

Appendix 5

Best Management Practices (BMP) Plan



*Simplot Rock Springs Consent Decree
Appendix 5.A*

Appendix 5.A

Minimizing and Addressing Spills and Leaks

Rock Springs
Final

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BMP – Minimizing and Addressing Spills and Leaks
Simplot Rock Springs

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Introduction

Simplot has developed Appendix 5.A: Best Management Practices Plan (hereinafter either “BMP” or “Plan”) to reduce unintended inputs¹ of phosphoric acid, sulfuric acid, fluorosilicic acid (FSA)², and SACS to Process Wastewater entering the Phosphogypsum Stack System. Where possible, Simplot will capture and reuse these materials. The BMP excludes equipment cleaning practices; these are addressed in Appendix 4 of the Consent Decree (the Facility Report), Section VI (Compliance Projects). This Plan also addresses other chemicals used at the Facility to ensure proper management and reduce unintended releases of these materials to the environment.

Through the BMP, Simplot has established procedures to address the management, tracking, and reporting of phosphoric acid, sulfuric acid, and FSA leaks¹ and spills¹ for its fertilizer production facilities in Rock Springs, Wyoming; in areas of the phosphoric acid plant (post first-stage filtration, e.g. table filters), including acid clarification and evaporation, and in the Granulation plants. The specific details of the BMP for the phosphoric acid (“Phosphoric Acid Plant”) and Granulation plants are discussed in the Sections that follow and the referenced Attachments. Where noted, certain BMP procedures are dependent upon the commencement of operation of the compliance projects set forth in Appendix 6 (Project Narrative & Compliance Schedules), to the Consent Decree.

All capitalized terms and/or acronyms not otherwise defined in this Appendix shall have the meaning set forth in the Consent Decree or in Appendix 9.

¹ For purposes of this BMP document: “unintended inputs”, “leaks, and “spills” are synonymous and mean accidental or unplanned escape of process streams (i.e. acid or cleaning solution) from the primary container, conveyance piping, valves, flanges, and/or pumps onto impervious surfaces with a reasonable potential to reach or exceed the BMP Actionable Volume (Table 1) or onto non-impervious surfaces.

² FSA is produced once it enters the transfer line to the FSA Settling Tanks described in Section IV.D of the Facility Report; before this point the process condensate from the phosphoric acid evaporators involved with FSA production is Process Wastewater.

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1 Containment of Phosphoric Acid Production Related Spills and Leaks

1.1 Non-Segregable Areas (Figure 1)

The concrete pads within the non-segregable areas (“Non-Segregable Areas”) of the Simplot Rock Springs Phosphoric Acid Plant are sloped towards lined sumps that transport any leaks and spills to the Phosphogypsum Stack System. For the #1, #2, and #3 Acid Sumps, Process Wastewater flows through the sumps at a rate of 300-500 gpm to the HDPE-lined Phosphogypsum Stack System. There are some areas in the phosphoric acid area that are not concrete and they are shown with redlines in Figure 2. The non-concrete areas are designated as “other areas” such that spills and leaks in these areas must be managed in accordance with RCRA and any other applicable law.

Figure 1: Non-Segregable Areas

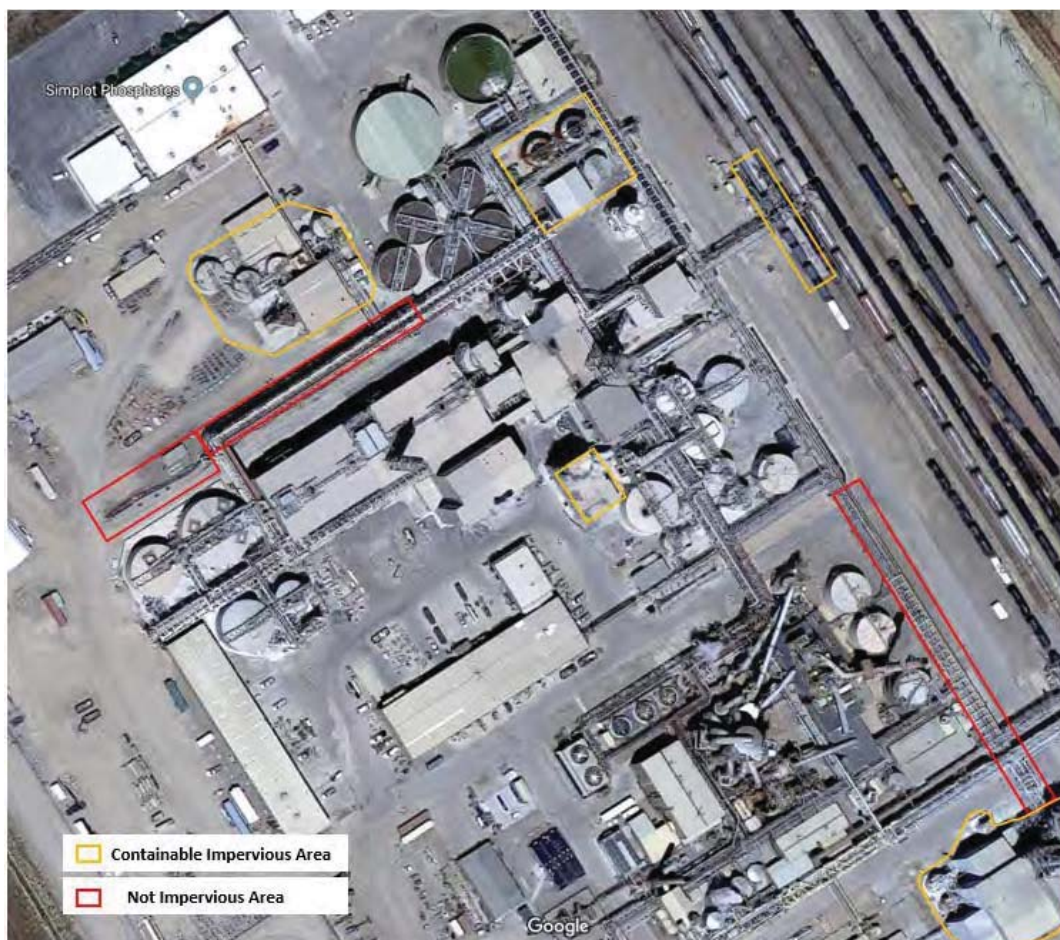


**BMP – Minimizing and Addressing Spills and Leaks
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1. SPA Acid and Re-pulp Sump Area
2. SPA Shipping and FSA Area
3. Car Wash Sump Area
4. C Evaporator Area
5. Granulation Plant Area

Spills and leaks of phosphoric acid, sulfuric acid, and FSA onto impervious areas designated by yellow lines in Figure 2 (“Containable Impervious Areas”) must be separately contained, and then recovered in accordance with the BMP. The foregoing shall not relieve Simplot of its obligations to manage any spills and leaks under RCRA or any other applicable law.

Figure 2: Containable Impervious Areas and Non-Impervious Areas (“Other Areas”)



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1.3 Semi-Segregable Areas (Figure 3)

1. 44/54 or #2 Tank Farm Area
2. East Phosphoric Acid Pipe rack
3. #1 or Badger Tank Farm Area
4. D/E Evaporator Area

For the semi-segregable area (“Semi-Segregable Areas”) sumps, Process Wastewater has intermittent and unpredictable flows through the sumps at varying rates in the range of several hundred to a few thousand gallons a minute depending upon location and circumstance. The normal flow path for the sumps in these areas will be to the Phosphogypsum Stack System. Due to the engineered slope of the concrete pad in these areas and the configuration of the Phosphoric Acid Plant, spills and leaks of phosphoric acid, sulfuric acid, SPA, and FSA onto the concrete pad will flow to the sump and mix with the Process Wastewater being pumped from the sump. If high acid content is detected by acid content monitoring instruments, then the entire flow from the sump will be diverted for recovery in accordance with the BMP.

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Figure 3: Semi-Segregable Areas

**1.4 Other Areas (Figure 2)**

Any leak or spill of a hazardous material, including phosphoric acid and sulfuric acid, that is not contained within the Containable Impervious Areas, Semi-Segregable Areas, or Non-Segregable Areas of the plant shall be managed in accordance with RCRA and any other applicable law.

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2 Phosphoric Acid Plants Leak / Spill Detection Systems and Response Procedures**2.1 General**

Simplot will implement two approaches to increase the likelihood of detecting Non-Segregable Area acid leaks, spills and process upsets: operator inspections and acid content monitoring in Non-Segregable and Semi-Segregable Area sumps. While acid content monitoring is exclusive to Non-Segregable and Semi-Segregable Areas, operator inspections also serve to identify observable leaks and spills of acids regardless of the area of the plant where they occur – Non-Segregable, Semi-Segregable, Contained Impervious, or outside Contained Impervious Areas (“Other Areas”).

2.2 Release Reporting

Simplot personnel are responsible for notifying the appropriate personnel immediately upon identifying a leak or spill of any hazardous material listed in Attachment A, Table 1- BMP Actionable Volumes (hereinafter, “Table 1 Materials”) with a reasonable potential to reach or exceed the BMP Actionable Volume (Table 1) pursuant to this BMP. This BMP does not relieve Simplot of its obligation to comply with any federal, state, or local laws applicable to hazardous materials releases to the environment.

2.3 Inspections

Operators will visually inspect plant process equipment, floors and sumps for leaks and/or spills of phosphoric acid, sulfuric acid, and FSA during their normal rounds a minimum of twice per shift (2 shifts per day) and document the inspection findings. A leak or spill, as referenced throughout this BMP, is defined as an accidental or unplanned release of Table 1 Materials from the primary container, conveyance piping, valves, flanges, and/or pumps with a reasonable potential to reach or exceed the BMP Actionable Volume (Table 1) within a 24 hour period and/or which triggers the alarm limits for the acid content monitoring system on key outgoing sumps in Non-Segregable Areas. The operator will attempt to correct leaks from valves, flanges, pumps, or any other equipment that can be readily and safely corrected at the time of discovery. The incident(s) will be reported to management for further action and recorded in the tracking database for future reference. Reporting responsibilities are outlined in Simplot's Spill Reporting Policy and Procedure.

2.4 Acid Content Monitoring System Description: Non- & Semi-Segregable Spills / Leaks

The Facility will monitor key outgoing sumps (see Attachment B) with an acid content monitoring system to enable the continuous detection of changes in acid content that indicate occurrence of detectable acid leaks and spills. Each key outgoing sump will have a measurement device to continuously measure the acid content of the Process Wastewater being pumped from the sump as shown in Attachment B of this Plan. The acid content monitoring of the return Process Wastewater stream from each non-segregable and semi-segregable sump will be displayed on the operators' distributive control system (DCS) (see Attachment B of this Plan for an example).

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Acid leaking or spilling into an outgoing sump stream will increase the acid content of the aqueous water stream within and exiting the sump. Within Non-Segregable Areas, alarms will be triggered if the acid content increases beyond the set alarm limits for a 5-minute interval. Upon triggering of such an alarm, the area around the measurement device will be investigated (see Attachment B of this BMP for the corrective action plan, or “Corrective Action Plan”). For semi-segregable sumps, alarms will be triggered if the acid content increases beyond the set alarm limits for a 2-minute interval. Upon triggering of such an alarm, the sump will be automatically switched to recovery (see Attachment B) by the DCS once the alarm sounds and the area around the measurement device will be investigated. After the acid content within the semi-segregable sump reduces below the alarm threshold for a 2-minute interval, the process wastewater flow from the semi-segregable sump will be automatically reverted to discharge back to the Phosphogypsum Stack System by the DCS. The locations of acid content monitoring devices are found in Attachment B of this Plan.

Individual measurement devices will alarm based on the preliminary trigger values set for each device found in Attachment B of this Plan. The targets shown in Attachment B of this Plan are the preliminary targets for the Facility. Pursuant to Section 7: BMP Performance Standards, Simplot will monitor the devices for a period of one year starting from the date of completion of the applicable compliance project in Appendix 6 (RCRA Project Narrative and Compliance Schedule) to the Consent Decree, to ensure settings are correct for alerting operations to leaks and spills within the limits of the devices when properly operated and calibrated. Simplot will notify EPA when the one-year monitoring period begins. After the one (1) year period, Simplot will notify EPA of the results and monitoring will continue.

When an alarm triggers, the operator will inspect that area of the plant for any problems and take appropriate measures to stop or minimize the release and minimize further impacts (see Attachment B of this Plan).

The acid content measurement system will be maintained in accordance with specific manufacturer recommendations or acceptable industrial practices and updated as needed. Devices will be checked at least monthly and during any instrument error readings and calibrated if necessary. The calibration dates and alarm limits will be documented in the maintenance management system that is in place at the time. Maintenance and calibration procedures are found in Attachment B of this Plan.

2.5 Tracking / Recording

A tracking database software (currently Enablon)³ will be used to track leaks and spills of Table 1 Materials with a reasonable potential to reach or exceed the BMP Actionable Volume (Table 1) within any rolling 24-hour period and the remedial measures taken to address these leaks and spills. The area management, engineering, and environmental

³ If problems develop using the Enablon software for the tracking/recording required in this Appendices 5A and 5B, an alternative tracking/recording method will be put in place.

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departments will use the maintenance management system to ensure the prompt and proper execution of corrective actions. When plant personnel identify a leak or spill of Table 1 Materials with a reasonable potential to reach or exceed the BMP Actionable Volume (Table 1) within any rolling 24-hour period, appropriate corrective actions will be taken as outlined below. A record of the incident will be entered within 24 hours of the incident into the tracking database software to log and track leaks and spills of Table 1 Materials. Supervisors will be trained to enter incidents into the tracking database software. The tracking database software tracks specific information including date and time of release, date and time of report, a description of the incident, volume of the material, type of material, and additional supporting information. Simplot personnel are responsible for notifying the appropriate personnel immediately upon the identification of a leak or spill.

2.6 Reporting, Recovery, and Corrective Actions

Management and environmental staff will be notified immediately of leaks or spills with a reasonable potential to reach or exceed the BMP Actionable Volume (Table 1) to verify the volume of the leak or spill and ensure that it is properly reported, documented, and corrected pursuant to this BMP. The tracking database software will be used to track leaks and spills of Table 1 Materials with a reasonable potential to reach or exceed the BMP Actionable Volume (Table 1) within any rolling 24-hour period and the immediate actions taken to address the leak or spill. The area management, engineering, and environmental departments will use the maintenance management system to ensure the prompt and proper execution of corrective actions.

2.6.1 Non-Segregable Areas of the Phosphoric Acid Plants

2.6.1.1 Reporting

A leak or spill of a Table 1 Material into a Non-Segregable Area, with a reasonable potential to reach or exceed the BMP Actionable Volume (Table 1) within any rolling 24-hour period, which is detected as a result of visual inspections, alarms, or acid content monitoring must be logged into the tracking database software. See Section 2.6.1.2 (Corrective Actions), below.

Appropriate management and environmental staff will be notified, and the leak or spill will be properly reported, documented, and corrected pursuant to this BMP.

2.6.1.2 Corrective Actions

If a leak or spill of a Table 1 Material into a Non-Segregable Area, with a reasonable potential to reach or exceed the BMP Actionable Volume (Table 1) within any rolling 24-hour period is discovered, Simplot will take the following measures:

1. Investigate potential release sources.
2. Address any issues found.
 - a. Stop the release if possible, such as by flow diversion or by closing the release gate.

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- b. Generate a work order if needed to correct the issue.
3. Document the release in the tracking database software.
4. Report the release to the appropriate agencies pursuant to (or in accordance with) the Consent Decree

This BMP does not relieve Simplot of its obligation to comply with any federal, state, or local laws applicable to hazardous materials releases to the environment.

2.6.2 Containable Impervious Areas**2.6.2.1 Reporting**

A leak or spill of a Table 1 Material with a reasonable potential to reach or exceed the BMP Actionable Volume (Table 1) into a Containable Impervious Area, as described in the Rock Springs Facility Report, must be logged into the tracking database software and made available to inspectors upon request, but does not need to be reported to the EPA if recovered to a tank containing the same chemical or the Acid Value Recovery System, described in Section 4: Recovery System Operation for Spill and Leak Recovery, of this BMP.

2.6.2.2 Recovery and Corrective Actions

A leak or spill of a Table 1 Material with a reasonable potential to reach or exceed the BMP Actionable Volume (Table 1) into a Containable Impervious Area, will be recovered back to a tank containing the same chemical or input into the Acid Value Recovery System via sump pump, vacuum truck, or other means. If unrecoverable due to contamination or location of the spill, the material must be managed in compliance with the RCRA Requirements as described in the Consent Decree. This BMP does not relieve Simplot of its obligation to comply with any other federal, state, or local laws applicable to such a leak or spill.

2.6.3 Semi-Segregable Areas**2.6.3.1 Reporting**

A leak or spill of a Table 1 Material into a Semi-Segregable Area, with a reasonable potential to reach or exceed the BMP Actionable Volume (Table 1) within any rolling 24-hour period, which is detected as a result of visual inspections, alarms, or acid content monitoring must be logged into the tracking database software. See Section 2.6.3.2: Corrective Actions, below.

Appropriate management and environmental staff will be notified, and the leak or spill will be properly reported, documented, and corrected pursuant to this BMP.

2.6.3.2 Recovery and Corrective Actions

A leak or spill of a Table 1 Material into a Semi-Segregable Area, with a reasonable potential to reach or exceed the BMP Actionable Volume (Table 1) within any rolling 24-hour period, which is detected as a result of visual inspections, alarms, or acid content monitoring will be recovered back to a tank containing the same chemical or

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input into the Acid Value Recovery System, described in Section 4: Recovery System Operation for Spill and Leak Recovery, of this BMP. If unrecoverable due to large volumes of Process Wastewater in the same area or there is a reasonable potential the volume of material pumped to the Phosphogypsum Stack System before the system started collecting reached or exceeded the BMP Actionable Volume, then Simplot will notify the agencies of the release in accordance with the Consent Decree. If the volume pumped to the Phosphogypsum Stack System did not reasonably reach or exceed the BMP Actionable Volume, the leak or spill only needs to be recorded in the tracking database and not reported to the agencies. Upon triggering of an alarm in these areas, Simplot will take the following measures:

1. Investigate potential release sources.
2. Address any issues found.
 - a. Stop the release if possible, such as by flow diversion or by closing the release gate.
 - b. Generate a work order if needed to correct the issue.
3. Document the release in the tracking database software.
4. Report the release to agencies pursuant with the Consent Decree.

This BMP does not relieve Simplot of its obligation to comply with any federal, state, or local laws applicable to hazardous materials releases to the environment.

2.6.4 Other Areas**2.6.4.1 Reporting**

All reasonable measures shall be taken to avoid releases of Table 1 materials outside of plant containment areas. In the event of a release, Simplot must comply with the appropriate federal, state, or local laws applicable to such a release. A leak or spill of a Table 1 Material with a reasonable potential to reach or exceed the BMP Actionable Volume (Table 1) must be recorded in the tracking database software and reported pursuant to the Consent Decree.

2.6.4.2 Corrective Actions

All reasonable measures shall be taken to avoid releases of Table 1 materials outside of plant containment areas. In the event of such a release, Simplot must comply with the appropriate federal, state, or local laws applicable to such a release.

2.7 Production Department Responsibilities

The Phosphoric Acid Production Department personnel will be responsible for troubleshooting and correcting process upsets that result in a leak or spill. The operator covering the plant at which the upset occurs will notify his or her supervisor and begin taking immediate action. The appropriate manager or supervisor will enter a leak or spill in the tracking database software.

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2.8 Maintenance Department Responsibilities

The Maintenance Department personnel will be responsible for repairs and maintenance of faulty equipment. If the leak or spill is the result of a mechanical failure, then the appropriate operations personnel shall notify the Maintenance Department of the condition and a work order request for correction of the problem is initiated. The Maintenance Department will be responsible for timely completion of leak repairs. Maintenance work order requests and their status are tracked in a computerized maintenance management system.

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3 Granulation Plants Leak / Spill Detection Systems and Response Procedures**3.1 General**

The purpose of this Section is to assist Simplot's operators with the appropriate management of leaks and spills of phosphoric acid and sulfuric acid in the Granulation plant ("Granulation Plant").

Leaks and spills of a Table 1 Material to secondary containment areas in the Granulation Plant will be captured and returned to the process as soon as practicable. If recovery is not possible, then they will be treated in an appropriate vessel so that they no longer exhibit hazardous characteristics and meet the LDR standards and may be discharged to the Phosphogypsum Stack System. If treatment is not possible, then they will be managed in compliance with the RCRA Requirements as described in the Consent Decree, as well as the specific procedures set forth in this BMP.

3.2 Release Reporting

Simplot personnel are responsible for notifying the appropriate personnel immediately upon the identification of a leak or spill of a Table 1 Material with a reasonable potential to reach or exceed the BMP Actionable Volume (Table 1) pursuant to this BMP. This BMP does not relieve Simplot of its obligation to comply with any federal, state, or local laws applicable to hazardous materials releases to the environment.

3.3 Inspections

Operators will inspect the Granulation Plants in the course of their normal rounds and document the inspections. The operator will correct leaks from valves, flanges, pumps, or any other equipment that can be readily and safely corrected at the time of discovery. The incident will be recorded in the tracking database software. Operator and supervisor responsibilities associated with discovery of a spill or leak are outlined in this BMP.

3.4 Recording / Tracking

When plant personnel identify a leak or spill of a Table 1 Material with a reasonable potential to reach or exceed the BMP Actionable Volume (Table 1), appropriate actions will be taken as outlined in this BMP. A record of the incident will be entered into the tracking database software within 24 hours of the incident. Supervisors will be trained to enter incidents into the tracking database software. As described in Section 2.5, the tracking database software program tracks specific information including date and time of release, date and time of report, a description of the incident, volume of the material, type of material, and additional supporting information.

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3.5 Reporting, Recovery, and Corrective Actions**3.5.1 Containable Impervious Areas of the Granulation Plants****3.5.1.1 Reporting**

A leak or spill of a Table 1 Material with a reasonable potential to reach or exceed the BMP Actionable Volume (Table 1) to Containable Impervious Areas as described in the Facility Report must be logged into the tracking database software, but does not need to be reported to EPA or other regulatory agency if recovered to a tank containing the same chemical, the Acid Value Recovery System or the Granulation Recovery System, as described below.

3.5.1.2 Recovery and Corrective Actions

A leak or spill of a Table 1 Material with a reasonable potential to reach or exceed the BMP Actionable Volume (Table 1) to Containable Impervious Areas as described in the Facility Report will be recovered back to the appropriate process vessel containing the same chemical or input into the Acid Value Recovery System or Granulation Recovery System, as described in the Facility Report.

If unrecoverable for any reason, the leak or spill must be managed in compliance with the RCRA Requirements as described in the Consent Decree. This BMP does not relieve Simplot of its obligation to comply with any federal, state, or local laws applicable to hazardous materials releases to the environment.

3.5.2 Other Areas**3.5.2.1 Reporting**

Simplot personnel are responsible for notifying the appropriate personnel immediately upon identification of a leak or spill.

A leak or spill of a Table 1 Material with a reasonable potential to reach or exceed the BMP Actionable Volume (Table 1) that is not contained within a Containable Impervious Area as described in the Facility Report must be recorded in the tracking database software and reported pursuant to the Consent Decree. This BMP does not relieve Simplot of its obligation to comply with any federal, state, or local laws applicable to hazardous materials releases to the environment. The tracking database software shall be used to record such a spill or leak and to track immediate actions taken to address the leak or spill.

3.5.2.2 Corrective Actions

The cleanup of a leak or spill of a Table 1 Material shall be administered in compliance with the Consent Decree. This BMP does not relieve Simplot of its obligation to comply with any federal, state, or local laws applicable to hazardous materials releases to the environment.

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3.6 Production Department Responsibilities

The Granulation Production Department personnel shall be responsible for troubleshooting and correcting process upsets. The employee who discovers the upset shall execute his or her responsibilities as outlined in this BMP. The operator covering the plant at which the leak or spill occurred shall notify his or her supervisor and begin taking immediate action. The appropriate manager or supervisor shall enter the incident in the tracking database software.

3.7 Maintenance Department Responsibilities

The Maintenance Department personnel will be responsible for repairs and maintenance to faulty equipment. If the leak or spill is the result of a mechanical failure, then the appropriate operations personnel shall notify the Maintenance Department of the condition and shall initiate a work order request for correction of the problem. The Maintenance Department shall be responsible for timely completion of leak repairs. Maintenance work requests and their status are tracked in a computerized maintenance management system. When the Maintenance Department completes the repairs, the appropriate operations personnel shall be notified.

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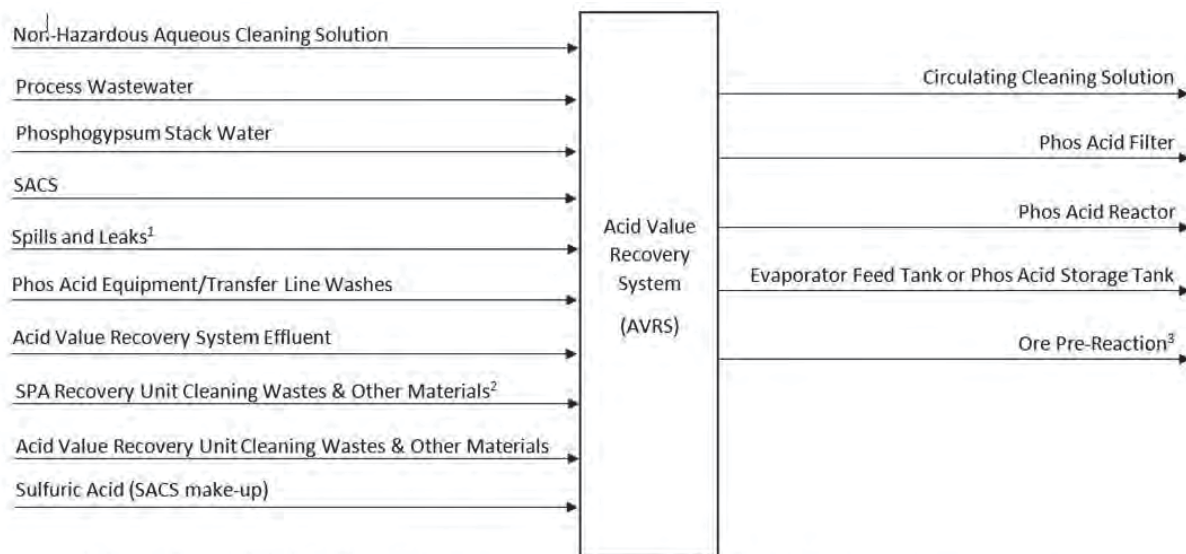
4 Recovery System Operation for Spill and Leak Recovery**4.1 Phosphoric Acid Plant Areas**

Simplot may recover spills and leaks of phosphoric acid, sulfuric acid, FSA, SACS, or Acid Value Recovery System Effluent; or NHACS, Process Wastewater, Phosphogypsum Stack System Wastewater, when mixed with any of the preceding solutions due to spills, leaks, or cleaning of leaks and spills, in Containable Impervious and/or Semi-Segregable Areas to a tank containing the same chemical or to the Acid Value Recovery System. The Acid Value Recovery System will return the spills, leaks, and cleaning solution streams to the phosphoric acid production process, where constituent values can be recovered through the methods outlined in Appendix 4 of the Consent Decree, (the Facility Report) Section VI, and as illustrated in Diagram 1 below.

Process Wastewater, Phosphogypsum Stack System Wastewater, or NHACS may be used for washing the floors, building, equipment, etc. in the SPA and/or Phosphoric Acid Plants' Non-Segregable, Semi-Segregable, and Containable Impervious Areas as described in the Facility Report, Section VII: Containment of Phosphoric Acid Production Related Spills and Leaks. These plant wash downs of Non-Segregable and Semi-Segregable Areas are not considered a spill or leak and may be returned to the Phosphogypsum Stack System or the Phosphoric Acid Plant for reuse. Plant wash downs of Containable Impervious Areas (such as within SPA) will be recovered to the Acid Value Recovery System. Plant wash downs may include the wash down of intermittent operation inputs as described in Section 5: Minimization of Operation Phosphoric Acid Inputs, of this BMP and leaks and spills that do not have the potential to reach or exceed the BMP Actionable Volume (Table 1 of this BMP).

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Diagram 1: Acid Value Recovery Tank Inputs and Effluents



¹ Spills and leaks include: P_2O_5 , H_2SO_4 , FSA, and mixtures of the proceeding with Process Wastewater, Phosphogypsum Stack Water, and NHACS

² Does not include SPA Process Condensate or non-hazardous wash materials (such as C Evaporator caustic washes)

³ Potential Future Project described in Section VIII of the Facility Report

4.2 Granulation Areas

The Granulation containment pads shall be designed to collect rainfall, spills, leaks, and cleaning solutions within plant areas. The collection sumps for these containment pads shall pump to the Granulation Plant scrubbers, Granulation Recovery Tank(s) or, if non-hazardous, may be discharged to the Phosphogypsum Stack System. The Granulation Plant acid scrubbers and recovery tank are designed to recover fertilizer materials, product and raw materials for consumption in the Granulation process.

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5 Minimization of Operational Phosphoric Acid Inputs**5.1 Background**

During normal operation of the Phosphoric Acid Plant, various activities may result in the operational input of phosphoric acid to impervious areas within the confines of the Phosphoric Acid Plant or, indirectly, to the Phosphogypsum Stack System via non-segregable or semi-segregable areas/sumps. These activities include sample collection, slide/knife gate valve operation, clearing plugged piping or process equipment (not to include unplugging via standard cleaning operations), and similar routine operations (other than standard cleaning operations). These routine activities resulting in minor operational inputs shall not be considered unintended inputs, accidental, or unplanned leaks or spills.

Intermittent operational inputs of phosphoric acid to impervious areas or the Phosphogypsum Stack System are unavoidable and shall not be considered malfunctions, leaks, or spills, unless the volume from one of these inputs to the Phosphogypsum Stack System exceeds the BMP Actionable Volume (Table 1). Notwithstanding, operators shall minimize the volume of such phosphoric acid inputs whenever possible and recover acid loss where practicable. Section 5.2 Operational Input Minimization describes some of the common minimization and recovery tactics for these intermittent operational inputs.

5.2 Operational Input Minimization**5.2.1 Sample Collection**

Samples of phosphoric acid or reactor slurry collected for purposes of plant process control shall be returned to the process. During sample collection, operational inputs shall be minimized to the extent practicable, releasing only the amount of material necessary out of the primary containment in order to accomplish the task and recovery where practicable.

5.2.2 Clarifier / Valve / Line Operational Releases

Operational inputs of phosphoric acid from clarifier unplugging, valve operation and line unplugging shall be minimized to the extent practicable, releasing only the amount of acid necessary out of the primary containment area in order to accomplish the task and recovery where practicable.

5.3 Response**5.3.1 Releases Outside Containment Areas (“Other Areas”)**

All reasonable measures will be taken to avoid releases of phosphoric acid outside of plant containment (impervious) areas. This BMP does not relieve Simplot of its obligation to comply with any federal, state, or local laws applicable to hazardous materials releases to the environment.

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5.3.2 Emergency Response

Simplot's Spill Reporting Policy and Procedure contains guidance for the management of environmental spills or releases that may require emergency response measures.

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6 Containment Integrity Plan**6.1 Background**

The mechanical integrity of new, upgraded, or existing containment systems for phosphoric acid shall be managed in accordance with Appendix 5.B (Inspections and Integrity of Tanks, Sumps, and Secondary Containment). The most current versions of these specifications shall be maintained by the Inspections and Environmental Departments.

6.2 Tanks

The mechanical integrity of phosphoric acid tanks shall be managed in accordance with the current version of Appendix 5.B (Inspections and Integrity of Tanks, Sumps, and Secondary Containment).

6.3 Concrete Acid Pads

The integrity of concrete acid pad containment systems for phosphoric acid leaks or spills shall be inspected and evaluated annually in accordance with requirements contained in Appendix 5.B (Inspections and Integrity of Tanks, Sumps, and Secondary Containment).

Simplot shall be responsible for conducting annual inspections of concrete acid pads in the Phosphoric Acid and Granulation Plant areas. Visual inspection will be for the following indicators: erosion/holes, protective liner damage and/or floor drainage irregularities. Inspection results shall be documented in a report with recommendations, reviewed with appropriate management, and implemented as needed.

When Simplot determines it is necessary to replace or partially replace concrete acid pads in the Phosphoric Acid and Granulation Plant areas, under-slab liners shall be installed in the affected area.

6.4 Sumps and Ditches

The mechanical integrity of sumps and ditches used in washing circuits and collection of phosphoric acid leaks or spills shall be managed as specified in Appendix 5.B (Inspections and Integrity of Tanks, Sumps, and Secondary Containment).

Simplot shall be responsible for conducting inspections of sumps and ditches whenever major plant outages, turnarounds, or other events in the Phosphoric Acid and Granulation Plant Areas allow for the sumps to be drained. These sump inspections shall occur at least once every 5 years. Inspection results shall be documented in a report with recommendations and reviewed with appropriate management and implemented as needed.

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7 BMP Performance Standards**7.1 Performance Criteria**

The goals of the BMP are listed in the Introduction of this Appendix. Simplot will develop appropriate performance criteria consistent with the BMP herein for the purpose of evaluating trends and improving performance. The performance criteria include progress review of the construction and utilization of the projects in Appendix 6 (Project Narrative & Compliance Schedules) to the Consent Decree, BMP training, and implementation of the procedures set forth herein.

Beginning within eighteen months from the Effective Date of the CD, annual meetings will be held with t Wyoming DEQ and/or EPA to review BMP performance. Meeting frequency may be adjusted based on the completion of the implementation schedule.

7.2 Performance Criteria for Spill and Leak Detection

An initial data collection period of 12 months will be used to establish baseline performance criteria (Performance Criteria) for spills, leaks, and other releases. Once BMP Performance Criteria are established, Simplot will review the criteria quarterly. Based upon the reviews, BMPs will be updated as warranted to minimize leaks, spills, and other releases. Simplot will initiate additional review of the BMP Program under the following circumstances:

- At any time during a calendar quarter when two or more leak or spill events of phosphoric acid, sulfuric acid or FSA into “Non-Segregable Areas” have occurred that exceed the quantity shown in Table 1 (BMP Actionable Volumes) in a rolling 24-hour period.
- At any time during a calendar quarter when two or more leak or spill events of phosphoric acid, sulfuric acid or FSA into “Semi-Segregable Areas” have occurred where the unrecovered volume exceeded the quantity shown in Table 1 (BMP Actionable Volumes) in a rolling 24-hour period.
- At any time during a calendar quarter when two or more leak or spill events of phosphoric acid, sulfuric acid or FSA have occurred in “Other Areas” that exceed the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Reportable Quantity.

7.3 Reporting / Auditing

Reporting shall be conducted pursuant to the Consent Decree and the aforementioned Performance Criteria.

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8 BMP Training**8.1 Overview Training**

An overview of BMP issues and procedures will be included in the periodic environmental compliance training provided to all affected employees, such as the managers, superintendents, supervisors, operators, and maintenance personnel in the Phosphoric Acid, SPA, FSA, and Granulation Plants.

8.2 Area Specific Employee Training

Employees within Phosphoric Acid, SPA, FSA, and Granulation Plants will receive initial training on RCRA and the Consent Decree, including the BMP, through classes and materials developed by Simplot. Employee training is part of project implementation and is found in Appendix 6 (Project Narrative & Compliance Schedules) to the Consent Decree. Detailed refresher training on the Consent Decree, including RCRA and the BMP, will be conducted for all affected employees every year. Updated training will be provided as BMP projects are completed, and will commence within two months of establishing baseline Performance Criteria under Section 7.2, and if the BMP is modified. Records of training will be maintained by the Training Department.

8.3 Contractors

The relevant portions of this BMP will be incorporated into contractors' site-specific training where appropriate.

**BMP – Minimizing and Addressing Spills and Leaks
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Attachment A: Tables

Table 1. BMP Actionable Volumes

Chemical	Concentration	Non-Segregable, Semi-Segregable, & Containable Impervious (gallons)
Phosphoric Acid	Equal to or less than 28% ¹	1,100
	Greater than 28% and equal to or less than 58%	500
	Greater than 58% and equal to or less than 69%	320
SACS	5% P2O5	1,100
	5% H2SO4	1,100
Sulfuric Acid	98%	70
FSA	Greater than or equal to 23%	9
¹ Excluding Process Wastewater and Phosphogypsum Stack Wastewater.		

Table 2: RCRA 8 Metals and Regulatory Limits

TCLP Metals	Toxicity Characteristic (TCLP, grab) (mg/L)	UTS for Wastewater (mg/L)	UTS for Non-Wastewater (mg/L)
Arsenic	5.0	1.4	5.0
Barium	100	1.2	21
Cadmium	1.0	0.69	0.11
Chromium (total)	5.0	2.77	0.60
Lead	5.0	0.69	0.75
Mercury	0.2	0.15	0.025
Selenium	1.0	n/a	n/a
Silver	5.0	0.43	0.14
<p>Note 1: UTS = Universal Treatment Standards (40 C.F.R. §268.48).</p> <p>Note 2: The amount of total suspended solids (TSS) by weight in the sample must be determined in order to compare the UHC concentrations to the appropriate UTS. The waste stream is a "wastewater" if it contains less than 1% by weight TSS, and "non-wastewaters" contain TSS ≥1% by weight (defined in 40 C.F.R. §268.2(d) and (f)).</p> <p>Reference: 40 C.F.R. §§261.24 & 268.48</p>			

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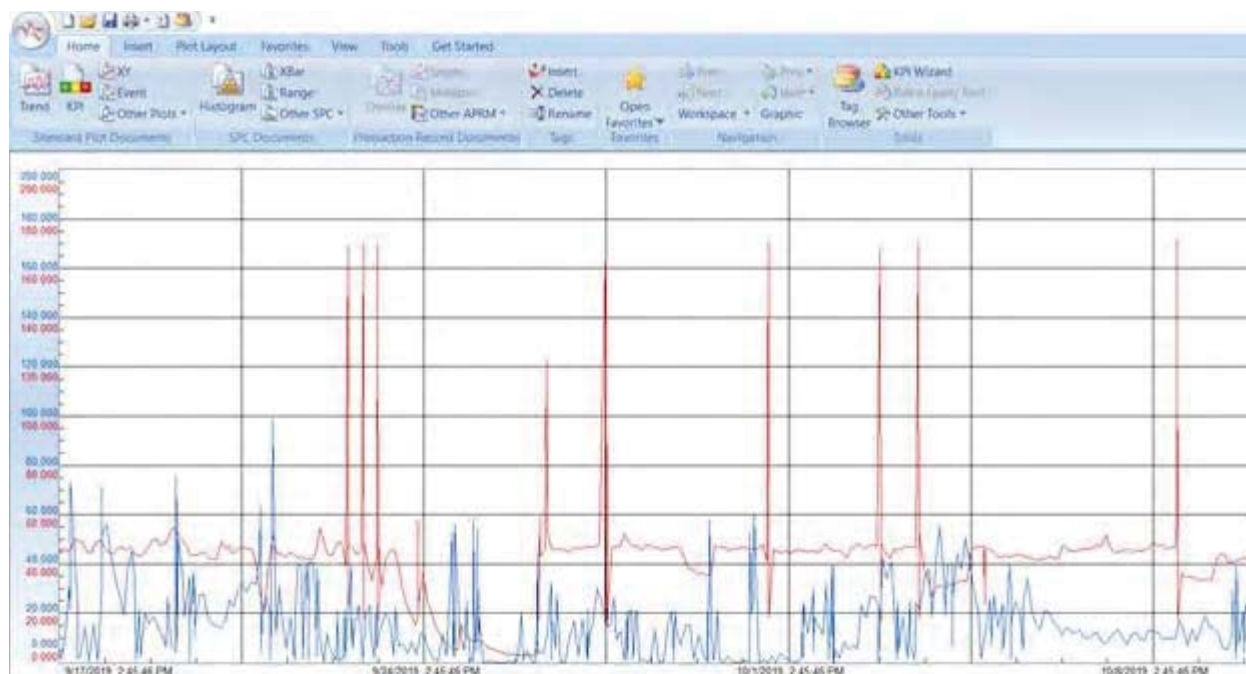
Attachment B: Acid Content Measurement on Process Wastewater System

This attachment addresses acid content measurement located in the outgoing non-segregable and semi-segregable sump streams at the Phosphoric Acid Plants. It contains information on instrument locations, alarm settings, and maintenance.

General

Acid content instruments continuously measure the acid content of the outgoing non-segregable and semi-segregable sump streams and will calculate the differential from a reference incoming Process Wastewater. The incoming Process Wastewater acid content value may be periodically measured to validate and/or update the reference number utilized in the calculation. The acid content measurement of the non-segregable and semi-segregable sump streams are displayed on the operators' distributive control system, see Figure 4 and Figure 5 below as an example.

Figure 4: Example of Acid Content Measurement Trend Stored in Data Historian



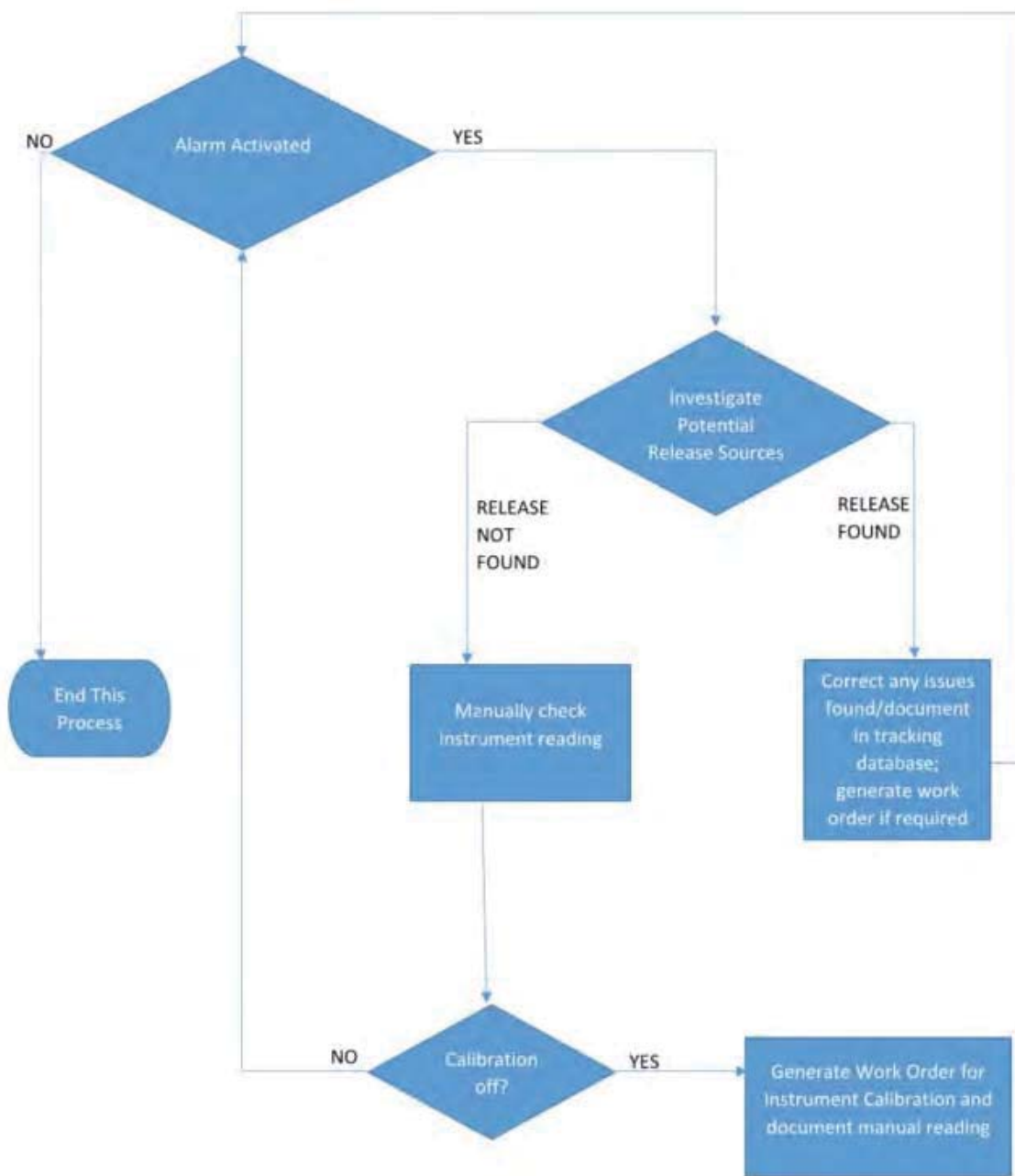
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Figure 5: Example of Operator Monitoring Graphic



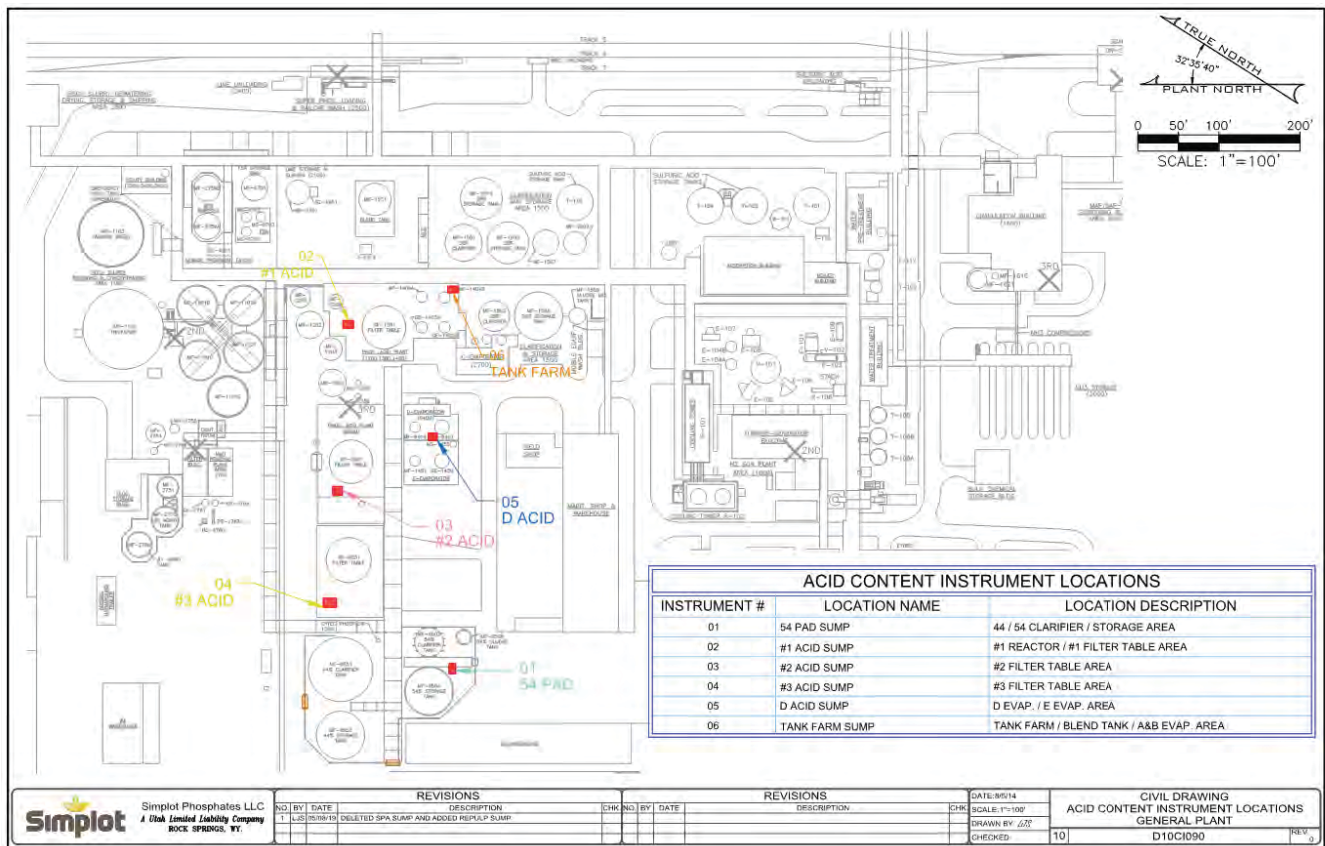
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Figure 6: Acid Content Measurement Alarm Trigger Corrective Action Plan



Acid Content Measurement Alarm Trigger Corrective Action Plan
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Figure 7: Rock Springs Acid Content Instrument Locations in Phosphoric Acid Plant



*Simplot Rock Springs Consent Decree
Appendix 5.A*

Table 1: Rock Springs Acid Content Measurement Initial Alarm Limits (Differential)

Instrument Number	Probe Location	Alarm Trigger (units mS)
01	54 Pad Sump	10
02	#1 Acid Sump	10
03	#2 Acid Sump	10
04	#3 Acid Sump	10
05	D Acid Sump	10
06	Tank Farm Sump	10

Maintenance

Simplot uses manufacturer recommended calibration procedures specific to the type of instrument. The Rock Springs Facility currently utilizes Mettler Toledo INPRO 71000I conductivity probes. The calibration methods that are being used are utilizing reference solutions to provide either a 1-point or 2-point calibration depending upon which is needed at the time. If Simplot were to switch to a different acid content monitoring instrument, manufacturer recommended calibration procedures would be utilized for that instrument.



*Simplot Rock Springs Consent Decree
Appendix 5.B*

Appendix 5.B

Inspections and Integrity of Tanks, Sumps, and Secondary Containment

Rock Springs
Final

May 13, 2020

Corporate Environmental & Regulatory Affairs
1099 W. Front St., Boise, ID 83702
(202) 780-7303