



SUSQUEHANNA RIVER BASIN COMMISSION

1721 North Front Street • Harrisburg, Pennsylvania 17102-2391

Phone (717) 238-0423 • Fax (717) 238-2436

Web <http://www.srbc.net>

Docket No. 20020205

Approval Date: February 21, 2002

HERSHEY CREAMERY COMPANY

Consumptive Water Use of up to 0.078 mgd,
for the Manufacture of Food Products,
City of Harrisburg, Dauphin County, Pennsylvania

Review Authority

This project is subject to review pursuant to Article 3, Section 3.10 of the Susquehanna River Basin Compact, P.L. 91-575, and Commission Regulations §803.4 relating to projects requiring review and approval, and §803.42 relating to the consumptive use of water. The Commission received the application on November 13, 2001.

Description

Purpose. The purpose of the application is to request approval for the consumptive use of water associated with the manufacture of ice cream and other frozen desserts.

Location. The project is located in the City of Harrisburg, Dauphin County, Pennsylvania.

Project Features. The applicant has requested approval for consumptive water use of up to 0.078 million gallons per day (mgd). Water is supplied to the facility by the City of Harrisburg Water Authority (Harrisburg Authority) at an average annual rate of 0.061 mgd and a peak monthly rate of 0.091 mgd. The water supplied by Harrisburg Authority is used for product, product refrigeration, and sanitary purposes. Water is metered as it enters the facility. Hershey Creamery Company began manufacturing ice cream and frozen dessert products at the Harrisburg Plant in 1894, and has steadily expanded production since that time.

Currently, the plant's peak monthly consumptive water use reaches 0.033 mgd during peak summer months and is estimated to reach 0.060 mgd during peak days. The plant's future peak day consumptive water use is projected to increase to 0.078 mgd. Makeup water to the three chiller cooling towers is metered. Water incorporated into the product is measured by weight as it fills the batch process tank.

The process wastewater generated at the facility is treated at the facility's pre-treatment plant before being discharged to the sanitary sewer system through a metered outfall line for further treatment at the City of Harrisburg's wastewater treatment facility. Sanitary wastewater from the facility is metered separately and discharged to the City's sanitary sewer system. Process wastewater

sludge from the facility's pre-treatment plant is trucked to farms for land application disposal. Additionally, rejected product is trucked to farms for use as animal feed.

Findings

The project's consumptive water use is subject to Commission approval and reporting requirements as per Commission Regulation §803.42 regarding the consumptive use of water.

The project obtains all of its water from a public supplier, and the water is metered on a daily basis prior to its use in the plant. Also, wastewater discharged from the facility's pre-treatment plant and sanitary waste discharged from the facility are each metered daily. The applicant has identified, and staff concurs, that the facility has four categories of significant consumptive water use, as described below.

Evaporation from the three chiller cooling towers used to cool refrigerant comprises most of the plant's peak monthly consumptive water use. The applicant has determined, and staff concurs, that makeup water to the cooling towers is entirely consumptively used. The makeup water to the cooling towers is metered daily. Staff has determined that the amount of makeup water required for the boilers is negligible.

Each batch of ice cream or frozen dessert has a recipe that requires a measured quantity of water by weight. Therefore, daily quantities of water used for product manufacturing can be calculated by summing the quantities required for each batch produced during that day. The applicant has determined, and staff concurs, that all water used for product manufacture is entirely consumptively used.

Sludge from the facility's process wastewater pre-treatment plant is trucked from the site to area farms for disposal by land application. Tanker trucks for sludge hold between 5,000 and 7,250 gallons of sludge, and the number and size of truckloads is recorded weekly. The applicant has estimated the water content of the sludge to average 95 percent by volume, and the water content of the sludge is considered to be entirely consumptively used. Staff concurs with this finding. The applicant proposes to calculate the amount of water trucked to farms for land application disposal on a weekly basis.

Additionally, rejected product is trucked from the facility to area farms for use as animal feed. Hot water is added to the rejected product to melt it before loading it into the tanker trucks. Tanker trucks for rejected product hold between 5,000 and 6,500 gallons, and the number and size of truckloads is recorded weekly. The applicant has estimated the amount of hot water added to melt the rejected product to average 50 percent by volume of each tanker truckload. All water added to melt rejected product is considered to be entirely consumptively used. Staff concurs with this finding.

The applicant was consumptively using water at the facility before January 1971, the effective date of Commission Regulation §803.42 concerning consumptive water use. The applicant has calculated the pre-1971 consumptive water use to be 0.013 mgd based proportionally on product production rates. Staff concurs with this finding. The quantity of pre-compact consumptive water use, 0.013 mgd, is considered "grandfathered" and is exempt from compliance compensation requirements.

The project's consumptive use of water in excess of the "grandfathered" quantity is subject to water compensation requirements, as per Commission Regulation §803.42. To satisfy these requirements, the applicant has proposed the use of water from the Harrisburg Authority public water supply as its method of compensation for the facility's consumptive water use. Harrisburg Authority utilizes raw water storage in Dehart Reservoir as its primary source of water supply for the system. Harrisburg Authority's water allocation permit (No. WA 22-53B) issued by the Pennsylvania Department of Environmental Protection (Pa. DEP) requires Harrisburg Authority to maintain a continuous conservation release downstream from Dehart Dam of 3.34 mgd. Staff has determined that, at the point of withdrawal, this conservation release exceeds the Commission's low flow criterion of the 7-day, 10-year low flow (Q7-10) for the Clarks Creek. Therefore, staff concurs that the use of Harrisburg Authority is an acceptable method of compensation for the project's consumptive water use so long as Dehart Reservoir is being used exclusively as its water supply.

During periods of severe drought or at other times when Dehart Reservoir is out of service, Harrisburg Authority uses its Susquehanna River intake as its alternate source of supply. According to Harrisburg Authority's water allocation permit WA 22-53B, the Susquehanna River intake does not have a passby flow requirement. It is the policy of the Commission to require any consumptive water use project that utilizes public water storage as its method of compliance to have a backup compliance method in case the water supplier is unable to exclusively utilize its raw water storage or make sufficient releases. To satisfy this requirement, the applicant has agreed to pay the Commission quarterly in-lieu-of providing actual compensation water for any year that Dehart Reservoir's raw water storage is not exclusively utilized or a conservation release downstream from Dehart Reservoir is not maintained.

The applicant has proposed a spreadsheet accounting procedure for quantifying the four categories of consumptive water use for its annual reporting to the Commission. This procedure has been in place and used for quantifying the project's consumptive water use since January 1, 2001. First, makeup water to the chiller cooling tower will be metered and recorded daily. Second, quantities of water used for product will be measured by batch, summed by the number of batches produced daily, and recorded daily.

Third, the number of tanker loads by size of sludge trucked to area farms for land application disposal will be monitored and recorded weekly. The total calculated water content of the sludge applied during the week will be prorated to a daily basis. Fourth, the number of tanker loads by size of rejected product trucked to area farms for animal feed will be monitored and recorded weekly. The total calculated amount of hot water added to melt rejected product during the week will be prorated to a daily basis.

After summing the daily consumptive water use from the four categories, the project's daily "grandfathered" consumptive water use of 0.013 mgd will be subtracted from the total daily consumptive water use. If the daily "grandfathered" amount exceeds the project's calculated daily consumptive water use, that day's consumptive water use is considered to be zero.

Staff recommends approval of the applicant's proposed spreadsheet accounting procedure for use in calculating daily consumptive water use for the project. The quantities of the two largest

consumptive water use categories are metered daily while the remaining two use categories will be measured weekly and prorated to a daily basis.

The applicant anticipates a one percent increase in product production per year over the duration of this approval with a proportional increase in future consumptive water use. Therefore, the applicant has requested an approval of up to 0.078 mgd. Should the project's future consumptive water use exceed 0.078 mgd, the applicant must apply for a modification to this docket.

The project is subject to water conservation requirements as per Commission Regulation §804.20(b).

The applicant has paid the appropriate application fee pursuant to Commission Regulation §803.28 and in accordance with Commission Resolution 98-19, as amended by Commission Resolution 2000-06. The applicant has also provided all proofs of notification as required by Commission Regulation §803.25.

The project is physically feasible, does not conflict with or adversely affect the Commission's Comprehensive Plan, and does not adversely influence the present or future use and development of the water resources of the basin.

Compliance Incentive Program

Commission staff has determined that the applicant is eligible to participate in the Commission's Compliance Incentive Program (CIP). Therefore, the applicant would not be subject to any penalties for water consumed in violation of Commission Regulation §803.42 prior to January 1, 2001. In accordance with the CIP, the use of water from the Harrisburg Authority public water supply utilizing raw water storage in Dehart Reservoir as a method of compensation for the project's consumptive water use shall be effective and applicable to all consumptive water used by the project beginning January 1, 2001. For any year that Dehart Reservoir is not exclusively utilized as Harrisburg Authority's source of supply or Dehart Reservoir's conservation release is not maintained, the applicant shall make payment to the Commission as its method of compensation for the project's consumptive water use.

Decision

The consumptive use of water of up to 0.078 mgd is approved pursuant to Article 3, Section 3.10 of the Compact subject to the following conditions:

- a. The applicant shall comply with all Commission regulations, including consumptive water use reporting requirements as per Commission Regulation §803.42. The required reporting data shall be submitted to the Commission annually.
- b. The applicant shall keep daily records of the project's consumptive water use, and shall provide the results to the Commission annually and as otherwise requested. The applicant shall compute the project's daily consumptive water use by summing daily metered cooling tower makeup water with daily water used for product, and weekly water trucked to area farms for sludge disposal

and animal feed, prorated to a daily basis. The applicant shall maintain the project's existing meters, accurate to within five percent, to calculate the consumptive water use.

c. The applicant shall comply with water conservation requirements as per Commission Regulation §804.20(b).

d. To satisfy the Commission's current compensation requirements for consumptive water use set forth in Commission Regulation §803.42, the Commission has determined that the use of water from the Harrisburg Authority public water supply utilizing raw water storage in Dehart Reservoir is an acceptable method of compensation for the project's consumptive water use.

e. For any year that low flow conditions preclude Dehart Reservoir's raw water storage from being exclusively utilized for Harrisburg Authority's source of supply or a conservation release downstream from Dehart Reservoir is not maintained, the applicant shall make quarterly payments to the Commission in the amount of \$0.14 per 1,000 gallons of water consumptively used by the project, less the grandfathered quantity of 0.013 mgd, during the preceding quarter. Payment amounts shall be calculated by applying this rate to the amount of water used consumptively by the project during the preceding calendar quarter. Quarterly payments are due and payable within 30 days after the close of the preceding quarter. The rate of payment, after appropriate notice to all consumptive users of water using this method of compliance, is subject to change at the Commission's discretion.

f. The applicant is eligible for the Commission's Compliance Incentive Program (CIP). Therefore, the applicant is not subject to any penalties for prior noncompliance. In accordance with the CIP, the use of water from the Harrisburg Authority public water supply utilizing raw water storage in Dehart Reservoir is an acceptable method of compensation for the project's consumptive water use and is applicable to all consumptive water used by the project from January 1, 2001 through the date of this approval. The applicant's spreadsheet accounting procedure for calculating consumptive water use has been in place since January 1, 2001, and the data collected will be used to determine the project's consumptive water use prior to this approval.

g. This action shall not be construed to exempt the applicant from obtaining all necessary permits and/or approvals required for the project from other federal, state or local government agencies having jurisdiction over the project. The Commission reserves the right to modify, suspend or revoke this action if the applicant fails to obtain or maintain such approvals.

h. If the project applicant fails to comply with any term or condition of this docket, the Commission may suspend, modify or revoke its approval of same. Upon written notice by the Commission, the project applicant shall have thirty (30) days to correct such noncompliance, unless an alternate period is specified in the notice. Failure to comply within thirty (30) days, or within the alternate period identified in the notice, shall result in a ninety (90) day suspension of approval of this docket. If the project applicant fails to address the noncompliance to the satisfaction of the Commission within the suspension period, this approval may be revoked. Nothing herein shall preclude the Commission from exercising its authority to immediately modify, suspend or revoke this approval where it determines exigent circumstances warrant such action.

i. The Commission reserves the right to reopen any project docket and make additional orders that may be necessary to mitigate or avoid adverse impacts or otherwise to protect the public health, safety, welfare or the environment.


j. Commission approval confers no property rights upon the applicant. The securing of all rights necessary and incident to the applicant's development and operation of the project shall be the sole and exclusive responsibility of the applicant, and this approval shall be subject thereto.

k. This approval is effective until February 21, 2027. The applicant shall submit a renewal application by August 21, 2026 and obtain Commission approval prior to continuing operation beyond February 21, 2027.

l. If the project is discontinued for such a period of time and under such circumstances that an abandonment of the project may reasonably be inferred, the Commission may rescind the approval of the project unless a renewal is requested by the applicant and approved by the Commission.

By the Commission:

Dated: February 21, 2002



Chairman