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**MEDIA TELECONFERENCE**

Briefers:

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Senior Official, Disaster Recovery and Relief

**BILL GERSTENMAIER,**  
Associate Administrator for Space Operations

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## 1 P R O C E E D I N G S

2 MODERATOR: Thanks everyone for joining us today  
3 for this teleconference update on Hurricane Katrina's  
4 impact to NASA. Calling today from one of our effective  
5 facilities, from the NASA Stennis Space Center in South  
6 Mississippi, is the senior agency official in charge of  
7 NASA's Hurricane Recovery Effort, Bill Parsons. Also  
8 joining us from NASA's Johnson Space Center in Houston is  
9 the associate administrator for Space Operations, Bill  
10 Gerstenmaier.

11 We will start off with an update from Mr. Parsons  
12 and Mr. Gerstenmaier, and then we will open it up to  
13 questions.

14 Mr. Parsons:

15 MR. PARSONS: Before anybody asks a question, I  
16 will just explain that I have been assigned as the senior  
17 NASA official for Disaster Recovery and Relief, and while I  
18 am doing this, we put a letter out making Wayne Hale the  
19 acting program manager for the Shuttle program. So that is  
20 what he is doing at this time.

21 Our first priority in this recovery is taking  
22 care of our people, and we have had a huge effort on going

1 with that. I will tell you a little bit about that in a  
2 minute.

3 The second priority is to save our facilities as  
4 best we could, to reduce the damage that might occur with  
5 ongoing storms or anything like that. So that has been  
6 ongoing as well.

7 Then the third major priority is assisting all  
8 the disaster relief agencies that are located here at the  
9 Stennis Space Center and at Michoud in their efforts to  
10 provide search-and-rescue, relief, and recovery for all the  
11 people that are affected here.

12 I'll tell you, you just can't watch it on TV and  
13 get a feel for the devastating that I have seen down here  
14 on the Gulf Coast. It is just unbelievable.

15 I will say that you can't imagine the dedication  
16 of these employees here at the Stennis Space Center and  
17 Michoud that faced this Category 5 hurricane, the ride-out  
18 crews that stuck with our facilities and made sure that  
19 they kept our facilities up at Michoud, and then here at  
20 Stennis, we evacuated almost 4,000 people to the Stennis  
21 Space Center as a point to ride the storm out. Then the  
22 employees here that took care of those people, took care of

1 our facilities, and rode the storm out right here where the  
2 eye just about came over the top of Stennis.

3 At this point in time, we have accounted for all  
4 our civil servants at the Stennis Space Center, and we have  
5 accounted for about 95 percent of all our contractor  
6 employees. Every meeting I go to, we have contacted one  
7 more or two more or three more, and we continue to get in  
8 contact with all our employees, but we still have a few  
9 that we need to get in contact with.

10 At Michoud, all the civil servants are accounted  
11 for and about half the contractors, and as you can imagine,  
12 more of the contractor work force is in the New Orleans  
13 area. It is so difficult to get information about the  
14 people there in the New Orleans area, and it is going  
15 pretty slow, but Lockheed Martin is putting forth one heck  
16 of an effort to find all of their employees and get  
17 accountability for them.

18 I will say that I can't really give you a figure  
19 for Michoud because, again, only about half of the  
20 contractor employees have been accounted for, but I can  
21 tell you that the people without homes are going to be  
22 huge.

1           Here at the Stennis Space Center between the NASA  
2 and contractor work force, it is somewhere around 180 to  
3 200 people that are without homes, and the overall  
4 population of Stennis, which includes the Navy and the  
5 resident agencies here, it is somewhere in the neighborhood  
6 of 8- to 900, possibly a thousand people that are without  
7 homes or homes that are not livable, you couldn't go back  
8 to. So, again, that gives you a feel just from the work  
9 force here at these two facilities and the impact of this  
10 work force.

11           From a facilities standpoint, both Stennis and  
12 Michoud fared pretty well. A tornado seemed to have hit  
13 one of the headquarters buildings here at Stennis, took off  
14 part of the roof, caused some water damage. We have a  
15 little bit of water damage here and there. We have some  
16 trees down and a few facilities that need some work, but  
17 overall Stennis Space Center fared very well from a  
18 facilities standpoint.

19           Michoud, again, some roof damage on some  
20 facilities. Some of the facilities in the outlying areas  
21 that really weren't hardware critical took more damage.  
22 Some of the facilities that housed our flight hardware took

1 some roof damage. There was a little bit of the concrete  
2 roofing that fell and impacted one of the external tanks.  
3 We haven't been able to evaluate that yet. It is still on  
4 going. We need to save that facility.

5 As you can imagine, the Michoud facility is  
6 pretty much surrounded by water, and we have had a hard  
7 time getting any kind of heavy equipment support in there  
8 so we could do some of this work. So all we have done  
9 really is try to cover with tarps and kind of stem the flow  
10 of damage that was occurring.

11 I would say up until last night, the Michoud  
12 facility was cut off, and the only way we could get there  
13 was by air. We were using both Army helicopters from Red  
14 Stone Arsenal and the Kennedy Space Center helicopters to  
15 provide support. They do not have fresh water, other than  
16 what was already there, and they had it stored. That is  
17 just water that they can use for showers and for flushing  
18 the commodes and things like that.

19 They do not have electrical power, but they do  
20 have generator power. They do not have natural gas, and so  
21 they were pretty much cut off. So everything we were doing  
22 in support of them was by helicopter.

1           At the Stennis Space Center, we have brought back  
2 temporary power into the center. It is only about half of  
3 what we normally have, but it has been sufficient to get  
4 some of the facilities up.

5           A large portion of the facility where the Army  
6 ammunition plant it -- and that is where FEMA and a lot of  
7 people are locating do not have power, but we are powering  
8 that by generators right now in support of their effort.

9           At Michoud, again, we broke through last night  
10 with a convoy. That sounds a little funny, but it's what  
11 it felt like as you ride this. There was a Navy convoy  
12 going to Michoud where the Marines are located as well as  
13 they go do search-and-rescue out of the Michoud facility.  
14 The Navy was resupplying the Marines. We followed behind  
15 them, and we were able to get supplies and things into the  
16 Michoud facility. Now we kind of have an open road in  
17 there, and we are starting to supply them by truck, so a  
18 little helicopter support now and a lot more convoy  
19 support, truck support into the Michoud facility.

20           They are estimating power at Michoud probably --  
21 you know, it's hard to tell. We really have not been able  
22 to get to the power people, but let's say it may be as long

1 as 3 weeks. It could be even longer than that, but again,  
2 we have generator power, and we are able to get the  
3 facilities [inaudible] and do things like that.

4 Let's see. Huge supports from everybody in this  
5 agency. I won't even go through that, just to tell you  
6 that if you've ever seen the way we came together when the  
7 Columbia disaster occurred, you can imagine how this agency  
8 has come together to support Stennis and Michoud. And I  
9 have to have a special thanks to the Marshall Space Flight  
10 Center since they provide a lot of support to Michoud.  
11 They have really stepped up, and I also have to say  
12 headquarters has met all of our needs and enabled us to be  
13 able to do everything we needed to do, to aid the recovery  
14 of our -- or the relief to our employees and recovery to  
15 our facilities.

16 Right now, we probably have about 1,500 relief  
17 workers located at the Stennis Space Center. That may grow  
18 to as many as 3- to 5,000.

19 Also, they have a joint task force, that the  
20 communications link is operating out of here at Stennis,  
21 and at one time, we had the two-star Marine general located  
22 here that was providing security from Mobile to New



1 Orleans. I think he has moved forward again and engaged  
2 himself in a different place. Maybe he is at Michoud. He  
3 tends to move around a lot, but the bottom line is not only  
4 the Mississippi National Guard, Army units, Marine Corps  
5 units, Navy units, the Navy Seabees, we have a lot of folks  
6 coming in and out of Stennis, a lot of supplies coming in  
7 and out of Stennis that are providing relief and recovery  
8 to this community, and it is going to be required for quite  
9 some time.

10 So, with that, there is plenty more I could add,  
11 and I could just tell you that we have one heck of an  
12 operation going on here, and I am just glad I could be of  
13 some help here in this major disaster.

14 So I'm done.

15 MODERATOR: Okay. Mr. Gerstenmaier?

16 MR. GERSTENMAIER: From the Space Operations  
17 standpoint, I really want to thank the employees that  
18 stayed at MAF and the employees that stayed at Stennis to  
19 protect our assets. They did a tremendous job of really  
20 taking care of our facilities. They are in as good a shape  
21 and as great shape really only because of their dedication  
22 and their preparedness.

1           It wasn't only the employees, but we had good  
2 plans in place. We had good procedures in place. They  
3 knew what they needed to do to execute. We kept the  
4 minimum amount of personnel around to keep our facilities  
5 safe. They were able to take care of their families, but  
6 they still felt a tremendous dedication to take care of our  
7 hardware.

8           Keeping the pumps running at Michoud was  
9 extremely important to keep the water and the flooding out  
10 of the area, and again, they have done a tremendous job.

11           The Administrator said in his remarks to the  
12 agency personnel today, you know, what a privilege it is to  
13 be part of that team that has that same dedication to the  
14 baseline business that these folks have evidenced for us,  
15 and they have just done a phenomenal job.

16           So, again, we thank all the folks that have been  
17 on the ground and have really made huge sacrifices for the  
18 agency both at Stennis and Michoud.

19           Also, another thing we are kind of watching now  
20 is there is another tropical storm, Ophelia, off the coast  
21 of KSC. It doesn't look like it is going to be a problem  
22 to us. It looks like it is probably going to go offshore,

1 but again, in the spirit of being prepared, we have been  
2 tracking that. We haven't taken any -- we are in Hurricane  
3 -- I think -- Status 2 or 3 or 4 for that preparedness. We  
4 really have not heard anything. We are just doing general  
5 cleanup at KSC being prepared.

6           If it looks like it may be coming towards KSC, we  
7 will do some more intrusive kind of shutdown of equipment  
8 and board some things up and get prepared for potentially a  
9 tropical storm or a hurricane. So, again, throughout this  
10 season, we are still continuing to be vigilant and do the  
11 planning that we need to go do.

12           If you take a look at what the Michoud impacts  
13 and the Stennis impacts are overall to the program -- and  
14 we are really not sure what they are -- we have done some  
15 things to try to mitigate the problems or concerns for the  
16 program from those facilities, but we had our Marshall  
17 teams down at Michoud doing the external tank investigation  
18 activities. We moved those folks to Marshall well in  
19 advance of the storm. So they were in Marshall, and they  
20 didn't have access to some of their computer information.  
21 They got that today. Again, the people at Michoud were  
22 able to get some computers up and got the data systems up,

1 so they could actually get access to some of their data.  
2 They are looking at that.

3 We have done some contingency planning of looking  
4 at doing some nondestructive evaluation of some of the  
5 tanks in Florida. We will do some of that evaluation in  
6 Florida. That is a good thing to go do.

7 Where we do processing, where we do follow-on  
8 work, we really don't know yet from an overall standpoint.

9 It kind of changes on a daily basis.

10 I think, again, the teams have done a phenomenal  
11 job at Michoud. They have got tarps over some of the  
12 buildings, as Bill described. We have got air-conditioning  
13 on in a couple of the buildings. We are starting to get  
14 climate control back in, drop the humidity down, and we are  
15 doing that with our own diesel generator power.

16 We have offered some support to the local energy  
17 community to help them with some of the wiring that comes  
18 in the facility. So that may shorten some of the times for  
19 getting power back on. Again, they have done a great job  
20 of just being prepared, and we will see kind of how this  
21 plays out, but I would tell you in recent days, the  
22 progress has been really good and much faster than we had

1 been predicting in the past.

2           The fact that Highway 11 is now open and we can  
3 get some trucks in and out is a big plus to us from an  
4 overall processing standpoint. It will help us get back  
5 online.

6           We have got some reverse osmosis units delivered  
7 from Ames that will allow us to produce potable water.  
8 About 6,000 gallons of water per hour can be generated with  
9 these reverse osmosis units. We will figure out a way to  
10 get those powered up, so we will get some potable water  
11 back for folks to drink and use and whatever.

12           So, again, I think the teams have done a great  
13 job of protecting the facilities. They are doing a good  
14 job in the recovery efforts. It is too early to say how  
15 that all impacts. We will see how it plays out. We have  
16 done the smart things immediately to protect schedule where  
17 we can and see where they are.

18           I look forward to your questions.

19           MODERATOR: Okay. With that, we will open it up  
20 to questions. Since we have a lot of people on the line, I  
21 want to make sure we get to everyone with at least one  
22 question. So please start out with just one question, and

1 then we will go back around if time permits.

2 I will call on you in the order you RSVP'd. So  
3 we will start off with Mark Carreau, Houston Chronicle.

4 QUESTIONER: Thanks. Mine is probably for Mr.  
5 Gerstenmaier.

6 Before the storm dealt you this blow, you were  
7 looking at March as a potential -- well, no-earlier-than  
8 launch date. Given what you know now, is that still  
9 possible, or are you really sort of looking more towards  
10 the end of next year, or is it just really totally a  
11 mystery?

12 MR. GERSTENMAIER: I think it is really too  
13 difficult to predict.

14 You know, when I talked to you before from  
15 Washington, I mentioned that we had kind of established the  
16 March date, and then we were going to spend a couple weeks  
17 building a scheduling to see if we could really support  
18 March or if there were some other things that might push us  
19 out.

20 We never really got through with that schedule  
21 evaluation before the hurricane hit, and that kind of has  
22 thrown all of that activity kind off kilter a little bit.

1           So we are looking now kind of at options. They  
2 kind of change daily, depending on how we want to go do  
3 things. We are looking at big swings about where we do  
4 processing, where we may do foam spray-on. We could do  
5 some of this NDE investigation in Florida which helps us.  
6 That keeps the schedule moving forward. We were able to do  
7 a lot of testing at Marshall. We got the teams located at  
8 Marshall. So, again, that helps us.

9           So I think we have got a good near-term plan, but  
10 we still are nowhere near being able to have enough of a  
11 plan put together to say with any concrete certainty about  
12 when the launch date would be, and it would be just  
13 speculation. It is probably better not to speculate now.

14           Let's see what happens in terms of when power  
15 gets established. Let's see where we are in terms of  
16 getting water in the facility. Let's see what the workers  
17 want to go do. Some folks may want to come back to the  
18 area and start work. Others may want to stay away and do  
19 some other things, and we will try to respect some of the  
20 workers' wishes as much as we can and figure that into our  
21 schedule. So it is too early to tell at this point.

22           MODERATOR: Marsha Dunn, Associated Press.

1 QUESTIONER: Yes. Hi. Can you hear me?

2 MODERATOR: Yes, ma'am.

3 QUESTIONER: Gees, I guess for Bill Gerstenmaier  
4 again.

5 You know, you are probably pretty familiar with  
6 the Wayne Hale memo in which he said even before the  
7 hurricane, March was infeasible, maybe unlikely, and I am  
8 just wondering if you could comment on that. Hurricane  
9 aside, was March overly optimistic?

10 MR. GERSTENMAIER: Again, the Wayne memo was a  
11 thing that he gave to me last week. It was a piece of  
12 paper we used to discuss future planning and schedule  
13 stuff, and we looked at it as a preliminary discussion.  
14 Even during those meetings, after we got done with the  
15 discussion, some of the initial points that Wayne put down  
16 in the memo, we're not sure that those were right. Wayne  
17 and I kind of agreed that, well, we'll just continue to  
18 work it and see where it falls out.

19 We are looking at some things in terms of -- you  
20 know, the PAL ramp is one of the pacing items for us and  
21 what we are going to do with the PAL ramp. We have  
22 discussed some options about maybe trimming the PAL ramp to



1 down maybe half size and not totally removing the PAL ramp,  
2 but doing that. That doesn't require any spray-on of foam.

3 I don't know if that is feasible or not. We need to let  
4 the teams go work and look at that. So there's lots of  
5 options that are being investigated.

6 So I would say that what you got to see in the  
7 Wayne memo -- "memo" is too strong of a word. It was  
8 officially kind of a note -- not officially. It was kind  
9 of a preliminary note that Wayne and I used to just discuss  
10 overall schedule planning.

11 I would tell you, in talking to Wayne today, he  
12 shares my opinion. We are not really sure exactly where  
13 things are, and we will just wait and see what happens.

14 So I would not say that March is feasible,  
15 infeasible, or not. I would just say we are in the  
16 processing of evaluating it, and we will see where we are  
17 in the next couple of weeks after we see what actually  
18 comes about.

19 MODERATOR: Okay. Frank Moring, Aviation Week.

20 QUESTIONER: Thank you.

21 On that same subject, can you say where you were  
22 in understanding the foam loss on STS-114 before the storm

1 came up?

2 MR. GERSTENMAIER: Again, kind of where we are is  
3 we have identified the five areas of foam loss.

4 One that probably paces most things is the PAL  
5 ramp area, the protuberance air load ramp area. In that  
6 one, we are still kind of searching at root cause. We have  
7 three or four potential root causes identified.

8 We have some testing at Marshall that we are  
9 going to go do to try to validate and verify those  
10 potential root causes. That testing is unimpacted by the  
11 hurricane activity. So we will still get that testing, and  
12 it will help close some of the legs of the fault tree down.

13 We are also going to do some NDE, non-destructive  
14 evaluation, of the tanks in Florida. That will also give  
15 us some data that will help also isolate some of the legs  
16 of the fault tree. Again, that is on our original plan and  
17 pretty much not affected also by the hurricane. So this  
18 kind of preliminary work is to narrow down what we think  
19 the root cause was for the PAL ramp loss, and once we look  
20 at that, we will look at options on how we can put another  
21 PAL ramp on or modify the existing PAL ramp to fly it  
22 safely.

1           MR. PARSONS:  And Gerst, I would add one thing --  
2  is one of the first things we did is we got all of the data  
3  tapes downloaded, and we air-lifted them out and took them  
4  up to Marshall, so that the folks could continue their work  
5  to look into the PAL ramp and all of that.  So the  
6  investigation team has all the data that was at Michoud,  
7  and they are using that to continue with the work they are  
8  doing.

9           MODERATOR:  Brian Berger, Space News.

10          QUESTIONER:  Thanks.  I guess this question is  
11  for Gerstenmaier.

12          Now, Bill, I heard you say that Wayne has  
13  actually backed off some of his estimates about the  
14  hurricane's impact, but what about this part of the white  
15  paper here that references the best pre-hurricane estimate?  
16  Did he back off that as well, that March was infeasible  
17  and May looked unlikely?

18          MR. GERSTENMAIER:  Again, I think he -- when we  
19  discussed it all, we laid it all out, and we think there's  
20  still a lot of options there that we need to go look at.

21          It is going to be key determining what we think  
22  the potential root cause is, and then once we know what the

1 potential root cause is and how we have to protect for it,  
2 then that is going to kind of set the path we need to go  
3 back to get the tank ready to fly.

4           What we got out of our discussion was there is  
5 still a lot of uncertainty about those potential root  
6 causes. We don't know which ones they are. There may be  
7 and likely we will probably end up with a couple of these  
8 root causes still open, and then we will have to protect  
9 for all three of those from a design standpoint or four of  
10 those initial root causes.

11           But we still have a lot of work to go do with  
12 that. Wayne and I think at this point that it is a little  
13 premature to kind of pick a date. Let the teams go ahead  
14 and work. Let them go work their root-cause stuff. Let  
15 the folks get their answers together. Then we will start  
16 flowing that back in with what we can do from a facilities  
17 standpoint, and then at that point, then we are ready to  
18 talk with a little bit of certainty -- or not certainty,  
19 but a little more assurance of what the schedule might be.

20           MODERATOR: A.J. Hostetler, Richmond Times  
21 Dispatch.

22           QUESTIONER: For either Mr. Parsons or Mr.

1 Gerstenmaier, what is the crew of the STS-121 working on at  
2 this point? Are they involved in the hurricane efforts, or  
3 what?

4 MR. GERSTENMAIER: Again, I think from an overall  
5 training standpoint, they are still doing some training for  
6 their mission.

7 We backed off initially when we moved to the  
8 large kind of time frame or using that for a planning date.

9 So we are not keeping them in as intensive a training as  
10 we were before, but they are still off essentially doing  
11 training and getting prepared for their mission, and we are  
12 looking at overall kind of refining things.

13 I would add along those same lines, we had a  
14 Progress vehicle launch today from Baikonur. That Progress  
15 vehicle, we amended a little bit, the manifest. We put a  
16 little more food and some other items on there because we  
17 know the Shuttle schedule will move a little bit into the  
18 March time frame. So we have protected for that.

19 That Progress is scheduled to dock on Saturday,  
20 and now we are in flight preparation for the Expedition 12  
21 crew launch on October 1st from Baikonur. We are in kind  
22 of the flight review process where we go through and make

1 sure that all the systems are ready and the Space Station  
2 is ready to go oversee that crew.

3           The 121 crew is kind of in maintenance training,  
4 but the Expedition 12 crew is getting ready to go fly on  
5 the Soyuz in October.

6           MODERATOR: Randy Sigel [ph] from WTSU Radio.

7           QUESTIONER: S-T-U.

8           MODERATOR: I'm sorry?

9           QUESTIONER: S-T-U.

10           The drop-dead date -- Bill Gerstenmaier, the  
11 drop-dead date I understand is November to have the ET at  
12 Kennedy Space Center, and if we don't do that, how is that  
13 going to impact the actual retirement of the Shuttle,  
14 enabling us to complete the ISS by 2010, or is there any  
15 consideration being given to extending that retirement  
16 date?

17           MR. GERSTENMAIER: First of all, in terms of the  
18 drop-dead date for the tank to Florida, that has a lot of  
19 assumptions in it. It had a lot of work-processing  
20 assumptions at the Cape, but it protected for a bunch of  
21 holidays over the holiday time frame, et cetera. But I  
22 think there is a lot of softness in that November date,

1 maybe on the order of 30, 40, 50 days or so, and so I  
2 wouldn't hang my hat on that November date.

3           When we looked at the overall sequence and the  
4 impacts there, we looked at kind of the number of flights  
5 that we were kind of thinking, that we have talked about  
6 for Station, and they are really not impacted by a move  
7 from where we were going to launch in September to kind of  
8 the March, later, next-year time frame. So, again, we  
9 still are going to be able to accommodate basically the  
10 number of flights that we need to get Station in a good  
11 configuration for the partners and to leave Station in a  
12 good configuration for Shuttle retirement.

13           Right now, we don't see any need nor will we want  
14 to move that Shuttle retirement date in 2010, and we will  
15 just leave that where it is. I don't see any threat to  
16 that right now.

17           In our scheduling and planning, we assumed that  
18 we would have some Shuttle problems along the way. We  
19 didn't assume that everything would go perfectly. So our  
20 baseline schedules has got some margin in them already.  
21 Then when we picked this hurricane up, we used a little bit  
22 of that margin, but there is still plenty of margin left to

1 go ahead and give us a good viable program to meet our  
2 commitments to the partners.

3 MODERATOR: Ivan [inaudible].

4 QUESTIONER: Yes. Well, my question is could you  
5 please tell us what kind of operations at Stennis and  
6 Michoud on the Space Shuttle program were actually  
7 disrupted because of the hurricane.

8 MR. PARSONS: I will take a little bit of that,  
9 and, Bill, you can add on.

10 At Stennis right now, our test facilities have  
11 been saved. They are in a standby mode. Of course, right  
12 now, that's not the most important thing to us. Let's just  
13 there was no hurricane or it had passed through and  
14 people's lives weren't impacted the way they were here. I  
15 would believe Stennis Space Center could support a test  
16 just in the very, very near future.

17 So, from a test standpoint at the Stennis Space  
18 Center, our facilities are ready to go. Again, that would  
19 be there is a huge other effort going on that impacts that  
20 up and the fact that the people aren't ready right now, and  
21 until we get the recovery from the hurricane, we wouldn't  
22 be able to test.



1           From a Michoud standpoint, some of the facilities  
2 suffered some roof damage. We will get that put back  
3 together, but really the major impact of those facilities  
4 is just power and water and sewerage treatment, and a lot  
5 of those services come out of the City of New Orleans to  
6 the Michoud facility. We know that they are going to be  
7 impacted for some time.

8           Now, we have temporary ways to work around that,  
9 and we are working around that. I think that you just have  
10 to see the effort that is going on there, again, as we put  
11 back power, bring up facilities, bring up air-conditioning,  
12 and get the facilities back in order, and that is ongoing.

13          We continue to be able to do work around for water and for  
14 sewerage treatment and everything else. So thing tends to  
15 go -- or are going in a good direction, but we are going to  
16 have to wait and see how the recovery for some of the  
17 utilities for the City of New Orleans goes before we can  
18 tell you where we are going to be at on long-term fixes for  
19 that facility.

20           MR. PARSONS: Again, kind of the work we had  
21 planned at Michoud was we were going to do some  
22 nondestructive evaluation of some of the tank. That work

1 was going to be done in Michoud. It will now be done in  
2 Florida, and so I think, again, from an overall schedule  
3 standpoint, we didn't lose much schedule at all there. We  
4 will just do that work in a different location.

5 MODERATOR: Jim Hodges, Newport News Daily Press.

6 QUESTIONER: Yes. Gentlemen -- and this is for  
7 either of you -- the impact of Stennis and Michoud, how  
8 does this impact the rest of NASA's centers down the line  
9 as far as their contributions to the mission, to the  
10 Shuttle mission?

11 MR. PARSONS: Well, I don't know. I don't think  
12 it really does very much at all.

13 The other centers have helped us in this recovery  
14 effort, but to be quite honest, we are kind of coming back.

15 Even though the tempo here is still a very high  
16 operational tempo for the recovery effort, for the relief  
17 effort, it has come to a more normal high tempo effort. I  
18 mean, we are not in the emergency mode anymore, although we  
19 stayed in that mode probably longer at any point in time  
20 that we have dealt with a disaster.

21 I would say that the other centers now are back  
22 to their business. We will call upon them for very specific

1 kinds of things that we might need from them, but I don't  
2 think at this point in time we are impacting the other  
3 centers' ability to support the Shuttle program, if that is  
4 what you meant.

5 Gerst, you may have some other thoughts, too.

6 MR. GERSTENMAIER: I think that is a good  
7 characterization. I think the thing that was neat was that  
8 each one of the centers have figured out their unique way  
9 to help.

10 As Bill said in his opening remarks, Marshall was  
11 closest to these two, and Marshall helped a lot with  
12 supplies and various items they could. JSC did the same  
13 thing.

14 KSC also looked at what they could bring in, and  
15 again, they are very familiar with what it is like to go  
16 through hurricanes. They figured out what supplies they  
17 could most likely need and figured out ways to get them  
18 into Stennis and to Michoud, and that was a great effort  
19 from Kennedy. Ames, again, helped with this reverse  
20 osmosis unit for water supply.

21 For each one of the NASA centers in their own way  
22 tried to figure out their little piece of how they could

1 help out down there, and they figured out a way they could  
2 contribute through our plans and processes to help out the  
3 folks in the area. So, again, the NASA centers all pulled  
4 together kind of as a real team to help out.

5 MR. PARSONS: And I would add, too, after the  
6 Columbia accident, we realized there was an agency-wide  
7 kind of disaster relief plan that we needed to put into  
8 place. We did that. We really went and worked the plan,  
9 as Bill Gerstenmaier said, and so what we really saw was  
10 that a really good plan had been put together.

11 We will improve upon that plan upon incorporating  
12 the lessons learned that we have learned through this  
13 experience, but the fact is Columbia and the things that we  
14 learned having to deal with all of the centers  
15 participating and the relief of that really helped us come  
16 together very quickly, and then our familiarity with FEMA  
17 and other -- United States Forest Service and those kind of  
18 organizations helped a great deal as well. So I think that  
19 that was a real plus in how we have conducted our business  
20 here in the last 10 days.

21 MODERATOR: Let me apologize up front if I  
22 mispronounce this time. Brian Nelson, Newsday.

1 QUESTIONER: Bryn Nelson.

2 MODERATOR: Bryn. Sorry.

3 QUESTIONER: That's fine.

4 I am wondering if you could just talk a little  
5 bit more about -- you had mentioned some damage from the  
6 roof concrete onto one of the external fuel tanks. Has  
7 there been any more sense as to that damage and how that  
8 may impact the program?

9 MR. PARSONS: I talked to the guy who went up and  
10 looked at it. Right now, from where they can see, it is  
11 pretty superficial. Can't even tell it really -- to be  
12 quite honest, there are a few little marks. You can't tell  
13 that it really impacted that much, but we know a large  
14 chunk came off. It was laying off to the side. It may  
15 have missed it, or pieces of it may have hit. The bottom  
16 line is we need to get up there when we can and get the  
17 right people, which they are not currently at Michoud right  
18 now, to do that evaluation.

19 So what I would say is it doesn't appear to be  
20 very bad. It is also on the opposite side of the tank that  
21 is against the orbiter, which is good. We are going to  
22 have to evaluate it with the right people, but right now,

1 it doesn't look like there is anything we need to be overly  
2 concerned about.

3 MODERATOR: Robin Shelton, Orlando Sentinel.

4 QUESTIONER: Mr. Parsons, if you could go back  
5 over the numbers of folk who don't have homes or livable  
6 homes. I heard two different numbers, and I am just trying  
7 to nail that down better, if you have that both for Stennis  
8 and Michoud.

9 MR. PARSONS: Well, I will start with Michoud. I  
10 don't really have a good number for Michoud. So I am going  
11 to just have to give you kind of [inaudible].

12 We know that we have only been able to contact --  
13 or Lockheed Martin has only been able to contact about 50  
14 percent of their employees. So they are still trying to  
15 find their employees, and by the way, I haven't talked to  
16 them in 6 or 8 hours and that means they probably could  
17 have contacted many more since then because it is ongoing.

18 We are always getting contacts from employees.

19 I don't know the number that are without homes at  
20 Michoud because, again, until we contact all of the  
21 employees -- and the fact is some of them have no idea  
22 because they have not been able to find out the status on

1 their homes or that they are under water or anything like  
2 that.

3 At Stennis, we have accounted for all of our  
4 civil servants, which is around 300 people, and we have  
5 accounted for about 95 percent of our contractors. That  
6 continues to improve every hour.

7 Of those, we have about 180 to 200 of the NASA  
8 and NASA contractors that are without homes, but at the  
9 Stennis Space Center, there is a number of resident  
10 agencies to the number of about 5,000 people that work  
11 here. Some of them were with the Navy, EPA, United States  
12 Geological Survey, agencies like that, and we know right  
13 now that as many as 8- to 900 people within this community  
14 at the Stennis Space Center that work here are without  
15 homes. I was just trying to give you a feel of the  
16 magnitude of the number of people that work here. So  
17 almost 20 percent of our employees here at the Stennis  
18 Space Center are without homes.

19 MODERATOR: June Santini, AFP.

20 QUESTIONER: Jean-Louis Santini.

21 How many people worked at the Michoud factory?

22 MR. PARSONS: It is about 2,000 Lockheed Martin

1 folks. There is only about 14 or 15 NASA folks. So that  
2 is about the numbers.

3 It was quick to come to grips with the 14 or 15  
4 NASA folks. It is much harder to find all the 2,000  
5 Lockheed Martin workers, especially since so many of them  
6 live in the New Orleans area.

7 MODERATOR: [Inaudible], Space.com.

8 QUESTIONER: Yes. Thank you. I have a question  
9 for Bill Parsons.

10 Based on what you have seen both at Stennis and  
11 Michoud, what is your estimate on just the ultimate cost in  
12 terms of the recovery effort that it is going to cost NASA  
13 to rebuild these centers?

14 MR. PARSONS: Well, you know, I really can't -- I  
15 would be shooting in the dark a little bit here.

16 We have facility assessment teams that have  
17 already been to Michoud, and they are now putting those  
18 numbers together back at Marshall. They came in. They  
19 spent a couple of days reviewing all of the damage, and  
20 then they went back and they are pulling those numbers  
21 together.

22 Today, we have a facilities assessment team



1 pulled together by NASA headquarters under Gene Hubbard  
2 that is here. They will spend a full day. They will take  
3 all the data that we had already collected here and then do  
4 their own assessment. They will take that data back, and  
5 then they will put together those numbers.

6 That is ongoing right now, and so I can't have  
7 just an actual number for you, but we probably will have  
8 something pulled together here in a week or two.

9 MR. GERSTENMAIER: Kind of for planning purposes  
10 from a headquarters standpoint, we have estimated, a  
11 preliminary estimate, for about 1.1 billion and above that,  
12 and that breaks down to about 600 million for Stennis and  
13 500 million for Michoud. And again, that was extremely  
14 preliminary. It is based on some of the pictures we have  
15 seen without really looking at the actual facilities and  
16 actually looking at the damage.

17 So what Bill described to you is the process we  
18 will go to refine that, but our estimate, just kind of a  
19 ball-park number, it has just been a rough  
20 order-of-magnitude guess. We estimated 1.1 billion.

21 MODERATOR: Irene Klotz, Reuters.

22 QUESTIONER: Thanks very much. My question is for

1 Bill Gerstenmaier.

2           Between investigations into the Government's  
3 response to the hurricane and the Supreme Court nominee  
4 hearings and all kinds of other things, NASA is clearly not  
5 at the top of the priority list these days at Congress, and  
6 I am just wondering if you could talk a little bit about  
7 how comfortable you are with the idea of launching an  
8 astronaut to the Space Station in less than a month when  
9 you don't have a ride home for him.

10           MR. GERSTENMAIER: Again, we will work out with  
11 our Russian partners a plan for that as part of the Flight  
12 Readiness Review process.

13           Again, I think our partners understand what we  
14 are doing and what we are going through. We have talked to  
15 them daily about where we are in the [inaudible] process.  
16 I think they understand where we are going, and I think,  
17 again, in the spirit of cooperation, they are taking the  
18 higher ground. They know what has occurred with the  
19 hurricane. They know what is happening in the bigger sense  
20 of things, and they are willing to support us where we are.

21           We will make sure we have a plan in place and a  
22 contingency scenario to go support them before we go launch

1 a crew member, and we will be comfortable with that and in  
2 agreement with our partners to work that out before we go  
3 commit.

4 MODERATOR: Bill Harwood, CBS.

5 QUESTIONER: Yeah. Hi. It's Bill Harwood. Make  
6 sure you hear me?

7 MODERATOR: Yes, sir. Go ahead.

8 QUESTIONER: Thanks.

9 For Bill Gerstenmaier, I guess in the last  
10 teleconference and this briefing today or last news  
11 conference and this briefing, you are very careful not to  
12 address any schedule issues, and I certainly understand  
13 that, given all of the unknowns involved. But just the  
14 reality of the work force, the number of people out of  
15 homes, the lack of a root cause for the PAL ramp separation  
16 or repair that you could do, the tanks that are still at  
17 KSC that have to be served, I mean regardless of softness  
18 in the drop-dead date, I don't understand the reluctance to  
19 say the March window is gone.

20 I mean, are you really telling us that you think  
21 you really can launch in March? I mean, is that a real  
22 option at this point? I just don't understand the -- I

1 understand there is no definitive answer to these  
2 questions, but I don't understand keeping a window open,  
3 that I don't know anyone who think you can make it.

4 MR. GERSTENMAIER: Again, maybe you are smarter  
5 than I am, but --

6 QUESTIONER: No, no. No, no, no. I don't say  
7 that.

8 MR. GERSTENMAIER: But from the data that I have  
9 got laid in front of me, we don't even have a tentative  
10 plan to say with any certainty where we are.

11 We were in the process of doing that evaluation.  
12 We didn't complete it. We have got liens against things,  
13 but also some major things have changed. I can take a path  
14 and pick particular failures on the fault tree, pick  
15 particular schedules that look like you can get to March.  
16 So I can't say definitively what the probabilities of those  
17 are. We need to spend a little more time to get some  
18 understanding of what the probabilities of those particular  
19 events occurring, and then I can talk to you with some  
20 definitiveness about what the schedule is.

21 And I am not trying to be -- I don't know -- to  
22 avoid the question or not pick a date. I honestly don't

1 have the data to talk to you intelligently about what the  
2 date would be because, as soon as I lay it out, you are  
3 going to start asking, well, what about this, and I will  
4 tell you I don't know about that schedule constraint, or  
5 what about this piece, I don't know that.

6           So, rather than pick some arbitrary thing and  
7 then be criticized for how we either deliver to it or we  
8 don't deliver to it or we change it, I would rather just  
9 say we don't have a schedule, let the teams do what they  
10 are supposed to go do, lay out all the constraints, look at  
11 the probabilities of achieving these things, and then  
12 understand where we are and then make some definitive  
13 statements.

14           It is not going to affect any of our near-term  
15 work. We are clearly not in the fall. We don't have  
16 anything that is driving us from an overall standpoint  
17 where, sometime in the spring, picking one answer or  
18 another answer can actually hurt us from a planning  
19 standpoint. I would rather just let it float until we got  
20 some more real data to go talk to.

21           One of the key pieces is what our work force can  
22 do from a support standpoint in Michoud. The facility is

1 in pretty good shape. The question is what does the work  
2 force want to do and where are they ready to go support,  
3 and I want to actually get a chance to involve them in the  
4 decision rather than pick an arbitrary decision one way or  
5 the other and then have that dictate a solution. So we are  
6 going to work with our work force, figure out the right  
7 thing to go do, and then when we get a schedule that kind  
8 of makes sense and I can talk to it intelligently, I will  
9 talk to you about it. Even if it is not certain, I will  
10 start discussing it with you when I have got enough to come  
11 talk to you, but at this point, it is so uncertain. There  
12 are so many variables there. I think it is foolish for us  
13 to try to speculate on a particular date.

14 MR. PARSONS: I want to add something. I have  
15 been out there to see the Michoud workers out there and  
16 listened to them and talked to them, and I can tell you  
17 something. These guys are motivated. These men and women  
18 are ready to support this program in any way they possibly  
19 can. They will do whatever it takes to ensure that they  
20 provide us with the best tank possible.

21 I can just tell you that they want to get this  
22 thing going as soon as they possibly can. So, when we give

1 them a chance to get their feet underneath them and do a  
2 little recovery, I think you will find out that things that  
3 seem very, very difficult, they will find ways to do work  
4 around and find ways to support this program.

5 I just wanted to add that. This work force is  
6 just tremendous, and you just can't believe it when you go  
7 out there and see what they have done so far.

8 MODERATOR: Sharish Date [ph], Palm Beach Post.

9 QUESTIONER: Yes. Thanks. I guess this is for  
10 Mr. Gerstenmaier.

11 I had a question on the doing of the work at the  
12 Cape. Do you need the work force that is out in Louisiana,  
13 or is this stuff that can be done also by people if you  
14 train them in Florida? What were you looking at here if  
15 people who have lost their homes are asked then to come  
16 1,500 miles away from there and do this work.

17 And second, if you could elaborate on the PAL  
18 ramp, the data that Wayne Hale mentioned, was that  
19 basically from the camera, the video camera that was there,  
20 or is there some other data?

21 Thanks.

22 MR. GERSTENMAIER: In terms of the work force

1 that will do the work, some of this NDE work can be done  
2 with the work forces in place in Kennedy, but again, my  
3 idea is I kind of want to leave it up to the workers that  
4 are involved. They have been through a tremendous tragedy.

5 Many of them don't have homes. So we want to have a  
6 chance to let Lockheed and the other folks work with the  
7 people involved and let them kind of tell us what they  
8 would like to do.

9 I can imagine some folks might want to go  
10 someplace and have a little more stability to go and get  
11 back to work again. Others may want to stay where they are  
12 and then work.

13 We talked about potentially bringing some  
14 trailers in to help with homes, but then where do their  
15 kids go to school, those kind of things. There's lots of  
16 personal issues that need to be worked by the family  
17 members, and rather than me dictate some solution from a  
18 headquarters perspective, I don't want to do that.

19 I want the people to help us figure out the right  
20 thing to go do, and we will move the right folks to the  
21 right location and do the right work in the right location.

22 So, again, that is why I am hesitant on the schedule



1 thing.

2 I want folks to kind of actually weigh in and  
3 help us build a plan as a team, and then we have got a  
4 schedule. Then we can talk about it.

5 So, in terms of specifics, we can do some of the  
6 NDE work without impacting the workers at all in Michoud,  
7 but then some of the other work that comes later in the  
8 next couple of weeks, then we need to start thinking about  
9 where that work is going to be done and who is going to go  
10 do it. But I want the actual workers to help us make that  
11 decision and not us dictate it.

12 The day you talked about on the PAL ramp removal  
13 was there was some instrumentation that we flew on the area  
14 of the press lines, up on the LO2, the liquid oxygen tank.

15 We flew some instrumentation up there, [inaudible]  
16 gage-type data. That was the data that came back that was  
17 different than what our wind tunnel results had shown us.

18 It turns out that that is a very complicated flow  
19 field up in that area, and the data wasn't exactly  
20 consistent with what our models and some of our wind tunnel  
21 tests had shown.

22 What we are doing now is we are going to take

1 that actual flight data we got off of STS-114, put that  
2 back into our models, look at the wind tunnel again with  
3 the real flight data in place, and then that will give us  
4 some insight into whether we know enough about that region  
5 to remove a PAL ramp and fly without it or not.

6           The initial indications were the data was  
7 different enough that it says it is a very complicated  
8 area, the flow fields. It is very difficult to predict.  
9 So we want to be very careful about taking the step of  
10 removing a PAL ramp and thinking we understand that  
11 environment. The data shows us that based on our first  
12 assessment from the models, we don't understand the  
13 environment. Now we got to take the data, put it back in  
14 our models, and spend some time analyzing that.

15           That analysis is ongoing, and that should  
16 complete probably by the end of this month. So we will be  
17 a lot smarter again by the end of this month. Understand  
18 where we are from a transport phenomena, where foam can go  
19 and hit the orbiter. We will also be a lot smarter in  
20 taking that flight data from STS-114 and seeing what it is  
21 really telling us. So that is the data that we alluded to  
22 in Wayne's paper that he gave.

1 MODERATOR: Guy Gugliotta, Washington Post.

2 QUESTIONER: Yeah. Hi. Can you guys hear me  
3 okay?

4 MODERATOR: Yes, sir.

5 QUESTIONER: Yeah. Probably for Bill Parsons.

6 You talked about people who have lost their  
7 homes. Do you have any idea what percent of your workers,  
8 both at Stennis and Michoud, have moved out of the area,  
9 what it will take to get them back, and what are your  
10 housing contingency plans, if any, if you want to get  
11 either of these plans up and running if and when you can?

12 MR. PARSONS: Well, I am going to try to let you  
13 get with Lockheed Martin and probably talk a little bit  
14 more about their employees. I wouldn't want to go and talk  
15 about Michoud and what Lockheed Martin has been trying to  
16 do. I can tell you what we have been doing here at Stennis  
17 working with the FEMA and everybody else.

18 Most of the employees are in the area for the  
19 Stennis Space Center. The ones that are without homes are  
20 the ones that were, of course, closer down on the coast.  
21 Of course, in Mississippi, the coastal area was the  
22 worst-hit area. There was some flooding that took some

1 homes, but mostly, if you were close to the water, you  
2 don't have a home anymore.

3 In the case of those employees here at Stennis  
4 and to include the resident agencies, the first order of  
5 business is can we find apartments or anything that is  
6 available and get those folks in there, and we are making a  
7 huge effort to do that.

8 And you know what, we found some. There have  
9 been new apartment buildings that were built that had some  
10 openings, and we are getting those employees there and  
11 getting those folks in there as best we can and place them.

12 That is the first order.

13 The second order is when we can't find that, of  
14 course, we are looking at other options. What we are  
15 working with right now with FEMA and with the Navy here is  
16 to put some of these tent cities, much like what they  
17 build, these self-sufficient tent cities that were used in  
18 the operation in Iraq. We are looking at could we use some  
19 of those here on the site as temporary housing for a few  
20 months, and again, these are options. These aren't what we  
21 are doing. It is just one of the options we are doing.

22 Then using Government land well away from the

1 center here, but not -- when I say "well away," you know, a  
2 mile, 2 miles away, using some Government land, clearing  
3 it, letting the Navy Seabees and FEMA work to clear that  
4 land and put in trailers, so that we could put our  
5 employees in there temporarily while they rebuild their  
6 lives.

7 All of our employees are kind of aware of where  
8 we are headed and what we are trying to do. We are going  
9 to have an all-hands with the employees about Wednesday of  
10 next week. We are going to start trying to give them all  
11 the options that are available to them because FEMA has  
12 options as well.

13 We are doing everything we can to add on or  
14 supplement whatever FEMA would do, and we are going to see  
15 -- we are also offering employees -- again, if they have  
16 lost everything and they wish to relocate, which maybe a  
17 couple will, we would move them to a different center if  
18 that was what they wanted to do.

19 But in most cases, people have family here. They  
20 have built their lives here, and they want to remain here.

21 They will suffer a little bit of housing discomfort and  
22 whatever they might have to do to maintain their jobs here

1 and to be a part of this great agency.

2           So far, people are really showing resiliency, and  
3 I can only tell you that this is the beginning phase of us  
4 talking with FEMA and looking at those different ways that  
5 we may help our employees, but I have great hope that  
6 whatever solutions we come up with will work and that these  
7 folks will be able to get the job done.

8           I am going to assume that Michoud has very  
9 similar kinds of conversations ongoing with their  
10 employees. You know, Michoud is only about 30 miles from  
11 Stennis, and so, I mean, the bottom line is we could house  
12 those folks here. We could hope those folks in any way and  
13 allow them to go to work and go over there and do the  
14 things they need to do. So, in many ways, they have a safe  
15 haven in this direction, and that is a good thing. As we  
16 get more information, we will do whatever we can to help  
17 the Michoud work force to be able to get back to work and  
18 to their jobs, too.

19           I hope that answered your question.

20           MODERATOR: Tracy Watson, USA Today.

21           QUESTIONER: Hi. Thank you.

22           For Mr. Gerstenmaier, the memo from Wayne Hale

1 says it would take approximately 13 months to do a  
2 full-scale wind tunnel and computer CFD analysis to provide  
3 you with the right options for engineering rework, and I am  
4 wondering if you think that estimate is correct or not.

5 MR. GERSTENMAIER: Again, that estimate was  
6 associated with the analysis and the work to conclusively  
7 and 100 percent remove the PAL ramp from the rank. I think  
8 that is probably a reasonable estimate for that.

9 We had some discussions about that, and the  
10 discussion was maybe we do some pieces or maybe we remove a  
11 portion of the PAL ramp, not all the PAL ramp, which might  
12 help us.

13 We also talked about instrumenting the cable  
14 trays and the press lines. Again, we really haven't made  
15 an official -- Wayne hasn't made an official program  
16 position on whether we need to remove the PAL ramp or not  
17 remove the PAL ramp.

18 What he was doing in that paper was essentially  
19 laying out in a preliminary sense for me what the  
20 discussion points were back and forth and the items to be  
21 traded and what the likely outcome was from these things.  
22 So what you got to see in Wayne's paper, effectively it is

1 kind of an informal discussion that Wayne and I and the  
2 team were having about what our future planning was. So we  
3 weren't making decisions. They weren't concrete answers.  
4 We didn't hold those as hard dates. This is an internal  
5 planning kind of document, and the way we discuss things  
6 back and forth, we put pros and cons, kind of extreme  
7 positions, on both sides. We trade them back and forth,  
8 and then out of that, we start formulating a plan on how we  
9 want to put together a schedule and where we want to go.

10           What you kind of get from that is it looks like  
11 it is very unlikely that we are going to be able to just  
12 remove a PAL ramp and fly without a PAL ramp. So that was  
13 kind of the discussion we had, and I agree with that.

14           Whether it is the number of days that you stated  
15 or number of months, I don't know specifically, but it  
16 looks like it is not going to be easy, that coupled with  
17 the data that we got from the [inaudible] tank region.  
18 Unless something changes dramatically there, it doesn't  
19 look like it would make sense.

20           So, again, that was kind of our discussion that  
21 there wasn't an easy path that said we could fly without a  
22 PAL ramp, and that was kind of the discussion we had based



1 on that data.

2 MODERATOR: Todd Halvorsen, Florida Today.

3 QUESTIONER: Thanks. Can you hear me?

4 MODERATOR: Yes, sir.

5 QUESTIONER: Okay. For either of the guys who  
6 wants to field this -- I don't know, maybe Bill -- KSC is  
7 getting ready to accommodate about 150 to 200 people from  
8 Stennis and Michoud, and I was wondering is that part of  
9 like a large agency-wide humanitarian effort to provide  
10 people with a place to live and work should they decide  
11 that they want to go to another center, or is this part of  
12 an effort to maybe put in place workers, should you decide  
13 to do ET MOD work of any type down here? I am just trying  
14 to get a handle on what the options are for people moving  
15 from center to center and whether those numbers are right.

16 MR. PARSONS: Hey, Todd, this is Bill.

17 That was just the agency saying this is what we  
18 could do, and as we asked -- you know, when you started  
19 watching this disaster unfold, it looked like from a -- if  
20 everything along the entire length of this disaster was  
21 like New Orleans, well, you know, something like that might  
22 have to happen, but it turns out the NASA facilities, even

1     though we had that planning in place. The NASA facilities  
2     have fared pretty well, and we have plans.

3             So, initially, what it was, is each center was  
4     just saying if you needed to send displaced employees here,  
5     it was a humanitarian effort.

6             To be quite honest, now that I look at the  
7     numbers and the people and what kind of options we have  
8     open to us, those were just people pouring their hearts  
9     out, saying that we could do everything, this is what we  
10    can do for you, and I don't think that kind of housing  
11    requirement -- not even close to that -- is going to be  
12    required at any of the centers.

13            So it is down into the tens and twenties, not  
14    into the hundreds and hundreds, but it does show you the  
15    great hearts that this NASA family has, and I just can't  
16    tell you, for people in this situation, they just knew that  
17    they had something to go to if they had to, was just enough  
18    to get them going again and looking at their other options.

19            So I can just tell you it really was just kind of  
20    a spiritual thing, you know, to know that your family was  
21    reaching out to you and saying we will take care of you,  
22    and again, I don't believe that is going to be required at

1 all. We are going to be able to take care of almost  
2 everything we have right here.

3 MODERATOR: Richard Harris, NPR.

4 QUESTIONER: Thanks.

5 I am a little confused. Maybe I just  
6 misunderstood, but I thought I heard Mr. Gerstenmaier say  
7 that you are talking about over a billion dollars in an  
8 obviously very vaguely guessed-at figure for repairs, but  
9 the damage that I heard described didn't sound like that  
10 magnitude. Did I misunderstand, or could you help me  
11 understand this a little bit more?

12 MR. GERSTENMAIER: I guess I would couch it this  
13 way, that just based on the photograph evidence we have,  
14 without any detailed inspection or looking, we estimated  
15 that that's what it could be, and it was just a rough  
16 estimate. Sometimes the pictures don't look so bad, but  
17 then when you actually get in and you start looking at the  
18 underlying structure -- this is what we learned from the  
19 KSC activities. We start getting in and look at underlying  
20 structure. There is some foundation problems or other  
21 things below the roof, other things that need more work.  
22 So this is kind of just, I would say, a first estimate that

1 we floated out there.

2 As Bill Parsons said, they will go do the  
3 detailed analysis. They will do the actual assessment to  
4 actually go looking, and then that number will refined.

5 So, for planning purposes, we put that number  
6 into some discussions we had external to the agency, and  
7 again, it was 600 million for Stennis and 500 million for  
8 Michoud, but a very, very rough estimate, and it was based  
9 on the pictures we saw and our experience that we gained  
10 from KSC.

11 MR. PARSONS: In addition to that, folks, that is  
12 not just the facilities' cost either. What Bill is talking  
13 about is there is just going to be a lot of other costs  
14 involved in just the travel and -- I mean all the different  
15 things that we are going to have to do in this effort to  
16 take care of our people. I just use that as a term, but  
17 whatever it takes. So there is some facilities' cost in  
18 here, but there is just some loss of work and different  
19 things that we are going to have to try to make up and do.

20 I am not using the right terminology, but there  
21 are just other factors that are involved other than the  
22 facilities' cost that have gone into that, into that number

1 that -- into that estimate.

2 MODERATOR: [Inaudible] Lutz [ph], ABC.

3 QUESTIONER: Hello?

4 MODERATOR: Yes.

5 QUESTIONER: No questions actually. Thank you.

6 MODERATOR: Okay. Thanks.

7 Jim Oberg, NBC.

8 QUESTIONER: Am I on here?

9 MODERATOR: You are, indeed.

10 QUESTIONER: Okay. I am going to go back to Bill  
11 about your answer to Irene's question on how does McArthur  
12 get home because you are saying that it has been a long  
13 time before you have any reliable schedules for next year.

14 Well, in about 2 weeks of FRR time, you are going to have  
15 to know whether or not you can count on a Shuttle coming up  
16 in time to pick up Bill or fly in some way to get the  
17 Russian to bring him home on the Soyuz in April. You don't  
18 have a whole -- correct me on this, Bill, but I don't see  
19 that you have a whole lot of options.

20 You got to rely on coming home on the Russians,  
21 and you got to find a way to let them carry Bill home, and  
22 do you see any other option, any option that you can trust?

1 MR. PARSONS: Hey, Jim, can I make an observation  
2 here?

3 MODERATOR: Yeah.

4 MR. PARSONS: This is Bill Parsons, Bill  
5 Gerstenmaier, Bill McArthur. [Inaudible] tell us which  
6 Bill.

7 That was a joke.

8 MR. GERSTENMAIER: Again, we'll get a ride home  
9 for McArthur on the Soyuz, and we will have that as one of  
10 our plans. And we will be prepared again to execute that,  
11 and we will go do that before we go launch. So we will  
12 have a way for him home.

13 MODERATOR: Okay. Dan [inaudible], WESH.

14 TELECONFERENCE OPERATOR: And he has disconnected  
15 from the call, sir.

16 MODERATOR: Okay. Well, that leaves us to our  
17 last person, Ken Chang, New York Times.

18 QUESTIONER: Yes. Hi. I guess I was confused  
19 about the estimates again.

20 Are you including lost work time now in that 1  
21 billion?

22 MR. GERSTENMAIER: Again, I think we got to be

1 careful. We just did a rough-order estimate, and I think  
2 it includes everything in there that we could think of.  
3 Again, it is subject to a lot of update and refinement once  
4 we get in the area and understand it.

5           So, as Bill described it, we put it in. It was  
6 based on essentially what we saw from KSC for our costs  
7 associated with what we had for KSC. It includes some of  
8 the support, some of the other travel, some of the other  
9 things, but it is in there. It is our first ball-park  
10 estimate.

11           You know, I would be careful, again, couching  
12 that number as the definitized numbers. Let us go work  
13 through it again, but it is kind of all-encompassing.

14           MODERATOR: Okay. That is pretty much all the  
15 time we have. Thank you, gentlemen.

16           I would ask media, if possible -- we have been  
17 trying to get this word out in as many channels as possible  
18 for employees to check in, so we can do ourselves an actual  
19 accurate count of where people are and make sure that they  
20 are well, and if you can get this information out through  
21 your publications or broadcast facilities, that would be  
22 helpful.

1           The number is 877-470-5240. 877-470-5240. That  
2 toll-free number we have been basically advertising for the  
3 better part of a week now, it is on all of our websites,  
4 including where you can get the latest information on the  
5 impacts from the Hurricane Katrina on our facilities and  
6 the latest images from both Stennis and Michoud,  
7 [www.nasa.gov/hurricane](http://www.nasa.gov/hurricane). That is the repository of all --  
8 at least it links and whatnot relative to the hurricane and  
9 its impact to NASA.

10           So thank you for joining us, and we will have  
11 later updates as soon as we get more information. Thanks,  
12 guys.

13           [End of media teleconference.]

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