ESCC

Electricity Subsector
Coordinating Council

Assessing and Mitigating the Novel Coronavirus (COVID-19)

A RESOURCE GUIDE

Version 2: Updated March 24, 2020

Planning for a health emergency, such as the novel coronavirus (or COVID-19), is unique from other business continuity planning because it requires businesses to prepare to operate with a significantly smaller workforce, a threatened supply chain, and limited support services for an extended period of time at an unknown date in the future.

The business continuity and pandemic plans developed by investor-owned electric companies, electric cooperatives, and public power utilities are designed to protect the people working for them and to ensure energy operations and infrastructure are supported properly throughout an emergency.

This document is a resource for electric power industry leaders to guide informed localized decisions in response to the COVID-19 global health emergency. It highlights data points, stakeholders, and options to consider in making decisions about operational status, while protecting the health and safety of employees, customers, and communities.

Sharing practices and expertise will allow participants to make better-informed independent, localized decisions that will help reduce the negative impacts to the country's electric power supply during the COVID-19 global pandemic. The ESCC and its members are committed to complying fully with all applicable federal and state antitrust laws. The activities of the ESCC are not intended, and do not constitute an agreement, to influence markets or prices for goods or services.
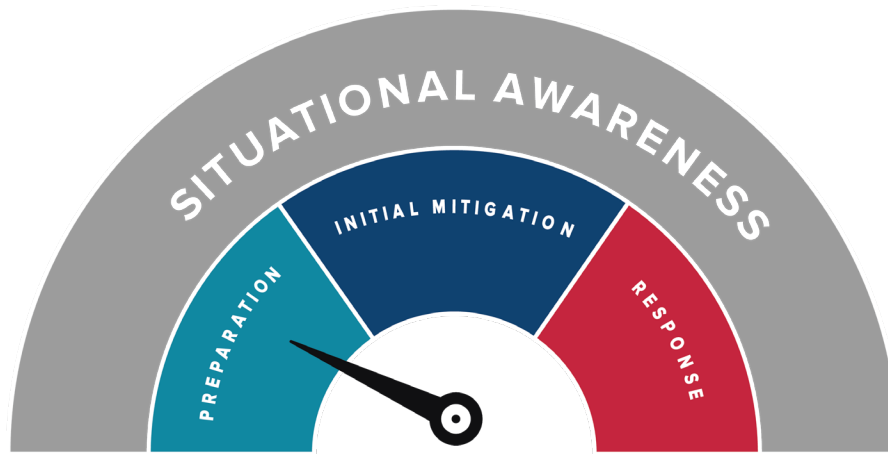
This document will evolve as public health officials and other government sources provide additional data and more is known about COVID-19.

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Stages of COVID-19 Mitigation and Response

Situational Awareness

Investor-owned electric companies, electric cooperatives, and public power utilities should maintain regular situational awareness of critical information that may inform preparation, mitigation, and response actions, including:

- COVID infection rates, including number of current cases and deaths impacting:
    — local communities served
    — employees or immediate family members
    — contractor or vendor operations, personnel, or immediate family members

- Public health emergency declarations in service territory

- Centers for Disease Control and Prevention (CDC) travel guidelines for service territory

- School closures, including impacts to personnel with job duties that limit telework and other flexibility options

- Key accounts posture/closures

- Contractor and vendor posture

- Access to, and availability of, testing and vaccines

- Access to health care facilities and the changes in capacity of these facilities

- Industry trends based on tracking by trade organizations (APPA, EEI, NRECA), NERC, and the E-ISAC

Investor-owned electric companies, electric cooperatives, and public power utilities should coordinate with:

- State/local elected/appointed officials and designees

- State/local health offices

- Key accounts, vendors, and contractors

- Local union and labor officials

- Federal government officials through the Electricity Subsector Coordinating Council (ESCC)

Preparation

Assuming there are **no confirmed cases of coronavirus among employees or within the service territory**, investor-owned electric companies, electric cooperatives, and public power utilities should consider:

- Increasing hygiene measures

- Planning for all employee telework

- Planning for sheltering-in-place at critical facilities

- Assessing stockpiles of critical materials, including food, PPE, and critical equipment or materials

- Instituting foreign travel restrictions (CDC level 2 and 3 countries)

- Increasing the frequency of messaging internally (employees) and externally (community, customers, other partners)

Initial Mitigation

If there are **no confirmed cases of coronavirus among employees, but confirmed cases within the service territory/community**, investor-owned electric companies, electric cooperatives, and public power utilities should consider:

- Increasing hygiene measures

- Instituting non-essential employee telework and continue planning for all employee telework

- Sheltering-in-place as appropriate at critical facilities

- Instituting domestic and foreign travel restrictions (CDC level 2 and 3 countries)

- Limiting attendance to large group events

- Maintaining internal/external messaging

- Planning for facility decontamination and remediation

Response

If there are **multiple employees with confirmed coronavirus**, investor-owned electric companies, electric cooperatives, and public power utilities should consider:

- Instituting employee telework for all appropriate employees

- Sheltering-in-place at critical facilities

- Instituting domestic and foreign travel restrictions (CDC level 2 and 3 countries)

- Maintaining internal/external messaging

- Planning for facility decontamination and remediation

General Planning Considerations

As part of their business continuity planning, investor-owned electric companies, electric cooperatives, and public power utilities should consider the following:

Enterprise-Wide Planning

- Refreshing all business continuity plans and assessing whether the plans are robust enough to deal with workforce shortages considering loss of workers, facilities, and critical vendors and possibly technology.

- Establishing a cross-functional team to identify roles and responsibilities for stakeholder engagement and tracking of key planning indicators.

- Assessing what level of leadership should meet, and how often, to discuss recommendations and decisions.

- Identifying factors that might lead to declaring an organizational emergency, and the consequences of declaring an emergency.

- Determining who is considered an essential employee, whether employees can be required to stay at work, and what the HR/ legal considerations are.

Work-Related Domestic and International Travel

- Determining at what point the organization:
  — Restricts international travel to, or transit through, CDC level 2 and 3 countries
  — Restricts or discourages all non-essential international travel, regardless of CDC assessment
  — Restricts or discourages non-essential domestic travel

- Determining whether the organization should require self-quarantine for travelers returning from CDC Level 2 and 3 countries, and when should the self-quarantine be enforced.

- Determining whether travel restrictions are limited to situations where any social distancing is difficult (i.e., train travel, metro travel, etc.).

Information Technology

- Benchmarking current IT capabilities to address:
  — How many log-ons can the network support at once?
  — How many people require VPN access to perform their jobs?
  — Do employees who do not normally telework need to be issued additional equipment, such as laptops?

▪ Determining the plan if the organization should significantly increase network capability to support more telework and how long it would take to complete the necessary upgrades.

Assessing Employee Health and Wellness

▪ Considering what testing guidelines/information can be provided to workers.

▪ Determining whether the organization may test potentially exposed employees prior to returning to work.

▪ Deciding how the organization will identify and inform potentially exposed co-workers, vendors, or contractors if an employee is confirmed to have COVID-19.

— Will those who are potentially exposed be required to self-quarantine?

— How will the organization inform local health officials?

▪ Determining what family support resources currently are in place and whether they need to be enhanced.

Facility Management

▪ Identifying what the basic daily cleaning requirements are and whether the frequency of cleaning should be increased.

— How many times a day?

— Where should hand-sanitizer/disinfectant wipes be placed?

▪ Deciding when it is appropriate for the organization to cancel or restrict large group gatherings, both internally and externally, and how a large group should be defined.

▪ Determining when the organization limits access to, and employs protective measures for, critical facilities.

▪ Deciding what type of decontamination should occur if an affected employee/vendor/ contractor reports to a work location and whether the immediate area or entire facility should be shut down.

▪ Determining when an organization should consider implementation of employee/visitor screening at building entrances, and when visitors should be restricted from entering facilities.

Management of Vendors/Contractors/Supply Chain Disruptions

▪ Determining when an organization would consider suspending in-person vendor meetings, particularly if vendors travel internationally.

▪ Defining what types of materials and services are critical.

▪ Assessing the current stockpiles of critical materials and the course of action if the stockpiles become low or are depleted.

▪ Identifying what plans vendors/contractors/suppliers have in place to ensure continuity of operations.

External and Internal Messaging

- Determining what messaging would be provided to:
    — General employees/managers/supervisors
    — Affected employee(s)
    — Managers/supervisors of affected employee(s)
    — Co-workers of affected employee(s)
    — Others at work location of affected employee(s)
    — Externally affected/exposed stakeholders
    — Internal stakeholders
    — Media

- Deciding what additional information needs to be included in messaging and whether there are any additional notifications that need to be made.

- Establishing the frequency and cadence of communications and consideration of multiple modes of communications (e.g., emails, FAQs, portals, facility-specific messaging, etc.).

Review of Grid Reliability and Mutual Assistance Networks

- Identifying whether decisions to increase/suspend/reduce operations at key accounts will impact load balancing.

- Determining whether the organization has identified facilities critical to the operation of the energy grid and has made accommodations for sheltering-in-place at those facilities (on-site food/water/hygiene/medical, family services, personal protective equipment, etc.).
    — What enhanced facility management needs to occur to make the environment as safe as possible?

- Determining whether the organization has made accommodations for line crews that may need to respond to grid disruptions (family services, PPE, etc.).
    — What type of personal protective equipment should be provided to crews operating in areas with high numbers of infections?

- Determining whether the organization is in contact with mutual assistance networks to assess the availability of additional resources if there are not enough workers to perform critical work.
    — Could the organization support a request for assistance, and has the company shared its status with the mutual assistance networks?

COVID-19 Access Considerations

This document provides guidance that investor-owned electric and/or natural gas companies, public power utilities, and electric cooperatives may want to consider when accessing buildings or areas with COVID-19 contamination. It includes two sections:

- Guidance before entering a home/building with known or suspected COVID-19 contamination.

- Guidance to consider when attempting to access an entire community or region that has been restricted by a state/local government entity due to COVID-19.

The guidance in this document was collected from organizations across the industry. The intent of the content is to serve as a general resource of information and not an industry standard. This document is evergreen and will be updated regularly as additional guidance is received.

Access to Contaminated Homes/Buildings

Prioritizing Work in Contaminated Areas

Recognizing circumstances differ across different service territories and different communities, investor-owned electric and/or natural gas companies, public power utilities, and electric cooperatives may consider the following in prioritizing work required to be completed in a contaminated area:

- Organizations should develop a list of essential and non-essential services and discuss those with appropriate government officials (including, but not limited to the public utility commission) for feedback and appropriate waivers, if needed.

- Natural gas utilities should discuss leak response time requirements with the public utility commission and how/if responses can be prioritized, if applicable.

- Organizations should identify essential vs. non-essential services specific for in-home/building service (most applicable to appliance servicing) to inform prioritization of work orders/requests.

Supporting the Workforce Operating in Contaminated Areas

To support the workforce, investor-owned electric and/or natural gas companies, public power utilities, and electric cooperatives should consider the following practices to identify a contaminated home and mitigate exposure to field personnel:

- Conduct daily safety briefings prior to field workers going on service calls and develop an internal website with FAQs that are updated once a day on PPE guidance and other mitigation requirements. *(See Q&A on using a respirator.)*

- Develop a process workflow with questions and talking points for employees to use at the customer's door to identify suspected COVID-19 concerns. The document will give employees the flexibility to gauge the situation and to employ voluntary social distancing when the response requires entering a home/building.

  If a customer reports he/she has symptoms, the workflow document should include direction for the employee to call a supervisor to decide if the work is essential or non-essential. If essential, the employee follows the workflow document using upgraded PPE. *(See example of COVID-19 Workflow & Biohazard Assessment.)*

  Questions/directions to consider for a workflow document include:
  — Employees ask three pre-entry questions to validate status of COVID-19 at the location:
    - Is anyone in the residence, location, or establishment self-quarantined or self-monitoring for COVID-19 within the past 14 days?
    - Has anyone in the residence, location, or establishment had a possible exposure to COVID-19 within the past 14 days?
    - Is anyone in the residence, location, or establishment sick with a respiratory illness, cough, fever, congestion, or experiencing shortness of breath?
  — Employees who enter a customer location with an active case of COVID-19 should consider the following protective measures:
    - Ask that the sick person go to another room.
    - Practice social distancing (at least 6 feet) from healthy people in the location.
    - Avoid touching surfaces whenever possible.
    - Avoid touching your face, nose, mouth, or eyes.

- Allow field personnel to call a "safety stop" when they are reluctant to enter a dwelling. A field worker should call his/her supervisor and discuss essential vs. non-essential work and proper precautions to take.

- After the work is completed, refer to CDC and OSHA for proper handling and disposal of contaminated PPE. OSHA issued specific guidance on COVID-19, which can be found on-line at:
  https://www.osha.gov/Publications/OSHA3990.pdf

- Ensure employees are aware of the COVID-19 symptoms, and provide a mechanism (e.g., confidential hotline) for personnel to contact an organization's internal/external medical provider.

- Consider the importance of providing family services' support for employees who may need to self-quarantine after potentially coming in contact with COVID-19 cases or have symptoms of an infection.

Access to Restricted Areas

In addition to the considerations already outlined, below are additional considerations for organizations for accessing an entire community or region that has been restricted by a government entity due to COVID-19.

- Public health quarantine and isolation statutes vary by state. A state-by-state summary of these statutes can be found online at:
    https://www.ncsl.org/research/health/state-quarantine-and-isolation-statutes.aspx

- Decisions to restrict access generally are made by local governments. Note, those decisions likely will be made in coordination with state officials. Enforcement of restricted access typically will be done by local law enforcement, state police, or national guard with authority from the governor.

- Organizations should engage with their state Emergency Operations Centers (EOC) on a regular basis.
    — Pursue obtaining an authorization letter, or similar documentation, that will help facilitate transportation across the state.
    — Ensure that the EOC staff has visibility on crew movements and operational priorities.

- Organizations should use the EOC to engage local authorities to discuss:
    — How an organization will be informed of a decision to restrict access to a community or region.
    — The process that will be used to grant access to the restricted area. This process may allow cleared workers to enter and exit the restricted area at will, or it could require daily or regular screening.

- Organizations should consider issuing badges/cards that identify employees who serve critical functions and should work with local authorities to accept such credentials to grant timely access. These additional credentials could help facilitate access to restricted areas. The credential can reference guidance released by the U.S. Department of Homeland Security to help state and local officials determine the businesses and workers that are essential for sustaining critical infrastructure operations. That guidance can be found online at:
    https://www.cisa.gov/publication/guidance-essential-critical-infrastructure-workforce

- Organizations should monitor restricted areas across their service territory to consider how those restrictions may impact transportation routes.

Additional Resources

Example Q&A for Using a Respirator for COVID-19 Mitigation

When do I need to wear a respirator?
A respirator (N-95 or higher-level) only should be used if you are entering a customer's premises where there is a confirmed or suspected COVID-19 case, and you cannot maintain 6 ft social distancing.

How do I get a respirator?
Contact your supervisor with justification to use a respirator. Your supervisor will arrange to get you a respirator after ensuring that you have been fit tested, medically cleared, and properly trained on the use of the respirator.

Do I need Medical Clearance and Fit Testing before wearing a respirator?
Yes, you must complete respirator medical clearance and fit testing within two years before use. Employees must be fit tested to all makes, models, and sizes of the respirator(s) to be used. Unless it has been waived by OSHA, an employee's medical condition must be evaluated before fit testing. There are different N95 respirator models that may be in use in the company – you must be fit tested for the model you will be using. (NOTE: Some safety procedures require OSHA-approved training on the use of PPE prior to entering a hazardous environment. A respirator cannot protect an employee if he/she does not know how to use it properly. Check with your company policy and follow any training requirements.)

What types of respirators are effective against COVID-19?
Disposable respirators (also known as N95 respirators), half-face respirators, and full-face respirators. All respirators must be NIOSH approved. Class and stock details are provided at the end of this Q&A.

How do I use an N95 respirator correctly in a COVID-19 situation?
Follow this N95 Respirator use guidance:

- Use hand hygiene/sanitation when donning and doffing.

- Use a pair of clean latex or nitrile gloves when donning an N95 respirator and performing a user seal check. Employees should understand that beards and other facial hair may reduce the effectiveness of a respirator substantially.

- Discard gloves after donning and making any adjustments to ensure the respirator is sitting comfortably on your face with a good seal.

- Avoid touching the inside of the respirator.

- Inspect the respirator again after cleaning.

- Contact lenses may be worn; however, the employee must have experienced success in wearing contact lenses with a respirator. Consider the environment before doing so

Can I reuse an N95 respirator?
Yes. You may reuse an N95 respirator. As with any respirator, inspect it before each use and ensure all components of the respirator are intact, and perform a user seal check. Reuse can be done for up to one shift, as long as the N95 was used as per above guidance. Filtering facepiece respirators can be reused by the same worker, but *only* if the respirator is working properly, its shape remains unchanged, and the filter material is not physically damaged or soiled.

How do I store and dispose of an N95 respirator?
A: Store respirators in a bag labeled with your name. Dispose of the storage bag after each use. Discard spent gloves, respirators, and storage bags as regular trash.

Can I use half-face and full-face respirators instead of N95 respirators?
Yes. If N95 respirator supplies are low, you can use half- or full-face respirators with P100 magenta cartridges, which will provide adequate protection. Follow all donning and doffing, hand hygiene, storage, and disposal procedures described above. Half- and full-face respirators may be reused if they pass the pre-use inspection.

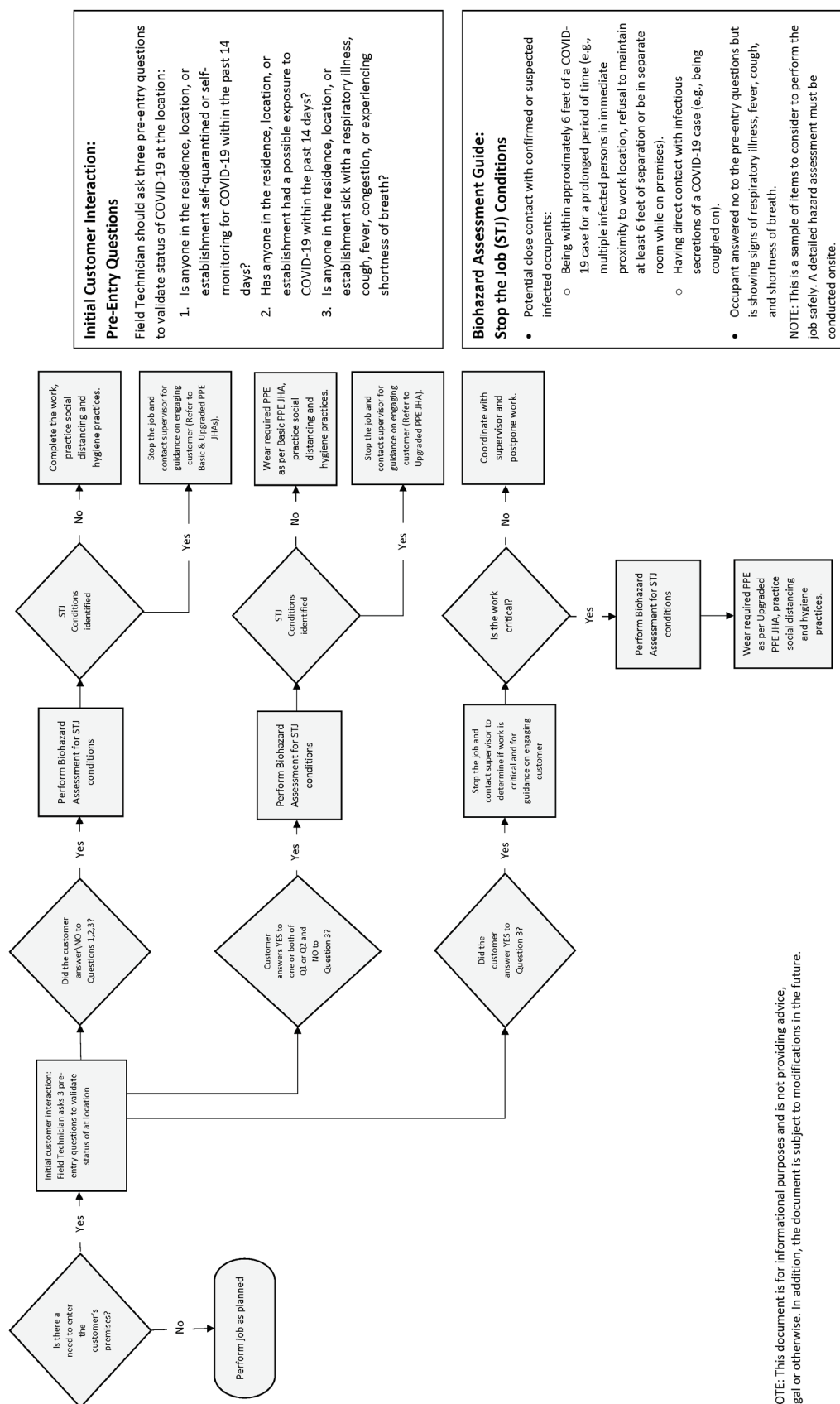**What cleaning instructions apply to half- and full-face respirators?**
Half- and full-face respirators must be cleaned using an approved towelette or cleaning solution after each use. Wipe down all surfaces of the respirator, including the cartridges.

What do I do if my respirator is damaged?
Do not use any damaged equipment. Discard all damaged respirators and components and request a new one from your supervisor.

Example of COVID-19 Workflow & Biohazard Assessment

Initial Customer Interaction: Pre-Entry Questions

Field Technician should ask three pre-entry questions to validate status of COVID-19 at the location:

1. Is anyone in the residence, location, or establishment self-quarantined or self-monitoring for COVID-19 within the past 14 days?

2. Has anyone in the residence, location, or establishment had a possible exposure to COVID-19 within the past 14 days?

3. Is anyone in the residence, location, or establishment sick with a respiratory illness, cough, fever, congestion, or experiencing shortness of breath?

Biohazard Assessment Guide: Stop the Job (STJ) Conditions

- Potential close contact with confirmed or suspected infected occupants:
  - Being within approximately 6 feet of a COVID-19 case for a prolonged period of time (e.g., multiple infected persons in immediate proximity to work location, refusal to maintain at least 6 feet of separation or be in separate room while on premises).
  - Having direct contact with infectious secretions of a COVID-19 case (e.g., being coughed on).
- Occupant answered no to the pre-entry questions but is showing signs of respiratory illness, fever, cough, and shortness of breath.

NOTE: This is a sample of items to consider to perform the job safely. A detailed hazard assessment must be conducted onsite.

Flowchart elements:

- Is there a need to enter the customer's premises?
  - No → Perform job as planned
  - Yes → Initial customer interaction: Field Technician asks 3 pre-entry questions to validate status of at location

- Did the customer answer \NO to Questions 1,2,3?
  - Yes → Perform Biohazard Assessment for STJ conditions
    - STJ Conditions identified
      - No → Complete the work, practice social distancing and hygiene practices.
      - Yes → Stop the job and contact supervisor for guidance on engaging customer (Refer to Basic & Upgraded PPE JHAs).

- Customer answers YES to one or both of Q1 or Q2 and NO to Question 3?
  - Yes → Perform Biohazard Assessment for STJ conditions
    - STJ Conditions identified
      - No → Wear required PPE as per Basic PPE JHA, practice social distancing and hygiene practices.
      - Yes → Stop the job and contact supervisor for guidance on engaging customer (Refer to Upgraded PPE JHA).

- Did the customer answer YES to Question 3?
  - Yes → Stop the job and contact supervisor to determine if work is critical and for guidance on engaging customer
    - Is the work critical?
      - No → Coordinate with supervisor and postpone work.
      - Yes → Perform Biohazard Assessment for STJ conditions → Wear required PPE as per Upgraded PPE JHA, practice social distancing and hygiene practices.

NOTE: This document is for informational purposes and is not providing advice, legal or otherwise. In addition, the document is subject to modifications in the future.

Control Center Continuity

Updated: March 24, 2020

This document provides guidance to investor-owned electric companies, public power utilities, electric cooperatives, and federal government-owned utilities responsible for the safe and reliable operation of transmission and distribution control centers during and throughout the COVID-19 pandemic. This document develops credible scenarios that could impact control center operations, identifies mitigation options, supports information sharing across the industry, and outlines needed government actions.

Regulatory Relief and Governmental Support Needs

The mitigation strategies for the scenarios described below cannot be executed unless: **(1)** COVID-19 testing is available and streamlined for essential personnel who work in shift environments, i.e., control center personnel; **(2)** relief from certain regulatory obligations is obtained to ensure the continued availability of control room operators; **(3)** travel restrictions for the general public exclude personnel essential to the reliable operation of control centers; and **(4)** supplies for cleaning/hygiene are readily available.

Following is a summary of specific government actions needed to ensure successful mitigation of risk to control center continuity:

- **High-Priority Actions Needed**
  - Governmental authorities should direct medical facilities to prioritize testing for asymptomatic control room operators (and treat them comparable to first responders) in advance of sequestered, extended-duration shifts. State regulatory approval should be given to corporate health services organizations to administer testing for coronavirus to essential employees, if applicable.
  - If local, regional, state, or federal government authorities enforce a populace-wide quarantine/curfew or other travel restrictions, operators of critical facilities still should be able to move freely outside of hours.
  - NERC should waive the certification requirement for system operating personnel if minimum staffing levels cannot be maintained. *(This issue was addressed by FERC/NERC on 3/18/20.)*
  - NERC should allow the deferment of maintenance activities that require support from control center staff (e.g., contingency analysis and switching instructions). *(This issue was partially addressed by FERC/NERC on 3/18/20.)*

- **Medium-Priority Actions Needed**
  - — Control center facilities should be authorized to receive a priority supply of sanitizing supplies and PPE.
  - — Non-medical professionals (such as control center managers and supervisors) should be given state approval to administer health questionnaires and temperature checks without HIPAA constraints.
  - — NERC temporarily should suspend regional entity audits of all registered entities. *[This issue was partially addressed by FERC/NERC on 3/18/20.]*

Identifying Critical Control Center Personnel

The personnel needed to staff the control centers of electric transmission and distribution facilities, generation facilities, reliability coordinators, and balancing authorities are essential to the reliable operation of the energy grid. The facilities needed to perform these functions are generally well-isolated and physically secure, or at least conducive to the sequestration of on-site staff as needed. However, given the long lead times required to train personnel to properly utilize the Information Technology (IT) and Operations Technology (OT) tools used to maintain control center functionality and grid visibility, the limited number of people with these qualifications places a higher risk to reliable operations and requires a higher priority for protection from the spread of COVID-19 than the general population.

To categorize these personnel accurately across the electric industry, a common method for identifying essential personnel is needed. This will allow for a better understanding of the number of people involved so that effective strategies for mitigating their risk of infection and resulting removal from the workforce can be developed. Individual investor-owned electric companies, public power utilities, electric cooperatives, and federal government-owned utilities still will have discretion to identify essential personnel unique to their organization, but a more uniform approach to categorizing staff will support the communication of likely areas of government support at the local, state, and federal levels.

Specific to energy grid operation, each organization has employees who fit into two categories: Control Room Operators and Direct Support Personnel. Each of these categories can be broken down into individuals who can perform their functions remotely, and those who must be physically present at their control center workstations in order to perform their required duties. For the purpose of this analysis, only those who cannot work remotely will be prioritized for continuity of operations.

The job titles of people in each category will vary by company, but Control Room Operators generally include reliability engineers, dispatchers, area controllers, and their shift supervisors. Direct Support Personnel consist of those employees who maintain and secure the functionality of the IT and OT tools used by Control Room Operators.

Scenario Development

Given the extensive work within the electric industry to develop business continuity plans supported by redundant physical and IT infrastructure, many organizations already have taken steps to utilize their ability to operate from more than one location. As such, the emphasis now must be on the development of risk scenarios that can identify potential gaps in existing plans given the unique nature of a pandemic's effect on personnel availability.

Each scenario was developed to describe an escalating impact to control room personnel at their primary and secondary location (or both). The scenarios will test the effectiveness of social distancing and quarantine, the availability of mutual assistance, and the need for proactive testing of priority employees to quantify the current risk level explicitly. The scenarios are accompanied by corresponding mitigation strategies that represent existing industry and government policies, standards, and capabilities, as well as suggested actions going forward.

Many investor-owned electric companies, public power utilities, electric cooperatives, and federal government-owned utilities took proactive steps to isolate their control center facilities from external visitors and non-essential employees early in the pandemic, leveraging the presence of back-up control centers, self-quarantining of employees, and multiple shifts to maximize social distancing.

As such, the scenarios are designed to anticipate the logistical and operational challenges associated with the following conditions:

- Single operator impacted (either site)

- Single operator impacted (both sites)

- Shift compromised (either site)

- Shift compromised (both sites)

- Site compromised (either site)

- Site compromised (both sites)

Possible Mitigation Strategies for Scenarios

This section first describes universal preventive measures that should be considered prior to having any control center personnel diagnosed with COVID-19, in addition to measures that would apply in most scenarios where employees are diagnosed with the virus. Thereafter, specific recommendations for the escalating impacts of the above scenarios are provided.

Universal Mitigation Strategies

- Union leadership should be involved in discussions around possible mitigation strategies from the beginning to ensure transparency and collaboration.

- Compensation, attendance and reliability, PTO, and related polices that will apply during these conditions should be developed and communicated proactively.

- Social distancing at work and on personal time should be encouraged; opportunities to create greater physical separation of control room operator workstations should be identified; adjacent rooms should be utilized where possible; and interactions across shifts should be eliminated.

- Good personal hygiene practices should be reinforced, and employees should self-administer wellness checks at home prior to departure for his or her shift. CDC and state health department information should be posted at the entrance to control rooms and pre-shift safety-hygiene message(s) should be delivered.
  1. Minimize direct contact (maintain 6' distance) and indirect contact, where possible leveraging gloves prior to contacting non-sanitized shared surfaces;
  2. Routine handwashing, leveraging soap & water for at least 20 sec or leveraging an alcohol-based hand sanitizer (containing 60+% alcohol).

- Provide clear symptom reporting guidance to employees around at-home self-administered wellness checks and/or observations while on-shift:
  1. Fever (person feels warm to the touch, reports having been feverish since last report, or has an actual measured temperature of 100.4°F) that has persisted for more than 48hrs.
  2. Or, fever AND one of the following:
     - Persistent cough;
     - Difficulty breathing;
     - Appears obviously unwell.

- The CDC's most current travel advisories should be built into event planning and travel arrangements, and practices to increase awareness of employees' personal travel plans to areas with active advisories should be considered.

- Employees who travel to a location with a CDC Level 3 Travel Health Notice should be required to adhere to a 14-day self-quarantine at home and should be cleared by company health services before they return to work.

- COVID-19 testing of asymptomatic control room operators and support staff should be required to the extent available.

- The frequency and extent of cleaning and disinfecting surfaces and equipment that comes into routine contact with multiple people should be increased.

- In the event exposure occurs, resources should be secured, and processes established for further sanitizing and segregating work areas. Suggested cleaning procedures should include the following within 6 feet of the exposure in all directions:
  1. Cleaning porous (soft) surfaces near work-station (e.g., cloth, leather, faux leather seats within manufacturers guidelines);
  2. Cleaning non-porous (hard) surfaces near work-station (e.g., desk, peripherals, communication devices, hard-chairs, etc.) with disinfectant products with EP-approved emerging viral pathogens claims that are expected to be effective against the virus that causes COVID-19 (SARS-CoV-2) and ensure these products are compatible with surfaces and components. All products should be used according to label instructions.

3. Clean lavatories used by the symptomatic employee, including door handle, locking device, toilet seat(s), faucet(s), washbasin(s), adjacent walls, and counter.

4. Properly dispose of any items that cannot be cleaned. Paper procedures, maps, etc.)

- Individually assigned peripheral equipment (mice/keyboards/handsets/chairs) should be provided.

- A dedicated building entrance that is a significant distance from all other employees should be provided for all personnel working in the control center.

- Outside visitors should not be allowed in control centers (e.g., no tours or non-essential personnel from the same company).

- Additional access restrictions, such as limiting visitors or nonessential meetings within spaces in proximity to control centers, should be implemented.

- Non-badged contractors/vendors should be screened with a health questionnaire and temperature check before being allowed onsite for deliveries, repairs, etc., and access during this time should be limited to critical activities only.

- Crews on shift work schedules should be segregated. System operators should be split (days/nights or split individual shifts) between primary and backup control centers. Operating night shifts and day shifts in different locations will provide a 12-hour window between occupation (e.g., allow for enhanced cleaning).

- Control room operators should be reduced to minimum (active desks), and they should be rotated in and out on a 7-day or 14-day schedule. (Be cautious of length of shifts when considering length of time.)

- Business continuity plans should have clearly defined thresholds and procedures for initiating company shelter-in-place, sequestration, and quarantining of control center personnel.

  1. Shelter-in-place: Stay directive to operate/reside within the location (building) one currently is located.

  2. Sequestration: Protective sequestration involves physical isolation to protect a healthy population from a pandemic. Requires a degree of certainty that the population is healthy via testing, rather than an assumption of health, lest the entire sequestered employee population is compromised.

  3. Quarantining: A state of physical isolation due to potential exposure prior to reintroduction into a healthy employee population.

- A complete healthy shift should be sequestered and held in reserve for extreme scenarios such as when minimum staffing levels cannot be met.

- A resource plan should be developed for potential use of retirees, supervisors, managers, and engineers with the requisite skills to backfill control room operator and support staff in the event staffing is reduced due to COVID-19 infections.

- Control center support staff (engineering, transmission scheduling, compliance, etc.) should be allowed to work remotely (e.g., VPN) to the extent permissible within remote access and cybersecurity requirements of the organization.

- Information and communications technology resources should be appropriate to accommodate increased use of remote work arrangements consistent with business continuity plans, without compromising security. Consider conducting planned stress tests for these arrangements.

- Organizations should anticipate and prepare for coronavirus-themed opportunistic social engineering attacks. Spearphishing, watering hole, and other disinformation tactics commonly are used to exploit public interest in significant events. Steps to ensure continued visibility and maintenance of cyber assets should be taken in the event of staffing disruptions.

- Logistics to house operators onsite, including bedding, entertainment, and food accommodations, should be developed.

- Mutual assistance and sharing of operators should be considered.

- Organizations should consider declaring CIP Exceptional Circumstance to the extent necessary if staffing levels are reduced to a minimum level as a mitigation strategy.

Scenarios 1&2 (single operator impacted at one or both sites)

Control Room Operator or Direct Support Personnel in the primary or secondary control room is confirmed with COVID-19. Both categories of employees work in tightly controlled shifts in terms of working hours, skill sets, and physical proximity during work. A positive case in any shift comes with a high risk of infection for other personnel in the same shift if the infected individual is not identified quickly.

While there is some amount of redundancy in skills sets on a single shift allowing for a degree of interchangeability, this option does not apply to all positions and is limited in both the quantity of people available and the duration of operational tempo. Having at least one confirmed case at both locations potentially compromises the standard redundant-site model of continuity, but still allows for proactive quarantine and reallocation of shift personnel if possible.

Mitigation Strategies:

- All staff on shift with the impacted operator(s) should immediately be home quarantined, and the work hours/coverage of all non-impacted shifts extended.

- A body temperature screening process should be used or symptoms reviewed before admission into control rooms. This is typically required to be performed by licensed medical professionals and may require relief from HIPAA requirements for supervisors/managers to perform if necessary.

- Conservative/reduced field operations should be implemented to reduce the workload of control room staff (reduce the number of switching orders to process).

- A supplemental staffing plan should be implemented and refresher training and simulations offered for supervisors, managers, engineers, and retirees with the requisite skills to backfill control room staff in the event control center staffing is further reduced due to COVID-19 infections.

- The family situations of operators impacted by quarantine should be considered and assistance/support offered where needed to ensure quarantined operators do not feel they are placing their family at risk (e.g., transportation, housing, childcare, eldercare, video chats).

- Organizations should consider sequestering employees in their homes rather than in a separate location away from their families (address individual employee personal circumstances).

Scenario 3&4 (shift compromised at one or both sites)

Multiple Control Room Operators and/or Direct Support Personnel in any single shift at both the primary and backup control rooms have been confirmed with COVID-19. This scenario assumes at least one shift in both facilities is infected, or multiple shifts in the case of an organization that only has one functioning control center. This will limit the value of social distancing between the staffs of the two control centers and raises the likelihood of close physical contact with infected individuals at both locations. These circumstances also quickly overextend the ability to reallocate personnel between shifts since at least one complete shift at each location has been compromised.

Mitigation Strategies:

- The same strategies outlined in Scenario 1&2 apply.

- Non-impacted shifts should be sequestered onsite.

- There should be a single control room for operators who have confirmed cases of COVID-19 in the event minimum staffing levels cannot be maintained with employees who do not have the virus.

- If available, onsite 24-hour medical care should be considered.

- Vending services should be shut down, and food and drinks for quarantined staff brought in as individually wrapped items.

Scenario 5&6 (site compromised at one or both locations)

The primary and backup control rooms have a significant number of Operators and/or Direct Support Personnel impacted with COVID-19, compromising the entire site. Multiple infected personnel in this scenario also assumes that, in addition to both facilities having personnel who test positive, more than one shift at each location is affected. This will exacerbate the problem of realigning personnel who are cross trained to perform specific functions or using in-house redundancy of employees without knowing which specific skills are needed. Additionally, this also could lead to the compromise of a control center to the degree that it is no longer usable until it can be sanitized properly.

Mitigation Strategies:

- Operations should be sequestered fully onsite (i.e., shelter in place).

- If available, onsite 24-hour medical care should be considered.

- Food and drinks for sequestered staff should be brought in as individually wrapped items.

- Per the guidance above, a body temperature screening process should be used or symptoms reviewed before re-admission into control rooms, and recovered staff should be isolated from infected staff in a plan to return to heathy pool.

- The family situations of operators impacted by sequestering should be considered, and they should be offered assistance/support where needed to ensure sequestered operators do not feel they are placing their family at risk (e.g., transportation, housing, childcare, eldercare, video chats).

Additional Resources

FERC, NERC Provide Industry Guidance to Ensure Grid Reliability Amid Potential Coronavirus Impacts

Federal Energy Regulatory Commission

NERC
NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

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FERC, NERC Provide Industry Guidance to Ensure Grid Reliability Amid Potential Coronavirus Impacts

The Federal Energy Regulatory Commission (FERC) and the North American Electric Reliability Corporation (NERC) announced today they are taking steps to ensure that operators of the bulk electric system can focus their resources on keeping people safe and the lights on during this unprecedented public health emergency.

FERC and NERC are using regulatory discretion to advise all registered entities that they will consider the impact of the coronavirus outbreak in complying with Reliability Standards as follows:

- The effects of the coronavirus will be considered an acceptable basis for non-compliance with obtaining and maintaining personnel certification, as required in Reliability Standard PER-003-2, for the period of March 1, 2020 to December 31, 2020. Registered entities should notify their Regional Entities and Reliability Coordinators when using system operator personnel that are not NERC-certified.

- The effects of the coronavirus will be considered an acceptable reason for case-by-case non-compliance with Reliability Standard requirements involving periodic actions that would have been taken between March 1, 2020 and July 31, 2020. Registered entities should notify their Regional Entities of any periodic actions that will be missed during this period.

- Regional Entities will postpone on-site audits, certifications and other on-site activities at least until July 31, 2020. Registered entities should communicate any resource impacts associated with remote activities to their Regional Entities.

FERC and NERC recognize the uncertainties regarding the response to and recovery from the coronavirus outbreak and will continue to evaluate the situation to determine whether to extend these dates. Our shared goal is to ensure all registered entities balance the concerns for the health and welfare of their workforce while staying focused on the mission of supplying power to consumers across North America.

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Mutual Assistance Considerations

Updated: March 19, 2020

Pandemic Mutual Assistance Checklist

This checklist is designed to provide host and responding investor-owned electric companies, public power utilities, and electric cooperatives guidance on how to conduct mutual assistance during the COVID-19 pandemic.

Investor-owned electric companies, electric cooperatives, and public power utilities are committed to protecting the people working for them and to ensuring energy operations and infrastructure are supported throughout an emergency. The items in this checklist can help provide guidance for mutual assistance efforts while protecting the health and safety of employees, customers, and communities. These practices are suggested for all organizations, regardless of the number of confirmed COVID-19 cases in the area.

This checklist may be used when providing mutual assistance for outage incidents during the COVID-19 pandemic. It also may be used when providing mutual assistance if a host organization is so impacted by COVID-19 cases that it is not able to conduct normal daily operations without assistance.

Work Practices

☐ Responding crews should follow their organization's policies and procedures, and each crew member is asked to complete a COVID-19 Questionnaire before traveling to the host organization. *(See COVID-19 Mutual Assistance Questionnaire.)*

☐ Host investor-owned electric companies, public power utilities, and electric cooperatives should minimize movement of crews to different regions in their territory. By assigning the same crews to the same work areas, cross pollination and potential exposures are limited. Note, this may require organizations to need additional resources and could impact restoration times.

☐ Investor-owned electric companies, public power utilities, and electric cooperatives should consider moving toward more isolated and self-contained responding teams to limit the exposure between host and responding crews. Keep crew teams intact to minimize exposure and execute "transfer of control" best practices for restoration when possible to limit exposure between host and responding crews.

☐ When information is available, host investor-owned electric companies, public power utilities, and electric cooperatives should avoid sending responding crews into areas with significant COVID-19 outbreaks. The host company should restore in those areas.

☐ When information is available, the host organization should provide full situational awareness of the COVID-19 impact, the number of cases in the community (or region), and what protective measures are in place to responding crews and their organization, with regular updates.

☐ Host investor-owned electric companies, public power utilities, and electric cooperatives should clarify how long they expect responding crews to be in their area.

☐ Host organizations should identify a liaison who can work with each responding entity to provide information about local conditions. Consider providing this information in advance of receiving responding crews.

☐ Host organizations should try to minimize person-to-person contact for material distribution and use drop points.

☐ Host organizations should use technology for onboarding and briefings (e.g., online conferencing services, conference calls) or conduct briefings in the field to reduce large meetings. Have safety onboarding on videos that can be distributed to crews in advance, with conference calls for Q&A. Conduct daily briefings remotely where feasible.

☐ If practicable, pre-staging should be avoided unless the threat is imminent.

☐ Host organizations should look for opportunities within the restoration process to execute the function remotely [dispatching functions, advanced metering infrastructure (AMI) functionality, assessment, etc.].

General COVID-19 Safety Practices

☐ If you are sick or have any flu-/virus-like symptoms, report this immediately to your supervisor and consult your physician.

☐ Cover your coughs and sneezes with a tissue, then immediately throw the tissue in the trash.

☐ Wash your hands often with soap and water for at least 20 seconds, especially after going to the bathroom; before eating; and after blowing your nose, coughing, or sneezing.

☐ Avoid touching your eyes, nose, and mouth with unwashed hands.

☐ Regularly clean your phones and handheld devices as these are some of the dirtiest items we carry.

☐ Maintain social distancing whenever possible [six (6) feet distance from anyone coughing or sneezing]. Avoid shaking hands and touching others.

☐ Use "non-circulating mode" for vehicle air conditioning/heating/ventilation.

Staging Sites

☐ Instead of large staging sites, host organizations should consider having multiple, smaller staging sites to limit contact with/exposure to crews. Design smaller staging sites to allow CDC distancing recommendations to be followed (currently 6 feet of distancing at all times). Note: this may require

organizations to request more self-sufficient resources, such as crews from investor-owned electric companies, public power utilities, and/or electric cooperatives rather than contractors.

☐ Cleaning supplies, hand sanitizer, sanitation supplies, etc. should be available for all crews located at staging areas.

Lodging and Meals

☐ Host organizations should establish lodging and dining sites where social distancing can be established, and the host can manage and control access and direct sanitation.

- o This can include appropriately sized sleeper trailers, tents, renting out entire hotels/motels, or nontraditional spaces for crew-only use.

- o Keep crews that are working together in the same lodging and dining facilities.

- o Have a plan for feeding crews in the event restaurants are closed by government order.

- o Have lodging, dining, and common areas cleaned following CDC guidelines. *(See CDC Recommendations.)*

- o Cleaning supplies, hand sanitizer, sanitation supplies, etc. should be available for all crews located at all lodging and meals areas.

- o Provide laundry service, if needed.

- o Minimize travel in large vehicles such as buses by having crews use trucks for transportation between lodging and work sites.

- o Have vehicles cleaned following CDC guidelines. *(See CDC Recommendations.)*

- o Try to minimize exposure by providing box lunches, snacks, water, etc.

External Outreach and Communication

☐ Host organizations should proactively communicate to regulators and government partners that power restoration and recovery may be slower due to the new response regime. Establish and disseminate information to customers that travel and restoration times may be longer.

☐ Host organizations should proactively communicate with customers about social distancing efforts. Ensure responding crews have consistent messaging and practices.

Health Issues

☐ Host organizations and responding crews should utilize the COVID-19 Visitor Questionnaire to evaluate health risks. *(See COVID-19 Mutual Assistance Questionnaire.)*

☐ Workers' temperatures should be taken daily. If a worker has a temperature above 100.4 F, he/she should be removed from the workforce and should follow CDC guidelines on what to do if you are sick. *(See CDC Recommendations.)*

☐ Workers who become ill should follow CDC guidelines. *(See CDC Recommendations.)*

☐ Workers should minimize the use of currency and use credit cards instead to avoid hand-to-hand contact.

CDC Recommendations

Interim Guidance for Business and Employers:
https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-business-response.html

Cleaning and Disinfection Recommendations:
https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/cleaning-disinfection.html

What to Do If You Are Sick:
https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/steps-when-sick.html

Guidance for Large Events:
https://www.cdc.gov/coronavirus/2019-ncov/community/large-events/index.html

COVID-19 Mutual Assistance Questionnaire

The health and well-being of employees, strategic partners, families, and visitors remains our industry's top priority. To prevent the spread of COVID-19 and to reduce the potential risk of exposure to our workforce, contractors, and visitors, we are requesting mutual assistance workers fill out a simple screening questionnaire. The participation of the screening questionnaire is required for all visitors/contractors who are expected onsite and for employees who are responding to a mutual assistance request at another investor-owned electric company, public power utility, and/or electric cooperative. This will be required for each contract employee or visitor prior to coming onsite or travelling to another investor-owned electric company, public power utility, and electric cooperative.

Visitor's Name:	Personal Phone Number (mobile/home):
Visitor's Organization:	Name of Host Organization Sponsor:
Facility Name:	

SELF-DECLARATION BY VISITOR
Have you returned from any of the countries listed by the CDC as a travel/health advisory warning for Covid-19 Level 3 or higher in the last 14 days? Current list can be found here: https://wwwnc.cdc.gov/travel/notices □ Yes   □ No
Have you had close contact with or cared for someone diagnosed with COVID-19 within the last 14 days? □ Yes   □ No
Have you been in close contact with anyone who has traveled within the last 14 days to one of the countries listed as a level 3 or higher travel/health advisory by the CDC for Covid-19? □ Yes   □ No
Have you experienced any cold or flu-like symptoms in the last 14 days (to include fever of 100.4 degrees F or higher, dry cough, difficulty breathing, or shortness of breath)? □ Yes   □ No
Have you or any member of your household traveled on a cruise ship within the last 14 days? □ Yes   □ No
Please report any air travel, cruise ship travel, and/or destinations visited within the last 14 days, both work-related and personal travel.

If you answer "yes" to any of the questions above, access to the facility will be denied.

Signature (Visitor): _____ _____
Date:_____

Note: If you plan to be on host's property for consecutive days and your response to this self-declaration changes, please notify your host organization sponsor immediately.

Please complete and return this form electronically to: POC

ACCESS TO FACILITY (circle one):   APPROVED   DENIED