



April 25, 2016

Ms. Sharon R. Fisher, CHMM
Environmental Manager
Harley-Davidson Motor Company Operations, Inc.
1425 Eden Road
York, PA 17402

*Re: Second Year Progress Report of the Bldg3 Footer Drain Lift Station Shutdown Monitoring
Former York Naval Ordnance Plant (fYNOP)
1425 Eden Road, Springettsbury Township, York, Pennsylvania
Project 10012.23*

Dear Ms. Fisher:

The purpose of this letter is to provide the 2015 results of groundwater monitoring during shutdown of the Building 3 (Bldg3) Footer Drain Lift Station. Water level monitoring was conducted by Groundwater Sciences Corporation (GSC) of Harrisburg, Pennsylvania. The Bldg3 Footer Drain System (System) is a groundwater collection system located beneath and adjacent to Harley-Davidson's manufacturing building (Bldg3) at the former York Naval Ordnance Plant (fYNOP), 1425 Eden Road, Springettsbury Township, York, Pennsylvania (Site). Any water that accumulates in the System drains by gravity into a Lift Station where active pumping was terminated on June 19, 2013. Monthly monitoring of groundwater levels has been performed through the present time.

A report titled "Results of NPBA Extraction System and Bldg3 Footer Drain Monitored Shutdown Tests for Part 2 of the Supplemental Groundwater Remedial Investigation" (GSC, 2014) provided recommendations to shut down pumping at the Lift Station because groundwater levels have never risen sufficiently to negatively impact Bldg3 and because chemicals of concern (COCs) have been undetected or detected at very low concentrations in samples from the Lift Station. The report was submitted to the US Environmental Protection Agency (USEPA) and the Pennsylvania Department of Environmental Protection (PADEP) on April 11, 2014. The USEPA approved the shutdown of active pumping of the Lift Station and subsequent monitoring in an email reply to Mr. Stephen Snyder of GSC, dated April 17, 2014. The approved monitoring plan involves water level monitoring for two years, with preparation of a final report with recommendations after the second year of monitoring, provided that a heavy precipitation event occurred during the two year monitoring period. This second-year progress report provides monitoring data for 2015.

BACKGROUND

In 2001, Harley-Davidson expanded its facility through the construction of a new production plant, designated as Bldg3. The construction included the installation of a groundwater collection system that includes a deep interceptor trench and drain (Footer Drain), a shallow interceptor trench (or Toe Drain), a pumping station, designated as the Bldg3 Lift Station (formerly called Softail Lift Station), and a groundwater collection well (CW-19), located inside Bldg3.

All three components of the groundwater collection system were designed to lower the groundwater level beneath Bldg3, and direct flow to an underground collection tank (Lift Station) and then to the groundwater treatment facility located in Building 41. Groundwater collection via this system was initiated in March 2002. Refer to “Results of NPBA Extraction System and Bldg3 Footer Drain Monitored Shutdown Tests for Part 2 of the Supplemental Groundwater Remedial Investigation” (GSC, 2014) for details of the trench and lift station construction. The Footer Drain was constructed to be approximately 20 feet below the finished floor grade, and designed to intercept the water table. The Toe Drain next to the hillside was constructed approximately 6 feet below the finished floor grade, and designed to capture shallow groundwater flow that seasonally discharges at the base of the slope. Well CW-19 was installed in the event that groundwater would rise to a level of the sub-floor paint sludge tank. Refer to “Results of NPBA Extraction System and Bldg3 Footer Drain Monitored Shutdown Tests for Part 2 of the Supplemental Groundwater Remedial Investigation” (GSC, 2014) for details of the CW-19 well construction. Installation of CW-19 was precautionary, with the depth of the well penetrating below the adjacent paint sludge pit, but above projected groundwater table elevations. Groundwater has never accumulated in well CW-19 and pumping of it has never been necessary.

Monitored shutdown testing of the System was performed as a component of the Part 2 Supplemental Investigation (Part 2 SRI) from June 19, 2013 through November 25, 2013. Section 4.3.5 of the Field Sampling Plan (FSP) for the Part 2 SRI (GSC, 2012) and Addendum #7 to the FSP (GSC, 2013) describe the rationale and plan for evaluating the deactivation of the System. The Bldg3 Lift Station receives drainage from the Bldg3 Footer Drain and formerly from a Toe Drain which collected drainage from the toe of the hill located east of Bldg3, as described below and shown in **Attachment A**, Building 3 Footer Drain System Long-Term Monitoring Locations map.

RESULTS

An InSitu LevelTroll™ water level recorder has been automatically recording water levels in the Lift Station since May 24, 2013 – three weeks prior to de-activation of the pumping of the Bldg3 Lift Station on June 19, 2013. Monthly downloads of the recorder and the collection of manual water level measurements from the Lift Station, Footer Drain Cleanouts 1 and 3 (FD1 and FD3), and well CW-19 began in July 2014 after allowing sufficient time for review of the shutdown testing results by PADEP.

The monthly manual water level measurements collected since the start of the System shutdown test are listed in **Attachment B**, Table 1. Manual water elevation measurements in 2015 at the Lift Station ranged from 371.32 feet above mean sea level (amsl) on November 25, 2015 to 372.43 feet amsl on May 21, 2015. Well CW-19, with an invert elevation of 363 feet amsl, is located adjacent to the paint sludge pit beneath the western side of Bldg3 and was drilled seven feet deeper than the paint sludge pit. CW-19 was dry during all monthly measuring events and its automatic water level sensors have never indicated the occurrence of an elevated groundwater condition in the well. Thus, the groundwater elevation has remained below the elevation of the paint sludge pit. FD1, located outside the east side of Bldg3, contained water once during the 2015 monitoring period, on July 15, 2015, at an elevation of 371.65 feet amsl, which is about 23 feet below the Bldg3 floor elevation of 395 feet amsl. That elevation is also more than 12 feet lower than the bottom of a subfloor equipment pit. FD3, with an invert elevation of approximately 372.5 feet amsl, was dry during each measuring event. FD3 is located inside an active manufacturing area of Bldg3 which was inaccessible for monitoring in October and December.

Monthly observations were performed for evidence of water seepage down-gradient of the Lift Station and west of Bldg3. No seepage was observed that appeared to be the result of drainage from the Lift Station.

Automatically recorded water level data measured in the Lift Station is shown on the hydrograph in **Attachment C**. Daily precipitation data from an on-site Davis Instruments wireless Vantage Pro2 weather station also has been added to the hydrograph (it should be noted that precipitation data shown from January 1, 2014 through April 20, 2014 was obtained from public data from the North Hills weather station in York, Pennsylvania due to data being over-written in the on-Site weather station memory during those months). The hydrograph shows that the water level in the Lift Station responds to precipitation events, but water quickly drains out from the Lift Station into the surrounding subsurface material. The largest daily precipitation event during the reporting year (2015) was 2.15 inches on June 1, which resulted in the water elevation in the Lift Station rising to 373.13 feet amsl, a rise of 1.0 feet. The excess water quickly drained by gravity from the Lift Station as shown on the hydrograph (**Attachment C**). In 2015, the Lift Station's highest water elevation of 373.31 feet amsl was recorded by the data logger on March 14 after several days of rainfall (total of 1.48 inches).

The two-year planned monitoring period was to include a period of heavy precipitation outside of the growing season so that the potential effects of not pumping the lift station would be observed. Precipitation of approximately 2.5 inches or more in a 24-hour period would most likely be enough to adequately test the effects of a large rainfall event; however, the weather conditions prior to a precipitation of that magnitude would also need to be considered in the analysis.

A precipitation event of 2.5 inches or more did not occur during the monitoring period in 2014 or 2015; however, 6.4 inches of rain fell on October 9-11, 2013, while manual monitoring and inspection for seepage was not occurring. The automatic recorder was installed and was operating in October 2013. This recorded data can be used to predict the effects of future heavy precipitation events. The highest groundwater level recorded in the Lift Station to date occurred during that rainfall at 375.06 feet amsl on October 11, 2013. This groundwater elevation is about 20 feet lower than the top of the Lift Station and about 18 feet lower than the ground surface at the Lift Station. The hydrograph (**Attachment C**) shows a rapid decline in the water elevation in the Lift Station after this precipitation event.

Another rainfall event of 3.69 inches occurred in a single day during the shutdown testing period on July 22, 2013, and resulted in a water elevation in the Lift Station of up to 373.32 feet amsl which also declined rapidly due to gravity drainage from the Lift Station sump.

It is likely that any drainage from out of the Lift Station would dissipate in the subsurface before it would intersect with the ground surface and result in surface seepage. A ground surface elevation of 375 feet amsl (equal to the water elevation in the Lift Station on October 11, 2013) is located approximately 500 feet west of the Lift Station, at one of Harley-Davidson's water retention ponds. Subsurface drainage from the Lift Station is likely to dissipate in that 500-foot distance without surfacing.

A groundwater sample from the Lift Station was collected on October 2, 2015 and submitted to TestAmerica Pittsburgh Laboratory for analysis of volatile organic compounds. Laboratory results are summarized in **Attachment D**, Table 2, which includes all historical analytical data for the Lift Station. All COCs were below the laboratory detection limits in the annual sample collected in October.

In summary, groundwater elevation data from monitoring in 2015 indicates that there were no adverse effects to Bldg3 from shutdown of the Lift Station for the System. Additionally, the laboratory analytical results continue to indicate that dissolved COCs in the water samples from the Lift Station do not exceed PADEP medium specific standards for residential used aquifers (RUA MSCs) with total dissolved solids $\leq 2,500$ milligrams per liter (mg/l).

CONTINUED MONITORING FOR 2016

A modification is recommended to the planned monitoring program for the Bldg3 Footer Drain System and Lift Station shutdown. The recommended work plan for 2016 is to discontinue monthly manual monitoring, but to continue automatic monitoring of the water level in the Lift Station using the transducer and continuous data logger currently installed, with downloads occurring on a quarterly basis (March, June, September and December). In the event of precipitation of approximately 2.5 inches in 24 hours outside of the growing season, then manual monitoring of water levels from the Lift Station, well CW-19, FD1 and FD3, would be performed within three days, and the data logger would be downloaded. At that time, observations would also be performed for evidence of water seepage down-gradient of the Lift Station. Automatic high water level sensors will remain functional in well CW-19. Once a precipitation event approximately 2.5 inches in 24 hours occurs, a final report of results of the monitoring program will be prepared with recommendations of future plans for the Bldg3 Footer Drain System and Lift Station operation.

GSC appreciates the opportunity to assist Harley-Davidson and the fYNOP team with the results of the Second Year Progress Report of the Bldg3 Footer Drain Lift Station System Shutdown Monitoring. Please do not hesitate to contact me at 717-901-8187 if you have any questions or require additional information.

Very truly yours,
GROUNDWATER SCIENCES CORPORATION



Stephen M. Snyder, P.G.
Senior Associate

Attachments: A – Building 3 Footer Drain System Long-Term Monitoring Locations Map
 B – Table 1
 C – Lift Station Water Elevation Hydrograph
 D – Table 2

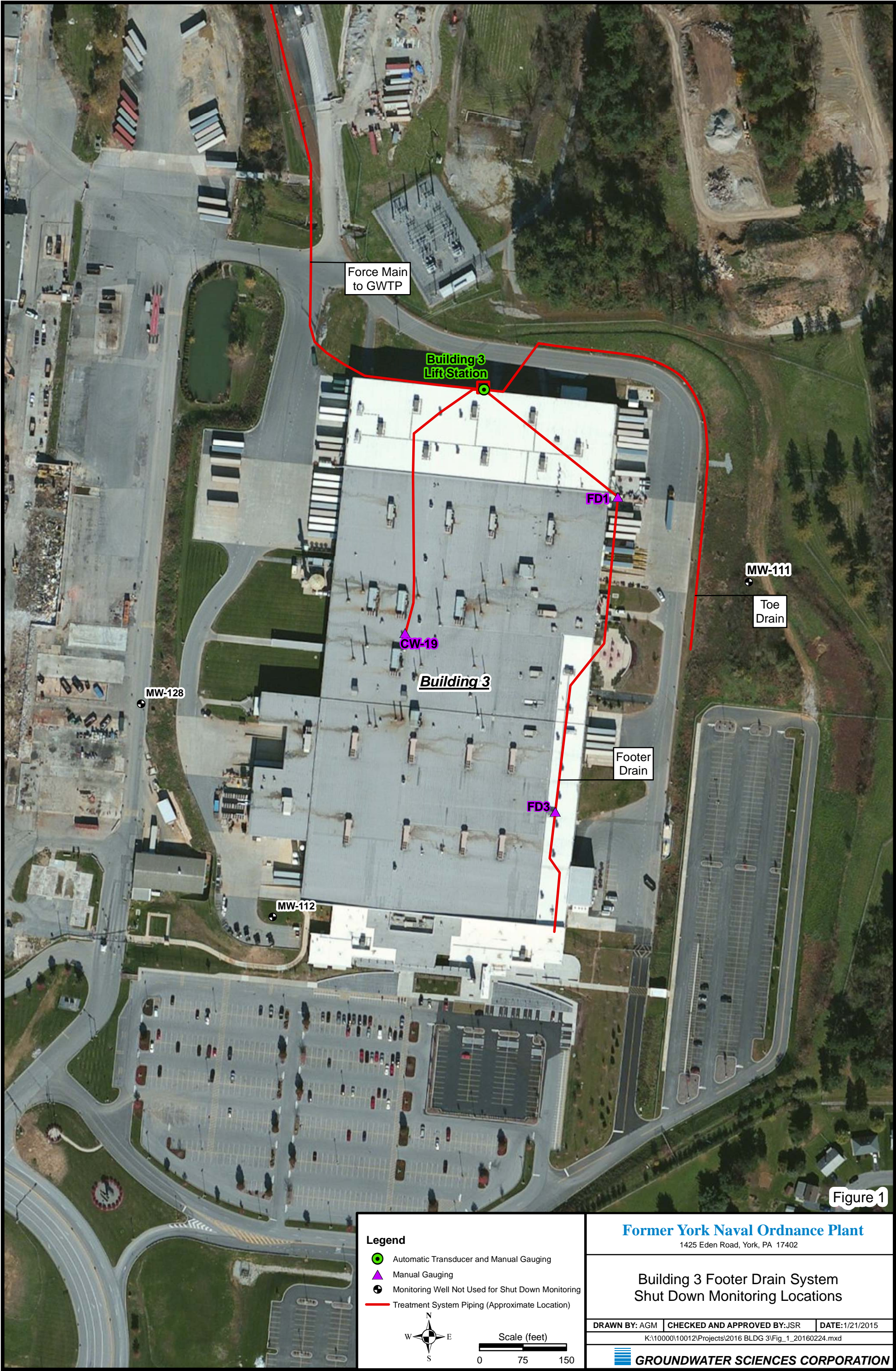
cc: Ralph Golia, AMO Environmental Decisions
 Hamid Rafiee, USACE Baltimore District

REFERENCES

- GSC, 2012. Field Sampling Plan For Part 2 of the Supplemental Groundwater Remedial Investigation at the former York Naval Ordnance Plant in York, Pennsylvania, April.
- GSC, 2013. Addendum #7, to Field Sampling Plan For Part 2 of the Supplemental Groundwater Remedial Investigation Former York Naval Ordnance Plant, March 20.
- GSC, 2014. Results of NPBA Extraction System and Bldg3 Footer Drain Monitored Shutdown Tests for Part 2 of the Supplemental Groundwater Remedial Investigation Former York Naval Ordnance Plant, April.

ATTACHMENT A

Building 3 Footer Drain System Long-Term Monitoring Locations Map



ATTACHMENT B

Table 1 – Building 3 Footer Drain System and Lift Station Water Elevations from Manual Monitoring

Table 1
Monthly Monitoring Data
Building 3 Footer Drain System Lift Station Shutdown
Former York Naval Ordnance Plant - York, PA

Location	Location Type	6/6/13			6/11/13			6/12/13			6/17/13			6/27/13			7/5/13		
		Bldg3 Footer Drain Shutdown Test Pre-Shutdown			Bldg3 Footer Drain Shutdown Test Pre-Shutdown			Bldg3 Footer Drain Shutdown Test Pre-Shutdown			Bldg3 Footer Drain Shutdown Test Pre-Shutdown			Bldg3 Footer Drain Shutdown Test			Bldg3 Footer Drain Shutdown Test		
		MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev
CW-19	Collection Well	384.94	D	D	384.94	D	D	384.94	NM	NM	384.94	D	D	384.94	NM	NM	384.94	NM	NM
Lift Station	Lift Station	396.53	27.62	368.91	396.53	28.68	367.85	396.53	NM	NM	396.53	28.15	368.38	396.53	25.63	370.90	396.53	24.70	371.83
BLDG3 FD-1	Building 3 Footer Drain	392.20	D	D	392.20	D	D	392.20	NM	NM	392.20	D	D	392.20	NM	D	392.20	D	D
BLDG3 FD-3	Building 3 Footer Drain	396*	D	D	396*	NM	NM	396*	NM	NM	396*	D	D	396*	NM	D	396*	D	D

Location	Location Type	7/12/13			7/16/13			7/25/13			7/31/13			8/8/13			8/28/13		
		Bldg3 Footer Drain Shutdown Test			Bldg3 Footer Drain Shutdown Test			Bldg3 Footer Drain Shutdown Test			Bldg3 Footer Drain Shutdown Test			Bldg3 Footer Drain Shutdown Test			August 2013 Site Wide Water Levels		
		MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev
CW-19	Collection Well	384.94	D	D	384.94	D	D	384.94	NM	NM	384.94	NM	NM	384.94	D	D	384.94	D	D
Lift Station	Lift Station	396.53	24.45	372.08	396.53	24.35	372.18	396.53	24.30	372.23	396.53	24.43	372.10	396.53	24.23	372.30	396.53	25.53	371.00
BLDG3 FD-1	Building 3 Footer Drain	392.20	D	D	392.20	20.61	371.59	392.20	20.59	371.61	392.20	20.58	371.62	392.20	20.56	371.64	392.20	NM	NM
BLDG3 FD-3	Building 3 Footer Drain	396*	D	D	396*	NM	NM	396*	NM	NM	396*	NM	NM	396*	NM	NM	396*	NM	NM

Location	Location Type	7/17/14			8/21/14			9/11/14			10/28/14			11/24/14			12/15/14		
		Bldg3 Monthly Monitoring			Bldg3 Monthly Monitoring			Bldg3 Monthly Monitoring			Bldg3 Monthly Monitoring			Bldg3 Monthly Monitoring			Bldg3 Monthly Monitoring		
		MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev
CW-19	Collection Well	384.94	D	D	384.94	D	D	384.94	D	D	384.94	D	D	384.94	D	D	384.94	D	D
Lift Station	Lift Station	396.53	24.88	371.65	396.53	24.75	371.78	396.53	26.10	370.43	396.53	24.83	371.70	396.53	24.24	372.29	396.53	24.30	372.23
BLDG3 FD-1	Building 3 Footer Drain	392.20	D	D	392.20	19.65	372.55	392.20	D	D	392.20	D	D	392.20	20.85	371.35	392.20	D	D
BLDG3 FD-3	Building 3 Footer Drain	396*	NM	NM	396*	D	D	396*	D	D	396*	D	D	396*	D	D	396*	D	D

Location	Location Type	1/15/15			2/25/15			3/24/15			4/23/15			5/21/15			6/4/15		
		Bldg3 Monthly			Bldg3 Monthly			Bldg3 Monthly			Bldg3 Monthly			Bldg3 Monthly			Bldg3 Monthly		
		MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev
CW-19	Collection Well	384.94	D	D	384.94	D	D	384.94	NM	NM	384.94	NM	NM	384.94	D	D	384.94	D	D
Lift Station	Lift Station	396.53	24.55	371.98	396.53	24.75	371.78	396.53	23.96	372.57	396.53	24.27	372.26	396.53	24.10	372.43	396.53	24.19	372.34
BLDG3 FD-1	Building 3 Footer Drain	392.20	D	D	392.20	D	D	392.20	D	D	392.20	D	D	392.20	D	D	392.20	D	D
BLDG3 FD-3	Building 3 Footer Drain	396*	D	D	396*	D	D	396*	D	D	396*	D	D	396*	D	D	396*	D	D

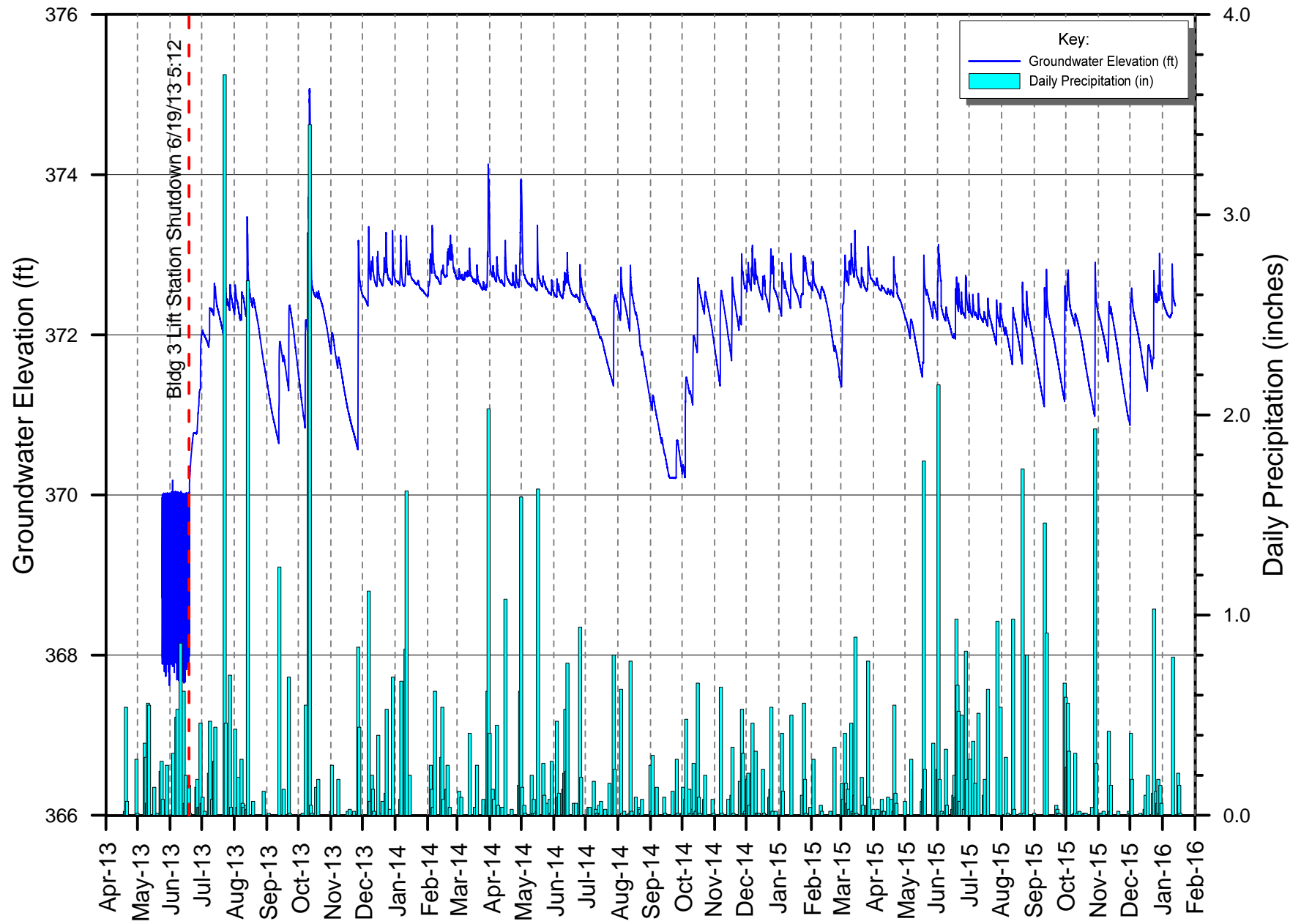
Location	Location Type	7/15/15			8/14/15			9/15/15			10/15/15			11/25/15			12/15/15		
		Bldg3 Monthly			Bldg3 Monthly			Bldg3 Monthly			Bldg3 Monthly			Bldg3 Monthly			Bldg3 Monthly		
		MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev	MPE	DTW	WL Elev
CW-19	Collection Well	384.94	D	D	384.94	D	D	384.94	NM	NM	384.94	NM	NM	384.94	D	D	384.94	D	D
Lift Station	Lift Station	396.53	24.21	372.32	396.53	24.38	372.15	396.53	24.15	372.38	396.53	24.58	371.95	396.53	25.21	371.32	396.53	25.07	371.46
BLDG3 FD-1	Building 3 Footer Drain	392.20	20.55	371.65	392.20	D	D	392.20	D	D	392.20	D	D	392.20	D	D	392.20	D	D
BLDG3 FD-3	Building 3 Footer Drain	396*	D	D	396*	D	D	396*	D	D	396*	NM	NM	396*	D	D	396*	NM	NM

MPE - Measuring Point Reference Elevation (feet above mean sea level)
DTW - Depth to Water (feet)
WL Elev - Water Level Elevation (feet above mean sea level)
NM - Not Measured/Location Not Accessible
D - Dry
* - Approximate Unsurveyed Elevation

ATTACHMENT C

Lift Station Water Elevation Hydrograph

Lift Station



ATTACHMENT D

Table 2 – Laboratory Results

Table 2
Groundwater Data Summary - Lift Station
Former York Naval Ordnance Plant - York, PA

Location/ID Sample Date	MSC Used Aquifer R (ug/L)	MSC Used Aquifer NR (ug/L)	Federal MCL (ug/L)	EPA RSL Tap Water (ug/L)	Lift Station 12/10/2004	Lift Station 6/13/2005	Lift Station 12/9/2005	Lift Station 6/20/2006	Lift Station 6/19/2007	Lift Station 12/12/2007	Lift Station 10/23/2014	Lift Station 10/2/2015	Lift Station Deep Foundation 5/20/2008	Lift Station Deep Foundation 12/16/2009	Lift Station Deep Foundation 6/28/2011	Lift Station Deep Foundation 12/10/2012	Lift Station Deep Foundation 5/24/2013	Lift Station Deep Foundation 9/16/2013
Parameter																		
TOTAL VOC					4.5	3.2	0.32	0	381.5	0	0	0	5.62	0.47	1.95	0.5	0.84	0.48
Volatile Organic Compound																		
1,1,1,2-Tetrachloroethane	70	70		0.57							1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	200	200	8000	1 J	0.8 J	1 U	5 U	5 U	5 U	1.0 U	1.0 U	0.71 J	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	1 U	1 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	5	5	5	0.28	3 U	3 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	0.17 J	1 U	1 U	1 U	0.21 J	1 U
1,1-Dichloroethane	31	160		2.7	5 U	5 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	7	7	7	280	2 U	2 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	0.56 J	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075							1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	5	5	5	0.17	2 U	2 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	5	5	5	0.44	1 U	1 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	6.4	32		0.78	1000 U	1000 U	200 U	1000 U	380 J	1000 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2-Butanone	4000	4000		5600	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	10 U	10 U	5 U	5 U	5 U	5 U
2-Chloroethyl Vinyl Ether					5 U	5 U	2 U	10 U	10 U	10 U								
2-Hexanone	11	44		38							5.0 U	5.0 U	10 U	10 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone	2900	8200		1200							5.0 U	5.0 U	10 U	10 U	5 U	5 U	5 U	5 U
Acetone	33000	92000		14000							5.0 U	5.0 U	2.7 J	10 U	5 U	5 U	5 U	5 U
Acrolein	0.042	0.18		0.042	100 U	100 U	20 U	100 U	100 U	100 U								
Acrylonitrile	0.72	3.7		0.052	50 U	50 U	20 U	100 U	100 U	100 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzene	5	5	5	0.45	1 U	1 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromochloromethane	90	90		83							1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	80	80		0.13	1 U	1 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	80	80		9.2	4 U	4 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	10	10		7.5	5 U	5 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon Disulfide	1500	6200		810							1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	5	5	5	0.45	2 U	2 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	100	100	100	78	5 U	5 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	80	80		0.17	5 U	5 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	230	900		21000	5 U	5 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	80	80		0.22	5 U	5 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane				190	5 U	5 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	70	70	70	36	5 U	5 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	0.84 J	1 U	1 U	1 U
cis-1,3-Dichloropropene	6.6	26		0.47	5 U	5 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	700	700	700	1.5	4 U	4 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	20	20		14							1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	5	5		11	3 U	3 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	100	100	100	1200							1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	5	5	11	1.1	1 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	0.28 J	1 U	0.22 J	1 U	1 U	1 U
Toluene	1000	1000	1000	1100	5 U	5 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	100	100	100	360	5 U	5 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	6.6	26		0.47	5 U	5 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	5	5	0.49	2.4	2.4	0.32 J	5 U	1.5 J	5 U	1.0 U	1.0 U	1.2	0.47 J	0.89 J	0.5 J	0.63 J	0.48 J
Vinyl Chloride	2	2	2	0.019	5 U	5 U	1 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	10000	10000	10000	190							3.0 U	3.0 U	3 U	3 U	3 U	3 U	3 U	3 U

Lift Station refers to a composite water sample collected from the Bldg3 Lift Station.
Lift Station Deep Foundation refers to a sample collected from the deep footer drain system beneath Bldg3.
Lift Station Toe of Slope refers to a sample collected of the drainage from the hillside toe drain.

Blank results = analyte not analyzed. U = Not detected. J = Organics; estimated. Inorganics; blank contamination. B = Organics; blank contamination. Inorganics; estimated. E = Inorganics: matrix interference.

Table 2
Groundwater Data Summary - Lift Station
Former York Naval Ordnance Plant - York, PA

Location/ID Sample Date	MSC Used Aquifer R (ug/L)	MSC Used Aquifer NR (ug/L)	Federal MCL (ug/L)	EPA RSL Tap Water (ug/L)	Lift Station Toe of Slope 5/20/2008	Lift Station Toe of Slope 12/16/2009	Lift Station Toe of Slope 6/28/2011	Lift Station Toe of Slope 1/3/2013
Parameter								
TOTAL VOC								
Total VOC					9.15	0.53	8.39	4.46
Volatile Organic Compound								
1,1,1,2-Tetrachloroethane	70	70		0.57	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	200	200	8000	0.77 J	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	0.84	4.3		0.076	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	5	5	5	0.28	0.22 J	1 U	1 U	1 U
1,1-Dichloroethane	31	160		2.7	1 U	1 U	1 U	1 U
1,1-Dichloroethene	7	7	7	280	0.56 J	1 U	1 U	1 U
1,2-Dibromoethane	0.05	0.05	0.05	0.0075	1 U	1 U	1 U	1 U
1,2-Dichloroethane	5	5	5	0.17	1 U	1 U	1 U	1 U
1,2-Dichloropropane	5	5	5	0.44	1 U	1 U	1 U	1 U
1,4-Dioxane	6.4	32		0.78	200 U	200 U	200 U	200 U
2-Butanone	4000	4000		5600	10 U	10 U	5 U	5 U
2-Chloroethyl Vinyl Ether								
2-Hexanone	11	44		38	10 U	10 U	5 U	5 U
4-Methyl-2-Pentanone	2900	8200		1200	10 U	10 U	5 U	5 U
Acetone	33000	92000		14000	10 U	10 U	6.8	4.2 J
Acrolein	0.042	0.18		0.042				
Acrylonitrile	0.72	3.7		0.052	20 U	20 U	20 U	20 U
Benzene	5	5	5	0.45	0.81 J	1 U	1 U	1 U
Bromochloromethane	90	90		83	1 U	1 U	1 U	1 U
Bromodichloromethane	80	80		0.13	1 U	1 U	1 U	1 U
Bromoform	80	80		9.2	1 U	1 U	1 U	1 U
Bromomethane	10	10		7.5	1 U	1 U	1 U	1 U
Carbon Disulfide	1500	6200		810	1 U	1 U	1 U	1 U
Carbon Tetrachloride	5	5	5	0.45	1 U	1 U	1 U	1 U
Chlorobenzene	100	100	100	78	1 U	1 U	1 U	1 U
Chlorodibromomethane	80	80		0.17	1 U	1 U	1 U	1 U
Chloroethane	230	900		21000	1 U	1 U	1 U	1 U
Chloroform	80	80		0.22	1 U	1 U	1 U	1 U
Chloromethane				190	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	70	70	70	36	0.92 J	1 U	1 U	1 U
cis-1,3-Dichloropropene	6.6	26		0.47	1 U	1 U	1 U	1 U
Ethylbenzene	700	700	700	1.5	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	20	20		14	0.4 J	1 U	1 U	1 U
Methylene chloride	5	5		11	1 U	1 U	1 U	1 U
Styrene	100	100	100	1200	1 U	1 U	1 U	1 U
Tetrachloroethene	5	5	5	11	2.1	1 U	0.18 J	1 U
Toluene	1000	1000	1000	1100	1 U	1 U	0.21 J	1 U
trans-1,2-Dichloroethene	100	100	100	360	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	6.6	26		0.47	1 U	1 U	1 U	1 U
Trichloroethene	5	5	5	0.49	3.1	0.53 J	1.2	0.26 J
Vinyl Chloride	2	2	2	0.019	1 U	1 U	1 U	1 U
Xylenes (Total)	10000	10000	10000	190	0.27 J	3 U	3 U	3 U

Lift Station refers to a composite water sample collected from the Bldg3 Lift Station.
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