

Twin Falls Facility Food Safety Plan

Document No: FSP-06

Version: 9/28/23

Granulated Sugar

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Corporate Recall Plan	NSM

Plan Approval

Plant Manager:



Date: 9/28/2023

Local HACCP Coordinator:



Date: 9/28/23

Facility Information

Facility Name:	Twin Falls Factory
Facility Address:	2320 Orchard East, Twin Falls, Idaho 83301
Phone:	208.733.4104
Plant/Facility Manager:	Ian Kihara
Local HACCP Coordinator:	Calista Newman
Number of Employees:	400-450 employees based on season.
Temporary Employees:	As needed Must go through standard food safety orientation.
Facility Description:	The Twin Falls factory was constructed in 1916. It is one of three factories located in Idaho that processes sugar beets. This facility produces granulated sugar which is conditioned and stored in seven bulk silos. Stored sugar is screened and packaged into bulk cars and trailers or packaged into flexible intermediate bulk container (FIBC) totes. Totes are shipped via truck or rail to distribution sites or directly to customers.

Food Safety

Products:	Granulated Sugar		
Third Party Audit Standard:	SQF current edition		
Certification Body:	CICS		
Import Capability:	No		
Ingredients/Raw Materials:	Sugar Beets		
Packaging:	Tote (Flexible Intermediate Bulk Container)		
Prerequisite Programs :	1. Employee Training	2. Personnel Practices	3. Integrated Pest Management
	4. Equipment Calibration	5. Facility & Equipment Maintenance	6. Cleaning & Sanitation
	7. Water & Air Programs	8. Physical Contaminant Prevention & Control	9. Product Storage & Warehousing
	10. Sanitary Transportation	11. Allergen & Sensitizing Agents	12. Chemical Control & Approval
	13. Supplier Approval	14. Visitors	

Team

Ian Kihara	Plant Manager	1 Day HACCP Course
Travis Fries	Warehouse Manager	Preventative Controls Qualified Individual
Angel Perez	Sr. Warehouse Foreman	Preventative Controls Qualified Individual
William Norman	Factory Lab Supervisor	1 Day HACCP Course
Bruce Hahn	Assistant Production Manager	1 Day HACCP Course
Bryce Smedley	Day Mechanical Supervisor	1 Day HACCP Course
Calista Newman	Food Safety & Quality Professional	Preventive Controls Qualified Individual

Product Description

General Product Information

Product Name:	Granulated Sugar
Technical Name:	Sucrose
Product Description:	Sucrose is a nonreducing disaccharide composed of glucose and fructose bonded by an oxygen atom. It is derived from sugar beets or sugar cane and is used as a food and a sweetener.
Ingredients:	Crystalline sucrose
Intended Use:	This product is used as an ingredient in many food products and functions as a sweetener.
Intended Consumer:	Granulated sugar is sold as retail or distributed to food processors that provide products to the general public, including high risk groups.
Shelf Life:	See product data sheets for specific shelf life for each granulation type.
Labeling Instructions:	None
FDA Classification:	GRAS 21 CFR 184.1854
Storage:	Silo storage, ambient. Packaged product is warehoused.
Distribution:	Granulated sugar is distributed in bulk or packaged form. Bulk sugar is transported by bulk rail or truck. Packaged sugar is distributed by trailer or boxcar.

Technical Information

Chemical Formula:	$C_{12}H_{22}O_{11}$
Water Activity (a_w):	0.22 ¹
Moisture:	0.04% Max.
Sulfites:	2 to 5 ppm. Must be less than 10 ppm.
Microbiological:	Will not support the growth of vegetative pathogens. ^{2,3} Meets ISBT ⁴ and NFP ⁵ standards for use in carbonated beverages and canned foods.

Preventive Controls

Process Control:	CCP Metal Detection
Allergen Control:	None
Sanitation Control:	None
Supply-Chain Control:	None

¹ [Water Activity Values of Select Food Ingredients and Products](#)

² [Microbial Risk Assessment: Pathogen Challenge Evaluations of Granulated and Liquid Sugar](#)

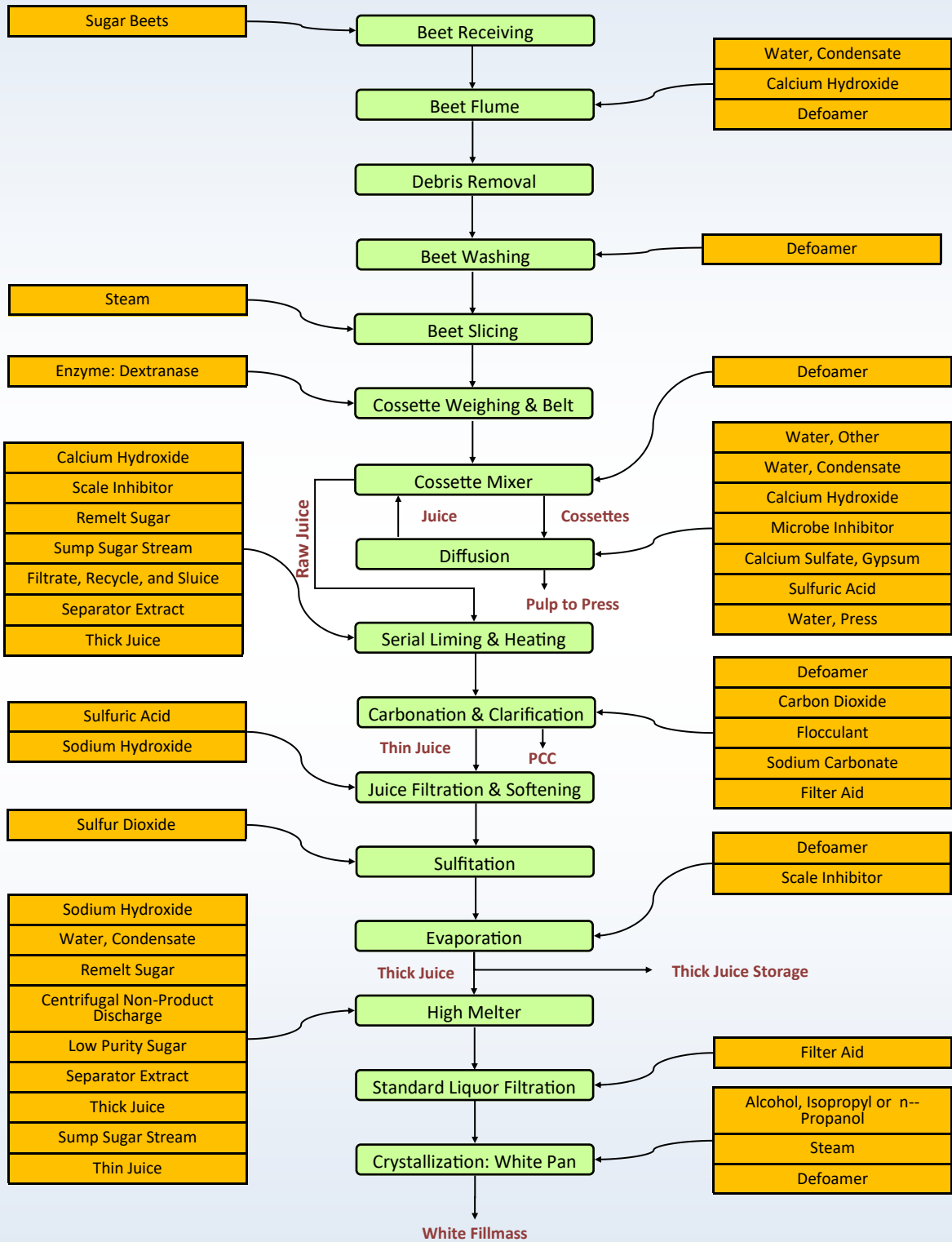
³ [Fate of Bacterial Pathogens and Indicator Organisms in Liquid Sweeteners](#)

⁴ International Society of Beverage Technologists (ISBT)

⁵ GMA Canner's Standard

Process Flowchart: Beets to Fillmass

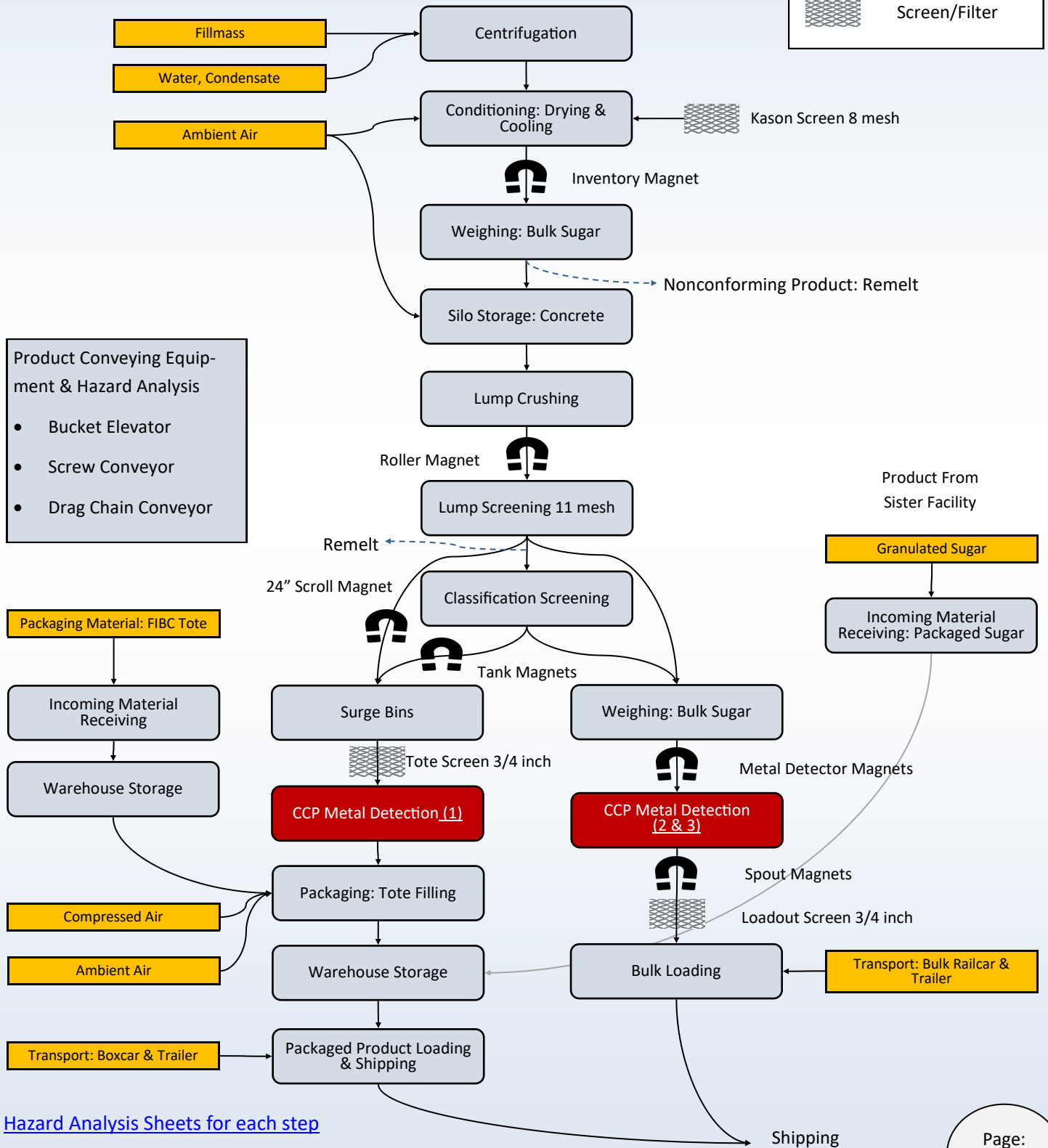
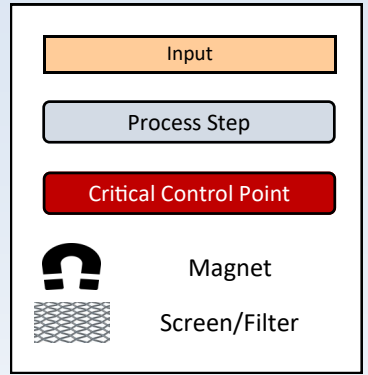
This flowchart outlines the factory mill, including slicing, extraction, purification, and crystallization. The separation in diagrams is based on product risk and resulting hygienic zoning. The factory process (outlined below) precludes any food safety hazards identified prior to crystallization.



[Hazard Analysis Sheets for each step](#)

Process Flowchart: Granulated Sugar

This flowchart outlines granulated sugar separation through storage and shipping steps. Outlined below are the areas with elevated hygiene requirements based on product risk and employee exposure.



Product Conveying Equipment & Hazard Analysis

- Bucket Elevator
- Screw Conveyor
- Drag Chain Conveyor

Packaging Material: FIBC Tote

Incoming Material Receiving

Warehouse Storage

Compressed Air

Ambient Air

Transport: Boxcar & Trailer

[Hazard Analysis Sheets for each step](#)

Process Preventive Control: Critical Control Point Summary

Process Control Step:	CCP Metal Detection (Tote Line & Bulk Metal Detectors)	
Hazard(s):	Metal	
Parameters, values, or critical limits:	Functioning metal detector that can detect 1.5 Fe, 1.8 NF, 2.0 SS, and 2.0 Al mm spheres.	
Monitoring:	What:	All product passes through an operating metal detector.
	How:	Monitor according to SOP 5.21-01 CCP Monitoring Metal Detector .
	Frequency:	Conduct the inspection at the beginning of a startup, a shutdown of two hours or longer, at the end of a production run (no following shift), and at least every 2.5 hours of operation. Bulk detectors are tested prior to startup and after each vessel.
	Who:	Trained warehouse operator.
Corrective Action:	Operator notifies supervisory personnel. Supervisory personnel complete corrective action according to SOP 5.21-03 HACCP Deviation for Metal Detector .	
Verification:	Monitoring Activity:	Supervisory personnel verify the monitoring activity through record review within 7 days of record generation. The review is indicated by a signature and date.
	Food Safety Plan:	The food safety plan is incorporated into annual internal audits. The plan, CCP selection, and CL determination are reviewed/assessed annually.
Validation:	Critical Control Point:	CCP selection is reevaluated annually in light of emerging technological and regulatory information. This review is documented on record Validation .
	Critical Limits:	CL or parameter selection is reevaluated annually in light of emerging technological and regulatory information. This review is documented on record Validation .
	Scientific & Technical Information:	Decisions for the hazard analysis, CCP selection, and CL selection have been based on scientific and technical information. This information is posted to the corporate intranet and may be accessed through this link .
Records:	Monitoring Activity: 6.3-01.0 Critical Control Point: Packaged Product Metal Detector or 6.3-01.1 Critical Control Point: Bulk Loading Metal Detector . Records are retained according to retention policies.	

Procedural documentation is available on the corporate intranet through direct links or through the quality assurance tab. This documentation will be made available to customers upon request.

Supply-Chain Program

Hazards Requiring a Supply-Chain-Applied Control:	<p>Hazard analysis determined that incoming packaged sugar requires a supply-chain-applied control for metal contamination. In the absence of a supplier-applied control, there could be the potential for hazardous metal contamination based on sugar processing equipment and facilities. Some of this product might be warehoused and distributed directly to the customer without further processing.</p>
Preventive Controls Applied by Supplier:	<p>Approved suppliers continually monitor sugar by passing all product through metal detectors or magnets. These actions are documented in a supplier's records.</p>
Verification Activities:	<p>Based on supplier performance and the low risk associated with material, a 2nd or 3rd party audit by a qualified auditor is used to verify supplier's control of metal hazard. Preference is given to GFSI certification.</p>
Verification Procedures:	<p>A copy of the audit is requested from the supplier annually or every three years if the supplier certifies to the FSSC 22,000 standard. The quality assurance director reviews certification audits and approves suppliers based on the onsite audit and documentation requests. System assurances include a two-step verification procedure. First, Corporate office only sources product from approved suppliers. Second, receiving facilities are given an approved supplier register which is utilized as a product acceptance criterion. Both measures should ensure that receiving facilities only receive sugar products from approved suppliers.</p>
Verification Records:	<p>Supplier audit report made available– Beet Sugar.</p>
Receiving Facility Procedures:	<p>Receiving facility only accepts product from approved suppliers as outlined on the Approved Supplier Register. Facilities hold and do not accept shipments from unapproved suppliers. If this occurs, facilities notify the quality assurance director for disposition.</p>
Receiving Records:	<p>Inspection and receipt records are maintained locally.</p>

Amendments	
9/25/23	Changed Day Mechanic Supervisor from Brent Rambough to Bryce Smedley, added Plant Manager Ian Kihara to the team list.
3/6/23	Removed Jordon Hauge from HACCP team. Added Calista's refresher HACCP class.
10/5/22	Removed record retention for three years and just referenced the retention policy. Removed Lump from Kason screen description as it is stated specifically that the lump screens must be 10-11 mesh. Added size of Kason screen, 8 mesh. Added Thick juice to Serial Liming step. Removed Defoamer from Diffusion step. Added Water, Other to Diffusion step and created a HA form. Added Defoamer to Beet washing step. Updated Number of employees to 400-450, changed temporary employees from No to as needed but will receive standard food safety orientation, Changed certifying body to CICS.
2/8/22	Updated training log for HACCP team removing all training for personnel no longer on the team and adding 1- Day HACCP training for Brent Rambough, Bruce Hahn and Jordon Hauge, also added PCQI training for Travis Fries and Angel Perez. Added n-Propanol to flow diagram.
10/13/21	Added document control number to first page , removed document control number from product description, removed Edward Berg and Sean Arritt. Added Jordon Hauge as Operations manager added Bruce Hahn as Assistant Production Manager.
5/20/21	Added PCC waste stream.
4/20/21	Changed Lab Supervisor from Eric Bair to William Norman, changed Warehouse Manager from Kevin Carter to Travis Fries. Added training for Travis Fries and William Norman
10/20/20	Changed Production Manager from Dalton Ziegler to Edward Berg. Added training information for Edward Berg & Brent Rambough.
6/30/20	Added section on Supply Chain Program. Replaced Jorge deVarona with Ian Kihara as Plant Manager, Replaced Tyrel Murphy with Eric Bair for Lab Supervisor, Replaced David Webb beet end process engineer with Dalton Zeigler Production Manager, Replaced Kyle Laib warehouse mechanic with Brent Rambough Mechanical Supervisor.
8/22/19	Changed recall from intranet to NSM and updated link. Removed Jeremy Adamson the Company HACCP Coordinator. Changed number of employees from 300-380 to 380-420. Changed SQF ed. 8.0 to current edition. Changed Certification body to NSF. Renumbered and consolidated Prerequisite programs to match NSM no validation needed as none removed. Replaced Jereme Winn with Kyle Laib as Warehouse Mechanic. Changed 7.1-03 Validation to Validation and updated links. Removed Loadout Magnet.
08/02/2018	Removed Charlie Mower and added Tyrel Murphy, David Webb, and Sean Arritt to the HACCP team. Added Kevin Carter's PCQI and Tyrel, David, and Sean's HACCP to training log. Added descalant and extract to serial liming and thin juice to high melter. Removed sodium carbonate from evaporation. Moved filter aid from juice filtration and softening and added it to carbonation and clarification.

01/23/2018	Removed Zhanna Draget and Bryan Soloaga from the HACCP team and added Charlie Mower and Jereme Winn.
05/24/2017	Removed the Environmental Monitoring prerequisite program. Documented a validation of change & a notification letter outlining rationale.
03/28/2017	Removed Joshua Elliott as the local coordinator and added Calista Newman.
06/13/2016	Removed the local organizational chart and added links to the corporate recall procedure. Supply-chain program is applied to NSM facilities receiving sugar products.
02/11/2015	Joshua Elliott has replaced Jeremy Adamson as the local HACCP coordinator. Jeremy Adamson has been added to the HACCP team as the corporate HACCP coordinator.
07/20/2015	Removed the production magnet from the flow diagram and the hazard analysis due to magnet strength and location. Added an identifier to each magnet in the flow diagram.
04/23/2015	The corporate SOPs were modified. Quality assurance will now verify documentation during internal audits rather than verifying on lot per week.
09/08/2014	Corporate standardization of SOPs. SOPs and blank record copies have been moved from the HACCP plan to the corporate intranet. Updated the SQF-related ORG chart due to reorganization efforts. Added Angel Perez to the HACCP team to replace Joe Benitez.
06/25/2013	Updated SOPs by consolidating the two metal detector SOPs (bulk and packaged) into one procedure.

Training Log	
4/15/22	Calista Newman completed One-Day HACCP refresher course
1/20/2022	Travis Fries and Angel Perez completed FSPCA Preventive Controls for Human Food Course.
12/13/2021	Jordon Hauge & Brent Rambough completed a one-day HACCP course.
11/29/2021	Bruce Hahn completed a one-day HACCP course.
4/20/2021	William Norman completed a one-day HACCP course.
2/25/2021	Travis Fries completed a one-day HACCP course.
07/28/2016	Calista Newman completed FSPCA Preventive Controls for Human Food course.
11/04/2014	Angel Perez completed a Three-Day HACCP workshop.
10/4/2014	Ian Kihara completed a One-Day HACCP course.
08/10/2013	Calista Newman completed a Three-Day HACCP Workshop.