



# Turnaround and Major Project Safety Program

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### 1. PURPOSE

The purpose of the Turnaround and Major Project Program is to develop a standardized environmental, safety and health program for the organizational structure and best practices to be used during turnarounds and major projects.

### 2. SCOPE

The Scope of the program includes all Mosaic Phosphates Operations and should be applied to projects and turnarounds that meet the criteria as defined in the program. Facility Managers and/or the Director of Engineering will determine the applicability of the program for work that is planned under their direction.

### 3. DEFINITIONS

- 3.1 Turnaround – A planned outage at a Mosaic facility where contractors will be utilized to perform major repair, construction or modifications. A Turnaround is typically planned for a duration of more than 3 days and includes either the entire facility or main process units.
- 3.2 Major Project – A planned project at a Mosaic facility where contractors will be utilized to perform major construction or modifications. A Major Project will typically exceed \$3 million in capital or expense spending and exceed 3 days in duration.
- 3.3 ISNetworld (ISN) – Web based program used by Mosaic to assess and select contractors. All contractors performing physical work on Mosaic property are required to be ISN subscribers and maintain acceptable grades/ratings.
- 3.4 Approved Contractor List – A system or list of contractors who have been deemed acceptable to use for work on Mosaic sites. The Approved Contractor List may be a separate document maintained by Procurement. ISN is also acceptable for identifying approved Mosaic contractors.
- 3.5 Variance Form – Signed document that allows Mosaic to use non-approved Contractors or Contractors with a less than acceptable grade in ISN.



- 3.6 Site Risk Mitigation Plan – An approved plan that documents the justification to use a Contractor with a less than acceptable grade and any additional requirements that must be followed while they are working on Mosaic property.
- 3.7 Turnaround or Project Manager – The person responsible for the overall planning and execution of the Turnaround or Project.
- 3.8 Turnaround or Project Steering Team – A team or committee responsible for the planning and execution of the turnaround or project. The team will consist of representatives from each department and support group involved in the TA/Project. Multiple teams may be needed based on the size or duration of the TA/Project.
- 3.9 Turnaround/Project Site EHSS Plan – Written plan following provided template and examples that outlines all aspect of EHSS processes to be used during the specific Turnaround or Project.
- 3.10 EHSS – Environmental, Health, Safety and Security.

#### 4. PROCEDURE

- 4.1 Turnaround or Major Project Planning Process
  - 4.1.1 The Facility Manager and/or Director of Engineering will designate a Turnaround or Project Manager who will ensure adequate planning and resources are allocated to manage to work scope. An established management process will be used for Turnaround and Major Project work (Appendix A – Turnaround Management Process Procedures). Alternative planning or management processes may be used if approved by the Facility Manager and/or Director of engineering.
  - 4.1.2 The Turnaround or Project Manager will ensure a specific plan is developed and communicated. See 4.5 Turnaround/Project Specific Plan (Appendix B – TA/Project Site EHSS Plan Template and Appendix G - Example TA/Project Site EHSS Plans)
- 4.2 Selection of Contractors/Pre-Qualification
  - 4.2.1 Contractors allowed to bid or conduct work will be pre-qualified by Mosaic and approved by the Project Manager. ISNetwork is utilized for pre-qualification and all contractor companies working for Mosaic must maintain an acceptable rating in ISN.
    - a. Any Sub-Contractors used on site will be submitted in advance to the Mosaic TA/Project Manager by the Contractor or Mosaic employee using the sub. These companies will be evaluated to determine training and pre-qualification requirements. The Mosaic Rep or Approved Contractor will take responsibility for their subs in regards to training, orientation, reporting of hours and incidents and processing variances if required.
  - 4.2.2 A Variance Form (Appendix C) is required for non-approved Contractors or Contractors not subscribed to ISN.
  - 4.2.3 A Site Mitigation Plan (Appendix D) is required in addition to a Variance Form for Contractors with less than acceptable ratings in ISN (“C” or “F” ratings).
  - 4.2.4 It is the responsibility of the TA or Project Manager to ensure non-approved Contractors have been assessed to ensure:
    - a. All Variance Forms and Mitigation Plans are completed and on file
    - b. Insurance requirements are met
    - c. EHS programs are adequate for the work being performed
- 4.3 Contractor Training
  - 4.3.1 Contractors selected to perform work will complete all required EHS training prior to entering the site as dictated by the Mosaic business unit requirements. This includes any applicable regulatory training, hazard training and/or site specific training.
  - 4.3.2 Additional training or orientation for specific projects may be required at the direction of the TA/Project Manager or Steering Team.



#### 4.4 EHSS Goals and Staffing

- 4.4.1 The TA/Project Steering Team or Manager will establish specific EHSS goals and targets to be tracked during the TA/Project. The goals will be included in the Site safety Plan and tracked on the Daily TA/Project Safety Summary. Examples of goals include:
- Number of Observations and Audits
  - Management walkthroughs
  - Housekeeping inspection scores
  - Safety Meetings attended by Management/EHSS
  - Injuries, Near Misses and Environmental Events - Targets
- 4.4.2 Staffing for EHSS will be determined by the TA/Project Steering Team or Manager with input and approval from the Facility Manager or the Director of Engineering. Staffing should be based on the scope of the work for adequate coverage. Contractor companies are responsible to provide EHSS professionals and site safety representatives for their crews based on the size or nature of the TA/Project.
- Contractor companies with more than 25 full time employees working on site must have a dedicated full time safety representative on site during the TA/Project Work. Companies with less than 25 employees on site must designate an individual who is responsible for site safety and is the first point of contact for Mosaic.

#### 4.5 Turnaround/Project EHSS Plan (Appendix B – Turnaround/Project EHSS Plan Template and Appendix G - Turnaround/Project EHSS Plans)

- 4.5.1 The Turnaround or Project Manager will ensure a specific TA/Project plan is developed and communicated that includes at a minimum the following EHS management systems:
- Goals, Vision and Principles – the TA plan should include high level goals as set by Mosaic Sr. Management, as well as TA or Project specific targets or goals set by the Steering Team that will be a measure of success for the project.
  - Metrics/Leading Indicators – what activities or processes will be measured and tracked to ensure systems are in place to manage the risk on site. These metrics should be measurable and reported on the TA/Project summary report.
  - Facility Logistics – pedestrian and vehicle traffic, parking areas, washing and restroom facilities, break areas and meeting locations.
  - Security/Site Access – entry/exit points, identification to enter site, training verification, restricted areas.
  - Severe/Inclement Weather Procedures – plans for monitoring, communicating and modifying work due to inclement or severe weather during the Project or TA.
  - Contractor Site Specific Training/Orientation – checklist or information required for all contractor individuals working on site. Method of communication and documentation.
  - Environmental – Environmental aspects must be included in all TA/Major Project planning and execution. Efforts will be in the plan and will include the following:
    - Surveys, Monitoring and Abatement (Asbestos, Lead, etc.)
      - Mosaic employees and non-authorized contractors are not to disturb asbestos or lead paint.
      - Any suspect areas will be surveyed by an approved vendor to determine the presence of asbestos or lead based paint.
      - Approved contractors will perform any required abatement and work with Mosaic environmental staff to make appropriate notifications to FDEP.
      - For all friable asbestos abatement and large non-friable abatement work, 3<sup>rd</sup> party air monitoring of the abatement will be performed.



- E. For demolition projects, all asbestos is to be abated prior to demolition.
- ii. Waste Management – hazardous and non-hazardous
  - A. Wastes will be segregated and stored in an area designated by the environmental department
  - B. All waste containers will be properly labeled
  - C. Contractors are responsible for the proper disposal of waste or leftover materials that they bring on site.
- iii. Spill Response Plan
  - A. For projects where regulated waste will be generated, or that involve transferring hazardous materials or petroleum products a spill response plan will be developed. The plan will be developed by the contractor or group introducing the waste, be specific to the project and be reviewed by the Mosaic representative responsible for the work along with the Mosaic Environmental Dept.
- iv. Fuel Tanks
  - A. All fuel tanks brought on site will be double walled, or will have secondary containment with volume of at least 110% of the tank's capacity.
  - B. A Portable Fuel Tank Tracking Form will be completed and provided to the environmental department for all fuel tanks with a capacity of 55 gallons or greater.
- v. Reporting
  - A. Mosaic's Spill Reporting Policy and Procedure will be followed for all projects. This includes prompt reporting of any spilled or released materials to Mosaic immediately.
- vi. Permitting
  - A. The MOC process will be used to identify any regulatory permitting requirements prior to the project.
  - B. Projects will not begin and in many cases orders for equipment cannot be placed prior to receiving permits.
- vii. Radiation
  - A. The site's Radiation Safety Officer (RSO) will be informed of all activities involving radioactive materials.
  - B. Radiation work permits will be completed by the site's RSO or another 40 hour trained Advanced Authorized User designated by the RSO for all jobs where the dose rate could exceed 2 mR/hr.
  - C. All activities involving radioactive materials will be performed in accordance with Mosaic's Radiation Protection manual.
- h. Industrial Hygiene – identification of potential contaminants, monitoring plans, controls, communication.
- i. Safety Meetings – requirements for daily group meetings, crew tool box meetings, and daily TA performance review meetings.
- j. Safety and Health Policy/Procedures – location and content for contractors to access EHSS policies they are expected to follow.
- k. Safety resources – additional safety resources, including consultants, ERT members, safety observers, etc. will be determined and outlined in the plan. How many will be used, what will their roles be and how will they report out daily.
- l. Pre-Work Requirements



- i. Job Permitting – key permit requirements, location of permit resources, process for obtaining permits.
- ii. Energy Isolation – LOTO procedures and contractor requirements.
- iii. Inspection Checklists – requirements, filing, etc.
- iv. Other Critical Safety Procedures – Fall Protection, Scaffolding, Overhead Work, Traffic Safety, Critical Lifts, etc.
- m. JSA's/TRA's
  - i. Job Safety Hazard Analysis or Task Risk Assessments will be developed for critical tasks and job steps during the TA/Project. The requirement will be determined by the TA/Project Manager and will be communicated to the Contractor Companies.
  - ii. Companies performing work on Mosaic property will develop and communicate the JSA/TRA's to all affected workers to ensure hazards and risks are recognized and controlled.
- n. Barricading/Tagging
  - i. The Mosaic barricading procedure will be communicated and audits will be conducted specific to barricading compliance. The focus will be on proper use of red/yellow barricading, proper tagging and compliance by workers.
- o. Scaffolding/Overhead Work
  - i. Special emphasis on the Mosaic Scaffold Program including precautions and requirements for overhead work will be part of the planning and auditing phase of the TA/Project. This includes storing materials, lifting and lowering of tools in proper lifting devices (tool buckets), tethering of tools and use of barricading to protect workers below.
- p. Fall Protection/Prevention
  - i. Mosaic requires 100% fall protection for all work. This requires fall protection and prevention to be integrated into the planning of all TA/Project efforts. Written fall protection plans will be required for work where the risk of falls is elevated.
  - ii. The requirement for written fall protection plans will be determined by the TA/Project Manager and/or the company conducting the work.
- q. Audits/Observation Processes – description of supervisory audits and/or observation processes that will be used. Scheduling of people, type and number of audits/observations, and communication of results will be included.
- r. Emergency Response Procedures – alerting systems, contact numbers, evacuation procedures, shelter in place and mustering areas.
- s. Procedures for managing start up or shut down of adjacent plants or process units that may affect TA or Project workers (sulfuric acid or ammonia processes).
- t. Incident Reporting and Investigation – Mosaic reporting procedures, timelines, format.
- u. Turnaround/Project Daily Summary - The TA/Project Manager will designate resources to maintain a daily summary report (Appendix F – TA/Project Daily Safety Report) which will be distributed during daily safety and performance meetings. The information will be disseminated through daily tool box and company safety meetings.
- v. Recognition – daily or weekly recognition to workers or companies for demonstrating safe behaviors or meeting performance targets.
- w. Discipline – Individual or company discipline for non-compliance with procedures. Any critical safety rules or areas of focus should be included in the plan.



- x. Review and Approval Process – the plan will be reviewed prior to the project by Mosaic BU Management with signatures obtained for approval. The review can take place during planned outage meetings with the managers present. Signatures for approval shall be obtained from the:
  - i. Facility Manager
  - ii. TA/Project Manager
  - iii. Director or VP of Engineering and Technical Services
  - iv. Director of Health and Safety
- 4.6 EHSS Guidelines/Best Practices for Turnaround and Major Project Management
  - 4.6.1 In addition to the basic requirements in the Turnaround/Project EHSS Plan, the guidelines in this section should be implemented at the direction of the Turnaround/Project Manager. The expectation is for all Mosaic operations to follow a consistent, proactive process and to include these practices in all turnarounds and projects covered under the scope of this program.
  - 4.6.2 Pre TA/Project Kick Off Meeting
    - a. A meeting to include all contractor company managers, safety representatives and Mosaic TA/Project personnel will be scheduled prior to the work beginning. The meeting outcomes include:
      - i. Introductions/familiarization of all group representatives, key personnel and their contact information.
      - ii. Basic review of the scope of work to be performed and the persons/group responsible for each area or job scope.
      - iii. Training and site entry requirements for all contractor company workers.
      - iv. Review of logistics including plant access, security, parking, etc.
      - v. Emergency response and notifications. The procedures and contact information will be made available and shall be included in the Site Specific Turnaround/Project Plan.
      - vi. Review of EHSS basic requirements. A checklist (Appendix E – TA/Project EHSS Checklist) should be used to document the meeting and the topics covered. This information shall be transferred to each individual contract worker by their company representatives prior to work beginning. Documentation will be maintained by each company and will be made available upon request.
      - vii. A question/answer session and general discussion to clarify expectations.
  - 4.6.3 Contractor TA/Project Tent
    - a. A location will be established for contractors to utilize for daily meetings that is large enough and equipped for the number of workers expected. A speaker system should be set up as needed so that meetings will be effective and the presented can be heard by attendees. The location is typically a tent with tables and chairs that can also be used for breaks, lunch, etc. and is also located near restroom and washing facilities.
  - 4.6.4 Contractor Safety Contacts/Representatives
    - a. Key contractor companies working on site will designate a member of management who will serve as the safety contact for the duration of the project or turnaround. This person should have overall responsibilities for their company site safety and will be the contact for all safety related activities including meetings, audits and accident investigations.
    - b. Companies required to establish a designated safety contact will be determined by the Turnaround or Project Manager.
  - 4.6.5 Daily Safety Meetings



- a. A schedule will be established for daily safety meetings that will ensure each individual working on site participates in a meeting at least once per shift. Contractor Safety Contacts/Representatives will also participate in a daily meeting coordinated by the Mosaic Turnaround/Project Manager and Mosaic EHS. The daily meeting will include:
  - i. A review of the Turnaround/Project Daily Summary including any incidents occurring the previous day/shift.
  - ii. Audits and observations conducted with key findings.
  - iii. Safety meeting topics for the next day/shift safety meetings.
  - iv. Positive recognition for individuals/companies.
- 4.6.6 Flagman Requirements
  - a. Mobile equipment and motorized vehicles moving through designated TA/Project areas will be required to have a flag person in place during movement. The designated area(s) and specific requirements will be established during the planning phase and be included in the Site Specific TA/Project Plan.
- 4.6.7 Equipment Inspections and Deliveries
  - a. A process to inspect and approve any and all heavy or mobile equipment prior to being used on site. This includes cranes, aerial lifts, fork trucks, etc. that are to be used by Mosaic or Contractors. A person designated by the TA/Project Manager will take ownership of ensuring all equipment is inspected prior to work beginning and ongoing as needed.
  - b. Each Contractor company will designate a person to coordinate equipment or material deliveries to the site. They will meet and escort the delivery personnel, ensure safe unloading of the equipment or materials, and coordinate any needed inspections before use.
- 4.6.8 Audits and Observations
  - a. A schedule and process for conducting safety audits and observations will be established and included in the Site Specific TA/Project Plan. This will include Mosaic management, EHS personnel and contractors. The schedule should provide coverage throughout the TA/Project and include weekends and off shifts.
  - b. Audits and observation targets will be established and tracked on the Daily TA/Project Safety Summary, with the results and feedback used in daily meetings.
- 4.6.9 Cross Team Audits
  - a. Promoting or requiring individuals or groups to team up and conduct audits on each other's crews. This promotes communication between companies and work groups and brings in another point of view for the audit. Cross Team Audits can be scheduled during daily TA meetings at the direction of the Steering Team.
- 4.6.10 Team Walkthroughs
  - a. In addition to or in conjunction with the audit/observation process, teams will be established to conduct area walkthroughs to promote safe behaviors, housekeeping and to provide coaching/positive recognition where appropriate. The teams should be a cross section of Mosaic and Contractor management with support from EHS.
- 4.6.11 Housekeeping Stand Downs/Roll-ups
  - a. Housekeeping is an integral part of TA/Project safety and should be included in the daily discussions and auditing.
  - b. Focused Housekeeping "Stand Downs" or Roll-Ups" should be scheduled as needed in order to get crews re-focused on housekeeping and to provide resources to bring the standard up to acceptable levels. This will be determined by the TA/Project Manager or Team and will be communicated through daily meetings when scheduled.



- 4.6.12 Positive Recognition/Rewards
  - a. A plan or system for recognition will be put in place to promote safe behaviors and to recognize safety performance. Recognition should be flexible and designed to address individuals, companies and the entire TA team when appropriate. Recognition will be driven by the TA/Project Manager and should include:
    - i. Stickers, trinkets or handouts for workers who demonstrate positive efforts.
    - ii. Drawings of audits/observations that are conducted by workers that result in recognition/rewards.
    - iii. Meals or snack items provided to crews for achieving performance goals.
- 4.7 Post Turnaround or Project Critique Meeting
  - 4.7.1 At the completion of the TA/Project, the TA/Project Manager will coordinate a meeting with key Mosaic and Contractor representatives to review the plan and overall effort to determine opportunities for improvement. The critique meeting should include:
    - a. Review of the written TA/Project Safety Plan to identify gaps or omissions.
    - b. Review of incidents and investigation findings for lessons learned.
    - c. Overall planning, scheduling and logistical issues during the TA/Project.
    - d. Groups or companies that performed well and should be recognized, along with groups or companies who may benefit from coaching or corrective actions.
  - 4.7.2 A summary of the meeting should be distributed and made available to other sites and/or TA/Project Steering Teams for future use during planning phases.
- 5. TRAINING
  - 5.1 The Turnaround and Major Project Program will be reviewed by all Mosaic personnel responsible for TA/Project planning and support. This includes plant operations, engineering and EHSS. Department heads will ensure the program is communicated and utilized as required.
- 6. PROGRAM REVIEW / PERIODIC INSPECTIONS
  - 6.1 The Turnaround and Major Project Program will be reviewed and updated every 3 years from the effective date. New processes and methods may be added more frequently at the discretion of EHS.
- 7. CONTRACTORS
  - 7.1 Contractors involved in bidding or work on Mosaic property during Turnarounds or Major Projects will be expected to read and support the program including providing resources to apply all program elements where required.
- 8. APPENDICES
  - 8.1 Appendix A – Turnaround Management Process Procedures
  - 8.2 Appendix B – TA/Project Site EHSS Plan Template
  - 8.3 Appendix C – Contractor Variance Form
  - 8.4 Appendix D – Contractor Site Risk Mitigation Plan
  - 8.5 Appendix E – TA/Project Safety Checklist
  - 8.6 Appendix F - Daily TA/Project Safety Summary
  - 8.7 Appendix G - *Example* TA/Project Site EHSS Plans
- 9. REFERENCES
  - 9.1 Mosaic Turnaround Process Procedures, Dennis Sisco, 2008 (Appendix A)





**10. REVISION LOG**

Revision Log				
Rev. No.	Requested By	Approved By	Revised By	Rev. Date
1	Safety Department		Todd Smith	12-21-2011

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