



Mike Horkachuck
NASA Project Executive, SpaceX



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00:00:01,246 --> 00:00:05,946
[NASA Public Affairs Officer Kylie Clem:] The
SpaceX Dragon spacecraft is targeted for launch

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00:00:06,376 --> 00:00:13,216
on May 7, and to talk about the progress
and milestones leading up to launch we have

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00:00:13,216 --> 00:00:16,336
on the phone with us from the
Kennedy Space Center Mike Horkachuck

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00:00:16,886 --> 00:00:20,726
who is NASA's Project Executive for SpaceX.

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00:00:20,976 --> 00:00:21,616
Good morning Mike.

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00:00:21,616 --> 00:00:21,946
How are you?

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00:00:22,206 --> 00:00:22,886
[Mike Horkachuck:] I'm doing good.

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00:00:22,886 --> 00:00:26,826
[Clem:] Well, we appreciate you joining
us from the Kennedy Space Center.

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00:00:26,826 --> 00:00:30,296
You're over there monitoring
the progress for launch.

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00:00:30,876 --> 00:00:32,436
How are our things going?

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00:00:33,456 --> 00:00:34,606
[Horkachuck:] They're going very well.

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00:00:34,606 --> 00:00:36,506

The hardware's in good shape.

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00:00:36,506 --> 00:00:45,256

In fact, they just put the rocket and capsule on their transporter that rolls it out to the pad

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00:00:45,716 --> 00:00:49,696

and tilts the rocket up to vertical getting ready for launch.

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00:00:50,326 --> 00:00:57,476

So, in the last few days they've done the final closeouts and checkouts of the Dragon spacecraft

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00:00:57,476 --> 00:01:01,896

and fueled the Dragon spacecraft and have a good fuel load.

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00:01:02,456 --> 00:01:07,526

So, heading into static fire, the hardware seems to be in good shape.

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00:01:08,566 --> 00:01:11,186

[Clem:] Ok, let's talk little more about the static fire.

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00:01:11,186 --> 00:01:12,926

I understand that's scheduled for Monday.

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00:01:12,926 --> 00:01:13,926

What does that involve?

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00:01:14,966 --> 00:01:21,786

[Horkachuck:] It involves rolling the rocket out to the launch pad, starting fueling

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00:01:21,786 --> 00:01:23,606

and going through the full countdown.

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00:01:24,256 --> 00:01:30,116

So, it simulates all the activities leading up to a launch, fully fuels the rocket,

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00:01:30,116 --> 00:01:35,106

and then it actually starts the first stage engines for just a few seconds,

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00:01:35,556 --> 00:01:38,986

makes sure that they all work and function correctly.

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00:01:39,946 --> 00:01:43,856

So, it runs for about two seconds and then shuts off.

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00:01:44,646 --> 00:01:48,086

It'll check out all the automated procedures and software

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00:01:48,086 --> 00:01:50,946

that the vehicle has leading up to the final launch.

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00:01:51,396 --> 00:01:56,496

Since we have an instantaneous launch window for this flight, they want to make sure

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00:01:56,496 --> 00:02:01,416

that everything's working correctly and we don't have any glitches at the last second.

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00:02:02,126 --> 00:02:03,846

[Clem:] Ok, that's understandable.

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00:02:03,846 --> 00:02:06,996

I guess that's a week out before launch.

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00:02:06,996 --> 00:02:10,776

Are there any other key milestones leading up to May 7?

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00:02:12,096 --> 00:02:15,566

[Horkachuck:] Tonight, in fact, we're having a meeting with SpaceX.

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00:02:15,566 --> 00:02:17,346

It's one of their internal meetings -

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00:02:17,346 --> 00:02:19,986

their Flight Readiness Review and Rollout Readiness Review.

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00:02:20,526 --> 00:02:28,296

So, they have all the responsible engineers in the SpaceX company report out how each one

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00:02:28,296 --> 00:02:32,656

of their pieces of hardware and subsystems are doing and their readiness

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00:02:32,656 --> 00:02:35,006

and open work getting ready for launch.

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00:02:35,676 --> 00:02:41,316

So, that's a key review leading up to the static fire, and then after static fire,

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00:02:41,316 --> 00:02:45,856

there'll be a lot of data review of how everything worked on the static fire,

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00:02:46,276 --> 00:02:51,186

and then there'll be a final Launch Readiness Review about a day before launch.

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00:02:53,046 --> 00:02:56,646

[Clem:] It sounds like technically the hardware's getting ready,

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00:02:56,646 --> 00:03:00,996

and there's progress towards the launch after it was delayed earlier this week.

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00:03:01,036 --> 00:03:05,596

They had been targeting Monday for launch, but now May 7 is the target, right?

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00:03:05,846 --> 00:03:06,716

[Horkachuck:] It is.

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00:03:07,186 --> 00:03:12,836

Yeah, there was a lot of review of all the software, and they had just finished

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00:03:12,836 --> 00:03:17,276

up a large number of what they call HITL - hardware in the loop -

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00:03:17,956 --> 00:03:25,286

testing where they tested the software on simulators as well as on the actual vehicle

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00:03:25,896 --> 00:03:32,176

and made sure that a number of different cases that they had simulated were all working well.

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00:03:32,576 --> 00:03:36,356

So, they were spending a lot of time reviewing all that data and making sure

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00:03:36,356 --> 00:03:42,146

that there were no little funnies in any of the activities that resulted

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00:03:42,146 --> 00:03:43,716

from all those different test cases.

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00:03:43,716 --> 00:03:48,116

So, that's a large amount of work, and they needed a little bit more time to go look at all

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00:03:48,116 --> 00:03:51,136

that and make sure that all the software was functioning correctly.

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00:03:52,046 --> 00:03:56,256

[Clem:] Well, that's good to hear that it's going through the process methodically,

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00:03:56,256 --> 00:03:59,776

and you guys have been planning for this mission for a while.

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00:03:59,776 --> 00:04:03,486

And, I'm sure you're excited to be at Kennedy and getting ready for the flight.

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00:04:03,486 --> 00:04:05,336

What are you looking forward to most?

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00:04:06,606 --> 00:04:11,636

[Horkachuck:] Oh, obviously getting the Dragon spacecraft deployed in orbit.

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00:04:12,756 --> 00:04:16,096

Rocket launches are always a risky business.

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00:04:16,556 --> 00:04:18,646

If it was easy, I guess everybody'd be doing it.

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00:04:18,746 --> 00:04:23,506

But getting the capsule up into space, and then there's a number

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00:04:23,506 --> 00:04:25,726

of new subsystems on the capsule.

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00:04:26,496 --> 00:04:29,026

So, this'll have solar arrays to be able

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00:04:29,026 --> 00:04:32,366

to collect the sun's energy
and help power the spacecraft.

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00:04:32,996 --> 00:04:34,956

Those need to deploy correctly.

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00:04:35,346 --> 00:04:37,946

There's a cooling system that needs to operate.

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00:04:38,436 --> 00:04:44,586

There's some new staging events that are similar
to what has happened on the previous missions

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00:04:44,616 --> 00:04:47,146

but are slightly different interfaces.

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00:04:47,406 --> 00:04:53,926

And then all the software - this is a fully
redundant three-string avionics system

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00:04:53,926 --> 00:04:58,826

on this vehicle, and making sure that all
those components work well together as well

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00:04:58,826 --> 00:05:02,736

as in the space environment, all going
to be critical to being able to come

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00:05:02,736 --> 00:05:04,826

in and berth to the space station.

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00:05:06,046 --> 00:05:08,556

[Clem:] Yes, it sounds like there
are several steps along the way

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00:05:08,556 --> 00:05:13,516

that people should stay tuned for and monitor the progress of the mission.

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00:05:13,516 --> 00:05:17,936

And, I'm sure we'll hear from you and other folks along the way of how that's going.

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00:05:18,526 --> 00:05:20,786

Thank you for joining us this morning.

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00:05:20,786 --> 00:05:26,426

I'm sure again we'll hear from you again here on NASA Television, and hope all goes well

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00:05:26,426 --> 00:05:27,746

down there at the Kennedy Space Center.