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## IOWA REP COMPENSATORY ACTIONS MEMO

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**TO:** ALL IOWA REP PROGRAM PARTNERS

**FROM:** ANGELA LEEK, CHIEF  
BUREAU OF RADIOLOGICAL HEALTH  
IOWA DEPARTMENT OF PUBLIC HEALTH

**SUBJECT:** IOWA REP COMPENSATORY ACTIONS DURING COVID-19 PANDEMIC

**DATE:** 4/30/2020

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### BACKGROUND

There is currently an outbreak of respiratory disease caused by a novel coronavirus. The virus has been named "SARS-CoV-2" and the disease it causes has been named "Coronavirus Disease 2019" (COVID-19). On January 31, 2020, the United States Department of Health and Human Services issued a declaration of a public health emergency related to COVID-19 and mobilized the Operating Divisions of HHS. On March 9, 2020, Governor Reynolds declared a State of Disaster Emergency and on March 13, 2020, the President declared a national emergency in response to COVID-19.

SARS-CoV-2 has demonstrated the capability to spread rapidly. To respond effectively to the COVID-19 outbreak, appropriate clinical management and infection control in conjunction with implementation of community mitigation efforts and social distancing are critical.

Some of the existing response strategies in Iowa's Radiological Emergency Plan (REP) may present significant infectious disease risk to both responders and the public as well as represent a burden to the emergency response organizations actively engaged in the COVID-19 public health response.

### GUIDANCE AND COMPENSATORY ACTIONS

In order to avoid further putting responders and the public at risk or overwhelming emergency response organizations at the front-lines of this pandemic attack should a nuclear or radiological emergency occur coincident with the pandemic, the Iowa Department of Public Health, Bureau of Radiological Health is recommending the following guidance and compensatory actions related to the following aspects of the

Iowa radiological emergency preparedness program for response to a nuclear power plant incident while community mitigation and social distancing measures are required.

- **Shelter in Place (SIP) as the most effective public protective action to a release exceeding EPA Protective Action Guidelines (PAGs).** The EPA PAG Manual (EPA-400) provides PAGs for public protective actions at 1 to 5 rem (10 to 50 mSv) projected public dose over four days. The recommended protective action is, “Sheltering-in- place or evacuation of the public.” While it is generally most protective to evacuate the public prior to any release, the presence of the high risk of COVID-19 transmission represents a significant impediment to any orderly evacuation because the key strategy to prevent rapid transmission and spread of the disease is to maintain social distancing and minimize movement and gathering of large populations. Since evacuation would result in both movement of large populations and aggregation of people at community reception centers, evacuation represents significantly greater overall risk to the health and safety of the public than a projected dose of 5 rem. Moreover, current stay at home orders are in place with the majority of the public sequestered in their immediate family units. Schools throughout the state have been closed with children conducting education from their homes. General recommendation of SIP also alleviates other burdens on emergency responders during an evacuation. Specifically, SIP reduces the need to staff Community Reception Centers many whose staff may be actively engaged in the public health response to the COVID-19 pandemic. SIP also relieves the burden on local law enforcement agencies (LLEAs) for traffic management. SIP should be the primary public protection recommendation until it is determined possible to evacuate and maintain appropriate COVID-19 mitigation measures or the projected offsite dose projections exceed 25 rem (250 mSv) projected public dose over four days. Factoring in shielding effects from buildings in a SIP situation, the offsite projected doses from most postulated nuclear power plant incidents are not expected to exceed this threshold.
- **Hospitals and nursing homes should be directed to preferentially SIP. Evacuation of critical populations in hospitals and nursing home should not be considered for doses less than 50 rem or implemented until projected dose exceeds 100 rem.** COVID-19 is particularly impactful to vulnerable populations in nursing homes. In addition, hospital intensive care infrastructure is stressed to capacity in caring for severe COVID-19 patients, many of whom are on supplemental life support provided by mechanical ventilators. The additional stress of attempting to move patients and residents in a vulnerable position could result in significantly more risk. Acute Radiation Sickness (ARS) does not present until approximately 100 rem. The additional shielding from these large institutional structures is expected to reduce the dose by a further factor of 10 to 100 times. Therefore, for most postulated events, the dose to

these patients is expected to be well below any level that would result in acute effects. Dose to health care workers in these facilities should be monitored by dosimetry and hours limited through shift rotation to further reduce their dose.

- **In the event of a radiological release, the Emergency Response Joint Information Center (JIC) should clearly articulate the difference between SIP and stay at home or shelter in place orders issued for COVID-19 pandemic mitigation.** Several states have used the terms of stay at home or shelter in place when issuing orders to restrict movement and gatherings of individuals and other personnel not involved in essential business. However, under these orders, the public is not restricted from outdoor activities and has been even encouraged to get outside. In response to a large radiological release, the JIC needs to ensure the public understands the SIP order for radiological releases includes staying indoors with windows closed and outdoor air intake secured. They should also understand they should not be going out for recreation or for other reasons unless specifically authorized as Emergency Workers with a response dosimetry and limits.
- **The Iowa REP radiological response organization will maximize remote capabilities to reduce the risk for transmission of COVID-19 and the subsequent impact to radiological assessment capabilities.** Aggregation of critical radiological expertise represents a significant risk to sustaining operations for the duration of an event. Recognizing that there will be some impact to the efficiency of operations, a review of the key tasks and objectives for the response indicates that we can maintain sufficient effectiveness in radiological emergency response while minimizing the risk of COVID-19 transmission with the following compensatory actions:
  - **Only the IDPH Dose Assessment Lead and IDPH Plant Liaison/ERDS will report to the State Emergency Operations Center (SEOC).** The IDPH Dose Assessment Lead provides technical recommendations directly to Iowa HSEMD and the Governor’s representatives during radiological emergencies. It is especially important to have the in person technical support for discussions related to the risk perspectives of this unique situation including a combination of pandemic response and radiological emergency.

The IDPH Plant Liaison/ERDS staff provides command and control to the radiological assessment team. This position will interact with the remote assessment staff and provide technical information to the IDPH Dose Assessment Lead. With other staff working remotely, the risk for COVID-19 transmission is minimized with two staff members in the SEOC.

- **Offsite Dose Assessment will be conducted remotely.** IDPH personnel qualified to conduct dose assessment using URI-RASCAL and RASCAL represent a limited critical resource. In order to ensure their availability, key dose assessment personnel have been provided a state laptop with access to both systems as well as ERDS. Dose assessments can be provided remotely to the IDPH Dose Assessment Lead in coordination with the IDPH Plant Liaison/ERDS staff at the EOC and the field team coordination team.
- **Field Teams will deploy with one member when possible and will employ source control equipment practices when multiple team members are necessary.** Placing multiple people in close proximity within one vehicle creates a significant risk of COVID-19 transmission. Therefore, during the pandemic response, deployed field teams will consist of a single person when possible and teams will use source control equipment as outlined by the State Hygienic Laboratory procedures or other COVID-19 related protection guidance. In addition, efforts will be made to keep the same members on each team as much as possible to reduce the number of people interacting in close space. We accept that this can result in some loss of efficiency in survey and sample collection, but is necessary under current COVID-19 pandemic mitigation orders. Since Iowa REP has adopted RadResponder, measurements taken in safer areas near predesignated points will be properly recorded for dose correlation. Field team members are trained and qualified in all tasks assigned to the teams.
- **Field Monitoring Team Coordinators (FMTCs) response will be conducted remotely.** The FMTC function is provided by emergency response personnel from Iowa State University EH&S and the State Hygienic Laboratory at the University of Iowa. The FMTC will report to the EOF as usual provided that adequate social distancing measures and exposure control can be maintained in the EOF location. In the event that space limitations exist, the FMTC group will set up base at an alternate location where social distancing requirements can be maintained and connectivity is sufficient to ensure radio, cell and RadResponder connection to the field teams. **PPE will be enhanced for field teams if access to high COVID-19 risk areas is required.** Iowa REP has sufficient PPE available for radiological contamination control. PPE includes Tyvek suits, booties and nitrile gloves.

Currently, Iowa REP has been able to maintain calibration of all radiation detection instrumentation and other equipment.

Iowa REP is continuing to monitor impacts to the REP nuclear power plant response due to actions

and restrictions taken to mitigate the current COVID-19 Public Health Emergency and will make modification to these compensatory actions as required. Please contact Angela Leek, [angela.leek@idph.iowa.gov](mailto:angela.leek@idph.iowa.gov) if you have any questions or concerns.

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