# NPDES Pretreatment Compliance Sampling Inspection Report

Agri-Mark

39 McCadam Lane
Chateaugay, New York 12920

Industrial Discharge Permit: C-001-89

Inspection Dates: September 19-20, 2023

**Report Prepared by:**

THUAN TRAN Digitally signed by THUAN TRAN
Date: 2023.11.20 11:08:56 -05'00'

Thuan Tran, Physical Scientist

**Report Approved by:**

PHILIP COCUZZA Digitally signed by PHILIP COCUZZA
Date: 2023.11.20 11:13:01 -05'00'

Phil Cocuzza, Chief
Monitoring Operations Section

## 1.0 OBJECTIVE

On September 19-20, 2023, at the request of the New York State Department of Environmental Conservation (NYSDEC), the United States Environmental Protection Agency (USEPA) conducted a Pretreatment Compliance Sampling Inspection (CSI) at Agri-Mark in the Village of Chateaugay, New York (NY). The objective of the Pretreatment CSI was to gather information necessary to determine if the pretreated discharge effluent from Agri-Mark Industrial Wastewater Treatment Facility is in compliance with the requirements and limitations set forth in their Significant Industrial User (SIU) Discharge Permit; C-009-89, and the Federal General Pretreatment Standards for Existing and New Sources of Pollution under 40 CFR Part 403. The permit was issued by the Village of Chateaugay and became effective on January 01, 2020. The permit will expire on December 31, 2024.

## 2.0 KEY PARTICIPANTS

Listed below are key inspection participants and contact information, grouped by organization.

U.S. Environmental Protection Agency
Thuan Tran, Lead Inspector
732-321-4455, email: tran.thuan@epa.gov
Molly Hillenbrand, Environmental Scientist

Agri-Mark
Aaron Page, Corporate EH&S Manager
802-279-1672 (mobile) email: apage@cabotcheese.com
Sergio Macieira, EH& S Specialist
Tyler Chevier, Maintenance Manager
Joel Cox, Maintenance Supervisor

Village of Chateaugay WWTP
Wayne Knechtel, Chief Plant Operator
Matt Clarke, Village of Chateaugay Mayor

## 3.0 FACILITY DESCRIPTION

### 3.1 General Information

Agri-Mark is located on 39 McCadam Lane in the Village of Chateaugay, NY. Agri-Mark, Chateaugay site, is one of four (4) member-owned dairy cooperative facilities that produces cheddar and other similar cheeses. Whey, a by-product of cheese production, is partially processed on-site and is sold as a commodity or sent to other cooperative facilities for further processing. The facility employs 106 personnels and operates 24 hours per day, 7 days per week, 365 days per year with scheduled shut-down days for maintenance. It is categorized under Standard Industrial Classification (SIC) 2022– Natural, Processed, and Imitation Cheese and the North American Industry Classification System (NAICS) 311513 – Cheese Manufacturing.

3.2 Process Information

Agri-Mark; Chateaugay site, uses well water for sanitary and manufacturing operation. Based on the facility's March 2022 "Water Withdrawal Report Form," the average day withdrawal is 512,423 gallons (GPD) from the private wells. Well water is disinfected with sodium hypochlorite (NaOCl) prior to storage in the water tower. From the tower, the water is piped throughout the facility for sanitary use such as bathroom and breakroom areas, and manufacturing operation. Sanitary wastewater is segregated and discharged directly into the Village of Chateaugay Sewer Collection System.

The Chateaugay site receives cow milk from regional dairy farms to initiate the start of the manufacturing process. Attachments used in the transfer of raw milk to the raw milk storage tanks undergo a CIP (Cleaning-In-Place) for food safety. From the storage tanks, the raw milk is pumped into a pasteurizer to kill harmful bacteria. Once pasteurized, the milk is pumped into the Cheese Vats and starter ingredients are added. After cooking for approximately one-hour between 90-102°F, the cheese separates from the raw whey. The cheese continues to the Dry Matting Conveyor (DMC) for curdling, draining, and cutting. From the DMC, the cheese is conveyed onto the Finishing Table. As residual whey drains from the table, salt is manually spread over the cheese. Once the table is full, a rotating arm is attached above to mix the salt into the cheese. After mixing, the rotating arm is replaced by a shovel. The shovel moves the cheese into the screw auger that feeds the Block Forming Towers. The cheese is formed into square blocks and are packaged. The blocks of cheese are vacuum sealed by the Pressurized Vacuum Sealers. Once vacuum sealed, the cheese goes into cold storage. The final cheese product is either shipped to Agri-Mark or their customers.

Raw whey collected from the Cheese Vats, DMC, Finishing Tables, and the Block Forming Towers is filtered through a Fine Saver before moving into the Clarifier. Excess solids from the clarifier are collected and disposed of. Raw whey continues to the Separator where cream and liquid are separated. The cream goes to the Cream Balance Tank where it is directed into the Batch Pasteurizer, then stored in the Cream Silos. The liquid continues to a different pasteurizer, followed by the Reverse Osmosis (RO) Unit. RO permeate flows to the Ultrafiltration (UF) Unit generating UF permeate (lactose) and whey protein concentrate (WPC). The WPC is collected in the WPC Silos. The product is either shipped to Agri-Mark, Middlebury facility, or other customers. The lactose continues to the Evaporator where water is removed. The concentrated lactose is stored in the Permeate Silos where it is hauled to Agri-Mark farms or their customers.

Process wastewater generated from the manufacturing operation consists of rinsed water, milk and other milk products, bits of cheese, water extracted from whey ("cow water"), residuals from cleaning chemicals, as well as, cooling tower bleed and boiler blowdown. The pretreatment process begins when the waste streams commingle at the Receiving Lift Station. The wastewater is pumped through two (2) in-line strainers to the Equalization (EQ) Tank. From the EQ Tank, the wastewater is gravity feed into the pH Neutralization Tank with the addition of either sodium hydroxide (NaOH) or carbon dioxide ($CO_2$) to pH adjust

the wastewater to within 6.7 – 6.9 Standard Units (SU). From the pH Neutralization Tank, the wastewater continues to the splitter box where it is distributed between the North and South Wet Wells. Pumps in the Wet Wells deliver the wastewater to their respective Bio-Towers with plastic media. The effluent and biomass from the Bio-Towers flow into the Rectangular Clarifier. Potassium permanganate ($KMnO_4$) is added to the clarifier for odor control. The effluent from the clarifier overflows the V-Notch weirs and continues to the Parshall flume with an Ultrasonic flow sensor. The flow is monitored, then the pretreated effluent continues to the monitoring manhole before discharging into the Village of Chateaugay Sewer Collection System.

Sludge from the Rectangular Clarifier is pumped into the Sludge Aeration Tank. From the Aeration Tank, the sludge is pumped into the spray trucks where it is land applied. Depending on sludge volume in the aeration tank, solids from the in-line strainers can be diverted to either the Sludge Aeration Tank or pumped into spray trucks to be land applied.

### 3.3 Facility Self-Monitoring Information

Employees performed sample collection at the monitoring manhole. Composite samples are collected for 5-day Biochemical Oxygen Demand ($BOD_5$) and Total Suspended Solids (TSS). On-site sample is collected and analyzed for pH (hydrogen ion). Endyne Environmental Laboratories provides Agri-Mark with sample containers for $BOD_5$ and TSS. A courier from Endyne Environmental Laboratories transports the samples to the laboratory for analyses.

## 4.0 EPA SAMPLING/INSPECTION ACTIVITIES

### 4.1 Sampling Activities

An ISCO automatic composite sampler was programmed to take 96 sample aliquots during the 24-hour sampling event at the monitoring manhole. A 24-hour composite sample was collected and analyzed for $BOD_5$, and TSS. Grab sample was collected for Total Petroleum Hydrocarbons (TPH).

In addition, on-site grab samples were collected and analyzed for pH and Temperature.

All sample containers, preservation techniques and holding times were in accordance with USEPA requirements specified in 40 CFR Part 136. Signed and dated custody seal tape was placed across the lids and along the sides of the sample containers. The custody sealed sample containers were placed inside plastic sample bags and sealed. All samples were transported on ice to the USEPA Laboratory in Edison, New Jersey for analyses.

Flow monitoring data were obtained from Agri-Mark instrumentation which was last calibrated on November 09, 2022.

Split samples were collected and given to the facility representative.

4.2 Inspection Activities

A Pretreatment CSI at Agri-Mark; Chateaugay Site, was conducted on September 19-20, 2023. The inspectors met with Aaron Page; Corporate EH&S Manager, Sergio Macieira; EH&S Specialist, Tyler Chevier; Maintenance Manager, Joel Cox; Maintenance Supervisor as well as Wayne Knechtel; Village of Chateaugay WWTP Chief Plant Operator, and Matt Clarke; Village of Chateaugay Mayor. Inspector's credentials were presented, and business cards were provided during the opening conference. The facility representatives were explained that the purpose of the inspection with supporting on-site activities was to determine if the facility is in compliance with their Significant Industrial User Discharge Permit and the Federal General Pretreatment Standards for Existing and New Sources of Pollution under 40 CFR Part 403.

On-site supporting activities consist of collecting samples at the monitoring location, observing and evaluating the monitoring location, observing and evaluating the flow monitoring equipment, observing and evaluating the facility sampling equipment, review and evaluate the facility's laboratory data and test procedures, tour the manufacturing operation to observe where process wastewater is generated, tour the On-site Pretreatment System, and interview the facility's representatives.

During the closing conference, the facility representatives were briefed on the inspection activities. On-site sample results and concerns observed during the inspection were communicated to the facility representatives.

4.3 Deviations and/or Environmental Conditions

A chemical reaction was observed while preserving Total Petroleum Hydrocarbon (TPH) sample with hydrochloric acid (HCL). The sample container was capped, shook and uncapped to release any built-up pressure. The pH of the sample was checked but did not lower to 2 SU or less. Additional HCL was added, capped, shook and pH checked.

## 5.0 ANALYTICAL RESULTS

**Agri-Mark – Pretreated Effluent to Chateaugay (V) WWTP**
**Inspection Dates: September 19-20, 2023**

| Parameters | Units | SIU Limitations | 40 CFR P 403 | EPA Results |
|---|---|---|---|---|
| Flow | GPD | 400,000 | --- | 328,000 |
| pH | SU | 5.5 – 8.5 | >/= 5.0 | 7.42 |
| Petroleum Hydrocarbon, Total | MG/L | --- | shall not be in amount to cause interference or pass through. | U L |
| $BOD_5$ | MG/L | --- | --- | 432 |
| $BOD_5$ Mass Loading | LBS/Day | 3,000 | --- | 1,080 |
| TSS | MG/L | --- | --- | 206 |
| TSS Mass Loading | LBS/Day | 800 | --- | 515 |
| Temperature | °C | --- | </= 40 (104°F) | 28 |

**Notes** U- The analyte was not detected at or above the Reporting Limit.
L- The identification of the analyte is acceptable; the reported value may be biased low.

## 6.0 FINDINGS

### 6.1 Sampling Result Findings

The EPA analytical results obtained during this inspection are within the acceptable limits.

### 6.2 Inspection Findings

In addition to the analytical data, an inspection of the facility operation was conducted as discussed in Section 4.2 above. During the inspection, the following observations were noted which may contravene the requirements of the permit or the applicable regulations:

6.2.1 The approaching flow to the Parshall flume is turbulence. As a result, the Ultrasonic flow sensor is recording high flow. According to the ISCO Open Channel Flow Measurement Handbook, Fifth Edition, Page 73 of Chapter 4: Flumes, it states, "*The approaching flow should enter the converging section reasonably well distributed across the entrance width, and the flowlines should be essentially parallel to the flume centerline. Surges and waves of any appreciable size should be eliminated. Also, the flow at the flume entrance should be free of "white" water and free from turbulence in the form of visible surface boils*." Furthermore, Section 10.1(b) – Disposal System Operation and Daily Quality Control in Part – II General Condition of the SIU Discharge Permit, it states, "*The permittee shall at all times, properly operate and maintain all facilities and system control (and related appurtenances) which are installed or used by the permitted to achieve compliance with the conditions of this permit…"*

6.2.2 The sampling assemblage consists of the composite sample container, sampling tube, and sampling probe was observed to be dirty and/or contains algal growth. In addition, the sampling probe was observed covered with accumulated growth when raised above the discharging flow. It also felt the sampling probe was resting at the bottom of the monitoring manhole when it was lower back in. At any point in the sampling event and/or during the purging cycle, dirt and/or algal growth could potentially become dislodged and be part of the sample. Hence, the analytical result could be bias high. The sampling assemblage should be clean and/or replaced. Furthermore, the sampling probe should be positioned in the middle of the flow at mid-depth. According to Section 9.1(b) – Monitoring, Recording, and Reporting in Part – II General Condition of the SIU Discharge Permit, it states, "*Samples and measurements taken to meet monitoring requirements specified in this permit shall be representative of the quantity and character of the monitored discharge…."* Furthermore 40 CFR Part 403.12(b)(5)(ii) of the General Pretreatment Regulations for Existing and New Sources of Pollution, it states, " *In addition, the User shall submit the results of sampling and analysis identifying the nature and concentration (or mass, where required by the Standard or Control Authority) of regulated pollutants in the Discharge from each regulated process. Both daily maximum and average concentration (or mass, where required) shall be reported. The sample shall be representative of daily operations…."*

6.2.3 The facility starts pH calibration with the 7-buffer solution, followed by the 4-buffer solution, then finally the 10-buffer solution. According to the "Monitoring, Recording and Reporting" Section of the SIU permit, it states, " *Monitoring must be conducted according to test procedures approved under 40 CFR Pat 136 unless otherwise specified in this permit."* Furthermore, 40 CFR Part 403.12(b)(5)(v) states, "*Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR part 136 and amendments thereto."*

6.2.4 No temperature control was observed in the composite sample refrigerator. It is necessary to maintain preservation of the composite sample during the sampling event. According to 40 CFR Part 136 Table II – Required Containers, Preservation Techniques, and Holding Times under footnote #2, it states, " *Except where noted in this Table II and the method for the parameter, preserve each grab sample within 15 minutes of collection. For a composite sample collected with an automated sample (e.g., using a 24-hour composite sample; see 40 CFR 122.21(g)(7)(i) or 40 CFR part 403, appendix E), refrigerate the sample at ≤6 °C during collection unless specified otherwise in this Table II or in the method(s)."*

6.2.5 During the DMR data review for October 2022 and March 2023, it was noted that the 5-Day Biochemical Oxygen Demand ($BOD_5$) samples exceeded the holding time. According to 40 CFR Part 403.12(b)(5)(v), it states, " *Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR part 136 and amendments thereto."* Furthermore, 40 CFR Part 136 Table II – Required Containers, Preservation Techniques, and Holding Times, the maximum holding time for $BOD_5$ is 48 hours.

## 7.0 ATTACHMENTS

**Attachment #1.** A flow schematic of the manufacturing operation at the Chateaugay Site.

**Attachment #2.** Process wastewater is pretreated by the Industrial Wastewater Treatment Facility (WTF).

**Attachment #3.** Samples were submitted to the USEPA Laboratory on September20, 2023.

**Attachment #4**. USEPA Analytical Data Package was received on September 27, 2023.

## 8.0 PHOTOGRAPHS

**Photo #1**. The Industrial WTF pretreated effluent was sampled at the monitoring manhole.

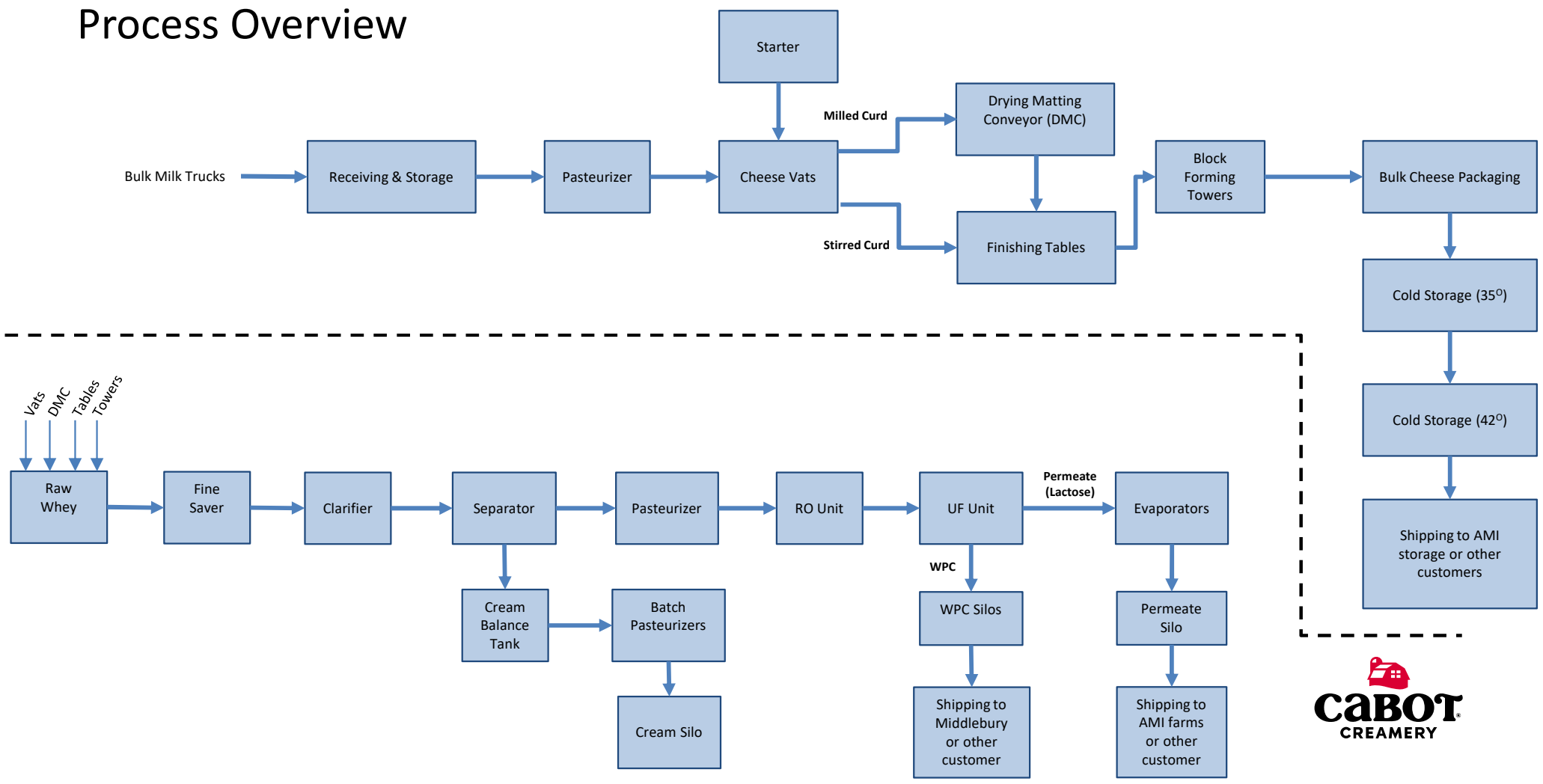
**Photo #2**. The facility's sampling assemblage was dirty and/or contains algal growth.

**Photo #3**. The approaching flow to the Parshall flume is turbulence.

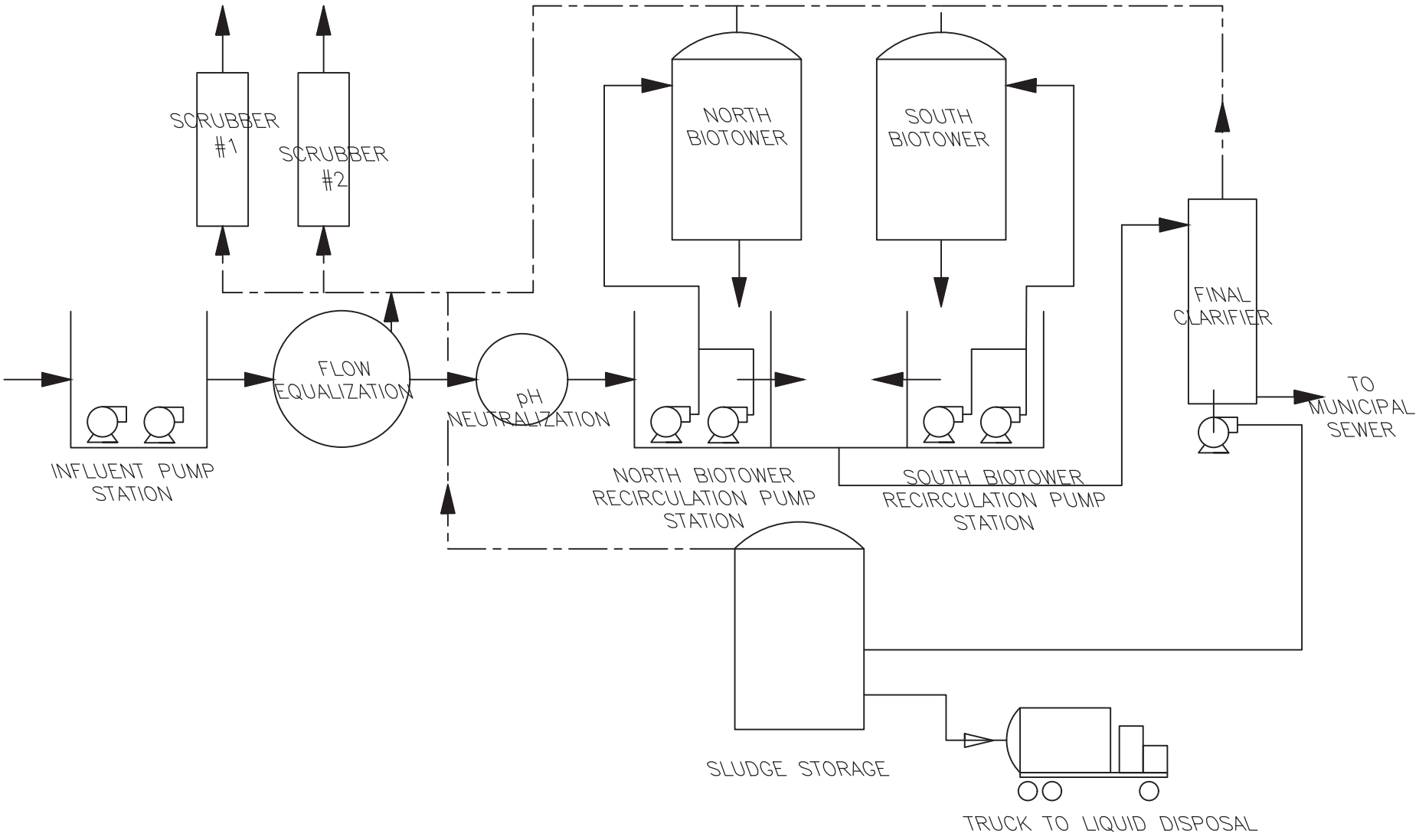
**Photo #4**. The facility's sampling probe was laying at the bottom of the monitoring manhole.

# 7.0 Attachments

**Attachment #1**. Raw milk is processed at Agri-Mark, Chateaugay Site, to produce cheese and whey protein.



**Attachment #2**. Industrial wastewater from the cheese and whey protein processes is pretreated through the Industrial WTF.




TATA & HOWARD

PROCESS SCHEMATIC
EXISTING
INDUSTRIAL WASTEWATER TREATMENT FACILITY
AGRIMARK
CHATEAUGAY, NEW YORK

| | |
|---|---|
| SHEET: FIG 2 | DATE: 03/03/22 |
| DRAWN BY: BDL | CHK'D BY: |
| DESIGN BY: BDL | APP'D BY: SJL |

FIG 2

P:_Vermont\Projects\Agrimark\Chateauguay WWTF Process Evaluation\CADD\C2 PFD AND HYD PRO.dwg ##### 4/14/2022 9:03 AM

**Attachment #3.** Samples were submitted to the EPA Laboratory in Edison, New Jersey on Wednesday, September 20, 2023.

US EPA REGION 2 LABORATORY

Page 1 of 1 pages

# CHAIN OF CUSTODY/ FIELD DATA FORM

SURVEY NAME & LOCALITY Agri-Mark

PROJECT LEADER Thuan Tran

**PROGRAM:** SF ☐ :

SITE ID _____

OPERABLE UNIT _____

PROGRAM RESULTS CODE _____

| Decision | RCRA ☐ | RCRA ENF ☐ | NPDES ☐ | SDWA ☐ | AM ☐ | CAA ☐ | TSCA ☐ | OD ☐ | FIFRA ☐ | CRIMINAL ENF ☐ |
|---|---|---|---|---|---|---|---|---|---|---|
| Unit Code Y206 | D210 | D307 | B304 X | C215 | B224 | A305 | L306 | B253 | | |

| Permit #: SIU #: C-001089<br>LAB ID/ FIELD ID | # OF CONTERS | MATRIX | CHECK IF SPLIT SAMPLE | DESCRIPTION & INSTRUCTIONS INCLUDING LOCATION, ESTIMATED CONCENTRATIONS, SPECIAL REPORTING LIMITS, SPECIAL TEST REQUIREMENTS & ALIQUOTING | Res CL Checked | Preservative (circle) | Collection Time (24hr clock) Begin | Collection Time (24hr clock) End | Collection Date mm/dd/yy |
|---|---|---|---|---|---|---|---|---|---|
| Pretreated Discharge - Comp | 3 | A | ☐ | 2, 1-liter plastic bottles: 5-day BOD: 24-Hr Comp -01 | ☐ | 0 | 9 AM | 8:45AM | 9/19-20/23 |
| | | A | ☐ | 1, 500-ml plastic bottle: TSS: 24-Hr Comp -01 | ☐ | 0 | 9 AM | 8:45AM | 9/19-20/23 |
| | | | ☐ | | ☐ | 0 1 2 3 4 5 6 7 8 9 10 | | | |
| Pretreated Discharge - Grab | 3 | A | ☐ | 3, 1-liter WM clear jars: Petroleum Hydrocarbons, T; Grab -02 | ☐ | 0 3 | | 2:30PM | 9/19/2023 |
| | | | ☐ | | ☐ | 0 1 2 3 4 5 6 7 8 9 10 | | | |
| | | | ☐ | 9/19/23 | ☐ | 0 1 2 3 4 5 6 7 8 9 10 | | | |
| | | | ☐ | | ☐ | 0 1 2 3 4 5 6 7 8 9 10 | | | |
| | | | ☐ | | ☐ | 0 1 2 3 4 5 6 7 8 9 10 | | | |
| | | | ☐ | | ☐ | 0 1 2 3 4 5 6 7 8 9 10 | | | |
| | | | ☐ | | ☐ | 0 1 2 3 4 5 6 7 8 9 10 | | | |

COMMENTS & SPECIAL REQUIREMENTS:

**Preservative Added & Checked**

0=ice
1=H2SO4 pH<2
2=HNO3 pH<2
3=HCl pH<2
4=Na2S2O3
5=NaOH pH>9
6=Ascorbic Acid
7=FAS
8=ZnAc
9=NaOH pH>12
10=NH4Cl

| | Time | Date |
|---|---|---|
| Person Assuming Responsibility for Sample(s): Thuan Tran | 6:10pm | 9/20/2023 |
| Relinquished By: Thuan Tran / Received By: | 18:10 | 9/20/23 |
| Relinquished By: / Received By: | | |
| Relinquished By: / Received By: | | |

**Matrix:**

A=aqueous
B=aqueous (chlorinated)
C=soil
D=sediment
E=sludge
F=multiphasic
G=solvent
H=biota
I=oil
J=other

Survey Complete? Y ☐ N ☐

Direct feed samples, chilled, delivered, 9/19/23

revised 10/25/2004

**Attachment #4**. The Analytical Data Package was received on Wednesday, September 27, 2023.

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**Region 2 Laboratory**
**2890 Woodbridge Avenue**
**Edison , New Jersey 08837**
**732-906-6886 Phone**
**732-906-6165 Fax**

September 27, 2023

Thuan Tran
Monitoring & Assessment Branch
LSASD/MAB
Edison, NJ 08837

RE: Agri-Mark - 2309012

Enclosed are the results of analyses for samples received by the laboratory on 09/20/2023. The signature below reflects the laboratory's approval of the reported results. If you have any questions concerning this report, please refer to Project Number 2309012 and contact the laboratory.

Sincerely,

John R. Bourbon
Chief, LSASD/LB

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**Region 2 Laboratory**

**Final Report**

**Project: Agri-Mark - 2309012**

**Project Number: 2309012**

## Project Narrative:

The National Environmental Laboratory Accreditation Conference Institute (TNI) is a voluntary environmental laboratory accreditation association of State and Federal agencies. TNI established and promoted a National Environmental Laboratory Accreditation Program (NELAP) that provides a uniform set of standards for the generation of environmental data that are of known and defensible quality. The EPA Region 2 Laboratory is NELAP accredited. The Laboratory tests that are accredited have met all the requirements established under the TNI Standards.

Condition Comments

None

Comment(s):

The "Sample Analysis Date and Time" is included in the results section for any analyte with a prescribed holding time of 72 hours or less.

TPH Analysis: Sample 2309012-02 was not successfully analyzed using the SPE method. The sample clogged the SPE disk with only a fraction of the sample passing through. A separatory funnel extraction based on method 1664 was also attempted in which an emulsion formed which did not break. The sample is qualified with an L due to failing MS recovery.

Data Qualifier(s):

U- The analyte was not detected at or above the Reporting Limit.
J- The identification of the analyte is acceptable; the reported value is an estimate.
K- The identification of the analyte is acceptable; the reported value may be biased high.
L- The identification of the analyte is acceptable; the reported value may be biased low.
NJ- There is presumptive evidence that the analyte is present; the analyte is reported as a tentative identification. The reported value is an estimate.

# Final Report

**Project: Agri-Mark - 2309012**

**Project Number: 2309012**

Reporting Limit(s):

The Laboratory was able to achieve the appropriate limit for each analyte requested.

**SUMMARY REPORT FOR SAMPLES**

| Field ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| Pretreated Discharge - Comp | 2309012-01 | Aqueous | 09/20/2023 08:45 | 09/20/2023 18:10 |
| Pretreated Discharge - Grab | 2309012-02 | Aqueous | 09/19/2023 14:30 | 09/20/2023 18:10 |

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**Region 2 Laboratory**

# Final Report

**Project: Agri-Mark - 2309012**

**Project Number: 2309012**

## SUMMARY REPORT FOR METHODS

| Analysis | Method | Certification | Matrix |
|---|---|---|---|
| Biochemical Oxygen Demand | SM 5210B SOP C-21 Rev 2.8 | NELAP | Aqueous |
| Petroleum Hydrocarbons, Tot. | EPA 1664A SOP C-126 Rev 1.7 | NELAP | Aqueous |
| Residue, Non-Filterable | SM 2540D SOP C-33 Rev 3.8 | NELAP | Aqueous |

# Final Report

**Project: Agri-Mark - 2309012**

**Project Number: 2309012**

| Analyte | Result | Qualifier | Reporting Limit | Units | Batch | Date and Time of Analysis* |
|---|---|---|---|---|---|---|
| **Field ID: Pretreated Discharge - Comp** | | | | **Sample ID: 2309012-01** | | |
| **Sanitary** | | | | | | |
| Biochemical Oxygen Demand | 432 | | 2.00 | mg/L | B309089 | 09/26/2023 07:18 |
| Total Suspended Solids | 206 | | 10.0 | mg/L | B309080 | |
| **Field ID: Pretreated Discharge - Grab** | | | | **Sample ID: 2309012-02** | | |
| **GC** | | | | | | |
| Petroleum Hydrocarbons, Tot. | --- | U L | 5.62 | mg/L | B309090 | |

# Final Report

## Project: Agri-Mark - 2309012

## Project Number: 2309012

## GC - Quality Control

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| **Batch B309090** | | | | | | | | | |
| **Blank (B309090-BLK1)** | | | | | | | | | |
| Petroleum Hydrocarbons, Tot. | --- U | 5.00 | mg/L | | | | | | |
| **LCS (B309090-BS1)** | | | | | | | | | |
| Petroleum Hydrocarbons, Tot. | 40.5 | 5.00 | mg/L | 40.00 | | 101 | 64-132 | | |
| **LCS Dup (B309090-BSD1)** | | | | | | | | | |
| Petroleum Hydrocarbons, Tot. | 38.9 | 5.00 | mg/L | 40.00 | | 97 | 64-132 | 4 | 20 |
| **Matrix Spike (B309090-MS1)** | **Source: 2309012-02** | | | | | | | | |
| Petroleum Hydrocarbons, Tot. | 1.49 | 5.75 | mg/L | 45.98 | 4.49 | NR | 64-132 | | |
| **Matrix Spike (B309090-MS2)** | **Source: 2309019-01** | | | | | | | | |
| Petroleum Hydrocarbons, Tot. | 0.667 | 6.67 | mg/L | 53.33 | 0.390 | 0.5 | 64-132 | | |

# Final Report

## Project: Agri-Mark - 2309012

## Project Number: 2309012

## Sanitary - Quality Control

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| **Batch B309080** | | | | | | | | | |
| **Blank (B309080-BLK1)** | | | | | | | | | |
| Residue, Non-Filterable | --- U | 10.0 | mg/L | | | | | | |
| **LCS (B309080-BS1)** | | | | | | | | | |
| Residue, Non-Filterable | 95.0 | 10.0 | mg/L | 96.70 | | 98.2 | 85-115 | | |
| **LCS Dup (B309080-BSD1)** | | | | | | | | | |
| Residue, Non-Filterable | 95.0 | 10.0 | mg/L | 96.70 | | 98.2 | 85-115 | 0.00 | 20 |
| **Duplicate (B309080-DUP1)** | **Source: 2309004-01** | | | | | | | | |
| Residue, Non-Filterable | --- U | 10.0 | mg/L | | ND | | | | 20 |
| **Batch B309089** | | | | | | | | | |
| **Blank (B309089-BLK1)** | | | | | | | | | |
| Biochemical Oxygen Demand | --- U | 2.00 | mg/L | | | | | | |
| **LCS (B309089-BS1)** | | | | | | | | | |
| Biochemical Oxygen Demand | 180 | 2.00 | mg/L | 198.0 | | 91.1 | 84.6-115.4 | | |
| **LCS (B309089-BS2)** | | | | | | | | | |
| Biochemical Oxygen Demand | 185 | 2.00 | mg/L | 198.0 | | 93.6 | 84.6-115.4 | | |
| **LCS (B309089-BS3)** | | | | | | | | | |
| Biochemical Oxygen Demand | 192 | 2.00 | mg/L | 198.0 | | 97.1 | 84.6-115.4 | | |
| **Matrix Spike (B309089-MS1)** | **Source: 2309012-01** | | | | | | | | |
| Biochemical Oxygen Demand | 829 | 2.00 | mg/L | 396.0 | 432 | 100 | 75-125 | | |



NOTE: The results recorded in this report relate only to the samples as received on the date and at the time noted

# 8.0 Photographs

**Photo #1.** Samples were collected from the discharged pipe in the monitoring manhole.

**Photo #2.** The facility's composite sampling assemblage is dirty and/or contains algal growth.

**Photo #3.** The Parshall flume w/ the flow sensor is recording high flow due to turbulence.

**Photo #4.** The facility's sampling probe was resting at the bottom of the monitoring manhole.