pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0232700**
Facility Type	**Industrial**	APS ID	**1026426**
Major / Minor	**Minor**	Authorization ID	**1332531**

NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Applicant and Facility Information

Applicant Name	**Leprino Foods Co.**	Facility Name	**Leprino Foods Co. WWTP**
Applicant Address	400 Leprino Avenue Waverly, NY 14892-1351	Facility Address	400 Leprino Avenue Waverly, NY 14892-1351
Applicant Contact	Troy Erickson	Facility Contact	Seth Williams
Applicant Phone	(570) 882-7236	Facility Phone	(607) 953-8519
Client ID	1469	Site ID	811381
SIC Code	2022,2023	Municipality	South Waverly Borough
SIC Description	Manufacturing - Cheese, Natural And Processed, Manufacturing - Dry, Condensed, Evaporated Products	County	Bradford
Date Application Received	October 29, 2020	EPA Waived?	Yes
Date Application Accepted	November 4, 2020	If No, Reason	
Purpose of Application	Renewal of existing NPDES permit		

Summary of Review

The above permittee has submitted an NPDES renewal application for their existing facility located in South Waverly Borough in Bradford County, PA. The facility is a dairy product plant that processes milk into mozzarella cheese and byproducts (sweet whey and cream). The facility is located both in PA and New York, as the state border crosses through the facility. The facility has 1 industrial wastewater discharge (002) and 5 stormwater outfalls (014, 011, 012, 013, and 015) covered by the respective NPDES permit at the existing facility. All sewage from the facility is conveyed to the Village of Waverly (NY) to be treated at their public owned treatment works (POTW) that discharges to the Cuyuta Creek in NY.

Unless otherwise noted, all applicable Department standard operating procedures (SOPs) were followed during the review of this NPDES renewal application.

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Approve	Deny	Signatures	Date
X		*Chad A. Fabian* Chad A. Fabian / Project Manager	May 13, 2022
X		*Nicholas W. Hartranft, P.E.* Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	May 16, 2022

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	002	Design Flow (MGD)	.55
Latitude	41º 59' 58.45"	Longitude	-76º 33' 29.64"
Wastewater Description:	IW Process Effluent with ELG		
Receiving Waters	Chemung River (WWF, MF)	Stream Code	30851
NHD Com ID	48522706	RMI	0.0500
Drainage Area	2580 mi^2	Yield (cfs/mi^2)	0.028
Q_{7-10} Flow (cfs)	73.9	Q_{7-10} Basis	USGS streamstats from previous issuance
Elevation (ft)	740	Slope (ft/ft)	n/a
Watershed No.	4-B	Chapter 93 Class.	WWF, MF
Existing Use	WWF	Existing Use Qualifier	n/a
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Impaired		
Cause(s) of Impairment	MERCURY		
Source(s) of Impairment	SOURCE UNKNOWN		
TMDL Status	Unknown	Name	n/a

Changes Since Last Permit Issuance: None.

Other Comments:

-The nearest downstream public water supply is on the Susquehanna River near Danville, PA approximately 100 river miles downstream.
-The impairment from Mercury is unknown and was determined through fish tissue samples. The proposed discharge is not expected to contain any significant levels of mercury and therefore will not contribute to the existing impairment.

Stormwater Outfalls

Stormwater Outfalls				
	Latitude	Longitude	Stormwater Description	Receiving Stream
011	41° 59’ 58”	-76° 32’ 38”	Roofs and asphalt	UNT to Dry Brook
012	41° 59’ 57”	-76° 32’ 40”	Asphalt area	UNT to Dry Brook
013	41° 59’ 56”	-76° 32’ 32”	Roof drainage and asphalt parking lot	UNT to Dry Brook
014*	41° 59’ 58”	-76° 32’ 24”	WWTP area	UNT to Dry Brook
015	41° 59’ 59”	-76° 32’ 16”	WWTP area	UNT to Dry Brook

*During the last permit review, it was determined that stormwater outfall 014 should be considered the representative sampling point for stormwater at the facility. This will remain the recommended representative sampling point for stormwater.

Treatment Facility Summary				
Treatment Facility Name: Leprino Foods WWTP Direct Discharge Line				
WQM Permit No.	**Issuance Date**			
0816202	9/13/2016			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Industrial	Tertiary	Extended Aeration With Solids Removal	Ultraviolet	0.4
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.5	n/a	Not overloaded	Belt filter press	Land application

Changes Since Last Permit Issuance: None

Other Comments:

Complete details about the existing treatment facilities can be found in WQM Permit 0816202. In summary, the treatment system consists of an influent lift station, equalization tanks (2), dissolved air floatation (DAF) unit, selector tanks, aeration basins, a clarifier, a fixed media filter (Fuzzy Filter), an 800,000 gallon calamity preparedness tank, UV disinfection, and a belt filter press.

Compliance History	
Summary of DMRs:	The facility utilizes the Department's eDMR system. There have been 2 fecal coliform IMAX violations in the past 12 months (July 2021 and August 2021).
Summary of Inspections:	The latest inspection performed by the Department occurred on 10/14/2021. The inspection noted the above IMAX exceedances for fecal coliforms. The facility has been in contact with the laboratory that performed the sampling to determine if there might have been lab errors during the testing, as the bulbs were recently replaced prior to the sampling. The Department requested to be kept up to date on any developments on how the fecal coliform IMAX limitations were exceeded.

Other Comments:

Based on the review of the eDMR results, it is not recommended that the draft permit be held up due to the above noted exceedances.

Development of Effluent Limitations

Outfall No. 002 **Design Flow (MGD)** 0.55
Latitude 41º 59' 58.45" **Longitude** -76º 33' 29.64"
Wastewater Description: Process wastewater

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Parameter	Limit (mg/l)	SBC	Federal Regulation	State Regulation
pH	6.0 – 9.0 SU	Min – Max	40 CFR 405	92a.48(a)(2) & 95.2(1)
BOD_5	35*	Average Monthly	40 CFR 405	-
BOD_5	54*	Daily Maximum	40 CFR 405	-
TSS	90*	Average Monthly	40 CFR 405	-
TSS	135*	Daily Maximum	40 CFR 405	-
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)

*BOD_5 and TSS Technology-Based limits are pursuant to 40 CFR 405 as calculated below.

Effluent Limitation Guidelines (ELGs)

The facility is subject to the ELGs at 40 CFR 405 – Dairy Products Processing Point Source Category, specifically the following subcategories: Subpart B – Fluids Production, Subpart F – Natural and Processed Cheese, Subpart K – Condensed Whey, and Subpart L – Dry Whey, . These ELGS establish allowable BOD_5 and TSS loading limitations based on the input BOD_5 for each subpart. The effluent limitations for each parameter are the cumulative allowances for each subpart.

A summary of the proposed effluent limitations based on the ELG and a design flow of 0.55 MGD are as follows:

Parameter	Average Monthly	Daily Maximum	Instant. Maximum
BOD_5 (mg/l)	49	73	98
TSS (mg/l)	62	93	124

The complete detailed ELG calculations, with BOD5 input loadings for each subpart, along with ELG computing factors for each subpart, can be found attached.

Water Quality-Based Limitations

The Department's WQM7.0 model allows the Department to evaluate point source discharges of dissolved oxygen (DO), carbonaceous BOD ($CBOD_5$), and ammonia-nitrogen (NH_3-N) into free-flowing streams and rivers. To accomplish this, the model simulates two basic processes: the mixing and degradation of NH_3-N in the stream and the mixing and consumption of DO in the stream due to the degradation of $CBOD_5$ and NH_3-N. Modeling was done using the ELG input of 49 mg/l of $CBOD_5$ to assure that the ELG does not exceed water quality standards. The model output shows that the proposed ELG based $CBOD_5$ limitation of 49 mg/l will not exceed water quality standards.

A "Reasonable Potential Analysis" (Attachment C-Toxics Screening Analysis) determined 3 parameters (hexavalent chromium, copper, and phenol) to be candidates for limitations. Therefore, modeling for these parameters was performed using the Department's PENTOXSD water quality model (see attached). These results from the respective model were then input into the reasonable potential spreadsheet to see if any limitations and or monitoring is required. Based on the attached reasonable potential spreadsheet, monitoring for copper and hexavalent chromium will be required.

It should be noted that the reasonable potential spreadsheet also recommended modeling for Total Dissolved Solids and chlorides, both of which only have criteria only applicable at downstream water supplies. Since there is not a nearby downstream water supply, modeling for these parameters is not performed.

The attached TRC spreadsheet model shows that the existing TRC limitations are protective of water quality standards.

NH3-N

The WQM7.0 model allows the Department to evaluate point source discharges of dissolved oxygen (DO), carbonaceous BOD ($CBOD_5$), and ammonia nitrogen (NH_3-N) into free-flowing streams and rivers. The model is intended for sewage discharges, as industrial dischargers typically receive BOD5 limitations in lieu of CBOD5 limitations. To accomplish this, the model simulates two basic processes: the mixing and degradation of NH_3-N in the stream and the mixing and consumption of DO in the stream due to the degradation of $CBOD_5$ and NH_3-N. However, a WQM7.0 model run was performed for this discharge assuming all of the BOD_5 was $CBOD_5$. This was done to show if any water quality based effluent limitations for ammonia were necessary. A 25 mg/l concentration of ammonia in the effluent was assumed, even though the application stated values less than 0.1 mg/l. As the attached model shows, no water quality limitations to ammonia are needed even at these conservative assumptions. Therefore, no ammonia monitoring will be required in the permit.

Chemical Additives

The facility uses several chemical additives, all of which are now on the Department's approved list of chemical additives. The proposed usage rates are within the guidelines of the approved list. The chemical additives and usage rates can be found in application and supplemental email dated 11/18/2015 by Tim Steed of Hunt Engineers The permit will contain a chemical additive condition in Part C.

Chesapeake Bay/Nutrients Requirements

According to Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, this facility is a relocated insignificant industrial wastewater discharger (<75 lbs/day of total nitrogen and <25 lbs/day total phosphorus) and as such requires no nutrient loading limits. The total nitrogen and total phosphorus annual loads are approximately 3000 lbs and 3500 lbs, respectively. There are sufficient available reserves for total nitrogen and total phosphorus in the Pennsylvania Point Source Reserve, as discussed in the Department's Chesapeake Bay Phase 2 Watershed Implementation Plan.

However, because the facility operation causes a net increase of Pennsylvania's nutrient allocation to the receiving water it does require total nitrogen and total phosphorus monitoring. Monthly monitoring for total phosphorus and total nitrogen will be included in the permit per the SOPs and the Phase II Watershed Implementation Plan. The relocation of this discharge from NY to PA causes no net increase to the Chesapeake Bay load.

Emerging Pollutants (TDS, Sulfate, Chloride, Bromide, 1,4-Dioxane)

As a result of direction from the Environmental Quality Board and EPA, the Department has begun increased monitoring for the emerging pollutants of TDS, Sulfate, Chloride, Bromide, 1,4-Dioxane. See the attached email dated 1/23/2014 from Sean Furjanic as reference.

Where the TDS concentration from a discharge exceeds 1,000 mg/l or loading exceeds 20,000 lbs/day and the flow exceeds 0.1 MGD the permit should typically include monitoring for TDS, Sulfate, Chloride and Bromide. Therefore, because the application sampling showed the TDS concentration in Outfall 002 to be greater than 1,000 mg/l (1953 average and 2180 max), the permit will include quarterly monitoring for TDS, as well as Sulfate and Chloride. Since sampling for Bromide was <0.2 mg/l, it will not be required to be monitored in the permit. Additionally, since there is not a known source of 1,4-Dioxane present, it also will not be required to be monitored in the permit.

Best Professional Judgment (BPJ)

Since the treatment facility is a biological treatment process, the permit will include monitor and report for dissolved oxygen to ensure adequate treatment.

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 002, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Daily Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Min	XXX	9.0 Max	XXX	1/day	Grab
DO	XXX	XXX	Report Min	XXX	XXX	XXX	1/day	Grab
BOD5	224	334	XXX	49	73	98	1/week	24-Hr Composite
TSS	284	426	XXX	62	93	124	1/week	24-Hr Composite
Total Dissolved Solids	XXX	XXX	XXX	Report Avg Qrtly	Report	XXX	1/quarter	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
UV Intensity (mW/cm^2)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Metered
Total Nitrogen	XXX	XXX	XXX	Report	Report	XXX	1/month	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report	Report	XXX	1/month	24-Hr Composite
Hexavalent Chromium	XXX	XXX	XXX	Report	Report	XXX	1/month	24-Hr Composite
Total Copper	XXX	XXX	XXX	Report	Report	XXX	1/month	24-Hr Composite

Outfall 002 , Continued (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Daily Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Sulfate	XXX	XXX	XXX	Report Avg Qrtly	Report	XXX	1/quarter	24-Hr Composite
Chloride	XXX	XXX	XXX	Report Avg Qrtly	Report	XXX	1/quarter	24-Hr Composite

Compliance Sampling Location: 002

Anti-Backsliding

The proposed BOD5 (49 mg/l, monthly average) and proposed TSS (62 mg/l) effluent limitations have been increased from the existing BOD5 (35 mg/l) and existing TSS (54 mg/l) effluent limitations due to updated information regarding the current production data at the facility which was used to calculate the ELGs. This does not constitute as backsliding, as ELG limitations are production based.

It is recommended the permit be drafted as described above.