Jennifer Brooks Hutchinson
Senior Counsel

February 3, 2012

VIA HAND DELIVERY & ELECTRONIC MAIL

Luly E. Massaro, Clerk
Rhode Island Division of Public Utilities & Carriers
89 Jefferson Boulevard
Warwick, RI 02888

RE: Division Docket No. D-11-94
National Grid Hurricane Irene Response Assessment
Responses to Division Data Requests (Set 2)
Section V. System Incident Commander/Branch Directors

Dear Ms. Massaro:

Enclosed are one original and five (5) copies of National Grid's[1] responses to the Division's Second Set of Data Requests issued in Section V. System Incident Commander/Branch Directors.

Thank you for your attention to this transmittal. If you have any questions, please feel free to contact me at (401) 784-7288.

Very truly yours,

Jennifer Brooks Hutchinson

Enclosures

cc: Steve Scialabba, Division
Leo Wold, Esq.

[1] The Narragansett Electric Company d/b/a National Grid ("Company").

V. System Incident Commander/Branch Directors

Division 2-1

Request:

How many of the management, Branch and Division leaders had previously been through a hurricane or major storm event?

Response:

Both the Division leader and the Branch Directors that were appointed to lead this event all have over 20 years experience in electric distribution from both a design and construction aspect. They all have experienced a myriad of major storm events including ice storms, tornadoes, blizzards, and at least one other hurricane.

Prepared by or under the supervision of: Kathy Lyford

V. System Incident Commander/Branch Directors
Division 2-2

Request:

When was the last emergency preparedness exercise completed? Describe the activities that are activated and evaluated as part of this process. What levels of management are included in this process? Did the exercise include scenarios for power restoration in Rhode Island? Were Rhode Island emergency services or municipalities included in these exercises?

Response:

National Grid conducts numerous emergency preparedness exercises throughout the year. These exercises may be business specific (Electric, Gas, Generation, etc) or hazard specific (Hurricane, Flooding, etc). The Company's last System Restoration Exercise was conducted on July 19, 2011.

The 2011 System Restoration Exercise involved the activation of National Grid's System, New England Regional and Rhode Island Incident Command organizations. It also included activation of all restoration support activities, including Storm Rooms, Wires Down, Damage Assessment, Logistics, Public Information, Safety, Security, Finance and Human Resources.

The 2011 System Restoration Exercise included all levels of management from the Chief Operating Officer to front line Supervisors. The exercise also included both union and non-union support personnel.

The 2011 System Restoration Exercise included scenarios for both gas and electric service restoration in Rhode Island.

Rhode Island Emergency Management Agency State Exercise Coordinator Raymond Laprad participated as an observer at National Grid's Emergency Operations Center. Members of the Rhode Island Public Utilities Commission also participated as observers in the Providence Emergency Operations Center. Municipalities did not participate beyond notification and verification of contact information.

Prepared by or under the supervision of: Robert A. Schneller

V. System Incident Commander/Branch Directors

Division 2-3

Request:

What process does National Grid use to evaluate weather forecasts and predictions? Were the Telvent forecasts the only data source evaluated?

Response:

The Regional Control Center ("RCC") in Northborough, MA continuously monitors various weather forecasts as a normal course of business. Additionally, National Grid hires Telvent to provide forecast updates at 6:00 am, 1:00 pm and 7:30 pm on a daily basis, and to provide more in depth analysis upon request.

When the RCC identifies a weather forecast with the potential to disrupt electrical system operations, an executive level conference call is held, where a Telvent forecaster will provide a forecast and answer questions relating to the forecast. Depending on the forecast the executive team will make a determination of whether or not to appoint an incident commander and initiate the emergency response plan.

Prepared by or under the supervision of: Robert A. Schneller

V. System Incident Commander/Branch Directors
Division 2-4

Request:

Based on the decision on Friday, August 26 to downgrade the anticipated incident classification, what difference in the emergency preparations would have been required by National Grid if an anticipated event is expected to be a level 4 or 5? When were the incident classifications established for MA and RI?

Response:

The incident anticipation steps for preparing for a level 4 event are exactly the same as the preparation for a level 5 event. The primary difference between the two is the expected duration of the event. A level 4 event is expected to be restored within 3 days whereas a level 5 event is expected to be restored in greater than 3 days in duration. Therefore the decision to downgrade from a level 5 to a level 4 on Friday August 26th had no impact on the preparations for the event.

On August 25th the Company initially established an anticipated classification of level 5 for New England.

Prepared by or under the supervision of: Robert A. Schneller

V. System Incident Commander/Branch Directors

Division 2-5

Request:

Discuss the management structure of the restoration process. Which commanders/directors had responsibility for areas outside of Rhode Island? Describe how resources were allocated to insure that National Grid's different service territories received proportionate attention, i.e., one State's customers did not receive an undue benefit relative to the other?

Response:

Ellen Smith was the System Incident commander with responsibilities for determining the appropriate crew allocations between the three active regions for this event, New England, Upstate New York, and Long Island. Chris Root was appointed as the New England Regional Incident Commander with responsibility for determining resource allocations between branches within the New England Region. Initially there were four branches-- Rhode Island, Northeastern Massachusetts and New Hampshire, Western Massachusetts, and Southeastern Massachusetts. During the event, the Rhode Island branch was split into two branches in order to manage the incident at a more local level. Initially Mike Hrycin was the Branch Director for all of Rhode Island managing the event from Providence. Ultimately, Kathy Lyford became the branch director for Southern Rhode Island managing the event from North Kingstown, while Mike Hrycin continued to manage the event for Northern Rhode Island from Providence.

The Regional Incident Commander ("RIC") is responsible for procuring contract resources for his/her region. The RIC evaluates resource requests received from Branch Directors, based on available damage and customer outage data, resource availability and recommendations of his/her staff in order to ensure equitable resource allocation to each branch. Similarly, resources are allocated between regions by the System Incident Commander who evaluates resource requests received from Regional Incident Commanders in order to ensure equitable resource allocation to each region.

Prepared by or under the supervision of: Kathy Lyford

V. System Incident Commander/Branch Directors
Division 2-6

Request:

Discuss any considerations due to any state requirements, labor regulations, or corporate policies. What, if any, complications were a result?

Response:

In general the Company's standard emergency response procedures and practices are designed to take into account state requirements, labor regulations and corporate policies in order to safely and efficiently restore service as quickly as possible. For example, through its labor relations, in emergency response situations the Company has the ability to allow its workers to perform tasks, which are not normally part of their job classification by contract, but for which they are trained and qualified. In the case of Irene, gas workers were utilized to perform pole setting functions to expedite restoration.

Prepared by or under the supervision of: Kathy Lyford

V. System Incident Commander/Branch Directors
Division 2-7

Request:

What role did the Branch Directors play in the coordination of the restoration process? How did a branch manager get priority for repair crews compared to other branches?

Response:

Under the Incident Command Structure that was in place during Tropical Storm Irene, the Branch Directors communicated with the Regional Incident Commander routinely during the day. Repair crew requirements were communicated to the Regional Incident Commander during daily conference calls. The Regional Incident Commander would review total resources within the region and assign resources to the branches equitably based on customer outage data, damage assessment data and dialogue with the Branch Directors. On a daily basis, the Branch Directors performed the following activities to ensure coordination of restoration:

- Obtain a situational briefing as required.
- Assess the impact of the incident to the branch.
- Establish an appropriate response organization based on the specifics of the incident and revise level of response activation as appropriate.
- Identify operational situation changes that require augmenting/ demobilizing resources. Revise level of response activation and communicating to the command and general staff.
- Establish restoration assignments and immediate priorities.
- Direct the coordinated response with key management personnel and officials from outside agencies.
- Keep the Regional Incident Commander frequently apprised of status and response issues.

Prepared by or under the supervision of: Kathy Lyford

V. System Incident Commander/Branch Directors
Division 2-8

Request:

The National Grid report of Hurricane Irene recovery for Rhode Island states that National Grid "decentralized" the responsibility for storm recovery the morning of Sunday, August 28. What does the term "decentralized" mean to the management of the storm recovery activities?

Response:

Under normal operating conditions all trouble in New England is analyzed, prioritized and dispatched centrally from the Northboro Control Center. When it is anticipated that there will be more system damage than the resources at the Northboro Control Center will be able to effectively handle, these functions are "decentralized" to local field offices or Emergency Operating Centers (EOCs). National Grid initially decentralized the responsibility for storm recovery for all of Rhode Island to a branch established in Providence. This allows for the analysis, prioritization and dispatching of resources to be done at a more local level during large scale events such as Hurricane Irene thereby reducing the strain on the Northboro Control Center. As restoration progressed and additional resources were allocated to Rhode Island, it was decided that it would be more efficient to break the branch into smaller geographical areas to manage the restoration at a more local level. At that time a second branch was opened in North Kingstown with responsibility for restoration in the Southern part of the state, allowing the Providence branch to focus on the Northern portion of the state.

Prepared by or under the supervision of: Kathy Lyford

V. System Incident Commander/Branch Directors
Division 2-9

Request:

Please confirm that initially there was one branch center in Raynham, MA for the NE Region (including Rhode Island) and, subsequently, Rhode Island was divided into two branches, Providence and North Kingston. Discuss the process in decentralizing the restoration effort and the delay in splitting the Rhode Island restoration area until Tuesday, August 30.

Response:

Raynham, MA was not a branch center for the New England Region, but a staging area in a central location in the southern part of the New England service territory to pre-stage crews prior to the storm event. This central location enabled the company to quickly allocate crews to the hardest hit locations in either Massachusetts or Rhode Island once the extent of the damage was known. This pre-staging area was not considered a branch, because it did not have dispatching or work prioritization capabilities.

Providence was initially assigned as a branch to manage the entire Rhode Island restoration effort. As restoration progressed and additional resources were allocated to Rhode Island, it was decided that it would be more efficient to break the branch into smaller geographical areas to manage the restoration at a more local level. At that time a second branch was opened in North Kingstown with responsibility for restoration in the Southern part of the state, allowing the Providence branch to focus on the Northern portion of the state.

Prepared by or under the supervision of: Kathy Lyford

V. System Incident Commander/Branch Directors

Division 2-10

Request:

Provide a list of all centers of restoration activity (storm rooms, wires down offices, EOC, Branch Offices, staging sites, etc.) during the restoration, include the date(s) in operation, functions performed, and staffing.

Response:

The table below lists all New England centers of restoration activity during the restoration, including the dates of operation and functions performed. National Grid did not maintain a list of staffing at each location.

Center of Activity	Open	Close	Functions Performed
Northboro, MA EOC	08/26/2011	09/03/2011	Coordination of reporting, general regional support
Brockton, MA EOC	08/26/2011	09/03/2011	(Storm Room, Wires Down Ops, Damage Assessment, Municipal Room)
Hopedale, MA EOC	08/26/2011	09/03/2011	(Storm Room, Wires Down Ops, Damage Assessment, Municipal Room)
Malden, MA EOC	08/26/2011	09/03/2011	(Storm Room, Wires Down Ops, Damage Assessment, Municipal Room)
North Andover, MA EOC	08/26/2011	09/01/2011	(Storm Room, Wires Down Ops, Damage Assessment, Municipal Room)
Worcester, MA EOC	08/26/2011	09/01/2011	(Storm Room, Wires Down Ops, Damage Assessment, Municipal Room)
Providence, MA EOC	08/26/2011	09/03/2011	(Storm Room, Wires Down Ops, Damage Assessment, Municipal Room)
Somerset, MA EOC	08/30/2011	09/03/2011	(Storm Room, Wires Down Ops, Damage Assessment, Municipal Room)
North Kingstown, RI EOC	08/30/2011	09/04/2011	(Storm Room, Wires Down Ops, Damage Assessment, Municipal Room)
Best Western Hotel, Marlborough, MA	08/27/2011	09/04/2011	(Staging Area)

V. System Incident Commander/Branch Directors

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Raynham, MA	08/27/2011	09/04/2011	(Staging Area)
Rockingham Park, Salem, NH	08/27/2011	08/31/2011	(Staging Area)
Twin River Casino, Lincoln, RI	08/29/2011	09/04/2011	(Staging Area)
Community College of Rhode Island, Lincoln RI	08/29/2011	09/04/2011	(Staging Area)

Prepared by or under the supervision of: Kathy Lyford

V. System Incident Commander/Branch Directors
Division 2-11

Request:

Discuss the restoration process from a Branch Office level. What were the daily operations coordinated from each Branch Office? How were the labor and equipment resources divided throughout each branch? Describe how the restoration effort was coordinated between each Branch and the EOC.

Response:

Each branch office during Tropical Storm Irene was comprised of a damage assessment function which supported operations by prioritizing work, a storm restoration room, a wires down room which supported operations by dispatching outage and wire condition calls, a municipal room, which maintained constant communication with municipalities as well as a logistics support function. The restoration process was conducted jointly with the support of all the functional groups.

Resources were allocated to each branch by the Incident Commander as described in the Company's response to Division 2-7-V.System Incident Commander/Branch Directors. Contracted line crews were given work packages generated by the damage appraisal process each day. If the crews did not complete the work by end of their shift, they would return the next day to complete it. In certain cases, the work would be handed off to the next shift. The supervisors or escorts of these crews communicated status updates by phone regarding work package repairs. As repairs to the assigned feeders were completed, runners designated from the staging sites would collect the completed packages and also hand off additional work to the crews. This process continued until every customer was restored.

Internal line crews were dispatched work directly from the storm room. This work was also a product of damage appraisal results as well as outages from less affected areas that were within the outage management system.

The restoration effort was coordinated between branches through numerous daily conference calls that included the Branch Directors, Regional Incident Commander and other staff. The restoration status of each branch was reviewed through this process, and crews were re-allocated as needed to expedite restoration to system priorities.

Prepared by or under the supervision of: Kathy Lyford

V. System Incident Commander/Branch Directors
Division 2-12

Request:

Were line crews on Wires Down patrol in the initial phases of the storm restoration? When was sufficient damage appraisal information available to produce work packages and route resources?

Response:

During the initial phases of storm restoration, line crews were not performing wires down patrols. Line resources were utilized to respond to priority one police and fire emergency calls, and restoration related to critical public facilities.

Phase one damage appraisal packages and work packages were produced and distributed to line resources by the second day after landfall of Tropical Storm Irene.

Prepared by or under the supervision of: Kathy Lyford

V. System Incident Commander/Branch Directors
Division 2-13

Request:

Describe the process used to assess incoming damage appraisals and produce work packages. Were the office personnel responsible for disseminating the incoming damage appraisals adequate from a numbers, training, and equipment perspective? If adequate, could the damage appraisal process have been expedited?

Response:

Damage appraisal information returned from the field contains two key products required in the development of work packages. These are:

- Copies of distribution circuit maps marked up with field notes indicating the physical location of tree conditions and/or facility damage requiring corrective action.

- Detailed notes which identify more specifically the nature of the issues identified at each location noted on the circuit maps (ex. equipment required to address a downed pole such as transformer(s), cross arm(s), guy(s), anchor(s), etc., facility access issues, house numbers associated with services down, specifics of tree conditions such as tree down or simply a limb in contact with lines, etc.). These notes are designed to assist field construction coordinators in the assignment (resource quantity, prioritization, work sequencing, etc.) of restoration crews on a particular feeder. The notes also enable tallying of equipment or tree condition quantities for internal and external reporting.

Night shift office personnel responsible for receiving the damage appraisals have two main responsibilities associated with them. These are:

- Updating the storm damage appraisal database with damage quantities reflected in the appraisal notes.

- Creating required copies of the information and assembling them into work packages.

Since the field notes are taken on standardized forms designed to be self explanatory to those responsible for restoration activities (ex. storm room personnel, field construction coordinators, line and tree crew supervision, etc.), this effort primarily requires careful attention to detail in the creation of copies and collating of material. Completed work packages include copies of not only the damage appraisal circuit maps and damage appraisal notes but also worker safety briefs, copies of key contacts (individuals and phone numbers) that restoration personnel may require, forms used to record capital work completed during restoration, and extra copies of circuit maps. During the response effort associated with Hurricane Irene, three work package copies were

V. System Incident Commander/Branch Directors
Division 2-13 (continued, p2)

typically created one for line construction crews, one for tree crews, one for retention by the Storm Rooms, and the original for retention by the Damage Appraisal office.

The office personnel responsible for disseminating the incoming damage appraisals were adequate from a numbers, training, and equipment perspective. This is evidenced by the fact that, by 5:00am each day of the storm restoration activities, work packages had been created from 100% of the damage appraisals received the prior evening and were available for dissemination to restoration teams.

During this storm response effort, the resources assigned to the Damage Appraisal function completed work packet preparation at a pace that fully met the ability for available restoration crews to receive them. As such, expedited damage appraisal would not have reduced overall restoration durations.

Prepared by or under the supervision of: Alan Labarre

V. System Incident Commander/Branch Directors
Division 2-14

Request:

Confirm for Rhode Island the number of broken poles, damaged transformers, and downed conductors. Data reviewed to date vary on the number of broken poles from 81 replacements, 100 assessed to need replacement, to 222 damaged.

Response:

At the time of the initial 90-day Storm Report, the Company reported that 81 poles, 46 transformers and approximately 16,000 feet of wire had been replaced. This was based upon the paperwork (as-built information) received from the field at that point in time. Since the 90-day Storm Report was submitted, additional as-built data has been received from the field, verified and processed.

Based upon the as-built information received from the field, as of January 20, 2012, 207 poles, 100 transformers and approximately 23,000 feet of wire have been replaced in Rhode Island.

Prepared by or under the supervision of: Kathy Lyford

V. System Incident Commander/Branch Directors
Division 2-15

Request:

In the National Grid Report on Tropical Storm Irene, National Grid indicates the peak customer outage occurred on August 28 at 3:05 pm, with 273,000 customer outages. However, according to National Grid's Response to Division Data Request 1-6 (page 9 of 32), the peak occurred on August 28 at 9:20 pm, with 313,151 customer outages. Confirm the peak number of customer outages and the reason for this discrepancy.

Response:

The information provided in Division Data Request 1-6 consists of the actual customer interruption reports that were issued during the storm. While the Company initially reported 313,151 of its Rhode Island customers without power on August 28 at 9:20 p.m. as a result of Tropical Storm Irene, it is important to note that this figure was based upon the real time data available during the storm and prior to completion of the Company's validation process. During a storm there is a time lag in posting restorations, and as a result, the numbers contained in the final report are different from the raw data reported throughout the storm. The Company validates its customer interruption data from the Company's Outage Management System ("PowerOn"), which is a tool used by the Company to restore customers, but is not the Company's final customer interruption reporting tool. The Company's Interruption Disturbance System ("IDS") is used for final reporting of interruptions. IDS receives data from PowerOn to create the record for each interruption, and the data is then reviewed for accuracy. This process removes duplicate events and adjusts interruption and restoration times to known switching events. The validated peak for Tropical Storm Irene occurred on August 28 at 3:05 pm, with 273,000 customers interrupted.

Prepared by or under the supervision of: Jennifer L. Grimsley

V. System Incident Commander/Branch Directors
Division 2-16

Request:

In National Grid's Response to Division Data Request 1-6, customer outage data is displayed in three different formats (reference the difference between Page 1 of 32, Page 5 of 32, and Page 19 of 32). What are the different sources for this information? Why would all of the outage data not come from the same source to ensure consistency? Has a transition in systems created any of the discrepancies and inconsistencies?

Response:

The formats on page 1 of 32 and page 19 of 32 are both from the same system, PORTIS (Power On Real Time Information System). The report on page 1 shows customer interruptions by "crew area", where a crew area is comprised of several towns, and the report on page 19 shows customer interruptions by town. The report shown on page 5 of 32 is from Outage Central, which is the customer facing version of our interruption data and shows a subset of the same information shown in the other formats, but groups the towns by county. Both Outage Central and PORTIS use data from PowerOn, which is the Company's OMS (Outage Management System), and provides consistent information. Because PORTIS is a real time tool and Outage Central receives updates every fifteen minutes, presenting a snapshot in time, there will be timing differences between the two applications. As discussed in Sections V (A) and VII (1) of the Company's initial 90-day Storm Report, the Company experienced some performance issues with Outage Central during Tropical Storm Irene. To ensure that these issues did not impact PORTIS users focused on restoration efforts, those using PORTIS for reporting only purposes were asked to use Outage Central rather than PORTIS. Therefore, reports submitted from August 28, at 2 p.m. through August 30, at 8:00 a.m.were from Outage Central. Reports before and after that time period were from PORTIS. The Company addressed these issues at the time of their occurrence as quickly as possible and attempted to resolve the issues by restarting servers and selectively turning off non-critical functionality on its website that competed for information technology resources. In addition, the Company's service suppliers worked at the time of the occurrence to address telecom and network issues. The Company subsequently also undertook server upgrades after the restoration period subsided, as is reviewing long-term actions to remediate the issues that arose. Going forward the Company plans to use the format on page 19 of 32 (form PORTIS) as the standard format for providing information to the Division.

Prepared by or under the supervision of: Jennifer L. Grimsley

V. System Incident Commander/Branch Directors
Division 2-17

Request:

In National Grid's Response to Division Data Request 1-6 on Page 18 of 32, the Total Customers Served is reported as 480,281. However on Page 19 of 32, the Total Customers Served is reported as 480,722. Provide the reason for this discrepancy. In some reports the area "Warwick" is listed twice. Please explain.

Response:

The report format erroneously included the Town of Warwick, MA, with 441 customers, in the Rhode Island report. This error is typically manually corrected before the report is issued, but was missed in several instances.

Prepared by or under the supervision of: Jennifer L. Grimsley

V. System Incident Commander/Branch Directors
Division 2-18

Request:

Does the first day's significant drop in customer outages represent the restoration of a transmission line or some other significant restoration event? Explain in detail that initial significant change in number of customer outages.

Response:

The Company followed its prioritization process for restoration found in the EEP, focusing first on public safety, critical customers and then with the overall goal of maximizing customer restoration when lines were energized. The majority of the restorations made on Day 1 addressed feeder lockouts that restored power to a large number of customers with each repair. The table below provides the details of the 10 largest (based on customers restored) restoration steps for Day 1. These ten restoration steps account for 25% of the first day's restorations.

District	Town	Classification	Cause	Feeder	Lockout	Customers Interrupted	Substation
Coastal	Newport	Transmission	Deterioration	56-33F4, 56-33F2	Yes	5,288	Tiverton
Capital	Providence	Main Line - Overhead	Tree Fell	53-69F3	Yes	5,002	Manton
Capital	Cranston	Main Line - Overhead	Tree Fell	53-18F3	Yes	2,911	Johnston
Coastal	Narragansett	Main Line - Overhead	Tree Fell	56-42F1	Yes	2,851	Bonnet
Capital	Woonsocket	Main Line - Overhead	Tree Fell	53-108W62	Yes	2,811	Riverside
Coastal	Newport	Main Line - Overhead	Tree Fell	56-37W43	Yes	2,734	Jepson
Capital	North Smithfield	Main Line - Overhead	Tree Limb	53-127W40	Yes	2,601	Nasonville
Coastal	Warwick	Main Line - Overhead	Tree Limb	56-3F2	Yes	2,362	Apponaug
Capital	Cumberland	Main Line - Overhead	Tree Fell	53-126W41	Yes	2,359	Washington
Capital	North Providence	Main Line - Overhead	Tree Fell	53-69F1	Yes	2,188	Manton

Prepared by or under the supervision of: Jennifer Grimsley

V. System Incident Commander/Branch Directors
Division 2-19

Request:

There were many areas with conductors down. What were the circumstances causing the conductors to fall? Were there any recurring issues that suggested a system failure from workmanship, engineering design, or age? Include the following:

i. Trees breaking conductors
ii. Conductor age
iii. Improperly tied to the insulator

Response:

Based on data obtained from our interruption disturbance system (IDS), over 90% of the events related to downed conductors were coded as either tree limbs or entire trees falling, resulting in parted conductors or total conductor damage. The other 10% were the result of issues such as sleeve failures due to galloping or flying debris.

Prepared by or under the supervision of: Kathy Lyford

V. System Incident Commander/Branch Directors
Division 2-20

Request:

Of the poles that were down, what was the probable reason by percentage? Include the following:

i. Rotten poles
ii. Large trees breaking the poles from weight
iii. Saturated weak soil around the base of the pole or insufficient burial depth
iv. Poles overloaded with joint-use attachments
v. Insufficient guys and anchors
vi. Failure of the guy or anchor

Response:

Based on data obtained from our interruption disturbance system (IDS), 76% of pole related failures were coded as either tree limbs or entire trees falling, resulting in a broken or leaning pole requiring replacement or straightening. Approximately 9% of pole related failures were recorded as being due to either deterioration or general failure. Approximately 8% of pole damage or failure was coded as due to motor vehicle accidents occurring during the week of the Tropical Storm Irene, and the remaining failures were due to other causes. Only approximately 1% of the failures were attributed to saturated or flooded ground.

Prepared by or under the supervision of: Kathy Lyford