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**6712-01**

## **FEDERAL COMMUNICATIONS COMMISSION**

**47 CFR Parts 1 and 4**

**[GN Docket No. 15-206; FCC 16-81]**

### **Improving Outage Reporting for Submarine Cables and Enhanced Submarine Outage Data**

**AGENCY:** Federal Communications Commission.

**ACTION:** Final rule.

**SUMMARY:** In this document, the Federal Communications Commission (Commission or FCC) adopts final rules of a Report and Order requiring submarine cable licensees to report service outages through the network outage reporting systems (NORS). In doing so, the FCC seeks to improve overall submarine cable reliability and resiliency by enhancing the FCC's visibility into the operational status of submarine cables, which will permit the FCC to track and analyze outage trends. The Report and Order requires all submarine cable licensees to report service outages to the FCC, defined as a failure or significant degradation in the performance of a licensee's cable service regardless of whether the traffic can be re-routed to an alternate path. Licensees must report outages, including those caused by planned maintenance, of a portion of a submarine cable system for more than 30 minutes, or the failure or significant degradation of any fiber pair lasing for four hours or more. Lastly, the Report and Order will improve submarine cable deployment conditions and resiliency through better coordination of inter-agency permit review.

**DATES:** This rule contains information collection requirements that has not been approved by the Office of Management and Budget. The Federal Communications Commission will publish a document in the Federal Register announcing the effective date for this rule.

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**SUPPLEMENTARY INFORMATION:** This is a summary of the Commission's Report and Order in GN Docket No. 15-206, adopted on June 24, 2016, and released on July 12, 2016. The full text of this document is available for public inspection during regular business hours in the FCC Reference Center, Room CY-A257, 445 12<sup>th</sup> Street SW., Washington, D.C. 20554, or online at [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2016/db0712/FCC-16-81A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2016/db0712/FCC-16-81A1.pdf). In this Report and Order, the FCC adopts final rules requiring submarine cable licensees to report service outages through the network outage reporting systems (NORS). In doing so, the FCC seeks to improve overall submarine cable reliability and resiliency by enhancing the FCC's visibility into the operational status of submarine cables, which will permit the FCC to track and analyze outage trends. The Report and Order requires all submarine cable licensees to report service outages to the FCC, defined as a failure or significant degradation in the performance of a licensee's cable service regardless of whether the traffic can be re-routed to an alternate path. Licensees must report outages, including those caused by planned maintenance, of a portion of a submarine cable system for more than 30 minutes, or the failure or significant degradation of any fiber pair lasting for four hours or more. Lastly, the Report and Order will improve submarine cable deployment conditions and resiliency through better coordination of inter-agency permit review.

## Synopsis

### 1. Report and Order

1. This Report and Order serves the public interest and promotes the national and economic security of the nation by requiring submarine cable licensees to report to the Federal Communications Commission (“Commission” or “FCC”) when submarine (or “undersea”) cable outages occur and communications over those facilities are disrupted. By moving – as we do today – from an ad hoc outage reporting system to one that will ensure the Commission has a dependable, holistic view of the operating status of submarine cables, we will be in a better position to examine the resiliency posture of submarine cable infrastructure and to ensure the reliability of the critical national security and economic communications that transit it. In this Report and Order, we:

- Require submarine cable licensees to report to the Commission service outages, defined as “a failure or significant degradation in the performance of a licensee’s cable service regardless of whether the traffic can be re-routed to an alternate path.”
- Specify that an outage requires reporting when there is:
  - An outage, including those caused by planned maintenance, of a portion of a submarine cable system between submarine line terminal equipment (SLTE) at one end of the system and SLTE at another end of the system for more than 30 minutes; or
  - The failure or significant degradation of any fiber pair, including losses due to terminal equipment issues, on a cable segment for four hours or more, regardless of the number of fiber pairs that comprise the total capacity of the cable segment.
- Define the reporting requirements to include a Notification within eight hours (to become four hours after three years) of the time of determining that a reportable outage has occurred; an Interim Report within 24 hours of receiving a Plan of Work (relating to repairs); and a Final Report within seven days of completing repair.

- Clarify the content required in the reports to allow for the fact that not all requested information may be known when the reports are due.
- Treat the information provided through this reporting system as confidential, consistent with section 4.2 of our rules for existing outage reporting.
- Provide that these requirements will become effective six months after OMB approval of these rules to provide ample time for implementation.

2. Background. Submarine cables provide the conduit for the vast majority of voice, data and Internet connectivity between the mainland United States and consumers in Alaska, Hawaii, Guam American Samoa, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands, as well as the connectivity between the United States and the rest of the world. Accordingly, the operation and maintenance of the approximately 60 undersea cables licensed in the United States are essential to the nation's economic stability, national security and other vital public interests. Presently, submarine cable licensees are not required to report on their cables' operational status. Rather, licensees provide such operational information to the Commission on a voluntary, ad hoc basis through the Commission's Undersea Cable Information System (UCIS). This ad hoc approach contrasts significantly with the Commission's part 4 outage reporting requirements for other communication services which require targeted information on the cause and effects of communications outages, establishes specific reporting triggers and thresholds, and provides deadlines for those reports to be made. Furthermore, the Network Outage Reporting System (NORS) established for part 4 data reporting has not previously provided the Commission with the necessary information to analyze undersea cable disruptions, as the system was designed for different types of infrastructure outage reporting, not submarine cable reporting, and lacks the data fields necessary to report on submarine cable infrastructure.

3. We find that a mandatory outage reporting regime is necessary to provide the Commission with greater visibility into the availability and health of these networks to allow it to better

track and analyze submarine cable resiliency, and suggest or take appropriate actions when the data so indicate, i.e., before there is a significant problem. The need for such reporting is only heightened when, as is the case with submarine cable infrastructure, the facilities are few, are vital to U.S. economic activity and national security, have unique vulnerabilities in their environment, and are exceptionally challenging to repair. Further, it is clear that UCIS has failed to become the comprehensive source of information about undersea cable outages it was intended to be: few reports are filed; those that are filed are inconsistent from entity to entity; and the design of UCIS lacks the analytical capabilities necessary for the Commission to perform meaningful analysis.

4. We recognize that redundancies (i.e., traffic re-route engineering) are already in place for many cables that prevent or at least mitigate service outages, but this argument misses the broader goal of the proposed mandatory reporting regime, which is that both the cables and the services provided over them must be protected. For the Commission to ensure the stability of submarine cable infrastructure, it must have greater visibility than what is currently provided through UCIS into the connectivity and capacity of all undersea cables landing in the United States. And, even though we recognize that the low number of reports filed in UCIS might be due to a low number of reportable outages, the record suggests otherwise. As mere examples, the outages discussed above are important evidence of how it is not only the number of outages, but rather, also the potential impact of the outages, as well as the deficit in the Commission's situational awareness of a major outage, that convince us that reporting needs to be mandatory and of the scope described herein. Accordingly, we adopt the mandatory reporting regime for undersea cable operators described below. This regime will replace UCIS in its entirety and we direct the Bureau to retire UCIS upon the effective date of these rules.

5. **Reporting Obligations.** To effectively achieve undersea cable infrastructure assurance, consistent with part 4 traditionally, we will define reportable outages without regard to a licensee's or provider's re-routing of the traffic carried over a given cable, or some other measure requiring a

complete loss of service. Accordingly, we define “outage” as “a failure or significant degradation in the performance of a licensee’s cable service regardless of whether the traffic can be re-routed to an alternate path.”

6. Though there are redundant configurations in some, but not all submarine cable infrastructure, we adopt our proposal to require a reporting obligation regardless of whether traffic is re-routed, and we use the broader term “path” to avoid analysis of whether the traffic was specifically re-routed to another cable. For the purpose of promoting and advancing the national security and public safety interests served by our U.S.-based landings and connections as a whole, we need to assess outages across the total undersea cable environment serving the United States. For example, in some situations the redundant paths could be over-utilized due to an emerging problem, such as an expansive coastline area disruption affecting several independent submarine cables. Using such an approach would help us understand operability of submarine cables holistically to better safeguard reliability of this important part of the nation’s communications system.

7. We also modify our proposed definition to limit reportable events to failures or “significant” degradation in the performance of a communications provider’s cable. As explained in the section below on outage reporting triggers, we are adjusting our metrics to require the reporting of only significantly degraded service and not all incidents of degraded service, which will better align our outage reporting rules for submarine cables with our current part 4 outage reporting requirements. Further, our adjustment to include “significant” degradation is consistent with our long established outage reporting requirement that an outage includes events where even “some traffic might be getting through during a period of massive disruption” (See, e.g., Amendment of Part 63 of the Commission’s Rules to Provide for Notification by Common Carriers of Service Disruptions, CC Docket No. 91 273, Report and Order, 7 FCC Rcd 2010, 2010, para. 11 (1992).

8. **Reportable Outage Metrics.** We adopt a modified outage reporting metric to capture significant degradations and to simplify reporting in general. Under the originally proposed metric, events causing performance failures would not be reportable until all connectivity was lost. We therefore modify both proposed metrics, addressing the connectivity and capacity metrics to account for performance failures and events resulting from planned maintenance.

9. Connectivity is an important metric but we are persuaded to modify it to exclude reporting that could be burdensome and of limited value. Accordingly, we adopt a modified version of the connectivity metric proposed by the Submarine Cable Coalition and require reporting when there is an outage, including those caused by planned maintenance, of a portion of a submarine cable system between SLTE at one end of the system and SLTE at another end of the system for more than 30 minutes. We are persuaded to make this modification in order to limit the burdens caused by reporting routine terminal equipment issues that can be corrected rapidly. While the Submarine Cable Coalition does not specifically define the term “SLTE” in its comments, it is commonly understood to be part of the “dry plant” comprised of “signal processing equipment and optical multiplexing equipment that allows transmission over the submarine cable.” Thus, we focus on issues resulting in outages that fall between the SLTE due to problems with the “wet plant,” including the submarine cable, repeaters, optical equalizer, and branching unit. We believe 30 minutes, not three hours, is an appropriate timeframe to trigger a reporting obligation for such failures because damage or repair to facilities between the SLTE likely indicates a long-term problem that will not be cleared quickly, so there is no benefit to further delaying reporting.

10. Further, to simplify our original capacity metric (i.e., reporting required when fifty percent or more of the capacity of the submarine cable, in either the transmit or receive mode, is lost for at least 30 minutes), we adopt a modification of our original proposal. In doing so, we also seek to create a reporting backstop that is broader than the connectivity metric described above and designed to capture events that affect even a single fiber pair, yet provide a longer window before the event

becomes reportable. We adopt a metric requiring a report for the failure or significant degradation of any fiber pair, including losses due to terminal equipment issues, on a cable segment for four hours or more, regardless of the number of fiber pairs that comprise the total capacity of the cable segment. Because issues may arise at the landing station that will affect submarine cable system operation, we include outages that are due to SLTE failures.

11. **Covered Entities.** We adopt a requirement that all licensees, regardless of when the license was obtained, must comply with license conditions, including the outage reporting rules we now adopt. We agree with Docomo that there is no public policy reason to exempt submarine cable licensees from the obligation to report. All licensees are integral components in the provision of submarine cable infrastructure, and the Commission could not meet its goal of acquiring a comprehensive viewpoint of the operational status of all submarine cables if certain licensees were exempted. We believe with the flexibilities discussed below, pre-2002 licensees would be unlikely to have increased burden compared to post-2002 licensees. Most pre-2002 cables operate as a consortium. Consortium cables generally use construction and maintenance agreements (C&MA), which can be amended to incorporate new regulatory requirements as necessary. To the extent that extra flexibility or time is required to revise the C&MAs to ensure compliance with the outage reporting requirements adopted herein, we address that below.

12. In light of concerns raised regarding the operations of consortiums or that of a cable with multiple licensees, we choose to permit, but not require, a Responsible Licensee designation. We have made this decision to add flexibility to the Responsible Licensee system due to the concerns expressed about how our rules could be complicated given the nature of consortiums, including their size, domestic/foreign composition, potential language barriers, and time zone challenges, as well as how compliance review will add to costs for reporting. Consortium members are in the best position to determine which member is best placed to comply and meet the reporting obligation for the consortium, such as a U.S. landing operator or a Network Operations Center (NOC) operator. We agree

with Verizon that under this approach, licensees and non-licensees, including those operating with pre-2002 licensees, are free to negotiate and allocate the underlying risk and financial responsibility. Nonetheless, should a Responsible Licensee be designated, it must register with and keep the Commission updated as to its Responsible Licensee status pursuant to our rules. We will hold the Responsible Licensee responsible for reporting compliance once designated and registered with the Commission.

13. If no Responsible Licensee is designated with the Commission or in effect at the time of an outage, each party experiencing a reportable outage can be held responsible for reporting and liable should the Commission need to pursue enforcement action. This is a departure from our proposal to hold all consortium members jointly and severally liable when a cable experiences an outage, in order to provide additional flexibility to covered providers. In this way we limit enforcement liability to those licensees experiencing an outage.

14. **Content of Notification.** We require licensees to provide a preliminary notification in NORS (all reports described herein are to be filed in NORS in a system designed specifically for submarine cable outage reporting) once it has been determined that an undersea cable outage has occurred. We find that having awareness of an outage, even without certain information about that outage, helps achieve our goal of improving situational awareness as to the operational status of undersea cable networks. Reporting via widely available electronic means is affordably feasible and quite often a normal part of operations. As proposed in the Notice, notifications must contain the name of the reporting entity; the name of the cable and a list of all licensees for that cable; whether the event is planned or unplanned; and contact information for the Commission. We recognize, however, that access to information about the root cause, approximate location, and estimated duration of an outage will often be unavailable in the period immediately following an operator's determination that there has been an undersea cable outage. Accordingly, we modify our original proposal from the Notice and require such information only if known at the time of the notification.

15. We acknowledge that the root cause of an outage many times cannot be determined until after repair work is done, and only seldom is it known at the time of an outage. Accordingly, in their notifications licensees must provide a brief description of the event and need only include information on the root cause if known at the time. If the root cause is unknown, licensees should specify as such and provide further information where available in Interim or Final Reports.

16. With respect to the location of an outage, licensees must provide the name of the nearest cable landing station if known, as well as its best estimate of the location of the event, expressed in either, nautical miles and the direction from the nearest cable landing station, or in approximate latitude and longitude coordinates. We have added “the direction from” the nearest cable landing station (e.g., 15 nautical miles west of [the cable landing station])” to improve clarity in reporting, if known. We acknowledge that undersea cables traverse vast distances, and it can be a complicated and time-consuming task to determine the location of an undersea cable outage. Though we only proposed that licensees report the “approximate location” of an outage, we clarify that we do not seek to divert time and attention away from service restoration efforts by requiring licensees to provide this information. As with root cause information, licensees must provide this information if known at the time of the notification, and if unknown, licensees should provide further detail where possible in subsequent reports.

17. With respect to the duration of the event, licensees must provide their best estimate in the notification, but supplement with further information as it becomes available in their Interim or Final Reports. As with root cause and location information, our aim in including this information in the notification is to provide preliminary situational awareness in the immediate wake of an outage, which can be supplemented or corrected through later reports.

18. **Timeframe for Notification.** Again, we recognize that the determination of root cause, approximate location, and duration of an outage typically takes much longer than 120 minutes after the determination that an outage has occurred. Moreover, we agree with commenters that licensees’

primary objective in the wake of an outage should be to restore service, and that reporting obligations should be subordinate to that objective. As discussed above, we modify our original notification proposal to require licensees to provide root cause information, approximate location, and estimated duration of an outage only when available. The notification process is intended to be preliminary in nature and simply provide notice of, not necessarily detail about, an undersea cable outage, for purposes of situational awareness.

19. We also emphasize that the timeframe for reporting starts upon “the time of determining that an event is reportable” and not necessarily the moment that an event becomes reportable. Several commenters, in arguing that the Commission’s proposed notification timeframe is infeasible, point to difficulties in receiving the initial notification. For example, AT&T asserts that “most notifications of the occurrence of outages on consortium cables that AT&T receives from foreign consortium parties are not provided within two hours of the cable failure.” Even if the foregoing complications arose preventing a licensee from knowing of an outage when it became reportable, the licensee would only be “on the clock” to report the event when it determines (i.e., has knowledge that) the event is reportable. This distinction should alleviate many of the concerns that licensees will need to implement new network monitoring processes.

20. We continue to believe that licensees can report within the proposed two-hour timeframe from determining that an event is reportable, particularly as they need not provide substantive detail on the root cause, location, or duration of the outage if unavailable at that time; we believe that quick notification is an essential element in achieving the Commission’s goal of developing comprehensive situational awareness of submarine cable infrastructure. We additionally note our view that many of the submarine cable operators have the technical capabilities to near-instantly detect outages and are standard within the industry.

21. That said, given the support on the record for a longer notification timeframe and AT&T’s statements that it will need time to implement these requirements with its consortium partners,

we will initially, for a three year period from the effective date of these rules, require licensees to notify the Commission of an outage within eight hours of determining that an event is reportable. Three years after the effective date of these rules, licensees will be responsible for filing notifications within four hours of determining that an event is reportable. After three years, the Commission will open a proceeding to revisit. We find that allowing four hours from the time of determining an event is reportable, not when the event necessarily becomes reportable, is feasible, particularly as we have allowed for licensees to include approximations and best estimates in their filings. This phased-in approach will give licensees ample time to hone their reporting structure while still achieving the aforementioned goal of prompt situational awareness. A further elongated timeframe does not as adequately serve the Commission's goal of acquiring rapid situational awareness of submarine cable infrastructure.

22. **Content of Interim Report.** We adopt modified Interim Report content requirements to address concerns that a root cause may not always be known in this adjusted timeframe. We require licensees to report on all of the elements described above in the original proposal, observing that many of these elements (name of the reporting licensee; the name of the cable and a list of all licensees for that cable; the date and time of onset of the outage; and a contact name, contact email address, and contact telephone number by which the Commission's technical staff may contact the reporting entity) will be auto-filled from the Notification and thus will likely require no additional work on the part of the reporting entity barring administrative changes. These fields remain important for basic factual references and we see no reason to exclude them from the Interim Report. We will also continue to require a brief description of the event, including root cause; nearest cable landing station; approximate location of the event (either, in nautical miles and the direction from the nearest cable landing station or in latitude and longitude); and the best estimate of the duration of the event. These are the fields that will supply the Commission with necessary situational awareness about the status of the outage, particularly when the information is updated from that which we received in the Notification. We depart

slightly from our original proposal, however, and will now only require the root cause description if known at the time. We are persuaded by commenters' arguments that the root cause may need extended analysis and sometimes may not be known until the repair is completed. We have again added "the direction from" the nearest cable landing station (e.g., "15 nautical miles west of [the cable landing station]" to improve clarity in reporting, if known. We emphasize that an approximate location of the event and best estimate of the duration of the event are all that is required; licensees will not be penalized for the later-determined accuracy of these interim responses if they are submitted in good faith. We also adopt our proposal that Interim Reports are not required for planned outages so long as the planned nature of the event was appropriately signaled in the Notification.

23. **Timeframe for Interim Report.** We adopt a modified reporting timeframe for the Interim Report. Accordingly, we will require licensees to file an Interim Report, if required, within 24 hours of receipt of the Plan of Work, which we believe strikes the appropriate balance between allowing licensees sufficient time for necessary coordination to amply inform the Commission with useful and timely information.

24. **Final Report.** In the Notice, we proposed to require licensees to file a Final Report seven days after the repair is completed. We proposed that the following elements be required in a Final Report: the name of the reporting entity; the name of the cable; whether the outage was planned or unplanned; the date and time of onset of the outage (for planned events, this is the start date and time of the repair); a brief description of the event; nearest cable landing station; approximate location of the event (either in nautical miles from the nearest cable landing station or in latitude and longitude); duration of the event; the restoration method; a contact name, contact email address, and contact telephone number by which the Commission's technical staff may contact the reporting entity.

25. The two components of the Final Report that differ from the Notification and the Interim Report are (1) the duration of the event and (2) the restoration method. The Notice proposed that this type of Final Report, with the inclusion of these two additional elements, would enable the

Commission to work directly with communication providers using a data-driven method on collaborative reliability improvement initiatives that will produce measurable results for undersea cables.

26. **Contents of Final Report.** As with both the Notification and Interim Reports, we understand the commenters' concerns that particular information may not be known at the time the repairs have been completed given the complexities of undersea cable repairs. We also take into account that submarine cable licensees often work together in consortiums, and that although one member may know a certain element of the Final Report, the information may not make its way to other consortium members who are also experiencing an outage or disruption on the same cable. For these reasons, we adopt our proposals for the content reporting obligations for the Final Report, but with a modification for the "brief description of the event." Here, in a Final Report, a licensee will need to provide the root cause in its brief description of the event only if known at the time of filing. Both Verizon and AT&T noted that in some cases, completion of the root cause analysis may not be known in the proposed timeframe, and in some instances, never be determined. Nonetheless, the Commission expects providers to conduct reasonable due diligence to ascertain the root cause of an event. We have also again added "the direction from" the nearest cable landing station (e.g., "15 nautical miles west of [the cable landing station]") to improve clarity in reporting, if known.

27. After the submission of the Final Report, particular details of an event may become known or change as research is done and repairs are completed. In order for the Commission to obtain the most accurate information, previous Final Reports (and only Final Reports) must be supplemented after the Final Report if that information materially alters the previously reported material. Amendments to Final Reports should be made in good faith.

28. The parallels of the Final Report content to our existing part 4 rules, in conjunction with the NORS platform, create an efficient, streamlined and user-friendly system when implementing these new procedures. Furthermore, we believe that the contents of the Final Report would be easily compiled, as NORS interface automatically populates the fields where information required duplicates

that of the Notification and Interim Report, so the reporting licensee would not have to reenter data unless it is to amend or edit a previously-supplied response. We note that the Commission recently adopted a Further Notice of Proposed Rulemaking which sought comment on applying a two-step reporting process to all covered services, which, if adopted, would apply to submarine cable outage reporting. Interested parties may file comments on this issue in the part 4 proceeding.

29. **Timeframe for Final Report.** We adopt our proposal to require licensees to file a Final Report seven calendar days after the repair is completed. There is substantial record support for requiring submission of this critical information within a week following the repair completion. The Commission has a responsibility to ensure the reliability and security of the nation's communications infrastructure, and obtaining timely information on communications service disruptions is essential to that goal.

30. We are not persuaded by the proposal to extend the deadline to a minimum of 45 days. We find that a majority of the information that must be included in a Final Report is readily available following the repair of the submarine cable. As mentioned above, the Commission is aware of the unique nature of submarine cable repairs, which is why the Final Report shall be amended, when necessary. Therefore, we decline to adopt Latam's proposal of a 45-day minimum for a Final Report deadline. The seven day requirement we adopt today provides the Commission critical network outage information within a reasonable time.

31. **Good Faith Requirements in Section 4.11.** We adopt substantially the same wording codified in Section 4.11 of our rules for the submarine cable outage reporting system. We are cognizant of the complexities and uncertainties that may arise with outages resulting from a damaged cable. However, the good faith and attestation requirements will not be violated if the authorized personnel submitting a report does in fact submit all of the information known to them, in good faith, at the time of reporting. Also, as made clear above, licensees have the duty to amend their Final Reports, in good

faith, if the licensee later learns that the reported information is inaccurate. Accordingly, consistent with support from the record, we will require a good faith requirement and an attestation consistent with Section 4.11.

32. **Confidentiality of Submarine Outage Reports and Data.** We adopt our proposal that undersea cable reporting information is to be treated as presumptively confidential consistent with Section 4.2 of the Commission's rules governing outage reporting. Maintaining the confidentiality of submarine cable outage data is critical to safeguarding weaknesses or damage to our national communications infrastructure that could potentially facilitate enemies targeting our nation's key resources. The Communications Act of 1934 charges the Commission with promoting "the safety of life and property through the use of wire and radio communication." (47 U.S.C. 151). Releasing detailed and sensitive information regarding submarine cable outages and disruptions would contradict this core mission of the Commission. We will, however, share information with DHS as is customary with our part 4 outage reports. This model is consistent with the Commission's past precedent for outage reporting and we do not see a need to depart here from that practice solely for submarine cable outage reporting.

33. We also note that the Commission recently adopted a Further Notice of Proposed Rulemaking addressing many of these same issues and has not yet decided if or how it will change its outage report information sharing practices more broadly. Interested parties may file comments on this issue in the part 4 proceeding. We believe that a broader proceeding is a better context for making decisions on how outage information should be shared more generally, and allow for submarine cable outage information sharing to be considered in that context. We also observe that initiating this program in a manner that is consistent with the confidentiality in other part 4 reporting would allow for reevaluation at a later date of a different approach.

34. **Implementation.** These rules will become effective six (6) months after OMB approval of this information collection, representing a balance between industry's needs to adequately prepare for

these reporting requirements and the Commission's need to obtain timely situational awareness of the operational status of the nation's submarine cable infrastructure. As the incident in the CNMI has shown, the Commission cannot continue to wait for licensees to take advantage of the current voluntary approach. Yet, we find that a six month extension is warranted to allow those providers who did not previously report such outages to develop processes for doing so. We also recognize that consortium members may need additional time to determine reporting structures. We do not believe extending the rule implementation date beyond six months from OMB approval is warranted because of the significant adjustments to the proposed rules to add in flexibility and clarify responsibilities.

35. **Interagency Coordination.** In the Notice, we directed the International Bureau, in coordination with the Public Safety and Homeland Security Bureau, to "reach out to relevant government agencies, under its existing delegated authority," to "develop and improve interagency coordination processes and best practices vis-à-vis submarine cable deployment activities and related permits and authorizations to increase transparency and information sharing among the government agencies, cable licensees, and other stakeholders." We note that the Bureaus have met with several of the stakeholders since the Submarine Cable Outage Notice was adopted and that work on this matter is ongoing. We agree with commenters' that interagency coordination is very important to protect submarine cable infrastructure. To this end, the International Bureau, in coordination with the Public Safety and Homeland Security Bureau, will continue to lead interagency coordination efforts to help increase transparency and information sharing among the government agencies, cable licensees, and other stakeholders and promote improved interagency coordination processes to mitigate threats to undersea cables and facilitate new projects to improve geographic diversity.

36. **Potential Costs of Compliance.** The record makes clear that there are additional costs, beyond the Notice's initial \$8,000 cost estimate (premised upon the costs of filing the three versions of outage reports for 50 events) that should be factored into our total estimate of the costs of the regulations we enact today. Our finding that this cost figure should be adjusted, however, is not a result

of the Notice failing to account for costs; instead the Notice affirmatively sought comment on items such as implementation costs, the extent to which the information required is not available in the normal course of business, and the costs of inter-licensee negotiations that are unique to consortium submarine cables.

37. As an initial matter, we note that many of the proposals that commenters claimed would inflate the costs have been revised or clarified in an effort to reduce burdens in response to the record. For example, we limited the reporting on issues related to terminal-equipment to those events lasting four hours, and thus presumably eliminated many of the “mundane” events from the reporting requirement, thereby reducing compliance costs. We extended the proposed reporting timeframes for the Notification and the Interim Report while clarifying that reports are due within a set period from when the licensee determines that the event is reportable, not from when the event itself becomes reportable. In this way, we alleviate the concerns of those that claim they would have to update their entire network monitoring system in order to comply. We also allowed for best estimate reporting on many of the fields that commenters indicated would be costly to identify with precision on a timely basis. We have taken the Responsible Licensee system, which was explicitly designed to mitigate burdens by having only one licensee per submarine cable report on behalf of other licensees on that cable, and allowed licensees not to use that system if they find it burdensome.

38. Thus, while we acknowledge that \$8,000 figure may not represent the total cost of compliance and that upward adjustments should be made, the record on industry costs does not speak with specificity or even generalities to the requirements we have enacted given our record-based modifications. Accordingly, we instead recognize the OMB-approved 2014 UCIS collection of \$305,000. We note that the costs associated with UCIS also included costs beyond those which we now require. UCIS asked licensees to provide four categories of information for each submarine cable with a cable landing in the United States: (1) a terrestrial route map; (2) a location spreadsheet; (3) a general description of restoration plans in the event of an incident; and (4) system restoration messages. As we

described in the *Notice*, “the first three categories are static insofar as the route, the geographic coordinates (i.e., location), and restoration plans change infrequently. Information provided in the fourth category is dynamic, insofar as such messages should be updated after an incident and during the repair process.” It is the fourth category of reporting system restoration messages that is directly analogous to the outage reporting requirements we enact.

39. The costs of UCIS associated with the three “static” categories represented \$183,000 of the \$305,000 total, with the system restoration messages accounting for \$122,000 in reporting costs annually for the industry. This \$122,000 annual cost estimate was derived from use of two conservative assumptions. First, that a single set of outage reports would involve as many as 40 hours, rather than only the two hours that we estimate above. Second, that all 61 cables licensed in 2014 would experience an outage every year. (We used the number of licensed cables, rather than the number of cable licensees, because it is common for multiple licensees to operate on a single cable, and past experience indicates that consortia (or multiple licensees operating on a single cable) generally designate only one licensee to prepare and file the report.) We then used an estimated labor rate of \$50 rather than \$80 per hour, to be consistent with the 2014 OMB Supporting Statement’s UCIS cost estimate. Thus,  $40 \times 61 \times \$50 = \$122,000$ . If we increased this figure by 25 percent (to account for moving from 40 to 50 hours reporting per licensee per year), we would arrive at a total of approximately \$152,500 for an analogous reporting requirement. We find this to be a credible annual burden estimate based on the record and analogous UCIS processes, as confirmed by industry. Moreover, even if expected costs were to include all four elements of the UCIS collection at a total cost of \$335,500, we would still, as discussed below, consider this a minimal cost in comparison to the potential benefits from our improved ability to monitor outages on cables that are so vital to both our economy and national security.

40. **Public Interest Benefits.** We continue to find that the relative concentration of submarine cables serving as conduits for traffic to and from the United States render the Commission’s situational awareness and ability to facilitate communications alternatives not only beneficial, but vital

to the public interest. These submarine cables are the primary conduit for connectivity between the contiguous United States and Alaska, Hawaii, American Samoa, Guam, the Northern Marianas, Puerto Rico, and the U.S. Virgin Islands. They also carry 95 percent of U.S. international communications, with the potential for significant impacts on national security and the economy. In some circumstances, the public welfare cost of outage of such communications could be extremely high, as lives and tremendous financial interests are at stake. It is precisely because there is a very substantial public interest in the submarine cables that the Commission has authority to license the use of submarine cables and to condition the use of those lines. Simply put, there is too much riding on these cables for the Commission to be less than fully aware about the status of these crucial lines of communication.

41. We find that the anticipated benefits of the rules that we adopt today clearly outweigh the costs to providers, even with the adjustments made above. When the Commission adopted its original part 4 rules, it observed that previous outage reports required of wireline carriers enabled it to initiate investigations and, when appropriate, take corrective action with respect to certain carriers. The Commission explained that, “[e]nsuring that the United States has reliable communications requires us to obtain information about communications disruptions and their causes to prevent future disruptions that could otherwise occur from similar causes, as well as to facilitate the use of alternative communications facilities while the disrupted facilities are being restored.” This situation was borne out when the Commission was hampered in its ability to respond to the CNMI outage due to delayed situational awareness. Based on the record, we conclude that it is entirely appropriate and in the public interest for this agency to systematize, coordinate, review and analyze outage reports from various sources across the industry because this will help ensure that best practices will be identified and shared and recurring problems can be eliminated or mitigated. The Commission’s improved situational awareness will help ensure that licensees are consistently and appropriately acting to ensure the availability of submarine cable service, which has direct benefits to public safety and the national defense.

42. **Legal Authority.** We find that the Commission in fact possesses ample authority to regulate reporting as to the restoration and repair of undersea cables and effects on the related facilities licensed by the Commission. NASCA appears to misunderstand our recitation and reliance on legal authority. The Commission is instituting a uniform and tailored system of accountability designed to ensure that the licenses granted to submarine cable licensees are used to supply “just and reasonable . . . service in the operation and use of cables so licensed[,]” and we have explained why our role is critical here where the communications facilities at issue bear on national security and the economy and why the existing voluntary regime fails to adequately inform that role. In other words, the reporting requirements are designed to inform our understanding of whether the facilities that the Commission has licensed are working. Although our intent is to defer to licensees to institute the necessary repairs to their facilities and consider them to have adequate incentive to do so such that our direct involvement seems unwarranted at this time, it could be that enhancing our situational awareness will have the added benefit of improving licensees’ broader understanding of outage events. The main goal of our requirements, however, is to help ensure that submarine cable service will be reasonably available.

43. As explained above, availability of service is essential given that submarine cables carry at least 95 percent of international communications traffic in and out of the United States and are the primary means of connectivity for numerous U.S. states and territories. As a result, submarine cable connectivity plays a vital role in the nation’s security and economy. Accordingly, we conclude that that the Cable Landing License Act and Executive Order provide the Commission with ample authority to adopt the outage reporting requirements and compliance obligations as proposed in the Notice and as adopted today, and it is critical that we exercise it.

44. **Procedural Matters. Regulatory Flexibility Act.** Pursuant to the Regulatory Flexibility Act of 1980, as amended, the Commission’s Final Regulatory Flexibility Analysis (FRFA) relating to this Report and Order.

45. **Paperwork Reduction Act.** This document contains new information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. It will be submitted to the Office of Management and Budget (OMB) for review under Section 3507(d) of the PRA. OMB, the general public, and other Federal agencies are invited to comment on the new or modified information collection requirements contained in this proceeding.

46. In addition, we note that pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, see 44 U.S.C. 3506(c)(4), we previously sought specific comment on how the Commission might further reduce the information collection burden for small business concerns with fewer than 25 employees. In this present document, we have assessed the effects of the new rules adopted herein, which require submarine cable licensees to report when they experience outages of certain durations and causes, on small business concerns and find that the rules adopted here minimize the information collection burden on such entities.

47. **Congressional Review Act.** The Commission will send a copy of this Report & Order to Congress and the Government Accountability Office pursuant to the Congressional Review Act, see 5 U.S.C. 801(a)(1)(A).

48. **Final Regulatory Flexibility Analysis.** We adopt measures to improve the utility and effectiveness of the current scheme for receiving information on submarine cable outages, with the ultimate goal of enhancing both our overall understanding of submarine cable system status and our knowledge regarding specific outages disruptions and restoration efforts. At present, the Commission receives information regarding the operational status of submarine cables on an ad hoc and voluntary basis. We adopt the rules herein with the goal of improving the efficiency and utility of the reporting process for outages and repairs of the submarine cable network, which is a vital feature of the national and international communications infrastructure.

49. The operational status of submarine cables carries commercial, economic, social, financial, and national security implications. It is vital that the United States maintain a robust and

secure communications network that can continue to provide service in spite of significant equipment or system failure, and submarine cables are an integral part of that network.

50. **Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply.** The rules adopted in the Report and Order apply only to entities licensed to construct and operate submarine cables under the Cable Landing License Act. The Report and Order requires only submarine cable licensees affected by a service outage to file outage reports with the Commission describing the outage and restoration. The entities that the Report and Order requires to file reports are a mixture of both large and small entities. The Commission has not developed a small business size standard directed specifically toward these entities. However, as described below, these entities fit into larger categories for which the SBA has developed size standards that provide these facilities or services.

51. Facilities-based Carriers. Facilities-based providers of international telecommunications services would fall into the larger category of interexchange carriers. Neither the Commission nor the SBA has developed a small business size standard specifically for providers of interexchange services. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers.

52. Wired Telecommunications Carriers. This industry comprises establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies. Establishments in this industry use the wired telecommunications network facilities that they operate to provide a variety of services, such as wired telephony services, including VoIP services; wired (cable) audio and video programming distribution; and wired broadband Internet services. By exception, establishments providing satellite television distribution services using facilities and infrastructure that they operate are included in this industry.” In this category, the SBA deems a wired telecommunications carrier to be small if it has 1,500 or fewer employees. Census data for 2007 shows 3,188 firms in this

category. Of these, 3,144 had fewer than 1,000 employees. On this basis, the Commission estimates that a substantial majority of the providers of wired telecommunications carriers are small.

53. In the 2009 annual traffic and revenue report, 38 facilities-based and facilities-resale carriers reported approximately \$5.8 billion in revenues from international message telephone service (IMTS). Of these, three reported IMTS revenues of more than \$1 billion, eight reported IMTS revenues of more than \$100 million, 10 reported IMTS revenues of more than \$50 million, 20 reported IMTS revenues of more than \$10 million, 25 reported IMTS revenues of more than \$5 million, and 30 reported IMTS revenues of more than \$1 million. Based solely on their IMTS revenues the majority of these carriers would be considered non-small entities under the SBA definition.

54. The 2009 traffic and revenue report also shows that 45 facilities-based and facilities-resale carriers (including 14 who also reported IMTS revenues) reported \$683 million for international private line services; of which four reported private line revenues of more than \$50 million, 12 reported private line revenues of more than \$10 million, 30 reported revenues of more than \$1 million, 34 reported private line revenues of more than \$500,000; 41 reported revenues of more than \$100,000, while 2 reported revenues of less than \$10,000.

55. The 2009 traffic and revenue report also shows that seven carriers (including one that reported both IMTS and private line revenues, one that reported IMTS revenues and three that reported private line revenues) reported \$50 million for international miscellaneous services, of which two reported miscellaneous services revenues of more than \$1 million, one reported revenues of more than \$500,000, two reported revenues of more than \$200,000, one reported revenues of more than \$50,000, while one reported revenues of less than \$20,000. Based on its miscellaneous services revenue, this one carrier with revenues of less than \$20,000 would be considered a small business under the SBA definition. Based on their private line revenues, most of these entities would be considered non-small entities under the SBA definition.

56. Providers of International Telecommunications Transmission Facilities. According to the 2012 Circuit-Status Report, 61 U.S. international facility-based carriers filed information pursuant to Section 43.82. Some of these providers would fall within the category of Inter-exchange Carriers, some would fall within the category of Wired Telecommunications Carriers, while others may fall into the category of All Other Telecommunications.

57. All Other Telecommunications. This industry comprises establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems. Establishments providing Internet services or voice over Internet protocol (VoIP) services via client-supplied telecommunications connections are also included in this industry. The SBA has developed a small business size standard for All Other Telecommunications, which consists of all such firms with annual receipts of \$ 32.5 million or less. For this category, Census Bureau data for 2007 show that there were 2,383 firms that operated for the entire year, and of those firms, a total of 2,346 had annual receipts less than \$25 million. Consequently, we conclude that the majority of All Other Telecommunications firms can be considered small.

58. Operators of Undersea Cable Systems. The Report and Order adopts reporting requirements for submarine cable facilities in the event of an outage. Neither the Commission nor the SBA has developed a size standard specifically for operators of undersea cables. Such entities would fall within the large category of Wired Telecommunications Carriers.

59. Operators of Non-Common Carrier International Transmission Facilities. Carriers that provide common carrier international transmission facilities over submarine cables are not required to report on outages, though the Report and Order seeks comment on whether such carriers should be required to provide outage reports. Neither the Commission nor the SBA has developed a small business

size standard specifically for providers of non-common carrier terrestrial facilities. The operators of such terrestrial facilities would fall within the larger category of Wired Telecommunications Carriers.

60. Incumbent Local Exchange Carriers. Because some of the international terrestrial facilities that are used to provide international telecommunications services may be owned by incumbent local exchange carriers, we have included small incumbent local exchange carriers in this present RFA analysis, to the extent that such local exchange carriers may operate such international facilities. (Local exchange carriers along the U.S.-border with Mexico or Canada may have local facilities that cross the border.) Neither the Commission nor the SBA has developed a small business size standard specifically for incumbent local exchange carriers. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers.

61. **Description of Projecting Reporting, Recordkeeping, and Other Compliance Requirements.** The Report and Order adopts outage reporting requirements for all submarine cable licensees. An outage occurs when a licensee experiences an event in which (1) An outage related to damages or replacements of a portion of submarine cable system between the submarine line terminal equipment (SLTE) at one end of the system and the SLTE at another end of the system for more than 30 minutes; or (2) there is a loss of any fiber pair, including losses due to terminal equipment, on a cable segment for four hours or more, regardless of the number of fiber pairs that comprise the total capacity of the cable segment. After a triggering event, the reporting requirement consists of three filings, the Notification, an Interim Report for unplanned outages, and the Final Report, which provide the Commission important data to improve the Commission's situational awareness on the operational status of submarine cables. The production and transmission of these reports to the Commission may require the use of professionals such as attorneys, engineers, or accountants. However, we conclude that such reports will be based on information already within the reporting entity's possession, and therefore these should be considered routine reports.

62. **Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered.** The RFA requires an agency to describe any significant, specifically small business, alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage or the rule, or any part thereof, for small entities.”

63. **Ordering Clauses.** Accordingly, IT IS ORDERED pursuant to sections 1, 4(i), 4(j), 4(o), of the Communications Act of 1934, as amended, 47 U.S.C. 151, 154(i), (j), and (o), and pursuant to the Cable Landing License Act of 1921, 47 U.S.C. 34-39 and 3 U.S.C. 301 that this Report and Order in GN Docket No. 15-206 IS ADOPTED.

64. IT IS FURTHER ORDERED that parts 1 and 4 of the Commission’s rules ARE AMENDED.

65. IT IS FURTHER ORDERED that this Report and Order SHALL BE effective six months after approval of the Office of Management and Budget under the Paperwork Reduction Act.

66. IT IS FURTHER ORDERED that the Commission’s Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Report and Order, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

List of Subjects in 47 CFR Parts 1 and 4

Telecommunications, Communications equipment, Reporting and recordkeeping requirements.

FEDERAL COMMUNICATIONS COMMISSION.

Gloria J. Miles,

Federal Register Liaison Officer.

Office of the Secretary.

## Final Rules

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR parts 1 and 4 as follows:

### **PART 1 – PRACTICE AND PROCEDURE**

1. The authority citation for part 1 is revised to read as follows:

Authority: 47 U.S.C. 151, 154(i), 155, 157, 225, 303(r), 309, 1403, 1404, 1451, and 1452.

2. Section 1.767 is amended by adding paragraph (g)(15), revising paragraph (n), and adding paragraph (o) to read as follows:

#### **§ 1.767 Cable landing licenses.**

\* \* \* \* \*

(g) \* \* \*

(15) Licensees shall file submarine cable outage reports as required in 47 CFR part 4.

\* \* \* \* \*

(n)(1) With the exception of submarine cable outage reports, and subject to the availability of electronic forms, all applications and notifications described in this section must be filed electronically through the International Bureau Filing System (IBFS). A list of forms that are available for electronic filing can be found on the IBFS homepage. For information on electronic filing requirements, see Part 1, subpart Y, and the IBFS homepage at <http://www.fcc.gov/ibfs>. See also sections 63.20 and 63.53 of this chapter.

(2) Submarine cable outage reports must be filed as set forth in part 4 of this Title.

(o) Outage Reporting. Licensees of a cable landing license granted prior to March 15, 2002 shall file submarine cable outage reports as required in part 4 of this Title.

\* \* \* \* \*

#### **PART 4 – DISRUPTIONS TO COMMUNICATIONS**

3. The authority citation for part 4 is revised to read as follows:

Authority: 47 U.S.C. 34-39, 151, 154, 155, 157, 201, 251, 307, 316, 615a-1, 1302(a), and 1302(b); 5 U.S.C. 301, and Executive Order no. 10530.

4. Section 4.1 is revised to read as follows:

##### **§ 4.1 Scope, basis, and purpose.**

(a) In this part, the Federal Communications Commission is setting forth requirements pertinent to the reporting of disruptions to communications and to the reliability and security of communications infrastructures.

(b) The definitions, criteria, and reporting requirements set forth in Sections 4.2 through 4.13 of this part are applicable to the communications providers defined in Section 4.3 of this part.

(c) The definitions, criteria, and reporting requirements set forth in Section 4.15 of this part are applicable to submarine cable providers who have been licensed pursuant to 47 U.S.C. 34-39.

5. Section 4.15 is added to read as follows:

##### **§ 4.15 Submarine Cable Outage Reporting**

(a) Definitions. (1) For purposes of this section, “outage” is defined as a failure or significant degradation in the performance of a licensee’s cable service regardless of whether the traffic can be re-routed to an alternate path.

(2) An “outage” requires reporting under this section when there is:

- (i) An outage, including those caused by planned maintenance, of a portion of submarine cable system between submarine line terminal equipment (SLTE) at one end of the system and SLTE at another end of the system for more than 30 minutes; or
- (ii) The loss of any fiber pair, including losses due to terminal equipment, on a cable segment for four hours or more, regardless of the number of fiber pairs that comprise the total capacity of the cable segment.

(b) Outage reporting. (1) For each outage that requires reporting under this section, the licensee (or Responsible Licensee as designated by a Consortium) shall provide the Commission with a Notification, Interim Report (subject to the limitations on planned outages in Section 4.15(b)(2)(iii)), and a Final Outage Report.

- (i) For a submarine cable that is jointly owned and operated by multiple licensees, the licensees of that cable may designate a Responsible Licensee that files outage reports under this rule on behalf of all licensees on the affected cable.
- (ii) Licensees opting to designate a Responsible Licensee must jointly notify the Chief of the Public Safety and Homeland Security Bureau’s Cybersecurity and Communications Reliability Division of this decision in writing. Such notification shall include the name of the submarine cable at issue; and contact information for all licensees on the submarine cable at issue, including the Responsible Licensee.

(2) Notification, Interim, and Final Outage Reports shall be submitted by a person authorized by the licensee to submit such reports to the Commission.

(i) The person submitting the Final Outage Report to the Commission shall also be authorized by the licensee to legally bind the provider to the truth, completeness, and accuracy of the information contained in the report. Each Final report shall be attested by the person submitting the report that he/she has read the report prior to submitting it and on oath deposes and states that the information contained therein is true, correct, and accurate to the best of his/her knowledge and belief and that the licensee on oath deposes and states that this information is true, complete, and accurate.

(ii) The Notification is due within 480 minutes (8 hours) of the time of determining that an event is reportable for the first three years from the effective date of these rules. After three years from the effective date of the rules, Notifications shall be due within 240 minutes (4 hours). The Notification shall be submitted in good faith. Licensees shall provide: the name of the reporting entity; the name of the cable and a list of all licensees for that cable; the date and time of onset of the outage, if known (for planned events, this is the estimated start time/date of the repair); a brief description of the event, including root cause if known; nearest cable landing station; best estimate of approximate location of the event, if known (expressed in either nautical miles and the direction from the nearest cable landing station or in latitude and longitude coordinates); best estimate of the duration of the event, if known; whether the event is planned or unplanned; and a contact name, contact email address, and contact telephone number by which the Commission's technical staff may contact the reporting entity.

(iii) The Interim Report is due within 24 hours of receiving the Plan of Work. The Interim Report shall be submitted in good faith. Licensees shall provide: the name of the reporting entity; the name of the cable; a brief description of the event, including root cause, if known; the date and time of onset of the outage; nearest cable landing station; approximate location of the event (expressed in either nautical miles and the direction from the nearest cable landing station or in latitude and longitude); best estimate of when the cable is scheduled to be repaired, including approximate arrival time and date of the repair ship, if applicable; a contact name, contact email address, and contact telephone number by which the Commission's technical staff may contact the reporting entity. The Interim report is not required where the licensee has reported in the Notification that the outage at issue is a planned outage.

(iv) The Final Outage Report is due seven (7) days after the repair is completed. The Final Outage Report shall be submitted in good faith. Licensees shall provide: the name of the reporting entity; the name of the cable; whether the outage was planned or unplanned; the date and time of onset of the outage (for planned events, this is the start date and time of the repair); a brief description of the event, including the root cause if known; nearest cable landing station; approximate location of the event (expressed either expressed in either nautical miles and the direction from the nearest cable landing station or in latitude and longitude coordinates); duration of the event, as defined in paragraph (a)(2) of this section; the restoration method; and a contact name, contact email address, and contact telephone number by which the Commission's technical staff may contact the reporting entity. If any required information is unknown at the time of submission of the Final Report but later becomes known, licensees should amend their report to reflect this knowledge. The Final Report must also contain an attestation as described in paragraph (b)(2)(i) of this section.

(v) The Notification, Interim Report, and Final Outage Reports are to be submitted electronically to the Commission. "Submitted electronically" refers to submission of the information using Commission-approved Web-based outage report templates. If there are technical impediments to using the Web-based system during the Notification stage, then a written Notification to the Commission by e-mail to the Chief, Public Safety and Homeland Security Bureau is permitted; such Notification shall contain the information required. Electronic filing shall be effectuated in accordance with procedures that are specified by the Commission by public notice.

(c) Confidentiality. Reports filed under this part will be presumed to be confidential. Public access to reports filed under this part may be sought only pursuant to the procedures set forth in 47 CFR 0.461. Notice of any requests for inspection of outage reports will be provided pursuant to 47 CFR 0.461(d)(3).

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