

## ATTACHMENT C

### PEACH BOTTOM ATOMIC POWER STATION SITE CHARACTERISTICS

#### 1. General

The Peach Bottom Atomic Power Station (PBAPS) (39° 45' 32" N/76° 16' 9" W) is a nuclear power plant operated by Constellation (see Tab 1 to this Attachment). PBAPS consists of one decommissioned 40 Mw high temperature gas-cooled reactor designated as Unit 1, and two operating GE boiling water reactors designated as Unit 2 and Unit 3, both of which began operating in 1974. Each unit is rated at approximately 1350 Mw(e).

The minimum exclusion distance specified for PBAPS is 2,700 feet. There are no private residences inside the exclusion area. Constellation owns all the land within the exclusion area.

#### 2. Physical Characteristics

PBAPS is located in southeastern Pennsylvania on the west shore of the Susquehanna River. The majority of the plant is located in Peach Bottom Township, York County, with a small portion lying in Lancaster County. The site consists of 620 acres used for the plant.

The 10-mile Emergency Planning Zone (EPZ) contains portions of Chester, Lancaster, and York Counties in Pennsylvania and Cecil and Hartford Counties in Maryland. No community within the 10-mile EPZ has a population in excess of 15,000. Portions of Delaware, Maryland, and New Jersey are also within the 50-mile EPZ.

Soils of the Manor-Glenelg Association predominate in the area. These soils are shallow to moderately deep and are found on moderately sloping to very steep slopes. Geologically, schist or phyllite generally underlies these soils.

The normal pool elevation of Conowingo Pond is 109 feet above MSL. The plant grade is 116 feet above MSL. The maximum flood will produce an estimated pond elevation of 132 feet MSL. Critical safety features are flood protected to 135 feet MSL. Technical specifications require initiation of safe shutdown procedures when the water level at Conowingo Dam reaches 114 feet MSL. The general topography of the site is hilly with elevations ranging from 110 feet above MSL to over 460 feet above MSL. Broad ridgetops and steep hillsides along the river characterize it.

The climate in this area of York County is mild but humid. Prevailing winds are from the west. Average annual rainfall is approximately 40.5 inches and average annual temperature is 52.8 degrees.

3. Land Use Characteristics

The area in the immediate vicinity of the plant is mostly agricultural and other open spaces. The nearest community is Delta Borough, Pennsylvania, which is four miles away and has a population of approximately 750. The plant is about 30 miles NNE of Baltimore, Maryland, and 65 miles WSW of Philadelphia, Pennsylvania. The nearest population center of more than 25,000 people is Lancaster, Pennsylvania, population of approximately 56,000, located about 20 miles north of the plant.

There are no commercial airports within a 10-mile radius of the plant. The closest major airport is Harrisburg International Airport approximately 50 miles northwest of the site. A smaller airport servicing commuter and private aircraft is located in Lancaster, Pennsylvania approximately 25 miles north of the plant.

No public highways pass through the plant and no major arterial highways pass near it. There are two access roads to the plant area; one from the nearby town of Delta accesses the Unit 1 area and Information Center; the other passes north of Delta and enters the plant area on the Units 2 and 3 side.

4. Emergency Facilities Locations

- A. Emergency Operations Facility (EOF) – the EOF is located 31 miles northeast of the site near Coatesville, PA.
- B. Alternate EOF – none.
- C. Joint Information Center (JIC) – same as EOF.

5. Bases of Operations for Federal Support

- A. Airport – Lancaster Airport, Lancaster County or Capital City Airport, New Cumberland
- B. FRMAC – Conestoga Volunteer Fire Station, Conestoga or York County School of Technology (Vo-Tech), York
- C. JFO – Marietta Ceiling Plant, Armstrong World Industries, Marietta or York County Fairgrounds, York

6. Neighboring states within the 10-mile and 50-mile EPZs are as follows:

**10-Mile EPZ**  
Maryland

**50-Mile EPZ**  
Maryland  
New Jersey  
Delaware

7. Constellation has installed 97 sirens to cover the 10 mile plume exposure pathway EPZ. 65 of the sirens are located in Pennsylvania. Sirens have battery backup systems to operate during periods of power failure.

## **TABS**

1. PBAPS EPZ Information
2. PBAPS Plume Exposure Pathway Description
3. PBAPS Evacuation Time Estimate
4. PBAPS Map, Data, and Illustrations

**TAB 1**

**ATTACHMENT C**  
**PBAPS EPZ INFORMATION**

**Facility:** PBAPS operated by Constellation  
**Location:** Peach Bottom Township, York County  
**Site Area:** 620 acres  
**Energy Production:** Unit 2 – @1350 Megawatts BWR/GE  
**Capacity:** Unit 3 – @1350 Megawatts BWR/GE  
**Operating Status:** Unit 2 has been in commercial operation since 1974 and licensed till 2033  
Unit 3 has been in commercial operation since 1974 and licensed till 2034

**AFFECTED JURISDICTIONS (2020 Census)**

<b>Risk County</b>	<b>Risk Municipality (13)</b>	<b>Risk Population*</b>	<b>Monitoring and Decon Requirement (20%)</b>	<b>Mass Care Requirement (10%)</b>
<b>Chester County</b>	West Nottingham Township	2745	549	275
<b>Subtotal</b>		<b>2,745</b>	<b>549</b>	<b>275</b>
<b>Lancaster County</b>	Drumore Township	2,561	512	256
	East Drumore Township	3,936	787	394
	Fulton Township	3,214	643	321
	Little Britain Township	4,119	824	412
	Martic Township	4,467	893	447
	Providence Township	4,101	820	410
	Quarryville Borough	2,843	569	284
<b>Subtotal</b>		<b>25,241</b>	<b>5,048</b>	<b>2,524</b>
<b>York County</b>	Delta Borough	707	141	71
	Peach Bottom Township	4,966	993	497
	Fawn Township	3,012	602	301
	Fawn Grove Borough	476	95	48
	Lower Chanceford Township	3,031	606	303
<b>Subtotal</b>		<b>12,192</b>	<b>2,437</b>	<b>1,220</b>
<b>Grand Total</b>		<b>40,178</b>	<b>8,034</b>	<b>4,019</b>

\*Population within the plume exposure pathway

**Alert System Status:**

Constellation has installed 97 sirens required for coverage of the plume exposure pathway EPZ. 65 of them are located in Pennsylvania.

## MAJOR POPULATION CENTERS

<b>Major Cities</b>	<b>2020 Population</b>	<b>Distance from Plant</b>
Lancaster, PA	57,712	18 miles
York, PA	44,767	26 miles
Baltimore, MD	581,132	35 miles
Wilmington, DE	70,875	37 miles
Lebanon, PA	26,729	40 miles
Reading, PA	94,981	44 miles
Chester, PA	32,689	45 miles
Harrisburg, PA	50,069	47 miles

## SCHOOL DISTRICTS

### School Districts with Schools Located in the EPZ

**Lancaster County (2)**

Solanco  
Penn Manor

**York County (1)**

South Eastern

### School Districts Outside the EPZ with Students Residing in the EPZ

**Chester County (1)**

Oxford Area

**York County (1)**

Red Lion

### Host Schools that Receive Relocated Student Populations

**Chester County (1)**

Oxford Area High School (if required after 6:00 p.m.)<sup>1</sup>

**Lancaster County (2)**

Marticville Middle School  
Lampeter-Strasburg Campus

**York County (2)**

Susquehannock High School  
Red Lion Senior High School (if required after 2 hours)<sup>2</sup>

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<sup>1</sup> Oxford Area School District students are retained at their school of attendance until 6:00 p.m.

<sup>2</sup> Red Lion School District students are retained at their school of attendance for two hours.

## RECEPTION CENTERS

Municipality	Total Population	Reception Center
<b>Chester County</b>		
West Nottingham Township	2,745	Octorara Middle School
<b>Total Population</b>	<b>2,745</b>	
<b>Total Public Mon-Decon (20%)</b>	<b>549</b>	
<b>Total Mass Care Requirement (10%)</b>	<b>275</b>	
<b>Lancaster County</b>		
Drumore Township	2,561	Lampeter-Strausburg School Complex
East Drumore Township	3,936	Lampeter-Strausburg School Complex
Fulton Township	3,214	Lampeter-Strausburg School Complex
Little Britain Township	4,119	Lampeter-Strausburg School Complex
Martic Township	4,467	Lampeter-Strausburg School Complex
Providence Township	4,101	Lampeter-Strausburg School Complex
Quarryville Borough	2,843	Lampeter-Strausburg School Complex
<b>Total Population</b>	<b>25,241</b>	
<b>Total Public Mon-Decon (20%)</b>	<b>5,048</b>	
<b>Total Mass Care Requirement (10%)</b>	<b>2,524</b>	
<b>York County</b>		
Delta Borough	707	Southern School Complex - MS
Peach Bottom Township	4,966	Southern School Complex - MS
Fawn Township	3,012	Southern School Complex - MS
Fawn Grove Borough	476	Southern School Complex - MS
Lower Chanceford Township	3,031	Southern School Complex - MS
<b>Total Population</b>	<b>12,192</b>	
<b>Total Public Mon-Decon (20%)</b>	<b>2,438</b>	
<b>Total Mass Care Requirement (10%)</b>	<b>1,219</b>	
<b>Grand Total – Population</b>	<b>40,178</b>	
<b>Grand Total – Public Mon-Decon (20%)</b>	<b>8,035</b>	
<b>Grand Total – Mass Care (10%)</b>	<b>4,019</b>	

Totals Represent Pennsylvania Populations as of the 2020 Census

**MASS CARE CENTERS**

COUNTY	REQUIREMENT (10% of population)	CAPACITY
<b>CHESTER (1)</b>		
Octorara High School		1000
<b>Total</b>	<b>275</b>	<b>1,000</b>
<b>LANCASTER (18)</b>		
Penn Manor High School		430
Manheim Township High School		849
Manheim Township Middle School		436
Lampeter-Strasburg High School		532
Lampeter-Strasburg Martin Mylin High School		340
Lampeter-Strasburg Hans Herr Elementary School		206
Lampeter Elementary School		152
Hempfield Senior High School		587
Franklin & Marshall College		1,399
Manor Middle School		181
Conestoga Valley High School		491
Conestoga Valley Middle School		166
Garden Spot High School		707
Garden Spot Middle School		215
Warwick High School		652
Warwick Middle School		284
Cocalico High School		308
Cocalico Middle School		250
<b>Total</b>	<b>2,524</b>	<b>8,185</b>
<b>YORK (12)</b>		
Red Lion Senior High School		544
Red Lion Junior High School		250
Southern Middle School		270
Susquehannock High School		350
Spring Grove High School		520
Spring Grove Intermediate School		225
Spring Grove Middle School		225
York County 4-H (people w/pets)		50
Dallastown High School		312
Dallastown Middle School		175
South Western High School (Auxiliary)		425
Markle Intermediate School (Auxiliary)		250
<b>Total</b>	<b>1,220</b>	<b>3,596</b>
<b>Grand Total</b>	<b>4,019</b>	<b>12,781</b>



**EMERGENCY WORKER MONITORING/DECONTAMINATION STATIONS**

**CHESTER**

Penns Grove Middle School

**LANCASTER**

Lampeter-Strasburg High School Field House

**YORK**

Brogue Ambulance Company

**DECONTAMINATION CENTERS FOR THE GENERAL PUBLIC**

**CHESTER**

Octorara Middle School

**LANCASTER**

Lampeter-Strasburg School Complex

**YORK**

Red Lion School Complex – Senior High School  
Southern School Complex – Middle School

## TAB 2

### ATTACHMENT C PBAPS PLUME EXPOSURE PATHWAY EPZ DESCRIPTION (Pennsylvania Portion)

#### 1. YORK COUNTY

Begin at the intersection of the East Hopewell Township/Fawn Township corporate boundary and the Pennsylvania/Maryland State Line. Follow the East Hopewell Township/Fawn Township corporate boundary north to its intersection with Muddy Creek. Follow the East Hopewell Township/Lower Chanceford Township corporate boundary north along Muddy Creek to the Chanceford Township/Lower Chanceford Township corporate boundary. Follow the Chanceford/ Lower Chanceford corporate boundary northeast to the York County/Lancaster County line at the Susquehanna River. Follow the York County/Lancaster County line south to its intersection with the Conestoga Township/Martie Township corporate boundary.

#### 2. LANCASTER COUNTY

Begin at the intersection of the York County/Lancaster County line and the Conestoga Township/Martie Township corporate boundary. Follow the Conestoga Township/Martie Township corporate boundary east to the Penn Central Railroad tracks (Atglen and Susquehanna Branch). Follow the Penn Central Railroad tracks east to their intersection with the Quarryville Borough/ Providence Township corporate boundary. Follow the Quarryville Borough/Providence Township corporate boundary northeast to the Quarryville Borough/Eden Township corporate boundary. Follow the Quarryville Borough/Eden Township corporate boundary to its intersection with the East Drumore Township/Eden Township corporate boundary. Follow the East Drumore Township/Eden Township corporate boundary east to the East Drumore Township /Colerain Township corporate boundary. Follow the East Drumore Township/Colerain Township corporate boundary southeast to its intersection with the Little Britain Township/Colerain Township corporate boundary. Follow the Little Britain Township/Colerain Township corporate boundary southeast along Octoraro Creek to the Lancaster County/Chester County line. Follow the Lancaster County/Chester County line south to its intersection with the Lower Oxford Township/West Nottingham Township corporate boundary (Chester County).

#### 3. CHESTER COUNTY

Begin at the intersection of the Lancaster County/Chester County line and the Lower Oxford Township/West Nottingham Township corporate boundary. Follow the Lower Oxford Township/West Nottingham Township corporate boundary southeast to its intersection with the East Nottingham Township/West Nottingham Township corporate boundary. Follow the East Nottingham Township/West Nottingham Township corporate boundary southeast to its intersection with the Pennsylvania/ Maryland State line.

**TAB 3**

**ATTACHMENT C**  
**PBAPS EVACUATION TIME ESTIMATE**

			<b>Evacuation Times for Full EPZ (hours, minutes)</b>	
			<b>90%</b>	<b>100%</b>
	<b>Population</b>	<b>Vehicles</b>		
<b>(a) Traditional Vehicle Demand for Residential Population</b>				
<b>Winter Day</b>				
Fair Weather	71,362	21,645	4 hrs 12 min	5 hrs 09 min
Adverse Weather	71,362	21,645	5 hrs 02 min	6 hrs 24 min
<b>Winter Night</b>				
Fair Weather	57,091	19,304	3 hrs 46 min	4 hrs 45 min
Adverse Weather	57,091	19,304	3 hrs 40 min	5 hrs 49 min
<b>Summer Weekend</b>				
Fair Weather	66,158	22,042	3 hrs 53 min	4 hrs 46 min
Adverse Weather	66,158	22,042	3 hrs 20 min	5 hrs 24 min
<b>(b) High Vehicle Demand for Residential Population</b>				
<b>Winter Day</b>				
Fair Weather	71,362	34,661	4 hrs 36 min	6 hrs 30 min
Adverse Weather	71,362	34,661	5 hrs 37 min	8 hrs 19 min
<b>Winter Night</b>				
Fair Weather	57,091	32,320	4 hrs 11 min	6 hrs 22 min
Adverse Weather	57,091	32,320	5 hrs 00 min	8 hrs 08 min
<b>Summer Weekend</b>				
Fair Weather	66,158	35,058	4 hrs 42 min	6 hrs 24 min
Adverse Weather	66,158	35,058	5 hrs 19 min	7 hrs 26 min

**NOTE:** As per the KLD Report regarding ETEs, population has not grown enough to trigger a full ETE update for PBAPS. The information above will remain the same until an update is required based on population changes.

**TAB 4**

**ATTACHMENT C**  
**PBAPS MAPS, DATA, AND ILLUSTRATIONS**

The following maps, data, and illustrations are located on the Plans Drive in the PBAPS Folder.

- I. PBAPS Imagery
- II. Map - Peach Bottom EPZ and Ingestion Zone
- III. Map - Peach Bottom Critical Care Facilities
- IV. Critical Care Facilities Table
- V. Map - Peach Bottom School Districts and Host Schools
- VI. Peach Bottom School Districts Table
- VII. Map - Peach Bottom Reception Centers, Mon/Decon Centers and Mass Care Facilities
- VIII. Peach Bottom Reception Centers, Mon/Decon Centers and Mass Care Table
- IX. Map - Peach Bottom Siren Locations
- X. Peach Bottom Siren Locations Table  
Peach Bottom Siren Locations Table (2)
- XI. Map - Peach Bottom Evacuation Plan Map
- XII. Map - Peach Bottom Population Circles