



EHSS North America Program

Severe Weather

Severe Weather Program

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1 PURPOSE

The purpose of this Program is to establish guidelines and requirements for the monitoring of weather conditions at Mosaic sites in North America and what actions shall be taken to ensure personal safety and protect property and equipment from damage or loss during periods of extreme weather.

2 SCOPE

This program applies to Mosaic's North America Business (NAB) and associated facilities and contains minimum requirements intended to ensure that employees and contractors, working at Mosaic facilities, are protected from weather extremes.

The established requirements are intended to be followed in the event of abnormal weather conditions. The requirements include parameters for:

- Wind speed
- Extreme temperature
- Winter storm / blizzard
- Thunderstorm/ lightning activity within specified proximity
- Tropical storm / hurricane
- Tornado
- Storm surge

3 APPENDICES

There are no appendices attached to this Program document.

4 GENERAL REQUIREMENTS

- 4.1 Mosaic will not permit employees or contractors to place themselves in a position of undue risk by requiring them to report for, or remain at work, without consideration of weather and/or road conditions. Employees must make a reasonable and prudent decision whether to travel to or from work.
- 4.2 Described in Table 1 below are the guidelines for continuous monitoring of the weather 24-hours a day.

Table –1
Daily Monitoring and Notification Process



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Daily Monitoring	<ul style="list-style-type: none">Continuously monitor weather conditions at each Mosaic site 24 hours a day using the online IBM Weather Dashboard.Acknowledge weather conditions outside of Mosaic's safe work parameters and issue proper advisories site wide.Issue alerts, by designated site personnel, via site specific procedures when weather reaches indicated parameters.
During and Post Severe Weather Event	
Continuous Monitoring	<ul style="list-style-type: none">Monitor the website and weather station for changing conditions and send additional email updates as necessary.
Post Weather Event	<ul style="list-style-type: none">Provide an "All Clear" message when the weather event has ended via the site-specific procedure.

- 4.3 Each facility shall designate personnel to monitor the weather conditions at each designated location(s), refer to the parameters established in this policy and advise/notify as necessary.
- 4.4 Each Mosaic facility shall maintain site level weather related procedures.
- 4.5 Site level procedures shall contain:
- Site designees and their responsibilities as it pertains to monitoring and alerting of weather conditions.
 - Designated safe area locations.
 - Site specific actions to be taken during a weather event
- 4.6 Sites shall maintain necessary emergency supplies and equipment to be able to respond to weather related injuries; including first aid and / or ERT kits.
- 4.7 Each site shall maintain an IBM Weather Dashboard with the required alerts per this Program.

- 4.8 Handheld portable lightning detection devices are not permitted as a notification tool. Examples of other handhelds include stand-alone detection devices or any other smart device App (Application).
- 4.9 Sites shall establish an alerting system and process that is activated by weather alerts.
- 4.10 The alerting system shall be capable of communicating to all impacted employees and contractors, including through their supervisor, without delay.
- 4.11 Sites shall establish a set of alarms for weather related alerts including visual and / or audible notifications.
- 4.12 The alarm system shall be tested on a tested at a minimum, one time per quarter.

5 HIGH WINDS

- 5.1 Wind shall be monitored for both sustained and gusts and are considered a high wind condition when levels exceed:

	Action Level	All Clear
Sustained	20 m/h or 32 km/h	When wind falls below the action level
Gusts	25 m/h or 40 km/h	

- 5.2 Phosphates sites shall take action per the Mobile Crane and Overhead Cranes and Powered Hoists Programs.

 **Reference:** *Phosphates Mobile Crane Program*

 **Reference:** *Phosphates Overhead Cranes Powered Hoists Program*

- 5.3 All elevated work shall be evaluated during high wind conditions.
- 5.4 Scaffolds shall not be used in high wind conditions.
- 5.5 Follow scaffolding manufacturing guidelines and site procedures for securing scaffolds in expected high winds.

 **Reference:** *Phosphates Scaffold Program*

6 EXTREME TEMPERATURE

- 6.1 Temperature shall be monitored for both extreme high and extreme low temperatures when levels exceed:

	Action Level	All Clear
Heat Index	> 95 F or 35 C	



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Wind Chill	- 45 F or - 43 C	When temperature falls between the heat index and cold action levels
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- 6.2 Refer to the NA Heat Safety Program for actions to take in extreme high temperatures.

 **Reference:** *North America Heat Safety Program*

- 6.3 A safe work plan shall be implemented prior to performing work during Wind Chill Action Levels. The safe work plan, identifying the extreme cold hazard and identified control measures, will be documented on the Field Level Hazard Assessment (FLHA), Safe Work Permit, or contractor equivalent.

7 TORNADO

- 7.1 A Tornado Alert condition will be activated when the following advisories are issued:

Action Level	All Clear
Tornado Watch	When the tornado advisory is cancelled
Tornado Warning	

- 7.2 A tornado watch is issued when atmospheric conditions are favorable for the development of severe thunderstorms that are capable of producing tornados.
- 7.3 If a tornado warning is issued and tornado is imminent site shall issue a notification to seek shelter or evacuate depending on timing and area affected.

8 WINTER STORM AND BLIZZARD

- 8.1 A Winter Storm or Blizzard Alert condition will be activated when the following advisories are issued:

Action Level	All Clear
Blizzard Watch	When the advisory is cancelled
Blizzard Warning	
Winter Storm Watch	
Winter Storm Warning	

- 8.2 When weather advisories indicate an approaching severe winter storm or an active blizzard an alert communication will be issued to all impacted Mosaic employees.
- 8.3 The management Emergency Operations Center (EOC) shall be activated.



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- 8.4 Employees should follow site specific announcements for required actions.

9 TROPICAL STORM AND HURRICANE

- 9.1 A Tropical Storm or Hurricane Alert condition will be activated when the following advisories are issued:

Action Level	All Clear
Tropical Storm Watch	When the advisory is cancelled
Tropical Storm Warning	
Hurricane Watch	
Hurricane Warning	

- 9.2 When weather advisories indicate an approaching tropical storm or hurricane an alert communication will be issued to all impacted Mosaic employees.
- 9.3 Sites will activate tropical storm or hurricane actions based on North America Crisis Management and Incident Command Program as well as site level Hurricane Procedures.



Reference: North America Crisis Management and Incident Command Program

10 THUNDERSTORM AND LIGHTNING ACTIVITY

- 10.1 Each site shall establish a lightning monitoring system that includes an alert and messaging process.
- 10.2 Either the IBM Weather service or the ThorGuard system can be used for lightning monitoring and alerting.
- 10.3 Only one monitoring system shall be used for action level alert decisions.
- 10.4 Sites with weather monitoring hardware, ThorGuard, shall follow all manufacturing requirements for maintenance and testing.
- 10.5 Handheld portable lightning detection devices are not permitted as a notification tool.
- 10.6 Thunderstorm and lightning activity shall be monitored, and actions taken when levels at a minimum exceed:




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IBM Weather Dashboard

Warning Level	Action Level	All Clear
6 mi or 10 km All Lightning	3 mi or 5 km All Lightning	Greater than Warning Level for 15 minutes

 **Note:** IBM Weather Dashboard alerts for lightning at must be set to All Lightning at the specified Warning and Action Level. Alerts for lightning cannot be set to only cloud-to-cloud or cloud-to-ground.

ThorGuard

Warning Level	Action Level (ThorGuard Red Alert)	All Clear
There is electrical activity within the selected area. The user may want to look at the LHL DI values, as these values will change with the activity in the atmosphere. The warning indicates that there may be a strike, or perhaps you may see lightning, but there is less than a 30% chance it will happen within your concerned area.	Indicates that there is a 90% probability of a lightning discharge in your area of concern. The Red Alert hazard should be taken with serious care. This is a fixed level that Thor Guard is using when determining lightning hazard levels. As the storm begins to intensify in the area being monitored, the DI will increase. The number represents the chance of a discharge within the immediate area (2.5 mile radius). As the storm passes through the DI numbers will decrease.	There is no hazard in the area being monitored.


Warning Level: General announcement that lightning has been detected within the affected area. Employees should stay on alert for additional information and plan to seek shelter in a safe place. Elevated work shall stop. For example:

- Equipment operation on gypsum stacks and Tailing Management Areas (TMA)
- Operations of mobile cranes / lifting


- Aerial man lifts operations
- Dozers pushing rock on top of piles or tailings on top of Tailing Management Areas (TMA)

Action Level: Announcement that a lightning strike has been detected within the affected area and all employees shall seek shelter in a safe place. The following activities will be paused, secured and left in a safe state in the event a lightning alert is issued:

- Loading and unloading of barges and vessels at docks
- Dredge operations / brine ponds
- Accessing the top of unprotected elevated structures
- Routine electrical work outdoors
- Any Non-emergency work outside of grounded structure or buildings
- Walking in open areas (employees can walk to the shelter)
- Operating a golf cart (employees can drive to the shelter)
- Operating a Utility Vehicle (UTV) including Gators and Kubota vehicles (employees can drive to the shelter)
- Employees should not leave or enter the facility. It is recommended EE's take cover indoors or remain in their vehicle until lightning has passed.

 **Note:** Site specific procedures may prevent travel into and out of a facility during a Lightning alert condition. Site specific procedures may vary.

10.7 Phosphates sites shall take action per the Mobile Crane and Aerial Lift Programs.

 **Note:** Manufacturing and EHSS Programs shall be followed for the securing of equipment.

 **Reference:** Phosphates Mobile Crane Program

 **Reference:** Phosphates Aerial Lift Program



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11 ROLES AND RESPONSIBILITIES

11.1 The following table contains a listing of responsibilities for specific groups/jobs as required by this program.

Group or Title	Responsibilities
General Manager	<ul style="list-style-type: none">• Ensure compliance with the program requirements at their facility• Authorize and initiate site EAP for pending and current severe weather systems as required• Communicate with Senior Management regarding proceeding actions
Area Managers / Superintendents	<ul style="list-style-type: none">• Ensure compliance with applicable program requirements• Ensure employees comply with program requirements• Notify and advise all individuals in respective areas of site EAP actions
Site EHS	<ul style="list-style-type: none">• Support program on at site level• Provide subject matter expertise and support of the implementation of the program at facility level• Work with Supervision as needed to address weather controls
Designated Personnel (Typically, Security, site specific personnel designated with these responsibilities)	<ul style="list-style-type: none">• Monitor weather continuously.• Send alerts as necessary to all employees per site procedures.
All Employees	<ul style="list-style-type: none">• Be familiar and comply with program requirements• Complete training requirements

12 TRAINING



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12.1 Table 7 below outlines the training required for Crisis Management and Incident Command:

Table 7			
Audience	Training Elements / Topics	Frequency	Method
	<ul style="list-style-type: none">• Role specific on the use of tools, references, and processes• May be met with site specific procedure training such as Emergency Action Plan (EAP) training	Initial	ILT

12.2 Retraining

- In addition, an employee shall receive additional training (or retraining) if any of the following conditions exist:
 - Program requirements change;
 - Changes in the workplace render previous training obsolete;
 - Inadequacies in the employee's knowledge is of concern
 - An incident occurs

13 DEFINITIONS

13.1 Key terms used in this program are defined below.

Term	Definition
Safe Area	Above ground includes a fully enclosed substantial building with plumbing or electrical wiring that will act as a grounding point, or hard top enclosed vehicle / mobile equipment with windows and doors closed. Underground includes basement and tunnel areas.
Elevated Work	Any work that places an employee outside at a raised position including but not limited to cranes, man lifts, etc. including unprotected work above level 1 and / or 4 ft. The top level of elevated grounded structures.



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14 PROGRAM REVIEW

14.1 This program document requires review every seven years.

15 RECORD RETENTION

15.1 Refer to the *Mosaic Document and Record Control* policy for record retention requirements.

16 REFERENCES

References (Number and title)
Mosaic Document and Record Control Policy

17 REVISION LOG

Rev. No.	Rev. Date	Revised By	Reason for Revision
0	05/17/2021	PMO	Initial release
1	1/27/2022	PMO	Change Request
2	11/10/2022	PMO	Review
3	8/22/2023	PMO	IBM Weather settings change