

As noted in the *Further Notice*, the CMAS rules

require licensees and permittees of NCE/public broadcast television stations to install necessary equipment and technologies at, or as part of, their digital television transmitters that will provide them with the capability to receive CMAS alerts sent from the Alert Gateway over a secure, alternate interface and to transmit the alerts to the CMS Provider Gateways of participating CMS providers.

Further Notice, ¶ 25. As such, NCE stations will play a critical, albeit passive, role in the CMAS. Fundamentally, logic and prudence dictate that testing be performed periodically to ascertain whether the CMAS-related equipment installed and used at NCE broadcast television transmitters is functioning properly. Assuming the Commission has authority to do so, UNC-TV would support adoption by the Commission of reasonable rules to require and implement such testing as discussed below.

In UNC-TV's view, there are two principal issues affecting NCE stations in the CMAS testing regime: First, NCE stations do not have return-path capability by which to report test success or failure to the test originator. Second, because NCE stations serve a passive role in providing a redundant path by which participating commercial mobile service ("CMS") providers may, at their own option, elect to receive CMAS alerts and tests, NCE stations have no way to know whether a test was received at the CMS Provider Gateway end point. Assuming that the Commission does, in fact, have authority to require NCE stations to engage in CMAS testing—and UNC-TV does not address this jurisdictional issue—UNC-TV makes the following suggestions and observations about these two aspects of NCE station testing.

II. The Testing Regime Should Not Require Return-Path Construction or Notification By NCE Stations, and CMS Provider Gateways Should Be Required to Receive Tests Via the NCE Station Path

As UNC-TV understands the CMAS architecture, the Reference Point C interface is IP-based and the security of the Reference Point C interface is based upon standard IP security mechanisms such as virtual private network tunnels and IPSEC (Internet Protocol Security) functionality. Significantly, the ATSC digital television transmission system employed by NCE stations uses a half-duplex technology that would not provide a return path over the CMAS, is not IP compliant, and, therefore, would be unable to send a test acknowledgment back to the test source. In formulating an NCE station CMAS testing protocol, the Commission must take into account this lack of IP-compliance and the inability of NCE stations to send a message along the return path, i.e., from the NCE station to the Federal Alert Gateway, who will be the CMAS test originator.

One option to address the situation would be to require NCE stations to create a return path to the Federal Alert Gateway so that the NCE station could notify the Federal Alert Gateway that it has successfully received and passed along a test message. This option is far from ideal, as such a requirement would generate at least the following issues: What would the nature of that path be? How would the return path be funded? What security would be required? What redundancy would be required? Moreover, adoption of a return-path “solution” would require NCE stations to take a role in the CMAS that is more active than practicable, as NCE stations would be required to actively monitor CMAS tests, which would increase the cost to NCE stations of participation.

A second, and preferred, option would be to require NCE stations merely to receive a test originated by the Federal Alert Gateway and to automatically re-transmit the test to the CMS Provider Gateway. In such a regime, the CMS Provider Gateway should be obligated to notify

the test originator (the Federal Alert Gateway) of final receipt of the test. Such a testing regime would have the benefit of effectively serving as an “end-to-end” test because the ultimate infrastructure recipient (the CMS Provider Gateway) would receive the test message provided via the NCE station path and would communicate success or failure to the Federal Alert Gateway.

The role of NCE stations in the CMAS is to serve passively as the redundant path by which participating CMS providers will be able to receive geo-targeted CMAS alerts.² As noted above, the passive nature of the NCE station involvement in the redundant path means that NCE stations have no way to know whether an alert or test transmitted over its facility was actually received by any CMS Provider Gateway.

Because use by CMS Provider Gateways of NCE station paths is optional, the CMAS testing rules should *require* the CMS Provider Gateway to receive periodic tests via the NCE station path at the same time they receive tests via the CMAS primary secure path. The CMS Provider Gateway should then be required to report to the Federal Alert Gateway the results of the tests that it received via both paths. Since the CMAS testing rules already require CMS Provider Gateways to send an acknowledgement to the Federal Alert Gateway upon receipt of an interface test message, a requirement that they send an acknowledgement of receipt of the test via the NCE station path would be reasonable. Moreover, as noted above, absent an acknowledgement by the CMS Provider Gateway to the Federal Alert Gateway, there is no simple way for the Federal Alert Gateway to ascertain the success of the test and relative “health” of the CMAS.

² See *Second Report and Order*, ¶ 16.

