

INSPECTION REPORT

Inspection Date:	May 31, 2023	Inspection Announced: No
Time:	Entry: 9:30 AM	Exit: 4:45 PM
Media:	Water	
Statute (s)/Program(s):	Clean Water Act, National Pollutant Discharge Elimination System (NPDES), Industrial	
Type of inspection:	CEI - Compliance Evaluation Inspection	
Access:	Granted	
Permittee Name:	American Crystal Sugar Co.	
Facility or Site Name:	American Crystal Sugar – Moorhead	
Facility/Site Physical Address:	2500 11 th St. N	
(city, state, zip code)	Moorhead, Minnesota 56560	
County/Parish:	Clay	
Permit Number:	MN0001945	

Persons Participating in Inspection:					
Title	Name	Phone	Email	Present at Opening Conference	Present at Closing Conference
Physical Scientist, EPA	Matthew Schulte	(312) 886-2405	schulte.matthew@epa.gov	Yes	Yes
Environmental Engineer, EPA	Andi Hodaj	(312) 353-4656	hodaj.andi@epa.gov	Yes	Yes
Environmental Affairs Manager	Doug Emerson	(218) 236-4777	Demerson@crystalsugar.com	Yes	Yes
Factory Manager	Aaron Bjerke	(218) 291-5431	abjerke@crystalsugar.com	Yes	Yes
Environmental Compliance Supervisor	Nicholas Theis	(218) 291-5428	ntheis@crystalsugar.com	No	No
Assistant Chemist	Gary Bailey	—	—	No	Yes
Lead Inspector:					
Matthew Schulte		Schulte, Matthew	 Digitally signed by Schulte, Matthew Date: 2023.08.09 13:04:50 -05'00'		

Persons Participating in Inspection:			
	Region 5	schulte.matthew@epa.gov	(312) 886-2405
Additional Persons Participating in Inspection:			
Andi Hodaj	Region 5	hodaj.andi@epa.gov	(312) 886-6058
Supervisor Review:			
Molly Smith	MOLLY SMITH	 Digitally signed by MOLLY SMITH Date: 2023.08.09 14:04:00 -05'00'	
	Region 5	smith.molly@epa.gov	(312) 353-8773

SECTION I – INTRODUCTION

Site Entry and Inspection Objectives

Region 5 Lead Inspector, Matthew Schulte, and inspector Andi Hodaj arrived at the American Crystal Sugar – Moorhead Facility (the “Site” or “Facility”), located at 2500 11th St. N, Moorhead, MN 56560, at 9:30 AM on May 31, 2023, for an unannounced inspection. Inspectors presented their credentials to American Crystal Sugar representatives: Doug Emerson and Aaron Bjerke, and informed the Facility that this was an EPA Region 5 inspection to investigate elements of the Clean Water Act (CWA) and the National Pollutant Discharge Elimination System (NPDES) permit program. The inspection was conducted under the authority of the CWA NPDES permit program and Section 308 of the CWA. The table above identifies the attendees that participated in the inspection.

This report is based on information supplied by Facility representatives, observations made by the Region 5 inspectors, and records and reports maintained by the permittee and Region 5. These include the following: direct observations made by the Region 5 inspectors, photographs taken by Region 5 inspectors, physical evidence collected by Region 5 inspectors, measurements taken by Region 5 inspectors, verbal or written statements made or supplied by Facility representatives (the permittee) during or subsequent to the on-site inspection, and materials, processes, data, photographs, or documents shown, demonstrated, or submitted to the Region 5 inspectors by Facility representatives during or subsequent to the on-site inspection. In addition, information gathered prior to or subsequent to the inspection from a review of U.S. EPA, State, and public records may be included in this report.

Facility/Site Description

Region 5 Lead Inspector confirmed the following Facility information:

The Facility is a sugar beet processing facility that processes approximately 6,764 tons of beets a day, for 240 to 280 day per year. Products from the Facility include refined sugar and byproducts of molasses and dried beet pulp. The Facility owns and operates a wastewater treatment system to treat all process wastewater

generated from the following activities: beet transport flume wastewaters; barometric condenser wastewaters; and factory sewer wastewaters, including but not limited to, floor drains, pump seal cooling, boiler blowdown, house hot water overflows, research center wastewaters, and miscellaneous wastewaters.

The Facility's wastewater treatment processes consist of primary clarification, mud solids presses, and mud cell storage basins. Containment of contaminated snow melt and storm water runoff is stored in an approximately 15-acre stormwater pond for primary treatment before entering the Facility's wastewater treatment plant. Once treated, wastewater may be discharged from either Outfalls SD001 or SD002 to the Red River to the North or is transferred to 3 storage ponds on-site, referred to by the Facility as, game ponds. Additional sampling is performed on the game ponds prior to discharge. An Outfall SD003 exists in the NPDES permit, which represents the discharge combination of both SD001 and SD002, but this event has never occurred at the Facility to date.

At the time of this inspection, the Facility had already completed its annual beet processing and was performing maintenance. Beet processing typically occurs at the Facility from mid-August through mid-May while maintenance occurs from mid-May to mid-August. Under normal operations, all water used in the Facility's processes originates from the beets. The Facility has the ability to draw water from the City of Moorhead, but has never had the need to.

SECTION II – OBSERVATIONS

Observations may not be in sequential order.

Unique Identifying No.	Observation	Area of Concern?
MS-OB-001	Facility had chemical totes stored on-site that were not being kept under cover or in secondary containment. (Photos #: 22 and 23)	Yes
MS-OB-002	Facility had a scrap yard that was referred to as the "Boneyard" where scrap metal was kept. This yard was not covered, nor did it have secondary containment.	Yes
MS-OB-003	Facility has experienced exceedances for fecal coliform and is currently under a stipulated agreement with the Minnesota Pollution Control Agency (MPCA) to address the exceedances from September 2019 through June 2022.	Yes
MS-OB-004	The Facility has 2 stormwater collection ponds the Facility refer to as "low strength" and "high strength," where all stormwater is sent prior to entering the Facility's treatment system.	No
MS-OB-005	All composite sampling is currently being performed as a time-based composite.	Yes
MS-OB-006	Sample box for the composite sample did not contain a thermometer to ensure that samples were being kept at the required preservation temperatures (<6°C).	Yes

Unique Identifying No.	Observation	Area of Concern?
MS-OB-007	Sugar beets are kept on-site in frozen piles when processing. Piles have set locations on-site and any runoff would be directed to the Facility's stormwater ponds or to the treatment system.	No

SECTION III – RECORDS REVIEW

Records reviewed may not be in sequential order.

No.	Record
MS-RR-001	The following Records were uploaded to EPA's GoAnywhere site on June 22, 2023: 2020_EGF_annual_stormwater_report (002).pdf 2021_EGF_annual_stormwater_report (002).pdf 2022_EGF_stormwater_annual_report (002).pdf 4064_001.pdf 4067_001.pdf 4068_001.pdf 4069_001.pdf ACSC-MHD RY2020 Industrial Stormwater Annual Report.pdf ACSC-MHD RY2021 Ind Industrial Stormwater Annual Report.pdf April_21_DmrCalculatedValuesSpreadsheet.xlsx April_22_DmrCalculatedValuesSpreadsheet.xlsx April_23_DmrCalculatedValuesSpreadsheet.xlsx Ash Hauling Invoice (002).pdf Aug_2020_DmrCalculatedValuesSpreadsheet.xlsx Aug_21_DmrCalculatedValuesSpreadsheet.xlsx Aug_22_DmrCalculatedValuesSpreadsheet.xlsx CoC 5_30_23 (002).pdf CoC 5_31_23 (002).pdf CoC 6_1_23 (002).pdf Coal Ash Clay County Landfill tickets May 2023.pdf Copy of Record - initial RY2022 Industrial stormwater annual report.pdf Copy of River Discharge Flow Calibration Log.xlsx Copy of River Discharge pH Calibration Log.xlsx Core-Service-SubmittalDisplay-CROMERR April 2021.pdf Core-Service-SubmittalDisplay-CROMERR April 2022.pdf Core-Service-SubmittalDisplay-CROMERR April 2023.pdf Core-Service-SubmittalDisplay-CROMERR August 2020.pdf Core-Service-SubmittalDisplay-CROMERR August 2021.pdf

Core-Service-SubmittalDisplay-CROMERR August 2022.pdf
Core-Service-SubmittalDisplay-CROMERR December 2020.pdf
Core-Service-SubmittalDisplay-CROMERR December 2021.pdf
Core-Service-SubmittalDisplay-CROMERR December 2022.pdf
Core-Service-SubmittalDisplay-CROMERR February 2021.pdf
Core-Service-SubmittalDisplay-CROMERR February 2022.pdf
Core-Service-SubmittalDisplay-CROMERR February 2023.pdf
Core-Service-SubmittalDisplay-CROMERR January 2021.pdf
Core-Service-SubmittalDisplay-CROMERR January 2022.pdf
Core-Service-SubmittalDisplay-CROMERR January 2023.pdf
Core-Service-SubmittalDisplay-CROMERR July 2020.pdf
Core-Service-SubmittalDisplay-CROMERR July 2021.pdf
Core-Service-SubmittalDisplay-CROMERR July 2022.pdf
Core-Service-SubmittalDisplay-CROMERR June 2020.pdf
Core-Service-SubmittalDisplay-CROMERR June 2021.pdf
Core-Service-SubmittalDisplay-CROMERR June 2022.pdf
Core-Service-SubmittalDisplay-CROMERR March 2021.pdf
Core-Service-SubmittalDisplay-CROMERR March 2022.pdf
Core-Service-SubmittalDisplay-CROMERR March 2023.pdf
Core-Service-SubmittalDisplay-CROMERR May 2020.pdf
Core-Service-SubmittalDisplay-CROMERR May 2021.pdf
Core-Service-SubmittalDisplay-CROMERR May 2022.pdf
Core-Service-SubmittalDisplay-CROMERR November 2020.pdf
Core-Service-SubmittalDisplay-CROMERR November 2021.pdf
Core-Service-SubmittalDisplay-CROMERR November 2022.pdf
Core-Service-SubmittalDisplay-CROMERR October 2020.pdf
Core-Service-SubmittalDisplay-CROMERR October 2021.pdf
Core-Service-SubmittalDisplay-CROMERR October 2022.pdf
Core-Service-SubmittalDisplay-CROMERR September 2020.pdf
Core-Service-SubmittalDisplay-CROMERR September 2021.pdf
Core-Service-SubmittalDisplay-CROMERR September 2022.pdf
DMR-QA 42 MHD Lab.pdf
Dec_2020_DmrCalculatedValuesSpreadsheet.xlsx
Dec_21_DmrCalculatedValuesSpreadsheet.xlsx
Dec_22_DmrCalculatedValuesSpreadsheet.xlsx
EGF Factory Stormwater Map (002).pdf
EGF SWPPP REV 2013 (002).pdf
Feb_22_DmrCalculatedValuesSpreadsheet.xlsx
Feb_23_DmrCalculatedValuesSpreadsheet.xlsx
Industrial Stormwater Site Inspection Forms CY 2023.pdf
Jan_2021_DmrCalculatedValuesSpreadsheet.xlsx
Jan_22_DmrCalculatedValuesSpreadsheet.xlsx
Jan_23_DmrCalculatedValuesSpreadsheet.xlsx
July2021_DmrCalculatedValuesSpreadsheet.xlsx

	July_20_DmrCalculatedValuesSpreadsheet.xlsx July_22_DmrCalculatedValuesSpreadsheet.xlsx June_2020_DmrCalculatedValuesSpreadsheet.xlsx June_2021DmrCalculatedValuesSpreadsheet.xlsx June_22_DmrCalculatedValuesSpreadsheet.xlsx M6764Q01 Industrial Water Systems Flow.pdf March_22_DmrCalculatedValuesSpreadsheet.xlsx March_23_DmrCalculatedValuesSpreadsheet.xlsx May_2020_DmrCalculatedValuesSpreadsheet.xlsx May_22_DmrCalculatedValuesSpreadsheet.xlsx Nov_20_DmrCalculatedValuesSpreadsheet.xlsx Nov_21_DmrCalculatedValuesSpreadsheet.xlsx Nov_22_DmrCalculatedValuesSpreadsheet.xlsx Oct_20_DMRCalculatedValuesSpreadsheet.xlsx Oct_21_DmrCalculatedValuesSpreadsheet.xlsx Oct_22 Mercury CoC.pdf Oct_22_DmrCalculatedValuesSpreadsheet.xlsx Parshall flume calibrations.pdf QA-DMR42.pdf SWPPP Inspection 4_11_23.pdf SWPPP Inspection 5_16_23.pdf Sep_22_DmrCalculatedValuesSpreadsheet.xlsx Sept_20_DmrCalculatedValuesSpreadsheet.xlsx Sept_21_DmrCalculatedValuesSpreadsheet_Rev_2.xlsx egf-spcc-plan (002).pdf feb_2021_DmrCalculatedValuesSpreadsheet.xlsx march_21_DmrCalculatedValuesSpreadsheet.xlsx may_21_DmrCalculatedValuesSpreadsheet.xlsx mhd-spcc.pdf mhd-storm-water-plan.pdf
MS-RR-002	The Facility's NPDES Permit MN0001945 expired on August 31, 2013, but has been administratively continued by MPCA.

SECTION V - AREAS OF CONCERN

The presentation of areas of concern does not constitute a formal compliance determination or violation.

No.	
MS-OB-001	Facility had chemical totes stored on-site that were not being kept under cover or in secondary containment. (Photos #: 22 and 23) Chemicals and stored wastes should be kept under cover and in secondary containment to prevent any spills or leaks.

No.	
MS-OB-002	Facility has a scrap yard that was referred to as the “Boneyard,” where scrap metal was kept. This yard was not covered, nor did it have secondary containment. Scrap metal and other wastes should be kept under cover and in secondary containment to prevent leaching and runoff.
MS-OB-003	Facility has experienced exceedances for fecal coliform and is currently under a stipulated agreement with the Minnesota Pollution Control Agency (MPCA) to address the exceedances from September 2019 through June 2022. Under the Facility’s NPDES permit there is a fecal coliform limit of 400 per 100 milliliter with a grab sampling frequency of 1 sample per week for outfall WS006.
MS-OB-005	Composite sampling is currently being performed as a time-based composite rather than a flow-based composite. Composite sampling should be a 24-hour flow-based composite, rather than a time.
MS-OB-006	Sample box for the composite sample did not contain a thermometer to ensure that samples were being kept at the required preservation temperatures (<6°C).

SECTION VI – CLOSING CONFERENCE AND FOLLOW UP

Closing Conference

The Lead Inspector held a closing conference with Facility personnel on May 31, 2023, for the inspection. During the closing conference, the Lead Inspector discussed the observations and Areas of Concern identified during the inspection. Observations and Areas of Concern have not yet been evaluated for a formal compliance determination.

SECTION VII – LIST OF APPENDICES

Appendix 1 – Photo Log [times listed on images are in Central Standard Time.]

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 1	Time: 1:39 PM		
Direction Photo Taken:			
Photo Description: Evaporator tanks to remove water from the beats/sugar.			
		File: ACS_001.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 2	Time: 1:42 PM		
Direction Photo Taken:			
Photo Description: Pipe where cool water from the condenser pond is input into the system and used in the evaporators.			
		File: ACS_002.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 3	Time: 1:55 PM		
Direction Photo Taken: South			
Photo Description: Flume channel where beets enter the processing system.			
		File: ACS_003.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 4	Time: 1:59 PM		
Direction Photo Taken: South			
Photo Description: Rock and dirt catcher. Where rocks and dirt are separated from the beets.			
		File: ACS_004.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 5	Time: 2:02 PM		
Direction Photo Taken:			
Photo Description: "Panic" gate. Can be used to stop beets from entering Facility for processing.			
		File: ACS_005.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 6	Time: 2:03 PM		
Direction Photo Taken:			
Photo Description: Spray table in the flume system.			
		File: ACS_006.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 7	Time: 2:08 PM		
Direction Photo Taken: South			
Photo Description: Ditch west of primary clarifier.			
		File: ACS_007.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 8	Time: 2:13 PM		
Direction Photo Taken: North			
Photo Description: Primary clarifier in the process of being cleaned.		File: ACS_008.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 9	Time: 2:26 PM		
Direction Photo Taken: East			
Photo Description: EQ Pond (covered).			
		File: ACS_009.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 10	Time: 2:29 PM		
Direction Photo Taken: West			
Photo Description: Mud ditch. Water flowing in from primary clarifier. Straw on top of ditches to manage odors. Mud ditches receive mud from the mud presses.			
		31/05/2023 14:29	
		File: ACS_010.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 11	Time: 2:32 PM		
Direction Photo Taken: South			
Photo Description: Low strength stormwater pond.			
		File: ACS_011.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 12	Time: 2:35 PM		
Direction Photo Taken: South			
Photo Description: High strength stormwater pond. Covered with permeable material (thermogreen).			
		File: ACS_012.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 13	Time: 2:36 PM		
Direction Photo Taken: South			
Photo Description: High strength stormwater pond. Covered with permeable material (thermogreen).			
		File: ACS_013.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 14	Time: 2:40 PM		
Direction Photo Taken: West			
Photo Description: Condenser pond with floating aerators in its surface.			
		File: ACS_014.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 15	Time: 2:48 PM		
Direction Photo Taken: East			
Photo Description: Condenser pond with autosampler (non-operational) and pipe that says to river.			
		File: ACS_015.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 16	Time: 2:51 PM		
Direction Photo Taken: southeast			
Photo Description: Final Effluent sampling station. Outfall SD001.			
		File: ACS_016.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 17	Time: 2:52 PM		
Direction Photo Taken: West			
Photo Description: Final Effluent sampling station. Outfall SD001.			
		File: ACS_017.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 18	Time: 2:54 PM		
Direction Photo Taken: down			
Photo Description: Parshall flume meter for SD001.			
		File: ACS_018.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 19	Time: 3:11 PM		
Direction Photo Taken: East			
Photo Description: West game pond where final treated is stored before being discharged.			
		File: ACS_019.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 20	Time: 3:17 PM		
Direction Photo Taken: West			
Photo Description: Precipitated Calcium Carbonate (PCC) lime pile stored on east side of facility.			
		File: ACS_020.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023		 31/05/2023 15:17	
Photo No.: 21	Time: 3:17 PM		
Direction Photo Taken: West			
Photo Description: Rocks and dirt from the rock catchers. The area drains into the game ponds.			
		File: ACS_021.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 22	Time: 3:59 PM		
Direction Photo Taken: East			
Photo Description: Empty totes with no secondary containment or cover.			
		File: ACS_022.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 23	Time: 4:02 PM		
Direction Photo Taken: North			
Photo Description: Tote with label stating toxic to aquatic life. No secondary containment or cover.			
		File: ACS_023.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 24	Time: 4:04 PM		
Direction Photo Taken: West			
Photo Description: Final Clarifier directly before Outfall SD002 and WS006.			
		File: ACS_024.JPG	

Facility Name & Location: 2500 11 th St. N, Moorhead, MN 56560		Photographer: Andi Hodaj	Camera: Ricoh WG-4
Date Photograph Was Taken: May 31, 2023			
Photo No.: 25	Time: 4:09 PM		
Direction Photo Taken: West			
Photo Description: Grab sample location for WS006 and composite sampler for SD002.			
		File: ACS_025.JPG	