawed concept from the first and a rocket designed by a politician. When Richard Nixon was first elected President, he cancelled the Apollo Moon program with two completed rockets ready for launch to the Moon. They are now in

museums. However, as the election for his second term approached, the number of aerospace layoffs in California were causing great concern to his reelection prospects. Nixon asked NASA what it could do quickly, but it could NOT look like the Apollo rockets he had cancelled earlier. NASA quickly dusted off plans that had been drafted for a reusable space shuttle and the game was on. But there were two huge flaws with the space shuttle that would eventually prove to be fatal to two crews.

The first flaw was placement of the space shuttle alongside the solid rocket booster motors. Once a solid rocket motor is lit, it can't be shut down; and if everything is not perfect, they blow up. The placement of the shuttle alongside the solid rocket boosters meant that when a less than perfect rocket blew up, it also destroyed the shuttle. With the Apollo rockets, the crew compartment was at the top, far away from the very large and powerful main engines. If an explosion occurred, the crew compartment could be separated from the main body and parachuted back to earth. In the Challenger disaster, the crew compartment part of the space shuttle actually survived relatively intact after the explosion and carried the astronauts to their deaths at ocean impact.

The second flaw is that the space shuttle has wings and a tail. These are the most fragile parts of the vehicle and extraordinary things are done to protect them. A hole in a wing heat shield caused the loss of a wing, and then the second loss of a whole shuttle and crew, on re-entry. The Apollo astronauts were in a compact capsule with a heat shield, parachutes, and no vulnerable appendages to be torn off. The promise of cheap reusability for the space shuttle never paid off. It takes months of painstaking refurbishment after each flight. Also, those wings and tail that allow the shuttle to glide back to earth weigh a lot, and reduce the payload that can be taken up.

The new rockets being developed by NASA go back to the old Apollo design. The crew compartment sits at the top of the rocket stack and is easily severable. New solid rocket motors in the first stage are at the bottom, where they are far away from the crew compartment. Also, the crew module is now like the Apollo design with no appendages like wings to be ripped off in an accident. And there are no superfluous parts, like wings, to use up rocket capacity and heavier loads can be taken up, as compared to the space shuttle. All of these things have been preserved in the Senate compromise.

Finally, we have the notion of using private contractors for routine re-supply of the space station. There is nothing about this that cannot be done by private contractors. Private contractors currently launch commercial communications satellites, scientific satellites, and military payloads. I can assure you that with the cost of some of these payloads, there is no less concern with a safe launch than there is with a human crew. I also submit that there is no more expensive way to do anything than with a government cost-plus contractor. It is high time to move space station support to a fixed-price support services contractor and leave the cost-plus environment for the cutting-edge efforts to go to Mars or an asteroid.