



U.S. Department
of Transportation

1200 New Jersey Avenue, SE
Washington, DC 20590

**Pipeline and Hazardous
Materials Safety Administration**

July 12, 2021

Ms. Deborah Price
Integrity and Regulatory Services Managing
Shell Pipeline Company LP
Woodcreek Bldg A-2nd Floor
150 Dairy Ashford Road
Houston, TX 77079

Dear Ms. Price:

In a letter to the Pipeline and Hazardous Materials Safety Administration (PHMSA), dated June 4, 2021, you requested an interpretation of 49 CFR Part 195. Specifically, you requested an interpretation as to the applicability of § 195.412 to the use of drones to perform an aerial inspection of pipelines' rights-of-way (ROW).

You stated Shell Pipeline Company LP (SPLC) proposes to use drones to perform aerial inspection of ROW on a new pipeline in the PHMSA Eastern Region. The drone would be equipped with video equipment to fly over the ROW while Operator Qualified personnel will review the footage in real time. You provided, as attachment, examples of the quality of the images produced by the drone. You stated the video footage has an additional benefit of the ability to go back and review the footage. In addition, you stated if necessary, the video footage would also be stored for over time comparisons. You asked PHMSA whether the use of the drone technology complies with the § 195.412 ROW inspection requirements.

Section 195.412(a) requires each operator to inspect the surface conditions on or adjacent to each Part 195 regulated pipeline ROW at intervals not exceeding 3 weeks but at least 26 times each calendar year. Also, § 195.412(a) specifies the methods of inspection to include walking, driving, flying or other appropriate means of traversing the ROW.

Therefore, where aerial ROW inspection is appropriate, § 195.412(a) does not exclude drone (Unmanned Aerial System (UAS)) use as long as the images provided by the UAS have sufficient resolution to provide the necessary details of the surface conditions on and adjacent to each pipeline ROW. However, nothing in this interpretation affects the operator's obligation to operate the UAS in accordance with all laws and regulations regarding UAS use.

If we can be of further assistance, please contact Tewabe Asebe at 202-366-5523.

Sincerely,

John A. Gale
Director, Office of Standards
and Rulemaking



Shell Pipeline Company LP
Woodcreek Bldg A-2nd floor
150 Dairy Ashford Road
Houston, Texas 77079

June 4, 2021

Mr. John A. Gale
Director, Office of Standards and Rulemaking
PHMSA, U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, D.C. 20590-0001

SUBJECT: Request for Written Regulatory Interpretation on Drone Use for Inspection of Rights-of-Way as required by 49 CFR 195.412

Dear Mr. Gale:

Shell Pipeline Company LP (SPLC) respectfully requests a written interpretation as it pertains to the use of drones to perform aerial inspection of rights-of-way (ROW). SPLC is proposing to use drone aircraft to perform the regulatory required ROW inspection on a new pipeline in the PHMSA Eastern Region. A drone equipped with video equipment will be flown over the ROW while Operator Qualified personnel will review the footage in real time. An example of the quality of the images that will be provided is attached. As is evident in the examples, the quality of the images is as good if not better than what can be seen by a pilot in traditional aerial patrol situations. The video footage has an additional benefit of the ability to go back and review the footage if necessary. It will also be stored for a time so that comparisons over time can be made if necessary. One other tangential benefit that is becoming more important in today's world is a decrease in our overall net carbon footprint with drone technology over patrol with an aircraft.

SPLC is of the opinion that this method of pipeline patrol is equivalent or better than methods currently in use and approved by PHMSA and is seeking a ruling from PHMSA if they support the use of drone technology paired with human review of the images provided to comply with the requirements of 49 CFR 195.412. Please review the images and indicate if this technology is acceptable to PHMSA. If you would like to review some of the video footage, we would be more than happy to give you a demonstration of the capabilities of this technology.

Thank you for your time and attention to this matter. If you have any questions regarding this request or need any additional information, please contact me at (832) 762-2553 or deborah.price@shell.com.

Sincerely,

Deborah Price
Integrity and Regulatory Services Manager
Shell Pipeline Company LP

Attachment – Examples of the quality of the images provided by the drone



Note the clear view of the the ROW.



Vehicles, structures, and erosion mitigations are all clearly visible.



An example of the ability of the pilot to zoom in or out while flying. This car is the same car that is seen to the right below. The pilot zoomed out a bit for a wider view in the picture below.

