Where MDS response stations with digital modulation utilize all or part of more than one contiguous 6 MHz channel to form a larger channel (*e.g.*, a channel of width 12 MHz), the above-specified attenuations shall be applied only at the upper and lower edges of the overall combined channel. Notwithstanding these provisions, should harmful interference occur as a result of emissions outside the assigned channel(s), additional attenuation may be required by the Commission.

(e) In measuring compliance with the out-of-band emissions limitations, the licensee shall employ one of two methods in each instance: (1) absolute power measurement of the average signal power with one instrument, with measurement of the spectral attenuation on a separate instrument; or (2) relative measurement of both the average power and the spectral attenuation on a single instrument. The formula for absolute power measurements is to be used when the average signal power is found using a separate instrument, such as a power meter; the formula gives the amount by which the measured power value is to be attenuated to find the absolute power value to be used on the spectrum analyzer or equivalent instrument at the spectral point of concern. The formula for relative power measurements is to be used when the average signal power is found using the same instrument as used to measure the attenuation at the specified spectral points, and allows different resolution bandwidths to be applied to the two parts of the measurement; the formula gives the required amplitude separation (in dB) between the flat top of the (digital) signal and the point of concern.

For absolute power measurements:

$$\text{Attenuation in dB (below channel power)} = A + 10_{\log}\left(C_{BW} / R_{Bw}\right)$$

For relative power measurements:

$$\text{Attenuation in dB (below flat top)} = A + 10_{\log}\left(R_{BW1} / R_{BW2}\right)$$

Where:

A = Attenuation specified for spectral point (e.g., 25, 35, 40, 60 dB)

C_{BW} = *Channel bandwidth (for absolute power measurements)*

R_{BW} = *Resolution bandwidth (for absolute power measurements)*

R_{BW1} = *Resolution bandwidth for flat top measurement (relative)*

R_{BW2} = *Resolution bandwidth for spectral point measurement (relative)*

[55 FR 46011, Oct. 31, 1990, as amended at 56 FR 57818, Nov. 14, 1991; 63 FR 65105, Nov. 25, 1998; 65 FR 46617, July 31, 2000]

§ 21.909 MDS response stations.

(a) An MDS response station is authorized to provide communication by voice, video and/or data signals with its associated MDS response station hub or MDS station. An MDS response station may be operated only by the licensee of an MDS station, by any lessee of the MDS station or response station hub, or by a subscriber of either. The authorized channel may be divided to provide distinct subchannels for each of more than one response station, provided that digital modulation is employed and the aggregate power does not exceed the authorized power for the channel. An MDS response station may also, jointly with other licensees, transmit utilizing bandwidth in excess of that authorized to the station, provided that digital modulation is employed, all power spectral density requirements set forth in this part are met, and the out-of-band emissions restrictions set forth in §21.908(b) or paragraph (j) of this section are complied with. When a 125 kHz channel is employed, the specific channel which may be used by the response station is determined in accordance with §§21.901 and 74.939(j) of this chapter.

(b) MDS response stations that utilize the 2150–2162 MHz band, the 2500–2686 MHz band, and/or the 125 kHz channels may be installed and operated without an individual license, to communicate with a response station hub, provided that the conditions set forth in paragraph (g) of this section are met and that the MDS response stations' technical parameters are consistent with all applicable rules in this part and with the terms and conditions set out in the Commission's *Declaratory Ruling and Order*, 11 FCC Rcd 18839 (1996).

(c) An applicant for a response station hub license, or for modification thereto where not subject to §21.41 or §21.42, shall:

(1) File FCC Form 331 with Mellon Bank, and certify on that form that it has complied with the requirements of paragraphs (c)(2) and (d) of this section and that the interference data submitted under paragraph (d) of this section is complete and accurate. Failure to certify compliance and to comply completely with the requirements of paragraphs (c)(2) and (d) of this section shall result in dismissal of the application or revocation of the response station hub license, and may result in imposition of a monetary forfeiture; and

(2) Submit the following (see § 21.902(m) for permissible formats and media) to the Commission's Reference Room:

(i) The data files required by Appendix D to the *Report and Order* in MM Docket 97–217, FCC 98–231, ''Methods For Predicting Interference From Response Station Transmitters And To Response Station Hubs And For Supplying Data on Response Station Systems''; and

(ii) The demonstrations and certifications required by paragraph (d) of this section.

(d) An applicant for a response station hub license shall prepare the following:

(1) A demonstration describing the system channel plan, to the extent that such information is not contained in the data file required in (c)(2)(i) of this section; and

(2) A demonstration that:

(i) The proposed response station hub is within a protected service area, as defined in § 21.902(d) or § 21.933, to which the applicant is entitled either:

(A) by virtue of its being the licensee of an incumbent MDS station whose channels are being converted for MDS response station use; or

(B) by virtue of its holding a Basic Trading Area or Partitioned Service Area authorization. In the case of an application for response stations to utilize one or more of the 125 kHz response channels, such demonstration shall establish that the response station hub is within the protected service area of the station authorized to utilize the associated E-Group or F-Group channel(s); and

(ii) The entire proposed response service area is within a protected service area to which the applicant is entitled either (A) by virtue of its being the licensee of an incumbent MDS station whose channels are being converted for MDS response station use; or (B) by virtue of its holding a Basic Trading Area or Partitioned Service Area authorization. In the alternative, the applicant may demonstrate that the licensee entitled to any cochannel protected service area which is overlapped by the proposed response service area has consented to such overlap. In the case of an application for response stations to utilize one or more of the 125 kHz response channels, such demonstration shall establish that the response service area is entirely within the protected service area of the station authorized to utilize the associated E-Group or F-Group channel(s), or, in the alternative, that the licensee entitled to any cochannel protected service area which is overlapped by the proposed response service area has consented to such overlap; and

(iii) The combined signals of all simultaneously operating MDS response stations within all response service areas and oriented to transmit towards their respective response station hubs, and all cochannel MDS stations and booster stations licensed to or applied for by the applicant will not generate a power flux density in excess of -73 dBW/m^2 (or the appropriately adjusted value based on the actual bandwidth used if other than 6 MHz, see § 21.902(b)(7)(i)) outside the boundaries of the applicant's protected service area, as measured at locations for which there is an unobstructed signal path, except to the extent that consent of affected licensees has been obtained or consents have been granted pursuant to paragraph (d)(3)(ii) of this section to an extension of the response service area beyond the boundaries of the protected service area; and

(iv) The combined signals of all simultaneously operating MDS response stations within all response service areas and oriented to transmit towards their respective response station hubs, and all cochannel MDS stations and booster stations licensed to or applied for by the applicant, will result in a desired to undesired signal ratio of at

least 45 dB (or the appropriately adjusted value based on the actual bandwidth used if other than 6 MHz, see § 21.902(b)(7)(ii)):

(A) within the protected service area of any authorized or previously-proposed cochannel MDS or ITFS station with a 56.33 km (35 mile) protected service area with center coordinates located within 160.94 km (100 miles) of the proposed response station hub; and

(B) within the booster service area of any cochannel booster station entitled to such protection pursuant to §§ 21.913(f) or 74.985(f) of this chapter and located within 160.94 km (100 miles) of the proposed response station hub; and

(C) at any registered receive site of any authorized or previously-proposed cochannel ITFS station or booster station located within 160.94 km (100 miles) of the proposed response station hub, or, in the alternative, that the licensee of or applicant for such cochannel station or hub consents to the application; and

(v) The combined signals of all simultaneously operating MDS response stations within all response service areas and oriented to transmit towards their respective response station hubs, and all cochannel MDS stations and booster stations licensed to or applied for by the applicant, will result in a desired to undesired signal ratio of at least 0 dB (or the appropriately adjusted value based on the actual bandwidth used if other than 6 MHz, see § 21.902(b)(7)(iii)):

(A) within the protected service area of any authorized or previously-proposed adjacent channel MDS or ITFS station with a 56.33 km (35 mile) protected service area with center coordinates located within 160.94 km (100 miles) of the proposed response station hub; and

(B) within the booster service area of any adjacent channel booster station entitled to such protection pursuant to §§ 21.913(f) or 74.985(f) of this chapter and located within 160.94 km (100 miles) of the proposed response station hub; and

(C) at any registered receive site of any authorized or previously-proposed adjacent channel ITFS station or booster station located within 160.94 km (100 miles) of the proposed response station hub, or, in the alternative, that the licensee of or applicant for such adjacent channel station or hub consents to the application; and

(vi) The combined signals of all simultaneously operating MDS response stations within all response service areas and oriented to transmit towards their respective response station hub and all cochannel MDS stations and booster stations licensed to or applied for by the applicant will comply with the requirements of paragraph (i) of this section and § 74.939(i) of this chapter.

(3) A certification that the application has been served upon

(i) the holder of any cochannel or adjacent channel authorization with a protected service area which is overlapped by the proposed response service area;

(ii) the holder of any cochannel or adjacent channel authorization with a protected service area that adjoins the applicant's protected service area;

(iii) the holder of a cochannel or adjacent channel authorization for any BTA or PSA inside whose boundaries are locations for which there is an unobstructed signal path for combined signals from within the response station hub applicant's protected service area; and

(iv) every licensee of, or applicant for, any cochannel or adjacent channel, authorized or previously-proposed, incumbent MDS station with a 56.33 km (35 mile) protected service area with center coordinates located within 160.94 km (100 miles) of the proposed response station hub;

(v) every licensee of, or applicant for, any cochannel or adjacent channel, authorized or previously-proposed ITFS station (including any booster station or response station hub) located within 160.94 km (100 miles) of the proposed response station hub; and

(vi) every licensee of any non-cochannel or non-adjacent channel ITFS station (including any booster station) with one or more registered receive sites in, or within 1960 feet of the proposed response station service area.

(e) Except as set forth in § 21.27(d), applications for response station hub licenses may be filed at any time. Notwithstanding any other provision of

part 21 (including §21.31), applications for response station hub licenses meeting the requirements of paragraph (c) of this section shall cut-off applications that are filed on a subsequent day for facilities that would cause harmful electromagnetic interference to the proposed response station hubs. A response station hub shall not be entitled to protection from interference caused by facilities proposed on or prior to the day the application for the response station hub license is filed. Response stations shall not be required to protect from interference facilities proposed on or after the day the application for the response station hub license is filed.

(f) Notwithstanding the provisions of §21.30(b)(4) and except as set forth in §21.27(d), any petition to deny an application for a response station hub license shall be filed no later than the sixtieth (60th) day after the date of public notice announcing the filing of such application or major amendment thereto. Notwithstanding §21.31 and except as provided in §21.27(d), an application for a response station hub license that meets the requirements of this section shall be granted on the sixty-first (61st) day after the Commission shall have given public notice of the acceptance for filing of it, or of a major amendment to it if such major amendment has been filed, unless prior to such date either a party in interest timely files a formal petition to deny or for other relief pursuant to §21.30(a), or the Commission notifies the applicant that its application will not be granted. Where an application is granted pursuant to the provisions of this paragraph, the conditional licensee or licensee shall maintain a copy of the application at the response station hub until such time as the Commission issues a response station hub license.

(g) An MDS response station hub license shall be conditioned upon compliance with the following:

(1) No MDS response station shall be located beyond the response service area of the response station hub with which it communicates; and

(2) No MDS response station shall operate with a transmitter output power in excess of 2 watts; and

(3) No response station shall operate with an EIRP in excess of that specified in the application for the response station hub for the particular regional class of characteristics with which the response station is associated, and such response station shall not operate with an EIRP in excess of 33 dBW + 10log(X/6) dBW, where X is the channel width in MHz, and

(4) Each response station shall employ a transmission antenna oriented towards the response station hub with which the response station communicates and such antenna shall be no less directive than the worst-case outer envelope pattern specified in the application for the response station hub for the regional class of characteristics with which the response station is associated; and

(5) The combined out-of-band emissions of all response stations using all or part of one or multiple contiguous 6 MHz channels and employing digital modulation shall comply with §21.908(d). The combined out-of-band emissions of all response stations using all or part of one or multiple contiguous 125 kHz channels shall comply with paragraph (j) of this section. However, should harmful interference occur as a result of emissions outside the assigned channel, additional attenuation may be required; and

(6) The response stations transmitting simultaneously at any given time within any given region of the response service area utilized for purposes of analyzing the potential for interference by response stations shall conform to the numerical limits for each class of response station proposed in the application for the response station hub license. Notwithstanding the foregoing, where a response station hub licensee subchannelizes pursuant to §21.909(a) and limits the maximum EIRP emitted by any individual response station proportionately to the fraction of the channel that the response station occupies, the licensee may operate simultaneously on each subchannel the number of response stations specified in the license. Moreover, the licensee of a response station hub may alter the number of response stations of any class operated simultaneously in a given region, without

prior Commission authorization, provided that the licensee:

(i) Files with the Commission (see § 21.902(m) for permissible format(s) and media) a demonstration indicating the number of response stations of such class(es) to be operated simultaneously in such region and a certification that it has complied with the requirements of paragraphs (g)(6)(ii) and (iii) of this section and that the interference data submitted pursuant to paragraph (g)(6)(ii) is complete and accurate; and

(ii) Provides the Commission's Reference Room (see § 21.902(m) for permissible formats and media) with an update of the previously-filed response station data and with a demonstration that such alteration will not result in any increase in interference to the protected service area or protected receive sites of any existing or previously-proposed, cochannel or adjacent channel MDS or ITFS station or booster station, to the protected service area of any MDS Basic Trading Area or Partitioned Service Area licensee entitled to protection pursuant to paragraph (d)(3) of this section, or to any existing or previously-proposed, cochannel or adjacent channel response station hub, or response station under § 21.949 or § 74.949 of this chapter; or that the applicant for or licensee of such facility has consented to such interference; and

(iii) Serves a copy of such demonstration and certification upon each party entitled to be served pursuant to paragraph (d)(3) of this section; and

(7) Where an application is granted under this section, if a facility operated pursuant to that grant causes harmful, unauthorized interference to any cochannel or adjacent channel facility, it must promptly remedy the interference or immediately cease operations of the interfering facility, regardless of whether any petitions to deny or for other relief were filed against the application during the application process. The burden of proving that a facility operated under this section is not causing harmful, unauthorized interference lies on the licensee of the alleged interfering facility, following the filing of a documented complaint of interference by an affected party; and

(8) In the event any MDS or ITFS receive site suffers interference due to block downconverter overload, the licensee of each non-co/adjacent response station hub with a response service area within five miles of such receive site shall cooperate in good faith to expeditiously identify the source of the interference. Each licensee of a response station hub with an associated response station contributing to such interference shall bear the joint and several obligation to promptly remedy all block downconverter overload interference at any ITFS registered receive site or at any receive site within an MDS or ITFS protected service area applied for prior to the submission of the application for the response station hub license, regardless of whether the receive site suffering the interference was constructed prior to or after the construction of the response station(s) causing the downconverter overload; provided, however, that the licensee of the registered ITFS receive site or the MDS or ITFS protected service area must cooperate fully and in good faith with efforts by the response station hub licensee to prevent interference before constructing response stations and/or to remedy interference that may occur. In the event that the associated response station(s) of more than one response station hub licensee contribute(s) to block downconverter interference at an MDS or ITFS receive site, such hub licensees shall cooperate in good faith to remedy promptly the interference.

(h) Applicants must comply with Part 17 of this chapter concerning notification to the Federal Aviation Administration of proposed antenna construction or alteration for all hub stations and associated response stations.

(i) Response station hubs shall be protected from cochannel and adjacent channel interference in accordance with the following criteria:

(1) An applicant for any new or modified MDS or ITFS station (including any high-power booster station or response station hub) shall be required to demonstrate interference protection to a response station hub within 160.94 km (100 miles) of the proposed facilities. In

lieu of the interference protection requirements set forth in §§ 21.902(b)(3) through (b)(5), 21.938(b)(1) and (2) and (c), and 74.903 of this chapter, such demonstration shall establish that the proposed facility will not increase the effective power flux density of the undesired signals generated by the proposed facility and any associated main stations, booster stations or response stations at the response station hub antenna for any sector. In lieu of the foregoing, an applicant for a new MDS or ITFS main station license or for a new or modified response station hub or booster license may demonstrate that the facility will not increase the noise floor at a reception antenna of the response station hub by more than 1 dB for cochannel signals and 45 dB for adjacent channel signals, provided that:

(i) The entity submitting the application may only invoke this alternative once per response station hub reception sector; or

(ii) The licensee of the affected response station hub may consent to receive a certain amount of interference at its hub.

(2) Commencing upon the filing of an application for an MDS response station hub license and until such time as the application is dismissed or denied or, if the application is granted, a certification of completion of construction is filed, the MDS station whose channels are being utilized shall be entitled both to interference protection pursuant to §§ 21.902(b)(3) through (b)(5), 21.938(b)(1) and (2) and (c), and 74.903 of this chapter, and to protection of the response station hub pursuant to the preceding paragraph. Unless the application for the response station hub license specifies that the same frequencies also will be employed for digital and/or analog point-to-multipoint transmissions by MDS stations and/or MDS booster stations, upon the filing of a certification of completion of construction of an MDS response station hub where the channels of an MDS station are being utilized as response station transmit frequencies, the MDS station whose channels are being utilized for response station transmissions shall no longer be entitled to interference protection pursuant to §§ 21.902(b)(3) through (b)(5), 21.938(b)(1) and (2) and (c), and 74.903 of this chapter within the response service area with regard to any portion of any 6 MHz channel employed solely for response station communications. Upon the certification of completion of construction of an MDS response station hub where the channels of an MDS station are being utilized for response station transmissions and the application for the response station hub license specifies that the same frequencies will be employed for point-to-multipoint transmissions, the MDS station whose channels are being utilized shall be entitled both to interference protection pursuant to §§ 21.902(b)(3) through (b)(5), 21.938(b)(1) and (2) and (c), and 74.903 of this chapter, and to protection of the response station hub pursuant to the preceding provisions of this paragraph.

(j) 125 kHz wide response channels shall be subject to the following requirements: The 125 kHz wide channel shall be centered at the assigned frequency. If amplitude modulation is used, the carrier shall not be modulated in excess of 100%. If frequency modulation is used, the deviation shall not exceed ±25 kHz. Any emissions outside the channel shall be attenuated at the channel edges at least 35 dB below peak output power when analog modulation is employed or 35 dB below licensed average output power when digital modulation is employed (or, when subchannels are used, the appropriately adjusted value based upon the ratio of the channel-to-subchannel bandwidths). Any emissions more than 125 kHz from either channel edge, including harmonics, shall be attenuated at least 60 dB below peak output power when analog modulation is employed, or at least 60 dB below licensed average output power when digital modulation is employed (or, when subchannels are used, the appropriately adjusted value based upon the ratio of the channel-to-subchannel bandwidths). Notwithstanding the foregoing, in situations where adjacent channel licensees jointly transmit over more than one contiguous channel utilizing digital modulation, the maximum out-of-band power shall be attenuated at the edges of those combined channels at least 35 dB

relative to the licensed average power level of each channel. Emissions more than 125 kHz from either edge of the combined channels, including harmonics, shall be attenuated at least 60 dB below peak analog power or average digital power of each channel, as appropriate.

(k) A response station may be operated unattended. The overall performance of the response station transmitter shall be checked by the hub licensee as often as necessary to ensure that it is functioning in accordance with the requirements of the Commission's rules. The licensee of a response station hub is responsible for the proper operation of all associated response station transmitters. Each response station hub licensee is responsible for maintaining, and making available to the Commission upon request, a list containing all customer names and addresses, plus the technical parameters (EIRP, emission, bandwidth, antenna pattern/ height/ orientation/ polarization) pertinent to each class of response station within the response service area.

(l) The transmitting apparatus employed at MDS response stations shall have received type certification.

(m) An MDS response station shall be operated only when engaged in communications with its associated MDS response station hub or MDS station or booster station, or for necessary equipment or system tests and adjustments. Upon initial installation, and upon relocation and reinstallation, a response station transmitter shall be incapable of emitting radiation unless, and until, it has been activated by reception of a signal from the associated MDS station or booster station. A hub station licensee shall be capable of remotely deactivating any and all response station transmitters within its RSA by means of signals from the associated MDS station or booster station. Radiation of an unmodulated carrier and other unnecessary transmissions are forbidden.

(n) All response stations utilizing an EIRP greater than 18 dBW shall be installed by the associated hub licensee or by the licensee's employees or agents. For the purposes of this section, all EIRP dBW values assume the use of a 6 MHz channel. For channel bandwidths other than 6 MHz, the EIRP dBW values should be adjusted up (channel >6 MHz) or down (channel <6 MHz) by 10 log(X/6) dBW, where X is the channel width in MHz. For response stations located within 1960 feet of an ITFS receive site registered and built prior to the filing of the application for the hub station license, the hub licensee must notify the licensee of the ITFS receive site at least one business day prior to the activation of these response stations. The notification must contain, for each response station to be activated, the following information: name and telephone number of a contact person who will be responsible for coordinating the resolution of any interference problems; street address; geographic coordinates to the nearest second; channels/subchannels (transmit only); and transmit antenna pattern, EIRP, orientation and height AMSL. (If transmit antenna pattern, EIRP, orientation or height AMSL are not known with specificity at the time of notification, the hub licensee may, instead, specify the worst-case values for the class of response station being activated.) Such notice to the ITFS licensee shall be given in writing by certified mail unless the ITFS licensee has requested delivery by email or facsimile. The ITFS licensee may waive the notification requirement on a site-specific basis or on a system-wide basis. The notification provisions of this section shall not apply if:

(1) The response station will operate at an EIRP no greater than −6 dBW; or

(2) The response station will operate at an EIRP greater than −6 dBW and no more than 18 dBW and:

(i) The channels being received at the ITFS site are neither the same as, nor directly adjacent to, the channel(s) to be transmitted from the response station; and

(ii) The hub station licensee has replaced, at its expense, the frequency downconverters used at all ITFS receive sites registered and constructed prior to the filing of the hub station application which are within 1960 feet of the hub station's response service area; and

(iii) The downconverters, at a minimum, conform to the following specifications:

(A) A frequency of operation covering the 2150–2162 MHz band or the 2500–2686 MHz band; and

(B) A third-order intercept point of 30 dBm; and

(C) A conversion gain of 32 dB, or the same conversion gain as the existing ITFS downconverter, whichever is least; and

(D) A noise figure of no greater than 2.5 dB, or no more than 1 dB greater than the noise figure of the existing ITFS downconverter, whichever is greater; and

(iv) The proposal to upgrade the ITFS downconverter was made in writing and served upon the affected ITFS licensee, conditional licensee or applicant at the same time the application for the response station hub license was served on cochannel and adjacent channel ITFS parties and no objection was made within the 60-day period allowed for petitions to deny the hub station application.

(o) Interference calculations shall be performed in accordance with Appendix D (as amended) to the *Report and Order* in MM Docket 97–217, FCC 98–231, ''Methods For Predicting Interference From Response Station Transmitters and To Response Station Hubs and For Supplying Data on Response Station Systems.'' (Note: This document is subject to change and will be updated/amended as needed without prior notification. Applicants should always utilize the most current version of the document, as found at the Commission's internet web site, http://www.fcc.gov/mmb/vsd/files/methodology.doc). Compliance with out-of-band emission limitations shall be established in accordance with §21.908(e).

[63 FR 65105, Nov. 25, 1998; 64 FR 4054, Jan. 27, 1999, as amended at 64 FR 63733, Nov. 22, 1999; 65 FR 46618, July 31, 2000]

§21.910 Special procedures for discontinuance, reduction or impairment of service by common carrier licensees.

(a) Any licensee who has elected common carrier status and who seeks to discontinue service on a common carrier basis and instead provide service on a non-common carrier basis, or who otherwise intends to reduce or impair service the carrier shall notify all affected customers of the planned discontinuance, reduction or impairment on or before the date that the licensee provides notice to the Commission pursuant to §21.903(d).

(b) Notice shall be in writing to each affected customer unless the Commission authorizes in advance, for good cause shown, another form of notice. Notice shall include the following:

(1) Name and address of carrier; and

(2) Date of planned service discontinuance, reduction or impairment; and

(3) Points or geographic areas of service affected; and

(4) How many and which channels are affected.

[64 FR 63735, Nov. 22, 1999]

§21.911 Annual reports.

(a) No later than March 1 of each year for the preceding calendar year, each licensee in the Multipoint Distribution Service shall file with the Commission two copies of a report which must include the following:

(1) Name and address of licensee;

(2) Station(s) call letters and primary geographic service area(s);

(3) The following statistical information, preferably in tabular form, for the licensee's station (and each channel thereof);

(i) The total number of separate subscribers served during the calendar year;

(ii) The total hours of transmission service rendered during the calendar year to all subscribers;

(iii) The total hours of transmission service rendered during the calendar year in the following categories: entertainment, education and training, public service, data transmission, and other services;

(iv) A list of each period of time during the calendar year in which a station was not operational due to removal or alteration of equipment or facilities; and

(v) A list of each period of time during the calendar year in which the station rendered no service as authorized, if the time period was a consecutive period longer than 48 hours.