

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

PRESS BRIEFING

WITH

MIKE GRIFFIN, ADMINISTRATOR

BILL GERSTENMAIER

AND

DEAN ACOSTA, MODERATOR

Thursday, August 18, 2005

(TRANSCRIPT PREPARED FROM A TAPE RECORDING.)

PROCEEDINGS

[In progress] -- process works is, we floated this March date out, and now we're going to go have all the engineers and all the field centers and all the developers go analyze that to make sure that that really all fits and it all kind of hangs together and there's no other issues there or any other long poles. So this will still be about a two-week process before we really even kind of set an official date.

So I wouldn't say that we've officially set the date there. We're still evaluating it, but it looks like the early opportunities don't make sense for us. They don't allow us to do effective planning. So we want to go ahead and move to the first period that fits from an overall standpoint, gives us a more robust station assembly sequence, and really sets us up in a better posture, so. So that's basically kind of where we are overall schedule-wise.

I would also say that teams are doing very process of--making very good progress at Michoud in understanding the foam and understanding what repairs we may have to go make. They're still not complete by any stretch of the imagination, but they're moving along in a good positive direction.

MR. ACOSTA: All right. Let's go ahead and open it up to questions right now, and we'll start off right up front with Tracy.

QUESTIONER: Tracy Watson, USA Today. I guess for Mr. Gerstenmaier. Can you tell us a little more about the progress that has been made on foam that allows you to think that March is achievable, please?

MR. GERSTENMAIER: I think again--I'm not picking March because we've made progress, but we're starting to understand kind of the areas that we want to do rework on. You know, I talked to you last time a little bit about the power ramp area. We're going to have to repair the power ramp we think. How exactly we do that, we don't know yet.

But we're still--the other piece is that we've got really good data from the flight experience. We've got excellent data. Now the next thing we need is we want to take a look at some of the tanks that are already set up, ready to go fly, so we want to dissect some of the power ramps that are on vehicles. So to do that, that's going to make us move some of those tanks to Michoud where we can do that.

We're going to do some more non-destructive evaluation of those, so we've got the basic plan for the power ramp of how we're going to go move forward to gather some more data, again, to try to find root cause and then pick a particular solution.

As I talked to you before, the flange area, we think we're getting pretty comfortable with really probably no mods in the flange area. The (?) foam, we've got a strategy there. We're thinking of the next layer down, and in the ice frost ramps is still probably our most problematic from still understanding the root cause. We've got all the data together now, but we still haven't really laid that out. There's probably root causes associated with the ice frost ramps, not just one.

So again, I think the teams have done a very good job of taking the next step, sorting the data, putting it together, and they're ready to move forward.

QUESTIONER: A follow up. Are November, December and January pretty much off the table now for sure? And given the amount of work you still have to do in finding root causes, can you handicap March for me a little bit?

MR. GERSTENMAIER: Again, you can say November and January are pretty much off the table once we start moving tanks around and start taking hardware apart, so that's there.

I don't want to handicap March. Again, I want the teams to go work their two-week process, let them go evaluate it, let them take a look at it, let them define the key milestones that we're going to go work at, and then let's see how all that fits. So in a couple weeks, two weeks, three weeks, and then we'll be able to give you some kind of estimate. But right now that's pure speculation. I don't want to speculate.

MR. ACOSTA: All right. A couple more questions here at headquarters before we go around the centers. Let's go with Keith right up front.

QUESTIONER: Keith Kelly, NasaWatch.com for Mr. Gerstenmaier.

When the damning commentary in the Minority Report in the task Force report came out yesterday, which cites a lot of problems that may or may not have merit--nonetheless, they have been cited--part of the changes has apparently been the firing of several people at the top of the Agency and your promotion. You were part of that activity. Other than that of your promotion and that of Mike Suffredini, nothing else has changed. Do you ever plan to address these issues? Has Dr. Griffin given you a plan, and if so, could you at least describe--I know you've only been on the job, what, two days or so--just an idea of where you're going to go in addressing those issues.

MR. GERSTENMAIER: We really haven't discussed that. The report just came out yesterday. I've read through it. We'll take a look at it. We'll evaluate it, and like any information we get, we're going to take a look at it and understand what we can pick out of it that's important and helps us to move forward, and we'll pick those pieces up and other things we may discuss and see--there's even some--we need to read the report and really digest it, and then Mike and I need to discuss what really to go forward behind this.

QUESTIONER: Dr. Griffin, did you actually read those comments before you said "include them," or did you just say, "All comments are welcome. I haven't read them yet. Just put it in the report?"

MR. GRIFFIN: I was asked if I wanted to have the Minority Report or Minority comments in the overall report, and I said yes, because--and I had not read them ahead of time--because, frankly, I think that as NASA we do a disservice to ourselves and to our stakeholders, and frankly, to the taxpayers by creating an appearance that we do not wish to hear what people have to say if it should be negative.

I think we do--I think we do ourselves proud when we take all the comments that are given, we study them, we evaluate them, we investigate them, and we decide which ones makes sense to us and that we wish to move forward on, and which ones where we don't think the advisers got it right. I think that's the proper way to treat advice.

I have conferred with the folks as recently as yesterday who provided those comments to us, and I believe that they fully understand the spirit of openness and honest acceptance that we're trying to convey to their issues.

MR. ACOSTA: Let's go with John, second row.

QUESTIONER: John Schwartz, New York Times. This is, I guess, for Mike Griffin, and for Bill Gerstenmaier.

What do the delays mean to the overall shuttle plan at this point? At what point does this delay, now into March, start to impinge really on what you're trying to do before 2010? And how does that squeeze--what sort of squeeze does that put on your announced decision to reduce the number of flights?

MR. GRIFFIN: Well, let me take it first for policy-level issues and I'll let my colleague discuss the manifest details.

There is a change in thinking. If you will, to be honest, I'll put it on my shoulders. I've changed the game on shuttle thinking. We are not trying to get a specific number of flights out of the shuttle system. We are working toward an orderly, an expeditious but an orderly retirement of the shuttle system over the next 5 years, and the President has said that, and I have echoed that NASA wishes to and will plan its program to comply with that.

Now, what that means, given what we have learned about the shuttle in the time since Columbia, is that we need to view shuttle launches, shuttle missions as a process. We're going to work each mission through the process, being as careful as we can, as deliberate as we can, but with the intent, of course, to go fly. When we get to the end of that process we'll fly. But we can't pick a specific number. What we're working toward is an orderly and expeditious fly-out of the system.

We're going to use the shuttle system between now and then to assemble the space station. The United States has a commitment to itself and to its partners to complete the station. We believe that if we can--you know, absent major problems, we believe that we can essentially complete the assembly of the space station with the shuttle fleet in the time that we have remaining, and that's what we're going to try to do.

We will of course, after every flight, face up to whatever facts, whatever cards nature is dealing us in this hand, and we'll face up to that, but our planning is to use the shuttle fleet to assemble the--to essentially complete the assembly of the space station in the years that we have remaining, and that's what we're trying to do.

MR. GERSTENMAIER: The only thing I'd add is that, again, by being able to do this vehicle switch that I described to you, that's going to actually make a more efficient manifest that really makes the impact of moving into the March time frame, from kind of a macro standpoint, not a very big impact to us. It's still going to allow us to essentially at least conceptually think about flying about the same number of flights. And again, we'll treat them just as Mike said, we're going to treat each one unique and make sure we're ready to go fly a unique test flight, and go forward. But again, it doesn't seem to be a major impact at first look.

MR. ACOSTA: We're going to come back to headquarters. We have some media members at Kennedy Space Center, and we'll take the first question from there now.

QUESTIONER: Hi. This is Bill Horowitz, CBS, with two quick questions, a very quick one to Bill Gerstenmaier. Can I assume that when we do fly again that it will still be two flights in daylight to verify your processes before you can go back to night launches?

MR. GERSTENMAIER: Again, I think we ought to not jump to those conclusions. We ought to fly the flights, get the data that we've got, and then based on the data we see, make our decisions about what we want to do next. So rather than speculate on what performance we're going to see, speculate on what we're going to go do, let's let the data talk to us. Let's see what we actually see on this next flight, and see what we get and then make some of those decisions.

QUESTIONER: And for Mike Griffin, if I could, given the Minority Report, what it said, and given the fact that you did have a foam problem that was fairly unexpected I think for STS-114, do you have any sense that the management system that's in place in the shuttle program, are you planning to leave that intact the way it is? Do you sense any crisis of confidence? I hate to use a trite phrase, but I think some people might view it that way, just given the sequence of events, and how you view your current management structure.

MR. GRIFFIN: I don't want to make specific comments on that because we haven't--Bill and I have not thought our way through it, to be honest. When and if we want to make changes there, you know, those will become public knowledge.

But let me address the more important question of is there some crisis in confidence? No, there's not. There may be. There may very well be in accordance with the comments made in the Stafford-Covey Report, some issues that we need to address regarding engineering process and engineering management, engineering discipline, those sorts of things.

We've worked hard at NASA over the last 2-1/2 years to improve that situation that led to the Columbia, loss of Columbia, but we don't suppose that we're done. And one of the reasons why I was very receptive to the Minority Report was because we can't get done unless we're willing to listen to all of the hard truths. So we're going to be looking at our engineering processes.

But let me illustrate what I see. For good or ill--and obviously it was for ill, okay, poor choice of words on my part--we in NASA didn't look in detail at foam shedding from the tank for 113 flights. And shame on us. Absolutely everyone in and out of NASA learned a lesson I hope about that, and that is an incident, that is a process that will be examined in textbooks for years to come. We flew 113 flights without seriously addressing the issue of how much foam was coming off the tank, why, where and what it was doing. Okay.

So on the first flight after being hit very hard, as hard as an Agency can be hit by a mistake, with the loss of 7 lives, we stood down for 2-1/2 years to try to fix the problem. So on the first flight after we started really paying attention to the foam, almost

everything we did worked. There are I think 5 areas where it didn't work right, and one of them with the power ramp foam was a big piece, and you know, very embarrassing. But there were five areas that didn't work right, and almost everything did work right.

So do I have a crisis of confidence in the team that made almost everything work right? Of course not. As Bill just said a few minutes ago, we're going to take the data and see where it leads us, and we're going to fix those things that we didn't get right. But in a very important sense, this was the first try that the tank team, the shuttle team, the NASA team, ever really made to reduce the foam shedding to a minimum and acceptable level. I think they did pretty darn well for the first try, and that's how I'd like for people to view it.

MR. ACOSTA: I believe we have a couple more questions out in Florida.

QUESTIONER: This is Irene Klotz with Reuters, also for Mike Griffin.

I know you haven't had time to digest and analyze the report, especially that minority report written by the seven members. But could you tell us a little bit, what rang true to you, and if things like your intervention about the ice concerns and the installation of the heaters is true. Was that pretty much your idea, to step in and stop things at that point?

And what is it that you see still needs to be done from a process standpoint, how your people go about solving these problems?

And then related to that, your upper management changes, are these related to things that you see you want to have the agency move toward?

ADMINISTRATOR GRIFFIN: That was a lot of question; let me do my best. First of all, Irene, my role in, quote, stopping things, as you put it, has been exaggerated to the point where it's in danger of becoming an urban legend. When I joined the agency, I pledged to the Congress, to the White House, to NASA stakeholders throughout the nation, that the safe flight of every shuttle [audio out momentarily] how well it was proceeding, and all the things that go with that, and I will do that for every flight.

That's the best use of my, of my time and my training. We have other people who can handle other things that I don't, that I don't do as well. It's a team effort.

So therefore, in view of that priority, I attended every shuttle review that was of a significance to attend, between the time I joined and our actual launch.

In one of those, there were some issues that were raised. I had some comments about our engineering process and what we were trying to do and how long it was going to take to get the results we needed.

Other people, many other people had comments as well. There were issues with regard to engine cut-off sensors that I think you remember from last month.

There were issues about ice, issues about foam, issues about tanker heaters. Would we or would we not do another tanking test?

The sum and substance of all those issues led the team to come to a conclusion that we really weren't ready to do in May, that we would be ready to go in July, and, you know, this is what I said three months ago when the topic came up and it's what I'm saying now because it's what really happened.

Did I have a role? Yeah, I had a role. I would hate to say that I went to an engineering review and sat there like a potted plant.

On the other hand, you know, we did not emerge from that review with the direction that Mike says we're delaying the launch. I mean, that didn't happen. So I'd rather not have it categorized that way.

MR. ACOSTA: I believe we have one more question at KSC.

QUESTION: Yes. Hi. This is Marsha Dunn with the Associated Press. For the administrator, I was just wondering, it took two and a half years to get to this point and yet the criticism in the minority report says that the behavioral issues still exist, and I'm wondering how you can hope to launch in March, or anytime thereafter, just half a year away, with so many of these behavioral issues still unresolved?

ADMINISTRATOR GRIFFIN: Well, because the minority report said [audio out momentarily] to my left here is among the very most respected engineering managers in NASA. I think it is safe to say that he may have some peers but he has no superiors.

With that in mind, with that certain knowledge in mind, I asked him to assume the leadership of Space Operations. The prior team had had, I believe, given their all to return the shuttle to flight, and in the process of putting my management team together for the next few years, I selected Bill. We have not had a chance--as someone else pointed out, he's been on the job for two-three days. It's kind of a tough gig to change from being the space station program manager to being the head of manned space flight at NASA, and frankly, I'm still getting my feet on the ground after four months as the administrator.

So I want to assure everybody that we will go over, in detail, the minority report as frankly as well as the majority report in the Stafford-Covey Task Group report. We'll go over it all and we will decide what we want to do in as responsible a fashion as we can muster.

But I'm just not going to sit here and make off-the-cuff speculative remarks about how we're going to handle a report that we received yesterday.

In fact, if I were to do that, it would be to denigrate the report and the people who prepared it.

They spent--the Stafford-Covey Task Group spent two years working with this agency, and several months preparing this report, and it deserves a careful measured study, evaluation, and a careful response by Space Ops and by me as to what we're going to do about it.

QUESTION: A follow-up for you, sir. Some of the criticism also was against all the multiple launch dates, they were totally unrealistic, which led to shortcut repairs, and things not being taken into, in depth, as desired.

Is there going to be a real effort by both of you up there to not put out launch dates that are really unrealistic, just a few months out, just only to change them and keep bumping along?

ADMINISTRATOR GRIFFIN: Well, exactly, and that's why, you know, right after the launch of Discovery when the foam loss on the power ramp came up, and everyone was pressing to say, well, does that rule out September or whatever? And I was saying,

Well, no, let's get some data, let's figure out what's going on, and then we'll tell you what we think we can do. So now, Gerst has outlined for you a very conservative plan to do the second test flight in the Shuttle's Return to Flight sequence, which isn't trying for September, isn't trying for November, December, January, February--is going all the way out to March in an effort to give people some time for a planning horizon, and so now everybody's coming back and saying, why can't you make November?

We are trying to insert the necessary conservatism in this, and that's why we're going out as far as March and giving ourselves what we hope is plenty of time to evaluate where we are.

Now, again, we got a tremendous amount of data off this flight and we don't see that the task remaining before us is as difficult as the tasks we have behind us.

MR. GERSTENMAIER: And I would caution you, again, that we shouldn't be thinking of the launch date as March. You know, what I described to you was that we've put a planning target out there and now we're going to go do a detailed engineering assessment and analysis, and start seeing if that makes sense. We'll factor in what we learn from the tank--we'll factor those things in, and then when we, a couple weeks have gone by and we've got enough intelligence together, then we can pick a launch date.

So we're really not picking a launch date. What you're seeing us do is do planning, and we need to decouple this launch date setting with the normal planning process that the program has to go through to arrive at a decision.

ADMINISTRATOR GRIFFIN: Yeah. If we don't put March out there to the team, and then ask the question of, what do we have to do to make March, we never get those answers. But of course the minute we mention it, it then becomes public knowledge and now that's the launch date. It's a little hard.

MR. ACOSTA: All right. Let's come back to headquarters for two questions before we go out to JSC. Brian.

QUESTION: Brian Berger with Space News and space.com, for Bill. Back in the spring timeframe, on an evening of a Stafford-Covey meeting, it was canceled and word got out pretty quickly that Dan Crippen and the other members of the minority report were raising concerns or were protesting the way that the rest of the Stafford-Covey group was going.

What did NASA know about that at the time and what did NASA do to respond to those concerns raised by Dr. Crippen and others?

MR. GERSTENMAIER: To be frank, I really don't know. I was doing station program management at the time and I wasn't involved in any of that. So I don't have any insight or any knowledge of that at all.

ADMINISTRATOR GRIFFIN: I can answer some of that, and I will, because I don't want to be unresponsive. I was apprised that there were concerns by a group on the--task group who didn't necessarily agree with the minority, and I was asked at that time, for the first time, would I prefer--how would I prefer to handle that.

I said let them speak their mind. Let them tell us what, what they think, and we will listen.

I've tried to put out a message on a number of occasions that NASA line management is in charge of the civil space program.

The president reinforced that, a week or two ago, in his comments during the Discovery mission, that NASA will decide what to do with the shuttle, and other issues.

So we are accountable and responsible, Bill and I and others, are responsible for what we do here in the civil space program.

Advisory groups advise. We welcome the advice because it is very hard, when you're immersed in the day to day struggle to figure out the right thing, do the right thing, and make the hard decisions. It's very hard to pull back and look at things from a "big picture" perspective, and so NASA often uses knowledgeable but external advisers to help us shape our decision making.

But at the end of the day, those groups are not accountable and not responsible for what they suggest. They provide information that we use to evaluate our course of action and that's what we will do with the Stafford-Covey Task Group report or with any other report that we commission.

So when I was asked the question, do you want to hear this stuff? the only answer I could ever give would be, yes, I want to hear it, I want to hear what people have to say, and then we'll evaluate it. We do not shrink, in NASA, from criticism of our engineering processes, our decisions, or anything else.

We will listen to it, we'll evaluate, and we'll make a decision and we'll move on, and our superiors and stakeholders will judge us for what we have done.

MR. ACOSTA: All right. One follow-up. We're running out of time, though.

QUESTION: You don't want to guess on what you were doing at that time, when you were asked the question how you would handle it. So could you clarify how you were asked for your opinion and how you would have handled the situation with Dan Crippen and the others at the time.

ADMINISTRATOR GRIFFIN: I actually don't remember. I received, I believe, a call, either from Tom Stafford or Dick Covey, both of whom are old friends, and was apprised that there was some dissent within the group and a discussion of whether a minority report would be issued, and would I--you know, would I be receptive to that, and my attitude was exactly what I have conveyed to you.

We are ready to hear whatever it is that people have to say.

MR. ACOSTA: Let's go to Johnson Space--

ADMINISTRATOR GRIFFIN: [inaudible] and Dick and Tom said fine.

MR. ACOSTA: Sorry to interrupt there.

ADMINISTRATOR GRIFFIN: Yes, pardon me. I wanted to add that last bit, that Dick and Tom then just said let's go forward, was no issue.

MR. ACOSTA: All right. We have a few minutes left. Let's go to Johnson Space Flight Center for a question.

QUESTION: Mark Korove from the Houston Chronicle to Bill Gerstenmaier. At the top of your remarks, you mentioned that your teams in Michoud are looking at some root cause and potential repairs.

Could you elaborate, especially with regard to the power ramp. What kind of mechanism do you think you're seeing and how would you go about repairing?

MR. GERSTENMAIER: Again, kind a like I described last week. Probably the leading thing we're thinking about is removing the existing power ramp and then spraying a new power ramp in place of the one we took off, and we think we can do a better job from a spray standpoint, we can do a better job from an overall installation standpoint, and then it'll also be a fresh ramp that we've installed.

Now as I say that, we have to be cautious that we're spraying this power ramp on top of the foam acreage that sits below it, and you could think of that as the foundation that sits below it.

So we need to understand and make sure that that foundation we're putting it on is a viable foundation, is going to be as strong as a ramp we're adding on the top.

So, again, I'm kind a sharing with you what the team is thinking about. But you don't want to just jump to one conclusion and not test that conclusion and make sure you're really doing the right thing.

So we're going to take some of the tanks that we've already put foam on and we're going to dissect those, we're going to do some more NDE with them, now that we have the--you have the luxury of hindsight.

You saw when the foam came off, you saw where it came off, you understand what time it came off, you know the velocity it came off, you know the size of the piece that came off.

Now we can take our NDEs back on some a those other tanks and take that knowledge we now have of the failure and see if that can give us any more insight. So before we pick a particular repair technique, we're going to understand every bit of data we can get out of the existing tanks, we're going to make sure that we've got a good solid foundation, we're going to What if? this back and forth to make sure we've got the right repair philosophy that's going to ensure to a higher probability we won't have this type of event or the event will occur so late in the sequence that it's not a problem to us.

That's the other dimension we have here, that we sometimes don't talk about.

You know, after about 135 seconds or so, foam loss is really not a problem to us because we can't get enough delta velocity for it to cause us a problem.

So we can either ensure no foam comes off or we can ensure it's going to come off after a point in the sequence when it doesn't matter to us from a velocity standpoint.

So we're going to factor both of those together but we still have a lot of work before we pick a particular repair technique.

And I gave you kind a insight -- repair technique and just be cautious that you don't put that down and then next week, when we get more data we change it. We're going to let the data drive us and tell us which way we want to go and what we want to go do.

MR. ACOSTA: [inaudible] Marshall Space Flight Center.

QUESTION: Hi. Steve Johnson from NewsChannel 19. My question is for Bill Gerstenmaier. Obviously, the delay is going to allow you more time to work out the foam problems.

Is it also a benefit, say, here in Marshall, for the propulsion folks? I mean, is there a benefit in not launching until next March?

Will they be able to accomplish something new?

MR. GERSTENMAIER: Again, I think when you get a slip, you take a look at it and you figure out how you can use that to your best advantage and that's part of this review process that the teams are going through, is some of the teams won't be impacted by this and they may be able to add some new activities. You need to be careful, when you add new activities, that you don't push the schedule or put more risk in the system, but we'll go evaluate that, so we've got the new dimension of a little bit extra time and each one of the teams will take a look at it, they'll evaluate it, and then the program will discuss it in details over this two week or three week review.

MR. ACOSTA: All right. Let's go to Ames.

QUESTION: Hi. This is Matt Bigler, KCBS radio in San Francisco, and the question is about the Ames Research Center here. What role will Ames be playing in testing the foam issue and preparing the shuttle for launch, if that is an eventuality, come next year?

ADMINISTRATOR GRIFFIN: Again I think some of the teams are still formulating what kind of testing we want to do, if we want to do any more wind tunnel testing. There may be something come along those lines that we'd like to use Ames for.

Clearly, in the aerodynamics region and some of that activity, we may ask some work from Ames there.

Some time in the future, we'd probably like to remove the power ramp and to understand, the ability to remove the power ramp we need to look at the aerodynamic conditions of the cable tray that sits there in the press lines and we'll involve Ames or the right research folks throughout the agency to help us with this.

And that's one of the neat things about NASA, is the fact we have essentially a large pool of resources and engineering talent that we can pull on throughout the agency to help us with these problems and these issues that come up.

It's a tremendous pleasure for me to be able to have the ability to go ask whoever I need to go do, to help me understand a test or data, and get an immediate response that, hey, we're willing to help, and it's a tremendous testimony to the way NASA can work as a team and pull together from the multiple centers to support what we're trying to do here.

MR. ACOSTA: All right. Let's come back to headquarters for one question before we close it out.

QUESTION: Thank you. Jeff Morris with Aerospace Daily, for either gentleman.

At what point does the slip in this second test flight mission begin to impact the decision making window for a Hubble mission?

ADMINISTRATOR GRIFFIN: Well, I mean from a budget perspective, obviously we need data from the last shuttle flight, the upcoming shuttle flights, to be able to make a Hubble decision.

I've said that from the first. I have said that I would like to do a Hubble servicing mission if we can do it. But that if we can do it depended on the results of these flight experiences.

It's really just a budgetary issue. The longer we do without committing to do or not do a Hubble servicing mission, the more that we have to of course carry the budgetary protection to do it, and the more it costs us.

The running cost of that past December of 07 is about \$10 million a month, okay, as best we can calculate it right now. We're not going to make a decision based on that fact.

I'm just telling you that that's what it costs us, if we defer out past December of 07.

MR. ACOSTA: All right. Thank you. That'll conclude the question and answer.

I want to give the opportunity to MR. Gerstenmaier or the administrator for final remarks.

ADMINISTRATOR GRIFFIN: I have nothing.

MR. GERSTENMAIER: I really have nothing to add. I will add that I'm pretty excited getting up here to headquarters and getting a chance to work with these teams. I worked in the past with the shuttle team and I worked a lot with the station team and to be up here and know what engineering skill and the personnel that I have behind me at the field centers, both at Johnson and Marshall and Kennedy and even Ames, and then Langley, and Glen, where I came from, it's a tremendous privilege for me to be up here, to be able to represent them and to call on them, and pull from that pool of talent that's out there to solve these problems.

It's a neat thing to be up here and I feel privileged to be up here, but it's great having that team behind me, cause I know there's an awesome team back there that's really willing to work.

MR. ACOSTA: That'll be the final word, that'll conclude today's press briefing. For more information on today's topics and others, please go to www.nasa.gov. Thank you very much.

[END OF TAPED RECORDING.]
