

Sat 09:10 PM

From: Phil Jewell <pjewell@gb.nrao.edu>**Subject:** Contingency planning**To:** Ruth Milner <rmilner@aoc.nrao.edu>**CC:** abridle@NRAO.EDU

Ruth, Alan --

I'm sorry, I was traveling yesterday and did not see your second message until I returned today. The text of the contingency plan follows below. This text was actually from the next to last draft. I have done some hand editing to bring it into sync with the final document (I think). I am also faxing over a hardcopy of the final version (a Word doc). I'm sorry for the inconvenience of the late submittal.

Phil

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NRAO Green Bank Contingency Plan
Prepared by M. Holstine and J. Bolyard
14 September 1999

This plan, although started as a means to address Y2K issues, has grown into a document that we feel should be available to address to the following issues anytime, not solely at the Y2K rollover. Therefore, the problems and solutions noted will be incorporated into the GB safety plan as necessary, for the general use of management and personnel.

Loss of Commercial Power

The problems associated with a total or partial loss of commercial power include the following:

A site "Blackout" or complete loss of commercial power to the site results in an operational shutdown at NRAO-GB. Plant operations personnel are responsible to initiate emergency generators to maintain critical systems, but the site would close in accordance with the Emergency Operations Status plan. Restoration of power is monitored in accordance with the Power Failure Procedures, 9/14/99.

A "Brownout" or decrease in power level is most critical to systems that are already UPS-protected. It is unknown whether a brownout would actually trigger the UPS. The Sensaphone is programmed to dial-out when a complete power loss occurs. It is being investigated whether the Sensaphone set point can be adjusted to activate when there is a power drop below the set point. The likelihood of Brownout on the GB site is low. NRAO-GB is the sole user on a main power company feed. A Brownout scenario would likely only occur if there was a problem on the main power grid.

Fuel reserves for emergency generators have been estimated at 30 hours on existing fuel storage capacity. Supplier availability for additional fuel is not known for an emergency situation, although it is known that the fuel supply for this area is located approximately 45 minutes south of the facility and another is located approximately 15 minutes north of the facility.

Emergency lighting is located throughout the site. It is the intent of emergency lighting to provide for emergency egress only. The average operational life in an emergency power loss is approximately 2 hours. The emergency lights are tested annually. The last extended test was in August 1999.

The antennae auto stow in the event of commercial power loss. The resumption of the observing program is not possible; the antennae must be placed back in service by an operator. It is likely that small equipment and computers would resume automatically as power is restored.

Emergency generators maintain the heating system during power loss. However, the air conditioning is not maintained during power loss in the cooling season. A shutdown of critical operational systems would be necessary due to the potential for overheating the equipment. This equipment shutdown may necessitate a partial site

closure.

The fire detection system has a battery backup. It is unknown how long the battery will function in a power loss. It is being investigated if the emergency generators also provide power to the fire systems.

Telephone and Communications

There are eight extension telephones at the site that function if there is a failure of the PBX system. The emergency telephones are located at various critical locations

throughout the site. This system requires that the main trunk line of the telephone system is intact. Those knowledgeable about the emergency telephone system include plant, business office, and safety office personnel.

If there is a total commercial communication failure, the site is equipped with both handheld and mobile radios operating on an FCC-licensed site frequency. Additionally, several employees are active ham operators. The business office at NRAO-GB also has emergency scanning capabilities for monitoring emergency services activities. The site's Ethernet capability is independent of outside communications systems and can continue to provide on-site communication via computers. A loss of commercial communications would, however, render the Intranet and Internet useless.

Mail Service Failure

A failure of US Postal Service, Federal Express or other overnight carriers would be an inconvenience. The site is prepared to continue its functions through this failure.

Transportation and Travel

There is no mass transportation in Green Bank, Pocahontas County. A lack of gasoline for employee transportation to and from work would be manageable for approximately one month. Mass gasoline shortages lasting more than a month in duration could compromise operations. The majority of employees commute less than 5 miles to the site. There is no plan to accommodate employees in the event of a gasoline shortage. Domestic and foreign travel would be limited to emergency travel only in case of a shortage.

Personnel Roles and Responsibilities

The Business Manager is responsible, under the Emergency Operation Status (EOS), plan to initiate the site shutdown. The EOS requires external communication ability, and is managed through a call-in procedure to the site PBX telephone system, where a personnel-specific message is available. A calling procedure is in place to manage communication to employees if a site PBX failure occurs. If the telephone systems are out of service, the information is provided verbally to employees as they enter the site. There are designated plant staff on call at all times during an EOS.

Community Liaison

The NRAO has frequent communication with the Pocahontas County Sheriff, the County Emergency Management Office, County Emergency Response Personnel, Bartow-Frank-Durbin (BFD) Fire Department and EMS personnel. In the event of a site or county emergency, the Business Office is designated as the public relations contact.