



EHSS Phosphates Business Unit Program

Hazardous Work – Safe Work Permit Program

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1 PURPOSE

This program contains requirements to:

- ensure that adequate communication and pre-job planning occurs before hazardous work begins
- assist in identifying and eliminating potential hazards during job preparation
- ensure that all workers are protected from the hazards while working

2 SCOPE

This program applies to all Mosaic Fertilizer LLC Phosphate Business Unit facilities. This program applies to all Phosphate Business Unit employees and contractors performing hazardous work on Mosaic Fertilizer property.

The following hazardous work is considered in scope and requires a Safe Work Permit (SWP):

- Locking out or control of hazardous energy equipment for maintenance, service groups or contractors
- Line Breaking or Equipment Opening on any system that contains or has contained Hazardous Materials
- Hot Work
- Any Work in a Classified Area (see definition)
- Work in any area designated by management as requiring a SWP due to special hazards or the desire to control all work activity in that area
- Other hazardous work including (but not limited to):
 - Hydro blasting
 - Scaffold erection or dismantling
 - Hazardous materials environmental industrial services (vacuum or tank cleaning)
 - Abrasive blasting

This program does not apply to the following:

- Contractors performing non-hazardous work in Mining, Reclamation or remote areas where lockout, Hot Work or work with hazardous materials/processes is not required
- Delivery or transfer of parts, raw materials, products or routine process chemicals
- Maintaining Lockout of disconnects or valves for confined space entry when using a Confined Space Permit; the SWP is required for initial opening of the vessel



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- Hot Work in maintenance shops or areas evaluated and designated as Hot Work areas
- Preventative Maintenance being performed by the maintenance personnel assigned to the area
- Inspections that do not involve isolation of hazardous energy, Hot Work, Hazardous Materials, or Line Breaking and Equipment Opening
- Electrical and instrumentation trouble-shooting (but which may require an Energized Electrical Work Permit above 50V and below 600V); Specific requirements for electrical work are included in the Mosaic Phosphates Electrical Program – Addendum – NFPA 70E Guidelines
- Incidental work such as plumbing, air conditioning maintenance, janitorial, etc., that does not involve isolation of hazardous energy, Hot Work, Hazardous Materials, or Line Breaking and Equipment Opening
- Work requiring the locking out of equipment only as long as all work will be performed by Equipment Owner personnel assigned to the area
- Float Crews and Mine Maintenance performing Hot Work on noncombustible materials when there is no risk of igniting other appreciable sources of combustion such as grass, grease, combustible gases, etc.
- Power Line Clearance Procedure because specific documentation is included in both procedures.
- Routine operations involving:
 - Opening rail car or truck - lids, domes or doors
 - Connecting/disconnecting hoses equipped with quick disconnects used for loading/unloading
 - Instrument air lines from manifold to instrument or actuator
 - Catching samples from pressurized lines

3 APPENDICES

The following appendices are associated with this Program:

Appendix	Appendix Title
A	Definitions
B	Roles and Responsibilities
C	Safe Work Permit
D	Matrix for Final Safety Approval



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Appendix	Appendix Title
E	Workflow
F	Safe Work Permit Authorization for Final Safety Approval

4 GENERAL REQUIREMENTS

- 4.1 A properly executed and completed SWP is required for jobs involving hazardous work considered in scope (see Section 2 SCOPE).
- 4.2 Separate Permits shall be issued to each work group for specific tasks unless the hazards involved, and the precautions listed on a single Permit apply to the job uniformly.
- 4.3 Approvals for the Permit are obtained per the Matrix for Final Safety Approval (Appendix D).
- 4.4 SWP's are valid for one shift up to 12 hours. The work "Shift" refers to the shift of the Work Group performing the Work. If during the Shift the Equipment Owner or Work Group Reps must leave the job, transfer of their responsibilities shall be passed to another designated person and be documented on the permit in the Permit Approval Section.
- 4.5 The Permit shall be posted at the Work area or maintained by the Equipment Owner or Workers representative in a designated location. The Permit must be accessible for review for the duration of the job.
- 4.6 A Permit shall not be issued whenever the Acceptable Safe Work Conditions cannot be met or confirmed.
- 4.7 The Permit is only valid for the Acceptable Safe Work Conditions and duration noted. If any conditions on the Permit are not met, the Permit is void. All work must cease until conditions are met or another Permit is issued.
- 4.8 The Permit shall be protected from the work environment as necessary to protect its legibility.
- 4.9 All writing and signatures on the Permit shall be legible and completed in ink.

5 PERMIT INITIATION

- 5.1 The Work Group Representative must contact the appropriate Equipment Owner when assigned Work to determine if a Permit is required.
- 5.2 An Equipment Owner from that department shall initiate the Permit process by completing the Safe Work Identification section.
- 5.3 An Equipment Owner shall secure and verify the Acceptable Safe Work Conditions section of the Permit.



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6 VERIFYING ACCEPTABLE SAFE WORK CONDITIONS

- 6.1 If the personnel performing the Work do not appear to be familiar with the plant operation and potential hazards and it is felt that they cannot perform the work safely, they shall be referred to the Mosaic representative for the job and/or contact their supervisor.
- 6.2 Each item in the Acceptable Safe Work Conditions shall be secured by an Equipment Owner and verified by an Equipment Owner and Work Group Representative prior to the permit being approved and issued.
- 6.3 Verification shall consist of the Equipment Owner and Work Group Representative conducting a physical walk through of the work area and verifying that all proper isolation methods and precautions are in place and the correct equipment has been identified for work.
- 6.4 If a valve or disconnect for chemicals or an energy source is located in another Process Area, the following rules shall apply:
 - 6.4.1 An Equipment Owner in the Process Area where the valve/disconnect or energy source is located shall secure and lock out the valve or disconnect or energy source with Equipment Owner locks and shall initial the Permit in the Lockout section confirming communication of lockout.
 - 6.4.2 Each person performing work on the system or equipment shall place personal locks on the valve/disconnects or energy source located in the other Process Area or use a lock box as contained in the Lockout Procedure.

7 PERMIT APPROVAL

- 7.1 The Equipment Owner shall authorize permits that do not require additional approvals based on the Final Safety Approval Matrix guidelines.
- 7.2 The Equipment Owner and a Work Group Representative shall print and sign the permit indicating they have verified the equipment and area as safe for work to begin, and all precautions have been completed as listed on the Permit.
- 7.3 If during the Shift the Equipment Owner or Work Group Reps must leave the job, transfer of their responsibilities shall be passed to another designated person and be documented on the permit in the Permit Approval Section.
 - 7.3.1 The person(s) taking over responsibility for an existing Equipment Owner or Work Group Rep shall:
 - Discuss the job with the outgoing Equipment Owner(s) and/or Work Group Rep(s).



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- Review the permit to ensure all acceptable safe work conditions are in place and properly documented on the permit.
- Field verification (testing start/stop buttons and/or visually verifying lock placement) is not required for transfer. The responsibility for field verification remains with the initial Equipment Owner and/or Work Group Representative.
- Place their personal locks on any required disconnects or lock boxes.
- Sign the permit in the appropriate space in the Permit Approval section.

7.4 Final Safety Approval

7.4.1 The Equipment Owner shall determine if Final Safety Approval is required.

7.4.2 If Final Safety Approval is required, the Equipment Owner Supervisor or Shift Supervisor is responsible for obtaining approval per the Matrix for Final Safety Approval prior to commencing work and shall sign the appropriate section on the Permit.

7.4.3 Final approval as per the Matrix for Final Safety Approval (Appendix D – Matrix for Final Safety Approval) shall be obtained prior to commencing Work. The appropriate section on the Permit shall be completed.

7.4.4 Facility General Managers, Sr Managers Prod/Maint and Directors shall designate individuals under their control who are authorized to provide Final Safety Approval per the matrix.

- The individuals designated to approve at a higher level than their official title/position shall document their understanding of the responsibility by completing the Authorization for Final Safety Approval – Appendix F.
- Documentation for designated individuals may be maintained by each department or site with a Matrix for Final Safety Approval that lists the individuals who can approve at various levels.
- The documentation for facility or department Final Safety Approval and Authorizations shall be maintained as a controlled document and updated as needed when there are personnel changes.

8 PERSONS PERFORMING WORK

8.1 All personnel performing the Work must review, understand and comply with the procedures checked on the Permit and sign the Permit legibly in the Persons Performing Work section of the Permit.

8.2 If additional spaces are needed than are available on the permit being issued, an additional permit may be dated and attached to provide additional spaces for persons



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performing work. This additional permit only needs the top section filled out (Safe Work Identification) and to be attached (stapled) to the original permit.

9 WORK COMPLETION

- 9.1 In the Work Complete section of the Permit, the Work Group Representative of the employees performing the Work shall sign the SWP identifying if the job is complete or not complete and if the area is safe to return to service.
- 9.2 The permit shall then be returned to an Equipment Owner who shall then verify the status of the work and close the permit (complete – not complete).
- 9.3 The expired SWP shall be maintained for a minimum of 60 days and be disposed of following the Mosaic Record Retention Policy.

10 ACCEPTABLE SAFE WORK CONDITIONS

10.1 Lockout

- 10.1.1 All equipment shall be secured by the Equipment Owner per the Lockout/Tagout Program, Equipment Specific Lockout Procedures, and listed in the Lockout section on the Permit. The secured equipment does not need to be listed in the Lockout section on the Permit if copies of the applicable Equipment Specific Lockout Procedures are attached to the Permit.
- 10.1.2 Names of the Equipment Owner(s) and Work Group individuals who attempted to start the equipment at the appropriate field start/stop stations shall be listed in the Lockout section, Item 3.

10.2 Line & Equipment Opening

- 10.2.1 Specific requirements for performing Line / Equipment Opening are contained in the Line / Equipment Opening Procedure.
- 10.2.2 Methods used for securing the system shall be documented in the Line Breaking section of the Permit.
- 10.2.3 PPE required for line or equipment opening may be found in the PPE Matrix - Line & Equipment Opening in the Line Breaking and Equipment Opening Procedure. The PPE shall be listed in the PPE and Additional Precautions Section of the Permit.

10.3 Hot Work

- 10.3.1 Specific requirements for performing Hot Work are specified in the Welding / Cutting / Hot Work Program.
- 10.3.2 All precautions for performing Hot Work shall be noted in the Hot Work section of the SWP.

10.4 PPE and Additional Precautions



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- 10.4.1 The Equipment Owner shall indicate on the Permit in the PPE and Additional Precautions sections the type of special PPE that is required. The PPE Matrix – Line/Equipment Opening or Routine Work (see Line/Equipment Opening or PPE Programs) shall be referenced to identify the required PPE.
- 10.4.2 All systems are considered pressurized and the PPE requirements apply until after the line or equipment has been opened and verified as clear and safe to perform work. The required PPE may then be reduced to minimal levels.
- The downgrading of PPE after the initial line break must be approved following the requirements for downgrading PPE section on the Line Breaking/Equipment Opening PPE Matrix. PPE downgrades shall be documented on the SWP in the PPE Section.
 - For highly hazardous chemicals the downgrade approval must be obtained from a Permit Approver at the highest level as outlined by the Matrix for Final Safety Approval.
 - Documentation of the PPE downgrade including the time shall be listed in the PPE section of the Permit. Approval may be obtained verbally or in person.
- 10.4.3 Other additional precautions needed to safely perform the work shall be identified and documented in the PPE and Additional Precautions sections of the Permit.
- 10.5 Atmospheric Testing
- 10.5.1 The area, lines or vessels where Work is to be performed may require testing for flammable vapors, oxygen enrichment, etc. using appropriate instrumentation to determine if Acceptable Safe Work Conditions for performing the Work are met.
- 10.5.2 When the potential for the development of hazardous atmospheres exists continuous monitoring may be required and shall be noted on the Permit. If a break in work activity occurs for a time of one hour or more, the area shall be re-tested for explosive or oxygen deficient conditions before work is resumed.
- 10.5.3 Atmospheric test instruments shall be:
- Used by personnel familiar with the particular instrument
 - Calibrated per the manufacturer's recommendations
 - Labeled with the next calibration due date
 - Checked with a pre-operational check prior to use
 - The user shall insure that the test instruments have current calibration
 - Instruments out of calibration shall not be used



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- 10.5.4 Results of atmospheric testing shall be documented in the Atmospheric Testing section of the Permit. The initials of the person performing the atmospheric tests shall be entered for each test/retest in the Atmospheric Testing section.
- 10.5.5 The results of the initial tests and re-tests shall be recorded on the on the Permit and the employee performing the tests shall initial the Permit in the Atmospheric Testing section.
- 10.5.6 Minerals Supervision shall be responsible for explosive vapor and oxygen deficiency/enrichment testing when required by the Permit or Procedure.

11 TRAINING

11.1 Training

The following table outlines the training required for Hazardous Work – Safe Work Permit Program:

Audience	Training Elements / Topics	Frequency	Method
All employees involved in performing, authorizing, or supervising Work in any Mosaic facility	<ul style="list-style-type: none"> • Purpose and function of the SWP • When a Permit is required • How it is to be used • Lockout – Tagout • Line Breaking & Equipment Opening • Hot Work 	Initial and Annual	Instructor Led Training (ILT) Or Computer Based Training (CBT)

11.2 Retraining

11.2.1 Retraining in safety related work practices and applicable changes in this Program shall be performed annually.

11.2.2 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
- Periodic inspections reveal deviations from the use of the SWP or permitting process
- Inadequacies in the employee’s knowledge is of concern

11.3 Training records



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11.3.1 Training records shall be maintained by the Phosphates Learning Management System (LMS).

11.3.2 Training records shall be maintained as per ***Mosaic Document and Record Control*** policy.

 **Reference:** Mosaic Document and Record Control policy


12 SELF-ASSESSMENTS

12.1 Site self-assessment shall be conducted in accordance with the MMS requirements. This self-assessment may be conducted in conjunction with the annual LOTO review of the energy control procedures.

12.2 The following should be included as part of the self-assessment:

- A review of this document for accuracy and applicability
- An evaluation of site compliance through field observations / audits
- A review of the use of completed SWP's to determine if the SWP's are being used and completed correctly
- A review of the Risk Register for any entries related to the Program
- A review of recent site and / or BU related incidents
- A review of compliance with training requirements as per the Training Matrix

12.3 Document results of self-assessment and corresponding corrective actions.

 **Note:** Recommend any changes to the Program EHS Project Management Office (PMO) via the PMO Change Request form

13 PROGRAM REVIEW

13.1 Phosphates EHS team shall review this program and update as required.

14 RECORD RETENTION

14.1 The expired SWP shall be maintained for a minimum of 60 days and be disposed of following the Mosaic Record Retention Policy.

14.2 If a Pre-Job Risk Assessment is attached to the expired SWP, both shall be maintained for a minimum of 1 year and be disposed of following the Mosaic Record Retention Policy.

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

 **Reference:** Mosaic Document and Record Control policy



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15 REFERENCES

References (Number and title)
OSHA 29 CFR 1910.119 (k) Process Safety Management
NFPA 70E
EHSS-Phos Program – Confined Space Entry
EHSS-Phos Program – Electrical
EHSS-Phos Program – Hot Work Welding Cutting
EHSS-Phos Program – Line Breaking and Equipment Opening
EHSS-Phos Program – Lockout-Tagout (Control of Hazardous Energy)
Mosaic Document and Record Control Policy

16 REVISION LOG

Rev. No.	Rev. Date	Revised By	Reason for Revision
0	12/5/06	Safety Dept.	Initial release
1	2/22/07	Safety Dept.	Moved details for Line Breaking to Line Breaking Procedure
2	3/2/07	Safety Dept.	Divided PPE Matrix into two parts; corrected references
3	3/19/09	Safety Dept.	Added verbiage for downgrading PPP requirements
4	8/10/2011	D. Allen	Reformat for ISO
5	11/30/2012	J. Alderdice/T. Smith	Update per Review Process
6	/2020	EHSS PMO	Update per Review Process