

COMMONWEALTH OF PENNSYLVANIA
Department of Environmental Protection
Hazardous Sites Cleanup Program
CBS Vanport/Vanport Township Municipal Authority Site
Vanport Township, Beaver County
Southwest Region

STATEMENT OF DECISION

The Commonwealth of Pennsylvania, Department of Environmental Protection (“Department”) files this statement of the basis and purpose of its decision in accordance with Section 506(e) of the Pennsylvania Hazardous Sites Cleanup Act, Act of October 18, 1988, P.L., 756 No. (“HSCA”), 35 P.S. Section 6020.506(e).

The Department has determined that the following response is an appropriate limited interim response for investigation at the CBS Vanport/Vanport Township Municipal Authority Site (“Site”):

1. Conduct sampling of select groundwater monitoring wells and VTMA supply wells;
2. Install and sample additional groundwater monitoring wells necessary to adequately characterize groundwater contamination;
3. Collect soil and surface water samples to determine any threats to the environment;
4. Conduct fate and transport modeling of the contaminated groundwater plume to determine the long-term monitoring and treatment requirements;
5. Assess the efficiency of the VTMA towers and evaluate the utility of upgrades or operational alternatives;
6. Assess the adequacy of the pump and treat system operating at the CBS Beaver Plant;
7. Evaluate remediation options at the CBS Beaver Plant based on soil and groundwater sample results submitted by CBS.
8. Investigate the quarry to determine if it is a current source of groundwater contamination or poses a threat to public health or the environment.

I. SITE INFORMATION

A. Site Location, Description, and History

The Vanport Township Municipal Authority (VTMA) owns and operates a public water supply system that services the municipalities of Vanport Township, Brighton Township and Ohioville Borough in Beaver County, Pennsylvania. VTMA services a total population of approximately 10,000. The maximum daily consumption from the VTMA water supply system is approximately 2.2 million gallons per day (mgd); average daily consumption is 1.55 mgd.

The VTMA well field consists of seven (7) production wells. These wells are located on 8.9 acres owned by the VTMA, which is situated approximately 300 feet from the north bank of the Ohio River.

In January, 1988, analytical results of samples obtained from various points in the VTMA water supply system indicated the presence of trichloroethylene (TCE) at concentrations less than 100 ug/l (ppb). After that time, sample results from the hydrogeologically connected aquifer have frequently showed TCE levels above 100 ug/l. Under the Land Recycling and Environmental Remediation Standards Act, Act of May 19, 1995, P.L. 4, No. 1995-2, 35 P.S. §§ 6026.101-6026.9089, (Act 2), the Medium-Specific Concentration standard for TCE in used aquifers is 5.0 ug/l.

The Department believes that one possible source of the TCE is a former Westinghouse electronics manufacturing facility in Beaver. The facility is located approximately 1,500 feet north of the Ohio River at Vanport. The facility is bordered to the northwest by the bedrock wall of the Ohio River Valley and to the south by Georgetown Lane, the Beaver Cemetery, and an abandoned sand and gravel quarry. A park and athletic field lie to the west, and Tuscarawas Road, several businesses, and Beaver High School are east of the site. Twomile Run flows northeast of the site and along the southern border of the facility; it then flows southwest, to where it eventually discharges to the Ohio River.

The facility was originally operated by Curtiss Wright during World War II to manufacture airplane propellers. Westinghouse began operating the facility in 1947 to manufacture power distribution equipment, after which it manufactured circuit breakers until the plant closed. CBS Corporation merged with Westinghouse in 1995. Since 1994, Eaton Corporation has owned and operated the facility to manufacture electronic switchgear and switchboard apparatus.

Westinghouse used TCE at the facility for degreasing metal parts and components through 1987. In 1988, Westinghouse discovered TCE contamination in facility soil and groundwater.

Nearby businesses Jack and Jill One-Hour Cleaners and Crivelli Chevrolet are other possible sources of the TCE. Jack and Jill is now defunct, but during its operations the cleaner's wastes were handled by Safety-Kleen, a licensed hazardous waste transporter. Crivelli is an ongoing business. Crivelli connected with the sanitary sewer treatment system of Vanport in the summer of 1988.

Another potential source of TCE contamination is an abandoned sand and gravel quarry, known as Beaver Sand Company. The quarry is located approximately 1,000 feet north of the VTMA well field. The quarry is about 1,300 feet long and 600 feet wide, with a depth that does not appear to exceed 100 feet. Quarry operations ceased between 1965-1966. The quarry is now abandoned and overgrown with vegetation. There are currently at least eight different owners of the various parcels that make up the quarry.

A former quarry employee has alleged to the Department that significant amounts of industrial wastes were disposed of in the quarry while it was in operation. Also, apparently, small amounts of household waste and scrap were dumped in the quarry in the late 1980s. Participants at the Department's public hearing on February 28, 2017 also alleged illegal dumping of industrial waste into the quarry in the past. During a 1992 investigation of the quarry conducted on behalf of Westinghouse, contractor Rizzo & Associates excavated test pits, drilled borings, and

collected soil samples. TCE was found in one test pit soil sample at a depth of 4 to 6 feet, at levels well under the TCE soil standard under Act 2.

In 1988, the Department conducted a hydrogeologic investigation to investigate the source of the TCE contamination of the VTMA well field. During its investigation, the Department installed ten groundwater monitoring wells between the Westinghouse facility and the VTMA well field. At the same time, Westinghouse conducted an investigation of the TCE contamination at its facility. Westinghouse installed groundwater monitoring wells within and around the facility and between the facility and the VTMA well field.

Nine out of eleven groundwater samples collected during the Department hydrogeologic investigation exceeded the 5.0 ug/l Act 2 TCE standard for used aquifers, with sample results ranging from 14.8 ug/l to 1,100.0 ug/l TCE.

In a March 1989 sampling event, the Department's investigation found that TCE in the groundwater exceeded the Act 2 TCE standard in eight out of ten Department monitoring wells, with sample results ranging from 21.0 ug/l to 1,200.0 ug/l TCE. Samples collected from two Westinghouse wells from the same sampling event also exceeded the 5.0 ug/l Act 2 standard, at 44,000.0 ug/l and 800.0 ug/l TCE.

The Department and Westinghouse investigations determined that the aquifer under the Westinghouse facility is the same aquifer as that used by the VTMA pumping wells. The VTMA pumping wells are hydraulically downgradient from the Westinghouse facility. Groundwater flow from the Westinghouse facility is generally to the southwest, in the direction of the VTMA pumping wells and the Ohio River.

On June 23, 1989, Westinghouse entered into a Consent Order and Agreement (CO&A) with the Department. Westinghouse agreed to construct and install an air stripping tower system at the VTMA public water system to reduce the concentration of TCE in the public water supply. In addition, Westinghouse agreed to pay VTMA for the operation and maintenance costs of the tower system. The CO&A required Westinghouse to continue these payments until the Department determined that, for fifteen (15) sampling periods, the influent to the tower system showed TCE at less than 5.0 ug/l. Under the CO&A, Westinghouse would thereafter reinstate its payments if the Department determined that the TCE in the influent was 5.0 ug/l or greater. The CO&A also required Westinghouse to conduct representative sampling at the influent to and effluent from the tower.

After entering the CO&A, Westinghouse constructed the air stripping tower system at the VTMA and also conducted a remedial design investigation at its own Vanport facility. The investigation was documented in a June 1990 report. This report identified the presence of TCE and other volatile organic compounds (VOCs) in the shallow groundwater at the Westinghouse facility, in an area south of the facility where some tanks had leaked, and in the northeastern area of the facility. Evaluation of later groundwater data indicates that there is also deep groundwater VOC contamination in the south tank area of the facility. The Westinghouse groundwater monitoring well sample results for TCE ranged from 8.0 ug/l to over 10,000 ug/l, well exceeding

the 5 ug/l Act 2 TCE standard. Westinghouse installed two pumping wells for a pump and treat system at the facility.

In 1995, CBS Corporation merged with Westinghouse and assumed all liability for its environmental legacies. CBS continued to conduct the required sampling and analysis of groundwater and payment for operation and maintenance of the VTMA tower system. In April 2016, CBS advised the Department that it believed it had met the conditions at the influent at the VTMA tower system, and that it would cease payments for the operation and maintenance costs of the VTMA tower system. CBS discontinued its payment for the tower system at the VTMA public water system in June 2016. CBS has indicated it plans to continue the sampling and analysis of groundwater for TCE at VTMA's influent and at selected monitoring wells for a one-year period. Department review of the July 2016 groundwater data shows that sixteen of the monitored groundwater wells upgradient of the VTMA public water supply system exceeded the Act 2 TCE standard of 5.0 ug/l, with sample results ranging from 11.0 ug/l to 45,000.0 ug/l.

In response to the Department's proposed action, CBS submitted additional groundwater data and the results of soil sampling at the CBS Beaver Plant. The information submitted by CBS also indicates significant soil contamination present at the CBS Beaver Plant.

B. Threat of Release of Hazardous Substances

The Department has determined that groundwater downgradient of the CBS Beaver Plant is contaminated with organic compounds. TCE is the primary Contaminant of Concern at the Site. TCE is a hazardous substance as defined by the Hazardous Sites Cleanup Act and is a carcinogen.

The soil and groundwater contamination at the CBS Beaver Plant and in the groundwater upgradient of the VTMA supply wells poses a threat to the VTMA supply wells, public health, and the environment.

II. RESPONSE CATEGORY

The response category for this proposed response is a limited Interim Response. The response is projected to cost less than 2 million dollars and will take less than 1 year.

III. CLEANUP STANDARDS

This response is not a final remedial response pursuant to Section 504 of HSCA and therefore is not required to meet the cleanup standards that apply to final remedial responses.

IV. APPLICABLE, RELEVANT and APPROPRIATE REQUIREMENTS ("ARARs")

The following standards, requirements, criteria or limitations are legally applicable, or relevant and appropriate, under the circumstances presented at this Site.

Hazardous Sites Cleanup Act, Act of October 18, 1988, P.L. 756, 35 P.S. §§ 6020.101-6020.1305

Solid Waste Management Act, Act of July 7, 1980, P.L. 380, No. 97, *as amended*, 35 P.S. §§ 6018.101-6018.1003

25 Pa. Code Chapters 260-270: Hazardous Waste Management

Clean Streams Law, Act of June 22, 1937, P.L. 1987, *as amended*, 35 P.S. §§ 691.1-691.1001

Land Recycling and Environmental Remediation Standards Act, Act of May 19, 1995, P.L. 4, No. 1995-2, 35 P.S. §§ 6026.101-6026.909 (“Act 2”)

25 Pa. Code Chapter 250: Administration of Land Recycling Program (Act 2)

Technical Guidance Manual for the Land Recycling Program (Act 2)

40 CFR Part 302: Hazardous Substance Designation, Reportable Quantities and Notification

Pennsylvania Safe Drinking Water Act, Act of May 1, 1984, P.L. 206, as amended, 35 P.S. §§ 721.1-721.17

25 Pa. Code Chapter 109: Safe Drinking Water

V. ANALYSIS OF ALTERNATIVES

Alternative 1. No Action

If the Department does not take any action, without additional funds, VTMA will be unable to conduct sampling of the system’s influent or associated groundwater wells to assure the towers’ elimination of the threat of TCE to the water supply. No action will prolong the likely inefficiency of the tower system and of the upgradient pump and treat system, both of which are dated. The effective operation of both these systems is integral to VTMA’s provision of safe drinking water to the serviced communities.

Compliance with ARARs

This alternative does not comply with ARARs, because TCE, a hazardous substance, would continue to present a threat of contamination to a public drinking water supply. Threats to human health and the environment, such as direct contact, ingestion, inhalation and groundwater contamination, would not be addressed.

Cost Effectiveness

There would be no direct costs associated with this alternative, but, as indicated, the threat of TCE would remain in groundwater, threatening the community and the environment. In

addition, any delay in necessary improvements to the air stripping towers or the pump and treat system could result in increased costs for later repairs or improvements that would not have been necessary or would have been less costly had timely intervention been made.

Alternative 2. Cover only the cost of monthly monitoring of VTMA influent and select groundwater wells

If the Department only subsidizes costs associated with the groundwater monitoring program, the current efficiency or long-term viability of the towers and the upgradient pump and treat system will not be addressed. This will leave both systems at an ongoing risk of sudden breakdown, jeopardizing community safety, as well as sustaining an ongoing lack of cost-effectiveness in subsidizing a likely suboptimal system and deferring needed repairs.

Compliance with ARARs

Groundwater monitoring may address ARARs in part, but as noted, long-term groundwater contamination issues will persist. Until these issues are addressed, satisfactory compliance with ARARs will not be accomplished.

Cost Effectiveness

The estimated monthly cost for groundwater monitoring is about \$40,000. Without an assessment of the efficiency or long-term viability of the tower and pump and treat systems, repairs will likely become more costly over time. In addition, there will be a continuing loss of money that would otherwise be saved with an efficient system. This alternative would therefore not be cost-effective.

Alternative 3. Continue a sampling protocol; undertake fate and transport modeling of the contaminated groundwater using existing groundwater data and collect additional data as needed; collect soil and surface water samples to determine any threat to the environment from the soil and groundwater contamination; assess the efficiency, future viability, and alternatives to the tower and pump and treat systems, and investigate the quarry as a source of groundwater contamination.

Compliance with ARARs

This alternative would best assure compliance with ARARs.

Cost Effectiveness

This alternative would cost approximately \$600,000 in total and is feasible. This alternative is also cost-effective, as it would assure that the systems are operating with optimal efficiency and with the least risk of breakdown, preempting community safety risk and later costly repair.

VI. SELECTED RESPONSE

The selected alternative is Alternative 3, Department retention of a contractor to:

1. Conduct sampling of select groundwater monitoring wells and VTMA supply wells;
2. Install and sample additional groundwater monitoring wells necessary to adequately characterize groundwater contamination;
3. Collect soil and surface water samples to determine any threats to the environment;
4. Conduct fate and transport modeling of the contaminated groundwater plume to determine the long-term monitoring and treatment requirements;
5. Assess the efficiency of the VTMA towers and evaluate the utility of upgrades or operational alternatives;
6. Assess the adequacy of the pump and treat system operating at the CBS Vanport facility;
7. Evaluate remediation options at the CBS Beaver Plant based on soil and groundwater samples submitted by CBS.
8. Investigate the quarry to determine if it is a current source of groundwater contamination or poses a threat to public health or the environment.


VII. MAJOR CHANGES FROM PROPOSED RESPONSE

The Analysis of Alternatives (“AOA”) had initially proposed monthly sampling of select groundwater monitoring wells, however, the sampling interval and number of wells to be sampled will be determined based on the evaluation of the results of the groundwater investigation and modeling. Due to comments received, an investigation of the quarry as a source of groundwater contamination will be included in the response. Due to information provided by CBS, an evaluation of soil contamination and remedial options at the CBS Beaver Plant will be included in the response.

VIII. RESPONSE TO PUBLIC COMMENT

The Department’s response to public comments concerning the selection of this response action is attached to this document.

FOR THE COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Kevin Halloran
Environmental Cleanup Program Manager
Southwest Region

5/24/17
Date

CBS / Vanport Response to Administrative Record Comments

I. Public Hearing Comments

A. Rick Quigley Comments

1. Comment: Can DEP provide grant money to operate the air strippers or require CBS to pay to operate the air strippers?

Response: Currently, trichloroethylene (“TCE”) is not present in the Vanport Township Municipal Authority (“VTMA”) supply wells above actionable levels under the Safe Drinking Water Act, and operation of the air strippers is therefore not required. So right now, the Department cannot pay to operate the strippers or require CBS to do so. The Department’s proposed response is intended in significant part to define the current and future risk to the VTMA supply wells from contamination present in the aquifer upgradient of the VTMA supply wells, to determine the functionality and efficiency of the current treatment technology, and to evaluate other alternatives. If the Department’s response action determines that treatment of the VTMA supply wells is required, it intends to pursue CBS for those costs.

2. Comment: What are the potential health effects of exposure to pollutants discharged by CBS at the CBS Beaver Plant and from drums at the quarry?

Response: The main pollutant of concern in the groundwater that has previously contaminated the VTMA supply wells and continues to pose a threat to the wells and to the community and environment generally is TCE.

The following toxicological information on TCE is from the Agency for Toxic Substance and Disease Registry (<https://www.atsdr.cdc.gov/>): TCE is a colorless, volatile liquid. Liquid TCE evaporates quickly into the air. It is nonflammable and has a sweet odor. The two major uses of TCE are as a solvent to remove grease from metal parts and as a chemical that is used to make other chemicals, especially the refrigerant, HFC-134a. TCE was once used as an anesthetic for surgery. TCE breaks down very slowly in soil and water and is removed mostly through evaporation to air. TCE is broken down quickly in air.

Exposure to moderate amounts of TCE may cause headaches, dizziness, and sleepiness; large amounts may cause coma and even death. Eating or breathing high levels of TCE may damage some of the nerves in the face. Exposure to high levels can also result in changes in the rhythm of the heartbeat, liver damage, and evidence of kidney damage. Skin contact with concentrated solutions of TCE can cause skin rashes.

There is strong evidence that TCE can cause kidney cancer in people and some evidence for TCE-induced liver cancer and malignant lymphoma. Lifetime exposure to TCE

resulted in increased liver cancer in mice and increased kidney cancer and testicular cancer in rats.

The National Toxicology Program has determined that TCE is a "known human carcinogen." The EPA and the International Agency for Research on Cancer (IARC) have determined that TCE is "carcinogenic to humans."

Additional information on the health effects of TCE can be obtained by contacting the ATSDR:

Agency for Toxic Substances and Disease Registry
Division of Toxicology and Human Health Sciences
1600 Clifton Road NE, Mailstop F-57
Atlanta, GA 30329-4027
Phone: 1-800-CDC-INFO
Email: Contact CDC-INFO
<https://www.atsdr.cdc.gov/>

3. Comment: Can the Administrative Record be available at the Township instead of having to go to the Department's office for review?

Response: The Administrative Record contains numerous documents, some of which are large. To maintain integrity of the documents contained in the Administrative Record, the documents must be kept at the Department's office. Most of the documents contained in the Administrative Record have been placed on the Department's website for viewing online

(<http://www.dep.pa.gov/About/Regional/SouthwestRegion/Community%20Information/Pages/default.aspx>). The official Administrative Record is located at the Department's Pittsburgh office. Please contact the Department's Southwest Regional Files Section at 412-442-4000 to review the Administrative Record.

B. Paul Hoback Comments

1. CBS cannot be permitted to walk away from its responsibility to the health and welfare of our constituents. We urge CBS to operate and maintain the water treatment equipment.

Response: Currently, TCE is not present in the VTMA supply wells above actionable levels under the Safe Drinking Water Act, and operation of the air strippers is therefore not required. So right now, the Department cannot require CBS to do so. The Department's proposed response is intended in significant part to define the current and future risk to the VTMA supply wells from contamination present in the aquifer upgradient of the VTMA supply wells, to determine the functionality and efficiency of the current treatment technology, and to evaluate other alternatives. If the Department's response action determines that treatment of the VTMA supply wells is required or that other response action is necessary to remediate an ongoing release of TCE or other

hazardous substance for which CBS is responsible, the Department intends to pursue CBS for all necessary investigative and remedial costs.

C. John Szatkiewicz Comments

1. Comment: If the VTMA supply wells are contaminated, why not go to a different water source?

Response: The Department's proposed response is intended to determine the functionality and efficiency of the current treatment technology and to evaluate other alternatives, such as alternative water sources.

D. Dan Rubino

1. Comment: Until we have a complete understanding of the problem, the DEP should require VTMA to operate the air strippers and have redundancies in place.

Response: Currently, TCE is not present in the VTMA supply wells above actionable levels under the Safe Drinking Water Act, and operation of the air strippers is therefore not required. So right now, the Department cannot require VTMA to operate the strippers or require CBS to pay for their operation. The Department's proposed response is intended in significant part to define the current and future risk to the VTMA supply wells from contamination present in the aquifer upgradient of the VTMA supply wells, to determine the functionality and efficiency of the current treatment technology, and to evaluate other alternatives. If the Department's response action determines that treatment of the VTMA supply wells is required, or that other response action is necessary to remediate an ongoing release of TCE or other hazardous substance for which CBS is responsible, the Department intends to pursue CBS for all necessary investigative and remedial costs.

2. Comment: The DEP should work with the community and listen to the community.

Response: The Department values and encourages input from the community. The Department is always available for any questions or comments, or to share information. Please contact Annette Paluh at apaluh@pa.gov.

E. Wayne Ludkiewicz

1. The Shell Cracker plant being constructed across the Ohio River from the VTMA supply wells may affect the VTMA aquifer, has this been studied?

Response: While the Department is not aware of any specific studies of the impact of the cracker plant on the VTMA supply wells, it is not anticipated that the cracker plant will have any effect on the VTMA wells.

F. Jeff Maze Comments

1. Comment: The Department needs to hold CBS responsible and not risk the health and safety of our residents.

Response: The Department considers CBS a responsible party for the groundwater contamination in the VTMA supply well aquifer. If the Department's response action determines that treatment of the VTMA supply wells is required or that other response action is necessary to remediate an ongoing release of TCE or other hazardous substance for which CBS is responsible, the Department intends to pursue CBS for those costs.

Comment: Is the 15-month sampling period discussed quarterly or monthly sampling?

Response: Twice per month samples were collected at the influent to the VTMA water supply system and quarterly samples have been collected from the groundwater monitoring well network.

G. Mike Keelahaer

1. Comment: What is the scope and results of remediation efforts at the CBS Beaver Plant?

Response: The Department's proposed response is intended in significant part to evaluate the source of organic compound contamination located at the CBS Beaver Plant and the effectiveness of the groundwater pump and treat system at the CBS Beaver Plant. As part of its comments on the Administrative Record, CBS submitted to the Department an evaluation of the current pump and treat system and an assessment of site soils.

2. Comment: The Brighton Township Municipal Authority should get a copy of the Administrative Record.

Response: The Administrative Record contains numerous documents, some of which are large. To maintain integrity of the documents contained in the Administrative Record, the documents must be kept at the Department's office. Most of the documents contained in the Administrative Record have been placed on the Department's website for viewing online

(<http://www.dep.pa.gov/About/Regional/SouthwestRegion/Community%20Information/Pages/default.aspx>). The official Administrative Record is located at the Department's Pittsburgh office. Please contact the Department's Southwest Regional Files Section at 412-442-4000 to review the Administrative Record.

H. John Noto

1. Comment: How did the site go from being on the Superfund list to being cleared?

Response: The contamination at the CBS Beaver Plant and in the groundwater upgradient of the VTMA supply wells continues to pose a threat to public health and the environment, and the site is not considered cleared by either DEP or EPA. The CBS Vanport/Westinghouse Site was never on the EPA Superfund Site list, although the Beaver Sand Company Quarry was on an EPA list, but not actually listed as an EPA Superfund Site. EPA listed the Beaver Sand Quarry as a “no further action required” site, indicating that after a Preliminary Assessment and Site Investigation, EPA determined that they were not taking any further action on the Quarry and subsequently archived the Site. What has changed recently is that the level of TCE present at the VTMA supply wells has fallen below the 5 parts per billion (“ug/L”) maximum contaminant level (“MCL”) prescribed under Pennsylvania’s Land Recycling and Remediation Standards Act, known as Act 2, and the federal Safe Drinking Water Act. TCE has not been detected in the supply wells in excess of 5 ug/L for the last several years. Notwithstanding the threat posed by upgradient groundwater contamination, including TCE, because TCE is not currently present at the VTMA wells at levels in excess of 5 ug/L, operation of the air strippers is not required by the Safe Drinking Water Act.

2. Comment: What guarantee do we have that someone is going to address the contamination issue and make sure the water is safe in the future?

Response: In respect to VTMA’s supply wells, the Department’s proposed response is intended to define the current and future risk to the VTMA supply wells from contamination present in the aquifer upgradient of the VTMA supply wells, to determine the functionality and efficiency of the current treatment technology, and to evaluate other alternatives. In addition, it is important to note that the Department’s proposed response is intended to address not only the threat groundwater and soil contamination poses to the VTMA supply wells, but the threat that contamination poses to the environment and the surrounding community generally. Contamination of the VTMA wells is an important, but not exclusive, Department concern. Beyond risk to the VTMA wells, the continuing release of TCE and other contaminants in area groundwater and soil threatens area ecology and poses to community residents significant direct contact, inhalation and ingestion risks, whether those residents drink VTMA water or not. To ensure public safety and to protect the environment, as it is statutorily bound to do, the Department’s proposed response targets all threats emanating from the ongoing release of TCE and any other hazardous substance at the subject site. After the Department’s response action, it will complete a final report that details what long-term controls are necessary to protect public health and the environment.

II. Written Comments

A. CBS Comments

1. Comment: 1989 Consent Order and Agreement and HSCA Section 1301, pp. 4-5. The 1989 COA and Section 1301 of HSCA preclude the Department from recovering from CBS costs it incurs if it carries out its proposed interim response.

Response: Pursuant to paragraph 18 of the 1989 COA, nothing in the COA authorizes any violation of law, including, as particularly important here, the Clean Streams Law and the Solid Waste Management Act (“SWMA”). Pursuant to Paragraph 19 of the 1989 COA, the Department has reserved all rights to institute civil action for pollution or potential pollution to the air, land, or waters of the Commonwealth. Pursuant to Paragraphs 20 and 25 of the 1989 COA, CBS is required to reimburse the Department for its costs of investigation into CBS’s use and disposal of TCE and for costs and expenses generally that are incurred after April 24, 1989. The 1989 COA contains no covenant not to sue.

Pursuant to Sections 701 and 702 of HSCA and Section 107 of CERCLA, the ongoing presence of TCE in the subject aquifer constitutes a “release or threatened release” of “hazardous substances” at or from a site, for which the Department believes CBS is strictly, jointly and severally liable. CBS is liable for that release not only for its impact on the VTMA water supply system and the communities it serves but for the impact of the release on the environment and on public health and safety generally. Whatever the 1989 COA says in respect to the specific impact of the release on the water supply system, nothing in the COA precludes the Department from addressing and seeking cost recovery for the potential further pollution of the VTMA drinking water supply the upgradient TCE presently constitutes or the impact of the TCE on the community and environment generally.

Pursuant to Section 103 of HSCA, the Department’s proposed response is an interim response because it is intended to be completed within 12 months and at costs under \$2 million. Pursuant to Section 1301(c), nothing in Section 1301(a) affects the Department’s ability to implement or recover costs for an interim response.

If necessary, the Department will seek to recover its costs in federal court pursuant to Section 107(a) of CERCLA, with pendent State law claims pursuant to Sections 701 and 702 and Section 1101 (public nuisance abatement) of HSCA; and Section 613 of the SWMA (public nuisance abatement). In addition, the Department will look to implement in full its statutory responsibilities regarding civil penalties and natural resource damages.

2. Comment: CBS Comments on Existing Administrative Record, page 5. CBS alleges that the Department omitted several recent reports and correspondence related to the Site from the Administrative Record.

Response: Document 6 was previously provided by CBS and therefore was included in the Administrative Record. Documents 1, 2, 3, 4, 5, 8, 9, and 10 were not present in the Department’s Regional Files and therefore were not included in the Administrative

Record. Document 7 (newspaper clippings) was included in the Department's Regional Files, which were provided along with the Administrative Record for review.

The Department will review the list of suggested documents to determine whether they are relevant to the release of TCE and other hazardous substances at the site and to the selection, design and adequacy of the Department's proposed response action. If so, they will be included in the administrative record.

3. Comment: CBS Comments on Existing Administrative Record, page 5. CBS provided three documents that were not included in the Administrative Record but which the Department had not previously received until now.

Response: The Department cannot include documents in the Administrative Record that we did not have or which did not exist. The Department appreciates CBS providing these additional documents to the Department and will now include them in the Administrative Record.

4. Comment: Comments on Response Justification Document and Alternatives Analysis, page 6. The Department's Response Justification Document does not justify the decision to act under HSCA.

Response: The continued presence of TCE, as well as elevated levels of other organic compounds in groundwater and soil, upgradient of the VTMA supply wells, constitute a release of hazardous substances and present a threat to public health and the environment. The Department's action under HSCA is therefore justified.

5. Comment: Comments on Response Justification Document and Alternatives Analysis, page 6. The reference in the RJD that 16 monitoring wells exceeded the Act 2 standard does not address the absence of risk to the VTMA water supply wells and customers.

Response: Upgradient groundwater monitoring wells from the VTMA supply wells contain TCE at levels above the MCL and elevated levels of other organic compounds and therefore there is a real and present threat to the VTMA pumping wells and public health. The nature and extent of these threats and options to best deal with them have not been fully established, which is the purpose of the proposed HSCA action.

In addition, please see the Department's response to Comment I-H-2 for its concerns beyond those specific to the VTMA wells.

6. Comment: Comments on the Response Justification Document and Alternatives Analysis, page 6. The 2016 Annual Report contains the most recent groundwater data from the Site and demonstrates that there is no threat to the VTMA water supply.

Response: The Department did not have this report in its possession when it completed the RJD and AOA and therefore could not rely on any of its information or conclusions. The Report indicates that TCE is currently present in the groundwater upgradient of the VTMA supply wells at levels above the MCL. While the fate and transport analysis conducted by CBS indicates that the TCE concentration in certain upgradient wells may take several years to reach the VTMA supply wells and therefore does not pose a threat to the VTMA supply wells, the Department does not agree with this conclusion. The mere presence of TCE above the MCL and elevated levels of other organic compounds in groundwater upgradient of the VTMA supply wells does in fact pose a threat to the VTMA supply wells and public health. The immediacy of the threat, the acceptable risk, and the appropriate response to the threat need to be determined. The limited fate and transport analysis conducted by CBS and the current levels of organic compounds at the VTMA supply wells may preclude the immediate need to operate the air strippers, but a threat still exists if there are organic compounds in the groundwater upgradient of the supply wells. The Department will review the Annual Report and determine if it justifies any change to the proposed response.

In addition, please see the Department's response to Comment I-H-2 for its concerns beyond those specific to the VTMA wells.

7. Comment: Comments on the Response Justification Document and Alternatives Analysis, Inaccuracy of the RJD, page 7. The Department's initial version of the RJD was grossly inaccurate. The term 'system' in the second sentence is very misleading.

Response: The Department agrees that the second sentence refers to wells sited throughout the subject aquifer and not to the VTMA supply wells.

8. Comments on the Response Justification Document and Alternatives Analysis, Recent Trends in Site Groundwater, page 7. Data shows there is no threat of contamination to the VTMA wellfield or its water supply system.

Response: Upgradient monitoring wells from the VTMA supply wells contain TCE at levels above the MCL and elevated levels of other organic compounds, and therefore there is a real and present threat to the VTMA pumping wells and public health. The nature and extent of that threat and options to best deal with the threat have not been fully established, which is the purpose of the proposed HSCA action.

In addition, please see the Department's response to Comment I-H-2 for its concerns beyond those specific to the VTMA wells.

9. Comment: Comments on the Response Justification Document and Alternatives Analysis, Recent Trends in Site Groundwater, page 9. Any remaining contaminants at the CBS Beaver Plant are not migrating off-site and do not pose a risk to downgradient areas, including the VTMA wellfield.

Response: The Department did not have the capture zone analysis report in its possession when it completed the RJD and AOA and therefore could not rely on any of its information or conclusions. The Department will review the report and determine if it justifies any change to the proposed response. Groundwater monitoring wells at the CBS Beaver Plant and downgradient of the CBS Beaver Plant outside of the capture zone contain TCE above 5 ug/L and pose a threat to the VTMA supply wells and public health. Wells MW-17D and MW-28 located at the CBS Beaver Plant have current TCE concentrations above 5 ug/L and are outside of the capture zone. Wells DER-10, MW-17S, and MW-18 located at the CBS Beaver Plant have had recent TCE concentrations above 5 ug/L and are outside of the capture zone. Wells DER-5 and MW-65 located downgradient of the CBS Beaver Plant but upgradient of the quarry have current TCE concentrations above 5 ug/L and are outside of the capture zone. The TCE (and other organic compounds) in these areas is not currently controlled by CBS and continues to pose a threat to the VTMA supply wells, the public health, and the environment.

10. Comment: Comments on the Response Justification Document and Alternatives Analysis, Recent Trends in Site Groundwater, page 9. The RJD appears to suggest that the recent sampling results showing high concentrations of TCE at the Beaver Plant indicate a new issue.

Response: The Department did not intend to suggest that recent sampling indicates a new issue. Extremely elevated levels of TCE and other organic compounds have been present in the groundwater and discharging to groundwater at the CBS Beaver plant for decades.

11. Comment: Comments on the Response Justification Document and Alternatives Analysis, Recent Trends in Site Groundwater, page 9. The influent to the VTMA pumping wells has been below MCLs since 2012.

Response: The Department agrees that sampling indicates that the influent to the VTMA pumping wells has been below MCLs since 2012.

In addition, please see the Department's response to Comment I-H-2 for its concerns beyond those specific to the VTMA wells.

12. Comment: Comments on the Response Justification Document and Alternatives Analysis, Recent Trends in Site Groundwater, page 10. The concentration of TCE has decreased throughout the Site.

Response: The Department agrees that most wells have shown a decrease in TCE concentration.

In addition, please see the Department's response to Comment I-H-2 for its concerns beyond those specific to the VTMA wells.

13. Comment: Comments on the Response Justification Document and Alternatives Analysis, Recent Trends in Site Groundwater, page 11. Based on the documented historical disposal in the quarry, likely undocumented disposal, and the dramatic change in nearby groundwater quality after storm water discharge into the quarry decreased, the quarry is the most likely source of the TCE that previously affected the VTMA wellfield.

Response: While the quarry may be a source of TCE contamination, there is no direct evidence of any TCE disposal within the quarry, and there is not sufficient evidence to conclude that the quarry is the 'most likely source' of the TCE that previously contaminated the VTMA wellfield. As CBS indicated in footnote 2 on page 3 of their comments, TCE in soil at the quarry was detected below Act 2 soil standards. The historic and current extremely high levels of TCE and other organic compounds in the soils and groundwater at the CBS Beaver Plant are higher than at any other location, including downgradient of the quarry. While CBS contends that the source areas at the CBS Beaver Plant are currently being controlled by the Plant's pumping wells, there was an extended period prior to operation of the pumping wells when contaminated groundwater at the CBS Beaver Plant moved toward the quarry and the VTMA supply wells uncontrolled. The groundwater downgradient of the CBS Beaver Plant was and continues to be contaminated by discharges of organic compounds from the CBS Beaver Plant. The CBS Beaver Plant cannot be excluded as a source of contamination of the groundwater between the CBS Beaver Plant and the Ohio River. Determining the presence and extent of organic compound contamination associated with the quarry is one of the objectives of the proposed response.

14. Comment: Comments on the Response Justification Document and Alternatives Analysis, Recent Trends in Site Groundwater, page 12. The current concentration of TCE at well DER-2 is an order of magnitude below the concentration that would cause an exceedance of the MCL in groundwater at the VTMA wellfield. The current concentration of TCE in monitoring wells at the source of the contamination, the quarry, is not predicted to cause an exceedance at the VTMA wellfield.

Response: The Department did not have the fate and transport analysis in its possession when it completed the RJD and AOA and therefore could not rely on any of its information or conclusions. The Department will review the fate and transport analysis and determine if it justifies any change to the proposed response. The DER-2 TCE concentration cited is from one sample result. All previous sampling events showed higher TCE concentrations. While the trends for most of the wells are decreasing, the large reductions have only been seen in very recent data, and numerous wells upgradient of the VTMA supply wells contain TCE levels well in excess of the MCL. The CBS Beaver Plant is a documented source of TCE contamination in the groundwater upgradient of the VTMA supply wells and cannot be excluded as a source of contamination. Determining the presence and extent of organic compound contamination associated with the quarry is one of the objectives of the proposed response.

In addition, please see the Department's response to Comment I-H-2 for its concerns beyond those specific to the VTMA wells.

15. Comment: Comments on the Response Justification Document and Alternatives Analysis, Recent Trends in Site Groundwater, page 12. The approximate travel time from well DER-2 to the VTMA wellfield is over four years.

Response: The Department did not have the fate and transport analysis in its possession when it completed the RJD and AOA and therefore could not rely on any of its information or conclusions. The Department will review the fate and transport analysis and determine if it justifies any change to the proposed response. CBS did not evaluate the fate and transport of all upgradient wells containing elevated levels of TCE and did not evaluate the fate and transport of all organic compounds present in the upgradient wells.

In addition, please see the Department's response to Comment I-H-2 for its concerns beyond those specific to the VTMA wells.

16. Comment: Comments on Analysis of Alternatives and Proposed Response, page 12. The Department's Analysis of Alternatives and Proposed Response is superficial and does not meet the requirements of HSCA.

Response: CBS did not provide any statutory citations from HSCA to which the AOA failed to meet the requirements. The AOA sufficiently explores the selection, design and adequacy of the proposed response action to enable meaningful public review and comment. As such, the AOA meet the requirements of HSCA.

17. Comment: Comments on Analysis of Alternatives and Proposed Response, page 12. There is no evidence in the Administrative Record that the air strippers and the CBS pump and treat system at the CBS Beaver Plant are inefficient or need repairs.

Response: The Department has not concluded that the air strippers or the pump and treat system are inefficient or need repairs. The proposed response is intended to evaluate those concerns. The air strippers were installed decades ago and may have reached the end of their useful life. An analysis of the functionality, efficiency and comparison to newer technology or other alternatives is warranted. VTMA has informed the Department that the packing material inside the air strippers is due to be replaced during the summer of 2017, and this will be taken under consideration during the proposed response by the Department. The Department had little to no information on the adequacy of the CBS pump and treat system prior to the reports submitted with these comments. The Department will review the documents regarding the pump and treat system and will determine if they justify any changes to the proposed response.

18. Comment: Comments on Analysis of Alternatives and Proposed Response, page 12. There are no details in the alternatives analysis regarding the specific actions contemplated under the various alternatives.

Response: Specific details of the response are not included in the AOA. Specific details will be included in a scope of work following discussion with the Department's selected contractor.

19. Comment: Comments on Selected Alternative 3, Monthly sampling, page 12. The selected alternative is unreasonable and unnecessary.

Response: Upgradient monitoring wells from the VTMA supply wells contain TCE at levels above the MCL and elevated levels of other organic compounds, and therefore there is a clear and present threat to the VTMA pumping wells, public health, and the environment. The nature and extent of that threat and options to best deal with the threat have not been fully established, which justifies the proposed HSCA action as reasonable and necessary to protect public health.

In addition, please see the Department's response to Comment I-H-2 for its concerns beyond those specific to the VTMA wells.

20. Comment: Comments on Selected Alternative 3, Monthly sampling, page 13. The VTMA already samples the system influent monthly, there is no reason to duplicate that sampling effort.

Response: The groundwater sampling effort included in the proposed response is intended to sample multiple existing and possibly newly installed monitoring wells throughout the VTMA aquifer, not just the VTMA supply wells. The exact wells to be sampled will be determined following review of all available data and discussions with the Department's selected contractor.

In addition, please see the Department's response to Comment I-H-2 for its concerns beyond those specific to the VTMA wells.

21. Comment: Comments on Selected Alternative 3, Fate and Transport Modeling, page 13. CBS has completed a fate and transport analysis in the 2016 Annual Report, based on data collected over many years of monitoring. This analysis will now be part of the Administrative Record. There is no need for duplicative analysis as part of the response action.

Response: The Department did not have the fate and transport analysis when the AOA was completed. The Department will review the analysis and determine if it justifies any changes to the proposed response. CBS did not evaluate the fate and transport of all

upgradient wells containing elevated levels of TCE and did not evaluate the fate and transport of all organic compounds present in the upgradient wells.

22. Comment: Comments on Selected Alternative 3, Soil and surface water sampling, page 13. CBS has completed additional soil sampling and evaluation at the CBS Beaver Plant as described in the 2016 Pre-Remedial Design Investigation Report to refine its understanding of chlorinated VOC impacts which precludes the need for duplicative sampling or analysis as part of the response action.

Response: The Department did not have this report when the AOA was completed. The Department will review the report and determine if it justifies any changes to the proposed response. Upon initial review of this report, the Department has noted that CBS did not conduct any surface water sampling as part of the 2016 Pre-Remedial Design Investigation Report.

23. Comment: Comments on Selected Alternative 3, Soil and surface water sampling, page 14. With respect to surface water, CBS completed a reconnaissance of Two-Mile Run near the Beaver Plant and the quarry in late 2014 and did not identify any recent modifications to the course or drainage features of the stream that might influence groundwater flow patterns at the site.

Response: The surface water sampling in the proposed response is intended to determine if there are impacts to surface water near the CBS Beaver Plant and the quarry associated with discharges of contaminated groundwater. The Department has noted that the 2014 CBS reconnaissance of Two-Mile Run was visual in nature and did not include surface water sampling as the Department's proposed response will.

24. Comment: Comments on Selected Alternative 3, Assess treatment towers, page 14. There is no evidence in the Administrative Record that the air stripper towers are wearing out or operating inefficiently and there is no need to assess the efficiency of these towers because the TCE concentration in the influent water has been below 5.0 ug/L since October 2012.

Response: The Department has not concluded that the air strippers are wearing out or operating inefficiently. The proposed response is intended to evaluate those concerns. The air strippers were installed decades ago and probably have reached the end of their useful life. An analysis of the functionality, efficiency and comparison to newer technology or other alternatives is warranted. VTMA has informed the Department that the packing material inside the air strippers is due to be replaced during the summer of 2017, and this will be taken under consideration during the proposed response by the Department.

25. Comment: Comments on Selected Alternative 3, Assess pump and treat system, page 14. CBS and the Department are familiar with the design of this system, and the Department

has cited no evidence that the system is inefficient, malfunctioning, or on the verge of breakdown. The recent capture zone analysis confirmed that the pumping wells continue to capture all groundwater flow in the buried valley and successfully treat VOCs to below MCLs.

Response: The Department has not concluded that the pump and treat system 'is inefficient, malfunctioning, or on the verge of breakdown. The Department had little to no information on the adequacy of the CBS pump and treat system prior to the reports submitted with these comments. The Department will review the documents regarding the pump and treat system and will determine if they justify any changes to the proposed response.

B. Brighton Township Comments

1. Comment: We encourage the Department to take whatever measures are available to compel CBS to pay the cost of the continued operation of the treatment system to safeguard the water supply from the TCE contamination, of which the former CBS facility was identified as a source.

Response: The Department's proposed response is intended to define the current and future risk to the VTMA supply wells from organic compound contamination present in the aquifer upgradient of the VTMA supply wells, to determine the functionality and efficiency of the current treatment technology, and to evaluate other alternatives. Currently, TCE is not present in the VTMA supply wells and operation of the air strippers is not required by the Safe Drinking Water Act. If the Department's response action determines that treatment of the VTMA supply wells is required or that other response action is necessary to remediate an ongoing release of TCE or other hazardous substance for which CBS is responsible, the Department intends to pursue CBS for all necessary investigative and remedial costs.

C. Brighton Township Municipal Authority Comments

1. Comment. The BTMA Board of Directors feels it should be notified by the DEP directly as a first party of all decisions made by DEP regarding future programs and activities at Vanport as well as discussions with CBS about continuing their participation in support of the operation and maintenance of the stripping towers at Vanport.

Response: The Department will include BTMA in all written correspondence provided to responsible parties regarding the Department's proposed response.

2. Comment: The Department mentioned that there were ongoing remediation efforts at the CBS Beaver Plant even though the site is listed by the EPA as archived. We would like to learn the details about the scope and effectiveness of this effort and plans to fully remediate the site and eliminate the source of TCE.

Response: The Department's proposed response is intended to evaluate the source of organic compound contamination located at the CBS Beaver Plant and the effectiveness of the groundwater pump and treat system at the CBS Beaver Plant. As part of its comments on the administrative record, CBS submitted to the Department an evaluation of the current pump and treat system and an assessment of site soils. CBS has not submitted a revised remediation plan for the CBS Beaver Plant. To clarify, the CBS Vanport/Westinghouse Site was never on the EPA Superfund Site list, although the Beaver Sand Company Quarry was on an EPA list, but not actually listed as an EPA Superfund Site. EPA listed the Beaver Sand Quarry as a "no further action required" site, indicating that after a Preliminary Assessment and Site Investigation, EPA determined that they were not taking any further action on the Quarry and subsequently archived the Site.

Please see the Department's response to Comment I-H-2 for its concerns beyond those specific to the VTMA wells.

3. Comment: BTMA sees no reason why CBS shouldn't procure consultants and be made to cover the total cost of the \$600,000 estimated to evaluate and implement solutions.

Response: While the Department agrees that CBS is responsible for TCE contamination in the aquifer upgradient of the VTMA supply wells, the risk to the VTMA wells and the community and environment generally is currently not completely defined, and there is evidence that there may be additional sources of TCE. The Department's investigation will determine the sources of organic compound contamination, the level of risk to the VTMA supply wells, community, and environment, and the appropriate remedial actions. The Department intends to pursue appropriate cost recovery from CBS following its response.

4. Comment: An appropriate testing program should be put in place to ensure water safety, daily if need be. The cost of this program should be the sole responsibility of CBS and not the Commonwealth of Pennsylvania or the water authorities affected.

Response: The Department's investigation is intended to determine the level of risk to the VTMA supply wells, community, and environment, and the appropriate treatment technology or other appropriate alternatives, including potential long-term monitoring. The cost and responsible parties of any long-term solution will be determined following completion of the Department's action. The Department intends to pursue appropriate cost recovery from CBS for its response action.

D. Lani Fritz Comments

1. Comment: The Department must keep Vanport informed of the ongoing issue with CBS.

Response: The Department will include Vanport Township and VTMA in all written correspondence provided to responsible parties regarding the Department's proposed response.

2. Comment: CBS has an obligation to continue to pay for the stripper. Squabbling over the money needed to secure safe drinking water is not acceptable.

Response: The Department's proposed response is intended to define the current and future risk to the VTMA supply wells from organic compound contamination present in the aquifer upgradient of the VTMA supply wells, to determine the functionality and efficiency of the current treatment technology, and to evaluate other alternatives. Currently, TCE is not present in the VTMA supply wells and operation of the air strippers is not required by the Safe Drinking Water Act. If the Department's response action determines that treatment of the VTMA supply wells is required or if the Department determines that CBS is responsible for a continuing release of a hazardous substance, it intends to pursue CBS for all necessary investigative and remedial response costs. Please see the Department's response to Comment I-H-2 for its concerns beyond those specific to the VTMA wells.