Municipal Landfill Superfund Site from the NPL.

Dated: August 3, 1999.

Myron O. Knudson,

Acting Regional Administrator, Region 6.

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FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 73

[MM Docket No. 99–325; FCC 99–327]

Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Radio Broadcast Service

AGENCY: Federal Communications Commission.

ACTION: Notice of proposed rulemaking.

SUMMARY: In this document, the Commission considers alternative approaches to introduce Digital Audio Broadcasting (DAB) to the American public. This document is intended to help the Commission determine whether an in-band, on-channel (IBOC) model or a model utilizing new spectrum would be the best means to promptly introduce DAB service. This document intends to foster development of both models, help DAB system proponents identify design issues, and encourage modifications to advance Commission's policy objectives. This document is in response to USA Digital Radio's (USADR) Petition for rulemaking, which requested initiation of a proceeding to implement IBOC DAB technology.

DATES: Comments are due on or before January 24, 2000, and reply comments are due on or before February 22, 2000.

ADDRESSES: Parties who choose to file comments by paper should address their comments to Magalie Roman Salas, Office of the Secretary, TW–A306, Federal Communications Commission, 445 12th Street, SW., Washington, DC 20554 and should also submit comments on 3.5 inch diskette using Microsoft Word or compatible software addressed to William J. Scher, Federal Communications Commission, 445 12th Street, SW., Room 2–A445, Washington, DC 20554. Electronic comments may also be submitted using the Commission's electronic comment filing system via the Internet to <http://www.fcc.gov/e-file/ecfs.html>.

FOR FURTHER INFORMATION CONTACT: Peter Doyle or William Scher at (202) 418–2780 or pdoyle@fcc.gov or wscher@fcc.gov.

SUPPLEMENTARY INFORMATION:

1. *IBOC DAB.* IBOC systems allow simultaneous broadcast of analog and digital radio signals in the AM and FM bands without disruption to existing analog service. IBOC DAB systems have not been conclusively proven to be technically viable, but recent advances hold real promise. In the hybrid operational mode, IBOC systems transmit lower power digital signal sidebands positioned on either side of the host analog signal. Digital signals would be interleaved (station A's upper digital sideband would be between 1st adjacent channel station B's lower and upper digital sidebands, and adjoining station B's carrier frequency). The presence of digital sidebands would reduce the separation between the host analog signal and 2nd and 3rd adjacent channel digital signals. IBOC proponents believe digital signal processing techniques will permit transmission of a digital ''pair'' of each analog signal in the AM and FM bands, without disrupting existing analog service.

2. In the IBOC all-digital mode, the system proposed by USADR would continue to divide the digital signal into sidebands, boost power by tenfold, and use the channel center for lower-power auxiliary services. The increased power of the signal sidebands likely would interfere with 1st adjacent channel analog signals. Therefore, USADR proposes to use the hybrid mode for 12 years and then sunset protection of analog signals. At that time, it proposes to implement the all digital mode. The system proposed by Lucent Technologies (''Lucent'') consolidates the digital signal in the channel center in the all-digital mode, and proposes to use the 1st adjacent for auxiliary services. No sunset of protection for analog signals would be necessary because Lucent's model conforms to the Commission's current analog technical rules.

3. *DAB Public Policy Objectives.* In this Notice, the Commission's public policy objectives to introduce DAB are (1) to provide vastly improved radio service to the public, (2) to permit broadcasters and listeners to realize fully the superior technical performance capabilities of DAB; (3) to support a vibrant and vital terrestrial radio service for the public and create DAB opportunities for existing radio broadcasters; (4) to ensure that the introduction of DAB does not weaken the vitality of our free, over-the-air radio broadcast service; (5) to provide all broadcasters with the opportunity to provide DAB service. The Commission will favor systems that are spectrum efficient, that do not require burdensome investments in new broadcast transmission equipment, and that provide broadcasters with incentives to convert to DAB.

4. *Tentative Selection Criteria.* The Commission proposes to apply the following evaluative criteria to determine which DAB model and/or system would best promote the public policy objectives: (1) enhanced audio fidelity; (2) robustness to interference and other signal impairments; (3) compatibility with existing analog service; (4) spectrum efficiency; (5) flexibility; (6) auxiliary capacity; (7) extensibility; (8) accommodation for existing broadcasters; (9) coverage; and (10) implementation costs/affordability of equipment.

5. *Enhanced Audio Fidelity/Robustness.* DAB system proponents anticipate that AM IBOC DAB systems will offer sound quality comparable to today's stereo FM systems, and that FM IBOC DAB systems will deliver near-CD quality sound. As to robustness, DAB systems may improve reception by using techniques that protect digital signals from interference that affects analog signals. The Commission seeks comment of these selection criteria, including the specific standards that should be used to compare competing systems.

6. A comparison of IBOC and new-spectrum alternatives must consider the time frame to achieve all-digital operations and short-term performance advantages of a hybrid IBOC system over analog. The Commission seeks comment on the issue. The Commission also seeks comment on appropriate ways to compare IBOC and new-spectrum DAB alternatives under this selection criteria.

7. *Compatibility.* The Commission tentatively concludes that IBOC systems should minimize interference to host and adjacent-channel analog signals in hybrid mode including interference to FM subcarriers. The opportunity to introduce new ancillary services is tied to initiation of all-digital operations. A system which permits rapid implementation to all-digital radio service (such as Lucent's) may serve the public interest better than a system which relies on a longer transition period with a fixed sunset of analog protection (such as USADR's). The Commission seeks comment on whether all-digital compatibility with analog signals should be an evaluative criteria for IBOC systems.

8. The Commission seeks comment on how a DAB system could be designed to protect a possible future LPFM service. The Commission seeks comment on the

potential for enhancing the robustness of IBOC systems to reject undesired 2nd and 3rd adjacent channel signals and the likely impact on such modifications.

9. *Spectrum Efficiency.* Spectrum efficiency considers not only whether a DAB technology would not require additional spectrum, but also the additional value that results from the transition from analog to digital transmission service. The added value of spectrum is the product of several factors, including the capacity to transmit greater data per hertz, enhanced flexibility, the lesser likelihood of digital signals to cause interference, less susceptibility to interference, and more robust with respect to multi-path fading and non-radio noise sources, and the capacity to provide a listenable service at relatively low signal strength levels. The Commission wants to examine if digital receivers could provide additional protection against interference. What would the cost be to consumers and, besides cost, are there other considerations?

10. The Commission seeks comment on possible DAB efficiency standards. Are any of the Eureka-147 and/or satellite DARS signal bandwidth and interference protection standards relevant in establishing DAB spectrum efficiency standards? What bandwidth is necessary for CD-quality signals? What are the spectrum implications of recent advances in coding and multistreaming technologies? What are the quantifiable trade-offs between bandwidth and signal robustness? What trade-offs should the Commission consider in balancing the needs of incumbents and new entrants? Should there be different data capacity criteria during and after transition? Would transition be slowed if incumbents were assigned less bandwidth for all digital operations? Is preserving (or expanding) bandwidth assignments necessary?

11. *Flexibility/auxiliary capacity.* The Commission tentatively concludes that ancillary services must not technically impair reception of DAB programming. The Commission seeks comment on whether the Digital Television (DTV) framework is appropriate for radio and what limits if any, the Commission should establish for ancillary services.

12. *Extensibility.* The Commission tentatively concludes that extensibility (ability of a DAB system to adapt to future technological advances) is crucial to preserving of free broadcast in a digital environment and ensuring that listeners fully benefit from DAB. The Commission seeks comment.

13. *Accommodation.* The Commission tentatively concludes that a DAB system should, to the maximum extent possible, accommodate all existing broadcasters wanting to initiate DAB and that placing AM and FM on equal footing is not essential. The Commission seeks comment.

14. *Coverage.* Broadcasters argue that a DAB system should be able to replicate existing coverage areas, which tend to be greater than ''interference-free'' areas protected under Commission's rules. While the Commission recognizes that preserving existing coverage areas may be important, it tentatively concludes that the public interest is best served by a digital assignment policy based on analog protected service contours. Service contours reflect a balance between providing adequate service areas and expanding the number of station assignments. The Commission requests comment.

15. *IBOC DAB Model.* The Commission believes that IBOC would be superior to a new spectrum model because it would not require new spectrum, it would permit a fast transition to DAB while preserving benefits of analog service, and may achieve certain spectrum efficiencies. To ensure a smooth initiation to DAB, the Commission tentatively concludes that if IBOC is adopted, IBOC DAB licenses will not count as distinct authorizations for purposes of local ownership rules and seeks comment on that view.

16. The Commission seeks comment on the spectrum efficiency concerns inherent in the IBOC model and whether a model proposing to switch digital audio transmission from sidebands to a center band in the all digital mode would be more spectrally efficient than one which continues to carry the main audio signal in digital sidebands. The proposed IBOC systems would double the bandwidth licensed to AM and FM stations to 20 kHz and 400 kHz respectively, spectrum which is currently included in analog ''emission masks'' and the Commission seeks comment on whether spectrum may be returned at the end of the licensees' IBOC transition to an all-digital operating environment. The Commission seeks comment on how to balance the need to provide broadcasters with sufficient incentive to transition rapidly to DAB with the need to respond to unmet demand for new entrants. The Commission seeks analyses of minimum power levels needed to preserve service within protective service areas in a digital environment, and alternatively, the levels that would result in significant disruption to current listening patterns.

17. *New Spectrum DAB Model.* As an alternative to IBOC, the Commission requests comment on whether the six MHz of spectrum at 82–88 MHz (now TV Ch. 6) could be reallocated to DAB at the end of the DTV transition. The Commission seeks comment on any possible adverse affects on DTV implementation and television service in general. The earliest the spectrum could be available is 2007; however, the availability of this spectrum is tied to the end of the DTV transition period and could be significantly later. The Commission requests comment on all aspects of the new spectrum option and asks whether there are other frequency bands to consider. IBOC and new spectrum options are not mutually exclusive and could be complementary.

18. The Commission seeks comment on whether new spectrum models, which are independent of the existing analog AM and FM radio systems, would provide greater flexibility to plan and implement DAB, and whether compared to IBOC in hybrid mode, it would operate at a higher data rate and support higher audio quality and enhanced ancillary services. At the time when an 82–88 MHz DAB system proves successful, analog stations licensed to frequencies in the existing 88–108 MHz could convert to DAB. The transition could result in significant service disruptions, unless listeners have digital receivers. The Commission seeks comment on such transition issues.

19. The Commission seeks comment on whether to maintain the same channel bandwidth assignment scheme currently used with FM service and if this approach would facilitate conversion to DAB and a common FM/DAB radio receiver design in the 82–108 MHz band. The Commission seeks comment on whether to adopt a consistent service area approach which follows the plan of existing classes of FM stations (Class A, B1, B, C3, C2, C1 and C) or should all DAB stations be provided a common service area?

20. The Commission seeks comment on whether all AM and FM broadcasters should be eligible for a DAB license, whether DAB licenses should be excluded from local ownership limits and whether new channels should be reserved for educational use and new entrants. The Commission seeks comment on whether it should limit the number of DAB licenses in each market and whether issuing DAB licenses would implicate statutory auction requirements.

21. The Commission seeks comment on whether to allot DAB channels to communities in proportion to the

number of AM and FM channels operating or based on initial expression of interest by applicants, and whether either approach is consistent with 47 U.S.C. 307(b). The Commission requests comment on whether to use minimum geographic spacing distances or other engineering criteria to assess technical acceptability of new DAB allotments and modifications.

22. The Commission seeks comment on whether Channel 6 should be used to ensure adequate new entrant DAB opportunities and whether the Commission may give preferences to LPFM licensees in assigning Channel 6 spectrum, and if so, whether it should do so.

23. *DAB Transmission Standard.* The Commission tentatively concludes that it is in the public interest for the Commission to take a role in DAB standards development with the advice and involvement of all sectors of the industry. The Commission seeks comment on how likely the broadcast industry is to establish a de facto standard without Commission action and whether there is anything the Commission can do short of mandating a standard to assist the industry? The Commission lacks sufficient information at this time to conclude that a Commission-mandated transmission standard is necessary and seeks comment on whether a single mandated standard is desirable. The Commission seeks comment on whether there is a high degree of compatibility among the several DAB systems. It also seeks comment on whether developments in digital signal processors (DSPs) and DSP chip technology make a standard unnecessary, whether an ''open architecture'' approach is feasible, and what impact such an approach would have on the development and costs of receivers.

24. *Models for IBOC DAB System Testing and Evaluation.* The Commission believes that it is necessary to rely to some degree on the expertise of the private sector for DAB system evaluations and ultimately, recommendations for a transmission standard. However, it believes it is premature to select an approach at this time. The NRSC has set a deadline of December 15, 1999 for proponents to submit system test results and the Commission requests that the parties also submit the reports to the Commission as part of this proceeding. The Commission would give great weight to a fair and thorough NRSC testing process and any industry consensus the NRSC may achieve. However, the Commission will act promptly to provide an alternative mechanism if the current process breaks down. The Commission will revisit the effectiveness of the NRSC approach once the Commission reviews the NRSC report on IBOC tests expected the first quarter of 2000. The Commission seeks comment on evaluative models.

25. *Initial Regulatory Flexibility Analysis.* The Commission has prepared an Initial Regulatory Flexibility Analysis of the possible significant economic impact on small entities by the policies and rules proposed in this Notice. Comments are requested on this IRFA and must be identified as responses to the IRFA. The proposed rules and policies potentially will apply to all AM and FM radio broadcasting licensees and potential licensees. The SBA defines a radio broadcasting station that has no more than $5 million in annual receipts as a small business. A radio broadcasting station is an establishment primarily engaged in broadcasting aural programs by radio to the public, including commercial, religious, educational, and other radio stations. As of December 31, 1998, official Commission records indicate that 12,472 radio stations were operating, of which 4,793 were AM stations. Thus, the proposed rules will affect 12,472 radio stations, 11,973 of which are small businesses. These estimates may overstate the number of small entities since the revenue figures on which they are based do not include or aggregate revenues from non-radio affiliated companies. In addition, any entity that seeks or desires to obtain a DAB license may be affected by the proposals. The number of entities that seek to obtain a DAB radio broadcast license is unknown. The Commission invites comment on such number. The Notice sets forth policy objectives and proposes criteria for the selection of alternative DAB models and/or systems that will promote the interests of small entities and minimize the economic impact on such entities of a transition to DAB service.

Federal Communications Commission.

Magalie Roman Salas,

Secretary.

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DEPARTMENT OF DEFENSE

48 CFR Part 211

[DFARS Case 99–D024]

Defense Federal Acquisition Regulation Supplement; OMB Circular A–119

AGENCY: Department of Defense (DoD).

ACTION: Proposed rule with request for comments.

SUMMARY: The Director of Defense Procurement is proposing to amend the Defense Federal Acquisition Regulation Supplement (DFARS) to address use of a Federal Acquisition Regulation (FAR) provision that invites offerors to propose alternatives to Government-unique standards. This DFARS rule instructs DoD contracting officers not to use the FAR provision, since DoD uses the Single Process Initiative to encourage offerors to propose alternatives to Government-unique specifications and standards.

DATES: Comments on the proposed rule should be submitted in writing to the address specified below on or before January 10, 2000 to be considered in the formation of the final rule.

ADDRESSES: Interested parties should submit written comments on the proposed rule to: Defense Acquisition Regulations Council, Attn: Ms. Melissa Rider, PDUSD (AT&L) DP (DAR), IMD 3D139, 3062 Defense Pentagon, Washington, DC 20301–3062. Telefax (703) 602–0350. Please cite DFARS Case 99–D024.

E-mail comments submitted via the Internet should be addressed to: dfars@acq.osd.mil

Please cite DFARS Case 99–D024 in all correspondence related to this proposed rule. E-mail correspondence should cite DFARS Case 99–D024 in the subject line.

FOR FURTHER INFORMATION CONTACT: Ms. Melissa Rider, (703) 602–4245. Please cite DFARS Case 99–D024.

SUPPLEMENTARY INFORMATION:

A. Background

This proposed DFARS rule supplements the final FAR rule that was published at 64 FR 51834 on September 24, 1999 (Federal Acquisition Circular 97–14, Item V) to implement Office of Management and Budget Circular A–119, Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities. The FAR rule added a provision at FAR 52.211–7 to permit offerors to propose voluntary consensus standards as alternatives to