Phosphate Program – Environmental, Health and Safety (EHS) Department

Portable Ladders Program

Document Title: Phosphate Portable Ladders Program		**Document Identifier:** <Generated by Content Server>	
Applies To: North America Phosphates		**Managed By:** EHS PMO	
Document Owner: Director, NA Health & Safety Department		**Document Approver:** VP EHS	
Current Version Effective Date:	15 July 2021	**Formal Review Cycle Due Date:**	15 July 2028

TABLE OF CONTENTS

1. PURPOSE

This program outlines general information on specifications, inspections, and care of portable ladders.

2. SCOPE

2.1 The Program applies to all Mosaic employees, contractors and subcontractors performing work at Mosaic Fertilizer LLC.

3. DEFINITIONS

3.1 **Portable ladder** - A ladder that can be readily moved or carried.

3.2 **Job-made ladder** - A ladder that is fabricated by employees, typically at the construction site; noncommercially manufactured.

3.3 **Fixed ladder** - A ladder that cannot be readily moved or carried because it is an integral part of a building or structure.

3.4 **Competent Person** - This is an individual knowledgeable in the inspection and repair of ladders. (A competent person can recognize hazards, knows how to control them, and has the authority to implement the appropriate hazard control measures).

3.5 **Type I Ladder** - Portable ladder that supports at least 250 pounds (113 kilograms) of weight and are manufactured for heavy-duty use.

3.6 **Type II Ladder** - Portable ladder that supports at least 225 pounds of weight and approved for medium-duty use.

3.7 **Type III Ladder** - Portable ladder that supports at least 200 pounds of weight and are rated for light-duty use.

3.8 **Type IA Ladder** - Portable ladder that supports at least 300 pounds (136 kilograms) of weight and are recommended for extra-heavy-duty industrial use.

3.9 **Type IAA ladder** - Portable ladder that supports at least 375 pounds of weight.

3.10 **Cleat** - A ladder crosspiece of rectangular cross section placed on edge upon which a person may step while ascending or descending a ladder.

3.11 **Point of access** - All areas used by employees for work-related passage from one area or level to another.

3.12 **Single-cleat ladder** - A ladder consisting of a pair of side rails connected together by cleats, rungs or steps.

3.13 **Step stool** (ladder type). This term describes a self-supporting, foldable, portable ladder, nonadjustable in length, 32 inches or less in overall size, with flat steps and without a pail shelf, designed to be climbed on the ladder top cap as well as all steps. The side rails may continue above the top cap.

4. GENERAL REQUIREMENTS

4.1 The following rules apply to ***all ladders*:**

4.1.1 Read and follow all labels/markings on the ladder.

4.1.2 Maintain ladders free of oil, grease and other slipping hazards.

4.1.3 Do not load ladders beyond their maximum intended load nor beyond the manufacturer's rated capacity, including the weight of any tools or equipment.

4.1.4 Use ladders only for their designed purpose.

4.1.5 Use ladders only on stable and level surfaces unless secured to prevent accidental movement.

4.1.6 Do not use ladders on slippery surfaces unless secured or provided with slip-resistant feet to prevent accidental movement. Do not use slip resistant feet as a substitute for exercising care when placing, lashing or holding a ladder upon slippery surfaces.

4.1.7 Secure ladders placed in areas such as passageways, doorways or driveways, or where they can be displaced by workplace activities or traffic to prevent accidental movement or use a barricade to keep traffic or activity away from the ladder.

4.1.8 Keep areas clear around the top and bottom of ladders.

4.1.9 Always maintain a 3-point (two hands and a foot, or two feet and a hand) contact on the ladder when climbing and decending. Keep your body near the middle of the step and always face the ladder while climbing and decending.

4.1.10 Do not carry objects or loads that could cause loss of balance and falling.

4.1.11 Ladders must not be tied or fastened together to create longer sections unless they are specifically designed for such use.

4.1.12 Look for overhead power lines before handling a ladder.

4.1.13 Always inspect the ladder prior to using it. If the ladder is damaged, it must be removed from service and tagged until repaired or discarded. (Defective ladders should be destroyed before being discarded to prevent anyone from using an unsafe ladder).

4.1.14 Do not move or shift a ladder while a person or equipment is on the ladder.

4.1.15 Never push or pull anything sideways while on a ladder.

4.1.16 Only one person at a time on a ladder unless the ladder is specifically designed for two people.

4.1.17 Do not overreach from a ladder, or lean too far to one side. A good rule is to always keep your belt buckle inside the rails of a ladder.

4.1.18 Never slide down a ladder.

4.1.19 Ladders should be constructed of suitable materials that are free of splinters and sharp edges.

4.1.20 Portable ladders shall not be used in the horizontal position.

4.1.21 The rungs, steps, or cleats should be level, parallel, and spaced no more than 12 inches apart. They should either be treated to limit slipping or shaped to be somewhat flat on the stepping surface.

4.1.22 All hardware and fittings should be securely attached.

4.1.23 Only non-metallic, approved ladders shall be used during electrical operations where employees may come into contact with or near electrical circuits/hazards or systems, power lines/conduit.

4.1.24 Movable parts should operate freely without binding or being too loose.

4.1.25 Ladder feet should be in good condition.

4.1.26 Guard against people or vehicles running into the bottom of the ladder.

4.1.27 The minimum clear distance between side rails for all portable ladders must be 11.5 inches (29 cm).

4.1.28 Do not place a ladder on boxes, barrels or other unstable bases to obtain additional height.

4.1.29 Ladders shall not be used as guys, braces or skids; or as platforms, runways or scaffolds.

4.2 DO NOT USE:

4.2.1 Single-rail ladders.

4.2.2 Tripod ladders (ladders with three legs).

4.2.3 Trussel ladders to support scaffold planking.

5. FALL PROTECTION

5.1.1 Although OSHA does not require fall protection for employees climbing or working on portable ladders, the use of available fall protection devices and other safeguards should be considered, to prevent falls, when working 4 feet or more above a lower level. (Please refer to the Mosaic Fall Protection Program).

5.1.2 Fall protection will be required for ladder users in certain situations. An example would be using a ladder to change a light bulb on an elevated walkway, where, if the user should fall, the handrail would not serve as fall protection.

6. STRAIGHT AND EXTENSION LADDERS

6.1.1 Ladders should be positioned so they are safe and secure (e.g. tied or held by another person).

6.1.2 The length of single ladders or individual sections of ladders shall not exceed 30 feet. Two-section ladders shall not exceed 48 feet in length and over two-section ladders shall not exceed 60 feet in length.

6.1.3 Sections up to 11 meters (36 feet) should overlap at least 1 meter (3 feet).

6.1.4 Sections over 11 meters (36 feet) up to 14.5 meters (48 feet) should overlap at least 1.2 meters (4 feet).

6.1.5 Sections over 14.5 meters (48 feet) should overlap at least 1.5 meters (5 feet).

6.1.6 One-half (1/2) inch (1.3 centimeters) rope or substaintial web straps, shall be used to secure (tie-off) straight and extension ladders. Straps or rope should be lashed/tied to the side rails and not the rungs.

6.1.7 The side rails of all ladders shall extend 36 inches (3 feet) above the landing. When this is not practical, grab rails shall be installed.

6.1.8 Ladders shall be placed at an angle to create a 1:4 horizontal/vertical ratio. The foot of the ladder shall be 1' away for each 4' ascension.

6.1.9 When using two or more ladders to reach an elevated work area, there must be a platform, on which to place each subsequent ladder, to access the next level. Never tie or connect two ladders together to reach a higher elevation.

6.1.10 Worn rope on extension ladders should be replaced.

6.1.11 Extension ladders should be extended with the 'fly section' on the upward side of the ladder. This will cause the locking mechanism to be 'compressed' downward on a rung of the 'bed' section of the ladder.

6.1.12 Until an extension ladder is otherwise properly secured, one individual should be supporting the ladder from below while another individual is climbing it and doing work.

6.1.13 The individual supporting the ladder should be physically standing on the lowest rung of the ladder and holding the ladder rungs or rails.

6.1.14 Be sure that all locks on an extension ladder are properly engaged.

7. STEP LADDERS

7.1 Should be no longer than 6 meters (20 feet) measured along the front edge of the side rails.

7.2 Must have a locking device to hold the front and rear sections in an open position while the ladder is being used.

7.3 Steps should be uniformly spaced. Step spacing should not be greater than 30 centimeters (12 inches).

7.4 A stepladder shall not be used as a straight ladder.

7.5 The bracing on the back of a stepladder shall not be used for climbing.

7.6 Do not use the top or top step of a stepladder as a step.

7.7 Where the working surface allows, locking portable raised plateforms shall be used as the primary access for elevated work surfaces in place of step ladders.

8. JOB-MADE LADDERS

8.1 Job-made ladders shall be fabricated in compliance with the regulations in OSHA 1926.1053(a) as quoted in 8.2 & 8.3

8.2 Each self-supporting portable ladder: At least four times the maximum intended load, except that each extra-heavy-duty type 1A metal or fiberglass ladder shall sustain at least 3.3 time the maximum intended load, determined by applying or transmitting the requisite load to the ladder in a downward vertical direction

8.3 Each portable ladder that is not self-supporting: At least four times the maximum intended load, except that each extra-heavy-duty type 1A metal or fiberglass ladders shall sustain at least 3.3 times the maximum intended load, determined by applying or transmitting the requisite load to the ladder in a downward vertical direction when the ladder is placed at an angle of 75 1/2 degrees from the horizontal

8.4 Job-made ladders shall:

8.5 Have a minimum and uniform distance between rungs of 12 inches (30.48 cm), center to center;

8.6 Are capable of supporting a 250-pound (1,112 N) load without deformation; and

8.7 Have a minimum width between side rails of 12 inches (30.48 cm) for ladders 10 feet (3.05 m) in height. Width between rails shall increase at least 1/4 inch (0.64 cm) for each additional 2 feet (0.61 m) of ladder length.

9. INSPECTING LADDERS

9.1 The user has the immediate responsibility to inspect the ladder before each use.

9.2 Quarterly Inspections will be conducted by the user with results noted on the inspection log and filed in the EHS Department.

9.3 Bends, dents, cracks, loose or missing rivets, disconnected braces and corrosion seriously weaken a ladder.

9.4 The area around rivet points on fiberglass ladders should be carefully inspected for hairline stress cracks.

9.5 Any defective ladders shall be removed from service immediately and red tagged.

9.6 Ladders with broken or missing rungs, broken or split side rails, or otherwise damaged, shall not be used and shall be removed from service immediately and red tagged.

9.7 Storing and When not in use, ladders should be stored on racks in locations protected from the elements, with good ventilation, away from excessive heat, near radiators, stoves, steam pipes, or other places where they would be subjected to excessive heat or dampness.

9.8 **Defective Ladders -** Ladders needing repairs are subject to the following:

9.8.1 Portable ladders with structural defects- such as broken or missing rungs, cleats or steps, broken or split rails, corroded components or other faulty or defective components- must immediately be marked defective or tagged with "Do Not Use" or similar language and withdrawn from service until repaired.

9.8.2 Ladder repairs must restore the ladder to a condition meeting its original design criteria before the ladder is returned to use.

10. STORING AND TRANSPORTING LADDERS

10.1 When not in use, ladders should be stored on racks in locations protected from the elements, with good ventilation, away from excessive heat, eg. near radiators, stoves, steam pipes, or other places where they would be subjected to excessive heat or dampness.

10.2 Storage racks should have sufficient supporting points to avoid sagging. Long ladders need support every 6 feet (1.8 meters).

10.3 Other materials are not to be stored on ladders.

10.4 Ladders being transported on road, street and highway motor vehicles should be properly supported.

10.5 Supporting points should be made of material such as wood or rubber-covered iron pipe to minimize chafing and the effects of vibration and movement during transport.

10.6 Ladders over twelve feet should be carried by two persons.

10.7 Ladders should be carried with the front portion lower than the rear. This will minimize impairment of the carriers vision during transport and reduce the risk of injury to others.

10.8 Look for overhead power lines before handling a ladder.

11. TRAINING REQUIREMENTS

11.1 Each employee using ladders shall be trained by an authorized person in the following areas, as applicable:

- 11.1.1 Recognizing potential fall hazards.
- 11.1.2 When to use personal fall protection equipment.
- 11.1.3 How to put on the fall protection equipment and its proper use. This includes proper anchoring of the lanyard, how to estimate the free fall distance, the total fall distance provided to prevent striking a lower level, and storage of the equipment.
- 11.1.4 The types of ladders available based on the particular job they are required to perform.
- 11.1.5 How to conduct ladder inspections. Identify defective and/or deteriorating equipment, loose or damaged mountings, non-functioning parts and either tag the part or remove it from service immediately.
- 11.1.6 Limitations of the equipment and unique conditions at the worksite which are factors in determining the type of system to use.
- 11.1.7 The proper construction, use, placement and care in handling of ladders.
- 11.1.8 The correct procedures for erecting, maintaining and disassembling fall protection systems.
- 11.1.9 The maximum intended load-carrying capacities of ladders used.
- 11.1.10 Training documentation should be maintained.

11.2 Refresher training

- 11.2.1 Retraining shall be provided for each employee as appropriate so that the employee maintains the understanding and knowledge acquired through compliance with this Program.
- 11.2.2 Update employees on any new fall protection equipment that has been developed and recently made available.
- 11.2.3 New job tasks that have been developed, along with the corresponding fall hazards and proper fall protection equipment to use on the job.
- 11.2.4 Any employee who demonstrates a performance deficiency with regards to ladders shall be retrained by a qualified person.

12. REFERENCES

12.1 OSHA 29 CFR 1926.1053 - Ladders

12.2 ANSI A 14.1 - Wood Ladders

12.3 ANSI A 14.2.- Metal Ladders

12.4 ANSI A 14.5 - Portable Reinforced Plastic Ladders

Revision Log

Rev. No.	Requested By	Approved By	Revised By	Rev. Date
1	Safety & Health Dept.	Safety & Health Dept.	Safety & Health Dept.	9/23/99
2	Safety & Health Dept.	O. Morris	Safety & Health Dept.	1/25/02
3	Peer and Facility reviewd	M. Anan	M. Anan	12/6/2011
4	M. Anan	M. Anan	R. Withers	3/12/2012

5	Mike Neal		Ken Corley-corrected typos	5/7/2012
6	Mike Neal		Ken Corley	12/17/2012
7	Review data past due	PMO	PMO	6/30/2021

Contact the Subject Matter Expert for additional information on this program.