

Program Notice

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VIDEO STOWAGE EXAM FOR RIVER BARGES

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1. PURPOSE

The purpose of this notice is to provide guidance for performing stowage examinations on river barges using a camera as an alternative to physically performing the examination. This is a new Program Notice.

2. BACKGROUND

Safety when performing official duties is of paramount importance to FGIS. This applies equally to official agency personnel as well as federal personnel. Among the more dangerous official duties is performing stowage examinations on river barges. Adverse weather makes for hazardous conditions when getting to and working on top of a barge. Understandably, some grain companies are enacting policies that prevent those not employed by the elevator from being on top of a barge, due to safety concerns and insurance liabilities.

FGIS permitted the use of closed circuit television (CCTV) for hopper railcar stowage examinations in 2009. In 2018, FGIS approved a pilot program to study the use of video camera systems to perform stowage examinations on river barges. This notice provides minimum requirements and other considerations for CCTV equipment used in performing stowage examinations of river barges.

This program notice will be merged into Program Directive 9180.48 Stowage Examination Services and the Grain Inspection Handbook when they are updated. FGIS does not recommend or endorse any particular model or manufacturer of video camera equipment nor is it the intent of this program notice to dictate system design.

3. POLICY

The Field Office must examine and approve the proposed video system on-site before the system can be used to provide official stowage examination services. In addition, the Field Office must re-examine and re-approve any system after any material changes or major repairs have been made to the system or as a response to system failures. The Field Office is responsible for determining whether the video system (as a whole) has the capability of providing images sufficient to determine whether a barge is fit to receive grain.

4. SYSTEM ASSESSMENT

When examining the video system, the Field Office must confirm the following, using the Video System Authorization and Approval (Appendix) to document observations.

(1) The video system meets the following technical requirements:

- (a) Camera must be capable of hands-free operation, tilt, and 360 degree rotation such that it allows for the full examination of all parts of the barge stowage area(s), including hatch covers and tracks
 - (b) Minimum 20x zoom factor
 - (c) Focal length range: minimum </10 mm; maximum >/100 mm
 - (d) IP 66 minimum rating for relevant outdoor components
 - (e) Camera securely mounts to bracket for stable positioning on barge
 - (f) Wired or wireless operation
 - (g) Must produce images in real-time
- (2) The video system must be able to produce high-resolution color images of acceptable quality sufficient to identify any material deficiency, including any materials (grain or non-grain) remaining in the carrier. Image quality must be verified under various lighting and weather conditions by using qualitative tests as deemed appropriate by the Field Office.
- (a) Eye Charts – Three (3) Snellen Plastic Eye Charts, 20 feet version (22x11 inches): one chart positioned on each interior barge wall farthest and nearest to the camera and one chart in the control room
 - (b) Green and red color bars visible on Snellen chart
 - (c) Green and red colors as seen on monitor must be equivalent to colors on Snellen chart as seen in person in the control room
- (3) The video system must be capable of being controlled remotely by official personnel. Preset patterns may be used to assist the Official Service Provider (OSP) in achieving an effective and standardized stowage examination, but manual control and zoom capability is mandatory.
- (4) The portable parts of the video system must be of a size and weight that facility personnel can safely move and set the camera as needed on and about the carrier(s).
- (5) A Video System Authorization and Approval must be agreed upon and signed by the OSP, supervisory FGIS Field Office, and facility management authorizing the use of the video examination system in lieu of, or in conjunction with, physical stowage examinations. Only one authorization and approval form is required. It must be kept on file at the analysis location.

- (6) Approval may be revoked if the video system fails to perform adequately. If the system encounters repeated failures (as determined by the OSP or FGIS), the OSP is required to conduct physical examinations until such time that the systemic issues can be remedied and the field office can perform an assessment to validate that the system meets FGIS requirements.
- (7) If the electronic components of the video system are materially modified, approval must be re-issued before the system is used for official purposes.
- (8) Official personnel must verify that the video system is performing adequately prior to conducting an official stowage examination.

5. EXAMINATION PROCEDURE

Official personnel will perform either a physical or video (using an approved video system) examination of the stowage area to check for all conditions listed in the Program Directive 9180.48, Section 7 - Standards of Fitness. Before determining the method of examination, official personnel are required to talk with the applicant or the applicant's representative and inquire as to whether the barge has been chemically treated, transported toxic or hazardous materials in the previous shipment. If these conditions exist, refer to section 6(f) of Directive 9180.48 before proceeding with any physical examination of the stowage area.

Verify the video system is performing adequately prior to conducting an official stowage examination. Document observations on the Video System Authorization and Approval (Appendix).

- (1) Barge lids or hatch covers must be opened for video examination. The stowage area, including hatch covers and other openings, must not have holes, cracks or any other conditions that could cause a change in the weight or condition of the commodity. A supplemental camera system may facilitate this examination.
- (2) Verify that lighting is adequate to keep the camera from going grey-scale.
 - (a) Artificial lighting may be used to adequately light the inspection area(s) during low-light conditions, sufficient to keep the primary camera from going grey-scale.
 - (b) Care should be taken to ensure that artificial lighting does not create glare or otherwise obstruct the inspection view.
- (3) Verify that image quality is sufficient to perform an accurate stowage examination.
- (4) Verify that manual control of the primary camera system is established. Facility personnel may move the primary camera and/or other components between stowage examinations, but at no point during an official stowage examination may the system be controlled or manipulated by anyone other than official personnel.

- (5) If the system fails to produce a suitable view of the stowage area, or if full control of the system cannot be established, official personnel must physically examine the barge.
- (6) Include procedures for system operation, testing, malfunction, and repair in the OSP's Quality Management Plan. In the event that official personnel must physically examine the barge stowage due to system failure, notify the field office for further evaluation of the system.
- (7) Maintain a log of system malfunctions and failures. The log must be made available to FGIS upon request.

6. QUESTIONS

Direct any questions regarding this program notice to [AMS-FGIS Policies Procedures and Market Analysis Branch](#). File a copy of this program notice with Program Directive 9180.48-Stowage Examination Services.

APPENDIX (The appendix may be saved locally for use.)