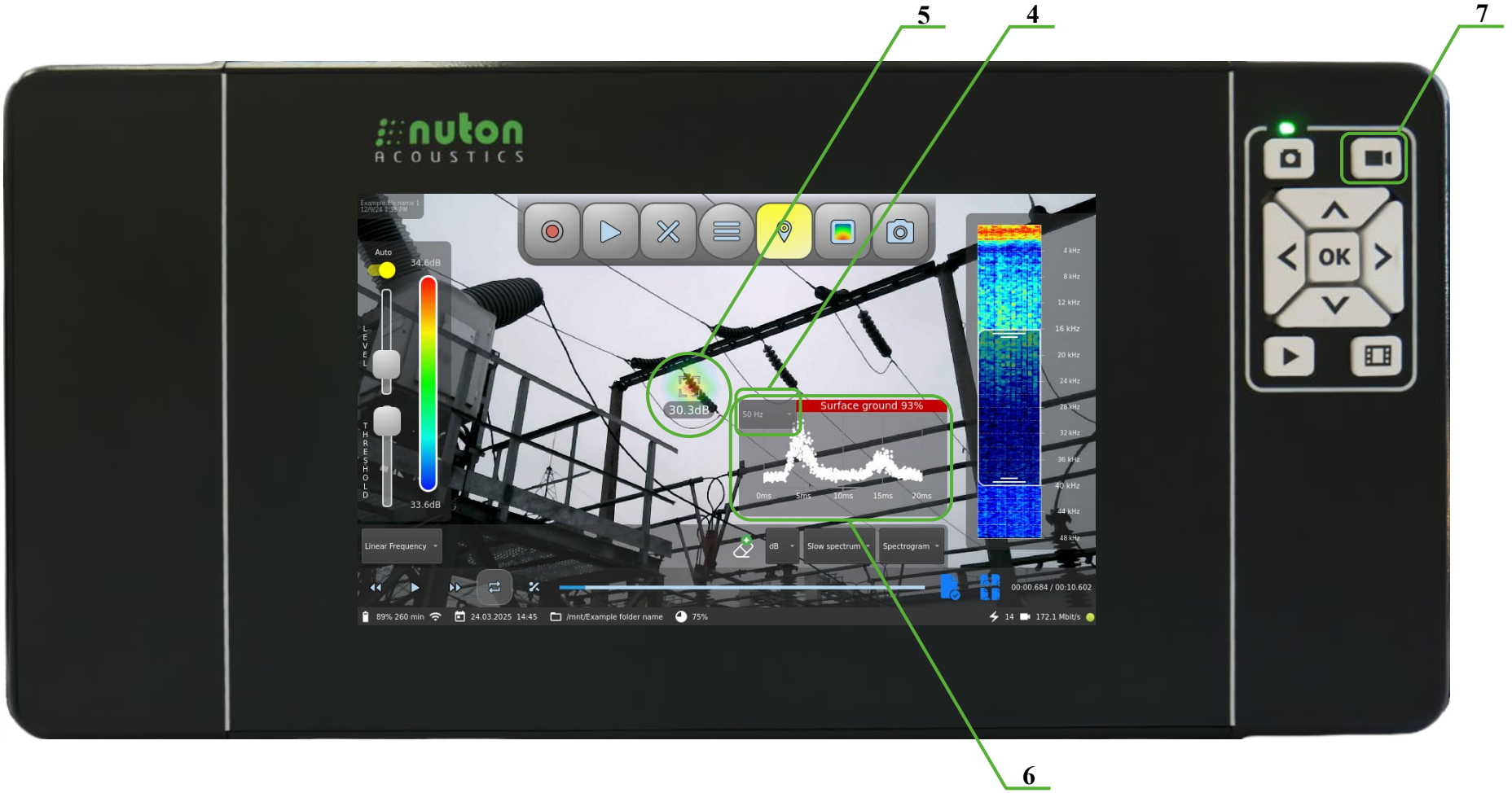
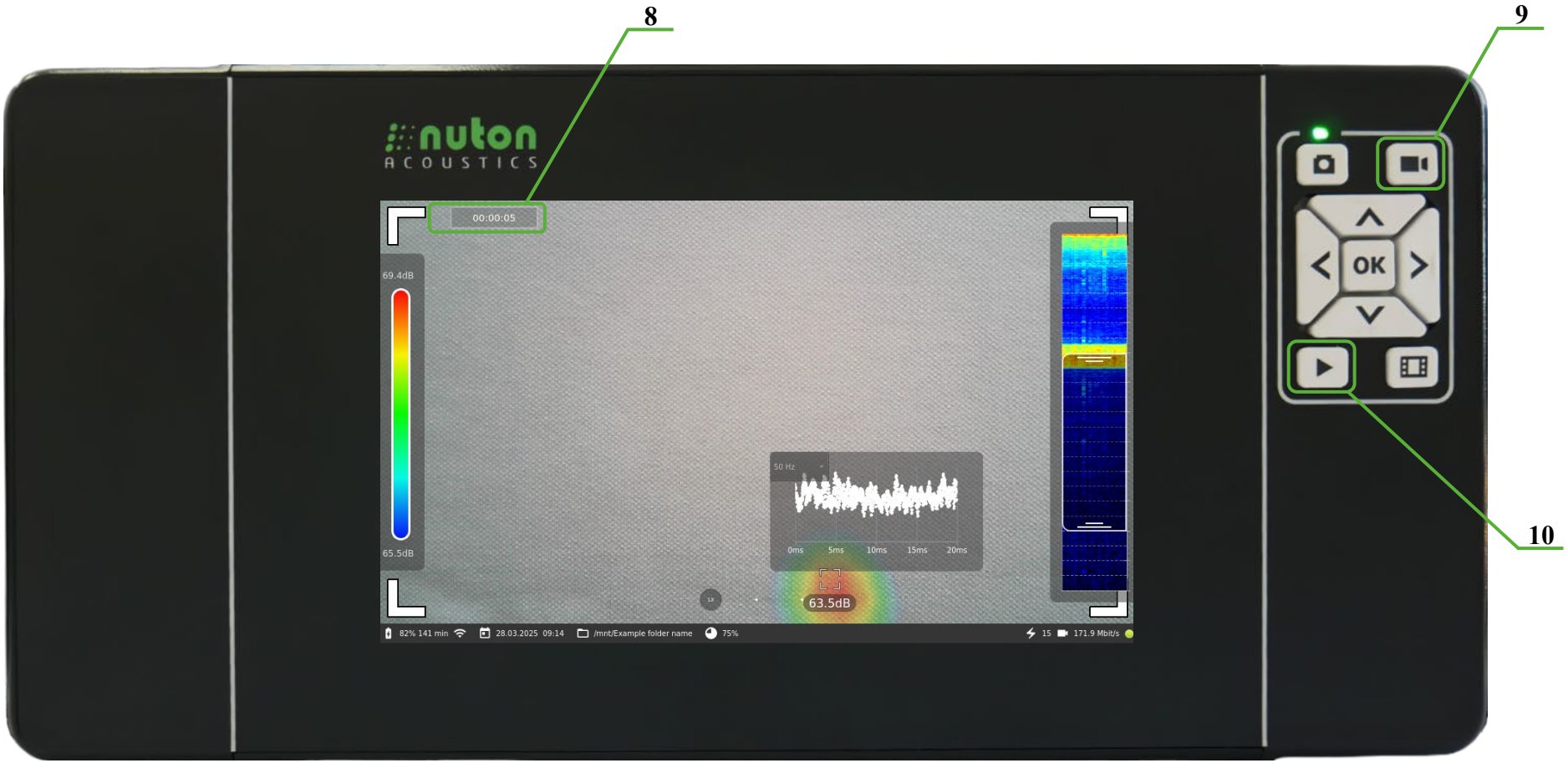
Conducting an inspection in the "Partial Discharge" mode using NAC-PU and NACEx-PU devices

Turn on the device by holding the on/off button for 2 seconds (1). The green LED indicator (2) of the device operation will light up and the loading will begin. After loading, in the main menu, select the "Partial Discharge" mode (3)

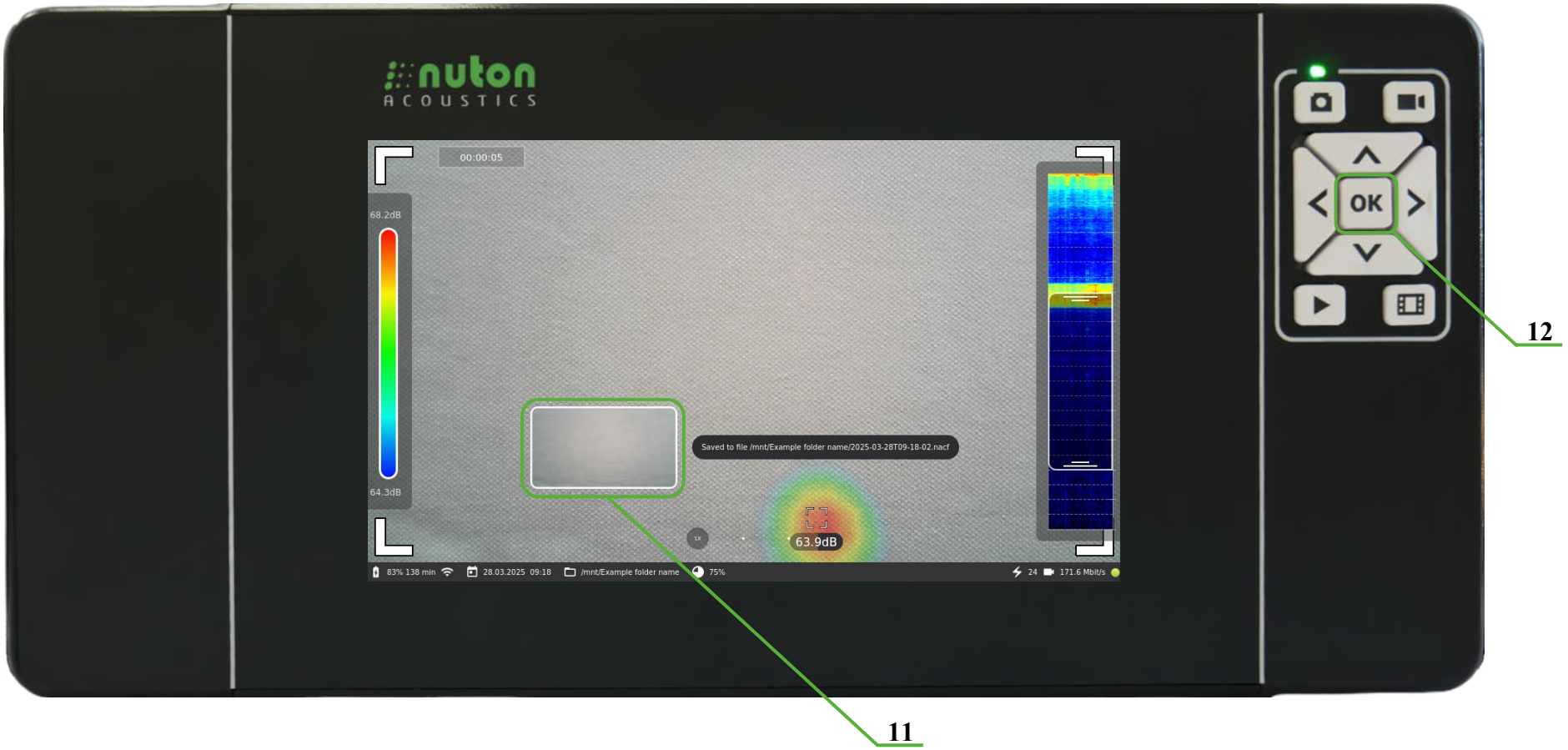
Select the mains voltage frequency (4) и start the inspection along the route. When a clear sound source is detected (5), hold the device still for a few seconds and make sure that the PRPD diagram is plotted and the discharge type is determined (6), then press the record button  (7)



The recording timer (8) will be displayed in the upper left corner. After 5 seconds, press the record button again (9). Enter the name of the container file (it will be used in the report) and press the button (10)



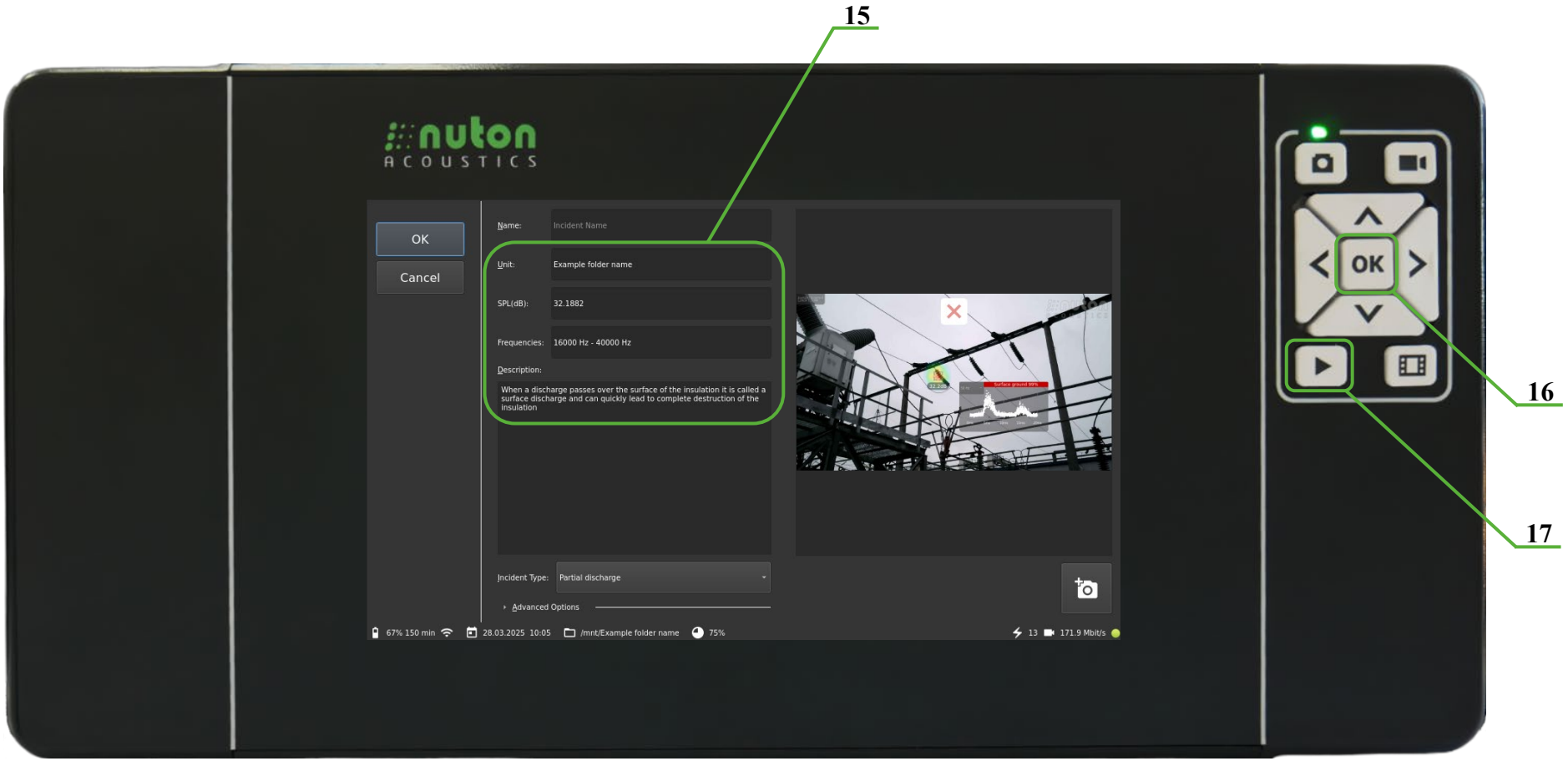
A thumbnail of the recorded container will appear on the screen (11) and while it is displayed, press the button OK (12). The newly recorded container file will open



The container file will start playing, wait a few seconds until the device determines the type of partial discharge (13) and press the button OK (14).

Note: *When playing a container file, the device constantly analyzes the data every few seconds and, based on the PRPD diagram shape, determines the type of partial discharge with a probability from green (low) to red (high). To correctly determine the type of partial discharge, it is necessary to play the container file several times and make sure that the recording contains a moment of determining a discharge with a high probability and select it. If the discharge is determined with a low probability, try making a new recording from a different angle or from a closer distance.*

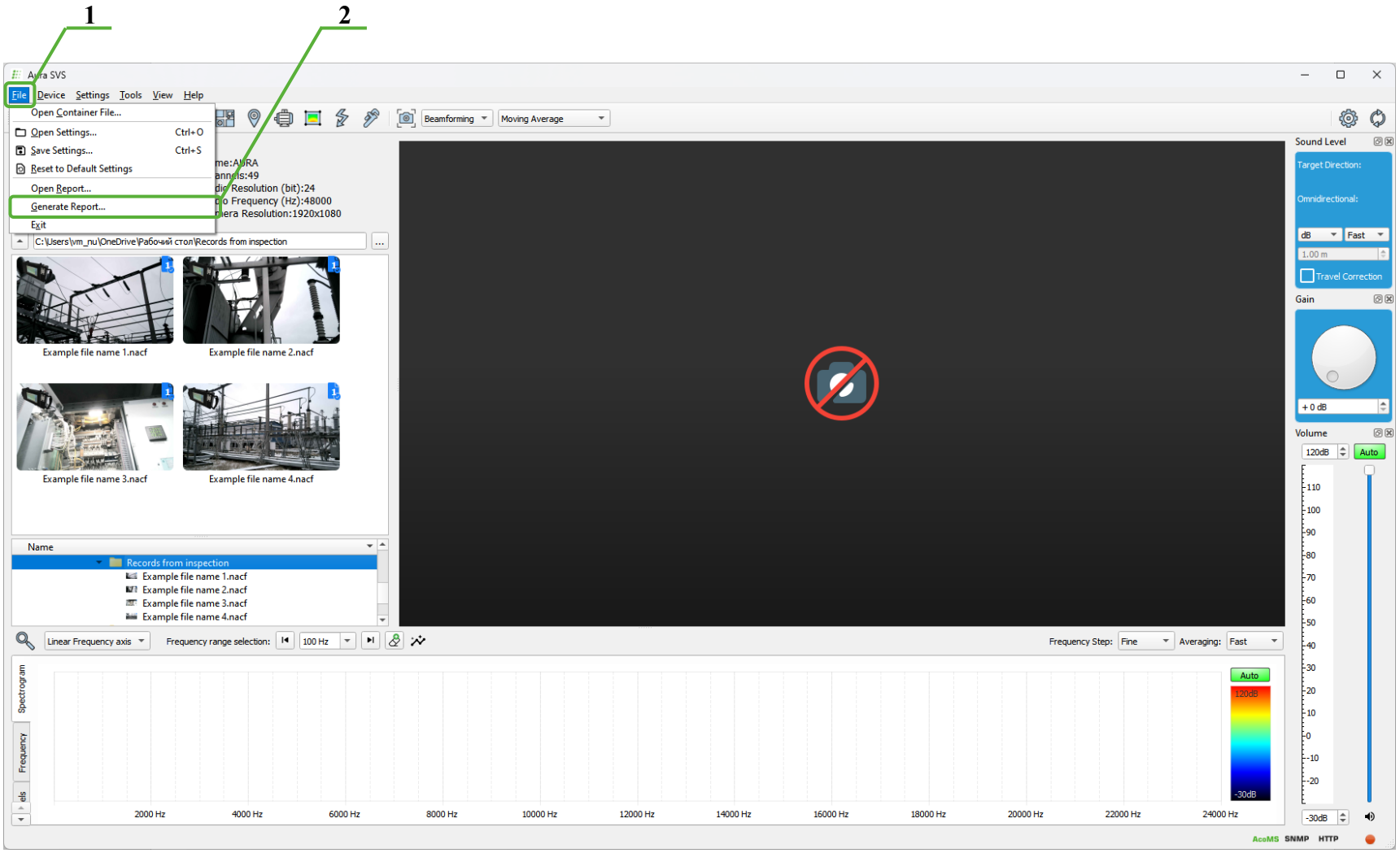
The Add Incident menu will open, where the following items will be automatically added, which will be used when creating the report (15): unit - taken from the name of the folder in which the container file is written, the sound pressure level of the partial discharge, the frequency range in which the partial discharge was detected, description of the detected type of partial discharge, and the report will also display its name and the percentage of probability with which it was identified. Press the button OK (16) to save the incident. Once the incident has been saved, press the button ▶ (17) to return to real-time viewing



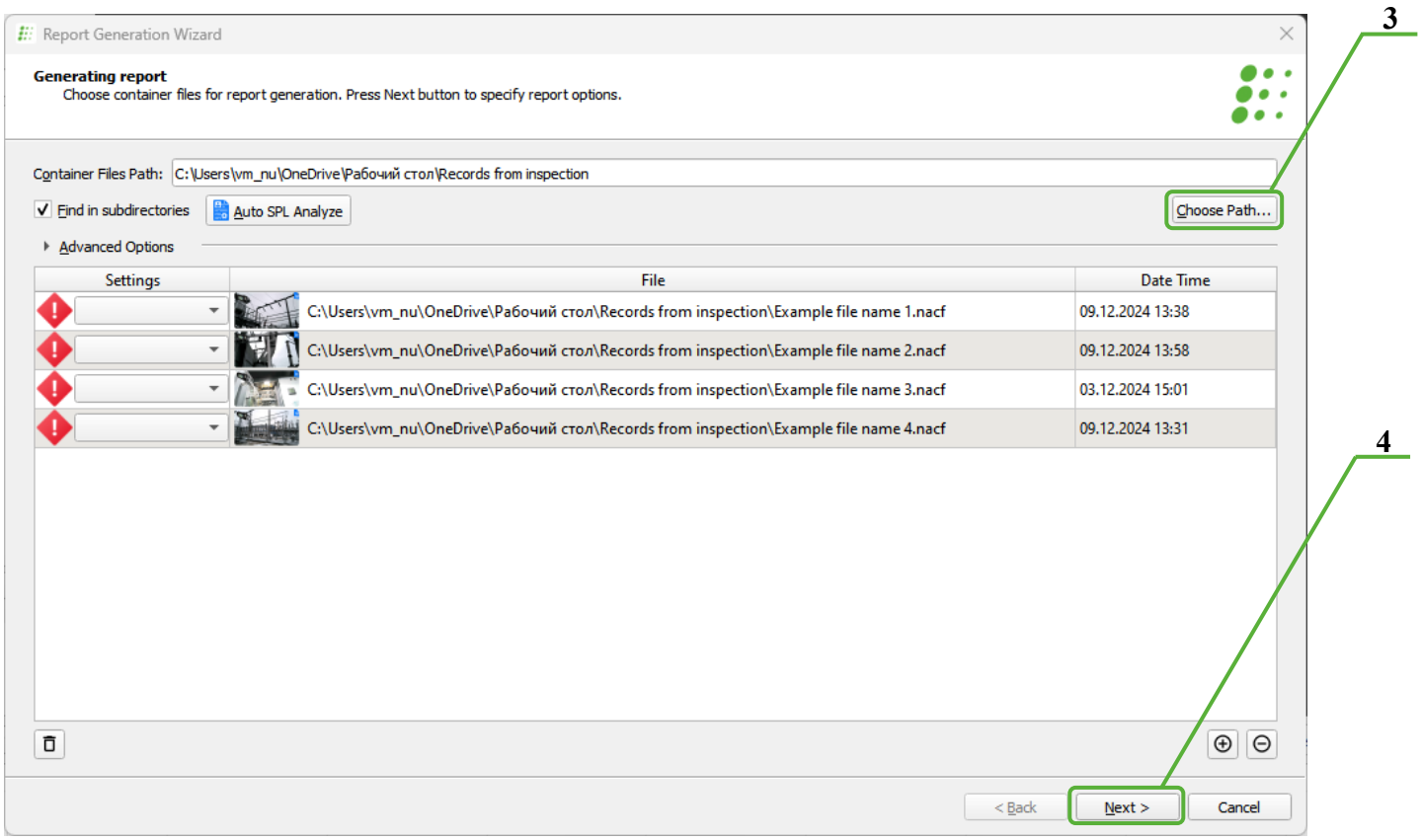
Continue the inspection, write container files and save incidents in them as described above until route is completed. At the end of the route, container files with the number one in the upper right corner (18) will be saved in the folder, meaning that an incident is saved in it and these container files can be used to create a report.

Generating a report on the results of an inspection in the "Partial Discharge" mode

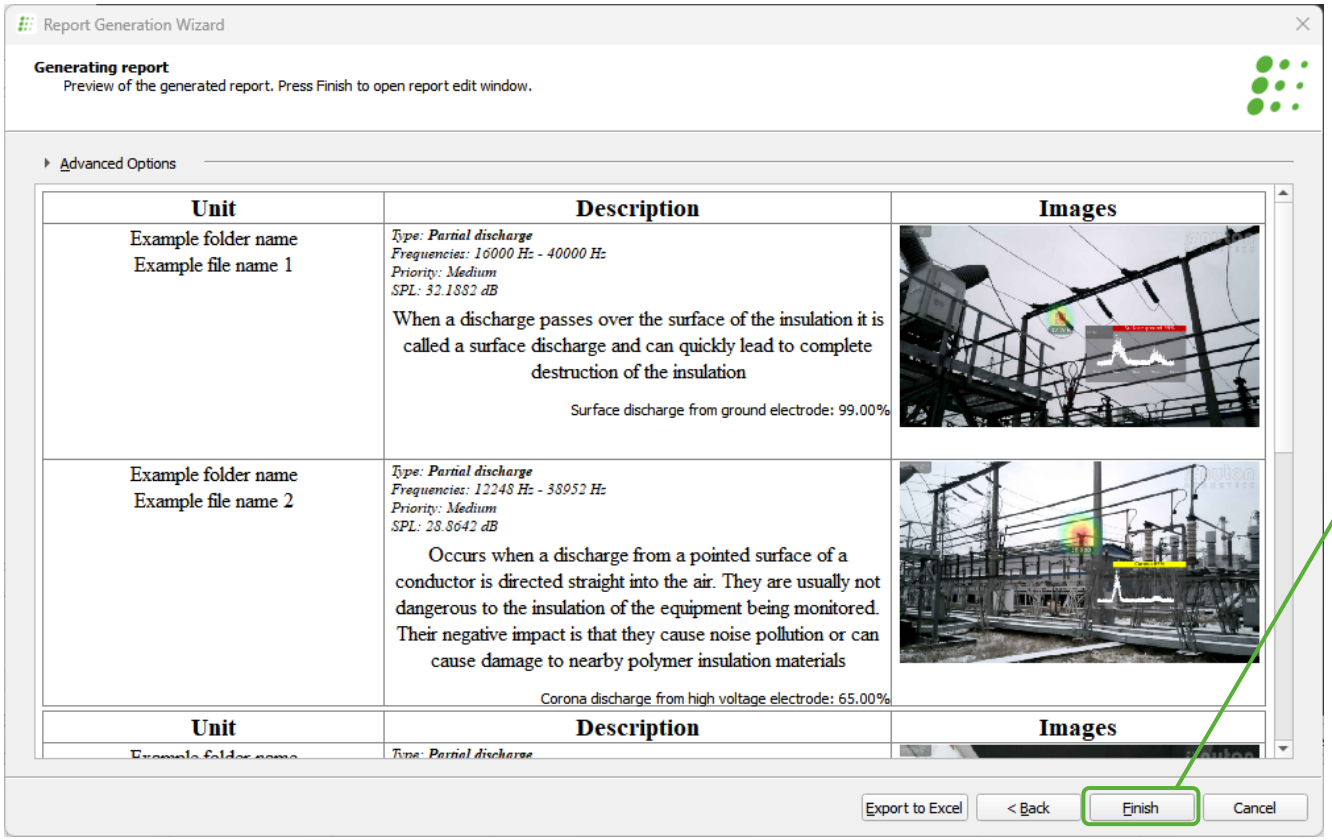
Copy the saved container files that were made during the inspection to a computer with the Aura SVS software installed. Launch the Aura SVS software and select the Generate Report (2) item from the File menu (1)



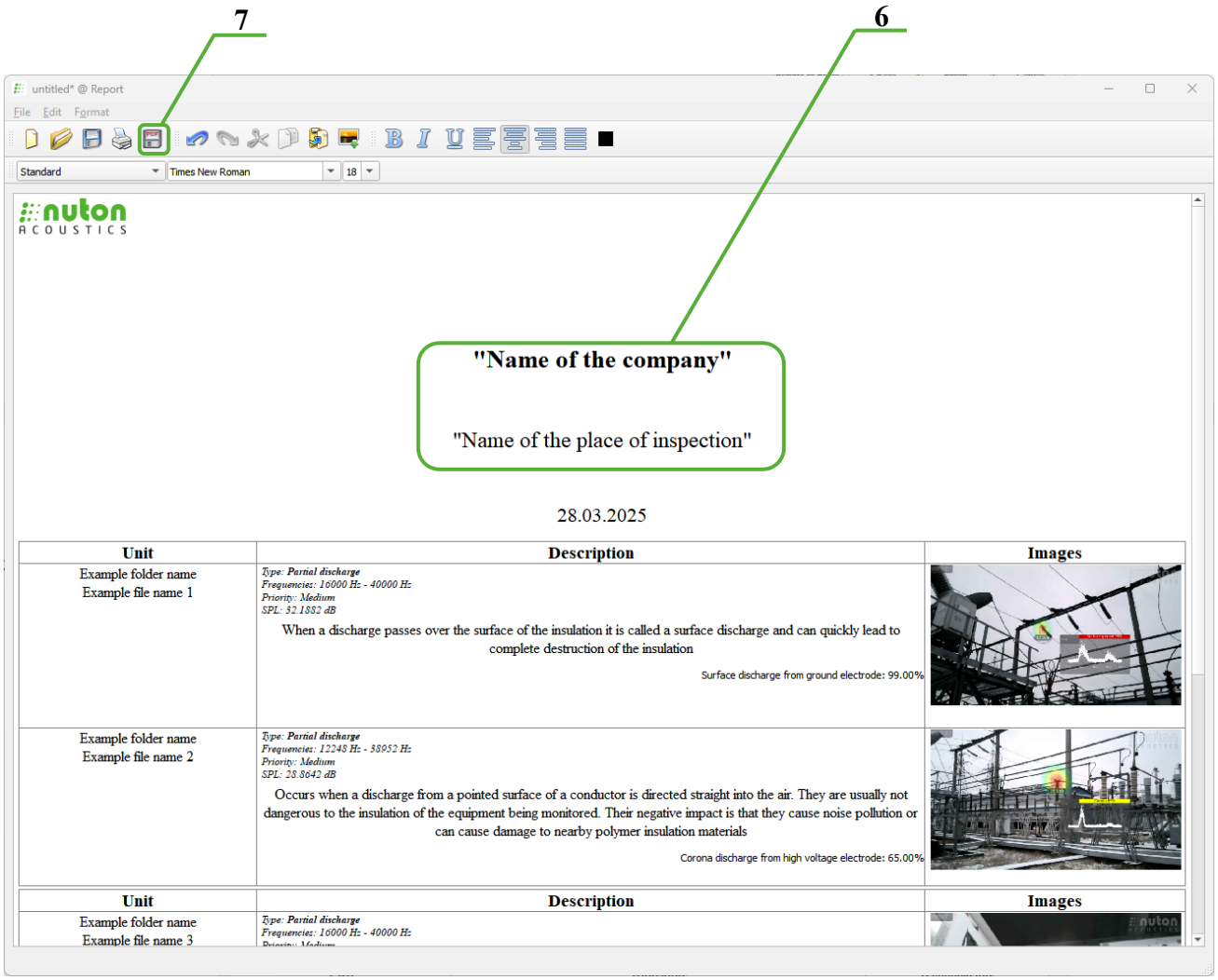
The report generation wizard will open. Select the folder (3) with the container files that were made during the inspection and click the Next button (4)



The report preview stage will open, in which click the Finish button (5)



The report editor will open, in which you enter the name of the company and the inspection location (6) and click the export to pdf button (7) and save the file



As a result, a report will be generated in pdf format with all the partial discharge detected based on the inspection results

Unit	Description	Images
Example folder name Example file name 1	*Type:* ***Partial discharge*** *Frequencies: 16000 Hz - 40000 Hz* *Priority: Medium* *SPL: 32.1882 dB* When a discharge passes over the surface of the insulation it is called a surface discharge and can quickly lead to complete destruction of the insulation Surface discharge from ground electrode: 99.00%	
Example folder name Example file name 2	*Type:* ***Partial discharge*** *Frequencies: 12248 Hz - 38952 Hz* *Priority: Medium* *SPL: 28.8642 dB* Occurs when a discharge from a pointed surface of a conductor is directed straight into the air. They are usually not dangerous to the insulation of the equipment being monitored. Their negative impact is that they cause noise pollution or can cause damage to nearby polymer insulation materials Corona discharge from high voltage electrode: 65.00%