Spreckels Sugar Company, Inc.

NATIONAL SUGAR MARKETING

Brawley Factory
Food Safety Plan

Doc. No.: FSP-10 **Date: 03/04/2024**

Granulated Sugar

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Plan Approval

Facility Management: Steven Olson Date: 3/18/24

Local HACCP Coordinator: Date: 3/18/24

Facility Information

Facility Name:	Spreckels Sugar Company, Inc., Brawley Factory
Facility Address:	395 w. Keystone Rd., Brawley, CA, 92227
Phone:	(760) 498-2434
Plant/Facility Manager:	Steve Olson
Local HACCP Coordinator:	Derek Binder
HACCP Coordinator (PCQI):	Derek Binder
Number of Employees:	350
Temporary Employees:	Yes
Facility Description:	The Brawley facility was constructed in 1945 and extracts and refines sugar from domestically grown sugar beets. This facility produces granulated sugar, which is conditioned and stored in bulk silos. Sugar is screened and loaded into bulk rail-cars and trailers or packaged into 50 lb. bags and 2000 lb. flexible intermediate bulk container (FIBC) supersacks (totes). Bags and totes are shipped via truck to forward warehouses or direct to customers.

Food Safety

Products:	Granulated Sugar
Third Party Audit Standard:	SQF Food Safety Code: Food Manufacturing
Certification Body:	CICS Americas
Import Capability:	Facility can import raw sugar (non-food) on a case-by-case basis for refining.
Ingredients/Raw Materials:	Granulated sugar extracted from domestic sugar beets.
Packaging:	This facility packages product into supersacks and 50 lb. bags.

Prerequisite Programs :

1. Employee Training	2. Personnel Practices	3. Integrated Pest Management
4. Equipment Calibration: Food Safety	5. Facility & Equipment Maintenance	6. Cleaning, Sanitation, and Waste Management
7. Water & Air Monitoring	8. Physical Contaminant Control	9. Product Storage & Warehousing
10. Product Distribution	11. Allergen Management	12. Chemical Control
13. Supplier Approval	14. Visitors	

Team

Tony Malagon	Technical Services Manager	PCQI, HACCP Certified (Secondary)
Derek Binder	Warehouse Manager	PCQI, HACCP Certified (Primary)
Martha Zaragoza	Food Safety Specialist	HACCP Certified (Secondary)
Steve Olson	District Manager	PCQI, HACCP Certified (Secondary)
Carlos Aragon	Maintenance Manager	In-House Training
Juan Patron	Production Manager	PCQI, In-House Training
Roger Colmenero	Agriculture Manager	In-House Training
Daniel McCullough	Assistant Maintenance Manager	In-House Training
Dan Dumas	Director of Technical Services	PCQI, HACCP Certified
Jaime Centeno	PM Planner/ Scheduler	In-house Training, PCQI Certified

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. Sugar products are typically classified as low-risk, shelf-stable products.
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 distributed for further processing to food processors that provide products to the general public, including high risk groups.
Shelf Life:	2 years, 70%RH, 90°F
Labeling Instructions:	No labeling requirements for consumer safety or bioengineering disclosure (validated refinement).
FDA Classification:	GRAS 21 CFR 184.1854
Storage:	Packaged product is warehoused in an ambient environment.
Distribution:	Granulated sugar is distributed in bulk or packaged form. Bulk sugar is transported by rail or bulk truck. Packaged sugar, bags and totes, is distributed by trailer.

Technical Information

Chemical Formula:	$C_{12}H_{22}O_{11}$
Water Activity (a_w):	0.22[1]
Moisture:	0.04% Max.
Sulfites:	2 to 6 ppm. Must be less than 10 ppm for regulatory labeling.
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. Classified as low risk by the ICMSF 2005[6].

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

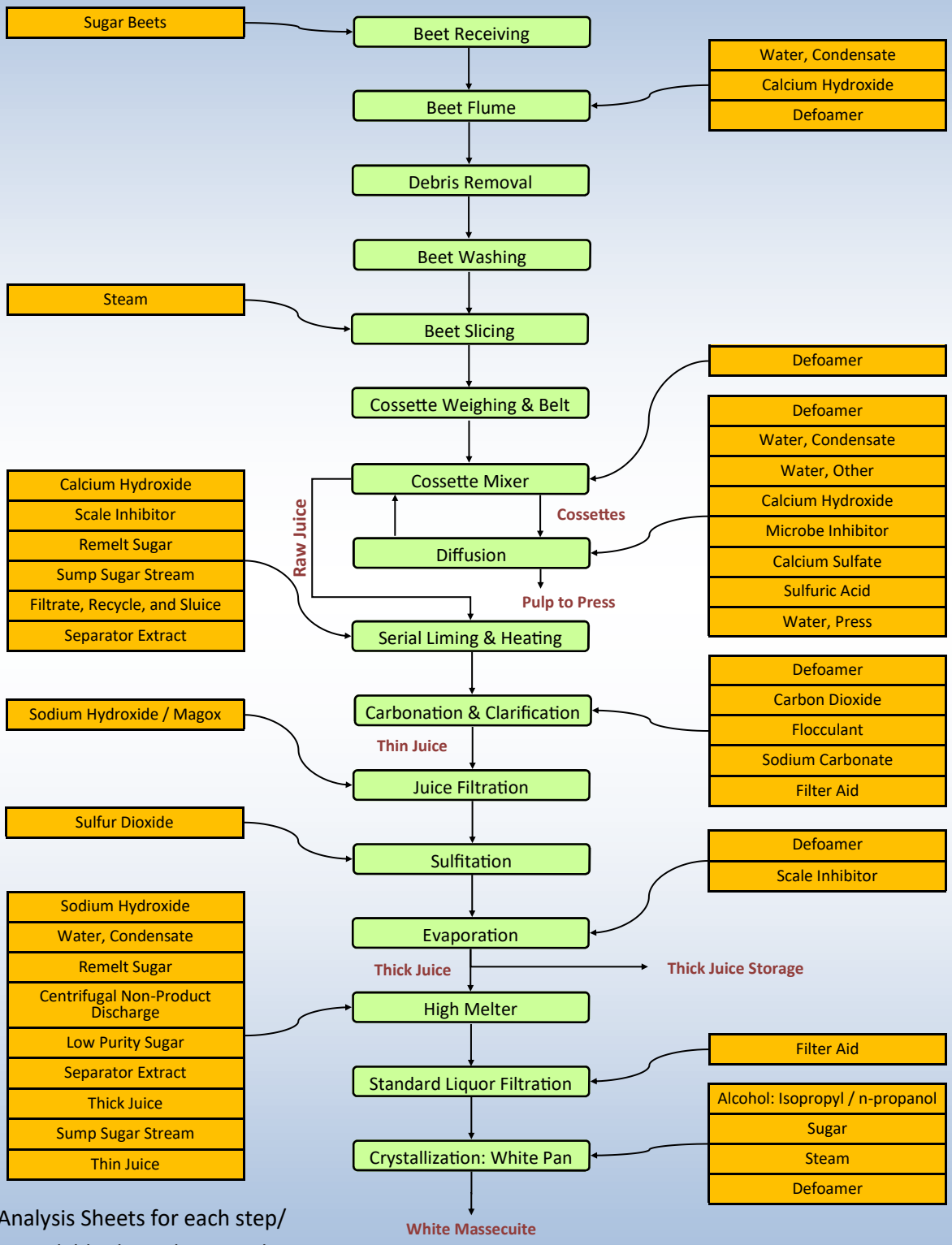
[4] International Society of Beverage Technologists (ISBT)

[5] GMA Canner's Standard

[6] International Commission for the Microbiological Specifications for Food: 12 Sugar, Syrups, and Honey (2005).

Process Flowchart: Beets to Massecuite

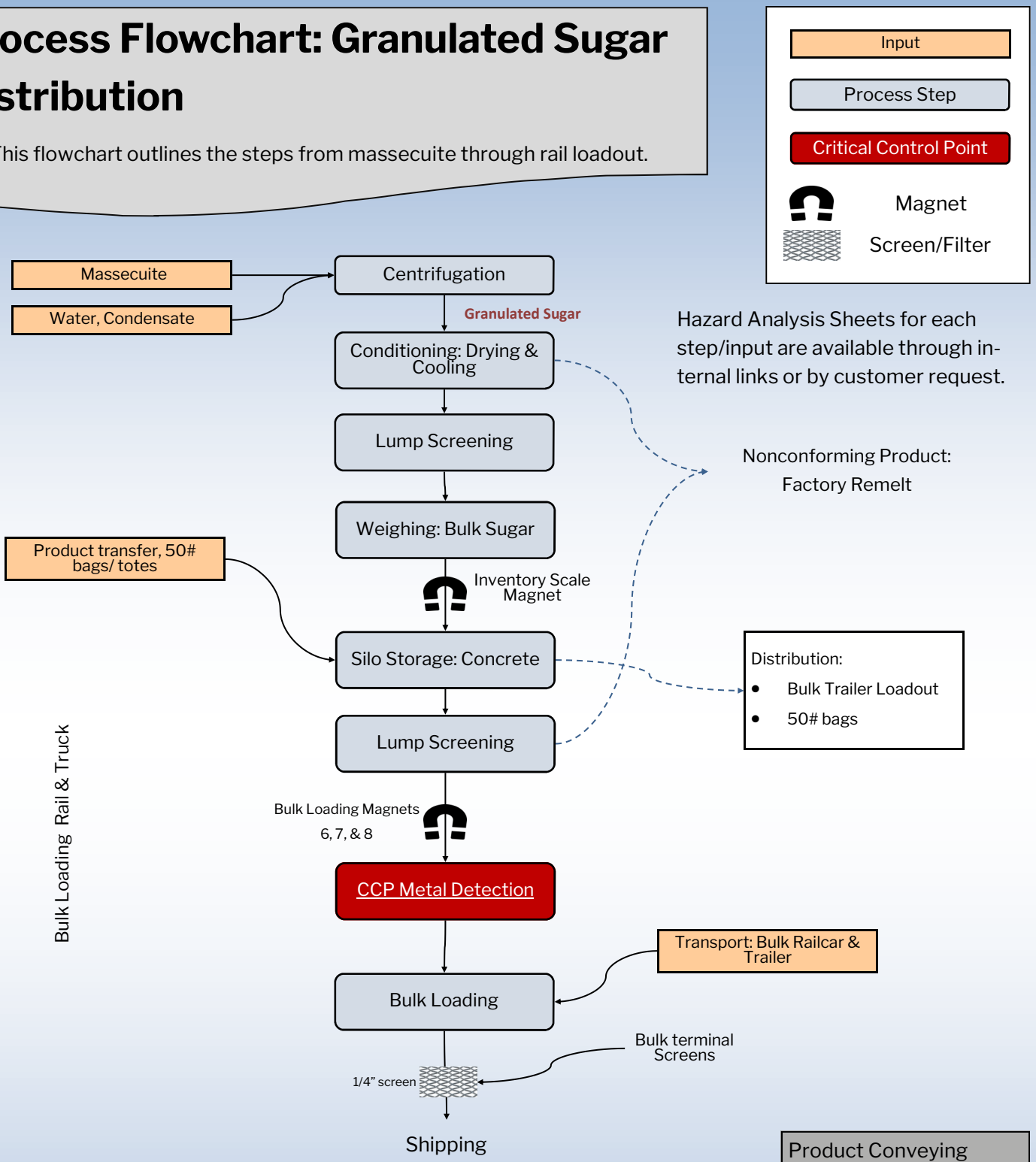
This flowchart outlines the factory mill, including slicing, extraction, purification, and crystallization. The separation in diagrams is based on product risk and resulting hygienic zoning (GMP). The factory process (outlined below) precludes any food safety hazards identified prior to crystallization.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



Hazard Analysis Sheets for each step/ input are available through internal links or by customer request.

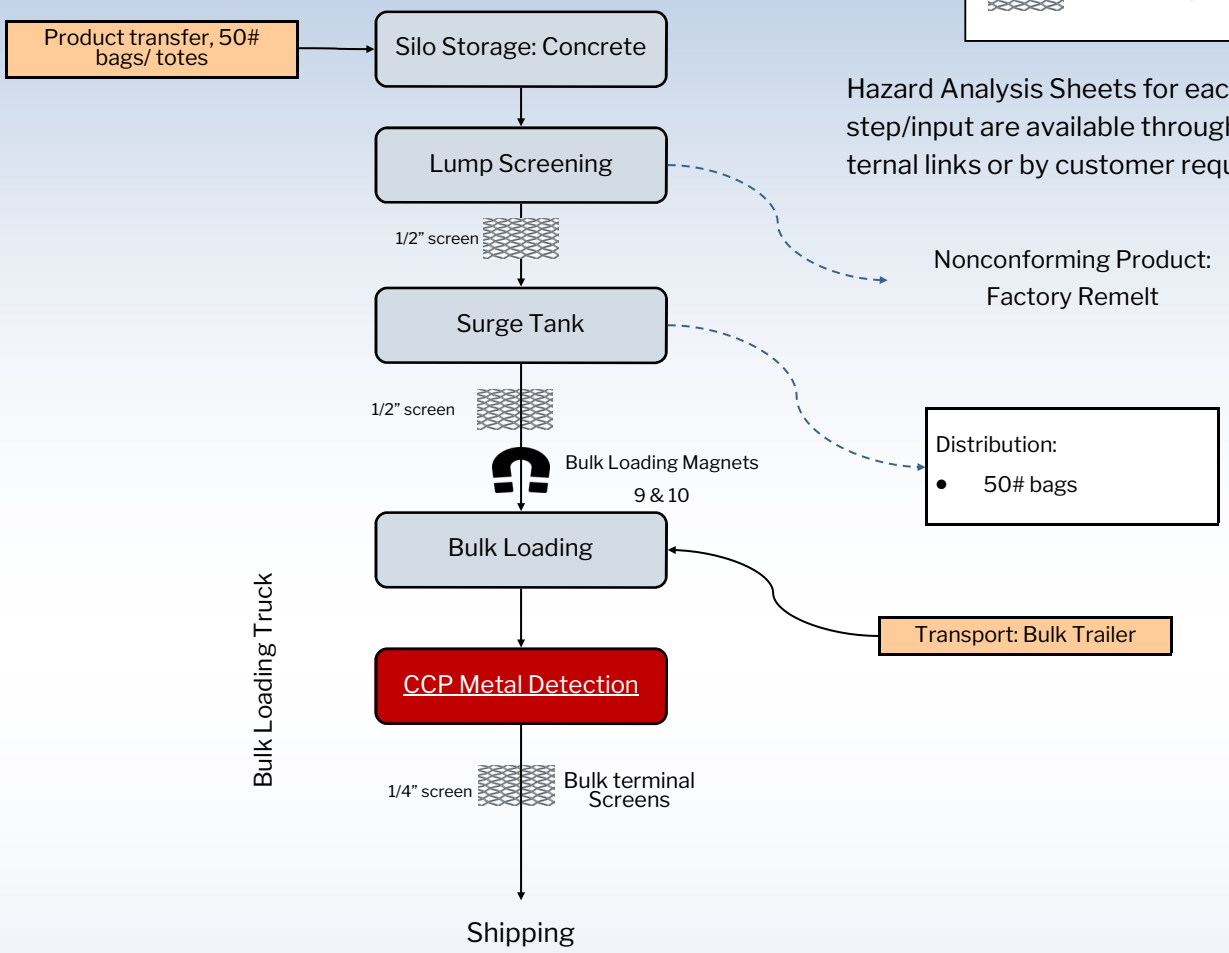
Process Flowchart: Granulated Sugar Distribution

This flowchart outlines the steps from massecuite through rail loadout.



Process Flowchart: Granulated Sugar Distribution

This flowchart outlines the steps from Silo Storage: Concrete through Bulk Truck.

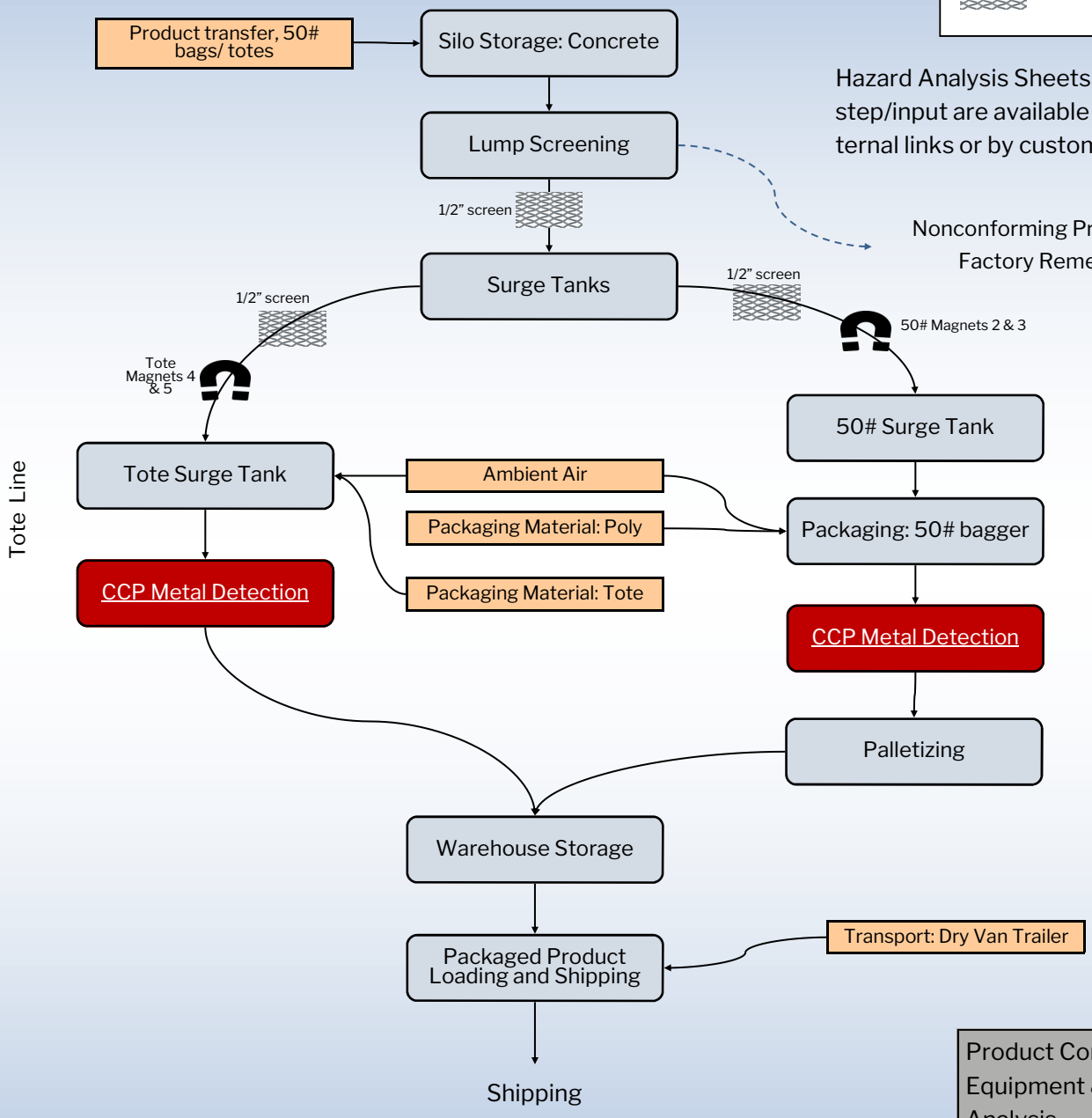


Product Conveying Equipment & Hazard Analysis

- Bucket Elevator
- Screw Conveyor

Process Flowchart: Granulated Sugar Distribution

This flowchart outlines the steps from Silo Storage: Concrete through tote line.



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Product Conveying Equipment & Hazard Analysis

- Bucket Elevator
- Screw Conveyor

Process Preventive Control: Critical Control Point Summary

Process Control Step:		CCP Metal Detection
Hazard(s):		Metal
Critical limits:		Functioning metal detector that can detect and reject 1.5 Fe, 1.8 NF, 2.0 SS, and 2.0 Al mm test pieces.
Monitoring:	**What:**	All product passes through an operating metal detector.
	How:	Monitor according to Metal Detector Monitoring Procedure.
	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 hours of operation (Packaged Product), at the start and finish of every compartment (Railcars), and first and last hatch (bulk trailer). Bulk detectors are tested prior to startup and after each vessel.
	Who:	Trained warehouse operator (qualified individual).
Corrective Action:		Operator notifies supervisory personnel. Supervisory personnel place affected product on hold, complete corrective action and determine final disposition.
Verification:	**Monitoring Activity:**	Supervisory staff verify the monitoring activity through record review within 7 days of record generation 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; documented on record 7.1-03 Validation.
	Critical Limits:	CL or parameter selection is reevaluated annually in light of emerging technological and regulatory information; documented on record 7.1-03 Validation.
	Scientific & Technical:	Decisions for the hazard analysis, CCP selection, and CL selection have been based on scientific and technical information. This information is available upon request.
Records:		Monitoring Activity: Documented in electronic or physical records. Records are retained for two years.

Procedural documentation is available to customers upon request.

Amendments

08/11/2017	Reviewed, no changes.
09/11/2017	Reviewed for hanger bearing material issue.
06/21/2018	Reviewed yearly, no changes.
08/20/2019	Annual review, added ammonium bisulfite and outside air filtered by socks, changed truck CCP to each.
09/04/2020	Reviewed yearly, no changes
3/31/2021	Updated Rotex screens used. Noted SO2 as a biocide. Included maximum Warehouse Time in shelf life statement.
10/05/2022	Modified formatting for multi-facility alignment. Hazard Analysis files have been separated and maintained independently.
12/06/2022	Reviewed, made final draft.
12/07/2022	Updated CCP Critical Limit to include test piece rejection, updated document retention from 3 to 2 years, and updated Corrective Action to include product hold.
09/21/2023	Updated due to personnel changes. Steve Olson the district manager, removal of Shelby Drye, and addition or Tony Malagon and Dan Dumas along with training records and Sammy McClaren completing PCQI and HACCP.
10/25/2023	Removed Sammy McClaren from Food Safety team.
12/06/2023	Added Martha Zaragoza to the Food Safety team
1/22/2024	Added Roger Colmenero as Ag. manager
03/01/2024	Updated training record

Training Log

01/09/2020	Martha Zaragoza completed Advanced HACCP Certification
Spring 2023	Sammy McClaren completed his HACCP Certification
5/31/2022	Steve Olson completed his HACCP certification
2/15/2018	Juan Patron completed FSPCA course for PCQI for human food
2/15/2018	Steve Olson completed FSPCA course for PCQI for human food
6/10/2016	Derek Binder & Tony Malagon completed FSPCA course for PCQI for human food
Spring 2016	Derek Binder Completed his HACCP certification