

From: [Lueders, Amy L](#)
To: [Ardizzone, Chuck CA](#)
Cc: [Polk, Jonna E](#); [Gardiner, Dawn](#); [Orms, Mary](#)
Subject: Re: FAA/SpaceX update.
Date: Friday, October 6, 2023 11:37:56 AM

Thanks for the update. Have to admit that I did look up the definition of “ablation”!

On Oct 6, 2023, at 4:46 AM, Ardizzone, Chuck CA <chuck_ardizzone@fws.gov> wrote:

Amy,

I asked Dawn for an update on FAA/SpaceX yesterday and wanted to make sure to forward the information.

We received the revised final addendum to the BA for SpaceX from FAA today around noon. FAA says this is the final version and includes all the project operations and effects they will be analyzing for their license. The main change is that heat and pressure from a full launch will ablate 190 pounds of stainless steel. Stainless steel is composed of iron, carbon, and chromium. We are thinking about where these metals will end up: in runoff from the pad, in water spray emitted onto tidal flats or in the vapor cloud from the launch that flows with the prevailing winds and is deposited somewhere. We especially would like to know much hexavalent chromium might be produced from the heat and pressure and what its fate would be? FAA says there is no way to know without testing air, water, and soil before and after a launch and that is what they propose in order to issue SpaceX their license to launch. Static fire tests will not give the results and SpaceX says they expect nothing much to happen and that the metals may all stay on the launch pad and be captured. We have no estimated time for completion of the amended BO and don't know yet if we have all the information we need to start the clock.

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