

**ENGINEERING AND TECHNICAL SERVICES REPORT**

<p><b>TITLE</b></p> <p><b>NARDALERT S3: 60 HZ ELECTRICAL FIELD IMMUNITY TESTING</b></p>			<p>DATE</p> <p>June 5, 2012</p>	<p>REPORT NO.</p> <p>TEST-12-073</p>
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SUMMARY:

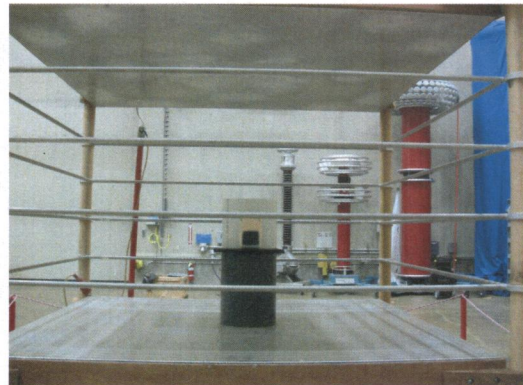
The Nardalert S3 RF Personal Monitor is a battery-powered monitoring device that detects harmful levels of high-frequency radio waves. At BPA, the monitor is typically worn by linemen while working near a cell phone or microwave antenna. Some previous RF personal monitors produced false alarms in the presence of strong 60-Hz fields produced by power lines. Therefore, BPA requires that monitors be tested to verify that they are immune to the low frequency fields. This test is commonly referred to as the ‘ELF’ test.

The Nardalert S3, serial number C-0442, was tested at the high voltage lab. The following procedure was used:

1. Power up the Nardalert S3 RF Personal Monitor
2. Check proper operation using a handheld radio
3. Place the S3 in the parallel plate electric field fixture
4. Raise the voltage to 100-kV (across one meter)
5. Hold the voltage at 100-kV for 30 seconds
6. Lower the voltage and remove the Nardalert from the fixture
7. Check proper operation using a handheld radio



**Figure 1** – Nardalert S3 Personal RF Monitor.



**Figure 2** –RF Monitor installed in the electric field fixture.

The unit passed since it did not alarm in the presence of a 100-kV/meter electric field and it operated correctly after the test.

DESCRIPTORS:

**NARDALERT, PERSONAL RF MONITOR, ELECTRIC FIELD**

DISTRIBUTION:

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