



600 Cardinal Way Road  
Church Hill, TN 37642  
423-357-2400

January 14, 2022

Mr. Dayne Cutshaw  
Tennessee Department of Environmental and Conservation  
Division of Water Resources  
Johnson City Field Office  
2305 Silverdale Road  
Johnson City, TN 37601

RE: Cardinal FG – Greenland Plant  
NPDES permit TN0002631  
TMSP permit TNR051221

Dear Mr. Cutshaw:

Enclosed please find a copy of the Water Inspection Corrective Action Plan for the Cardinal FG facility located in Church Hill, Tennessee.

The enclosed package consists of the following:

1. Water Inspection Corrective Action Plan and proposed actions to be completed by Cardinal FG – Greenland Plant to ensure compliance with NPDES permit TN0002631 and TMSP permit TNR051221.

Cardinal FG would like to take this opportunity to introduce themselves as the new owner of the Greenland Plant. Cardinal FG purchased the facility effective August 2, 2021 and is committed to facility and site improvement. Those improvements include significant concentration on the housekeeping of the entire facility as well as substantial capital investment to improve process operations while reducing environmental exposures at the same time. One such multi-million dollar project is a cullet return system that will minimize, if not eliminate, environmental exposure to recycled glass cullet that is being returned from production scrap to the raw materials area for reuse. Cardinal FG is dedicated to being a strong community partner, responsible corporate citizen and steward to the environment.

If you have any questions or require additional information in regard to this submittal, please do not hesitate to call (423) 357-2492 or email Butch Hatcher at [Jhatcher1@cardinalcorp.com](mailto:Jhatcher1@cardinalcorp.com).

Sincerely,

**CARDINAL FG – GREENLAND PLANT**

A handwritten signature in cursive script that reads "Butch Hatcher".

Butch Hatcher  
EH&S Manager

Cc: J. Smith/Cardinal FG  
M. Purcell/Cardinal FG  
File copy

# Cardinal FG – Greenland Plant Water Inspection Corrective Action Plan

## I. Permit

Deficiencies Noted:

1. As noted in the division's previous inspection report, backwash from the intake traveling screens at the S building discharged to Bradley Creek near its confluence with the Holston River. This discharge is not covered by an appropriate NPDES permit. The discharge must be included for coverage in the next NPDES TN0002631 permit renewal application, if not before.

**Cardinal FG – Greenland Plant will apply to include Bradley Creek under ARAP coverage during the next NPDES permit renewal (September 30, 2024) as directed, if not sooner.**

## II. Records/Reports

Deficiencies Noted:

1. Laboratory benchsheets used for onsite analyses indicated use of *Standard Methods for the Examination of Water and Wastewater* "22th" edition, for onsite analyses of pH, dissolved oxygen (DO), settleable solids, and total residual chlorine (TRC). However, this older version of the methods is not currently approved for use in Title 40 CFR Part 136.3. Method documentation is required by permit Part I B.4., and, as required by permit Part I B.2., all pollutant parameters must be determined using methods prescribed in Title 40 CFR Part 136.

**Cardinal FG – Greenland Plant will update benchsheets to reflect the proper edition of *Standard Methods for the Examination of Water and Wastewater 23<sup>rd</sup> Edition* while also updating Standard Operating Procedures as necessary to reflect any changes prompted by the new edition and the performance of analytical tests as warranted. Target Completion of all modification is February 14, 2022.**

## III. Facility Site Review, Self-Compliance Program, and Operations & Maintenance

Deficiencies Noted:

1. The facility reported an August 2, 2021, accidental discharge of an estimated 1,450 gallons of 93% sulfuric acid which entered waters of the state via outfall 004. Daily minimum effluent pH at the outfall point reached 1.2 S.U., which is well below the permit limit of 6.0 S.U. In addition, a limited fish kill was noted by the division and TWRA. This discharge was not in accordance with the provisions of NPDES permit TN0002631, TMSP TNR051221, or any other NPDES permit as required by the *Tennessee Water Quality Control Act of 1977*, as amended.

# Cardinal FG – Greenland Plant Water Inspection Corrective Action Plan

**The event occurred during the weekend prior to the transfer of ownership from AGC to Cardinal FG and the corrective measures were implemented by Cardinal FG after taking ownership of the business/property. The event was reported and has been properly documented with follow up letters to TDEC and the EPA. It is Cardinal FG's belief that adequate corrective measures have been identified and implemented. Those corrective measures to minimize, if not eliminate, the possibility of a recurrence from this same cause are:**

**Corrective Measure #1. Further protect the acid drip piping from damage by adding top fencing to protect from falling objects, such as happened to cause this incident. Complete.**

**Corrective Measure #2. Add acid storage tank level remote reading telemetry with alarm, that is triggered if the level changes significantly over a short period of time. Complete.**

**Both corrective measures are in place and functional.**

2. Substantial solids buildup was observed in the sanitary WWTP chlorine contact chamber. Accumulated solids can make effluent disinfection more difficult and can contribute to total suspended solids violations from IMP 002. Some bubbling, possibly from denitrification, was visible in the accumulated solids blanket. Mr. Hughes and Mr. Banks stated the basin was periodically cleaned out but appeared to be due for cleanout again. More frequent cleanout appeared advisable based on the amount of accumulated solids. NPDES permit TN0002631 Part II A.4. requires proper operation and maintenance of all facilities and systems for collection and treatment.

**Cardinal FG – Greenland will begin documenting visual inspections on the WWTP chlorine contact chamber to note solids buildup and trigger more frequent cleanings. Target start: January 17, 2022**

3. The lack of adequate process control for the sanitary WWTP operations was noted during the current inspection and previous inspections. Little progress has been made in implementing appropriate process control measures. As noted above, NPDES permit TN0002631 Part II A.4. requires proper operation and maintenance of all facilities and systems used for collection and treatment which are installed by the permittee to achieve compliance with the terms and conditions of this permit. Adequate process control measures are necessary to make informed operational decisions such as when and how much activated sludge to waste from the treatment plant for disposal. Operator training on activated sludge process control is available from Fleming Training Center and other sources.

**Cardinal FG – Greenland will identify and schedule operator training on the activated sludge process to increase the knowledge level, which will improve decision making and process control. Target Completion: TBD - Dependent upon training availability.**

# Cardinal FG – Greenland Plant Water Inspection Corrective Action Plan

No Deficiencies Noted.

## V Flow Measurement

Deficiencies Noted:

1. Observation of the IMP 001A and IMP 005 flow-measurement weirs revealed that solids buildup was evident in both weir boxes, particularly so at IMP 005. These solids must be frequently removed in order to avoid negative impacts on flow measurement accuracy. NPDES permit TN0002631 Part II A.4. requires proper operation and maintenance of all facilities and systems for treatment.

**Cardinal FG will develop a preventative maintenance check on a defined cleanout schedule, with documented cleanout activities (proposed frequency is bi-weekly). Target start: February 1, 2022**

## VI Laboratory

Deficiencies Noted:

1. Discussion of onsite analyses with facility personnel and review of laboratory bench sheets and written Standard Operating Procedures (SOPs) for the analysis methods performed onsite (*i.e.*, settleable solids, dissolved oxygen, pH, total residual chlorine, and temperature) revealed the methods used were taken from *Standard Methods for the Examination of Water and Wastewater*, 22nd Edition. These methods have since been superseded by newer versions approved for use in Title 40 CFR Part 136, effective July 19, 2021. Existing facility procedures and documentation must be updated to satisfy currently approved method versions. Note that Part 136 references methods by the date of adoption rather than by hard copy edition number and ensure that the facility obtains and references methods in this manner. Because of updates in method procedures, control chart requirements, and Method Detection Limit (MDL) procedures, the division also recommends updated Demonstrations of Capability (DOCs) be prepared for each employee performing NPDES analyses onsite.

**Cardinal FG – Greenland will obtain the 23<sup>rd</sup> edition of *Standard Methods for the Examination of Water and Wastewater*. Utilizing the new edition, modifications will be made to the Standard Operating Procedures for analysis methods to properly document the analysis being performed. Target date: February 14, 2022**

2. In addition to the method version deficiencies noted above, evaluation of onsite effluent analysis procedures revealed multiple deficiencies as summarized below.

## Cardinal FG – Greenland Plant Water Inspection Corrective Action Plan

- a. Dissolved oxygen meter initial calibrations were being performed using water-saturated air. However, the calibrations were based on altitude-corrected barometric pressure from the Tri-Cities Airport rather than local, uncorrected barometric pressure as appropriate. In addition, the dissolved oxygen level after initial calibration was not being verified against standard reference tables for the temperature and pressure conditions at the time of calibration and no continuing verification was being performed. DO meter initial and continuing calibration verifications (ICVs and CCVs) must be performed in water-saturated air and/or air-saturated water, as appropriate, in accordance with methods approved for use in Title 40 CFR Part 136.3, manufacturer's instructions, and division guidance. Documentation of these routine verifications must be maintained.

**Cardinal FG will research and purchase appropriate onsite weather station equipment to provide local uncorrected barometric pressure. Operators will ensure required documentation of routine verifications is being completed. Management will perform semi-annual audits of documentation, SOP manufacturer's and division guidance adherence.**

- b. No final CCVs were being performed for onsite pH analyses. CCVs must be performed after each analytical batch or, at a minimum, at the end of the day when measurements are made in order to ensure pH meter accuracy. These verifications are necessary to satisfy the requirements of Standard Method 4500-H+ B-2011, its associated QA/QC components discussed in Standard Methods 4020 A and 4020 B, and division guidance. Documentation of these routine verifications must be maintained.

**Cardinal FG will ensure required documentation of routine verifications is being completed. Management will perform semi-annual audits of documentation, SOP, manufacturer's and division guidance adherence. Target for Initial Audit: February 2022**

- c. Onsite observation revealed that the pH probe storage solution in use at the time of inspection had expired in May 2020. Analytical probes must be stored in unexpired solutions and in accordance with manufacturer specifications and approved analytical procedures in Title 40 CFR Part 136.

**Cardinal FG will perform documented monthly inventory of lab chemicals and verification of items with expiration dates to identify, dispose of and replace items going out of date. Target first inventory: January 2022**

- d. Evaluation of records and discussion with Mr. Mullins revealed that the total residual chlorine (TRC) Method Detection Limit (MDL) had not been recalculated in accordance with the requirements of Title 40 CFR Part 136 Appendix B. Available data must be used to calculate the spiked (MDLs) and blank (MDLb) sample MDL values for verification or determination of the overall MDL for this analysis.

# Cardinal FG – Greenland Plant Water Inspection Corrective Action Plan

**Cardinal FG will review the referenced requirements and verify that the method being used is correct. Target for review/process verification: February 14, 2022**

- e. The thermometers used for outfall 004 effluent temperature measurements had last been calibration checked on July 21, 2017, and October 8, 2018. The calibration certificates showed due dates of July 21, 2022, and October 8, 2019. The reason for the extended calibration interval on one thermometer was unclear. In accordance with EPA NPDES compliance guidance, thermometer calibration must be checked at least annually. Additional discussion is available in the *US EPA NPDES Compliance Inspection Manual*, Interim Revised Version, January 2017 (EPA Publication Number 305-K-17-001).

**Cardinal FG requests clarification of the interpretation of the calibration requirement as noted in US EPA NPDES Compliance Inspection Manual, Interim Revised Version, January 2017 (EPA Publication Number 305-K-17-001). Cardinal FG's current interpretation of the material is that the annual calibration requirement is for non-NIST approved thermometers. Records were provided that showed thermometers were calibrated annually through 2019. In 2017 a NIST thermometer was purchased that held a 5-year calibration which expires in July of 2022. Annual calibrations were discontinued because it was interpreted that the 5-year calibration per manufacturer recommendation was compliant.**

## VII Sludge Handling/Disposal

Recommendations:

1. NPDES permit TN0002631 Part II A.4. requires proper operation and maintenance of all facilities and systems for collection and treatment. TMSP TNR051221 part 11.E.3.2.3 (Sector E part 3.2.3) and its subparts requires implementation of appropriate controls, a preventive maintenance program, and a series of inspections and associated tracking and follow-up procedures to address deficiencies. Observation of onsite facilities revealed solids buildup in the IMP 001A and IMP 005 weir boxes, as detailed in other pertinent areas of this report, and in onsite settling basins. More frequent removal of accumulated sludges in these areas appeared warranted.

**Cardinal FG will develop a preventative maintenance check on a defined cleanout schedule, with documented cleanout activities (proposed frequency is bi-weekly). Target start: February 1, 2022**

Deficiencies Noted: None.

## VIII Pollution Prevention and Storm Water

Deficiencies Noted:

# Cardinal FG – Greenland Plant Water Inspection Corrective Action Plan

1. Review of the facility SWPPP revealed multiple outdated or inconsistent entries.

- a. The certification statement accompanying the responsible official signature in SWPPP section 8.0 does not satisfy the requirements of TMSF part 7.7.4. This same deficiency applies to the certification statement on documents included in the SWPPP Appendices. The final sentence of the required certification statement is missing.

**Cardinal FG will revise SWPPP to address noted deficiencies. Target Revision Completion: February 14, 2022**

- b. The site map required by TMSF part 3.2.2.1 was notably outdated at the time of this inspection. The second production building added to the southwest side of the facility was not shown on the map, nor was the new corporate headquarters building. In addition, locations of cullet piles and roll off hoppers did not appear to fully correspond with current facility operations. The map must be updated to reflect current operations and show all required components. Because of the size and complexity of the facility, multiple maps may be required to clearly show the necessary information.

**Cardinal FG will revise SWPPP to address noted deficiencies. Target Revision Completion: February 14, 2022**

- c. The non-stormwater discharge evaluation performed in November 2020 was signed, but does not contain the required certification statement in accordance with TMSF parts 7.7.4. and 11.E.3.2.3.7.1. It also states that no non-stormwater discharges were observed at any stormwater outfalls, but goes on to identify multiple types of authorized non-stormwater discharges as present.

**Cardinal FG will revise SWPPP to address noted deficiencies. Target Revision Completion: February 14, 2022**

- d. SWPPP section 6.4.1 states, “Cullet has been proved to be a very stable substance warranting no consideration regarding toxics or pollutants in wastewater.” This fails to recognize mobilization of cullet itself as a particulate solid pollutant which may be mobilized in stormwater runoff. SWPPP 6.7.7 contains further discussion regarding cullet entering stormwater.

**Cardinal FG will revise SWPPP to address noted deficiencies. Target Revision Completion: February 14, 2022**

- e. SWPPP 6.5.1 and 6.7.8 reference RCRA post-closure due to a leak from a pre-existing tank. Disposal of remediated groundwater is mentioned but not detailed. Status of post-closure is unclear. Section 6.16.1 states, “Currently, AGC-Greenland has provided the Water Pollution Control department with all the documentation needed for the TCE point of discharge. All samples have been



## Cardinal FG – Greenland Plant Water Inspection Corrective Action Plan

collected for compliance and submitted to TDEC for certifying this point of release.” SWPPP Appendix M includes the following entry for the TCE system, “Currently, system has a discharge to 001. Looking for approval from DWPC.” Such discharges are not covered under NPDES TN0002631, TMSP TNR051221, or other Division of Water Resources permit.

**Cardinal FG will revise SWPPP to address noted deficiencies. Target Revision Completion: February 14, 2022**

- f. SWPPP 6.6.1 references an unspecified outside organization hired to “pull samples” for NPDES and TMSP compliance. This did not appear to be accurate, with the possible exception of outfall 004 biomonitoring samples.

**Cardinal FG will revise SWPPP to address noted deficiencies. Target Revision Completion: February 14, 2022**

- g. SWPPP section 6.7.8 discussed post-closure activities associated with a past leak of methylene chloride from an above-ground tank at the plant. This section indicated monitoring was performed for a number of organic chemicals and reported to the Division of Remediation in Nashville, TN. Discussion with facility representatives indicated that no discharge had occurred in some time. The SWPPP must accurately reflect current facility operations.

**Cardinal FG will revise SWPPP to address noted deficiencies. Target Revision Completion: February 14, 2022**

- h. SWPPP section 6.9.1 states, in part, “Any problem areas such as conveyors are monitored for spillage and are attended to as the situation warrants.” Observation of facility areas, particularly those near the P building and batch house revealed this statement did not appear to be correct. Fugitive materials were apparent in these facility areas.

**Cardinal FG will revise SWPPP to address noted deficiencies. Target Revision Completion: February 14, 2022**

- i. SWPPP section 6.10 still does not appear to address preventive maintenance of facility equipment and systems aside from those related to outfalls and stormwater control measures. Preventive maintenance of all facility equipment and systems is a required component of TMSP compliance.

**Cardinal FG will revise SWPPP to address noted deficiencies. Target Revision Completion: February 14, 2022**

- j. SWPPP section 6.10.1 states, “The waste water treatment operators conduct pH samples daily of all outfalls and make adjustments accordingly.” This does not appear to be true on weekends.

## Cardinal FG – Greenland Plant Water Inspection Corrective Action Plan

**Cardinal FG will revise SWPPP to address noted deficiencies. Target Revision Completion: February 14, 2022**

- k. SWPPP 6.11.1 references regulatory agency contact information contained in facility SPCC plan. The SWPPP specifically requires notification of the Tennessee Division of Water Pollution Control in the event of a spill that changes the character of the plant's permitted discharges and causes non-compliance with the permit. The reference to DWPC is out of date, and other spills may necessitate notification of the Division of Water Resources. Further, NPDES TN0002631 requires notification within 24 hours in addition to the 5-day follow-up written report noted in the SWPPP.

**Cardinal FG will revise SWPPP to address noted deficiencies. Target Revision Completion: February 14, 2022**

- l. SWPPP 6.15.1 references discharge of non-stormwater including "Cullet cooling/glass hopper collection" and "Lime slurry settling pond". These are not allowable discharges under NPDES TN0002631 or TMSP TNR051221.

**Cardinal FG will revise SWPPP to address noted deficiencies. Target Revision Completion: February 14, 2022**

- m. SWPPP section 6.17.1 references past land application activities in three site areas. This discussion transitions to possible "heavy loading of dust" that can occur at N and P buildings. The relationship between these activities is unclear.

**Cardinal FG will revise SWPPP to address noted deficiencies. Target Revision Completion: February 14, 2022**

- n. SWPPP section 6.18.1 discusses discharge from lime settling lagoons. Such discharges are not allowable under the provisions of TMSP TNR051221, nor were such discharges included in the most recent permit renewal application for NPDES permit TN0002631. Therefore, they are not included in NPDES TN0002631 coverage.

**Cardinal FG will revise SWPPP to address noted deficiencies. Target Revision Completion: February 14, 2022**

- o. SWPPP section 6.21.1 states, with regard to outfall 004, "The pH is read at the outfall daily to verify compliance." This does not appear to be true on weekends. The section further states, "The waste water treatment plant is required to verify calibration of equipment on a monthly basis." The equipment in question is not clear. Calibration of equipment used for NPDES TN0002631 compliance analyses must be performed before each use in accordance with approved analytical methods in Title 40 CFR Part 136.

**Cardinal FG will revise SWPPP to address noted deficiencies. Target Revision Completion: February 14, 2022**

## Cardinal FG – Greenland Plant Water Inspection Corrective Action Plan

- p. The description of IMP 001A in SWPPP Appendix K does not correspond with the permitted discharges from this monitoring point in NPDES TN0002631. Only discharge of process wastewater from the glass tempering washer via IMP 001A is covered by the NPDES permit. Discharge of non-contact cooling water is only covered for outfall 004.

**Cardinal FG will revise SWPPP to address noted deficiencies. Target Revision Completion: February 14, 2022**

2. Quarterly visual observation records were only provided for 2021. The records did not contain the complete certification statement required by TMSP part 7.7.4. and were signed by Luke Hughes, who does not appear to satisfy the signatory requirements of TMSP part 7.7.2. Further, the records do not indicate the time runoff began or the time samples were collected; therefore, it is not possible to assess whether the samples were collected within the time frame required by TMSP part 11.E.5.3.1. In addition, aside from a general notation of “Qualifying Rain Event” (yes or no), the records fail to document that the sampled event was at least 72-hours from the previous measurable storm event as required by TMSP part 11.E.5.3.1. Also, the monitoring records do not provide observations of other obvious indicators of stormwater pollution as required in TMSP parts 11.E.5.3.1 and 11.E.5.3.2.

**Cardinal FG will revise Quarterly Observation record sheet to meet the criteria listed above to include the updated certification statement, elevate the level of the signee to an authorized signature authority, time of runoff event beginning and time of sample to verify that it was collected during a “Qualifying Rain Event”. Target form Revision: February 14, 2022**

3. Records of 2019-2021 monthly area inspections required by TMSP 11.E.3.2.3.4 were provided for review. Each monthly inspection included notation of “heavy dust or particulates generated and flowing into stormwater” for multiple inspected areas, including dust collectors, batch house, and cullet storage. The reports also included frequent notations regarding signs of “oil, grease, or other chemicals” on the ground, particularly near the diesel storage tank and filling station; stormwater coming into contact with “open top containers such as drums” and “spills present” in multiple site areas; and “trash and debris” present in various areas and “spills beneath loading station” in multiple areas. Some follow up on these deficiencies was noted, but only a few of the follow up records included dates for completion of corrective actions. Corrective actions were often noted as “Ongoing” or “As-needed” for some areas, and noted corrective actions did not always include all areas with noted deficiencies. Corrective actions noted as “Complete” did not always include completion date. TMSP 11.E.3.2.3.4 requires tracking or follow-up procedures be used to ensure appropriate actions are taken in response to the inspections. In addition, TMSP part 11.E.3.2.3 requires the facility to develop and implement stormwater management controls appropriate to the facility. The repetitive nature of the deficiencies noted on the monthly inspections indicates a need for improved control measures to minimize or prevent material exposure and mobilization in stormwater runoff.

**Cardinal FG will develop an action tracker log for all items identified in monthly TMSP inspections. Items noted on this action tracker will include at a minimum:**

# Cardinal FG – Greenland Plant Water Inspection Corrective Action Plan

**location, description of items needing attention, proposed corrected actions, responsible party for correction, target completion date as well as actual completion date. Target for Implementation of new form: February 14, 2022**

4. Field observation of the facility during the inspection revealed that cullet was stored in numerous piles around the facility. The piles were generally stored within bunkered areas to provide containment of the material. However, some fugitive material was visible outside the designated storage areas. Facility SWPPP section 6.7.1 stated that cullet was stored in silos, then loaded onto dump trucks and transported to P building. The presence of numerous piles of cullet around the facility appeared to indicate this was not correct. TMSP TNR051221 part 11.E.3.2.3 requires implementation of appropriate control measures to control pollutants and part 11.E.3.2.3.1 requires housekeeping measures to prevent or minimize discharge of aggregate and other significant materials present at the facility.

**Cardinal FG would like to clarify that the activities listed, including the use of silos, dump trucks for transport and in-building storage of cullet, is correct at the current time. In addition to those activities, there are multiple Cullet Storage Areas (Cullet Pads) at the facility for more long-term storage of cullet for future use or evaluation of cullet for possible disposal. The use of external bunkered cullet pads for containment are an industry norm. The SWPPP is being revised and as part of that revision this section will be verified to ensure operations are properly described. Target of SWPPP revision is February 14, 2022.**

5. Various batch materials were observed to be exposed to stormwater around the P building at the facility. Limited structural control measures were apparent in this area to prevent contact with and mobilization of materials in stormwater runoff from the facility. Facility SWPPP section 6.7.1 appeared to indicate minimal potential for exposure of these materials to stormwater, and section 6.7.3 stated conveyance systems “should be contained, monitored, and treated.” Field observations appeared to indicate these sections were not entirely correct. TMSP TNR051221 part 11.E.3.2.3 requires evaluation and implementation of appropriate control measures to minimize or eliminate contact of industrial materials with stormwater.

**Cardinal FG will increase the frequency of cleaning operations to address the batch materials that are lost from transportation conveyors in the P building area to minimize or eliminate contact of industrial materials with stormwater. Target Implementation: Immediate (January 14, 2022)**

6. Observation of a settling basin located below one of the P building batch conveyors revealed the presence of accumulated sediment. Mr. Hughes stated this settling basin was cleaned out frequently, but fugitive material was readily apparent in the vicinity. TMSP TNR051221 part 11.E.3.2.3 requires implementation of appropriate control measures to control pollutants and part 11.E.3.2.3.1 requires housekeeping measures to prevent or minimize discharge of aggregate materials and other significant materials.

**Cardinal FG will increase the frequency of cleaning operations to address the batch materials that are lost from transportation conveyors in the P building area to**

# Cardinal FG – Greenland Plant Water Inspection Corrective Action Plan

**minimize or eliminate contact of industrial materials with stormwater. Target Implementation: Immediate (January 14, 2022).**

7. Despite some improvement since the previous division inspection, the basement of the main production building contained large amounts of accumulated particulate materials and other miscellaneous materials, including finished glass. While indoor storage may appear to preclude discharge of these materials, many of them were stored near or adjacent to open floor drains contributing to the “high head”, which discharges from the facility to waters of the state. TMSP TNR051221 part 11.E.3.2.3 requires implementation of appropriate control measures to control pollutants and part 11.E.3.2.3.1 requires housekeeping measures to prevent or minimize discharge of aggregate and other significant materials.

**Cardinal FG, since purchasing the Greenland facility in August of 2021, has made a concerted effort to vastly improve the overall cleanliness of the entire facility inside and out, while placing special emphasis of the basement areas. The housekeeping and storage of items in the basement is greatly improved and is expected to continue to improve as Cardinal FG brings the Greenland facility up to the expected world class standards of a Cardinal FG facility. While this continued housekeeping effort progresses, Cardinal FG will cover all “high head” drains to prevent discharges or potential discharges of accumulated particulate materials, finished glass or any other inappropriate substances from entering the “high head” drains. Target: Immediately (January 14, 2022)**