Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)
	) EB Docket No. 04-296
Review of the Emergency Alert System	)
	) PS Docket No. 15-94
	)

ORDER

Adopted: July 24, 2019   Released: July 24, 2019

By the Chief, Public Safety and Homeland Security Bureau:

I.   INTRODUCTION

1.   In this Order, the Public Safety and Homeland Security Bureau (Bureau) of the Federal Communications Commission (Commission) grants a conditional waiver to Sirius XM Radio Inc. (Sirius XM) to authorize transmission of certain truncated Emergency Alert System (EAS) alert data on its four Instant Traffic, Weather and Alert channels. We take this action in response to a Motion of Sirius XM Radio Inc. for Leave to Supplement Petition for Reconsideration and Request for Limited Waiver,[1] as informed by supplemental filings made by Sirius XM.[2]

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[1] *See* Motion of Sirius XM Radio Inc. for Leave to Supplement Petition for Reconsideration and Request for Limited Waiver, EB Docket No. 04-296 (filed June 5, 2017) (*Sirius XM Waiver Request*), https://ecfsapi.fcc.gov/file/1060555872521/EAS%20docket%20filing.pdf. The *Sirius XM Waiver Request* was filed to supplement the Petition for Partial Reconsideration and Clarification of XM Radio Inc., EB Docket No. 04-296 (filed Dec. 27, 2005) (*XM Petition*). Although this petition was originally filed by XM Radio Inc. (XM), that entity subsequently became Sirius XM Radio Inc. when the Commission approved the merger of Sirius Satellite Radio Inc. and XM in August 2008. *See Applications for Consent to the Transfer of Control of Licenses XM Satellite Radio Holdings Inc., Transferor, to Sirius Satellite Radio Inc., Transferee*, MB Docket No. 07-57, Memorandum Opinion and Order and Report and Order, 23 FCC Rcd 12348 (2008) (*Sirius-XM Merger Order*). The *Sirius XM Waiver Request* sought revision of the EAS testing rules applied to Satellite Digital Audio Service (SDARS) providers, and waiver authorization to transmit abridged EAS header codes on its four Instant Traffic, Weather and Alert channels. The testing revisions were previously identified in an *ex parte* letter from Sirius XM, which the *Sirius XM Waiver Request* incorporated by reference. *See* Letter from James S. Blitz, Vice President, Regulatory Counsel, Sirius XM Radio Inc., to Marlene H. Dortch, Secretary, FCC, EB Docket 04-296 (filed July 31, 2014) (*July 2014 Ex Parte Letter*). On June 25, 2019, the Commission adopted the *Sirius XM Order on Reconsideration* addressing Sirius XM's request to revise the SDARS testing rules. *See Review of the Emergency Alert System*, EB Docket No. 04-296, PS Docket 15-94, Order on Reconsideration, FCC 19-57 (adopted June 25, 2019) (*Sirius XM Order on Reconsideration*). The Commission noted that the waiver portion of the *Sirius XM Waiver Request* "can be handled at the Bureau level." *See Sirius XM Order on Reconsideration* at para. 1 & n.6; *see also* 47 CFR §§ 0.191 and 0.392.

[2] Subsequent to the *Sirius XM Waiver Request*, Sirius XM made two more supplemental filings. Further Supplement of Sirius XM Radio Inc.to Petition for Reconsideration and Request for Limited Waiver, EB Docket No. 04-296 (filed Sept. 24, 2018) (*Further Supplement*), https://ecfsapi.fcc.gov/file/10924819802710/SiriusXM%20EAS%20Further%20Supplement%20to%20Recon%20Petition%20FINAL%209.24.18.pdf; and Letter from James S. Blitz, Vice President, Regulatory Counsel, Sirius XM Radio Inc., to Marlene H. Dortch, Secretary, FCC, EB Docket 04-296 (filed Nov. 5, 2018) (*November 2018 Letter*), https://ecfsapi.fcc.gov/file/110571174841/Sirius_XM_Ex_parte_in_04-296_110518__Final_.pdf.

II.   BACKGROUND

A.   The EAS

2.   The EAS is a national public warning system through which alerts concerning impending emergencies are distributed to the public by EAS Participants.[3] The primary purpose of the EAS is to provide the President with "the capability to provide immediate communications and information to the general public at the national, state and local levels during periods of national emergency."[4] The EAS also is used by state and local governments, as well as the National Weather Service (NWS), to distribute alerts.[5]

3.   The EAS uses a broadcast-based, hierarchical alert message distribution architecture to deliver alerts to the public. Using this system, the originator of an alert message at the local, state or national level encodes (or arranges to have encoded) a message in the EAS Protocol, a series of numeric codes that provides basic information about the alert.[6] Specifically, this encoding process converts the numeric codes to audible tones—the familiar EAS squawk—which are combined with an attention signal and other audible information and broadcast to the public.[7] When the transmission of an alert encoded in the EAS Protocol is received by the EAS equipment of EAS Participants assigned to monitor the transmission of the originating broadcaster, the encoded EAS header code tones activate the EAS equipment, which then decodes the numeric codes in the original alert message, re-encodes that information, and broadcasts anew the EAS header code tones, attention signal and audio message to the public. This process is repeated as the alert is rebroadcast to other downstream monitoring EAS Participants until all affected EAS Participants have received the alert and delivered it to the public. This process of EAS alert distribution among EAS Participants is often referred as the "daisy chain" distribution architecture.[8] To ensure that the EAS system will function properly and that alerts can be accurately and consistently encoded, distributed, received, decoded and delivered to the public, the EAS

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[3] The Commission's rules define EAS Participants as radio broadcast stations, including AM, FM, and low-power FM stations; Class A television and low-power TV stations; cable systems; wireline video systems; wireless cable systems; direct broadcast satellite service providers; and digital audio radio service providers. See 47 CFR § 11.11(a).

[4] 47 CFR § 11.1. National activation of the EAS for a Presidential alert message is initiated by the transmission of an Emergency Action Notification (EAN) event code and is designed to provide the President the capability to transmit an alert message (in particular, an audio alert message) to the public within ten minutes from any location at any time. The EAN must take priority over any other alert message and preempt other alert messages in progress. *See*, *e.g.*, *Review of the Emergency Alert System*, EB Docket No. 04-296, First Report and Order and Further Notice of Proposed Rulemaking, 20 FCC Rcd 18625, 18628, para. 8 (2005) (*EAS First Report and Order*). *See also*, *e.g.*, 47 CFR §§ 11.33(a)(11), 11.51(m), (n).

[5] EAS Participants are required to broadcast Presidential alerts; they participate in broadcasting state and local EAS alerts on a voluntary basis. *See* 47 CFR § 11.55(a). *See also EAS First Report and Order*, 20 FCC Rcd at 18628, para. 8. According to NWS, about 90 percent of all EAS activations are generated by NWS and relate to short-term weather events. *See* NWS Fact Sheet, "NOAA's National Weather Service (NWS) and the Emergency Alert System" (Jan. 2014), http://www.nws.noaa.gov/os/dissemination/EAS_factsheet.pdf.

[6] *See* 47 CFR § 11.31. Under this protocol, an EAS alert uses a four-part message: (1) preamble and EAS header codes (which contain information regarding the identity of the sender, the type of emergency, its location, and the valid time period of the alert); (2) audio attention signal; (3) audio message, if included by the alert originator; and (4) preamble and "end of message" (EOM) codes. *See id*. § 11.31(a). Although the EAS Protocol specifies that the message can be audio, video, or text, in practice, only audio is sent.

[7] The encoding process involves modulating the preamble and EAS header codes (event code, alert originator, EOM, etc.) onto an RF signal using Audio Frequency Shift Keying at a rate of 520.83 bits per second, in the specified

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rules require that the EAS Protocol not be "amended, extended, or abridged without FCC authorization."[9]

B. The Waiver Request

4. In the *XM Petition*, Sirius XM requested that the Commission clarify, with respect to state and local EAS alerts, that the transmission of functioning EAS codes and attention signals is only required to the extent technologically feasible.[10] In this regard, Sirius XM stated that its Instant Traffic, Weather and Alert channels "consist of only voice communications and use vocoder technology to compress the data transmitted to conserve bandwidth."[11] As a result, Sirius XM stated, "the EAS codes and attention signals transmitted over these channels may not be audible or will sound inferior to codes and attention signals transmitted by broadcast stations and cable systems."[12] Sirius XM added, however, that "the EAS codes and attention signals will be audible on all channels during a national level EAS alert or test."[13]

5. On June 5, 2017, Sirius XM submitted the *Sirius XM Waiver Request*, in which it stated that the compression of data transmissions on its four dedicated Instant Traffic, Weather and Alert channels (which prevents EAS header codes transmitted on these channels from activating the EAS equipment of other EAS participants) "impacts national (rather than state and local) EAS alerts."[14] Sirius XM observed that the EAS header code tones and attention signals transmitted over all of its channels are nonetheless "readily identifiable by satellite radio listeners as EAS alerts, and EAS transmissions on channels available to all non-subscribed radios and non-compressed Sirius XM channels (which comprise the vast majority of its channels) would fully trigger the equipment of any other EAS participants who may monitor Sirius XM transmissions for this purpose."[15] Sirius XM also observed that it is in "full compliance with its agreement with FEMA to deliver FEMA-originated emergency alert messages to Primary Entry Point stations and others, including state emergency operations centers."[16] Accordingly, Sirius XM requested, to the extent necessary, "a limited, thirty month waiver of any obligation it may have to transmit the EAS codes and attention signals on its compressed channels in a manner that would

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sequential order. *See* 47 CFR § 11.31(a)(1), (c). The Attention Signal is made up of the fundamental frequencies of 853 and 960 Hz, transmitted simultaneously. *See id.* at § 11.31(a)(2).

[8] At the national level, EAS message distribution starts at Primary Entry Point (PEP) stations, which are a group of geographically diverse, high-power radio stations designated and tasked by the Federal Emergency Management Agency (FEMA) to transmit "Presidential Level" messages initiated by FEMA. *See Fifth Report and Order*, 27 FCC Rcd at 646-47, para. 7; 47 CFR § 11.18(a). At the state level, state governors and state and local emergency operations managers activate the EAS by utilizing state-designated EAS entry points – specifically, State Primary stations and "State Relay" stations. *See* 47 CFR § 11.20. State Relay stations relay both national and state emergency messages to local areas. *See* 47 CFR § 11.18(d).

[9] 47 CFR § 11.31(c).

[10] *See XM Petition* at 8.

[11] *Id.*

[12] *Id.*

[13] *Id.* at 8-9. Sirius XM noted "In the event of a national level alert or test, XM is equipped with a manual switching device that can force every XM channel to the emergency audio alert, which will include transmission of codes and alerting signals on every channel." *Id.* at n.17.

[14] *Sirius XM Waiver Request* at 2.

[15] *Id.*

[16] *Id.* at 2-3.

activate the emergency alerting equipment of other EAS participants."[17]

6.   On September 24, 2018, Sirius XM submitted a *Further Supplement* to refine the relief requested in the *Sirius XM Waiver Request*.[18] Specifically, Sirius XM clarified that it is transmitting the EAS device output on its four dedicated Instant Traffic, Weather and Alert channels "using [an] AMBE [Advanced Multiband Excitation] codec with a very low bitrate," which allows it to transmit using less bandwidth.[19] Sirius XM noted that the compression technology preventing the EAS header code tones from being fully functional is limited to "four fulltime audio channels carried on the legacy XM Radio satellite distribution platform."[20] The alteration of the EAS header code tones caused by this compression process is typically not detectable by the listening audience, but renders the codes incapable of activating EAS decoders of other EAS Participants monitoring such compressed transmission, resulting in the alert being rejected by the EAS decoder as invalid (and preventing the regeneration and further redistribution of the alert by downstream monitoring stations).[21]

7.   Sirius XM further contended that a waiver might not be required because in the *2018 EAS State Plan Order*, the "the Commission limited State EAS Plans' use of satellite-based resources to only those sources 'approved by FEMA as alternate monitoring assignments for the Presidential Alert.'"[22] To that end, Sirius XM indicated that it had asked FEMA to approve use of Sirius XM satellites as alternative monitoring sources only with respect to its two free preview channels (Sirius network, Channel 184 and XM Radio network, Channel 1), and that "[i]f FEMA concurs . . ., only the two free preview channels could be monitored for EAS purposes, thereby ensuring any broadcaster using Sirius XM for EAS purposes will receive a signal fully capable of triggering its EAS equipment."[23] FEMA subsequently issued a letter approving only the two preview channels as national EAS alert sources.[24]

8.   On November 7, 2018, the Public Safety and Homeland Security Bureau (Bureau) released a Public Notice seeking comment on the *July 2014 Ex Parte Letter*, *Sirius XM Waiver Request*,

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[17] *Id*. at 3.

[18] *See Further Supplement*. In the *Sirius XM Order on Reconsideration*, the Commission observed that the *Further Supplement* was not accompanied by a motion seeking leave from the Commission to accept its untimely filing, as required by Section 1.429(d) of the Commission's rules, 47 CFR § 1.429(d). Accordingly, the Commission dismissed any legal arguments or clarification requests contained therein. *See Sirius XM Order on Reconsideration* at para. 9 & n.33. The Commission added, however, that to the extent that the *Further Supplement* presents information that bears on the public interest considerations raised in the *Sirius XM Waiver Request*, and its evaluation of the relief requested therein, it would take cognizance of such information. *See Sirius XM Order on Reconsideration* at para. 9 & n.33 (citing *Applications of Dena Pictures, Inc. and Alexander B/Casting Co., a joint venture, dba Kaye – Smith Enterprises For Renewal of Licenses of Station KJRB, Spokane, Washington; Station KJR and KISW-FM, Seattle, Washington; Stations KXL and KXL-FM, Portland, Oregon; and Applications of Bellevue B/Casters, Assignor, and Kaye – Smith Enterprises, Assignee of KEZE-.FM, Spokane, Washington, and The Great American Radio Corp., Assignee of KEZE, Spokane, Washington*, Memorandum Opinion and Order, 46 RR2nd 1583, 1585, para. 3 (1980); *New York City Transit Authority Application for Review*, Memorandum Opinion and Order, 4 FCC Rcd 4488, 4489, para. 11, n.18 (1989)). We follow the Commission's approach with respect to our evaluation of the relief requested in the *Sirius XM Waiver Request*.

[19] *Further Supplement* at 5. Sirius XM added that "[c]hannels transmitting at this bitrate cannot encode the alert and preamble tones in a manner accurate enough to trigger a downstream FCC-approved EAS decoder using current EAS technology." *Id*.

[20] *Further Supplement* at 5 (underline removed). Sirius added that these four channels represent "approximately one percent of the Sirius XM channels available, leaving over 170 fulltime channels on the XM Radio platform and over 160 fulltime channels on the Sirius platform that fully pass though EAS tones capable of triggering downstream EAS decoders." *Id*.

[21] The EAS Protocol requires that the EAS header codes must use Audio Frequency Shift Keying at a rate of 520.83 bits per second to transmit the codes and must be transmitted in a specific sequential order. *See* 47 CFR §

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Further Supplement and *November 2018 Letter*.[25] One comment was filed, which supported Sirius XM's request,[26] and one reply comment was filed (by Sirius XM).[27]

9. On June 25, 2019, the Commission adopted the *Sirius XM Order on Reconsideration*, which, among other things, granted Sirius XM's procedural request for leave to supplement its pending petition for reconsideration set forth in the *Sirius XM Waiver Request*, and referred resolution of Sirius XM's waiver request to the Bureau.[28]

III. DISCUSSION

10. Sirius XM's compression process truncates—or abridges—the EAS header codes such that they cannot be decoded and validated by EAS equipment in downstream monitoring EAS Participant facilities.[29] Section 11.31(c) provides that EAS Participants "must not . . . abridg[e]" the EAS Protocol "without [Commission] authorization."[30] We grant Sirius XM a waiver, pursuant to the conditions set forth below, authorizing Sirius XM to use compression technology on its four dedicated Instant Traffic, Weather, and Alert channels,[31] thus rendering the EAS header code transmissions on those channels incapable of activating EAS decoders monitoring such alert transmissions.[32]

11. The Commission has authority to waive its rules if there is "good cause" to do so.[33] Under this standard the Commission may find good cause to grant a waiver, "if special circumstances warrant a deviation from the general rule and such deviation will serve the public interest."[34] We find that such circumstances exist in this case and that granting the requested waiver authorization is consistent with the effective operation of the EAS and is in the public interest.[35]

12. First, Sirius XM's transmission on the four dedicated Instant Traffic, Weather and Alert

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11.31(a)(1), (c). The EAS header code string is transmitted in three bursts that the EAS decoder compares, using bit-by-bit comparison, to ensure two of the three tonal bursts match. *See* 47 CFR §§ 11.31(c), 11.33(a)(10). The AMBE compression process causes these bit strings to become truncated, thus rendering them erroneous to the EAS decoder. Specifically, the AMBE codec takes the digitized sound stream, applies certain 16- or 8-bit algorithms to compress the data and convert it into "frames" that can be transmitted at low data rates (over narrow channels), and those frames are then reconfigured by the decoder codec in the receiver using an algorithm-based synthesis, the output of which, does not represent a one-to-one reconstitution (or reproduction) of the sound bit stream that was initially converted to frames. Some of the bits in the EAS header code string are lost or changed (from "1" to "0" and/or the other way around) through this process, and those changes to the bit stream prevent the EAS equipment in downstream monitoring EAS Participant facilities from decoding and validating the alert. While the attention signal also is impacted by this compression process, unlike the EAS header codes, that signal does not trigger regeneration of the alert, and is instead used as an alerting signal to listeners that an alert message is in progress. Accordingly, while the attention signal may also be truncated to some extent by this compression process, the resulting signal should not impact EAS functionality or effectiveness to Sirius XM listeners or to the EAS as a whole.

[22] *Further Supplement* at 7 (*citing Amendment of Part 11 of the Commission's Rules Regarding the Emergency Alert System*, PS Docket No. 15-94, Report and Order, FCC 18-39, n. 114 (April 10, 2018) 2018 WL 1737202 (*2018 EAS State Plan Order*)). In the *Sirius XM Order on Reconsideration*, the Commission observed that the waiver was packaged with reconsideration supplements and clarification requests and granted the relief in those pleadings only to the extent noted therein. *See Sirius XM Order on Reconsideration* at paras. 1 & n.6, 9 & n.33, 24. We take cognizance of the developments and facts described in the *Further Supplement*, to the extent that this pleading was accepted by the Commission and bears on our determination regarding the *Sirius XM Waiver Request*.

[23] *Further Supplement* at 7. Sirius XM also contended that a waiver might not be required on the bases that (i) it would work with any EAS Participant that it learns is planning to monitor or is monitoring its satellite transmissions for EAS purposes to ensure that the correct channels are monitored, and (ii) the existence of dedicated EAS receivers (i.e., receivers that only transmit the EAS alert) previously made available to PEP stations state emergency communications offices ("State EOCs") by XM Radio pursuant to an arrangement between XM Radio and the Primary Entry Point Administrative Council ("PEPAC"), which, if installed, would ensure receipt of fully functional EAS alerts. *Id*. at 6, 8. As explained above, these arguments are procedurally defective; thus, we do not reach their

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channels of EAS header codes (and attention signals) that cannot activate downstream EAS decoders has no impact on the EAS's functionality or operations. The purpose of requiring transmission of fully functional codes (i.e., to encode the alert) is to enable and perpetuate the "daisy chain" redistribution of the alert throughout the thousands of EAS Participant facilities across the country. This distribution process is effected through monitoring assignments of two sources (which may include alternate sources): EAS Participants are identified as sources for the EAS alert and other EAS Participants are assigned to monitor their transmissions.[36] These monitoring assignments, including satellites monitored as alternate EAS alert sources, are set forth in the State EAS Plans administered by the State Emergency Communications Committees.[37] Requiring EAS Participants to monitor EAS alert sources specified in the State EAS Plan maintains the integrity of the distribution chain. In the *2018 EAS State Plan Order*, the Commission required that State EAS Plans identify any satellite-based communications resources that are used as alternate monitoring assignments, and clarified that this requirement is limited to "sources approved by FEMA as alternate monitoring assignments for the Presidential Alert."[38] For its part, FEMA has approved only the Sirius Preview Channel (Sirius satellite network, Channel 184) and the XM Preview Chanel (XM satellite network, Channel 1) as alternative monitoring sources (PEP sources) for national EAS alerts.[39] Accordingly, EAS Participants are not authorized to monitor Sirius XM's Instant Traffic, Weather and Alert channels for EANs, which effectively precludes their being monitored for any EAS alert.[40] The transmission of abridged EAS header codes over such channels therefore does not pose any risk to the integrity of EAS alert distribution.

13. Second, requiring Sirius XM to transmit functional EAS header codes and the attention signal on its Instant Traffic, Weather and Alert channels, would impose significant burdens associated with retrofitting Sirius XM's transmission platform and possibly require elimination of one or more of these channels.[41] Not only would such action serve no purpose, as no EAS Participant is authorized to monitor these channels, but doing so could result in less efficient use of the spectrum,[42] which is

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merits, if any. To the extent they bear on our public interest determinations relevant to resolving the relief requested in the *Sirius XM Waiver Request*, however, we take cognizance of them.

[24] *See November 2018 Letter*, Attachment A (Letter from Antwane V. Johnson, IPAWS Division Director, FEMA, to James S. Blitz, Vice President, Regulatory Counsel, Sirius XM Radio Inc. (Oct. 31, 2018) (stating that "FEMA approves the use of select programming channels as the exclusive alternative monitoring sources (PEP sources) on the Sirius XM satellites for the purpose of further distribution of national level EAS messages to the public," and that these channels are "the Sirius Preview Channel (Sirius satellite network, Channel 184) and the XM Preview Chanel (XM satellite network, Channel 1), when each is received by a Sirius XM approved commercially available receiver")). These preview channels do not require a subscription and thus are free to anyone with a satellite radio receiver.

[25] Public Safety and Homeland Security Bureau Seeks Comment on Filings by Sirius XM Radio Inc., EB Docket No. 04-296, PS Docket No. 15-94, Public Notice, DA 18-1140 (PSHSB Nov. 7, 2018).

[26] *See* Sean Donelan Comments at 5 (filed Nov. 27, 2018). Donelan conditioned his support of Sirius XM's request to use compression on its Instant Traffic, Weather and Alert channels on Sirius XM transmitting "all required weekly, monthly and national tests and actual EAS activations on at least one predictable, widely accessible channel using an audio codec compatible with AFSK EAS data bursts suitable for activating EAS decoders," and transmitting "required monthly and national tests, and actual EAS activations on all programming channels with the EAS Header, Attention Signal, audio message and EOM; including those channels with AFSK incompatible audio codecs," adding "[o]n channels with AFSK incompatible audio codecs, the AFSK data bursts should sound like EAS messages to a human, but do not need to activate EAS decoders." *Id*. at 4-5.

[27] *See* Sirius XM Radio Inc. Reply (filed Dec. 7, 2018).

inconsistent with the Commission's general spectrum policy goals.

14.   Third, we find that granting waiver authorization to Sirius XM, pursuant to the conditions set forth below, to use compression on its four Instant Traffic, Weather and Alert channels is consistent with the public interest. The Commission concluded that requiring SDARS licensees to transmit national EAS messages will serve the public interest because doing so would "promote the safety of the large and growing number of Americans who are subscribing to this service," whereas failure to do so "could potentially leave a substantial number of Americans without access to critical information in the event of a national emergency."[43] Authorizing Sirius XM to continue transmitting compressed EAS alerts over its four Instant Traffic, Weather and Alert channels is consistent with that conclusion. National EAS alerts will continue to be transmitted over all of Sirius XM's channels, including the four Instant Traffic, Weather and Alert channels using compression, and will be audible to Sirius XM's subscribers (and non-subscribers on its non-subscriber channels). Further, Sirius XM will continue to serve a critical role as a PEP station, initiating national EAS alerts encoded pursuant to the EAS Protocol requirements on all of its other channels, including its free preview channels authorized as monitoring sources for such alerts – thus enabling downstream EAS Participants monitoring such transmissions to regenerate (via encoding) that alert to be redistributed to the EAS Participants monitoring their broadcasts.[44]

15.   Reflecting the narrow and limited scope of this authorization, we grant Sirius XM a waiver authorizing it to use, in the transmission of EAS alerts, compression technology that renders the EAS header code transmissions incapable of activating EAS decoders monitoring such alert transmissions,[45] pursuant to the following conditions: (i) the use of such compression is limited to Sirius XM's current four dedicated Instant Traffic, Weather and Alert channels; (ii) FEMA authorization to monitor Sirius XM's transmissions for federal EAS alerts continues to be limited to the Sirius Preview Channel (Sirius satellite network, Channel 184) and the XM Preview Chanel (XM satellite network, Channel 1);[46] (iii) these preview channels remain authorized satellite sources used as alternate monitoring sources for Presidential alerts (i.e., EANs);[47] and (iv) the audio message portion of the alert transmitted to

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[28] *See Sirius XM Order on Reconsideration* at para. 1 & n.6.

[29] *See supra* note 21; 47 CFR § 11.31(c).

[30] *See* 47 CFR § 11.31(c).

[31] To the extent Sirius XM's contends that it is unclear whether SDARS providers are generally required under the EAS rules to encode national EAS alerts such that their transmission will activate EAS decoders of EAS Participants monitoring the SDARS provider's transmission, we reject that notion. *See Further Supplement* at 4. As specified in the EAS rules, SDARS providers are required to encode national EAS alerts on all channels in accordance with the EAS Protocol requirements. *See* 47 CFR § 11.11 (requiring SDARS providers to have installed a decoder and encoder); 11,32(a) (requiring that encoders must "at a minimum be capable of encoding the EAS protocol described in [47 CFR §11.31] and providing the EAS code transmission requirements described in [47 CFR §11.51]); 11.51(i) (requiring that SDARS licensees "shall transmit national audio EAS messages on all channels in the same order specified in [47 CFR §11.51(a)], which in turn requires "[transmission], either automatically or manually, [of] national level EAS messages and required tests by sending the EAS header codes, Attention Signal, emergency message and End of Message (EOM) codes using the EAS Protocol.). Encoding the EAS alert is necessary for to ensure that an alert will activate EAS decoders in downstream monitoring stations, thus enabling the regeneration and "daisy chain" distribution of the alert from one EAS Participant to another. As explained herein, because the transmissions on Sirius XM's Instant Traffic, Weather and Alert channels are not authorized to be monitored, their inability to disseminate functional EAS header codes does not pose any risk to the normal operation of the EAS.

[32] We recognize that the compression process applied to the EAS alert transmissions over the four dedicated Instant Traffic, Weather and Alert channels may also render the EOM code incapable of being decoded, and that such code is required to terminate federal alerts and return EAS Participant facilities to normal operation. *See*, *e.g.*, 47 CFR § 11.33(a)(9). However, because the truncated EAS header codes are incapable of initiating an alert, the capacity of the EOM code to terminate the alert should not pose any concerns. To the extent the EOM code is rendered

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listeners is not rendered unintelligible to any extent (e.g., no truncated speech, incomplete words or sentences, or confusing phonetic alterations) as a direct result of the compression process.[48] This waiver authority will become effective upon the effective date of this Order.[49]

IV. ORDERING CLAUSE

16. Accordingly, IT IS ORDERED that pursuant to sections 4(i) of the Communications Act of 1934, as amended, 47 U.S.C. § 154(i), and sections 0.392 and 1.3 of our rules, 47 CFR §§ 0.392, 1.3, Sirius XM Radio Inc.'s request for waiver set forth in the Motion of Sirius XM Radio Inc. for Leave to Supplement Petition for Reconsideration and Request for Limited Waiver IS GRANTED to the extent and subject to the conditions set forth herein, effective upon adoption of the effective date of this order. This action is taken under delegated authority pursuant to sections 0.191 and 0.392 of the Commission's rules, 47 CFR §§ 0.191 and 0.392, and the *Sirius XM Order on Reconsideration*.[50]

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nonfunctional due to the compression process, however, such action constitutes an abridgment of the EAS protocol, and we authorize such abridgment under the waiver authority issued herein.

[33] *See* 47 CFR § 1.3.

[34] *See Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990) (*citing WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969), *aff'd*, 459 F.2d 1203 (1973), *cert. denied*, 409 U.S. 1027 (1972)).

[35] *See*, *e.g.*, *Northeast C*ellular *Tel. Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990) (finding that good cause may be found "where particular facts would make strict compliance inconsistent with the public interest"); *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969) (in assessing good cause, the agency may take into account "considerations of hardship, equity, or more effective implementation of overall policy").

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[36] *See* 47 CFR §§ 11.18, 11.52(d), 11.21. These monitoring assignments are developed by State Emergency Communication Committees and EAS Participants, identified in the State EAS Plan, and periodically tested by FEMA to ensure its reliability via national tests. *See*, *e.g*., 47 CFR §§ 11.21, 11.61(a)(3). EAS alerts formatted in the Common Alerting Protocol (CAP), however, are initiated by FEMA's Integrated Public Alert and Warning System (IPAWS) via IP-based connections rather than over-the-air encoded transmissions, and all EAS Participants are required to monitor IPAWS for CAP-formatted alerts. *See* 47 CFR § 11.52(d)(2).

[37] *See* 47 CFR § 11.21(4), (6). State Emergency Communications Committees (SECCs), along with associated Local Emergency Communications Committees (LECCs), draft and file these plans on behalf of the states. The SECCs and LECCs are volunteer organizations composed of state broadcast associations, EAS Participants, emergency management personnel, and other stakeholders. *See 2018 EAS State Plan Order* at para. 4.

[38] *See 2018 EAS State Plan Order* at para. 42 & n. 114; 47 CFR § 11.21(a)(6).

[39] *See supra* note 21. These preview channels do not require a subscription and thus are free to anyone with a satellite radio receiver. Although approved prior to the requirement to identify satellite sources approved by FEMA, the Nebraska State EAS Plan demonstrates how monitoring of Sirius XM as a national EAS alert source is limited to its preview channels. *See* Nebraska State EAS Plan, Appendix B (approved March 8, 2018), https://www.fcc.gov/files/neseccplanpdf.

[40] We further observe that all State EAS Plans must be reviewed and approved by the Bureau prior to implementation, thus, providing a backstop to any inadvertent identification of unauthorized Sirius XM channels as alert sources. *See* 47 CFR § 11.21.

[41] *See*, *e.g*., *Further Supplement* at 8-9 ("Any mechanism requiring changes to Sirius XM's technology or platform is likely to have significant drawbacks and disadvantages, potentially including customer disruption, loss of programming options, and significant implementation costs, such as software development, code changes to the uplink delivery system control structure, code deployment, testing, and regression analysis.").

[42] To the extent transmission of functional EAS header codes would require more channel bandwidth than currently allocated to the four Instant Traffic, Weather and Alert channels, such bandwidth expansion presumably would involve taking the bandwidth from one or more of these four channels and reapportioning it into the remaining channels, thus reducing the overall number of Instant Traffic, Weather and Alert channels. In this particular case, such reduction in programming channels would be made to accommodate transmission of alert content (fully functional EAS header codes) that is not consumed by the public and is not used to fulfill its intended purpose (*i.e*., is not used to activate EAS decoders in downstream monitoring EAS Participant facilities).

[43] *EAS First Report and Order*, 20 FCC Rcd 18625, 18642, para. 44.

[44] *See*, *e.g*., *Further Supplement* at 4 ("Sirius XM has historically played an active and extensive role in the emergency alert network, including serving as one of a limited number of non-broadcast entities designated as [a PEP] station[]."); 47 CFR § 11.18(a) ("PEPs are the primary source of initial broadcast for a Presidential Alert. . . . The Primary Entry Point System is a nationwide network of such broadcast stations used to distribute EAS alerts formatted in the EAS Protocol. FEMA is responsible for designating broadcast stations as PEPs.").

[45] To the extent Sirius XM's use of compression on its four Instant Traffic, Weather and Alert channels also abridges the Attention Signal and EOM code contained in the EAS alert transmitted over these channels, such abridgment is subsumed under this waiver authorization.

[46] *See November 2018 Letter*.

[47] *See* 47 CFR § 11.21(a)(6); *2018 EAS State Plan Order* at para. 42, n.114.

[48] To be clear, this condition only applies to the effects of the compression process itself on the audio message. To the extent, for example, that the audio message portion of an EAS alert received by Sirius XM for retransmission already contains unintelligible portions or develops unintelligible portions during transmission due to environmental or other conditions that would result regardless of whether compression was employed, such types of results would fall outside the scope of, and not violate, this authorization condition.

FEDERAL COMMUNICATIONS COMMISSION

Lisa M. Fowlkes
Chief, Public Safety and Homeland Security Bureau
Federal Communications Commission

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[49] We acknowledge that Sirius XM requested a waiver duration of 30-months "to develop, test, and implement technical solutions that can address the issue identified in its earlier Petition and clarified [in the *Sirius XM Waiver Request*]." *Sirius XM Waiver Request* at 3. We find it unnecessary to limit the waiver to thirty months' duration or to require that Sirius XM replace its equipment to address the transmission of compressed, truncated, and non-functional EAS header codes on the four dedicated Instant Traffic, Weather, and Alert channels. The deviation from the rules is sufficiently narrow and its effects on the EAS are appropriately cabined by the waiver conditions applied herein. We also observe that the requirement that State EAS Plans specify satellite-based communications resources used as alternate monitoring assignments, and the requirement limiting such specified satellite resources to only those authorized by FEMA, were adopted subsequent to the *Sirius XM Waiver Request's* submission. These regulatory developments fundamentally altered the potential impact of transmitting compressed EAS header codes by rendering such otherwise nonfunctional codes inconsequential to the proper operation of the EAS. Furthermore, if Sirius XM modifies its equipment so that Sirius XM then transmits the EAS header codes, attention signal and EOM code as required in the rules for the four channels subject to this waiver, then this waiver will terminate as no longer necessary.

[50] *Sirius XM Order on Reconsideration* at para. 1 & n.6.

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