

Susquehanna River Basin Commission

a water management agency serving the Susquehanna River Watershed



January 27, 2005

TO ALL CONCERNED:

At the December 15, 2004 meeting, the draft minutes of the September 8, 2004 Commission meeting were approved as written. Please attach this notice to your copy of the September 8, 2004 minutes.

- DRAFT -

SUSQUEHANNA RIVER BASIN COMMISSION
1721 N. FRONT ST.
HARRISBURG, PA 17102

**MINUTES OF THE
SUSQUEHANNA RIVER BASIN COMMISSION**

December 15, 2004
#2004-04

The meeting was held at the Cecil Community College, North East, Md. Chairman Kendl Philbrick called the meeting to order at 8:33 a.m.

ROLL CALL

Commissioners Present

Mr. Kendl P. Philbrick, Secretary, Md. Dept. of the Environment (MDE)
Col. Robert J. Davis, Jr., District Engineer, U.S. Army Corps of Engineers, Baltimore District
Mr. Kenneth P. Lynch, Director, Region 7, N.Y. Dept. of Environmental Conservation (NYDEC)
Ms. Cathleen Curran Myers, Dep. Secretary for Water Mgmt., Pa. Dept. of Environmental Protection (PADEP)

**Alternate Commissioners
and Advisors Present**

Dr. Robert M. Summers, Dir. Water Management Administration, MDE
Ms. Stacey E. Brown, Team Leader, U.S. Army Corps of Engineers, Baltimore District
Mr. William A. Gast, Chief, Division of Water Use Planning, PADEP

Staff Present

Mr. Paul O. Swartz, Executive Director
Mr. Thomas W. Beauduy, Deputy Director
Mr. David W. Heicher, Chief, Watershed Assessment & Protection Division
Mr. Michael G. Brownell, Chief, Water Resources Management Division

Mr. Duane A. Friends, Chief Admin. Officer
Mr. Richard A. Cairo, Counsel/Secretary
Ms. Deborah J. Dickey, Executive Administrator
Ms. Susan S. Obleski, Director of Communications

Also Attending

Ms. Pam Bishop, Office of Regulatory Counsel, PADEP

INTRODUCTION/WELCOME

Following a welcome to Cecil Community College and Cecil County by Maryland Delegate David Rudolph, who praised the Commission for its work in protecting both the river and the Chesapeake Bay, Chairman Kendl Philbrick introduced the members of the Commission and the Executive Director. The Chairman then announced that, due to a defect in the notice of public hearing, the Commission would be tabling action on the City of Aberdeen application for a withdrawal from Deer Creek, Harford County, Maryland.

PRESENTATION

1. Hydrologic Conditions Report

Mr. Andrew Dehoff, of the Commission's Water Resources Management Division, reported on hydrologic conditions. One of the wettest years on record in the Susquehanna River Basin will be recorded as 2004. As of the end of November, precipitation was averaging about 10 inches above normal.

The abundant precipitation produced extraordinarily high stream flows. In September 2004, the river put more fresh water into the Chesapeake Bay than any September since 1937. Groundwater levels could only be described as "off the scale" in New York and Pennsylvania and only slightly lower in Maryland.

Several tropical storms passed through the region during 2004, accounting for much of the excess precipitation. Tropical Storm Ivan, which struck in September, caused serious flooding throughout the river basin. Harrisburg recorded its fifth worst flood on record while several other areas of the basin experienced their third worst flood.

Damages in the basin are placed at \$200-300 million; however, millions were also saved by the operation of structural flood control projects and the Susquehanna Flood Forecasting and Warning System. The warning system was able to accurately forecast flood stages all along the river, helping to reduce damages and, in one case involving the City of Wilkes-Barre, eliminating the need for a costly, time-consuming evacuation.

The Executive Director reminded the Commission that, just one year before, it had adopted a resolution calling for \$2 million in direct funding to the Susquehanna Flood Forecasting and Warning System. Unfortunately, that direct funding was not re-established by Congress, and the National Weather Service is now funding the program out of its own resources at \$1 million. The \$2 million that had been recommended by SRBC was to allow the system to make needed improvements. SRBC will continue to seek that extra funding to allow the improvements to be made.

Commissioner Myers noted that Governor Rendell is acutely aware that Pennsylvania is one of the most flood-prone states in the nation and that there are many dams on the Commonwealth's streams and rivers. Dam failures can lead to catastrophic flood damages and the Governor is therefore asking President Bush to reinstate a national dam safety inventory by

the U.S. Army Corps of Engineers. Such an inventory has not been carried out since 1978. That inventory was very useful in helping Pennsylvania target potential dam problems 26 years ago, but it now needs to be redone.

ACTION ITEMS

1. Minutes of the September 8, 2004 Commission Meeting

On a motion by Commissioner Davis, seconded by Commissioner Myers, the minutes of the regular business meeting of September 8, 2004 were unanimously adopted as written.

2. Public Comment Period–Proposed Project Fee Schedule

The Secretary presented a proposed project fee schedule (Exhibit A) and requested that the Commission approve a 60-day public comment period.

There has been no increase in basic fees since 1991. Since then, the cost of project review has risen by 40 percent and the Commission is only recovering about 23 percent of the cost in fees. In addition, the review process has become increasingly complex with such matters as pumping test evaluations, calculation of grandfathered amounts and pass-by flow determinations. These factors have greatly contributed to the need for a revised fee schedule.

The schedule proposed by staff is the product of several months of internal work by staff, consultation with the SRBC Water Resources Management Advisory Committee (WRMAC), and consultation with the commissioners. Staff believes that this proposal best achieves the objectives that the Commission considers most important for a revised fee schedule, namely: 1) the need to close the cost recovery gap; 2) the need to anticipate extraordinary costs; 3) the need to take into account the impacts on the regulated community; 4) the desire to provide relief to municipally-owned public water suppliers; and 5) ease of administration.

Some of the key features of the revised schedule that achieve these objectives include: 1) a five-year, phased-in increase in categorical fees of 10 percent per year beginning in January 2007; 2) expanding the categories for fees beyond one million gallons per day; 3) the addition of special fees for items such as pumping test evaluations and out-of-basin diversions; 4) providing a flat 20 percent discount to municipal public water suppliers; 5) providing an extraordinary cost recovery clause; and 6) providing an annual Consumer Price Index (CPI) adjustment, also beginning in January 2007. **Agricultural water use projects would remain exempt from all project fees.**

During the 60-day comment period, staff will gather, summarize and respond to public comments. An outreach plan has been drafted that details the specific efforts that will be made to solicit public input. A public hearing on the proposal will then be held in conjunction with the Commission's regular meeting on March 29, 2005.

Commissioner Myers thanked the staff for formulating a number of options for the Commission to consider and crafting a schedule that meets the commissioners' needs. She

further pointed out the desirability of having an up-to-date fee schedule that would recover approximately half of the costs of review that would otherwise be borne by the Commission and the taxpaying public. She was very comfortable with putting out this proposal.

On a motion by Commissioner Davis, seconded by Commissioner Myers, the Commission unanimously approved a 60-day public comment period for the revised project fee schedule proposed by staff.

3. Project Review

a. Project Applications

The Commission convened a public hearing on project applications before the Commission for review and approval. The Chairman repeated the announcement made at the outset of the meeting that the City of Aberdeen application would be tabled due to a defective legal notice.

Mr. Brownell first provided some background information on the Commission's review authority and the consumptive use and water withdrawal regulations. The main purpose of these regulations is to avoid adverse environmental impacts and conflicts among users, particularly during periods of drought and low flow. Cumulative impacts are also considered and coordination is carried out with member jurisdiction agencies.

Mr. Brownell went on to explain the methods available for compliance with the consumptive use regulation, including discontinuance of use, provision of storage water, and payment into the SRBC Water Management Fund to enable purchase of water storage for release during low flow periods. Unless otherwise noted, projects described have chosen payment as their compliance method.

Mr. Brownell listed the standard requirements for each project sponsor, including: 1) notice of application; 2) coordination with member jurisdictions; 3) aquifer tests for groundwater withdrawals; 4) metering, monitoring, and reporting of water use; 5) mitigation or other special conditions where there is a potential for adverse impacts; 6) water conservation; and 7) docket reopening authority.

Finally, Mr. Brownell mentioned that applications for some of the projects coming before the Commission were submitted through the Commission's Compliance Incentive Program (CIP) that offered amnesty to projects that did not make timely application for approval. The Commission is still in the process of completing action on some of those projects.

The dockets recommended for action included the following 11 projects, each of which was described in detail by Mr. Brownell.¹ As noted above, staff recommended that action be tabled on the project involving a diversion by the City of Aberdeen, Maryland, due to a defective legal notice.

¹ Docket decisions are not included with the hard copy of the minutes. However, they are available upon request and at www.srbc.net.

- Albany International (Exhibit B1)
- River Hill Power Company, LLC (Exhibit B2)
- Borough of Mifflinburg (Exhibit B3)
- Centre Hall Borough (Exhibit B4)
- Hegins-Hublely Authority (Exhibit B5)
- Carmeuse Lime, Inc. (Exhibit B6)
- Hershey Entertainment & Resort Co.- Hersheypark (Exhibit B7)
- Warwick Municipal Authority-Bonfield (Exhibit B8)
- Aqua Pennsylvania, Inc. – White Rock Acres (Exhibit B9)
- Wyeth Pharmaceuticals (Exhibit B10)
- Knouse Foods Cooperative, Inc.-Gardners Plant (Exhibit B11)

On a motion by Commissioner Myers, seconded by Commissioner Davis, the Commission approved the staff recommendations for all the dockets presented and tabled action on the City of Aberdeen docket. Staff was instructed, after giving proper notice, to schedule a special public hearing for the City of Aberdeen docket.

The Executive Director concluded this item by giving the commissioners a list of projects of particular interest that will be coming before the Commission in the near future.

2. 2005 Water Resources Program

The Secretary presented a draft version of the 2005 Water Resources Program. Section 14.2 of the Compact stipulates that the Commission shall annually adopt a water resources program consisting of the projects and facilities which the Commission proposes to be undertaken by the Commission and by other authorized governmental and private agencies, organizations and persons during the next six years.

The Secretary explained that each SRBC division has tried to review this document and update it with the latest information on programs and projects that SRBC is working on or expects to be working on, and some of the SRBC legislative priorities for the coming year. Still, there are sections of the program, particularly those pertaining to project and program priorities of our member jurisdictions, where the information presented in this draft may not be as current as it should be.

Therefore, staff requested that the commissioners take this draft back to their jurisdictions, review it and provide any needed updates or additions. Of course, any other comments or suggestions concerning the draft's contents would also be welcome. These will be incorporated, and hopefully, the draft will be ready for final adoption in March 2005.

The Secretary then reviewed some of the items in the Commission's portion of the Water Resources Program that staff feels are particularly noteworthy. These included: 1) seeking a \$2 million direct appropriation for the Susquehanna Flood Forecasting and Warning System; 2) seeking Congressional sponsorship of state-specific initiatives to expand the current Early Warning System for drinking water systems; 3) pursuing expanded opportunities for additional

instream flow studies on large cold water streams, as well as warm water streams; 4) cooperating with the U.S. Army Corps of Engineers in the initiation of feasibility studies related to sediment management and the development of a basin sediment transport model; 5) conduct of a “Susquehanna Shad School” to connect students with the efforts to restore American shad to the river system; 6) upgrading of SRBC’s GIS and data management capability; and 7) continuing participation in the implementation of Pennsylvania’s Water Resources Planning Act 220.

Commissioner Myers moved to accept the draft from staff and to schedule final action on the Water Resources Program in March 2005. This motion was seconded by Commissioner Lynch and unanimously adopted by the Commission.

3. Grant Approvals

a. Streamside Cleanup Training Academy & Assistance Program

Communications Director Susan Obleski requested that the Commission approve a Streamside Cleanup Training Academy & Assistance Program grant in the amount of \$40,000 from the Pennsylvania Department of Conservation and Natural Resources (DCNR) that will provide small grants to the Susquehanna Greenway Partnership’s regional advisory committees for streamside cleanups along the main stem Susquehanna River and greenway corridor. The DCNR wants SRBC to help initiate the cleanup process for the Greenway.

Streamside cleanup projects have been a success story in the Susquehanna River Basin. In all, some 255 groups doing cleanups have removed more than 1,000 tons of litter. The \$181,000 in Growing Greener grants already provided by the PADEP has helped establish new cleanup programs, assisted existing cleanup programs, educated groups on the conduct of cleanups, and made local government officials more aware of important watershed issues. Citizens and local officials are now becoming the eyes and ears of their watershed.

b. A Susquehanna Symposium – Flowing with Potential Riverfront Communities

Susan Obleski also requested approval for grants from DCNR/SEDA-COG and PADEP totaling \$55,000 for the conduct of a symposium on riverfront communities in June 2005. She also requested approval of an accompanying Memorandum of Understanding between SEDA-COG and SRBC.

This symposium would bring together elected officials and community leaders to discuss and exchange ideas on the unique challenges and opportunities that are presented to riverfront communities. It will showcase the special link that exists between communities and their rivers throughout the basin and unveil a draft greenway strategic action plan. The Commission would contribute \$25,000 to the symposium and another \$65,000 is anticipated from registrations and donations.

c. Water Quality Enhanced Monitoring Program

Watershed Assessment and Protection Chief David Heicher requested that the Commission approve a \$59,000 grant from the U.S. Environmental Protection Agency (EPA) for enhanced monitoring that will improve the assessment of sediment and nutrient load reductions to the Chesapeake Bay. This additional monitoring at 13 stations will be in direct support of the member states' tributary strategies and the Bay Program's collective effort to enhance non-tidal monitoring of the Chesapeake Bay Watershed. Output from the project will be used to improve nutrient and suspended sediment load and trend estimations, as well as improve calibration and verification of watershed models.

d. Surface Water Assessments and AMD Sampling

Mr. Heicher requested approval of the Surface Water Assessments and Abandoned Mine Drainage (AMD) sampling grant from PADEP. This grant will be used to perform assessments required under the Clean Water Act and collect water quality data from selected streams to assist in the development of total maximum daily loads for AMD-impaired streams. The amount of this grant is \$129,100.

e. Chesapeake Bay Nutrient Monitoring Program

Mr. Heicher requested approval of a \$150,300 grant from PADEP to carry out the long-term nutrient and suspended sediment database in sufficient detail to track and better define nutrient loading dynamics for the main stem and selected tributaries, relate load fluctuations to changes in water discharge during precipitation events, supply nutrient concentration loading data, and evaluate nutrient loading trends. The data gathered is used to help calibrate the Chesapeake Bay Model. The Commission would contribute \$14,390 to this effort.

f. Contract Amendment–Agricultural Consumptive Use Study-ASR

Mr. Heicher requested that the Commission approve a \$30,000 amendment to the existing contract with Moody Associates for additional evaluation of the Aquifer Storage Recovery (ASR) potential of valley bottoms in connection with the SRBC Agricultural Consumptive Use Study. This would bring the total amount of the contract to \$75,000.

On a motion by Commissioner Lynch, seconded by Commissioner Davis, the Commission unanimously approved and ratified the grants submitted by staff. Commissioner Myers added her thanks to the Commission for the technical assistance it lends to PADEP on many water management programs, particularly those relating to Chesapeake Bay.

PUBLIC COMMENTS

Ms. Lilah Haxton of the Maryland Emergency Management Agency, provided information on two grant programs.

1. **Pre-Disaster Mitigation Program**—A federal grant program requiring a 25 percent non-federal match. Communities considering flood projects should apply through their state emergency management office by the end of January.
2. **Hazard Mitigation Grant Program**—Again, a 25 percent match is required. This grant is applicable where a federal disaster declaration is in effect. It is used for such things as elevation of homes, elevation of fuel tanks, and similar mitigation work. She recently learned that Pennsylvania has these funds available because of the Ivan event so that candidates for these funds should make application as soon as possible.

Commissioner Myers believed that Pennsylvania was waiving the 25 percent match for communities and will check on that fact.

Mr. Charles Day of Darlington, Maryland appeared representing the Forest Conservancy District Board for Harford County. He announced that recently Deer Creek Watershed was placed on the 303(d) impaired water bodies list and, as a result, the county has successfully acquired a federal grant to perform a “Water Restoration Action Strategy” on the watershed, to be conducted over the next two years. He wanted the Commission to be aware of this effort so that it will have access to the data that will be generated.

Mr. Heicher mentioned that Pennsylvania is considering a similar listing for the upper reaches of Deer Creek.

ADJOURNMENT

There being no further business before the Commission, Chairman Philbrick adjourned the meeting at approximately 10:20 a.m.

NEXT MEETING

The next regular meeting of the Commission is tentatively scheduled for March 29, 2005 in Scranton, Pennsylvania.

Date Adopted



Richard A. Cairo
General Counsel/Secretary to the Commission

Susquehanna River Basin Commission

a water management agency serving the Susquehanna River Watershed



PROPOSED PROJECT FEE SCHEDULE December 15, 2004

Released for 60-day public review and comment period on December 15, 2004.
Comments due on or about February 14, 2005.

1. The Commission requires payment of a non-refundable project fee, in accordance with Tables 1, 2 and 3 herein, for the following categories of projects which require review and approval by the Commission under Section 3.10(2) of the Compact and Commission Regulation 803.4 (18 CFR §803.4):
 - a. Diversions of water into or out of the Susquehanna River Basin.
 - b. Hydroelectric projects.
 - c. Consumptive uses (including out-of-basin diversions), as defined and regulated by Commission Regulation 803.42.
 - d. Groundwater withdrawals, as defined and regulated by Commission Regulation 803.43.
 - e. Surface water withdrawals, as defined and regulated by Commission Regulation 803.44.
 - f. Any other projects requiring the review and approval of the Commission under Section 3.10 (2) of the Compact that do not involve a request for a quantity of water.
2. If any project involves more than one of the above categories, a separate application and fee is required for each category.
3. Agencies, authorities, or commissions of the signatories to the Compact are exempt from fees. However, political subdivisions of the signatory states are subject to the fees.
4. Agricultural water use projects primarily involving the raising of food or forage crops, trees, flowers, shrubs, turf and livestock, or aquaculture, are exempt from fees.
5. Municipal public water suppliers shall receive a 20% discount on all of the fees and special charges set forth herein; provided, however, that no fee paid by a municipal public water supplier under this fee schedule shall be less than the fee that would have been paid under the fee schedule in effect prior to this fee schedule.

6. The appropriate fee must be submitted to the Commission with the project application or special requests as related to Table 3, unless requesting an installment payment plan as outlined in paragraph 7. Failure to submit payment of the fee or the submission of an incorrect fee with the application will result in its return to the project sponsor, or, at the discretion of the Commission, will result in a billing of the proper fee to the project sponsor. The Commission will not take action on a project application until the appropriate fee is paid. Fees are non-refundable and are not reduced, nor any amount credited to the project sponsor, where the Commission's docket approval authorizes a quantity of water which is less than that requested by the project sponsor.
7. If the fee exceeds \$6,000, project sponsors have the option of making installment payments. This option provides for the payment of up to three consecutive equal annual installments with interest thereon at the rate of 10 percent per annum on the unpaid balance. The project sponsor should indicate that it intends to use this option when making application. The first annual installment is due at the time the application is submitted.
8. When the fee calculated in accordance with the tables below is deemed by the Executive Director to be insufficient due to exceptional costs associated with review, the Executive Director may impose a fee in the amount up to 100 percent of project review costs deemed by him or her to be exceptional.
9. Sponsors for modification of projects previously approved by the Commission shall be required to pay a fee in accordance with the schedule set forth below.
10. Sponsors for renewals of project approvals shall pay the same fees as sponsors of new projects.
11. The provisions of this fee schedule were established by, and are subject to, Commission Resolution No. 2005-2, which supersedes the provisions of Resolution Nos. 98-19 and 2000-06.
12. Subject to public hearing upon due notice given and final Commission approval, the categorical fees set forth herein shall be increased at the rate of 10% per year for five consecutive years, and a Consumer Price Index (CPI) adjustment shall be made annually, beginning on January 1, 2007.
13. The Commission may, for good cause shown, waive or reduce any of the fees set forth herein.

TABLE 1
PROJECT FEE SCHEDULE
July 1, 2005 to December 31, 2006

Project Category	Requested Quantity	Fee
Consumptive Use Projects Paying Consumptive Use Fee to Commission	20,000 gallons per day (gpd) - 100,000 gpd	\$ 750
	100,001 gpd - 500,000 gpd	3,000
	500,001 gpd - 1 million gallons per day (mgd)	6,000
	1,000,001gpd – 5 mgd	18,000
	Over 5 mgd	30,000
Consumptive Use Projects Not Paying Consumptive Use Fee to Commission	20,000 gallons per day (gpd) - 100,000 gpd	\$ 2,100
	100,001 gpd - 500,000 gpd	9,700
	500,001 gpd - 1 mgd	12,700
	1,000,001 gpd to 5 mgd	38,000
	Over 5 mgd	50,000
Groundwater & Surface Water Withdrawals	Up to 250,000 gallons per day (gpd)	\$ 1,500
	250,001 gpd - 500,000 gpd	3,000
	500,001 gpd - 1 mgd	4,500
	1,000,001 gpd– 5 mgd	6,000
	5,000,001 gpd – 10 mgd	18,000
	Over 10 mgd	18,000 + \$3,000 for each additional 1 mgd increment
Hydroelectric Projects*	Greater than 10 Megawatts (anything less handled under “all other projects” below)	\$7,500
<i>*These fees will be charged for review of applications for FERC exemption, short form, or regular license, if the hydroelectric project requires Commission review & approval. No fee will be charged for review of applications for a preliminary permit.</i>		
All other projects requiring review under Section 3.10(2) of the Compact that do not involve a request for a quantity of water	e.g. stream encroachments, discharges to interstate waters, etc.	\$2,500

TABLE 2
PROJECT MODIFICATION FEE SCHEDULE¹
July 1, 2005 to December 31, 2006

Project Category	Requested Increase In Quantity	Fee
Consumptive Use Projects	Up to 100,000 gpd	\$ 750
	100,001 gpd - 500,000 gpd	3,000
	500,001 gpd - 1 mgd	6,000
	1,000,001 gpd – 5 mgd	18,000
	Over 5 mgd	30,000
	Groundwater & Surface Water Withdrawal	Up to 250,000 gpd
	250,001 gpd - 500,000 gpd	2,000
	500,001 gpd - 1 mgd	3,000
	1,000,001 gpd – 5 mgd	4,500
	5,000,001 gpd – 10 mgd	18,000
	Over 10 mgd	18,000 + \$3,000 for each additional 1 mgd increment
Hydroelectric Projects*	Greater than 10 Megawatts (anything less handled under “all other projects” below.)	\$7,500
<i>*These fees will be charged for review of applications for FERC exemption, short form, or regular license, if the hydroelectric project requires Commission review & approval. No fee will be charged for review of applications for a preliminary permit.</i>		
All other projects ² requiring review under Section 3.10 (2) of the Compact that do not involve a request for a quantity of water	e.g. modifications to approved projects that do not involve and increase in quantity of water withdrawn or consumed, stream encroachments, discharges to interstate waters, etc.	\$2,500

1. The amount of the fee for a modification of an approved project involving a request for an additional quantity of water shall not be less than the difference between the amount of the fee that was paid on the total quantity of water requested in an initial application, and the fee for the total quantity of water (existing quantity + requested increase quantity) stipulated in Table 1.
2. The amount of the fee for a modification of an approved project that does not involve a request for an additional quantity of water shall pay the fee for all other projects requiring review under Section 3.10 (2) of the Compact.

TABLE 3

SPECIAL FEES

July 1, 2005 to December 31, 2006

Pumping Test Plan Evaluation	\$ 2,000
Out-of-Basin Diversion ($\leq 250,000$ gpd)	5,000
Out-of-Basin Diversion ($> 250,000$ gpd)	15,000
Transfer of Existing Approval	1,000
Emergency Certificate	2,500



SUSQUEHANNA RIVER BASIN COMMISSION

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Docket No. 20041201

Approval Date: December 15, 2004

ALBANY INTERNATIONAL

Groundwater Withdrawal (30-Day Average) of 0.283 mgd from
Wells 1, 2, 3, and 4,
for Manufacture of Monofilament,
Village of Homer, Cortland County, New York

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, 84 Stat. 1509 et seq., and Commission Regulations §803.4, relating to projects requiring review and approval, and §803.43, relating to groundwater withdrawals. The Commission received the application on July 3, 2001.

Description

Purpose. The purpose of the application is to request approval for the withdrawal of groundwater associated with the manufacture of monofilament fibers.

Location. The project is located in the Upper Susquehanna Subbasin, HUC 02050102, Tioughnioga River Watershed, Village of Homer, Cortland County, New York.

Project Features. The project sponsor originally requested approval for the withdrawal (30-day average) of 0.227 million gallons per day (mgd) from Wells 1, 2, 3, and 4, and subsequently, modified its request to 0.311 mgd. Based on water use data for the years 2001 through 2003 submitted by the project sponsor, Commission staff estimates the project's total peak daily withdrawal from the wells to be approximately 0.347 mgd, and the maximum 30-day average groundwater withdrawal to be approximately 0.283 mgd.

Manufacturing operations began at the current location in the 1940s. The project sponsor purchased the facility and has been operating there since the mid-1970s. The facility manufactures monofilament, which are strands of untwisted synthetic fibers extruded from plastic pellets.

Water is supplied to the facility from four on-site wells (Wells 1, 2, 3, and 4) and by the Village of Homer public water supply system. The facility and its well field are located west of

the West Branch Tioughnioga River. Based on limited information concerning well drilling and construction, the wells are drilled into and draw upon a confined or semi-confined, sand-and-gravel layer of irregular thickness located at the base of a glacial valley-fill sequence. The overlying confining (or semi-confining) unit is a 106- to 169-foot thick layer of lacustrine silt and clay.

Wells 3 and 4 are drilled through the valley fill approximately 20 feet (ft) and 125 ft, respectively, into the underlying Devonian shale bedrock. These two wells may produce groundwater from the bedrock in addition to producing water from the basal sand and gravel unit of the valley fill.

All four wells are 6-inches in diameter and have 6-inch diameter casings. Wells 1, 2, 3, and 4 are cased to the top of the basal sand and gravel unit of the valley fill. No data are available on well screens installed below casing, if screens were in fact installed in these wells.

The following table summarizes information for the wells:

Well No.	Date of Initial Use	Total Depth (ft)	Casing Depth (ft)	Pump Capacity (gpm)	Current Max. Withdrawal* (30-Day Average, in mgd)
1	1991	185	185	90	0.047
2	1997	195	184	90	0.125
3	2000	225	180	75	0.101
4	2001	300	172	35	0.038

*Based on 2001–2003 water use records provided by the project sponsor.

The withdrawals from Wells 1, 2, and 4 are separately metered and monitored on a daily basis by the project sponsor. Well 3 is not equipped with a meter. The water supplied by the Village of Homer is metered and monitored daily by the project sponsor.

Groundwater withdrawn from the four wells is used for once-through noncontact cooling of water in the manufacturing process and for air conditioning. Water supplied by the Village of Homer is distributed through the project's roll stand cooling system to provide noncontact cooling of equipment (rolls) used in the manufacturing process, and returned to a covered cooling tank (approximately 1,500-gallon capacity). Water in the cooling tank is cooled by the self-supplied groundwater flowing through coils, and then recirculated through the roll stand cooling system.

Groundwater also is used to provide once-through noncontact cooling water for the facility's five air conditioning units. The project currently does not utilize evaporative cooling towers.

In addition to providing the noncontact cooling water used in the roll stand cooling system, the public water supply system provides water for contact cooling (product quenching baths) and sanitary purposes. There are a total of 12 low-temperature quenching baths at the

facility, each having a surface area of approximately 15 square-feet and holding approximately 170 gallons of water. Evaporation from the quenching baths is nominal.

Groundwater cycled through the once-through noncontact cooling water and air conditioning systems is discharged through an unmetered outfall to the West Branch Tioughnioga River (New York State Department of Environmental Conservation (NYS DEC) Permit No. NY-0232734).

Process and sanitary wastewater from the facility is discharged through three unmetered outfalls and treated at the Cortland Wastewater Treatment Plant.

Pumping Tests. The project sponsor submitted an analysis of local hydrology and groundwater availability, and requested a waiver of the required pumping tests for Wells 1, 2, 3, and 4 based on historic use.

Findings

The project is subject to Commission approval and reporting requirements, as per Commission Regulation §803.43.

The project sponsor has requested a total combined groundwater withdrawal (30-day average) of 0.311 mgd from Wells 1, 2, 3, and 4. Commission staff recommends approval of 0.283 mgd, based on the current estimated combined (30-day average) groundwater withdrawal. Should the project's groundwater withdrawal exceed or be expected to exceed the approved amount, the project sponsor must apply for a modification to this docket at that time.

Commission staff recommends that the maximum instantaneous rates of production from each of the four wells should not exceed the current capacities of pumps installed in the wells, as shown in the table of well information.

Commission staff recommends that the project sponsor install appropriate metering on Well 3 and maintain existing metering on Wells 1, 2, and 4.

Commission staff finds that the project's withdrawal of groundwater likely exceeded the regulatory threshold in 1997, after the project sponsor initiated the use of Well 2 to meet the increasing noncontact cooling water needs at the facility.

The project sponsor requested a waiver from the Commission's pumping test requirements, specified in Commission Regulation §803.43, based on the historic use of its wells with no known adverse impacts to other users or natural resources. In support of its request, the project sponsor submitted an analysis of the local hydrogeology and groundwater availability. Commission staff reviewed the information submitted by the project sponsor, and recommends that the requirement for pumping tests be waived.

Analysis of the well drilling and construction data indicates that the wells tap a confined or semi-confined valley fill aquifer. Although the well field is located in the valley of the West

Branch Tioughnioga River, the proposed withdrawal is less than 10 percent of the 7-day 10-year low flow and the stream should be protected from any adverse impacts related to the withdrawal.

Commission staff finds that consumptive water use at the facility is minimal, consisting primarily of water evaporated from the low-temperature cooling tank and quenching baths. Based on metered make-up water records, the project sponsor estimates the project's consumptive use of water to be approximately 2,100 gallons per day (gpd) on a 30-day average and, thus, is not subject to review and approval under Commission Regulation §803.42, relating to the consumptive use of water. If the project's consumptive use of water exceeds or is expected to exceed 20,000 gpd on a 30-day average (600,000 gallons in any consecutive 30-day period), the project sponsor must submit a consumptive water use application to the Commission.

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

The project sponsor has paid the appropriate application fee, in accordance with Commission Regulation §803.28, and in accordance with Commission Resolution 98-19, as amended by Commission Resolution 2000-06. The project sponsor has 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 project sponsor is eligible to participate in the Commission's Compliance Incentive Program (CIP). Therefore, the project sponsor would not be subject to penalties for water withdrawn in violation of Commission Regulation §803.43 prior to January 1, 2001.

Decision

The foregoing findings are hereby adopted and shall be incorporated into and made a part of this decision. The project's groundwater withdrawal of 0.283 mgd (30-day average) from Wells 1, 2, 3 and 4 is approved pursuant to Article 3, Section 3.10 of the Compact subject to the following conditions:

- a. The project sponsor shall comply with all Commission regulations, including groundwater withdrawal reporting requirements, as per Commission Regulation §803.43.
- b. Within sixty (60) days from the date of this approval, the project sponsor shall install and maintain metering on Well 3, accurate to within five (5) percent, to measure its groundwater withdrawal. The project sponsor may propose alternative monitoring to the Commission for staff review and approval. The project sponsor shall maintain the existing meters, accurate to within

five (5) percent, on Wells 1, 2, and 4. The Commission reserves the right to inspect all measurement equipment and audit all measurement records.

c. The project sponsor shall keep daily records of the metered withdrawal and weekly water levels in Wells 1, 2, 3 and 4. The required reporting data shall be submitted to the Commission annually, and as otherwise required. Monitoring reports are due within sixty (60) days after the close of the preceding year.

d. The maximum instantaneous rate of production from Wells 1, 2, 3, and 4 shall not exceed 90 gpm, 90 gpm, 75 gpm, and 35 gpm, respectively.

e. The project sponsor shall comply with the water conservation requirements specified in Commission Regulation §804.20(b).

f. The project sponsor is eligible to participate in the Commission's Compliance Incentive Program. Therefore, the project sponsor is not subject to penalties for its prior noncompliance.

g. The constant rate pumping test requirements specified in Commission Regulation §803.43 (b) is hereby waived.

h. If the Commission determines that the operation of the project's groundwater withdrawal adversely affects any existing groundwater or surface water withdrawal, the project sponsor shall be required to provide, at its expense, an alternate water supply or other mitigating measure.

i. Commission approval shall not be construed to exempt the project sponsor 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 project sponsor fails to obtain or maintain such approvals.

j. The Commission reserves the right to inspect or investigate the project facility, and the project sponsor shall allow authorized employees or agents of the Commission, without advance notice or a search warrant, at any reasonable time and upon presentation of appropriate credentials, and without delay, to have access to and to inspect all areas where the project is being constructed, operated, or maintained. Such employees or agents shall be authorized to conduct tests or sampling, to take photographs, to perform measurements, surveys, and other tests, to inspect the methods of construction, operation, or maintenance, to inspect all measurement equipment, to audit, examine, and copy books, papers, and records pertinent to any matter under investigation, and to take any other action necessary to assure that the project is constructed, operated, or maintained in accordance with the terms and conditions of this approval or any other rule, regulation, or order of the Commission.

k. If the project sponsor fails to comply with the provisions of the Compact or any rule, regulation or order of the Commission, or any term or condition of this docket, the Commission

may suspend, modify, or revoke its approval of same, and may impose appropriate fines and penalties. Upon written notice by the Commission, the project sponsor shall have thirty (30) days to correct such noncompliance, unless an alternate period is specified in the notice. 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, or from imposing fines and penalties, regardless of the period of noncompliance.

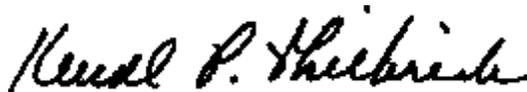
l. The Commission reserves the right to reopen any project docket or issue such additional orders, as may be necessary, to mitigate or avoid adverse impacts or otherwise to protect public health, safety, welfare, or the environment.

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

n. This approval is effective until December 15, 2029. The project sponsor shall submit a renewal application by June 15, 2029, and obtain Commission approval prior to continuing operation beyond December 15, 2029.

o. 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 project sponsor and approved by the Commission.

By the Commission:



Kendl P. Philbrick, Chair
Maryland Commissioner

Dated: December 15, 2004



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. 20041202

Approval Date: December 15, 2004

RIVER HILL POWER COMPANY, LLC

Surface-Water Withdrawal of Up to 5.0 mgd
from West Branch Susquehanna River and
Consumptive Water Use of Up to 4.0 mgd, for Electricity Generation,
Karthaus Township, Clearfield County, Pennsylvania

Review Authority

Commission staff reviewed the application pursuant to Article 3, Section 3.10 of the Susquehanna River Basin Compact, P.L. 91-575, 84 Stat. 1509 et seq., Commission Regulations §803.4, relating to projects requiring review and approval, §803.42, relating to consumptive use of water, and §803.44, relating to surface-water withdrawals. The Commission received the application on May 27, 2004, followed by additional information submitted by the project sponsor on July 23, 2004 and November 4, 2004.

Description

Purpose. The purpose of the application is to request approval for the surface-water withdrawal and consumptive use of water for electricity generation.

Location. The project is located in the West Branch Susquehanna Subbasin, HUC 02050201, Karthaus Township, Clearfield County, Pennsylvania.

Project Features. The project sponsor has requested approval for the surface-water withdrawal of up to 5.0 million gallons per day (mgd), an average (30-day average) surface-water withdrawal of up to 4.4 mgd, and the consumptive use of water of up to 4.0 mgd for a waste coal-fired power plant capable of generating up to 290 megawatts.

In addition to the boiler and steam turbine/generator, the facility will include an auxiliary boiler, a mechanical draft cooling tower, water treatment equipment, wastewater treatment equipment, and a stormwater management system. The facility is expected to run year-round as a high-capacity factor base load plant and will generate over 2 million megawatt-hours of electricity annually. The combustion of waste coal will generate ash and other combustion products.

Water will be used primarily for heat dissipation, but also will be required for boiler makeup, emissions control, ash wetting and dust control. Water will be withdrawn through a new surface-water intake along the West Branch Susquehanna River. The facility's potable water supply requirements will be satisfied through an interconnection to the Covington-Karthus-Girard Area Authority.

Process makeup water from the West Branch Susquehanna River will undergo pretreatment to reduce the suspended solids and dissolved metals concentration. Site runoff, collected in an approximate 2.5 million gallon stormwater runoff basin, also will be directed to the process water pretreatment system to supplement the surface-water withdrawal for use in process makeup. An approximate 1.3 million gallon coal pile sedimentation basin will be used to collect runoff from the coal piles for reuse as ash conditioning water.

A reuse water holding tank or concrete basin will be used to collect treated process wastewater. Effluent from the tank or basin will be reused for ash conditioning, when required. Excess treated wastewater from the tank or basin will be returned to the West Branch Susquehanna River through a new outfall in compliance with National Pollution Discharge Elimination System (NPDES) effluent limits.

Evaporative loss from the cooling tower system is estimated to average 2.8 mgd annually, with maximum monthly and peak day estimates totaling 3.2 mgd and 3.6 mgd, respectively.

Water requirements for ash conditioning prior to off-site transport are estimated to average approximately 0.13 mgd annually, and 0.144 to 0.22 mgd on a 30-day average and maximum day, respectively.

Dust suppression activities will be implemented on haul roads as necessary. The project sponsor estimates the water requirements could be as much as 0.04 mgd during dry periods, and about 0.007 mgd based on an annual average.

Coordination. Commission staff has coordinated with the Pennsylvania Department of Environmental Protection (PADEP) Northcentral Region Office and the Pennsylvania Fish and Boat Commission (PFBC) during review of the project.

Findings

The project is subject to Commission approval and reporting requirements, as per Commission Regulations §803.42 and §803.44.

The project proposes to supply most of its water needs by withdrawing water from the West Branch Susquehanna River. Commission staff recommends that the withdrawal be metered and monitored on a daily basis.

The project sponsor proposes to construct a new surface-water intake comprised of a submerged passive wedgewire screen intake system to minimize potential aquatic impacts

associated with impingement. The maximum instantaneous withdrawal rate at the intake is estimated to be 3,500 gallons per minute (gpm).

Approximate average annual flow in the vicinity of the intake is over 2,500 cubic feet per second (cfs), based on analysis of streamflow records for the West Branch Susquehanna River from the U.S. Geological Survey gage located at Karthaus, Pa. The analysis also showed that the seven-day, ten-year low flow (Q7-10) at Karthaus is approximately 201 cfs for the period of record following construction of, and flow regulation by, the Curwensville Dam. The project's proposed instantaneous withdrawal rate of 3,500 gpm (7.7 cfs) is less than 10 percent of the Q7-10. Therefore, Commission staff finds that a passby flow is not required at the point of withdrawal to protect aquatic resources and downstream users.

The project also proposes to use withdrawals from the on-site stormwater basin and coal pile sedimentation basin, when water is available, for ash conditioning and to supplement the river withdrawal in meeting process water needs. The project sponsor proposes to use theoretical methods to estimate the volume of stormwater runoff generated at the facility. Commission staff recommends that the project sponsor install and maintain metering, accurate to within 5 percent, on the withdrawals from the stormwater basins, and report the data to the Commission quarterly.

All water used for heat dissipation, ash conditioning, and dust suppression is considered to be consumptively used. Commission staff recommends that the project's total daily consumptive water use be calculated as the difference between inflow and discharge. Commission staff recommends that the project sponsor install sufficient metering at all the input and discharge points to accurately measure the many various uses, reuses, and losses of water related to the complex operations at the electrical generating facility.

Although the water captured in the runoff basins is subject to atmospheric evaporation, the capacity of the basin and the associated pump are such that retention time is not expected to exceed nine days, and will usually be much less. Because the project sponsor is proposing to calculate consumptive water use at the facility by calculating the difference between inflow and discharge as measured at its intake and discharge meters, staff has determined that the atmospheric evaporation is a *de minimus* loss. Hence, staff recommends that the project sponsor not be required to include stormwater evaporation in its consumptive water use calculations.

The project sponsor has requested a withdrawal and consumptive water use of up to 5.0 mgd and 4.0 mgd, respectively. To reduce overall water withdrawals, the facility will recycle and reuse internally generated waste streams to the maximum extent practicable. Commission staff is recommending approval of the requested amounts. Should the project's future consumptive water use exceed or be expected to exceed 4.0 mgd, the project sponsor must apply for a modification to this docket at that time.

In addition to maximizing reuse of water to minimize water withdrawal as much as practicable, the project sponsor also considered other sources of water and alternate cooling technologies. The proposed surface-water withdrawal from the West Branch Susquehanna River proved to be the most viable, reliable, and economical source for process water.

Neither the use of on-site wells nor tapping into local municipal distribution systems were determined to be technically viable options to meet the water needs of the facility. The project sponsor is proposing the installation of mechanical draft cooling towers for heat dissipation needs because the technology requires 95 percent smaller water withdrawals than once-through cooling techniques and poses lesser threats of thermal impacts to the receiving stream. The additional consumptive water use associated with mechanical draft cooling towers is not expected to adversely impact the West Branch Susquehanna River. As an alternate to mechanical draft cooling towers, the project sponsor investigated the use of an air-cooled condenser for facility cooling. The air-cooled condenser was rejected after determining that the excessive added cost would seriously affect the financial viability of the project and because it would decrease the plant's generation performance in hot weather when demand for electricity is generally greatest.

During extreme low flow periods, Commission augmentation releases from the Curwensville Reservoir upstream of the project's intake will help to mitigate any impacts of the withdrawal. PFBC has reviewed the project sponsor's application and does not anticipate any flow-related impacts from the proposed withdrawals. The project is expected to benefit the basin by eliminating waste coal piles and associated acid runoff, by providing alkaline ash useful for mitigating acidic outfalls, and by providing temporary and permanent employment.

The project's consumptive use of water is subject to water compensation requirements, as per Commission Regulation §803.42. To satisfy these requirements, the project sponsor proposes to make quarterly payments to the Commission in-lieu-of providing actual compensation water.

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

The project sponsor has paid the appropriate application fee, in accordance with Commission Regulation §803.28, and in accordance with Commission Resolution No. 98-19, as amended by Commission Resolution 2000-06. The project sponsor has provided all proofs of notification, as required by Commission Regulation §803.25.

No adverse impacts to other area surface-water withdrawals are anticipated. 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.

Decision

The foregoing findings are hereby adopted and shall be incorporated into and made a part of this decision. The project's surface-water withdrawal from the West Branch Susquehanna River of up to 5.0 mgd, and the consumptive use of water of up to 4.0 mgd are approved pursuant to Article 3, Section 3.10 of the Compact subject to the following conditions:

a. The project sponsor shall comply with all Commission regulations, including consumptive water use reporting requirements, as per Commission Regulation §803.42, and surface-water withdrawal reporting requirements, as per Commission Regulation §803.44.

b. Prior to commencing operation, the project sponsor shall install and then maintain meters, accurate to within five (5) percent, to measure the daily quantity of water entering and leaving the facility's process water system. The project sponsor may propose alternative monitoring to the Commission for staff review and approval.

c. The project sponsor shall keep daily records of the project's consumptive water use, and shall report the data to the Commission quarterly, and as otherwise required. Quarterly monitoring reports are due within thirty (30) days after the close of the preceding quarter. The daily quantity of water consumptively used shall be the difference in quantity of water input to the system from the West Branch Susquehanna River intake plus any water from the two runoff basins and the quantity of wastewater discharged through the river outfall. The Commission reserves the right to inspect all measurement equipment and audit all measurement records.

d. The project sponsor shall install and maintain metering on the surface-water withdrawal, accurate to within five (5) percent, and keep daily records of the project's surface-water withdrawal. The project sponsor shall report the data to the Commission quarterly, and as otherwise required. Quarterly monitoring reports are due within thirty (30) days after the close of the preceding quarter. The Commission reserves the right to inspect all measurement equipment and audit all measurement records.

e. The maximum instantaneous rate of withdrawal from the West Branch Susquehanna River shall not exceed 3,500 gpm (7.7 cfs).

f. To satisfy the Commission's current compensation requirements for consumptive water use set forth in Commission Regulation §803.42, the project sponsor shall make quarterly payments to the Commission based on the rate of \$0.14 per 1,000 gallons of water consumptively used by the project. The daily quantity of water consumptively used shall be the difference in quantity of water input to the system from the West Branch Susquehanna River intake plus any water from the two runoff basins and the quantity of wastewater discharged through the river outfall. Payments shall be made quarterly and shall be calculated by applying this rate to the daily amount of water consumptively used by the project during the preceding calendar quarter. Quarterly payments are due and payable within thirty (30) days after the close of the preceding quarter. The rate of payment, after appropriate notice to consumptive users of water using this method of compliance, is subject to change at the Commission's discretion.

g. The project sponsor shall comply with the water conservation requirements specified in Commission Regulation §804.20(b).

h. Commission approval shall not be construed to exempt the project sponsor 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 project sponsor fails to obtain or maintain such approvals.

i. The Commission reserves the right to inspect or investigate the project facility, and the project sponsor shall allow authorized employees or agents of the Commission, without advance notice or a search warrant, at any reasonable time and upon presentation of appropriate

credentials, and without delay, to have access to and to inspect all areas where the project is being constructed, operated, or maintained. Such employees or agents shall be authorized to conduct tests or sampling, to take photographs, to perform measurements, surveys, and other tests, to inspect the methods of construction, operation, or maintenance, to inspect all measurement equipment, to audit, examine, and copy books, papers, and records pertinent to any matter under investigation, and to take any other action necessary to assure that the project is constructed, operated, or maintained in accordance with the terms and conditions of this approval or any other rule, regulation, or order of the Commission.

j. If the project sponsor fails to comply with the provisions of the Compact or any rule, regulation or order of the Commission, or any term or condition of this docket, the Commission may suspend, modify, or revoke its approval of same, and may impose appropriate fines and penalties. Upon written notice by the Commission, the project sponsor shall have thirty (30) days to correct such noncompliance, unless an alternate period is specified in the notice. 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, or from imposing fines and penalties, regardless of the period of noncompliance.

k. The Commission reserves the right to reopen any project docket or issue such additional orders, as may be necessary, to mitigate or avoid adverse impacts or otherwise to protect public health, safety, welfare, or the environment.

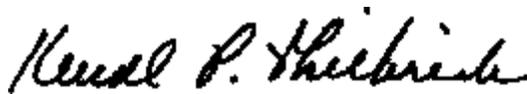
l. Commission approval confers no property rights upon the project sponsor. The securing of all rights necessary and incident to the project sponsor's development and operation of the project shall be the sole and exclusive responsibility of the project sponsor, and this approval shall be subject thereto.

m. This approval is effective until December 15, 2029. The project sponsor shall submit a renewal application by June 15, 2029, and obtain Commission approval prior to continuing operation beyond December 15, 2029.

n. The project sponsor has a period of three (3) years from the date of this approval to initiate the project or such approval will automatically expire, unless an extension is requested by the project sponsor and approved by the Commission. Likewise, if the project is discontinued for such a time and under such circumstances that an abandonment of the project may be reasonably inferred, the Commission may rescind the approval of the project unless a renewal is requested by the project sponsor and approved by the Commission.

By the Commission:

Dated: December 15, 2004



Kendal P. Philbrick, Chair
Maryland Commissioner



SUSQUEHANNA RIVER BASIN COMMISSION

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Docket No. 20041203

Approval Date: December 15, 2004

BOROUGH OF MIFFLINBURG

Groundwater Withdrawal (30-Day Average) of 0.554 mgd from Well PW2,
and a Total System Withdrawal Limit (30-Day Average) of 0.554 mgd,
for Public Water Supply,
West Buffalo Township, Union 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, 84 Stat. 1509 et seq., and Commission Regulations §803.4, relating to projects requiring review and approval, and §803.43, relating to groundwater withdrawals. The Commission received the application on September 8, 2003.

Description

Purpose. The purpose of the application is to request approval for the withdrawal of groundwater for distribution in a public water supply system.

Location. The project is located in the West Branch Susquehanna Subbasin, HUC 02050206, Buffalo Creek Watershed, West Buffalo Township, and Union County, Pennsylvania.

Project Features. The project sponsor has requested approval for the withdrawal of 0.554 million gallons per day (mgd) (30-day average) from Well PW2. The well will be used as an additional source for the public water supply system that currently relies on Wells PW1, Chambers Spring, and Mifflinburg's reservoir on the North Branch of Buffalo Creek. The Commission previously approved the groundwater withdrawal of up to 0.87 mgd from Well PW1 (in Commission Docket No. 19931104); and the surface-water withdrawals of up to 0.81 mgd from the Mifflinburg Reservoir and from Chambers Spring (in Commission Docket No. 19930506). Well PW2 was drilled in February and March 2002 to supplement the existing water sources.

Well PW2 is located approximately 5,700 feet west-northwest of the intersection of Pa. State Routes 45 and 104. Well PW2 was constructed as a 12-inch-diameter open-rock borehole from a depth of 120 feet to a total depth of 498 feet. The well has 120 feet of 12-inch steel

casing. The well penetrates predominantly limestone with some siltstone and shale of the Silurian-age undivided Keyser and Tonolway Formations.

The Borough of Mifflinburg public water supply system, which serves both Mifflinburg Borough and portions of West Buffalo and Limestone Townships and which may in the future serve portions of Buffalo Township, has an existing average daily demand of 0.420 mgd and an existing maximum daily demand of 0.736 mgd. The average and maximum daily demands are projected to grow to 0.536 and 0.939 mgd, respectively, by 2030.

Pumping Test. A 48-hour pumping test of Well PW2 was conducted on September 19-21, 2002. A constant pumping rate was achieved after 200 minutes of pumping, after two reductions in pumping rates (at 10 and 200 minutes). The testing was pre-approved by Commission staff. Pumping at an average rate of 400 gallons per minute (0.576 mgd) after 200 minutes lowered the water level in Well PW2 from a pretest level of 1.9 feet to 146.7 feet. At the end of the test, total measured drawdown was approximately 145 feet

Three (3) observation wells were used during aquifer test, including two residential wells and Mifflinburg Borough's existing Well PW1. A piezometer (No. 1) was installed in a wetland area near the pumping well and two stream-bank piezometers (Nos. 2 and 3) were installed along Buffalo Creek. A staff gage also was monitored in an area of standing water in a depression within the nearby wetlands. The stage of Buffalo Creek was monitored at a point approximately 500 feet north of Well PW1.

Water pumped from Well PW2 was discharged to Buffalo Creek, just downstream of the stream-stage monitoring point, approximately 500 feet north of the well. Significant rainfall (1.2 inches) occurred 1-2 days before the test and, again, nearly coincident with the end of the test (0.55 inches, in two events). These rainfall events may have masked subtle drawdown and recovery trends related to the pumping test.

Coordination. Commission staff has coordinated with the Pennsylvania Department of Environmental Protection (PADEP) North Central Region Office (NCRO) during review of the project. PADEP staff has reviewed this docket for consistency with its requirements.

Findings

The project is subject to Commission approval and reporting requirements, as per Commission Regulation §803.43.

Extrapolation of the time-drawdown trend at well PW2 at a pumping rate of 400 gpm places the pumping water level at a depth of 157 feet below top of casing after 69 days (100,000 minutes) of continuous pumping. A highly conservative, long-term extrapolation of the time-drawdown trend of Well PW2 indicates that continuous pumping for more than 1.9 years (1,000,000 minutes) at the 400 gpm test pumping rate could result in a lowering of the pumping water level to 164 feet below top of casing, and result in the dewatering of a significant water-bearing zone located at a depth of 158 feet below top of casing. Therefore, in order to avoid

dewatering of this uppermost water-bearing zone, the maximum pumping rate proposed for Well PW2 should be reduced from the tested rate.

Commission staff recommends approval of an average (30-day) daily withdrawal of 0.544 mgd for Well PW2; and a total system withdrawal limit of 0.554 mgd (30-day average).

The three observation wells used for the test are across bedding strike from the pumping well, in the probable direction of least transmissivity or hydraulic conductivity. The closest of these three observation wells may have shown some drawdown from the pumping test, although it was less than 0.5 foot. because of the rural setting of the well, there were no available observation wells in close proximity to the pumping well in directions along bedding strike.

One of the two stream-bank piezometers that were installed along nearby Buffalo Creek for the pumping test was located along bedding strike to the southwest of the well, while the other was located along a fracture trace and across bedding strike to the northwest. The piezometer located across strike (No. 2) showed no discernible drawdown from the pumping test, while the piezometer located along strike (No. 3) showed approximately 1.3 feet of drawdown from the pumping test, indicating the potential for induced infiltration of surface water along certain reaches of Buffalo Creek near the pumping well.

The impact from the project sponsor's proposed groundwater withdrawal is less than 10 percent of the 7-day 10-year low flow (Q_{7-10} flow) in Buffalo Creek. Therefore, a passby flow is not required to protect aquatic resources and downstream users.

A small area of ponded water within a wetland near the pumping well was monitored with a piezometer (No. 1) and a staff gage during the pumping test. Drawdown in both the stage of the pond (3.9 inches) and the shallow groundwater level in the piezometer (0.35 inches) were observed during the pumping test, indicating the potential for impacts to these wetlands from the pumping of Well PW2 at a rate of 400 gpm. Further, water level declines in the wetlands may have been masked to some extent by a rainfall event coincident with the testing. Commission staff and PADEP staff have expressed concern that continuous pumping at the tested pumping rate of 400 gpm, will dewater the wetlands, and Commission staff recommends that the maximum instantaneous pumping rate be reduced to 385 gpm.

Further, Commission staff recommends that Well PW 2 not be pumped during March and April to insure protection of wetland hydrology. In addition to the pumping restrictions, Commission staff recommends that the project sponsor implement a wetland monitoring plan. The wetland monitoring should include as a minimum: 1) an annual survey of the affected jurisdictional wetland size and shape; 2) annual characterization of the dominant vegetation in the wetland; 3) ground and surface water level monitoring in the wetland; and a schedule for implementation of the plan.

Commission staff recommends that the project sponsor submit a plan for the monitoring, including any additional data, calculations, or interpretations pertinent to the monitoring plan or to the issue of impact to the wetlands, to the Commission within sixty (60) days of docket approval for review and approval by Commission staff prior to implementation. Monitoring

should continue until at least 5 consecutive years of data have been collected at the maximum permitted pumping rate.

The project is subject to the Commission's water conservation requirements, as per Commission Regulation §804.20(a). The water system is 100 percent metered, however, system losses are greater than 20 percent (25 percent in 2001), based on data submitted to the Commission, which is not in compliance with this regulation.

The project sponsor has paid the appropriate application fee in accordance with Commission Regulation §803.28 and in accordance with Commission Resolution 98-19, as amended by Commission Resolution 2000-06. The project sponsor has 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, with the exceptions noted above, does not adversely influence the present or future use and development of the water resources of the basin.

Decision

The project's groundwater withdrawal of 0.554 mgd (30-day average) from Well PW2, and a total system withdrawal limit of 0.554 mgd (30-day average), is approved pursuant to Article 3, Section 3.10 of the Compact, subject to the following conditions:

- a. The project sponsor shall comply with all Commission regulations, including groundwater withdrawal reporting requirements, as per commission Regulation §803.43.
- b. The project sponsor shall keep daily records of the metered withdrawal and weekly water levels from Well PW2. The required reporting data shall be submitted to the Commission annually, and as otherwise required. Monitoring reports are due within sixty (60) days after the close of the preceding year. The project sponsor shall install a meter, accurate to within five (5) percent, on Well PW2 prior to its use as a water supply source.
- c. The maximum instantaneous rate of production from Well PW2 shall not exceed 385 gpm.
- d. The project sponsor shall not pump Well PW 2 during March and April of each year.
- e. The project sponsor shall monitor the wetlands nearby and adjacent to Well PW2 to assess any adverse impacts until at least five (5) consecutive years of data have been collected at the maximum permitted pumping rate. A monitoring plan, including any additional data, calculations, or interpretations pertinent to the monitoring plan or to the issue of impact to the wetlands, shall be submitted to the Commission within sixty (60) days of docket approval. This plan shall include as a minimum: 1) an annual survey of the affected jurisdictional wetland size and shape; 2) annual characterization of the dominant vegetation in the wetland; 3) ground and surface water level monitoring in the wetland; and a schedule for implementation of the plan. The plan shall be executed upon Commission approval. The monitoring results shall be

documented in an annual interpretive report due sixty (60) days after close of the calendar year, or otherwise as directed by Commission staff.

f. The project sponsor shall comply with the water conservation requirements specified in Commission Regulation §804.20(a). The project sponsor shall have reduced system losses and achieved 100 percent compliance with the requirements by December 15, 2009. The project sponsor shall report to the Commission annually on the progress made pursuant to this requirement. The project sponsor must petition the Commission for an extension should unforeseen events occur that preclude compliance with the December 15, 2009, deadline.

g. If the Commission determines that the operation of the project's groundwater withdrawal adversely affects any existing groundwater or surface water withdrawal, the project sponsor shall be required to provide, at its expense, an alternate water supply or other mitigating measure.

h. Commission approval shall not be construed to exempt the project sponsor 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 project sponsor fails to obtain or maintain such approvals.

i. The Commission reserves the right to inspect or investigate the project facility, and the project sponsor shall allow authorized employees or agents of the Commission, without advance notice or a search warrant, at any reasonable time and upon presentation of appropriate credentials, and without delay, to have access to and to inspect all areas where the project is being constructed, operated, or maintained. Such employees or agents shall be authorized to conduct tests or sampling, to take photographs, to perform measurements, surveys, and other tests, to inspect the methods of construction, operation, or maintenance, to inspect all measurement equipment, to audit, examine, and copy books, papers, and records pertinent to any matter under investigation, and to take any other action necessary to assure that the project is constructed, operated, or maintained in accordance with the terms and conditions of this approval or any other rule, regulation, or order of the Commission.

j. If the project sponsor fails to comply with the provisions of the Compact or any rule, regulation or order of the Commission, or any term or condition of this docket, the Commission may suspend, modify, or revoke its approval of same, and may impose appropriate fines and penalties. Upon written notice by the Commission, the project sponsor shall have thirty (30) days to correct such noncompliance, unless an alternate period is specified in the notice. 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, or from imposing fines and penalties, regardless of the period of noncompliance.

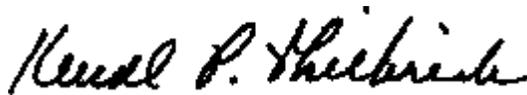
k. The Commission reserves the right to reopen any project docket or issue such additional orders, as may be necessary, to mitigate or avoid adverse impacts or otherwise to protect public health, safety, welfare, or the environment.

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

m. This approval is effective until December 15, 2029. The project sponsor shall submit a renewal application by June 15, 2029, and obtain Commission approval prior to continuing operation beyond December 15, 2029.

n. The project sponsor has a period of three (3) years from the date of this approval to initiate the project or such approval will automatically expire, unless an extension is requested by the project sponsor and approved by the Commission. Likewise, if the project is discontinued for such a time and under such circumstances that an abandonment of the project may be reasonably inferred, the Commission may rescind the approval of the project unless a renewal is requested by the project sponsor and approved by the Commission.

By the Commission:



Kendl P. Philbrick, Chair
Maryland Commissioner

Dated: December 15, 2004



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. 20041204

Approval Date: December 15, 2004

CENTRE HALL BOROUGH

Groundwater Withdrawal (30-Day Average) of 0.500 mgd from Well 11,
and a Total System Withdrawal Limit (30-Day Average) of 0.635 mgd,
for Public Water Supply,
Potter Township, Centre 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, 84 Stat. 1509 et seq., and Commission Regulations §803.4, relating to projects requiring review and approval, and §803.43, relating to groundwater withdrawals. The Commission received the application on June 7, 2004.

Description

Purpose. The purpose of the application is to request approval for the withdrawal of groundwater for distribution in a public water supply system.

Location. The project is located in the West Branch Susquehanna Subbasin, HUC 02050204, Penns Creek Watershed, Potter Township, Centre County, Pennsylvania.

Project Features. The project sponsor has requested approval for the withdrawal (30-day average) of 0.500 million gallons per day (mgd) from Well 11. The well will be used as a source for the public water supply system that currently relies on two other high-yielding carbonate-valley wells, Wells 8 and 9, both drilled in 1973 and located to the south-southeast of Well 11. Well 9 experiences occasional turbidity problems, and Well 11 was developed as an additional source that might be less susceptible to turbidity. The system previously relied on lower yielding Wells 1, 2, and 10, located on the southeastern slope of Nittany Mountain, which were developed between 1916 and 1965. These lower-yielding wells are currently inactive, and would only be used in the future on an emergency basis.

Well 11 is an open-rock, 8-inch-diameter well, drilled to a total depth of 500 ft and constructed with 8-inch casing to a depth of 100 ft. Well 11 is completed in dolomite of the Bellefonte Formation. The well has a minor fractured yielding zone at a depth of 243.5 to 246.5 ft, and derives most of its yield from two deep fractured zones, located at 340 to 350 ft, and 466.6 to 469 ft.

In 2003, the combined average daily withdrawal from Wells 8 and 9 was approximately 0.286 mgd with a peak demand of 0.428 mgd. The average and maximum daily demands are projected to grow to 0.635 and 0.942 mgd, respectively, by 2029.

Pumping Tests. A 48-hour constant-rate pumping test of Well 11 was conducted on October 13-15, 2003, with prior Commission approval. In addition to the pumping well, four observation wells were monitored during the test, including Well 8, Well 9 and two residential wells located 660 ft and 1,300 ft from Well 11, generally along bedding strike. The water levels at sixteen (16) wells and two springs located within 7,500 ft of Well 11 were measured immediately before and at the end of the pumping test so that the water table contour could be compared for the pre-test and end-of-test periods. A stepped-rate pumping test of Well 11 preceded the constant-rate pumping test. Pumping at an average rate of 400 gallons per minute (gpm), total drawdown at the pumping well was approximately 60 feet at the end of the test. End-of-test drawdown at the two monitored residential wells was 9.5 ft and 4.5 ft. No drawdown was measured at Wells 8 and 9, which are located approximately 1,300 ft and 1,800 ft, respectively, across bedding strike. Based on the aerial pattern of drawdown, the cone of depression from the pumping test was typically elongate along bedding strike.

A significant 0.9-inch rainfall event occurred during the pumping test.

Coordination. Commission staff has coordinated with the Pennsylvania Department of Environmental Protection (PADEP) Northcentral Region Office (NCRO) during review of the project. PADEP staff has reviewed this docket for consistency with its requirements.

Findings

The project is subject to Commission approval and reporting requirements, as per Commission Regulation §803.43.

Commission staff reviewed the groundwater availability analysis, pumping test results, and supporting information submitted by the project sponsor. Commission staff finds that the 0.9-inch rainfall event did not adversely affect the results of the pumping test.

Pumping test results indicate that Well 11 draws water from a highly transmissive, anisotropic, fractured carbonate-rock aquifer that has greatest transmissivity along bedding strike. As a result, the greatest drawdown from pumping of Well 11 will occur to the northeast and southwest of Well 11. Commission staff has concluded that the proposed groundwater withdrawal is not likely to have a significant adverse impact on water supply wells in the area, cause adverse lowering of groundwater levels, permanent loss of storage capacity, water quality degradation, or a substantial adverse impact on the low flow of streams.

Therefore, Commission staff recommends approval of a 30-day average withdrawal of 0.500 mgd from Well 11, and a total system 30-day average withdrawal of 0.635 mgd from Wells 8, 9 and 11. Commission staff recommends approval of a peak instantaneous pumping rate of 400 gpm for Well 11.

To protect nearby water users from any adverse impacts to their water supply, Commission staff recommends a year-long period of monitoring of wells that showed drawdown during the pumping test. The project sponsor should submit a plan for the monitoring of the wells along bedding strike to the northeast and southwest of Well 11 for Commission staff's review and approval. The plan should include a schedule for implementation, a description of the proposed monitoring, including a 30-day period prior to the initiation of operation of Well 11 and the time spanning the first year of operation of Well 11. At the conclusion of the monitoring period, the project sponsor should supply the results of the monitoring to the Commission in a written report including the monitoring data in graphical form.

The project is subject to the Commission's water conservation requirements, as per Commission Regulation §804.20(a). The water system is 100 percent metered except for a bulk water sale to another water supplier. The water system has unaccounted-for water loss of greater than 20 percent, which exceeds the maximum specified in Commission Regulation §804.20(a) (1). Commission staff recommends that the project sponsor achieve 100 percent compliance with the requirements by December 15, 2009. The project sponsor should report to the Commission annually on the progress made pursuant to this requirement, and must petition the Commission for an extension should unforeseen events occur that preclude compliance with the December 15, 2009 deadline.

The project sponsor has paid the appropriate application fee in accordance with Commission Regulation §803.28, and in accordance with Commission Resolution 98-19, as amended by Commission Resolution 2000-06. The project sponsor has 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.

Decision

The foregoing findings are hereby adopted and shall be incorporated into and made a part of this decision. The project's groundwater withdrawal of 0.500 mgd (30-day average) from Well 11, and a total system withdrawal limit of 0.635 mgd (30-day average) from Wells 8, 9, and 11 are approved pursuant to Article 3, Section 3.10 of the Compact, subject to the following conditions:

a. The project sponsor shall comply with all Commission regulations, including groundwater withdrawal reporting requirements, as per Commission Regulation §803.43.

b. Except as superceded by condition "e" below, the project sponsor shall keep daily records of the metered withdrawal and weekly water levels from Wells 8, 9 and 11. The required reporting data shall be submitted to the Commission annually, and as otherwise required. Monitoring reports are due within sixty (60) days after the close of the preceding year. The project sponsor shall install meters, accurate to within five (5) percent, on Wells 8, 9, and 11.

The Commission reserves the right to inspect all measurement equipment and audit all measurement records.

c. The maximum instantaneous rate of production from Well 11 shall not exceed 400 gpm.

d. The project sponsor shall comply with the water conservation requirements specified in Commission Regulation §804.20(a). The project sponsor shall have installed the necessary meters and reduced unaccounted-for water to achieve 100 percent compliance with the requirements by December 15, 2009. The project sponsor shall report to the Commission annually on the progress made pursuant to this requirement. The project sponsor must petition the Commission for an extension should unforeseen events occur that preclude compliance with the December 15, 2009 deadline.

e. Within sixty (60) days from the date of this approval, the project sponsor shall submit a plan for the monitoring of nearby wells along bedding strike to the northeast and southwest of Well 11 for Commission staff's review and approval. This plan shall include a schedule for implementation of the plan, and a description of the proposed monitoring parameters including locations or stations, instrumentation, and measurement frequency. The overall monitoring period shall include a 30-day period prior to the initiation of operation of Well 11, and the period spanning the first year of operation of Well 11. Upon approval of the monitoring plan, the project sponsor shall implement the monitoring plan and, at the conclusion of the monitoring period, supply the results of the monitoring to the Commission. The monitoring results shall be documented in an interpretive report, including the monitoring data in graphical form, due sixty (60) days after the one-year monitoring period, or otherwise as directed by Commission staff. Should the monitoring prove to be inconclusive with respect to interference, the Commission reserves the right to require additional monitoring, as necessary.

f. If the Commission determines that the operation of the project's groundwater withdrawal adversely affects any existing groundwater or surface-water withdrawal, the project sponsor shall be required to provide, at its expense, an alternate water supply or other mitigating measure.

g. Commission approval shall not be construed to exempt the project sponsor 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 project sponsor fails to obtain or maintain such approvals.

h. The Commission reserves the right to inspect or investigate the project facility, and the project sponsor shall allow authorized employees or agents of the Commission, without advance notice or a search warrant, at any reasonable time and upon presentation of appropriate credentials, and without delay, to have access to and to inspect all areas where the project is being constructed, operated, or maintained. Such employees or agents shall be authorized to conduct tests or sampling, to take photographs, to perform measurements, surveys, and other tests, to inspect the methods of construction, operation, or maintenance, to inspect all

measurement equipment, to audit, examine, and copy books, papers, and records pertinent to any matter under investigation, and to take any other action necessary to assure that the project is constructed, operated, or maintained in accordance with the terms and conditions of this approval or any other rule, regulation, or order of the Commission.

i. If the project sponsor fails to comply with the provisions of the Compact or any rule, regulation or order of the Commission, or any term or condition of this docket, the Commission may suspend, modify, or revoke its approval of same, and may impose appropriate fines and penalties. Upon written notice by the Commission, the project sponsor shall have thirty (30) days to correct such noncompliance, unless an alternate period is specified in the notice. 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, or from imposing fines and penalties, regardless of the period of noncompliance.

j. The Commission reserves the right to reopen any project docket or issue such additional orders, as may be necessary, to mitigate or avoid adverse impacts or otherwise to protect public health, safety, welfare, or the environment.

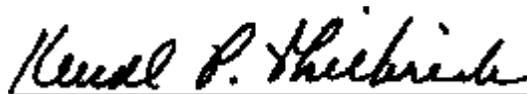
k. Commission approval confers no property rights upon the project sponsor. The securing of all rights necessary and incident to the project sponsor's development and operation of the project shall be the sole and exclusive responsibility of the project sponsor, and this approval shall be subject thereto.

l. This approval is effective until December 15, 2029. The project sponsor shall submit a renewal application by June 15, 2029, and obtain Commission approval prior to continuing operation beyond December 15, 2029.

m. The project sponsor has a period of three (3) years from the date of this approval to initiate the project or such approval will automatically expire, unless an extension is requested by the project sponsor and approved by the Commission. Likewise, if the project is discontinued for such a time and under such circumstances that an abandonment of the project may be reasonably inferred, the Commission may rescind the approval of the project unless a renewal is requested by the project sponsor and approved by the Commission.

By the Commission:

Dated: December 15, 2004



Kendl P. Philbrick, Chair
Maryland Commissioner



SUSQUEHANNA RIVER BASIN COMMISSION

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Docket No. 20041205

Approval Date: December 15, 2004

HEGINS-HUBLEY AUTHORITY

Groundwater Withdrawal (30-Day Average) of 0.100 mgd from Well 7
for Public Water Supply,
Hubley Township, Schuylkill 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, 84 Stat. 1509 et seq., and Commission Regulations §803.4, relating to projects requiring review and approval, and §803.43, relating to groundwater withdrawals. The Commission received the application April 30, 2004.

Description

Purpose. The purpose of the application is to request approval for the withdrawal of groundwater for distribution in a public water supply system.

Location. The project is located in the Lower Susquehanna Subbasin, HUC 02050301, Mahantango Creek Watershed, Hubley Township, Schuylkill County, Pennsylvania.

Project Features. The project sponsor has requested approval for the withdrawal (30-day average) of 0.100 million gallons per day (mgd) from Well 7, which also is known as the "Krammes Test Well 1." The well will be used as a source for the public water supply system that currently relies on Wells 1, 2, 3, 5 and 6; and Spring 1, which are clustered approximately 5 miles to the east-northeast of Well 7.

Well 7 is located at the foot of Bear Mountain, approximately 750 ft south-southeast of PA Route 25, on the south side of Pine Creek, between the villages of Spring Glen and Sacramento.

Well 7 is an open-rock, 8-inch-diameter well, drilled to a total depth of 601 ft and constructed with 8-inch-diameter casing to a depth of 80 ft. Well 7 is completed in interbedded sandstone, shale and siltstone of the Mauch Chunk Formation. Major yielding zones in the well occur at 95-130 ft, 392-397 ft, and 509-514 ft.

Current average daily water demand for the system is 0.215 mgd with a maximum daily demand of 0.448 mgd. By 2029 the average and peak daily demands are expected to grow to 0.569 and 0.854 mgd, respectively.

Pumping Tests. A 74-hour constant-rate pumping test of Well 7 was conducted on November, 1-4, 2003, with prior Commission approval. In addition to the pumping well, three observation wells (including two residential wells) were monitored. The residential wells are located approximately 800 ft and 900 ft west of Well 7, approximately along bedding strike. In addition to Pine Creek, two small unnamed tributaries to Pine Creek, and the channel below the “Western Spring” were monitored during the testing. Shallow groundwater was monitored using four piezometers installed up-dip of Well 7 along Pine Creek. Piezometers 2, 3, and 4 were screened in fine-textured residuum or alluvium and penetrated the top of bedrock (shale). Piezometer 1 was screened in the shallower, sandy, more permeable alluvium.

Pumping at an average rate of 150 gallons per minute (gpm), drawdown at the pumping well was approximately 55.2 ft at the end of the 74-hr test. End-of-test drawdown was approximately 10.5 ft, and 6.5 ft at the two residential wells. No change in flow was observed on the small tributary streams, the western spring, or the Pine Creek monitoring points. No drawdown occurred in Piezometer 1, which was screened across shallow, permeable alluvium. Drawdown in the range of 0.26 ft to 0.4 ft was measured along Pine Creek at Piezometers 2, 3, and 4, which were screened across the top of bedrock.

Coordination. Commission staff has coordinated with the Pennsylvania Department of Environmental Protection (PADEP) Northeast Region Office (NERO) during review of the project. PADEP staff has reviewed this docket for consistency with its requirements.

Findings

The project is subject to Commission approval and reporting requirements, as per Commission Regulation §803.43.

Pumping test results and geologic data on the well indicate that Well 7 draws water from a moderately transmissive fractured-rock aquifer. A “recharge-type boundary” (change to a lesser drawdown trend) was observed in the time-drawdown data from the pumping well. This boundary response, combined with the drawdown observed in the three piezometers installed along Pine Creek, suggests that Well 7 has potential to induce surface-water infiltration. The quantity of any induced infiltration during the test was not sufficiently large to measurably change flow or stage in any of the surface-water monitoring points. Commission staff recommends that two piezometers be installed at shallow depths in the alluvium along Pine Creek, adjacent to two of the deeper piezometers that showed drawdown during the test. The water levels in these two new piezometers should be monitored hourly for the first year of operation of Well 7 in order to determine if there is any significant adverse long-term impact to surface water. The project sponsor agrees with this recommendation.

Commission staff recommends approval of a 30-day average withdrawal of 0.100 mgd from Well 7. Commission staff recommends approval of a peak instantaneous pumping rate of 150 gpm for Well 7.

Commission staff reviewed the groundwater availability analysis and supporting information submitted by the project sponsor. Based on the results of the pumping test and the groundwater availability analysis, Commission staff has concluded that the groundwater withdrawal should not have a significant impact on most private water supplies in the area.

However, Commission staff recommends that the project sponsor monitor the two residential wells that exhibited draw down during the pumping test during the first year of operation of Well 7. The project sponsor has agreed to monitor these wells hourly, and submit the results of the monitoring to Commission staff after the first year of operation. If pumping Well 7 adversely affects these uses or any other withdrawal, the project sponsor will be required to provide an alternate water supply, reduce its withdrawal or take other mitigation measures.

The project is subject to the Commission's water conservation requirements, as per Commission Regulation §804.20(a). The water system is 100 percent metered, which is in compliance with this regulation, and system losses are less than the 20 percent maximum set forth in Commission Regulation §804.20(a)(1).

The project sponsor has paid the appropriate application fee in accordance with Commission Regulation §803.28, and in accordance with Commission Resolution 98-19, as amended by Commission Resolution 2000-06. The project sponsor has 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.

Decision

The foregoing findings are hereby adopted and shall be incorporated into and made a part of this decision. The project's groundwater withdrawal of 0.100 mgd (30-day average) from Well 7 is approved pursuant to Article 3, Section 3.10 of the Compact, subject to the following conditions:

a. The project sponsor shall comply with all Commission regulations, including groundwater withdrawal reporting requirements, as per Commission Regulation §803.43.

b. The project sponsor shall keep daily records of the metered withdrawal and weekly water levels in Well 7. The required reporting data shall be submitted to the Commission quarterly, and as otherwise required. Quarterly monitoring reports are due within thirty (30) days after the close of the preceding quarter. The project sponsor shall install a meter, accurate to within five (5) percent, on Well 7. The Commission reserves the right to inspect all measurement equipment and audit all measurement records.

c. The maximum instantaneous rate of production from Well 7 shall not exceed 150 gpm.

d. The project sponsor shall install two piezometers in the shallow alluvium along Pine Creek, adjacent to existing Piezometers 2 and 4, and monitor the water levels in these piezometers hourly for the first year of operation of Well 7. The monitoring data shall be submitted to the Commission in digital and graphical form within 60 days of the conclusion of the monitoring period, or as otherwise required.

e. The project sponsor shall monitor the water levels hourly in the two residential wells that were monitored during the pumping test for the first year of operation of Well 7. The monitoring data shall be submitted to the commission in digital and graphical form within 60 days of the conclusion of the monitoring period, or as otherwise required.

f. The project sponsor shall comply with the water conservation requirements specified in Commission Regulation §804.20(a).

g. If the Commission determines that the operation of the project's groundwater withdrawal from Well 7 adversely affects any existing groundwater or surface water withdrawal, the project sponsor shall be required to provide, at its expense, an alternate water supply or take other mitigating measures.

h. Commission approval shall not be construed to exempt the project sponsor 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 project sponsor fails to obtain or maintain such approvals.

i. The Commission reserves the right to inspect or investigate the project facility, and the project sponsor shall allow authorized employees or agents of the Commission, without advance notice or a search warrant, at any reasonable time and upon presentation of appropriate credentials, and without delay, to have access to and to inspect all areas where the project is being constructed, operated, or maintained. Such employees or agents shall be authorized to conduct tests or sampling, to take photographs, to perform measurements, surveys, and other tests, to inspect the methods of construction, operation, or maintenance, to inspect all measurement equipment, to audit, examine, and copy books, papers, and records pertinent to any matter under investigation, and to take any other action necessary to assure that the project is constructed, operated, or maintained in accordance with the terms and conditions of this approval or any other rule, regulation, or order of the Commission.

j. If the project sponsor fails to comply with the provisions of the Compact or any rule, regulation or order of the Commission, or any term or condition of this docket, the Commission may suspend, modify, or revoke its approval of same, and may impose appropriate fines and penalties. Upon written notice by the Commission, the project sponsor shall have thirty (30) days to correct such noncompliance, unless an alternate period is specified in the notice. 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, or from imposing fines and penalties, regardless of the period of noncompliance.

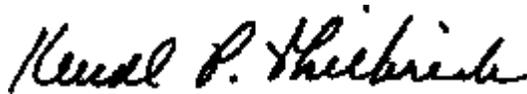
k. The Commission reserves the right to reopen any project docket or issue such additional orders, as may be necessary, to mitigate or avoid adverse impacts or otherwise to protect public health, safety, welfare, or the environment.

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

m. This approval is effective until December 15, 2029. The project sponsor shall submit a renewal application by June 15, 2029, and obtain Commission approval prior to continuing operation beyond December 15, 2029.

n. The project sponsor has a period of three (3) years from the date of this approval to initiate the project or such approval will automatically expire, unless an extension is requested by the project sponsor and approved by the Commission. Likewise, if the project is discontinued for such a time and under such circumstances that an abandonment of the project may be reasonably inferred, the Commission may rescind the approval of the project unless a renewal is requested by the project sponsor and approved by the Commission.

By the Commission:



Dated: December 15, 2004

Kendl P. Philbrick, Chair
Maryland Commissioner



SUSQUEHANNA RIVER BASIN COMMISSION

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Docket No. 20041206

Approval Date: December 15, 2004

CARMEUSE LIME, INC.

Consumptive Water Use of Up to 0.100 mgd
for Manufacture of Lime Products,

North Londonderry and South Annville Townships, Lebanon 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, 84 Stat. 1509 et seq., 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 original application from Pennsylvania Lime, Inc. (currently operating as Carmeuse Lime, Inc.) on July 2, 2001. The Commission received an updated application from the project sponsor on September 22, 2004.

Description

Purpose. The purpose of the application is to request approval for the consumptive use of water associated with the manufacture of lime products.

Location. The project is located in the Lower Susquehanna Subbasin, HUC 02050305, Swatara Creek Watershed, North Londonderry, and South Annville Townships, Lebanon County, Pennsylvania.

Project Features. The project sponsor has requested approval for the consumptive use of water of up to 0.100 million gallons per day (mgd). Based on water use data from January 2001 through September 2004 submitted by the project sponsor, Commission staff calculates the project's current maximum average 30-day consumptive water use to be approximately 0.080 mgd, and current peak-day consumptive water use to be approximately 0.091 mgd.

The original application submitted to the Commission by the project sponsor included all quarrying and lime production operations on the property. In December 2001, Pennsy Supply, Inc. (Pennsy) purchased the property from the project sponsor and has operated the quarry since that time. The project sponsor leases a portion of the property from Pennsy, and continues to operate the lime production plant located on the property. The limestone used for the production of lime products is processed and supplied by Pennsy. The lime plant has been in operation since approximately the 1930s.

The project sponsor manufactures high calcium lime, dolomitic lime, and hydrated lime. Crushed stone is conveyed to the lime plant and heated in one of the project's five gas-fired rotary kilns (Kilns 1 through 5), which results in the conversion of the limestone to lime. Depending on the type and grade of the stone, either high calcium lime or dolomitic lime is produced. A portion of the lime that is produced is sent to a separate hydrate plant for further processing.

Water for the project is withdrawn from the quarry reservoir located north of the lime plant. The water level is maintained in the reservoir by Pennsy's quarry dewatering activities. Water is withdrawn and consumptively used for hydrated lime production, contact cooling of air released from Kiln 5, and truck washing. Water also is used for once-through noncontact process cooling and sanitary purposes at the lime plant. The withdrawal from the reservoir is not metered.

Water supplied to the hydrated lime plant is reacted completely with lime to produce dry hydrated lime. The project sponsor meters the instantaneous water flow (gallons per minute) into the plant, and adjusts this rate of flow, as needed, based on the volumetric feed rate of the lime entering the plant. The total water used for the manufacture of hydrated lime currently is not metered with a totalizing flow meter.

A cooling tower is utilized to remove particulate matter and to provide contact cooling of the air emissions from Kiln 5, prior to being exhausted to a bag house for the removal of pollutants. Water supplied to the cooling tower is distributed through spray diffusers inside the cooling tower and applied to the air. Water supplied to the cooling tower is not metered.

The project sponsor operates a truck wash station to remove any lime from the loaded trucks prior to leaving the lime plant. Runoff from the truck washing operation is partially captured by a catch basin and conveyed to an on-site stormwater detention pond, and discharged to one of Pennsy's sediment ponds. The water used for truck washing is not metered.

Water cycled through the once-through noncontact cooling system is discharged through an unmetered outfall to one of Pennsy's sediment ponds.

Sanitary wastewater from the lime plant is discharged to an on-lot septic system.

Findings

The project is subject to Commission approval and reporting requirements, as per Commission Regulation §803.42.

All water used for hydrated lime production, contact cooling and environmental controls of the air emissions from Kiln 5, and evaporated from the truck washing operation, is considered to be used consumptively. Commission staff recommends that the project's total daily consumptive water use be calculated by summing the daily consumptive water use from these categories of use.

All water supplied to the cooling tower at Kiln 5 is evaporated, therefore Commission staff recommends that the project sponsor install a meter to measure the daily quantity of water supplied to the cooling tower. The project sponsor may propose an alternative to metering for the Commission staff's review and approval.

A second cooling tower exists at the lime plant, through which emissions from Kilns 1 through 4 are exhausted. However, the project sponsor currently does not operate this cooling tower. Commission staff recommends that the project sponsor apply for Commission approval prior to resuming use of the cooling tower.

Water supplied to the hydrated lime plant is reacted completely with lime. Commission staff finds that all water supplied to the hydrated lime plant is consumptively used, and recommends that the project sponsor install a meter to measure the daily quantity of water used for the production of hydrated lime.

The project sponsor operates a truck wash station to remove any lime from the trucks after being loaded with lime and prior to leaving the site. The total quantity of water used for truck washing, minus the quantity of water collected and discharged to the stormwater detention pond, is the quantity of water consumptively used through evaporation from the truck washing operation. Commission staff recommends that the project sponsor install meters to measure the daily quantity of water entering and leaving the truck wash station. The project sponsor may propose an alternative to metering to quantify the consumptive water use for Commission staff's review and approval.

The project sponsor has requested a consumptive water use approval of up to 0.100 mgd. Based on an analysis of water use records supplied by the project sponsor, Commission staff is recommending approval of the requested amount, which represents an increase of approximately 10 percent above the current estimated peak-day use of 0.091 mgd. This will allow for an anticipated increase in water usage over the 25-year duration of this approval. Should the project's future consumptive water use exceed or be expected to exceed 0.100 mgd, the project sponsor must apply for a modification to this docket at that time.

Commission staff and the project sponsor have agreed to a pre-1971 consumptive water use of 6,000 gallons per day (gpd) for the project and, for purposes of this docket, this quantity of water is considered "grandfathered," and is exempt from water 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 project sponsor proposes to make quarterly payments to the Commission in-lieu-of providing actual compensation water.

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

The project sponsor has paid the appropriate application fee, in accordance with Commission Regulation §803.28, and in accordance with Commission Resolution 98-19, as

amended by Commission Resolution 2000-06. The project sponsor has 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 project sponsor is eligible to participate in the Commission's Compliance Incentive Program (CIP). Therefore, the project sponsor would not be subject to penalties for water consumed in violation of Commission Regulation §803.42 prior to January 1, 2001. In accordance with the CIP, payment to the Commission 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.

Decision

The foregoing findings are hereby adopted and shall be incorporated into and made a part of this decision. The project's consumptive water use of up to 0.100 mgd is approved pursuant to Article 3, Section 3.10 of the Compact subject to the following conditions:

a. The project sponsor shall comply with all Commission regulations, including consumptive water use reporting requirements, as per Commission Regulation §803.42.

b. Within sixty (60) days from the date of this approval, the project sponsor shall install and then maintain meters, accurate to within five (5) percent, to measure the daily quantity of water used for hydrated lime production, the daily quantity of water used for contact cooling and environmental controls of the air emissions at the cooling tower at Kiln 5, and the daily quantity of water entering and leaving the truck wash station. The project sponsor may propose an alternative to metering to quantify the consumptive water use for Commission staff's review and approval.

c. The project sponsor shall keep daily records of the project's consumptive water use, and shall report the data to the Commission quarterly, and as otherwise required. Quarterly monitoring reports are due within thirty (30) days after the close of the preceding quarter. The daily quantity of water consumptively used shall be the quantity of water used for hydrated lime production, contact cooling and environmental controls of the air emissions from Kiln 5, and evaporated from the truck washing operation. The Commission reserves the right to inspect all measurement equipment and audit all measurement records.

d. To satisfy the Commission's current compensation requirements for consumptive water use set forth in Commission Regulation §803.42, the project sponsor shall make quarterly payments to the Commission based on the rate of \$0.14 per 1,000 gallons of water consumptively used by the project in excess of the grandfathered quantity. The daily quantity of water consumptively used shall be the quantity of water used for hydrated lime production,

contact cooling and environmental controls of the air emissions from Kiln 5, and evaporated from the truck washing operation. Payment amounts shall be calculated by applying this rate to the daily amount of water used consumptively by the project, less the grandfathered quantity of 0.006 mgd. If the daily grandfathered quantity exceeds the project's daily consumptive water use, that day's consumptive water use is considered to be zero. Quarterly payments are due and payable within thirty (30) days after the close of the preceding quarter. The rate of payment, after appropriate notice to consumptive users of water using this method of compliance, is subject to change at the Commission's discretion.

e. The project sponsor shall comply with the water conservation requirements specified in Commission Regulation §804.20(b).

f. The project sponsor shall apply for Commission approval prior to resuming use of the existing cooling tower at the lime plant, through which emissions from Kilns 1 through 4 are exhausted.

g. The project sponsor is eligible to participate in the Commission's Compliance Incentive Program (CIP). Therefore, the project sponsor is not subject to penalties for its prior noncompliance. In accordance with the CIP, payment to the Commission as a method of compensation for the project's consumptive water use shall be effective and applicable to all water consumptively used by the project beginning January 1, 2001. The project sponsor shall provide records of its consumptive water use and make a payment to the Commission based on the rate of \$0.14 per 1,000 gallons of water consumptively used in excess of the grandfathered quantity of 0.006 mgd during the period from January 1, 2001, until the effective date of this approval. This payment shall be calculated and included in the first quarterly payment made by the project sponsor in accordance with the requirements of condition (d) above.

h. Commission approval shall not be construed to exempt the project sponsor 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 project sponsor fails to obtain or maintain such approvals.

i. The Commission reserves the right to inspect or investigate the project facility, and the project sponsor shall allow authorized employees or agents of the Commission, without advance notice or a search warrant, at any reasonable time and upon presentation of appropriate credentials, and without delay, to have access to and to inspect all areas where the project is being constructed, operated, or maintained. Such employees or agents shall be authorized to conduct tests or sampling, to take photographs, to perform measurements, surveys, and other tests, to inspect the methods of construction, operation, or maintenance, to inspect all measurement equipment, to audit, examine, and copy books, papers, and records pertinent to any matter under investigation, and to take any other action necessary to assure that the project is constructed, operated, or maintained in accordance with the terms and conditions of this approval or any other rule, regulation, or order of the Commission.

j. If the project sponsor fails to comply with the provisions of the Compact or any rule, regulation or order of the Commission, or any term or condition of this docket, the Commission may suspend, modify, or revoke its approval of same, and may impose appropriate fines and penalties. Upon written notice by the Commission, the project sponsor shall have thirty (30) days to correct such noncompliance, unless an alternate period is specified in the notice. 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, or from imposing fines and penalties, regardless of the period of noncompliance.

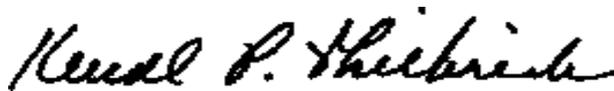
k. The Commission reserves the right to reopen any project docket or issue such additional orders, as may be necessary, to mitigate or avoid adverse impacts or otherwise to protect public health, safety, welfare, or the environment.

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

m. This approval is effective until December 15, 2029. The project sponsor shall submit a renewal application by June 15, 2029, and obtain Commission approval prior to continuing operation beyond December 15, 2029.

n. 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 project sponsor and approved by the Commission.

By the Commission:



Kendal P. Philbrick, Chair
Maryland Commissioner

Dated: December 15, 2004



SUSQUEHANNA RIVER BASIN COMMISSION

1721 North Front Street • Harrisburg, Pennsylvania 17102-2391

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Docket No. 20041207

Approval Date: December 15, 2004

HERSHEY ENTERTAINMENT & RESORTS COMPANY ENTERTAINMENT GROUP—HERSHEYPARK SPORTS AND ENTERTAINMENT COMPLEX

Groundwater Withdrawal (30-Day average) of 0.350 mgd from Four Wells, and
Consumptive Water Use of up to 0.237 mgd, for Amusement Park and Entertainment
Operations, Derry Township, 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, 84 Stat. 1509 et seq., and Commission Regulations §803.4, relating to projects requiring review and approval, §803.42, relating to the consumptive use of water, and §803.43, relating to groundwater withdrawals. The Commission received the applications on June 29, 2001.

Description

Purpose. The purpose of the application is to request approval for the withdrawal of groundwater and consumptive use of water associated with amusement park and other entertainment operations.

Location. The project is located in the Lower Susquehanna Subbasin, HUC 02050305, Spring Creek Watershed, Derry Township, Dauphin County, Pennsylvania.

Project Features. The project sponsor has requested approval for the withdrawal (30-day average) of 0.350 million gallons per day (mgd) from four wells and the consumptive use of water of up to 0.237 mgd. The project sponsor calculates the maximum 30-day average withdrawal from the wells to be 0.350 mgd and a peak day of 0.888 mgd. Based on submitted data, Commission staff calculates the project's peak day consumptive water use to be 0.237 mgd and the maximum 30-day average consumptive water use to be 0.237 mgd.

Hersheypark Sports and Entertainment Complex (HPSEC), recently formed during a reorganization of the corporate structure, is owned and operated by Hershey Entertainment and Resorts Company (HERCO). HPSEC features two multipurpose arenas (Hersheypark Arena and the Giant Center), Hersheypark stadium, and Hersheypark, which has over sixty amusement rides and attractions. Seven of the amusement rides in Hersheypark are water attractions.

HPSEC opened as a picnic grove in 1907, for the employees of Milton S. Hershey. Through the years, the area developed into a community recreation area with a swimming pool and amusements. Present day operations began in 1972 when Hersheypark became a one-price admission entertainment facility.

HPSEC consumes water in a variety of ways to support its day-to-day operations. During the operating season, the water attractions at Hersheypark consume water by surface evaporation, splash out, and “walk away” water (water carried away from the attraction by wet patrons). The impervious area of the amusement park (approximately 16 acres) is washed by hose on a daily basis, a practice known as “wash-down.” The two arenas have ice surfaces and cold storage that utilize evaporative refrigeration, and the Giant Center has air conditioning that utilizes evaporative cooling. HPSEC irrigates approximately 2.5 acres of lawn and other landscaping, and hand-waters a large number of ornamental planters and flowerpots, as necessary. HPSEC also provides water for plant watering to Hershey Nursery, which is owned and operated by HERCO, and Hershey Gardens, a neighboring facility not owned and operated by HERCO.

HPSEC is supplied water in two ways; public water supply and wells. Pennsylvania American Water Company supplies potable water to HPSEC for sanitary purposes and evaporative cooling at the Giant Center. Four wells supply non-potable water to a distribution system supporting all other operations, including Hershey Nursery. All of the sources are metered.

All wastewater generated at HPSEC is discharged via metered outfalls to the sanitary sewer system owned and operated by Derry Township Municipal Authority.

The four wells are located within the boundaries of Hersheypark, and three of the wells are adjacent to Spring Creek. All of the wells penetrate interbedded limestone and dolomite of Ordovician-age Ontelaunee Formation, although Well 1 (Rhineland) also may penetrate interbedded limestone and dolomite of Ordovician-age Epler Formation. Available data on the wells is summarized in the following table:

WELL DESIGNATION	YEAR DRILLED	CASING DEPTH/ DIAMETER	OPEN-ROCK BOREHOLE DIAMETER & INTERVAL	PUMP CAPACITY
WELL 1 (RHINELAND)	1942; Reconstructed 1963	56 ft/ 10 inches	10-inch dia. from 56 ft to 108 ft; 8-inch dia. from 108 ft to 269 ft	500 gpm
WELL 2 (FLUME RIDE)	1977	48 ft/ 8 inches	8-inch dia. From 48 ft to 190 ft	150 gpm
WELL 3 (TRAILBLAZER)	1988	67 ft/ 8 inches	8-inch dia. From 67 ft to 303 ft	640 gpm
WELL 4 (CANYON RIVER)	1988	110 ft/ 10 inches	Open interval 110 ft to 325 ft; Diameter not reported	15 gpm

Pumping Tests. The project sponsor requests that the Commission waive its testing requirements for Wells 1, 2, 3, and 4. In support of that request, the project sponsor submitted historic pumping test data for Well 1 (Rhineland) and Well 3 (Trailblazer). No pumping test data are available for Well 2 (Flume Ride) or Well 4 (Canyon River).

The project sponsor conducted another pumping test of Well 3 (Trailblazer) in April 2004, but without prior Commission approval. The Trailblazer Well was pumped at an average pumping rate of 563 gpm for 48 hours. Drawdown in Well 3 at the end of the test was 26.8 ft, for a 48-hour specific capacity of 21 gpm/ft. Monitoring points for the pumping test included four (4) other wells within Hersheypark, and stage monitoring points on the Air Park Pond and on Spring Creek.

Findings

The project is subject to Commission approval and reporting requirements, as per Commission Regulations §803.42 and §803.43.

All water evaporated directly from the water attractions, splashed out of the water rides and evaporated, leaving the park as walk away water, evaporated as a result of sanitary wash-down, evaporated through refrigeration for arena ice and cold storage, used for evaporative cooling, and irrigated to maintain lawns, gardens and ornamental plantings, is considered to be consumptively used. Commission staff recommends that the project's total daily consumptive water use be calculated as the total daily withdrawal from the four wells minus metered discharges from the non-potable water distribution system, minus the grandfathered quantity, plus the metered inflow minus outflow for the evaporative cooling system at the Giant Center.

Commission staff recommends HPSEC submit a metering and monitoring plan for staff approval detailing all meter locations being used to quantify consumptive water use, including those locations where additional metering is required to adequately quantify consumptive water use.

The project sponsor has requested a peak day consumptive water use approval of up to 0.237 mgd. Based on an analysis of water use records supplied by the project sponsor, Commission staff is recommending approval of the requested amount, which equals the current estimated peak-day use. Should the project's future consumptive water use exceed or be expected to exceed 0.237 mgd, the project sponsor must apply for a modification to this docket at that time.

The facility began present day operations in 1972. Commission staff has determined that the pre-1971 consumptive water use by the project sponsor is 0.005 mgd and, for purposes of this docket, this quantity of water 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 project sponsor proposes to make quarterly payments to the Commission in-lieu-of providing actual compensation water. The payment will be based on the sum of daily withdrawals from the wells minus metered discharges plus the metered difference of inflow and outflow to the evaporative cooling system at the Giant Center, minus the grandfathered quantity

of 0.005 mgd. If the daily grandfathered quantity exceeds the project's calculated consumptive water use, that day's consumptive water use is considered to be zero.

Commission staff reviewed the groundwater availability analysis, pumping test results, and supporting information submitted by the project sponsor. The pumping test data on file were reviewed considering the withdrawal amounts and staff finds that no substantial draw downs would occur in any of the on-site monitoring wells. The area surrounding the production wells is supplied by public water supply. Thus, there are no potentially impacted off-site wells.

Pumping test results indicate that the wells are situated in a highly productive karst aquifer. Drawdown during the 2004 pumping test of Well 3 (Trailblazer) occurred in 1 of the 4 observation wells. Approximately 1 ft of drawdown was measured at Well 1 (Rhineland), located approximately 970 ft to the southwest of the Well 3, generally along the strike of bedding. No drawdown was measured in the 3 observation wells located across bedding strike from the Well 3. Significant temperature fluctuations in the discharge water at the pumping well correlated to temperature fluctuations in Spring Creek, suggesting induced infiltration from the creek. The likelihood of induced infiltration appears to be confirmed by a recharge-type-boundary response during the pumping test and during a preliminary step test of the well.

Commission staff has concluded that the current groundwater withdrawal is likely to adversely impact Spring Creek but is not currently having a significant adverse impact on private water supply wells in the area. Commission staff recommends approval of a 30-day average withdrawal of 0.350 mgd from the all of the wells. Should the project's future withdrawal exceed or be expected to exceed 0.350 mgd, the project sponsor must apply for a modification to this docket at that time.

The highly productive karst aquifer also is highly developed. Commission staff is concerned about the potential for geologic hazards related to long-term withdrawal of groundwater from these geologic formations. The lowering of groundwater levels locally can remove buoyant support from overlying silts and clays that fill voids in the limestone. This can lead to formation of sinkholes within the cone of depression formed by pumping and could cause significant risk to any facilities located in the immediate vicinity of these wells. Additionally, any sinkholes that form close to the streams or ponds could pose a risk to public safety in an entertainment complex or lead to loss of downstream flow until the sinkhole is repaired.

In order to ensure that there will be no adverse lowering of the local water table in the future and that the resource is sufficient to support HERCO's development plans on a sustainable basis, staff recommends that the project submit a water resource development plan. The work plan for the water resources development plan should be submitted for Commission staff's review within sixty (60) days of the date of this approval.

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

The applicant has paid the appropriate application fee in accordance with Commission Regulation §803.28 and in accordance with Commission Resolution 98-19, as amended by

Commission Resolution 2000-06. The applicant has provided all proofs of notification as called for in 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 project sponsor is eligible to participate in the Commission's Compliance Incentive Program (CIP). Therefore, the project sponsor would not be subject to penalties for water withdrawn and consumed in violation of Commission Regulations §803.42 and §803.43 prior to January 1, 2001. In accordance with the CIP, payment to the Commission 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.

Decision

The foregoing findings are hereby adopted and shall be incorporated into and made a part of this decision. The project's groundwater withdrawal of 0.350 mgd (30-day average) from Wells 1, 2, 3, and 4 and the consumptive use of water of up to 0.237 mgd are approved pursuant to Article 3, Section 3.10 of the Compact subject to the following conditions:

a. The project sponsor shall comply with all Commission regulations, including consumptive water use reporting requirements, as per Commission Regulation §803.42, and groundwater withdrawal reporting requirements, as per Commission Regulation §803.43.

b. The project sponsor shall keep daily records of the project's consumptive water use, and shall report the data to the Commission quarterly, and as otherwise required. Quarterly monitoring reports are due within thirty (30) days after the close of the preceding quarter. The daily quantity of water consumptively used shall be the quantity evaporated directly from the water attractions, splashed out of the water attractions and evaporated, leaving the park as walk away water, evaporated as a result of sanitary wash-down, evaporated through refrigeration for arena ice and cold storage, used for evaporative cooling, and irrigated to maintain lawns, gardens and ornamental plantings.

c. Within thirty (30) days from the date of this approval, the project sponsor shall submit a metering and monitoring plan for Commission staff approval detailing all meter locations being used to quantify consumptive water use, including those locations where additional metering is required to adequately quantify consumptive water use. The project sponsor shall install and maintain metering according to the plan, accurate to within five (5) percent. The Commission reserves the right to inspect all measurement equipment and audit all measurement records.

d. The project sponsor shall keep daily records of the metered withdrawal and weekly water levels in Wells 1, 2, 3, and 4. The required reporting data shall be submitted to the

Commission quarterly, and as otherwise required. Quarterly monitoring reports are due within thirty (30) days after the close of the preceding quarter. The project sponsor shall maintain the existing meters, accurate to within five (5) percent, on Wells 1, 2, 3, and 4. The Commission reserves the right to inspect all measurement equipment and audit all measurement records.

e. Within sixty (60) days from the date of this approval, the project sponsor shall submit a plan of study for the water resources development plan to the Commission for staff's review and approval prior to commencing work on the study. The water resources development plan shall be submitted to Commission staff within one year of the date of this approval, and shall assess the sustainability of the resource with respect to future development.

f. To satisfy the Commission's current compensation requirements for consumptive water use set forth in Commission Regulation §803.42, the project sponsor shall make quarterly payments to the Commission based on the rate of \$0.14 per 1,000 gallons of water consumptively used by the project in excess of the grandfathered quantity. The daily quantity of water consumptively used shall be the quantity evaporated directly from the water attractions, splashed out of the water attractions and evaporated, leaving the park as walk away water, evaporated as a result of sanitary wash-down, evaporated through refrigeration for arena ice and cold storage, used for evaporative cooling, and irrigated to maintain lawns, gardens and ornamental plantings. Payment amounts shall be calculated by applying this rate to the daily amount of water used consumptively by the project, less the grandfathered quantity of 0.005 mgd. If the daily grandfathered quantity exceeds the project's daily consumptive water use, that day's consumptive water use is considered to be zero. Quarterly payments are due and payable within thirty (30) days after the close of the preceding quarter. The rate of payment, after appropriate notice to consumptive users of water using this method of compliance, is subject to change at the Commission's discretion.

g. The project sponsor shall comply with the water conservation requirements specified in Commission Regulation §804.20(b).

h. The project sponsor is eligible to participate in the Commission's Compliance Incentive Program (CIP). Therefore, the project sponsor is not subject to penalties for its prior noncompliance. In accordance with the CIP, payment to the Commission as a method of compensation for the project's consumptive water use shall be effective and applicable to all water consumptively used by the project beginning January 1, 2001. The project sponsor shall provide records of its consumptive water use and make a payment to the Commission based on the rate of \$0.14 per 1,000 gallons of water consumptively used in excess of the grandfathered quantity of 0.005 mgd during the period from January 1, 2001, until the effective date of this approval. This payment shall be calculated and included in the first quarterly payment made by the project sponsor in accordance with the requirements of condition (f) above.

i. The constant rate pumping test requirements specified in Commission Regulation §803.43 (b) are hereby waived.

j. If the Commission determines that the operation of the project's groundwater withdrawal adversely affects any existing groundwater or surface water withdrawal, the project

sponsor shall be required to provide, at its expense, an alternate water supply or other mitigating measure.

k. Commission approval shall not be construed to exempt the project sponsor 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 project sponsor fails to obtain or maintain such approvals.

l. The Commission reserves the right to inspect or investigate the project facility, and the project sponsor shall allow authorized employees or agents of the Commission, without advance notice or a search warrant, at any reasonable time and upon presentation of appropriate credentials, and without delay, to have access to and to inspect all areas where the project is being constructed, operated, or maintained. Such employees or agents shall be authorized to conduct tests or sampling, to take photographs, to perform measurements, surveys, and other tests, to inspect the methods of construction, operation, or maintenance, to inspect all measurement equipment, to audit, examine, and copy books, papers, and records pertinent to any matter under investigation, and to take any other action necessary to assure that the project is constructed, operated, or maintained in accordance with the terms and conditions of this approval or any other rule, regulation, or order of the Commission.

m. If the project sponsor fails to comply with the provisions of the Compact or any rule, regulation or order of the Commission, or any term or condition of this docket, the Commission may suspend, modify, or revoke its approval of same, and may impose appropriate fines and penalties. Upon written notice by the Commission, the project sponsor shall have thirty (30) days to correct such noncompliance, unless an alternate period is specified in the notice. 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, or from imposing fines and penalties, regardless of the period of noncompliance.

n. The Commission reserves the right to reopen any project docket or issue such additional orders, as may be necessary, to mitigate or avoid adverse impacts or otherwise to protect public health, safety, welfare, or the environment.

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

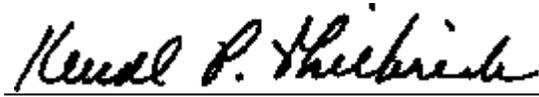
p. This approval is effective until December 15, 2029. The project sponsor shall submit a renewal application by June 15, 2029, and obtain Commission approval prior to continuing operation beyond December 15, 2029.

q. 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 project sponsor and approved by the Commission.

By the Commission:

Dated: December 15, 2004

A handwritten signature in black ink, reading "Kendl P. Philbrick". The signature is written in a cursive style and is positioned above a horizontal line.

Kendl P. Philbrick, Chair
Maryland Commissioner



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Docket No. 20041208

Approval Date: December 15, 2004

WARWICK TOWNSHIP MUNICIPAL AUTHORITY

Groundwater Withdrawal (30-Day Average) of 1.08 mgd from the Bonfield Well,
for Public Water Supply,
Warwick Township, Lancaster 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, 84 Stat. 1509 et seq., and Commission Regulations §803.4, relating to projects requiring review and approval, and §803.43, relating to groundwater withdrawals. The Commission received the application on December 31, 2003.

Description

Purpose. The purpose of the application is to request approval for the withdrawal of groundwater for distribution in a public water supply system.

Location. The project is located in the Lower Susquehanna Subbasin, HUC 02050306, Conestoga River Watershed, Warwick Township, Lancaster County, Pennsylvania.

Project Features. The project sponsor has requested approval for the withdrawal (30 day average) of 1.08 million gallons per day (mgd) from the Bonfield Well. The Warwick Township Municipal Authority (WTMA) has two separate water-supply systems, one supplying the area in and around the Village of Rothsville, and the other supplying the area of Warwick Township contiguous to Lititz Borough. The Commission previously approved the withdrawal from WTMA Well 1 (Rothsville Well), which is the only source in WTMA's Rothsville-area system, in Commission Docket No. 19890103. The WTMA system contiguous to Lititz is an extension of the Lititz Borough Water System by inter-municipal agreement, and that system relies on six wells, designated Lititz Wells 1 through 6, located within the Borough of Lititz. The Bonfield Well, which was first drilled in October 2001 and deepened in September 2002, is intended to supplement the existing water sources of the combined Lititz Borough–WTMA system.

Constructed in September 2002, the Bonfield Well is an open-rock well, 12 inches in diameter from a depth of 165 feet to a depth of 210 feet; 8 inches in diameter from a depth of 210 feet to a depth of 250 feet; and 6 inches in diameter from a depth of 250 feet to a depth of 367 feet. The well has 12-inch-diameter steel casing to a depth of 165 feet and 18-inch-diameter

steel casing to a depth of 80 feet. The well penetrates limestone of the Stonehenge Formation. The primary water bearing zones occur as dissolution zones or weathered zones and are located at 207-210 feet, 213-214 feet, 280-290 feet and 300-310 feet.

The Bonfield Well is located approximately 300 feet east of the eastern boundary of Lititz Borough, and east of an unnamed tributary of Lititz Run. A local name of Moore's Run has been reported for this small stream.

The combined Lititz Borough–WTMA water supply system has an existing average demand of 1.500 mgd and an existing maximum daily demand of 1.875 mgd. The average and maximum daily demands are projected to grow to 3.284 and 4.105 mgd, respectively, by 2025.

Pumping Tests. A 48-hour constant-rate pumping test of the Bonfield well was conducted from July 28, 2003 to July 30, 2003. This pumping test had prior Commission approval. Pumping at an average rate of 750 gallons per minute (gpm) or 1.08 mgd, drawdown at the end of the test at the Bonfield Well was 3.44 feet. Four residential or farm wells, one of which was not in service, a well at the Warwick Township office, two Lititz Borough municipal water-supply wells and three installed or dedicated observation wells, located between approximately 50 feet and 4,725 feet from the Bonfield Well, were monitored during the aquifer test. Streamflow was monitored at two weirs, one on the unnamed tributary of Lititz Run and the second on Lititz Run approximately 4,800 feet southeast of the Bonfield Well and downstream of the confluence of the unnamed tributary stream. A stream-bank piezometer was also installed near the Lititz-Run Weir.

Coordination. Commission staff has coordinated with the PADEP Southcentral Region Office (SCRO) during review of the project. PADEP staff has reviewed this docket for consistency with its requirements.

Findings

The project is subject to Commission approval and reporting requirements, as per Commission Regulation §803.43.

Commission staff reviewed the groundwater availability analysis, pumping test results, and supporting information submitted by the project sponsor. Drawdown at the end of the pumping test was relatively low, and ranged from 0.6 to 1.79 feet in wells within 50 to 1,730 feet of the pumping well. The cone of depression from the test was elliptical to the east-west, generally parallel to bedding strike. During the pumping test, no drawdown was observed at any of the more distant observation wells located 2,200 to 4,725 feet from the pumping well. Using time-drawdown data from the two nearest observation wells, the carbonate aquifer tapped by the Bonfield Well was determined to have a high transmissivity and a storativity in the unconfined-aquifer range.

There was no flow loss attributable to pumping of the Bonfield Well at either stream weir monitored during the pumping test, nor was there any decline in water level at the stream-bank piezometer along Lititz Run. A subtle rise in stream stage and flow occurred at the weir on the

unnamed tributary near the Bonfield Well coincident with the pumping period of the Bonfield Well, although the reason for this rise in stage and flow is unclear.

The unnamed tributary to Lititz Run is influent or losing in the reach near the Bonfield Well. This losing stream reach is apparently natural, as it is coincident with a change from non-carbonate to carbonate bedrock. The stream gains flow across higher, lower permeability shale terrain (Cocalico Formation) and loses flow as it exits the shale terrain and flows across more permeable carbonates in the valley to the east of Lititz. The flow loss also could be induced, in whole or in part, by existing, large withdrawals in the carbonate valley. The project sponsor's consultant documented the loss in flow was over a small reach of the stream. However, reviews and analyses being undertaken in the detailed *Northern Lancaster Water Budget Study*, which is currently underway by the Commission and in which WTMA is an active participant, has documented a loss in flow over a 4,000 feet reach of this stream as well as similar losing reaches of other nearby small streams.

Commission staff reviewed the groundwater availability analysis, pumping test results, and supporting information submitted by the project sponsor. The project sponsor's consultant estimated the groundwater available in this area to be 0.98 mgd in an average year, and 0.59 mgd in a 1-in-10-drought year, based on a surface drainage area to the well of 1.6 square miles. The project sponsor's consultant noted that the probable catchment area of the well is likely more extensive in the carbonate valley based on the extent of the cone of depression from the pumping tests.

Commission staff agrees that the probable recharge area is larger and groundwater availability higher than estimated by the project sponsor's consultant. A draft water table contour map of the Lititz area prepared by Commission staff as part of the on-going *Northern Lancaster County Water Budget Study* indicates that the probable recharge area is several times larger than that delineated by the project sponsor. Recharge to the carbonate valley aquifer also would be augmented by losses from small influent streams exiting the shale terrain on the northern side of the carbonate valley. Commission staff recommends approval of a 30-day average withdrawal of 1.08 mgd from the Bonfield Well. Commission staff recommends approval of a peak instantaneous pumping rate of 750 gpm for the Bonfield Well.

No adverse impacts on other area groundwater withdrawals are likely, though the presence of several large capacity wells in a limited area raises some concern over a local overdevelopment of the groundwater resource. To address this concern, Commission staff recommends that the project sponsor develop and implement a groundwater-level monitoring program to provide for long-term monitoring in non-pumped or dedicated observation wells in the carbonate aquifer.

The withdrawal is subject to the Commission's water conservation requirements as per Commission Regulation §804.20(a). The water system is 100 percent metered and system losses are less than 20 percent, which is in compliance with this regulation.

The project sponsor 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 project sponsor has 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.

Decision

The foregoing findings are hereby adopted and shall be incorporated into and made a part of this decision. The project's groundwater withdrawal of 1.08 mgd (30-day average) from the Bonfield Well is approved pursuant to Article 3, Section 3.10 of the Compact, subject to the following conditions:

a. The project sponsor shall comply with all Commission regulations, including groundwater withdrawal reporting requirements, as per Commission Regulation §803.43.

b. Except as modified by condition "e" below, the project sponsor shall keep daily records of the metered withdrawal and weekly water levels from the Bonfield Well. The required reporting data shall be submitted to the Commission annually, and as otherwise required. Monitoring reports are due within sixty (60) days after the close of the preceding year. The project sponsor shall install a meters, accurate to within five (5) percent, on the Bonfield Well. The Commission reserves the right to inspect all measurement equipment and audit all measurement records.

c. The maximum instantaneous rate of production from the Bonfield Well shall not exceed 750 gpm.

d. The project sponsor shall comply with the water conservation requirements specified in Commission Regulation §804.20(a).

e. Within sixty (60) days from the date of this approval, the project sponsor shall submit a plan that provides for the long-term monitoring of groundwater levels in the carbonate aquifer in the area of the Bonfield Well for Commission staff's review and approval. This plan shall include a schedule for implementation of the plan, and a description of the proposed monitoring parameters including locations or stations, instrumentation, and measurement frequency. The overall monitoring period shall include a 30-day period prior to the initiation of operation of the Bonfield Well, and shall be continued for the duration of this approval. Upon approval of the monitoring plan, the project sponsor shall implement the monitoring plan and supply the results of the monitoring annually to the Commission. The monitoring results shall be documented in an interpretive report, including the monitoring data in graphical form, due sixty (60) days after the end of the calendar year, or otherwise as directed by Commission staff. Should the monitoring prove to be inconclusive with respect to interference, the Commission reserves the right to require additional monitoring, as necessary.

f. If the Commission determines that operation of the proposed groundwater withdrawal adversely affects any existing groundwater or surface-water withdrawal, the project sponsor shall be required to provide, at its expense, an alternate water supply or other mitigating measures.

g. Commission approval shall not be construed to exempt the project sponsor 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 project sponsor fails to obtain or maintain such approvals.

h. The Commission reserves the right to inspect or investigate the project facility, and the project sponsor shall allow authorized employees or agents of the Commission, without advance notice or a search warrant, at any reasonable time and upon presentation of appropriate credentials, and without delay, to have access to and to inspect all areas where the project is being constructed, operated, or maintained. Such employees or agents shall be authorized to conduct tests or sampling, to take photographs, to perform measurements, surveys, and other tests, to inspect the methods of construction, operation, or maintenance, to inspect all measurement equipment, to audit, examine, and copy books, papers, and records pertinent to any matter under investigation, and to take any other action necessary to assure that the project is constructed, operated, or maintained in accordance with the terms and conditions of this approval or any other rule, regulation, or order of the Commission.

i. If the project sponsor fails to comply with the provisions of the Compact or any rule, regulation or order of the Commission, or any term or condition of this docket, the Commission may suspend, modify, or revoke its approval of same, and may impose appropriate fines and penalties. Upon written notice by the Commission, the project sponsor shall have thirty (30) days to correct such noncompliance, unless an alternate period is specified in the notice. 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, or from imposing fines and penalties, regardless of the period of noncompliance.

j. The Commission reserves the right to reopen any project docket or issue such additional orders, as may be necessary, to mitigate or avoid adverse impacts or otherwise to protect public health, safety, welfare, or the environment.

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

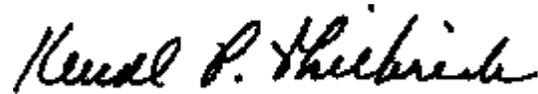
l. This approval is effective until December 15, 2029. The project sponsor shall submit a renewal application by June 15, 2029, and obtain Commission approval prior to continuing operation beyond December 15, 2029.

m. The project sponsor has a period of three (3) years from the date of this approval to initiate the project or such approval will automatically expire, unless an extension is requested by

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

By the Commission:

Dated: December 15, 2004



Kendl P. Philbrick, Chair
Maryland Commissioner



SUSQUEHANNA RIVER BASIN COMMISSION

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Docket No. 20041209

Approval Date: December 15, 2004

AQUA PENNSYLVANIA, INC. WHITE ROCK ACRES WATER SYSTEM

Groundwater Withdrawals (30-Day Averages) of 0.05 mgd from Well 3 and
0.137 mgd from Well 4,
and a Total System Withdrawal Limit (30-Day Average) of 0.137 mgd,
for Public Water Supply,
Monroe Township, Cumberland 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, 84 Stat. 1509 et seq., and Commission Regulations §803.4, relating to projects requiring review and approval, and §803.43, relating to groundwater withdrawals. The Commission received the application on July 6, 2004.

Description

Purpose. The purpose of the application is to request approval for the withdrawal of groundwater for distribution in a public water supply system.

Location. The project is located in the Lower Susquehanna Subbasin, HUC 02050305, Yellow Breeches Creek Watershed, Monroe Township, Cumberland County, Pennsylvania.

Project Features. The project sponsor has requested approval for the withdrawal (30-day averages) of 0.150 million gallons per day (mgd) from Well 4 and 0.05 mgd from existing Well 3, for a combined total withdrawal of 0.200 mgd from both Wells 3 and 4. Commission staff recommends approval of only 0.137 mgd from Well 4 and as the combined total withdrawal, as described in its findings, below. The wells will supply the White Rock Acres residential development. Well 4 will be used as the primary source and Well 3 will serve as a back-up supply for the public water supply system that currently relies on Wells 1 and 3. Well 1, developed as a water supply in the late 1960s, will be abandoned when replaced by the new well, Well 4. Well 3 was drilled and added to the water system in 1990 but at that time the groundwater withdrawal was less than the regulatory threshold and did not require approval by the Commission.

The White Rock Acres well field is located approximately 1 mile northwest of the Borough of Dillsburg and 1.4 miles south-southeast of Boiling Springs, at a ridge gap on the

north side of South Mountain. Well 4, drilled in the Antietam Formation quartzite, was installed 85 feet from existing Well 3. The well is cased with 8-inch steel casing to a depth of 132 feet, and has an open-rock borehole from a depth of 132 ft to the bottom of the well at 404 ft. Well 3, also drilled into the Antietam Formation, is cased with 6-inch steel casing to a depth of 240 ft, and has an open-rock borehole from a depth of 240 ft to the bottom of the well at 400 ft.

In 2003, average daily withdrawal from Wells 1 and 3 was approximately 0.064 mgd with a peak demand of 0.110 mgd. Wells 1 and 3 could not meet the system demand and water had to be trucked to the site. Well 4 was brought on-line as an emergency supply and approved by the Pennsylvania Department of Environmental Protection (PADEP). During a 91-day initial operational period in 2003-2004, at which time Well 4 was the sole well serving the system, the average demand was 0.087 mgd. During a year's period from May 2003 to April 2004, the average monthly system demand was 0.076 mgd, with a maximum daily demand of 0.121 mgd. The average and maximum daily demands are projected to grow to 0.106 and 0.169 mgd, respectively, by 2025.

Pumping Tests. A 48-hour constant-rate pumping test of Well 4 was conducted on October 21-23, 2003, with prior Commission approval. In addition to the pumping well, four observation wells were monitored during the test, including Well 1, Well 3, test Well 2, and an off-site residential well. Surface-water and shallow groundwater monitoring points for the test included the discharge at a nearby spring, the discharge and stage at the adjacent pond, and piezometers in nearby wetlands and in a small-unnamed stream to the south. The stage of a small-unnamed stream to the north also was monitored during the test. Monitoring points were located at distances of 50 to 3,900 feet from Well 4. A stepped-rate pumping test of Well 4 preceded the constant-rate pumping test. Pumping at an average rate of 121 gallons per minute (gpm), total drawdown at the pumping well was approximately 69 feet at the end of the constant rate test.

Coordination. Commission staff has coordinated with the PADEP Southcentral Region Office (SCRO) during review of the project. PADEP staff has reviewed this docket for consistency with its requirements.

Findings

The project is subject to Commission approval and reporting requirements, as per Commission Regulation §803.43.

Commission staff reviewed the groundwater availability analysis, pumping test results, and supporting information submitted by the project sponsor. Pumping test results indicate that Well 4 draws water from a moderately transmissive fractured-rock aquifer. Commission staff has concluded that the groundwater withdrawal will not have a significant impact on private water supply wells in the area or on wetlands, spring flow or stream flow.

Commission staff recommends approval of a peak instantaneous pumping rate of 120 gpm for Well 4 and concurs with PADEP's previously approved pumping rate of 35 gpm for Well 3.

The project sponsor's consultant evaluated groundwater availability in the site area using data from a nearby watershed. However, the reference watershed includes carbonates not found in the watershed of the White Rock Well field (Wells 3 and 4), and Commission staff finds that the reference watershed recharge rates likely overestimate groundwater availability at the site. Also, recharge in this area is partitioned between a shallow groundwater flow system in the unconsolidated alluvium/colluvium and a deeper groundwater flow system in the bedrock aquifer. Therefore, the amount of ground water available at the well field in the deep bedrock aquifer is further reduced. The drought year recharge is estimated to be 245,000 gpd by the project sponsor's consultant. Reducing this to account for a lack of carbonates in the watershed and to allow for some partitioning of recharge between a shallow and deep flow systems, Commission staff estimates that available recharge to the White Rock well field during a drought year is less than 150,000 gpd.

Thus, Commission staff's analysis indicates that the sustainable yield of Well 4 and the well field is lower than the requested withdrawal of 0.150 mgd from Well 4 and 0.05 mgd from existing Well 3, for a combined total withdrawal of 0.200 mgd from both Wells 3 and 4. Commission staff recommends approval of a 30-day average withdrawal of 0.137 mgd from Well 4, a 30-day average withdrawal of 0.05 mgd from back-up Well 3, and a total system 30-day average withdrawal of 0.137 mgd from both Wells 3 and 4. Although this quantity is less than the project sponsor requested, it is sufficient to meet the average daily demand projected to 2025. The project sponsor will need to develop additional sources to meet projected peak demand (0.169 mgd) to 2025.

The project is subject to the Commission's water conservation requirements, as per Commission Regulation §804.20(a). The water system is 100 percent metered, which is in compliance with this regulation, and the system had an unaccounted-for water loss of 2 percent which is less than the 20 percent maximum set forth in Commission Regulation §804.20(a)(1).

The project sponsor has paid the appropriate application fee in accordance with Commission Regulation §803.28, and in accordance with Commission Resolution 98-19, as amended by Commission Resolution 2000-06. The project sponsor has 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.

Decision

The foregoing findings are hereby adopted and shall be incorporated into and made a part of this decision. The project's groundwater withdrawal of 0.05 mgd (30-day average) from Well 3, 0.137 mgd (30-day average) from Well 4, and a total system withdrawal limit of 0.137 mgd (30-day average) from both Wells 3 and 4, is approved pursuant to Article 3, Section 3.10 of the Compact, subject to the following conditions:

a. The project sponsor shall comply with all Commission regulations, including groundwater withdrawal reporting requirements, as per Commission Regulation §803.43.

b. The project sponsor shall keep daily records of the metered withdrawal and weekly water levels from Well 3 and Well 4. The required reporting data shall be submitted to the Commission annually, and as otherwise required. Monitoring reports are due within sixty (60) days after the close of the preceding year. The project sponsor shall install meters, accurate to within five (5) percent, on Wells 3 and 4. The Commission reserves the right to inspect all measurement equipment and audit all measurement records.

c. The maximum instantaneous rate of production from Wells 3 and 4 shall not exceed 35 gpm and 120 gpm, respectively.

d. The project sponsor shall comply with the water conservation requirements specified in Commission Regulation §804.20(a).

e. If the Commission determines that the operation of the project's groundwater withdrawal adversely affects any existing groundwater or surface water withdrawal, the project sponsor shall be required to provide, at its expense, an alternate water supply or other mitigating measure.

f. Commission approval shall not be construed to exempt the project sponsor 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 project sponsor fails to obtain or maintain such approvals.

g. The Commission reserves the right to inspect or investigate the project facility, and the project sponsor shall allow authorized employees or agents of the Commission, without advance notice or a search warrant, at any reasonable time and upon presentation of appropriate credentials, and without delay, to have access to and to inspect all areas where the project is being constructed, operated, or maintained. Such employees or agents shall be authorized to conduct tests or sampling, to take photographs, to perform measurements, surveys, and other tests, to inspect the methods of construction, operation, or maintenance, to inspect all measurement equipment, to audit, examine, and copy books, papers, and records pertinent to any matter under investigation, and to take any other action necessary to assure that the project is constructed, operated, or maintained in accordance with the terms and conditions of this approval or any other rule, regulation, or order of the Commission.

h. If the project sponsor fails to comply with the provisions of the Compact or any rule, regulation or order of the Commission, or any term or condition of this docket, the Commission may suspend, modify, or revoke its approval of same, and may impose appropriate fines and penalties. Upon written notice by the Commission, the project sponsor shall have thirty (30) days to correct such noncompliance, unless an alternate period is specified in the notice. 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, or from imposing fines and penalties, regardless of the period of noncompliance.

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

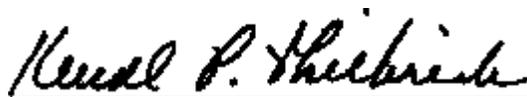
j. Commission approval confers no property rights upon the project sponsor. The securing of all rights necessary and incident to the project sponsor's development and operation of the project shall be the sole and exclusive responsibility of the project sponsor, and this approval shall be subject thereto.

k. This approval is effective until December 15, 2029. The project sponsor shall submit a renewal application by June 15, 2029, and obtain Commission approval prior to continuing operation beyond December 15, 2029.

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 project sponsor and approved by the Commission.

By the Commission:

Dated: December 15, 2004



Kendl P. Philbrick, Chair
Maryland Commissioner



SUSQUEHANNA RIVER BASIN COMMISSION

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Docket No. 20041210

Approval Date: December 15, 2004

WYETH PHARMACEUTICALS MARIETTA PLANT

Groundwater Withdrawal (30-Day Average) of 0.288 mgd from Well 1,
for Non-Contact Cooling Water
East Donegal Township, Lancaster 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, 84 Stat. 1509 et seq., and Commission Regulations §803.4, relating to projects requiring review and approval, and §803.43, relating to groundwater withdrawals. The Commission received the application on November 10, 2004.

Description

Purpose. The purpose of the application is to request approval for the withdrawal of groundwater for non-contact industrial cooling water in the manufacture of pharmaceutical and biological products.

Location. The project is located in the Lower Susquehanna Subbasin, HUC 02050306, Susquehanna River Watershed, East Donegal Township, and Lancaster County, Pennsylvania.

Project Features. The project sponsor has requested approval for the withdrawal (30-day average) of 0.288 million gallons per day (mgd) from Well 1 for use as non-contact cooling water. The current primary source of water for the facility is the East Donegal Township Municipal Authority (EDTMA) public water supply system. Well 1 was drilled in 2002 as a supplemental water source and has been used at a withdrawal rate of less than 100,000 gallons per day (gpd), which is less than the Commission's regulatory threshold. The project sponsor has requested to increase its withdrawal.

The manufacture of biological products began at this location in the 1880s. The project sponsor purchased the facility and has been operating there since 1943. Average water demand at the facility is 0.320 mgd. The project sponsor has recently suspended its operations and intends to sell the facility, but demand for cooling water at this facility will continue to be 0.288 mgd.

Well 1 is located south of PA Route 441, approximately 1,400 ft east of the intersection with PA Route 743. Well 1 is located approximately 2,700 ft north of the Susquehanna River and 800 ft southwest of a generally south-to-southeast flowing, small-unnamed tributary of the River.

Well 1 is an 8-inch-diameter, 475-ft deep, open-rock borehole, that penetrates limestone and dolomite of the Cambrian age Vintage Formation. The well is cased to a depth of 140 ft. The well has a minor water-bearing zone (10 gpm) at a depth of 248 ft. and a major water-bearing zone (greater than 200 gpm) at a depth of 447 to 448 ft.

Pumping Tests. A 48-hour constant-rate pumping test of Well 1 was conducted on July 28-30, 2003, with prior Commission approval. In addition to the pumping well, five observation wells were monitored during the test. The monitoring wells were located approximately 450 to 1,250 ft from the pumping well, and include an undeveloped on-site test well, and four off-site residential wells. The flow of a small, unnamed stream located to the northeast and east of Well 1 also was monitored during the test. A stepped-rate pumping test of Well 1 preceded the constant-rate pumping test. Pumping at an average rate of 200 gallons per minute (gpm), total drawdown at the pumping well was approximately 304 feet at the end of the constant-rate test. Drawdown occurred at all of the observation wells, ranging from a few tenths of a foot to slightly more than 1 ft by the end of the test. A loss in flow from the nearby small stream was measured, although the loss did not correlate to the period of the pumping test. The stream-flow loss was not the result of previous withdrawals from the well because Well 1 had not been pumped for approximately 8 months prior to the pumping test.

Findings

The project is subject to Commission approval and reporting requirements, as per Commission Regulation §803.43.

Commission staff reviewed the groundwater availability analysis, pumping test analysis, and supporting information submitted by the project sponsor. Time-drawdown data and recovery data for the pumping well indicate either a recharge-boundary (induced infiltration) response or a leaky-confined-aquifer response. Induced infiltration from the nearby Susquehanna River is a possible explanation for the observed recharge-boundary-type response. As an alternative, considering the significant depth of the primary water bearing zone in Well 1, the large drawdown at this pumping well (304 ft) compared to the limited drawdown at all of the observation wells (about 1 ft or less), and the range in aquifer storage coefficients calculated for the test, the observed response also could have been due to the aquifer behaving in a leaky confined fashion.

Extrapolation of drawdown trends from the pumping test indicates that drawdown at some nearby private wells could increase to several feet or more with prolonged pumping. Commission staff has concluded that the groundwater withdrawal will not have a significant adverse impact on private water supply wells in the area.

The area of Well 1 is prone to sinkhole development. Commission staff's review indicates that newer sinkholes near Well 1 apparently correlate largely to the concentration of storm water from the creation of newer impermeable surfaces associated with development of the area and to other man-made features (e.g. shallow soil-water following pipelines). The proposed withdrawal should not exacerbate conditions creating sinkholes.

Commission staff recommends approval of a 30-day average withdrawal of 0.288 mgd from Well 1, and approval of a maximum instantaneous pumping rate of 200 gpm. The flow from Well 1 should be metered and monitored on a daily basis.

The project is subject to the Commission's water conservation requirements, as per Commission Regulation §804.20(a).

The project sponsor has paid the appropriate application fee in accordance with Commission Regulation §803.28, and in accordance with Commission Resolution 98-19, as amended by Commission Resolution 2000-06. The project sponsor has 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.

Decision

The foregoing findings are hereby adopted and shall be incorporated into and made a part of this decision. The project's groundwater withdrawal of 0.288 mgd (30-day average) from Well 1 is approved pursuant to Article 3, Section 3.10 of the Compact, subject to the following conditions:

a. The project sponsor shall comply with all Commission regulations, including groundwater withdrawal reporting requirements, as per Commission Regulation §803.43.

b. Within sixty (60) days from the date of this approval, the project sponsor shall install and maintain metering on Well 1, accurate to within five (5) percent, to measure its groundwater withdrawal. The project sponsor may propose alternative monitoring to the Commission for staff review and approval.

c. The project sponsor shall keep daily records of the metered withdrawal and weekly water levels from Well 1. The required reporting data shall be submitted to the Commission quarterly, and as otherwise required. Quarterly monitoring reports are due within thirty (30) days after the close of the preceding quarter. The Commission reserves the right to inspect all measurement equipment and audit all measurement records.

d. The maximum instantaneous rate of production from Well 1 shall not exceed 200 gpm.

e. The project sponsor shall comply with the water conservation requirements specified in Commission Regulation §804.20(b).

f. If the Commission determines that the operation of the project's groundwater withdrawal adversely affects any existing groundwater or surface water withdrawal, the project sponsor shall be required to provide, at its expense, an alternate water supply or other mitigating measure.

g. Commission approval shall not be construed to exempt the project sponsor 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 project sponsor fails to obtain or maintain such approvals.

h. The Commission reserves the right to inspect or investigate the project facility, and the project sponsor shall allow authorized employees or agents of the Commission, without advance notice or a search warrant, at any reasonable time and upon presentation of appropriate credentials, and without delay, to have access to and to inspect all areas where the project is being constructed, operated, or maintained. Such employees or agents shall be authorized to conduct tests or sampling, to take photographs, to perform measurements, surveys, and other tests, to inspect the methods of construction, operation, or maintenance, to inspect all measurement equipment, to audit, examine, and copy books, papers, and records pertinent to any matter under investigation, and to take any other action necessary to assure that the project is constructed, operated, or maintained in accordance with the terms and conditions of this approval or any other rule, regulation, or order of the Commission.

i. If the project sponsor fails to comply with the provisions of the Compact or any rule, regulation or order of the Commission, or any term or condition of this docket, the Commission may suspend, modify, or revoke its approval of same, and may impose appropriate fines and penalties. Upon written notice by the Commission, the project sponsor shall have thirty (30) days to correct such noncompliance, unless an alternate period is specified in the notice. 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, or from imposing fines and penalties, regardless of the period of noncompliance.

j. The Commission reserves the right to reopen any project docket or issue such additional orders, as may be necessary, to mitigate or avoid adverse impacts or otherwise to protect public health, safety, welfare, or the environment.

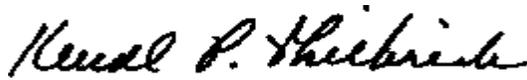
k. Commission approval confers no property rights upon the project sponsor. The securing of all rights necessary and incident to the project sponsor's development and operation of the project shall be the sole and exclusive responsibility of the project sponsor, and this approval shall be subject thereto.

l. This approval is effective until December 15, 2029. The project sponsor shall submit a renewal application by June 15, 2029, and obtain Commission approval prior to continuing operation beyond December 15, 2029.

m. The project sponsor has a period of three (3) years from the date of this approval to initiate the project or such approval will automatically expire, unless an extension is requested by the project sponsor and approved by the Commission. Likewise, if the project is discontinued for such a time and under such circumstances that an abandonment of the project may be reasonably inferred, the Commission may rescind the approval of the project unless a renewal is requested by the project sponsor and approved by the Commission.

By the Commission:

Dated: December 15, 2004



Kendl P. Philbrick, Chair
Maryland Commissioner



SUSQUEHANNA RIVER BASIN COMMISSION

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Docket No. 20041211

Approval Date: December 15, 2004

KNOUSE FOODS COOPERATIVE, INC. GARDNERS PLANT

Consumptive Water Use of Up to 0.475 mgd,
for Food Processing and Juice Bottling,
Tyrone Township, Adams 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, 84 Stat. 1509 et seq., 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 July 2, 2001.

Description

Purpose. The purpose of the application is to request approval for the consumptive use of water associated with processing fruit for production of canned goods and bottling of drink products.

Location. The project is located in the Lower Susquehanna Subbasin, HUC 02050306, Opossum Creek watershed, Tyrone Township, Adams County, Pennsylvania.

Project Features. The project sponsor has requested approval for the consumptive water use of up to 0.475 million gallons per day (mgd). Based on metered water use data submitted by the project sponsor, Commission staff calculates the project's maximum average 30-day consumptive water use to be 0.290 mgd, and the current peak-day consumptive water use to be 0.441 mgd.

Knouse Foods Cooperative, Inc. (Knouse Foods) operates seven bottling/processing facilities in three states; three facilities are in the Susquehanna River Basin. Operations at the Gardners facility began in approximately 1912.

Knouse Foods' Gardners facility processes apples for production of applesauce and apple juice. The majority of apples processed at the facility are stored in off-site cold storage and trucked into the facility for processing. The facility has bottled drink products such as Hawaiian Punch and Coca-cola products in the past, and presently bottles on a limited basis.

Consumptive water use at the facility includes water incorporated into product, steam production for cooking and heating, evaporation by the facility's cooling towers, evapo-transpiration as a result of on-site spray irrigation of treated process wastewater, and any wastewater trucked off-site for disposal.

Water is supplied to the processing facility from five wells and the "Kane Pond", which captures flow from an unnamed tributary to Opossum Creek. The wells supply potable water and Kane Pond supplies non-potable water for cooling and fire suppression. All sources are metered.

Water from the wells is pumped to a covered raw water reservoir. From the raw water reservoir the water is treated to potable standards and stored in a covered "finished" water reservoir. The finished water is used for apple washing, apple transport, domestic uses, steam production, and incorporated into product, as needed. Water discharged from the finished reservoir to the plant is metered.

All wastewater generated at the facility is discharged through a pump station with an hour meter pit to a wastewater storage pond. On-site disposal of stored wastewater is through a spray irrigation system, metered by pump capacity and run time.

Knouse Foods' Gardners facility is regulated by the Pennsylvania Department of Environmental Protection (PADEP). PADEP has issued PWS Permit No. PWS 7010400 for the public water supply of the facility and PADEP Permit No. 019321 for the wastewater disposal by spray irrigation.

Findings

The project is subject to Commission approval and reporting requirements, as per Commission Regulation §803.42.

All water incorporated into product, used for steam production for cooking and heating, evaporated by the facility's cooling towers, evapo-transpired as a result of on-site spray irrigation of treated process wastewater, and trucked off-site for wastewater disposal, is considered to be used consumptively. Consumptive water use as a result of spray irrigation of process wastewater is 85 percent of the total metered amount delivered to the spray system during the months of June through October, and 10 percent of the total metered amount, during the months of November through May.

The wastewater storage pond predates the Commission's consumptive water use regulation; therefore, the project sponsor is not required to provide compensation for the evaporative losses from this pond.

Total influent water supplied to the facility and the total water discharged from the facility is metered. The total water delivered to the waste spray irrigation system is metered. Commission staff recommends that the project's total daily consumptive water use be calculated

by subtracting the facility's metered discharge from total metered influent water supplied to the facility, plus the quantity consumptively used by the spray irrigation system.

Total influent water is the metered sum of potable water and non-potable water supplied to the production facility. Total water discharge is the metered sum of two disposal pumps discharging to the wastewater holding pond. The daily quantity of water consumptively used for spray irrigation of process wastewater is 85 percent of the total metered quantity delivered to the spray system during the months of June through October, and 10 percent of the total metered quantity delivered to the spray system during the months November through May. On the occasion that wastewater is trucked offsite, that quantity of water is considered consumptive.

The project sponsor has requested a consumptive water use approval of up to 0.475 mgd. Based on an analysis of water use records supplied by the project sponsor, Commission staff recommends approval of up to 0.475 mgd, which represents an increase of approximately 7 percent above the current peak-day use of 0.441 mgd. Should the project's future consumptive water use exceed or be expected to exceed 0.475 mgd, the project sponsor must apply for a modification to this docket at that time.

The project sponsor was consumptively using water at the facility for apple processing and bottling drink products before January 23, 1971, the effective date of Commission Regulation §803.42. Commission staff determined pre-1971 consumptive water use to be 0.215 mgd. For purposes of this docket, this quantity of water is considered "grandfathered," and is exempt from water 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 project sponsor proposes to make quarterly payments to the Commission in-lieu-of providing actual compensation water.

Four of the five wells were in use prior to 1978. The fifth well was installed in 1988. Commission staff calculated the present peak 30-day average groundwater withdrawal from all wells is to be 0.183 mgd, based on submitted data. Commission staff determined the peak 30-day pre-1978 groundwater withdrawal to be 0.101 mgd. Should the project's future groundwater withdrawal exceed or be expected to exceed 0.201 mgd as a 30-day average, the project sponsor must apply for approval of its groundwater withdrawal at that time.

The well field is situated near the topographical divide of the Bermudian Creek and the Opossum Creek watersheds. In support of the consumptive use application, the project sponsor's consultant performed a water budget analysis of the Bermudian Creek watershed and concluded that the withdrawal presents no adverse or adverse cumulative impacts to the watershed. Commission staff accepts that analysis.

Commission staff recognizes the Opossum Creek watershed to be an area of significant water use and potential future stress due to municipal and industrial uses. Knouse Foods' existing groundwater withdrawal captures more recharge from the Opossum Creek watershed than the Bermudian Creek watershed, and the withdrawal is located in the extreme headwaters of

an unnamed tributary to Opossum Creek. Commission staff has determined that the withdrawal potentially impacts base flow to the unnamed tributary to Opossum Creek, a trout stocked fishery.

In addition, the project sponsor has a withdrawal from Kane Pond (surface area 3.2 acres) an off-stream pond that captures water from an unnamed tributary to Opossum Creek. Flow is captured by a riser pipe in the unnamed tributary and diverted to the pond. The project sponsor has installed a rectangular cut concrete impoundment structure immediately downstream of the riser pipe intake. Overflow from the pond spills back to the unnamed tributary via a natural stream course.

Based on submitted data, Commission staff calculated that Knouse Foods' peak 30-day average withdrawal from Kane Pond is 0.125 mgd. The withdrawal existed prior to 1995, the effective date of Commission Regulation §804.44, relating to surface-water withdrawals. Commission staff determined the pre-1995 peak 30-day surface-water withdrawal to be 0.124 mgd. Should the project's future withdrawal from Kane Pond exceed or be expected to exceed 0.224 mgd as a 30-day average, the project sponsor must apply for approval of its surface water withdrawal at that time.

Commission staff calculated the 7-day 10-year low flow (Q7-10 flow) for the unnamed tributary to Opossum Creek to be 0.011 cubic feet per second (cfs) [5 gallons per minute (gpm)] and the average daily flow (ADF) to be 0.348 cfs (156 gpm) at the point of withdrawal. The project sponsor's taking exceeds 10 percent of the Q7-10 flow, thereby requiring a passby to protect downstream aquatic habitat and users. The unnamed tributary to Opossum Creek is designated a Trout Stocked Fishery. Therefore, Commission staff recommends a passby flow equal to 0.070 cfs (31.4 gpm) which is 20 percent of average daily flow (ADF). To ensure the passby requirement is met, Commission staff recommends modifying the existing intake by elevating the riser pipe and installing a "V" notch weir on the rectangular cut. The finished elevation of the riser pipe should be such that the intake will only accept streamflow greater than 32 gpm.

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

The project sponsor has paid the appropriate application fee, in accordance with Commission Regulation §803.28, and in accordance with Commission Resolution 98-19, as amended by Commission Resolution 2000-06. The project sponsor has 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 project sponsor is eligible to participate in the Commission's Compliance Incentive Program (CIP). Therefore, the project sponsor would not

be subject to penalties for water consumed in violation of Commission Regulation §803.42 prior to January 1, 2001. In accordance with the CIP, payment to the Commission 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.

Decision

The foregoing findings are hereby adopted and shall be incorporated into and made a part of this decision. The project's consumptive water use of up to 0.475 mgd is approved pursuant to Article 3, Section 3.10 of the Compact subject to the following conditions:

a. The project sponsor shall comply with all Commission regulations, including consumptive water use reporting requirements, as per Commission Regulation §803.42.

b. The project sponsor shall keep daily records of the project's consumptive water use, and shall report the data to the Commission quarterly, and as otherwise required. Quarterly monitoring reports are due within thirty (30) days after the close of the preceding quarter. The daily quantity of water consumptively used shall be the quantity incorporated into product, used for steam production for cooking and heating, evaporated by the facility's cooling towers, evaporated as a result of on-site spray irrigation of treated process wastewater, and trucked off-site for wastewater disposal, to be calculated by subtracting the facility's metered discharge from total metered water supplied to the facility, plus the quantity consumptively used by the spray irrigation system. The daily quantity of water consumptively used for spray irrigation of process wastewater is 85 percent of the total metered quantity delivered to the spray system during the months of June through October, and 10 percent of the total metered quantity delivered to the spray system during the months November through May.

c. The project sponsor shall keep daily records of the project's groundwater withdrawal, and shall report the data to the Commission quarterly, and as otherwise required. Quarterly monitoring reports are due within thirty (30) days after the close of the preceding quarter. The project sponsor may propose alternative monitoring to the Commission for staff review and approval. The Commission reserves the right to inspect all measurement equipment and audit all measurement records. If an increase in the project's groundwater withdrawal exceeds the threshold specified in Commission Regulation §803.43, the project sponsor shall submit the appropriate application for review and approval by the Commission.

d. Within sixty (60) days from the date of this approval, the project sponsor shall install and maintain metering on the water supplied to the facility, the water discharged from the facility, and the water delivered to the spray irrigation system, accurate to within five (5) percent. The project sponsor may propose alternative monitoring to the Commission for staff review and approval. The Commission reserves the right to inspect all measurement equipment and audit all measurement records

e. Within sixty (60) days from the date of this approval, the project sponsor shall install and maintain metering on the surface water withdrawal, accurate to within five (5) percent, and keep daily records of the project's surface water withdrawal. The project sponsor shall report the

data to the Commission quarterly, and as otherwise required. Quarterly monitoring reports are due within thirty (30) days after the close of the preceding quarter. The project sponsor may propose alternative monitoring to the Commission for staff review and approval. The Commission reserves the right to inspect all measurement equipment and audit all measurement records. If the surface water withdrawal exceeds the threshold specified in Commission Regulation §803.44, the project sponsor shall submit the appropriate application for review and approval by the Commission.

f. The project sponsor shall allow a flow to pass in the unnamed tributary to Opossum Creek directly below the intake of not less than 0.070 cfs (31.4 gpm). When the streamflow below the intake is less than this amount, the withdrawal shall be reduced to maintain 0.070 cfs (31.4 gpm) in the stream channel below the intake. When the natural flow is equal to or less than 0.070 cfs (31.4 gpm), no water may be withdrawn, and the entire natural flow shall be allowed to pass the intake to maintain such natural flow in the channel below the intake as may prevail above.

g. The project sponsor shall modify or replace the stream intake structure to incorporate a passive passby flow device. The project sponsor shall submit its design and a proposed construction schedule for a modified or replacement intake structure within sixty (60) days from the date of this approval for review and approval by Commission staff prior to any construction. Following approval, the project sponsor shall complete construction in accordance with the approved schedule and shall certify to the Commission that construction has been completed in accordance with the approved design. The passby system shall be kept fully functional and free of debris.

h. To satisfy the Commission's current compensation requirements for consumptive water use set forth in Commission Regulation §803.42, the project sponsor shall make quarterly payments to the Commission based on the rate of \$0.14 per 1,000 gallons of water consumptively used by the project in excess of the grandfathered quantity. The daily quantity of water consumptively used shall be the quantity of water incorporated into product, used for steam production for cooking and heating, evaporated by the facility's cooling towers, evaporated as a result of on-site spray irrigation of treated process wastewater, and trucked off-site for wastewater disposal. Payment amounts shall be calculated by applying this rate to the daily amount of water used consumptively by the project, less the grandfathered quantity of 0.215 mgd. If the daily grandfathered quantity exceeds the project's daily consumptive water use, that day's consumptive water use is considered to be zero. Quarterly payments are due and payable within thirty (30) days after the close of the preceding quarter. The rate of payment, after appropriate notice to consumptive users of water using this method of compliance, is subject to change at the Commission's discretion.

i. The project sponsor shall comply with the water conservation requirements specified in Commission Regulation §804.20(b).

j. The project sponsor is eligible to participate in the Commission's Compliance Incentive Program (CIP). Therefore, the project sponsor is not subject to penalties for its prior noncompliance. In accordance with the CIP, payment to the Commission as a method of

compensation for the project's consumptive water use shall be effective and applicable to all water used consumptively by the project beginning January 1, 2001. The project sponsor shall provide records of its consumptive water use and make a payment to the Commission based on the rate of \$0.14 per 1,000 gallons of water consumptively used, above the daily grandfathered quantity of 0.215 mgd, during the period from January 1, 2001, until the effective date of this approval. This payment shall be calculated separately and included in the first quarterly payment made by the project sponsor in accordance with the requirements of condition (f) above.

k. If the Commission determines that the operation of the project's groundwater withdrawal from its well field adversely affects any existing groundwater or surface water withdrawal, the project sponsor shall be required to provide, at its expense, an alternate water supply or other mitigating measure.

l. Commission approval shall not be construed to exempt the project sponsor 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 project sponsor fails to obtain or maintain such approvals.

m. The Commission reserves the right to inspect or investigate the project facility, and the project sponsor shall allow authorized employees or agents of the Commission, without advance notice or a search warrant, at any reasonable time and upon presentation of appropriate credentials, and without delay, to have access to and to inspect all areas where the project is being constructed, operated, or maintained. Such employees or agents shall be authorized to conduct tests or sampling, to take photographs, to perform measurements, surveys, and other tests, to inspect the methods of construction, operation, or maintenance, to inspect all measurement equipment, to audit, examine, and copy books, papers, and records pertinent to any matter under investigation, and to take any other action necessary to assure that the project is constructed, operated, or maintained in accordance with the terms and conditions of this approval or any other rule, regulation, or order of the Commission.

n. If the project sponsor fails to comply with the provisions of the Compact or any rule, regulation or order of the Commission, or any term or condition of this docket, the Commission may suspend, modify, or revoke its approval of same, and may impose appropriate fines and penalties. Upon written notice by the Commission, the project sponsor shall have thirty (30) days to correct such noncompliance, unless an alternate period is specified in the notice. 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, or from imposing fines and penalties, regardless of the period of noncompliance.

o. The Commission reserves the right to reopen any project docket or issue such additional orders, as may be necessary, to mitigate or avoid adverse impacts or otherwise to protect public health, safety, welfare, or the environment.

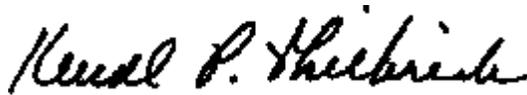
p. Commission approval confers no property rights upon the project sponsor. The securing of all rights necessary and incident to the project sponsor's development and operation

of the project shall be the sole and exclusive responsibility of the project sponsor, and this approval shall be subject thereto.

q. This approval is effective until December 15, 2029. The project sponsor shall submit a renewal application by June 15, 2029, and obtain Commission approval prior to continuing operation beyond December 15, 2029.

r. 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 project sponsor and approved by the Commission.

By the Commission:



Dated: December 15, 2004

Kendl P. Philbrick, Chair
Maryland Commissioner