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**DOCKET NO. D-1998-014-3**

**DELAWARE RIVER BASIN COMMISSION**

**Southeastern Pennsylvania  
Ground Water Protected Area**

**Merck Sharp & Dohme Corporation  
Groundwater Withdrawal  
Upper Gwynedd Township, Montgomery County, Pennsylvania**

**PROCEEDINGS**

This docket is issued in response to an Application submitted by Merck Sharp & Dohme Corporation (Merck) to the Delaware River Basin Commission (DRBC or Commission) on June 6, 2017 (Application), for a renewal and approval of an allocation of groundwater and review of a groundwater withdrawal project in the Ground Water Protected Area of Southeastern Pennsylvania. The project wells were reviewed under the Pennsylvania Safe Drinking Water Act for public water supply permits and approved by the Pennsylvania Department of Environmental Protection (PADEP) as follows:

<b>WELL NO.</b>	<b>PADEP PERMIT NO.</b>	<b>PADEP APPROVAL DATE</b>
1,2,3,5,7 and 8	4685503	January 31,1987
9 and 11	4685503-A1	July 16, 1990
12 and 13	4694502	February 25, 1998
14, 15 and deepening 11	4698504	January 5, 1999

The Application was reviewed for continuation and approval under Section 3.8 and for a withdrawal permit under Section 10.3 of the *Delaware River Basin Compact*. The Montgomery County Planning Commission has been notified of pending action on this permit. A public hearing on this project was held by the DRBC on May 16, 2018.

**A. DESCRIPTION**

**1. Purpose** - The purpose of this docket is to renew the approval of an existing supply of groundwater for to the docket holder's remediation and industrial process operations from twelve

(12) existing wells. The total allocation of groundwater will remain 46.5 million gallons per month (mgm).

**2. Location** - The project wells are located in the Skippack and Wissahickon Creek Watersheds, in Upper Gwynedd Township, Montgomery County, Pennsylvania. Skippack Creek near the project site is designated by the Pennsylvania Department of Environmental Protection (PADEP) as supporting Trout Stocking Fishes (TSF) and Migratory Fishes (MF). Wissahickon Creek near the project site is designated by the Pennsylvania Department of Environmental Protection (PADEP) as supporting Trout Stocking Fishes (TSF) and Migratory Fishes (MF). Wells 1, 3, 5, 9, 12, 13, 14 and 15 are completed in the Brunswick Formation and Wells 2, 7, 8 and 11 are completed in the Lockatong Formation.

Specific location information has been withheld for security reasons.

**3. Area Served** – The wells serve the docket holder’s facility as outlined on the map entitled “Merck West Point Potable Water System” submitted with the application. For the purpose of defining Area Served, the Application is incorporated herein by reference consistent with conditions contained in the DECISION section of this docket.

**4. Physical features.**

**a. Design criteria.** — Contaminated ground water from Merck’s remediation wells is treated on-site, mixed with purchased water from the North Wales Water Authority and used in facility operations. A flow diagram of treatment processes uses and distribution points for the Merck facility is shown on a map entitle “Potable Water System Schematic” submitted with the previous docket application.

The average and maximum demand is 0.929 million gallons per day (mgd) and 1.329 mgd, respectively. The docket holder projects an average and maximum water demand of 0.965 mgd and 1.369 mgd, respectively, by the year 2028. Merck purchases water from North Wales Water Authority on a regular basis with an average purchase of 0.846 mgd and projects the purchase to go up to 0.882 mgd by the year 2028. Merck is not requesting an increase in groundwater withdrawal allocation from that contained in its prior approval. The allocation of 46.5 million gallons per month (mgm) should be sufficient to meet the future demands of the Merck system.

**b. Facilities.** -- The docket holder’s existing project wells have the following characteristics:

WELL NO.	DEPTH (FEET)	CASED DEPTH/ CASING DIAMETER	PUMP CAPACITY (GPM)	YEAR DRILLED
1	300	30’/ 10”	110	1948
2	300	30’/ 10”	110	1948
3	420	30’/ 8”	125	1948
5	440	30’/ 8”	110	1948
7	300	30’/ 12”	135	1949

WELL NO.	DEPTH (FEET)	CASED DEPTH/ CASING DIAMETER	PUMP CAPACITY (GPM)	YEAR DRILLED
8	610	33' / 8"	200	1978
9	300	31' / 6"	110	1985
11	303	32' / 8"	225	1997
12	450	80' / 8"	100	1994
13	450	80' / 8"	150	1993
14	300	32' / 8"	25	1997
15	300	32' / 8"	150	1997

All wells are metered.

Well water is treated by granular activated carbon filtration, pH adjustment with sodium hydroxide and disinfection with sodium hypochlorite prior to entering the distribution system.

The project facilities are above the 100-year flood elevation.

The water system is presently interconnected with the North Wales Water Authority.

c. **Other.** -- Wastewater is conveyed to the Upper Gwynedd-Towamencin Municipal Authority sewage treatment facility which received approval most recently under Section 3.8 of the Compact by DRBC Docket No. D-2002-029 CP-3 on June 11, 2014. The PADEP issued its most recent NPDES Permit No. PA0039004 on October 27, 2015 for this treatment facility. The treatment facility has adequate capacity to receive wastewater from the project.

Wastewater is conveyed to the Upper Gwynedd Township sewage treatment facility which received approval most recently under Section 3.8 of the Compact by DRBC Docket No. D-1991-088 CP-8 on December 9, 2015. The PADEP issued its most recent NPDES Permit No. PA0023256 on June 8, 2012 for this treatment facility. The treatment facility has adequate capacity to receive wastewater from the project.

Wastewater is conveyed to the Lansdale Borough sewage treatment facility which received approval most recently under Section 3.8 of the Compact by DRBC Docket No. D-1996-045 CP-3 on June 11, 2014. The PADEP issued its most recent NPDES Permit No. PA0026182 on June 24, 2016 for this treatment facility. The treatment facility has adequate capacity to receive wastewater from the project.

d. **Cost.** There is no cost associated with this project.

## **B. FINDINGS**

The project is located within the Southeastern Pennsylvania Ground Water Protected Area delineated by the DRBC pursuant to Compact Section 10.2. The project is designed to conform to the requirements of the *Water Code, Water Quality Regulations and Ground Water Protected Area Regulations (GWPAR)* of the DRBC.

Review and analysis of the application pursuant to Section 6d. of the *Ground Water Protected Area Regulations (GWPAR)* result in the following:

1. The withdrawal is consistent with the Commission's Comprehensive Plan and the policies and purposes of these regulations.
2. Opportunities to satisfy water requirements on a timely basis from existing available supplies and facilities have been explored and found infeasible.
3. The withdrawal, in conjunction with other withdrawals in the applicable ground water basin, should not exceed withdrawal limits of the groundwater basin, aquifer or aquifer system.
4. The withdrawal should not significantly impair or reduce the flow of perennial streams in the area.
5. Existing ground and surface water withdrawals should not be adversely impacted, or will be otherwise assured of adequate supplies in accordance with the requirements of Section 10 of the *GWPAR*. There have been no reported complaints of well interference since the first approval of this renewal project. No adverse impact is anticipated due to continued operation of this project.
6. The withdrawal should not cause substantial, permanent adverse impact to the overlying environment.
7. The docket holder adopted and will implement conservation and management programs as required by Section 7 of the *GWPAR*.

Merck is located in the Upper Reach Wissahickon Creek (Subbasin No. 59) and the Towamencin Creek (Subbasin No. 58) subbasins, where total net annual groundwater withdrawals (679 and 90.9 mgd, respectively) is less than the withdrawal limit set in Section 6.I of the *GWPAR* (1,736.4 and 621.8 mgd, respectively). The applicant is requesting a monthly allocation of 46.5 mgd, which equates to 558 mgd, a fraction of which will be returned to ground water. However, even if no water from this project were returned to ground water, the total net annual ground water withdrawal from this subbasin would remain below the withdrawal limits set in Section 6.I of the *GWPAR*. Therefore, the withdrawals from the project wells, in conjunction with other withdrawals in the subbasin, are in accordance with the requirements of Section 6.I of the *GWPAR*.

The DRBC estimates that the project withdrawals, used for the purpose of groundwater remediation and industrial supply, result in a consumptive use of 69 percent of the total water use. The DRBC definition of consumptive use is defined in Article 5.5.1.D of the *Administrative Manual – Part III – Basin Regulations – Water Supply Charges*.

The docket holder's withdrawals were approved by the Commission in Docket No. D-1998-014-1 and continued in Docket No. D-1998-014-2 on August 12, 1998 and July 16, 2008, respectively. Issuance of this docket will continue the approval of this groundwater withdrawal project.

### C. DECISION

I. Effective on the approval date for Docket No. D-1998-014-3 below, Docket No. D-1998-014-2 is terminated and replaced by Docket No. D-1998-014-3.

II. The project as described in the Section A "Physical features" is approved pursuant to Section 3.8 of the *Compact* and is granted this withdrawal permit pursuant to Section 10.3 of the *Compact* and *GWPAR*, subject to the following conditions:

a. Docket approval is subject to all conditions, requirements, and limitations imposed by the PADEP in its Water Permits.

b. The wells and operational records shall be available at all times for inspection by the DRBC.

c. The wells shall be operated at all times to comply with the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

d. During any month, the total withdrawal from the wells shall not exceed 46.5 mgm. The wells shall not be pumped above the maximum instantaneous rate and monthly allocation as indicated below:

WELL NO.	INSTANTANEOUS RATE (GPM)	MONTHLY ALLOCATION (MILLION GALLONS)
1	110	5.17
2	110	2.89
3	125	5.58
5	110	4.44
7	135	5.99

8	200	7.44
9	110	3.10
11	225	8.47
12	100	3.1
13	150	6.1
14	25	1.03
15	150	6.70

e. The project withdrawals shall be metered with an automatic continuous recording device that measures to within 5 percent of actual flow. An exception to the 5 percent performance standard, but no greater than 10 percent, may be granted if maintenance of the 5 percent performance is not technically feasible or economically practicable. A record of daily withdrawals shall be maintained, and monthly totals shall be reported annually by June 30, to the PADEP. Withdrawal records shall be available at any time to the Commission if requested by the Executive Director.

f. Each new water service connection shall include a water meter in accordance with the DRBC's Resolution No. 87-7 (Revised).

g. The docket holder shall implement to the satisfaction of the PADEP, a continuous program to encourage water conservation in all types of use within the facilities served by this docket approval. The docket holder will report to the PADEP, on the actions taken pursuant to this program and the impact of those actions as requested by the PADEP.

h. The docket holder shall incorporate and implement reasonable conservation practices and measures consistent with efficient utilization of water resources.

i. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

j. The docket holder is permitted to provide the water approved in this docket to the areas included in Section A.3. Area Served of this permit. Any expansion beyond those included in Section A.3. Area Served is subject to DRBC review and approval in accordance with Section 3.8 of the *Compact* and the *GWPAR*.

k. Unless an extension is requested and approved by the Commission in advance, in accordance with paragraph 11 of the Commission's Project Review Fee schedule (Resolution No. 2009-2), the docket holder is responsible for timely submittal of a docket renewal application on the appropriate DRBC application form at least 12 months in advance of the docket expiration date set forth below. The docket holder will be subject to late charges in the event of untimely submittal of its renewal application, whether or not DRBC issues a reminder

notice in advance of the deadline or the docket holder receives such notice. In the event that a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date below (or the later date established by an extension that has been timely requested and approved), the terms and conditions of the current docket will remain fully effective and enforceable against the docket holder pending the grant or denial of the application for docket approval.

1. A long-term monitoring program is required to obtain data on ground water hydrologic conditions in the project area. The docket holder shall continue to implement the long-term monitoring program as required and defined in the EPA's "Statement of Basis". This program will include the following:

1. **Ground Water Level Monitoring** – Merck shall continue to monitor the wells identified in the above referenced EPA's "Statement of Basis" to estimate annual ground water fluctuations caused by seasonal changes and/or production well pumping, and detect water level declines that may affect the performance of public and private wells in the area of the Merck wells.

2. **Reports** - All monitoring data, including records required in Conditions "f." and "1." herein shall be submitted to the Commission annually, due by April 1. The docket holder is encouraged to submit the annual report electronically. The report shall be prepared by a hydrogeologist and shall assess the effects of well withdrawals on hydrologic conditions in the area. This report shall include an evaluation of the monitoring data required by this docket approval and such information as deemed appropriate by the hydrogeologist or required by the Executive Director.

3. The Executive Director may modify the monitoring program or temporarily suspend or modify this docket at any time if review of the hydrologic data and/or any other information indicates such action is necessary or appropriate.

m. The issuance of this docket approval shall not create any private or proprietary rights in the water of the Basin, and the Commission reserves the rights to amend, alter or rescind any actions taken hereunder in order to insure the proper control, use and management of the water resources of the Basin.

n. The docket holder is responsible for timely submittal to the DRBC of a docket renewal application on the appropriate application form including the appropriate docket application filing fee (see 18 CFR 401.43) at least 6 months in advance of the docket expiration date set forth below. The docket holder will be subject to late filed renewal surcharges in the event of untimely submittal of its renewal application, whether or not DRBC issues a reminder notice in advance of the deadline or the docket holder receives such notice. In the event that a

timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date below, the terms and conditions of the current docket will remain fully effective and enforceable against the docket holder pending the grant or denial of the application for docket approval.

o. The docket holder shall be subject to applicable DRBC regulatory program fees, in accordance with duly adopted DRBC resolutions and/or regulations. (see 18 CFR 401.43).

p. The ownership of this approval is transferable by request to the DRBC Executive Director provided that the project purpose and area served approved by the Commission in this docket will not be materially altered because of the change in project ownership. The request shall be submitted on the appropriate form and be accompanied by the appropriate fee (see 18 CFR 401.43).

q. The docket holder shall request a name change of the entity to which this approval is issued if the name of the entity to which this approval is issued changes its name. The request for name change shall be submitted on the appropriate form and be accompanied by the appropriate fee (see 18 CFR 401.43).

r. If the monitoring required herein or any other relevant data or information demonstrates that the operation of this project is interfering with or otherwise impairing existing uses of ground or surface water, or if the permit holder receives a complaint from an existing ground or surface water user within the zone of influence of the withdrawal alleging such interference or impairment, the permit holder shall immediately notify the Executive Director, and unless excused by the Executive Director, shall investigate the demonstrated or alleged impacts. For purposes of this condition, notification shall mean either (a) electronic transmittal of written notice to the Executive Director via email (using addresses posted on the DRBC website); or (b) written notice to the Executive Director and a telephone call to the Project Review Section at 609-883-9500, ext. 216. (Oral notification must always be accompanied by immediate written notification directed to the Executive Director.) In addition, the permit holder shall provide written notice to all potentially affected water users of the permit holder's responsibilities under this condition. **Any well or surface water supply that is impaired as a result of the permit holder's project withdrawal shall be repaired, replaced or mitigated at the permit holder's expense.** The scope of the options to consider for repair, replacement and/or mitigation shall not be limited solely to those that are owned, operated, or controlled by the project sponsor. An investigation report and/or mitigation plan prepared and certified by a licensed professional engineer and/or a licensed professional geologist shall be submitted to the Executive Director as soon as practicable following notice of the demonstrated or alleged impairment consistent with this paragraph. The Executive Director shall make the final determination regarding the scope and sufficiency of the investigation and the extent of any mitigation measures that may be required. Where ground and surface waters are rendered unavailable, unusable, or unsuitable for the pre-existing use, the Executive Director may direct the permit holder to take interim actions to mitigate such impacts, pending completion of the investigative report and any long-term repair, replacement or mitigation.

s. The Executive Director may modify or suspend this approval or any condition thereof, or require mitigating measures pending additional review, if in the Executive Director's judgment such modification or suspension is required to protect the water resources of the Basin.

t. For the duration of any drought emergency declared by either Pennsylvania or the Commission, water service or use by the docket holder pursuant to this approval shall be subject to the prohibition of those non-essential uses specified by the Governor of Pennsylvania, the Pennsylvania Emergency Management Council, PADEP, or the Commonwealth Drought Coordinator, to the extent that they may be applicable, and to any other emergency resolutions or orders adopted hereafter by the Commission.

u. Any person who objects to a docket decision by the Commission may request a hearing in accordance with Article 6 of the *Rules of Practice and Procedure*. In accordance with Section 15.1(p) of the *Delaware River Basin Compact*, cases and controversies arising under the *Compact* are reviewable in the United States district courts.

**BY THE COMMISSION**

**APPROVAL DATE:**

**EXPIRATION DATE: June 13, 2028**