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Media Briefing

"REENTRY OF U.S. SATELLITE"

Speakers:

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[Moderated by Geoff Morrell, Pentagon Press Secretary]

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P R O C E E D I N G S

MODERATOR: Good afternoon, and thank you all for joining us today.

As you know, for several weeks now, this Department and many others in the United States Government have been closely monitoring a rapidly decaying U.S. intelligence satellite. Together, we have been looking at options to mitigate any possible risk to human life that could be caused with this satellite reentering the Earth's atmosphere.

Today, we have assembled a group from across the Government to come in here to explain the course of action that President Bush has selected. You will hear first from Deputy National Security Advisor James Jeffrey, followed by the Vice Chairman of the Joint Chiefs, General "Hoss" Cartwright, and NASA Administrator Michael Griffin.

Please allow them to finish their statements before chiming in with questions, and with that, Ambassador Jeffrey?

AMBASSADOR JEFFREY: Thank you very much.

What I would like to do is sketch a little bit the rationale behind our decision, and then we will talk

more about the details of it.

We first discussed the satellite publicly at the end of January, after we had determined that it was coming down and as news reports began breaking.

Following further decisions, we have decided to, of course, brief you today. We just finished briefing Members and staff of both the House of Representatives and the Senate a little bit earlier today, and we are also doing a diplomatic rollout across the world this afternoon.

What I would like to do again is to sketch some of the background to the decision. Upon notification of the descending NRO satellite, the President and his National and Homeland Security Advisors reviewed the options available to us to mitigate risk from the descending satellite.

As background, I would like to note that over the past 30-plus years, there have been many satellites and other manmade objects falling from space, of course. They have fallen with very little damage and no injuries.

What makes this case a little bit different, however, and in particular for the President in his consideration was the likelihood that the satellite upon

descent to the Earth's surface could release much of its thousand-plus pounds of hydrazine fuel as a toxic gas.

The likelihood of the satellite falling in a populated area is small, and the extent and duration of toxic hydrazine in the atmosphere would be quite limited. Nevertheless, if the satellite did fall in a populated area, it was a possibility of death or injury to human beings beyond that associated with the fall of satellites and other space objects normally, if we can use that word.

Specifically, there enough of a risk for the President to be quite concerned about human life, and on that basis, he asked us to review our options.

Apart from the normal consequence of mitigation actions that we are prepared to deploy both at home and internationally to deal with the hydrazine, the one viable option we had, we concluded, was to use a tactical missile from an AEGIS ship to strike the satellite in order to reduce the overall risk.

This missile was designed, of course, for other missions, but we concluded that it could be reconfigured, both the missile and the various other systems related to it, on a one-time reversible basis to do the shot.

After further review of this option and in particular consideration of the question of saving -- reducing injury to human life, the President, on the recommendation of his National and Homeland Security teams, directed the Department of Defense to carry out the intercept.

Let me talk very briefly about the diplomatic side of this, and then I will turn it over to the Vice Chairman.

The United States has certain obligations based on treaties and other agreements related to activities in space. The 1967 UN Treaty on Exploration and Use of Outer Space in particular calls on states to keep others informed of activities of potential concern. While we do not believe that we meet the standard of Article 9 of that treaty that says we would have to consult in the case of generating potentially harmful interference with other activities in space, we do believe that it is important to keep other countries informed of what is happening.

We let many countries know at the end of January that the satellite was descending, that it would likely had hydrazine, and talked a bit about the consequences of that.

Today, we are reaching out to all countries and various organizations -- the UN, some of its subordinate agencies, the European Space Agency, and NATO -- to inform them of the actions that we are describing to you today.

With that, I would like to turn it over to General Cartwright. Thank you very much.

GENERAL CARTWRIGHT: Thank you.

Just to re-baseline, this is a National Reconnaissance Office satellite. It was launched on 14 December 2006. It is about, roughly, 5,000 pounds in its weight. Historically, a satellite of this size and that weight, roughly half of it would survive reentry. We are saying in the modeling, somewhere around 2,800 pounds would survive reentry.

What is different here is the hydrazine. In this case, we do have some historical background that we can work against for the tank that contains the hydrazine, and we had a similar tank on Columbia that survived reentry. So we have a pretty reasonable understanding that if the tank is left intact, it would survive the reentry.

This satellite essentially went dead for communications and control very shortly after it attained

orbit. It was a nominal launch, a nominal insertion into obit, but then on orbit within the first few hours stopped communicating.

A satellite like this, really all of our satellites have fuel that is reserved along with redundant systems to ensure that there is propulsion to allow for what we would call a "controlled deorbit," but the ability to put it, say, in the ocean. But with no communication with this satellite, that is what is different here. That is what distinguishes this particular activity is we have no way to communicate to invoke the safety measures that are already on board the bird.

To take it just a little bit further, hydrazine in this case, normal case, is that when it is used as rocket fuel, it is in a gaseous state. We bring it up to a liquid state with headers. This has had no benefit of heaters because there is no power on the bird. So this is a frozen state of hydrazine, which leaves for us another unknown, how much of it would melt on the reentry, therefore, would be either a liquid or gaseous phase.

In a worse-case scenario for the hydrazine, it is similar to chlorine or ammonia in that when you inhale it,

it affects your tissues in your lungs. You know it. It has the burning sensation. If you stay very close to it and inhale a lot of it, it could in fact be deadly, but for the most part here, we are talking an area, say, roughly the size of two football fields that the hydrazine could be dispersed over, and you would at least incur something that would make you go to the doctor. If you stayed inside that zone, if you got very close to it and stayed, you could get to exposures that would be deadly.

So that is a sense of what we are dealing here with Columbia, and I will let the Administrator talk to that, part of it, but with Columbia, the hydrazine tank came down in Texas in a wooded area, unpopulated, and unlike this, we had the mitigating in front of it. They burned most of it. The mission was at its end. So there was almost no hydrazine left. You could walk up very shortly after the event and walk right up to the tank's proximity, and it wouldn't have affected you.

Now, we didn't handle it that way. We treat it as a toxic. Anybody who should encounter something like this ought to treat it as a toxic. Don't approach things like this.

Now, having said that, what we tried to do here at the Department was to look at the risks that exist for what we will call a "normal reentry." This is normal for this satellite, not having the ability to deorbit it.

It would basically enter the atmosphere. As I said, it would incur the heating. It may break up, and exactly what the pieces look like, all of that, we are not sure. It is very, very unpredictable as to exactly where it would hit the atmosphere. The atmosphere raises and lowers based on heating, but when it encounters the atmosphere, then it would come down, as I said, about 25-, 2800 pounds worth of mass.

Those calculations in that alone would not be reason to take action. In other words, the likelihood of it hitting the land or a person as a hunk of metal or material is relatively low. It is the hydrazine here that is the distinguishing characteristic.

I also, like you, read the blogs. There is some question about the classified side of this. That is really not an issue. Once you go through the atmosphere and the heating and the burning, that would not be an issue in this case. It would not justify using a missile to take it and

break it up further.

Our objective here was to reduce the risk, could we reduce the risk to space platforms, to airborne platforms, and to terrestrial platforms, the Earth, cities, people, et cetera.

In the first case, one of the first actions that we took together was we believe that the window that we were looking at to intercept this vehicle can be accomplished after we bring the Shuttle down. So we are going to bring the Shuttle down before we even consider this option.

The second is that we looked at the various capabilities that we as a nation hold, and what held the highest likelihood of success for us was to move to a mobile platform and a tactical weapon, which we had good understanding of the performance of the weapon. That came to the Standard Missile, a Navy missile that has been in the inventory for several years, has a very solid track record. We understand how to use it and how it works and what its likelihood of performance would be.

In addition, it has a mobile platform, and the intent in the mobile platform is -- what we would like to

be able to do is to intercept this missile at a point at which we could have a high likelihood of bringing it down in an unpopulated area.

The second objective is to hit the tank, the hydrazine tank, and rupture it, so that we can off-gass this hydrazine as early as possible, so the least amount of it returns to the Earth.

So those are the two key objectives. It is looking at the likelihood of mitigating on orbit, in the air, or on the land.

On the orbit side in space, what we are attempting to do here is to intercept this just prior to it hitting the Earth's atmosphere. That does two things for us. It reduces the amount of debris that would be in space. So, in this case, what we are looking for is to try to have the debris, over 50 percent of it, within the first two orbits or the first 10 or 15 hours would be deorbited.

The second piece here is looking at other unmanned bodies in space and low-earth orbit and the Space Station to make sure that we do not increase the risk to other bodies in space. So that was a criteria we're trying to understand.

Next is when the orbit comes down through the air, is there anything that would increase the risk to normal general aviation. We have a set of standards. The FAA has a set of standards that it uses to revector aviation when there is a hazard in the air, would we cause a hazard in the air, if we did, would it be predictable enough that we could revector around. That was a criteria we had to get through.

Then the last criteria was on Earth, can we in any way help mitigate the opportunity for this to come on land, to land in a populated area, and so we worked out way through those.

I will let the director talk to the space side of this equation, but suffice it to say, we believe that if we intercept this just prior to entry -- and remember, this is not an aerodynamic body. If it were a ballistic missile and had aerodynamic properties, you could see it rising in one hemisphere and predict where it is going to come down in the next and, therefore, that is how you would accomplish an intercept.

This has no aerodynamic properties. Once it hits the atmosphere, it tumbles, it breaks apart, it is very

unpredictable and next to impossible to engage.

So what we are trying to do here is catch it just prior to the last minute, so it is as absolutely low as possible outside the atmosphere, so that the debris comes down as quickly as possible, A. B, on the intercept, first, if we can hit the satellite, which we believe we have a high confidence we can do, that will slow the satellite down, which means it will deorbit more quickly, and we can predict more accurately where it will deorbit, so we can potentially put it in a position in the ocean.

On the land side of the equation, again, the objective would be to breach the tank and let the hydrazine escape. Second is to break apart the satellite at least, so that the pieces can burn up on reentry a little easier and we'd bring them down quicker.

The last piece on land, we talked through a little bit, but we have an extensive program that we use regularly with deorbiting bodies that notifies the world that we have something coming in. But this is highly unpredictable. Again, they are not aerodynamic. So we can generally get a quadrant of the Earth down to the last day, but it is down to the last one or two hours before we can

tell you potentially a land mass, but not more accurately than that. So this is very difficult because you have a very non-aerodynamic body trying to move through the air.

A couple of the other pieces here to help put a little finer point on some of these, we are using the Standard Missile 3, well understood. It has the ability to get up just beyond the atmosphere. So it has the kinetic energy to be able to reach this satellite as it prepares to reentry.

We believe that the window for this activity will start here in the next three or four days and will be open for about maybe as many as seven or eight days. Much of this depends on the heating of the atmosphere. So we are trying to build, knowing that, where would be the best position be from the Earth to launch a missile to intercept that would drive this down into the ocean, and that is our objective, get rid of the hydrazine and have this fall in the ocean.

We will use one missile with two backups. We will have three ships on station, but it will be one shot. The other missiles are there principally in case something in the launch phase does not work. We will have radars and

space sensors pointed at the area, so that we have some sense of whether we were successful or not.

In the case that we are not successful with the first shot, we will reassess, but two things will be working against us. One, the satellite will continue to progress across the Earth, and so as it does, we will only have a certain amount of time before. If we shot, we would have a higher likelihood of bringing it down on land, and we are not going to shoot if that is the case.

We have to be able to assess if parts of the satellite came apart, which part is which, and that is a very difficult thing to do. In other words, if the satellite grazed but did not directly impact, how do you decide whether you should take a second shot, and we will work our way through that, but it will be a conscious decision that will take. We will have a window. We believe probably might get us as much as two days to make an assessment and come back before we really find it not feasible to reengage this target and to let it normally decay in its orbit.

So it is a relatively small window. We will take one shot and assess, and then we will come back and look.

We feel confident that we will be able to assess, but this is not necessarily something that will occur in minutes, and that is the challenge is to try to understand what it is we have after we have taken the shot and what it will take to come to the calculus that would say go ahead and reengage again or reengagement will either increase the risk to space, increase the risk to the air, or increase the risk on the ground. If any of those are the case, then we will not take a second shot.

At the end of this, just from my perspective, what to me was compelling as we reviewed the data is that if we fire at the satellite, the worst is that we miss, and then we have a known situation which is where we are today. If we graze the satellite, we are still better off because likely we will still bring it down sooner and, therefore, more predictably. If we hit the hydrazine tank, then we have improved our potential to mitigate that threat.

So the regret factor of not acting clearly outweighed the regret factors of acting, and as long as that is the case, we felt that it was the responsibility was to go ahead and try to engage the satellite.

I will turn it over to the director for his

comments. I'm sorry. Administrator.

ADMINISTRATOR GRIFFIN: Administrator, director, what difference?

[Laughter.]

ADMINISTRATOR GRIFFIN: My colleagues have said almost everything that would need to be said. I will add a couple of quick remarks.

The first is that, of course, we have already alluded to the fact that we have a Shuttle on orbit at the moment and a Space Station on orbit permanently with a permanent crew. So we looked very carefully. From the first, NASA has been involved in this. We looked very carefully at increased risks to Shuttle and Station, and broadly speaking, they are negligible. They are at least a factor of 10 smaller than risks we take just being in space anyway in the Shuttle. So they are not significant with respect to the risks we already assumed to fly the Shuttle.

On the Space Station, of course, it is a different issue. The Space Station is much more robust than the Shuttle, but even there, the risk posture does not increase significantly, and so we are very comfortable that this is a decision made carefully and objectively and

safely.

There are good times to conduct the intercept and poor times to conduct the intercept based on the positioning of the Station, and I and my colleagues will work together to make sure that, if possible, we pick one of the good times, but even the bad times are not too bad, and I would assure all of you that we are conducting this with due regard to the safety of people on orbit.

I would make the point that -- I want to reinforce the point that General Cartwright made -- is that there is a very large amount of uncertainty in predicting the landing zone of an entry object. It is generally acknowledged by specialists in the field that the best you will do is to get within around 10 percent of the remaining lifetime of the bird, and that is the best.

So a month ahead of time, you will know when it will land within about three days. That, of course, allows the satellite to make multiple revolutions around the entire surface of the Earth. So, in essence, a month ahead of time, you have no idea. Ten days ahead of time, you will be uncertain by at least a day. Again, it will make 16 revolutions around the Earth in that day. It could land

anywhere.

On the day that you land, you will be uncertain by several hours. The satellite will make at least two orbits in that period of time, which again sweeps out a very large fraction of the Earth. So it was necessary to make the decision about whether to engage days, weeks, even longer, if possible, ahead of when it will actually land because it is simply not possible to predict whether it will land in the middle of the Pacific or in a populated area. The decision had to be made before we could be certain where it would go.

I want to again emphasize General Cartwright's point that almost anything that we can do with this turns out to be either neutral or better. Neutral is if we miss. Nothing changes. If we shoot and barely touch it, the satellite is at this point just barely in orbit. Almost anything that you do to it when it is just barely in orbit is going to cause it to reenter within the next couple of orbits, and of course, if we shoot and get a direct hit, then that is a clean kill, and we are in good shape. So there is almost nothing we can do here that makes it worse. Almost everything we can do, technically, makes it better,

which was a very strong factor weighting the decision.

With that, I will close. I don't think you need to hear more from me.

MEDIA QUESTIONER: Could I ask you a couple quick questions? First of all, you said you have a high confidence that you can do this. Is this a first? Does it employ the same technology you use in Missile Defense and whether you learn anything relative to Missile Defense from this, and how much space debris will be left behind if you are successful?

GENERAL CARTWRIGHT: On the first side of the equation, this is the first time we have used a tactical missile to engage a spacecraft, but not the first time that we have used a tactical missile to engage a body that is just reentering. So the leap to move to catching it just before it hits the atmosphere really takes almost no modification at all. What we are talking about here is minor modification to software, both in the AEGIS system and in the missile itself. So that gives us a reasonably high confidence that we understand all of the activities here.

MEDIA QUESTIONER: [Inaudible.]

GENERAL CARTWRIGHT: Well, the missile is designed to -- this particular missile, the Standard Missile, is designed to intercept short- and medium-range ballistic missiles. They leave the atmosphere for a short period of time and come back.

MEDIA QUESTIONER: [Inaudible.]

GENERAL CARTWRIGHT: That is correct. So we have the experience there. What we are trying to do is match that period at which the satellite that is most like reentering missile, and so that gives us some sense that all of the work that has been done, the test data that we have over the years and the operational data would be transferrable to this activity, but it also makes the window very short for when we could intercept.

MEDIA QUESTIONER: So it does use Missile Defense technology?

GENERAL CARTWRIGHT: It uses the missile's technology, Missile Defense, and this is a defensive missile. The Standard Missile is a defensive missile, but it does not use that portion of it which is associated with the atmosphere.

MEDIA QUESTIONER: [Inaudible.]

GENERAL CARTWRIGHT: The debris reenters. What we are looking for is to catch it here very close to the Earth's surface. What we are shooting for nominally is about 130 miles up. Those are nautical miles, and these numbers get confusing because some people use kilometers, but 130 nautical miles is what we are trying.

In doing that, well over 50 percent of the debris will come in, in the first two revolutions, and so then we are talking weeks, maybe a month for some of the smaller debris to come down, but it is a very finite period of time that we can manage, and it is in an area where we don't have satellites manned or unmanned; in other words, down very low.

MEDIA QUESTIONER: General, first of all, what are the odds? What is the percentage chance that you will succeed, high, low, 70, 80 percent, that you will actually hit?

And secondly, obviously, the U.S. criticized China pretty heavily for their ASAT satellite tests. What makes this difference, and is this just sort of a resurgence of what has been in past years a U.S. anti-satellite program?

GENERAL CARTWRIGHT: Let me start with kind of the first piece here. This missile and what is different here is, one, we are notifying, which is required by treaties and law, and we have started that notification well over a month ago, and we are continuing to keep people informed, and we have a Consequence Management Plan that is in place that we will execute.

The second here is in looking at comparisons, this is right at the surface of the atmosphere, so to speak. Other intercepts that have occurred have occurred substantially higher than the Space Station, as an example, and that means that the debris is up there for 20 to 40 years and has to migrate down through both manned space platforms and unmanned space platforms. That will not be the case here. So those are the types of things that we looked at.

Percentage-wise, percentage that the missile will function normally, very high. Percentage that if it functions normally and gets to the altitude that it would intercept, again, I would give you very high, based on what we know and that this is a well understood asset.

MEDIA QUESTIONER: High, 80, 90?

GENERAL CARTWRIGHT: I will go closer to yours.

ADMINISTRATOR GRIFFIN: I would just comment that the Chinese ASAT test was conducted against a satellite in a circular orbit at around 850 kilometers of altitude. So the debris that was generated could go maybe not anywhere, but a very large swath of Earth orbital space and will be up, as General Cartwright said, for decades.

All of the debris from this encounter, as carefully designed as it is, will be done at most within weeks, and most of it will be down in the first couple of orbits afterward. There is an enormous difference to space-faring nations in the conduct of those two things.

MEDIA QUESTIONER: Where are the ships going to be located when this attempt is made? You can't move them around in space two or three days. Right?

GENERAL CARTWRIGHT: We are holding that close, just for the reasons we are still working the box. We are down in an area, but I will give you the northern hemisphere in the Pacific, and that is about as close as I want to draw it right now.

MEDIA QUESTIONER: General, would there be no danger if you didn't do this and this came down on land and

somebody else got to it first if it landed somewhere in China? This would be of no intelligence value to another country?

GENERAL CARTWRIGHT: Our assessment is a high probability that it would not be of any intelligence value.

Just the heating, the destruction that occurs on the reentry would leave it in a state that -- other than some rare, unforecast happenstance, this would not be of intelligence value.

MEDIA QUESTIONER: But is that rare possibility that -- I mean a remote possibility. Is that part of the calculation here?

GENERAL CARTWRIGHT: No. It would not change. It is the hydrazine that makes this different.

Now, I have read the blog space on this also, and I understand, but it is the hydrazine that we are looking at. That is the only thing that breaks it out as worthy of taking extraordinary measures.

MEDIA QUESTIONER: General, I have a quick follow-up to Jamie's question, and then I have a separate question.

Are there missiles that are being used in this

shoot part of the Missile Defense System? I just wanted to clarify that.

GENERAL CARTWRIGHT: The AEGIS is part of the regional/tactical system of missile defense, and it is netted into the broader system from a sensor standpoint.

MEDIA QUESTIONER: And then in terms of the Shuttle's hydrazine tank that survive the reentry and landed on earth -- but when the Shuttle first reentered, that was a controlled reentry.

GENERAL CARTWRIGHT: Right.

MEDIA QUESTIONER: This reentry would be -- even if you don't hit it, it is going to be much more violent. Wouldn't the percentages or the possibility that it would tear itself apart and destroy that hydrazine tank in the atmosphere --

ADMINISTRATOR GRIFFIN: No.

MEDIA QUESTIONER: -- increase with that?

ADMINISTRATOR GRIFFIN: No. The analysis that we have done is as certain as any analysis of this type can be. The hydrazine tank will survive intact, and in fact, the hydrazine which is in it is frozen, solid as it is now. Not all of it will melt. So you will land on the ground

with a tank full of slush hydrazine that would then later evaporate. The tank will have been breached, not probably. The tank will have been breached because the fuel lines will have been ripped out of the main spacecraft, and so that hydrazine will vent.

If it lands in a populated area -- the General referred to an area the size of a couple of football fields, and loosely, that is what our analysis shows -- it is hard to find areas that have any significant population to them where you could put a toxic substance down across a couple of football fields and not have somebody at risk. So we didn't want to create a situation like that.

So, in brief, the tank will survive. It will be breached. The hydrazine will reach the ground, and that is not an outcome we want to see.

MEDIA QUESTIONER: Thank you.

Can any of you gentlemen put into layman's terms the difficulty in hitting the satellite with one of these tactical missiles?

GENERAL CARTWRIGHT: What you are attempting to do here -- correct me if I am wrong, but I think the closing velocities that we are talking about here in rough

order of magnitude are about 22,000 miles per hour. So we are at the end of the boost of this missile in a very small box trying to make sure that the sensor can detect the satellite and then maneuver sufficiently to accomplish that intercept. That is a challenge.

But I go back to the earlier discussions. We have a missile that is well understood and well known and has a good track record here and a sensor that is part of it. The modifications had been to make it look for something like this satellite in software, and so we have a pretty good idea that we would have a reasonably high opportunity for success, but having said that, we looked at so what happens if we don't or what could be the worst downside. In each case, we really came away with we are better off taking the attempt than not.

Sir, in the back.

MEDIA QUESTIONER: Sir, have you done something similar in the past? This is for the General. How did you brief the international community? Through some organization, or how do you do it?

AMBASSADOR JEFFREY: I will take that. As I said, we have already reached out at the end of January to

a large number of nations that do have programs in space to give them an alert.

We began preparing in a national response in the case of the hydrazine coming down as well and alerted our Homeland Security here.

What we are doing today is to reach out to the various UN organizations, the UN Headquarters itself, and essentially the entire international community through capitals to let them know more details about the satellite coming down and about our plan to intercept it, and of course, these countries may or may not have comments. They may or may not have supportive statements, and we will see, but we believe in an exchange of information. We believe in keeping them informed, and we believe that we will live up to all of our international obligations in the 1972 and in other treaties.

MEDIA QUESTIONER: As far as the actual dangers of hydrazine, can you help us understand? If you were to inhale it, how quickly would damage be such that you needed hospitalization, and how quickly would damage happen such that you could be at risk of dying?

GENERAL CARTWRIGHT: Very difficult in that it

implies that you know what the concentration is, but you could find yourself very close or in a high concentration area, as an example. You are still talking about minutes that you would have to recognize the situation, move yourself, and have enough time to move away from the situation, if you really knew what you were dealing with.

The worst scenario is that you have a person who either is not mobile or does not, for whatever reason, sense that they are in danger and, therefore, doesn't take any action, but those variables are very difficult to put minutes or time to.

But we do believe that if you are in this area -- and we are talking roughly two football fields -- on a standard day with a certain amount of wind -- I mean, all of these are calculations that will change with every place on the Earth -- that you are at risk to an extent that you will recognize that you are in trouble. You will start to walk to where you feel like you are better off, and you will still need to see a doctor, and that is as close -- and if you stay and you are not ambulatory for whatever reason and you stay in a concentrated area, you could eventually get yourself to a point where death would

follow.

MEDIA QUESTIONER: Short of death, what would be the other health risks you could have that could happen with short exposure?

GENERAL CARTWRIGHT: Burning sensations, damage to tissue in the lungs.

MEDIA QUESTIONER: Two questions, just to clarify. The Shuttle's schedule will be altered?

ADMINISTRATOR GRIFFIN: No.

MEDIA QUESTIONER: No.

ADMINISTRATOR GRIFFIN: No. The window of engagement is nicely compatible with the nominal end of the Shuttle mission. We expect to have the Shuttle down in the normal course of events, even extending it by a day, as we plan to do, before we need to engage.

MEDIA QUESTIONER: Can you describe what this satellite did, what it was, what its purpose was, why was it up there?

GENERAL CARTWRIGHT: It was a test bird launched by the National Reconnaissance Office. I would direct you towards them. That is as much as I can go into.

MEDIA QUESTIONER: I mean, the question, the

reason why I ask is because, as you say, you've read the blogs, and you've read the comments about the classified material aboard. So, presumably, there is some high-level classified information, technology on the satellite.

GENERAL CARTWRIGHT: I will direct you to the National Reconnaissance Office.

MEDIA QUESTIONER: To no extent, this was an answer to the Chinese anti-satellite test? This is not to prove that the U.S. can also do this? That was not part of your consideration?

AMBASSADOR JEFFREY: This is all about trying to reduce the danger to human beings. That was a decision that was taken by the President after listening to all of the technical arguments you have heard today. That was the calculation.

Hydrazine equals hazard to human beings, and we tried to do what we could to mitigate it.

GENERAL CARTWRIGHT: But also remember that we did that 20 years ago. There is really no need to go back to that data point, and this is not like that test in technical terms and in terms that talk about the preservation of human life.

MEDIA QUESTIONER: General, can I ask you, on the satellite itself, to be clear, a lot of the taxpayers are going to want to know why did this thing fail within hours? Was this the Lockheed experimental payload satellite?

GENERAL CARTWRIGHT: Again, it wasn't. It is the National Reconnaissance Office's satellite. I direct you to them about its function and its failure mode, other than to tell you there is no power. So it was unresponsive.

MEDIA QUESTIONER: It went into a safe mode because it had a software malfunction?

GENERAL CARTWRIGHT: We don't even know that it is in a safe mode. In other words, it is totally unresponsive.

A safe mode implies that you can fly without running into your neighbor, so to speak. This is a totally unresponsive satellite.

MEDIA QUESTIONER: Ambassador Jeffrey, this is a malfunction. This wasn't an act of God or it was up there for years. It was a malfunction shortly after orbit. Is the White House or Pentagon looking at culpability or liability to the contractor on this? Because you are taking extraordinary measures to deal with a flawed bird up

in space, and I think taxpayers are going to want to know who is going to get, you know, nailed for this besides the satellite.

AMBASSADOR JEFFREY: For the moment, we are focusing on what is right in front of us, which is to try to mitigate the problems with the hydrazine coming down, and we will continue to review why this happened and what to do about it.

MEDIA QUESTIONER: What about the satellite, sir? Who built this, Lockheed or Boeing?

GENERAL CARTWRIGHT: Sir?

MEDIA QUESTIONER: General, it is our understanding at Space News that the NRO did not recommend that the satellite be destroyed. Is that correct?

GENERAL CARTWRIGHT: Not to my knowledge. They were very much a part of this team. They did much of our analysis on debris and on consequence, contributed largely to understanding what the mechanism would be if we were to intercept and the likelihood of success.

I mean, I don't want to speak for them, but they were very much a part of this decision.

MEDIA QUESTIONER: General?

MEDIA QUESTIONER: General?

MEDIA QUESTIONER: General, can you name the three ships that will be involved in this?

GENERAL CARTWRIGHT: I prefer not to.

MEDIA QUESTIONER: Are they the Curtis, [inaudible], the Fitzgerald, and the Shiloh?

GENERAL CARTWRIGHT: I prefer not to.

MEDIA QUESTIONER: [Inaudible] the Curtis, [inaudible], the Fitzgerald, and the Shiloh?

GENERAL CARTWRIGHT: Questions?

MEDIA QUESTIONER: General, if this shot is successful, would it be fair for the international community to regard the Standard Missile now as an anti-satellite-capable weapon, and have you dealt with that issue in the international community already?

GENERAL CARTWRIGHT: A fair question and a good question.

One, this is a modification, yes. In other words, this modification can't coexist with the current configuration. So it is a one-time deal.

Does it have the kinetic capability? That is why we picked it, but you would have to go in and do

modifications to ships, to missiles, to sensors, and they would be significant. This is an extreme measure for this problem. It would not be transferrable to a fleet configuration, so to speak.

MEDIA QUESTIONER: Are you going to have any support of the military international -- I mean as a backup or something. Are you going to have the support of some other countries' military just as a backup?

GENERAL CARTWRIGHT: Let me go at it this way. The space network that we use to track assets is an international network, and so from that perspective, people are helping us to make sure that we know what the position, what we would call the "ephemeris data," is because that is a global network of many nations.

From the standpoint of the missile itself and the ships, that is in America.

MEDIA QUESTIONER: Could you go back to the second part of my question, though, that I didn't really get an answer to? The international feedback.

GENERAL CARTWRIGHT: I will come back.

MEDIA QUESTIONER: Thanks. The international feedback on whether this is going to be regarded as an ASAT

weapon?

MEDIA QUESTIONER: Could you give us some idea of the size of the spacecraft and what the modeling shows, how big the pieces that survive? Will the tank be the biggest, and how big is that?

GENERAL CARTWRIGHT: It is 5,000 pounds, and probably think more along the size of a bus than a pickup truck, the largest piece from the modeling standpoint.

ADMINISTRATOR GRIFFIN: The tank will be the largest intact piece with high confidence. One can never be certain, and the tank is about, what, 40 inches across, something very close to that. It is a spherical tank.

MEDIA QUESTIONER: I'm sorry. I just wanted to see, again, the second part of my question, whether there has been some concern expressed in your diplomatic outreach from any countries about the potential that the Standard Missile could be used again in the future as an ASAT weapon.

AMBASSADOR JEFFREY: We haven't, of course, gotten the feedback yet because we have just gone out today, and I would be very reluctant, over a 30-year career, to predict what one of several hundred countries

and international organizations might react to.

What I do know is the truth. I know why we are doing this. As explained today, we are very firm in this. We all know why the decision was taken, and we stand by it.

MODERATOR: We will take the last one here.

MEDIA QUESTIONER: Is there an estimated price tag for this operation?

MEDIA QUESTIONER: And the satellite itself?

GENERAL CARTWRIGHT: I would have to go back to the NRO on the satellite. The price tag associated with the missile, if we use one missile, I'd have to go back and dig out the cost, but we have spent about three weeks in modification to software. You would have to kind of calculate the dollars and cents associated with that, but it is an existing round, so we are not off building something new, and we will get you the cost of a Standard Missile.

MEDIA QUESTIONER: I mean the entire operation, not just the missile, but there is a lot of manpower and everything else involved.

MEDIA QUESTIONER: And the satellite, too.

GENERAL CARTWRIGHT: We will come back.

MEDIA QUESTIONER: We are going to call the NRO today, and they are going to blow us off saying it is classified. Can you or Mr. Morrell direct them to give us the name of the contractor and the cost of the satellite roughly? The public deserves an answer on this, since you are taking extraordinary measures to shoot this thing down.

MODERATOR: Your interest is noted, Tony.

All right. Thank you. We appreciate it.

[End of media briefing at the Pentagon on February 14, 2008.]

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