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This document has been reviewed by a Y-12 DC / UCNI-RO and has been determined to be UNCLASSIFIED and contains no UCNI. This review does not constitute clearance for Public Release.

Name: Neal Mowery Date: 05/31/18

REVISION LOG

Revision	Description	Intent	Non Intent
2	Update to revise Policy for clarity relative to lightening and to insert guidance regarding “essential” work activities, their coordination with ES&H and the Project Superintendent for communication and actions to be taken on events listed. Identified the Construction Manager or his designee as the manager responsible for making determinations of essential work if/when the need arises for sensitive construction activities.	X	
1	Re-titled and updated to incorporate Tower Crane operational parameters and actions necessary when wind conditions are at or above prescribed thresholds.	X	
0	Initial issue	N/A	

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1.0 INTRODUCTION

1.1 Purpose

The Y-12 National Security Complex (Y-12) site meteorologist, Plant Shift Superintendent's Office (PSS), and Uranium Processing Facility (UPF) Construction and Environmental, Safety, and Health (ES&H) will work together to monitor weather scenarios, including the potential for lightning and wind conditions, to prevent potential impacts on personnel and outdoor activities. On days when weather events are predicted, UPF ES&H will increase observations of weather radar, lightning detection, and Y-12 Site Meteorological Tower data to help provide as much advance notification as possible of approaching weather conditions to our field personnel. Technical Readiness Reviews should include weather briefing and consideration when planning work activities.

Work considered "essential" is up to the discretion of the Construction Manager. Typically this is related to safety and security activities such as snow and ice removal. Sensitive concrete pours, batch plant operations, and finishing critical lifts are examples of activities that could be designated as essential outdoor work. It is recommended that the Construction Manager or designee make those determinations in advance.

During certain weather conditions, it may be necessary for to take emergency protective actions which are outlined in the Building Emergency Plans (orange books). Curfew is one of these actions. The PSS or Site Emergency Director will announce a curfew which is a population-control action that restricts the site population in the announced designated areas to remain within their building/facility or to enter and to remain in the nearest building or facility until instructions are given.

2.0 LIGHTNING CONDITIONS

Table 1 provides guidance information and what actions to be taken in case of lightning conditions. Remember to always listen for instructions provided by the UPF Project Management and ES&H.

Personnel engaged in tasks designated to be essential will be identified and informed in the pre-job brief. The table below covers the majority of work, which is normally considered to be non-essential from a weather protection perspective.

UPF Weather Protocols

Table 1. Lightning Conditions, Announcements, and Actions to be Taken

Condition	Announcement	UPF ES&H along with the Project Superintendent will:
<p>Lightning is within 30 miles of the plant.</p> <p><i>(Note: This condition should give UPF project sites between one to three hours to prepare; however, project will need to monitor speed and direction of the storm.)</i></p>	<p>The PSS Office will announce: Lightning is approaching the Y-12 site. Personnel involved in outdoor work should be aware of changing weather conditions and be prepared to implement protective actions.</p> <p>UPF announcement (radio): Work will continue at this time. Stand by for further information if storm directly impacts UPF.</p>	<p>Monitor approaching storms and lightning strikes. At this time, based on direction of storm and speed of approaching storm, discuss outdoor activities that may need to be suspended, such as:</p> <ul style="list-style-type: none"> - Batching of concrete - Crane activities - Tower crane use - Elevated work
<p>Based on speed and travel path of the storm, when lightning is estimated to be within 30 minutes of UPF site, and UPF is projected to be in the direct path of the storm.</p>	<p>UPF Project Superintendent will notify batch plant to suspend batching of concrete and Supervisors of outdoor activities will be notified of the approaching storm with directions concerning curtailed/make safe activities.</p>	<p>Decision will be made to begin curtailing outdoor activities:</p> <ul style="list-style-type: none"> - Batch concrete - Load concrete onto trucks or dump concrete - Place bulkhead - Place rigging activities in safe condition - Exit tower crane - Ensure outdoor activities are in safe condition.
<p>Lightning is within 15 miles of UPF site, and UPF site is in direct path of the storm.</p>	<p>PSS will announce: There is lightning activity in the vicinity of the Y-12 Plant. Non-essential outdoor work should be curtailed until further notice.</p> <p>UPF will announce: Work will be curtailed/made safe at this time. Stand by for further information if storm directly impacts UPF.</p>	<p>Curtail outdoor activities to allow time for personnel to take shelter from approaching storm. Personnel not responsible for curtailment should seek shelter immediately.</p>
<p>When lightning is within 10 miles of UPF site, and UPF site is in direct path of the storm.</p>	<p>UPF Project Superintendent will notify all personnel working outdoor activities to take shelter.</p>	<p>Stop curtailment activities, if not complete, and take shelter.</p>
<p>You see lightning.</p>	<p>No announcement has been made.</p>	<p>Seek shelter and contact your supervisor.</p>
<p>When storm has cleared UPF site, as determined by PSS & UPF ES&H.</p>	<p>PSS will announce all clear to resume outdoor activities.</p>	<p>UPF Project Superintendent will notify personnel to resume activities.</p>

Shelters are fully enclosed buildings with electrical wiring and plumbing. Hard-topped metal vehicles with rolled up windows also can serve as shelters.

Tower Cranes are grounded and insulated and may be used by only the operator or maintenance personnel as a shelter. This circumstance will most commonly occur in the event of pop up storms. No one is to gather under the tower crane for shelter.

Movement from shelter to shelter is permitted (i.e. Construction Support Building to vehicle) when not in curfew.

During Lightning Events, Avoid:

- Open areas, such as fields and construction sites
- Water, such as creeks, sediment basins, ponds, and puddles
- High places
- Tall structures, trees, and flag or light poles
- Metal conductors, such as construction equipment, fences, telephone or power lines, pipelines, and steel fabrications

Seek Safe Shelter, Such As:

- Fully enclosed vehicles with windows up
- Permanent or temporary buildings approved for occupancy

3.0 WINDY CONDITIONS

Table 2 describes the actions expected related to wind in the forecast or when windy conditions develop. Primarily, the actions are focused on crane operations, but blowing objects and dust can also be a hazard during windy weather. Precautions relative to these hazards shall be taken as well.

Table 2. Windy Conditions, Announcements, and Actions to be Taken

Condition	Announcement	Project or Area Superintendent along with UPF ES&H Support:
Sustained winds below 15 mph.	No announcement.	Notify PSS that cranes are operating. Cranes will be operated within the bounds of the Job Hazard Analysis, lift plans (when required), and the manufacturer’s guidance.
Sustained winds between 15 and 25 mph and gusts less than 40 mph.	No announcement.	Notify PSS that cranes are operating. Cranes will be operated within the bounds of the Job Hazard Analysis, lift plans (when required), and the manufacturer’s guidance.
Forecast sustained winds above 25 mph or forecast gusts above 40 mph.	Contact PSS for advice on time window of anticipated elevated wind conditions.	Notify PSS that cranes are operating. Verify work plans in place to begin and complete load movement prior to elevated wind levels. Secure material and equipment vulnerable to elevated wind conditions.
Sustained winds greater than 25 mph.	PSS will announce: <i>We are currently experiencing winds in excess of 25 miles per hour. All roof-top activities, elevated work, and mobile crane operations are suspended until further notice. Other activities that could be affected by wind gusts and high winds should be carefully assessed. Please report any wind damage to the PSS Office at 574-7172.</i>	Safely lower loads and place cranes in a safe condition.
Wind gusts greater than 40 mph.	No announcement.	Safely lower loads and place cranes in a safe condition.
When winds or storms have cleared, as determined by PSS and UPF ES&H.	PSS will announce all clear to resume outdoor activities or elevated work.	UPF Supervisor will verify that the area is free of damage and notify personnel to resume activities.

Winds can be determined by using the anemometer on the equipment or the West Meteorological Tower W60 & GUST60.

4.0 RECORDS

None

5.0 REFERENCES

None

6.0 SUPPLEMENTAL INFORMATION

Appendix A, Acronyms and Definitions

APPENDIX A Acronyms and Definitions

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ACRONYMS:

ES&H	Environmental, Safety, and Health
PSS	Plant Shift Superintendent
UPF	Uranium Processing Facility
Y-12	Y-12 National Security Complex

DEFINITIONS:

None