

**MONTHLY PROGRESS REPORT #254
FOR MAY 2018**

EPA REGION I ADMINISTRATIVE ORDERS SDWA 1-97-1019 and 1-2000-0014

**JOINT BASE CAPE COD (JBCC)
TRAINING RANGE AND IMPACT AREA**

The following summary of progress is for the period from 28 April to 26 May 2018.

1. SUMMARY OF REMEDIATION ACTIONS

The following is a description of Remediation Actions (RA) underway at Camp Edwards as of May 2018.

Demolition Area 1 Comprehensive Groundwater RA

The Demolition Area 1 Comprehensive Groundwater RA consists of the removal and treatment of contaminated groundwater to control further migration of explosives compounds and perchlorate. Extraction, treatment, and recharge (ETR) systems at Frank Perkins Road, Pew Road, Base Boundary, and the Leading Edge include extraction wells, ex-situ treatment processes to remove explosives compounds and perchlorate from the groundwater, and injection wells to return treated water to the aquifer.

The Frank Perkins Road Treatment Facility has been optimized as part of the Environmental and System Performance Monitoring (ESPM) program at Demolition Area 1. The treatment facility continues to operate at a flow rate of 175 gpm, with over 2.559 billion gallons of water treated and re-injected as of 26 May 2018. No shut downs occurred in May:

The Pew Road Mobile Treatment Unit (MTU) is off, with over 569.6 million gallons of water treated and re-injected as of 26 May 2018. The following Pew Road MTU shut downs occurred in May:

- 2309 on 03 May 2018 due to a high differential pressure in the bag filter housing. Bag filters were replaced and the MTU was restarted at 0734 on 04 May 2018.
- 0611 on 11 May 2018 due to a “system outlet low flow due to high differential pressure in the bag filters” alarm. Bag Filters were changed and the MTU restarted at 0745 on 11 May 2018.
- The Pew Road MTU is currently shut down due to high differential pressure on the bag filter system. Sand was being pumped through the system causing multiple shutdowns for the MTU.

The Base Boundary MTU is operating at a flow rate of 65 gpm with over 198.9 million gallons of water treated and re-injected as of 26 May 2018. No Base Boundary MTU shut downs occurred in May.

The Leading Edge system continues to operate at a flow rate of 100 gpm. As of 26 May 2018, over 104.3 million gallons of water treated and re-injected. No Leading Edge system shut down occurred in May.

J-2 Range Groundwater RA

Northern Plant

The J-2 Range Northern Treatment facility consists of removal and treatment of contaminated groundwater to control further migration of explosives compounds and perchlorate. The Extraction, Treatment, and Re-infiltration system includes three extraction wells, ex-situ treatment process to remove

explosives compounds and perchlorate from the groundwater, and an infiltration basin to return treated water to the aquifer.

The Northern Treatment Building continues to operate at a flow rate of 225 gpm. As of 26 May 2018, over 1.0003 billion gallons of water have been treated and re-injected. The following Northern Treatment Building shutdown occurred in May:

- 21 May 2018, the totalizer at the Building was reprogrammed because it was averaging too high and reset to "0" at 0924 h.

The Northern MTUs E and F continue to operate at a flow rate of 250 gpm. As of 26 May 2018, over 1.500 billion gallons of water have been treated and re-injected. No J-2 Range Northern MTU E or F shut downs occurred in May.

Eastern Plant

The J-2 Range Eastern Treatment facility consists of removal and treatment of groundwater to minimize downgradient migration of explosives compounds and perchlorate. The ETI system includes the following components: three extraction wells in an axial array, an ex-situ treatment process consisting of an ion exchange (IX) resin and granular activated carbon (GAC) media to treat perchlorate and explosives compounds and three infiltration trenches located along the lateral boundaries of the plume where treated water will enter the vadose zone and infiltrate into the aquifer. The J-2 Range Eastern system is running at a combined total flow rate of 495 gpm.

The MTUs H and I continue to operate at a flow rate of 250 gpm. As of 26 May 2018, over 1.080 billion gallons of water have been treated and re-injected. The following MTU H and I shut down occurred in May:

- 0748 on 22 May 2018 prior to disconnecting power for tree removal along the power lines on Greenway Road. MTUs H and I were restarted at 1148 on 22 May 2018.

MTU J continues to operate at a flow rate of 120 gpm. As of 26 May 2018, over 497.6 million gallons of water have been treated and re-injected. The following MTU J shutdowns occurred in May.

- 0524 on 10 May 2018 due to damaged fuses on the power line on Greenway Road. BETCO was onsite on 14 May 2018 and replaced the damaged fuses. The MTU J was restarted at 0908 on 14 May 2018.
- 0736 on 22 May 2018 prior to disconnecting the power for tree removal along the power lines on Greenway Road. The MTU was restarted at 1210 on 22 May 2018.

MTU K continues to operate at a flow rate of 125 gpm. As of 26 May 2018, over 633.0 million gallons of water have been treated and re-injected. The following MTU K shutdown occurred in May.

- 0740 h on 11 May 2018 prior to disconnecting power for tree removal along the power lines on Greenway Road. The MTU was restarted at 1200 h on 22 May 2018.

J-3 Range Groundwater RA

The J-3 Range Groundwater RA consists of removal and treatment of contaminated groundwater to control further migration of explosives compounds and perchlorate. The ETR system includes four extraction wells, ex-situ treatment process to remove explosives compounds and perchlorate from the

groundwater and use of the existing Fuel Spill-12 (FS-12) infiltration gallery to return treated water to the aquifer.

The J-3 system is currently operating at a flow rate of 235 gpm (while J3EW0032 is running at 45 gpm instead of 65 gpm). As of 26 May 2018, over 1.112 billion gallons of water have been treated and re-injected. The following J-3 Range system shut down occurred in May:

- 90EW0001 shut down at 0810 on 29 April 2018. There was no alarm. 90EW0001 was restarted at 0737 on 30 April 2018.

J-1 Range Groundwater RA

Southern Plant

The J-1 Range Southern Groundwater RA consists of removal and treatment of contaminated groundwater to control further migration of explosives compounds. The ETR system includes two extraction wells, ex-situ treatment process to remove explosives compounds from the groundwater, and an infiltration trench to return treated water to the aquifer.

The Southern MTU continues to operate at a flow rate of 125 gpm. As of 26 May 2018, over 479.9 million gallons of water have been treated and re-injected. The following J-1 Range Southern system shut downs occurred in May:

- 0524 on 10 May 2018 due to damaged fuses on the Greenway Road power line. BETCO was onsite on 14 May 2018 and replaced the fuses and restored power. The System was restarted at 0923 on 14 May 2018
- 0715 on 22 May 2018 prior to disconnecting power for tree removal along the power lines on Greenway Road. The System was restarted at 1226 on 22 May 2018.

Northern Plant

The J-1 Range Northern Groundwater RA consists of removal and treatment of contaminated groundwater to control further migration of explosives compounds and perchlorate. The ETR system includes two extraction wells, ex-situ treatment process to remove explosives compounds and perchlorate from the groundwater, and an infiltration trench to return treated water to the aquifer.

The Northern MTU continues to operate at a total system flow rate of 250 gpm. As of 26 May 2018, over 575.3 million gallons of water have been treated and re-injected. No J-1 Range Northern MTU shut downs occurred in May. Bag filters were changed on 21 May 2018.

Central Impact Area RA

The Central Impact Area (CIA) Groundwater treatment facility consists of removal and treatment of groundwater to minimize downgradient migration of explosives compounds and perchlorate. The ETR system includes the following components: three extraction wells, an ex-situ treatment process consisting of an ion exchange (IX) resin and granular activated carbon (GAC) media to treat explosives compounds and three infiltration galleries to return treated water to the aquifer. The CIA systems 1, 2, and 3 continue to run at a combined total flow rate of 750 gpm. As of 26 May 2018, over 1.371 billion gallons of water have been treated and re-injected. The following CIA treatment facility shut down occurred in May:

- System 2 shut down at 0517 on 17 May 2018 due to a PLC fault that would not clear. The system restarted at 0850 on 21 May 2018.

SUMMARY OF ACTIONS TAKEN

Performed routine inspections of BEM cover at the CIA to ensure cover is secure and intact.

QC seeding and EM61 geophysical survey in CIA Phase 3 Area 1

Excavated lifts and soil samples from C, D, and Former-B Range grids.

Groundwater sampling within the Central Impact, Demo 1, J1 North and South SPM programs.

Groundwater sampling within the Demo 2 LTM program.

Monitoring well survey within the Demo 1, J3 Range, J1 South, and J1 North SPM networks.

Process water samples were collected from the Central Impact Area (CIA), Demolition Area 1, J-1 Range Northern, J-1 Range Southern, J-2 Range Eastern, J-2 Range Northern, and J-3 Range.

Environmental and system performance monitoring groundwater samples were collected from C Range, CIA, D Range, Demolition Area 1 and 2, Former B Range, J-1 Range Northern, and J-3 Range.

JBCC IAGWSP Tech Update Meeting Minutes 10 May 2018

Project and Fieldwork Update

Dawson will be mobbing to the site next week to look at the eleven upcoming well locations and begin vegetation clearance for the first three well pads. They are in CIA on Canal View Road, Demolition Area 1 north of NBC and the J-3 Range location co-located with MW-227 at Greenway Road. No UXO clearance is required for these three locations. The Drill rig will mobilize to the site June 11. UXO clearance will begin in June for the wells in the Impact Area. A contract action is being worked on to execute the J-1 drivepoint work.

In the Small Arms Ranges, there is a contract modification being worked on to perform additional lifts at B Range, C Range and Former B Range. Each Range requires one grid. It is anticipated that work will begin at the end of May.

Over the next several weeks, electricians and programmers will be working in any treatment system that has older model VFDs in them. The outdated VFDs are being preemptively switched out to newer models as finding replacement parts for the older ones has become difficult. Also, Watermark will be painting all of the MTUs.

In the CIA, Parsons has the Metal Mapper set up and operational in dynamic mode. However, based on the initial data analysis, it doesn't appear that the instrument is performing well. In the first area they are working in, the 1.5 acre Area B, the full data analyses is still ongoing but initial results are showing that some of the deeper 81mm seeds were not detected. Parsons brought in an EM-61 to map the same area to have a comparison. A deeper 155mm item was added back in the IVS area and it was easily detected where it's a clean background. It appears the signal is getting lost in the noise in the very "dirty" Impact Area. The other issue with the Metal Mapper dynamic data is that the anomaly pick density is much higher than with the EM-61. For example in the first 1.5 acres, there were 2,000 picks. The team is

recommending going back to the EM-61. While, they thought that bringing in this new technology would be better but it turns out that's not really the case. Plan to go back to what has been working and use the EM-61 dynamic followed by the Metal Mapper.

EPA asked if Parsons has used the instrument in dynamic mode at other sites. It was explained that they have and with great success. It's not that it doesn't work, it's that the limits haven't been tested as much as they have been here with this level of high density. It doesn't appear to be the problem with the instrument having issues or the analysis, it's the site conditions. Parsons will be updating the QAPP and workplan to indicate the change in direction.

L Range Annual Environmental Monitoring Report Presentation

A presentation was provided on the L Range Annual Environmental Monitoring Report. It was noted that during the reporting period (February 2017 to January 2018), no new work was conducted.

Sampling locations, groundwater monitoring results, and trends were reviewed and discussed. The July 2017 semi-annual event, included MW-242M1, MW-595M1/M2, MW-596M1, 90MW0034 and RDX was seen at 3.7 µg/L (MW-242M1) and 3.3 µg/L (MW-595M1). The January 2018 annual event included 14 wells. RDX was detected at 3.0 µg/L (MW-242M1), 2.5 µg/L (MW-595M1), 0.88 µg/L (MW-651M1), 0.86 µg/L (MW-650M) and 0.29 µg/L (90MW0031).

Model predicated vs. observed plume comparison was discussed. It was noted that the plume shell was developed using the recently developed drift function to incorporate/reflect the measured RDX concentration data from samples collected between December 2015 and January 2018. The observed and predicted plumes are similar in size and zones of concentration above 2 µg/L near wells MW-242M1 and MW-595M1, which had not been represented in the migrated November 2015 Plume Shell transport model results previously, are now shown in the updated model predicted plume as expected based on measured concentrations from recent years.

Transport model results and time to cleanup goals were reviewed and discussed. The transport simulations using the drift function updated plume shell predicted RDX concentrations would fall below 2.0 µg/L at L Range in 2028, and below the 0.6 µg/L risk-based concentrations by 2070. Due to RDX concentrations greater than 2 µg/L at MW-242M1 and MW-595M1 (observed between the 2016 and current reporting periods) which data were not represented in the plume shell with November 2015 data cut-off, the previous transport model prediction of RDX attenuating completely below 2 µg/L by 2018 is likely unrealistic. Based on attenuation rates, distance, and the April 2018 groundwater flow and transport simulation, the entirety of the RDX plume is still expected to attenuate below the 0.6 µg/L RBC prior to reaching the FS-12 extraction wells.

Recommendations include removing MW-153M2 from the sampling program as the well is located approximately 450 feet upgradient of any RDX mass from the current depicted plume. In addition, this well has been sampled 8 consecutive times since sampling began in 2011 with no detections of RDX and M2 screen is significantly shallower than the elevation range of the modeled plume. IAGWSP also recommends reducing the sampling frequency of 90MW0034 because it is located 200 feet cross-gradient of the plume and has had only one detection of RDX since January of 2003.

Action Items

Action items were discussed and updated.

JBCC Cleanup Team Meeting

The next JBCC Cleanup Team (JBCCCT) meeting has yet to be scheduled. The Cleanup Team meeting discusses late breaking news and responses to action items, as well as updates from the IAGWSP and the Installation Restoration Program (IRP). The JBCCCT meetings provide a forum for community input regarding issues related to both the IRP and the IAGWSP.

SUMMARY OF DATA RECEIVED

Table 2 summarizes the validated detections of explosives compounds and perchlorate for all groundwater results received from 1 May to 31 May 2018. These results are compared to the Maximum Contaminant Levels/Health Advisory (MCL/HA) values for respective analytes. Explosives and perchlorate are the primary contaminants of concern (COC) at Camp Edwards.

Twelve operable units (OU) are under investigation and cleanup at Camp Edwards. The OUs include: Central Impact Area, Demolition Area 1, Demolition Area 2, Former A Range, J-1 Range, J-2 Range, J-3 Range, L Range, Northwest Corner, Small Arms Ranges, Training Areas, and Western Boundary. Environmental monitoring reports for each OU are generated each year to evaluate the current year groundwater results. These reports are available on the site Environmental Data Management System (EDMS) and at the project document repositories (IAGWSP office and Jonathan Bourne Library).

2. DELIVERABLES SUBMITTED

Deliverables submitted during the reporting period include the following:

- Draft L Range 2018 Environmental Monitoring Report 05/04/2018
- Monthly Progress Report No. 253 for April 2018 05/12/2018

3. SCHEDULED ACTIONS

The following documents are being prepared or revised during May 2018:

Training Areas

- Training Areas Decision Document

Annual Reports/ Environmental Monitoring Reports/Work Plans

- Northwest Corner Annual Monitoring Report

Central Impact Area

- 2017 Source Removal Annual Report
- 2018 Source Area Workplan

Miscellaneous

- Technology evaluation and attenuation study reports

TABLE 1
Sampling Progress: 1 May to 31 May 2018

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
Demolition Area 1	MW-210M2	MW-210M2_S18	N	05/30/2018	Ground Water	156	166
Demolition Area 1	MW-210M1	MW-210M1_S18	N	05/30/2018	Ground Water	201	211
Demolition Area 1	MW-73S	MW-73S_S18	N	05/30/2018	Ground Water	52.2	61.7
Demolition Area 1	MW-274	MW-274_S18	N	05/30/2018	Ground Water	109	199
J3 Range	LKSNK0007	LKSNK0007_S18	N	05/30/2018	Surface Water	0	4
J3 Range	LKSNK0006	LKSNK0006_S18	N	05/30/2018	Surface Water	0	1
J3 Range	LKSNK0005	LKSNK0005_S18	N	05/30/2018	Surface Water	0	4
Demolition Area 1	MW-431	MW-431_S18	N	05/29/2018	Ground Water	88	188
Demolition Area 1	MW-431	MW-431_S18D	FD	05/29/2018	Ground Water	88	188
Demolition Area 1	EW-658	EW-658_S18	N	05/29/2018	Ground Water	96	136
Demolition Area 1	MW-19S	MW-19S_S18	N	05/29/2018	Ground Water	52.7	62.7
Demolition Area 1	MW-19S	MW-19S_S18D	FD	05/29/2018	Ground Water	52.7	62.7
Demolition Area 1	FPR-2-EFF-A	FPR-2-EFF-A-146B	N	05/29/2018	Process Water	0	0
Demolition Area 1	MW-78M2	MW-78M2_S18	N	05/29/2018	Ground Water	115	125
Demolition Area 1	MW-78M1	MW-78M1_S18	N	05/29/2018	Ground Water	135	145
Demolition Area 1	MW-76S	MW-76S_S18	N	05/29/2018	Ground Water	85	95
Demolition Area 1	MW-76M2	MW-76M2_S18	N	05/29/2018	Ground Water	105	115
Demolition Area 1	MW-76M1	MW-76M1_S18	N	05/29/2018	Ground Water	125	135
Demolition Area 1	MW-648M1	MW-648M1_S18	N	05/22/2018	Ground Water	112	122
Demolition Area 1	MW-31S	MW-31S_S18	N	05/22/2018	Ground Water	98	103
Demolition Area 1	MW-31S	MW-31S_S18D	FD	05/22/2018	Ground Water	98	103
Demolition Area 1	MW-31M	MW-31M_S18	N	05/22/2018	Ground Water	113	123
Demolition Area 1	MW-31M	MW-31M_S18D	FD	05/22/2018	Ground Water	113	123
Demolition Area 1	MW-31D	MW-31D_S18	N	05/22/2018	Ground Water	133	138
Former B Range	SSFBR140QRA	FBR140QRA_I	FR	05/22/2018	Soil	0	0.25
Former B Range	SSFBR140QRA	FBR140QRA_H	FR	05/22/2018	Soil	0	0.25
Former B Range	SSFBR140QRA	FBR140QRA_G	N	05/22/2018	Soil	0	0.25
Demolition Area 1	MW-77S	MW-77S_S18	N	05/22/2018	Ground Water	83	93
Demolition Area 1	MW-77M2	MW-77M2_S18	N	05/22/2018	Ground Water	120	130
Demolition Area 1	MW-77M2	MW-77M2_S18D	FD	05/22/2018	Ground Water	120	130
Demolition Area 1	MW-77M1	MW-77M1_S18	N	05/22/2018	Ground Water	180	190
Demolition Area 1	MW-75M2	MW-75M2_S18	N	05/21/2018	Ground Water	115	125
Demolition Area 1	MW-75M1	MW-75M1_S18	N	05/21/2018	Ground Water	140	150
D Range	SSDRNG02	DRNG02_A	N	05/21/2018	Soil	0	0.25
C Range	SSDR158	DR158_L	FR	05/21/2018	Soil	0	0.25
C Range	SSDR158	DR158_K	FR	05/21/2018	Soil	0	0.25
C Range	SSDR158	DR158_J	N	05/21/2018	Soil	0	0.25
C Range	SSCRNGS02	CRNGS02_M	FR	05/21/2018	Soil	0	0.25
C Range	SSCRNGS02	CRNGS02_L	FR	05/21/2018	Soil	0	0.25
C Range	SSCRNGS02	CRNGS02_K	N	05/21/2018	Soil	0	0.25
Demolition Area 1	MW-114M2	MW-114M2_S18	N	05/18/2018	Ground Water	120	130
Demolition Area 1	MW-114M1	MW-114M1_S18	N	05/18/2018	Ground Water	177	187
Demolition Area 1	MW-129M3	MW-129M3_S18	N	05/18/2018	Ground Water	96	106
Demolition Area 1	MW-129M2	MW-129M2_S18	N	05/18/2018	Ground Water	116	126
Demolition Area 1	MW-129M1	MW-129M1_S18	N	05/18/2018	Ground Water	136	146
Demolition Area 2	MW-16S	MW-16S_S18	N	05/18/2018	Ground Water	125	135
Demolition Area 1	MW-139M2	MW-139M2_S18	N	05/17/2018	Ground Water	154	164
Demolition Area 1	MW-165M2	MW-165M2_S18	N	05/17/2018	Ground Water	124.5	134.5
Demolition Area 1	MW-165M1	MW-165M1_S18	N	05/17/2018	Ground Water	184.5	194.5
Demolition Area 2	MW-259M1	MW-259M1_S18	N	05/16/2018	Ground Water	189	199
Demolition Area 2	MW-262M1	MW-262M1_S18	N	05/16/2018	Ground Water	226	236
Demolition Area 2	MW-572M1	MW-572M1_S18	N	05/16/2018	Ground Water	164.9	174.9
Demolition Area 2	MW-311M2	MW-311M2_S18	N	05/16/2018	Ground Water	200	210
Demolition Area 2	MW-311M1	MW-311M1_S18	N	05/16/2018	Ground Water	222	232
Demolition Area 2	MW-161S	MW-161S_S18	N	05/15/2018	Ground Water	145.5	155.5
Demolition Area 2	MW-161S	MW-161S_S18D	FD	05/15/2018	Ground Water	145.5	155.5
Demolition Area 2	MW-160S	MW-160S_S18	N	05/15/2018	Ground Water	137.5	147.5
Demolition Area 2	MW-404M2	MW-404M2_S18	N	05/15/2018	Ground Water	200.04	210.04
Demolition Area 2	MW-404M1	MW-404M1_S18	N	05/15/2018	Ground Water	219.48	229.48
Demolition Area 2	MW-380M2	MW-380M2_S18	N	05/15/2018	Ground Water	205.66	215.66

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 1 May to 31 May 2018

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
Demolition Area 2	MW-380M1	MW-380M1_S18	N	05/15/2018	Ground Water	226.55	236.55
Demolition Area 2	MW-654M1	MW-654M1_S18	N	05/14/2018	Ground Water	154	164
Demolition Area 2	MW-655M2	MW-655M2_S18	N	05/14/2018	Ground Water	156	166
Demolition Area 2	MW-655M1	MW-655M1_S18	N	05/14/2018	Ground Water	178	188
J1 Range Northern	MW-590M2	MW-590M2_S18	N	05/14/2018	Ground Water	238	248
J1 Range Northern	MW-590M1	MW-590M1_S18	N	05/14/2018	Ground Water	258	268
J1 Range Northern	MW-540M1	MW-540M1_S18	N	05/14/2018	Ground Water	258	268
Demolition Area 2	MW-406M2	MW-406M2_S18	N	05/11/2018	Ground Water	202.54	212.54
Demolition Area 2	MW-406M1	MW-406M1_S18	N	05/11/2018	Ground Water	224.72	229.72
Demolition Area 2	MW-573M2	MW-573M2_S18	N	05/11/2018	Ground Water	155.4	165.4
Demolition Area 2	MW-573M2	MW-573M2_S18D	FD	05/11/2018	Ground Water	155.4	165.4
Demolition Area 2	MW-573M1	MW-573M1_S18	N	05/11/2018	Ground Water	176.4	186.4
Demolition Area 2	MW-435M2	MW-435M2_S18	N	05/11/2018	Ground Water	149.57	159.93
Demolition Area 2	MW-435M1	MW-435M1_S18	N	05/11/2018	Ground Water	169.94	179.95
J1 Range Northern	MW-303M2	MW-303M2_S18	N	05/09/2018	Ground Water	235.09	245.1
J1 Range Northern	MW-303M2	MW-303M2_S18D	FD	05/09/2018	Ground Water	235.09	245.1
J1 Range Northern	MW-689M2	MW-689M2_S18	N	05/09/2018	Ground Water	231.4	241.4
J1 Range Northern	MW-689M1	MW-689M1_S18	N	05/09/2018	Ground Water	253.5	263.5
J1 Range Northern	MW-688M2	MW-688M2_S18	N	05/09/2018	Ground Water	227.8	237.8
J1 Range Northern	MW-688M1	MW-688M1_S18	N	05/09/2018	Ground Water	255.2	265.2
J1 Range Northern	MW-584M2	MW-584M2_S18	N	05/08/2018	Ground Water	228	238
J1 Range Northern	MW-584M1	MW-584M1_S18	N	05/08/2018	Ground Water	248	258
J1 Range Northern	MW-401M3	MW-401M3_S18	N	05/08/2018	Ground Water	228.5	238.5
J1 Range Northern	MW-401M1	MW-401M1_S18	N	05/08/2018	Ground Water	256.1	266.1
J1 Range Northern	MW-430M2	MW-430M2_S18	N	05/08/2018	Ground Water	188.41	198.41
J1 Range Northern	MW-430M1	MW-430M1_S18	N	05/08/2018	Ground Water	245.23	255.23
Central Impact Area	MW-609M2	MW-609M2_S18	N	05/04/2018	Ground Water	182.39	192.39
Central Impact Area	MW-609M1	MW-609M1_S18	N	05/04/2018	Ground Water	210.39	220.39
Central Impact Area	MW-608M4	MW-608M4_S18	N	05/04/2018	Ground Water	185.4	195.4
Central Impact Area	MW-608M3	MW-608M3_S18	N	05/04/2018	Ground Water	220.4	230.4
Central Impact Area	MW-608M2	MW-608M2_S18	N	05/04/2018	Ground Water	253.4	263.4
Central Impact Area	MW-608M2	MW-608M2_S18D	FD	05/04/2018	Ground Water	253.4	263.4
Central Impact Area	MW-608M1	MW-608M1_S18	N	05/04/2018	Ground Water	267.4	277.4
Central Impact Area	MW-608M1	MW-608M1_S18D	FD	05/04/2018	Ground Water	267.4	277.4
J1 Range Northern	MW-606M2	MW-606M2_S18	N	05/03/2018	Ground Water	193.2	203.2
J2 Range Eastern	J2E-EFF-K	J2E-EFF-K-116A	N	05/03/2018	Process Water	0	0
J2 Range Eastern	J2E-MID-2K	J2E-MID-2K-116A	N	05/03/2018	Process Water	0	0
J2 Range Eastern	J2E-MID-1K	J2E-MID-1K-116A	N	05/03/2018	Process Water	0	0
J2 Range Eastern	J2E-INF-K	J2E-INF-K-116A	N	05/03/2018	Process Water	0	0
J1 Range Northern	MW-606M1	MW-606M1_S18	N	05/03/2018	Ground Water	233.3	243.3
J2 Range Eastern	J2E-EFF-J	J2E-EFF-J-116A	N	05/03/2018	Process Water	0	0
J2 Range Eastern	J2E-MID-2J	J2E-MID-2J-116A	N	05/03/2018	Process Water	0	0
J2 Range Eastern	J2E-MID-1J	J2E-MID-1J-116A	N	05/03/2018	Process Water	0	0
J2 Range Eastern	J2E-INF-J	J2E-INF-J-116A	N	05/03/2018	Process Water	0	0
J2 Range Eastern	J2E-EFF-IH	J2E-EFF-IH-116A	N	05/03/2018	Process Water	0	0
Central Impact Area	MW-629M2	MW-629M2_S18	N	05/03/2018	Ground Water	186.9	196.9
Central Impact Area	MW-629M2	MW-629M2_S18D	FD	05/03/2018	Ground Water	186.9	196.9
J2 Range Eastern	J2E-MID-2H	J2E-MID-2H-116A	N	05/03/2018	Process Water	0	0
J2 Range Eastern	J2E-MID-1H	J2E-MID-1H-116A	N	05/03/2018	Process Water	0	0
J2 Range Eastern	J2E-MID-2I	J2E-MID-2I-116A	N	05/03/2018	Process Water	0	0
J2 Range Eastern	J2E-MID-1I	J2E-MID-1I-116A	N	05/03/2018	Process Water	0	0
J2 Range Eastern	J2E-INF-I	J2E-INF-I-116A	N	05/03/2018	Process Water	0	0
Central Impact Area	MW-629M1	MW-629M1_S18	N	05/03/2018	Ground Water	216.9	226.9
Demolition Area 1	PR-EFF	PR-EFF-146A	N	05/03/2018	Process Water	0	0
Demolition Area 1	PR-MID-2	PR-MID-2-146A	N	05/03/2018	Process Water	0	0
Demolition Area 1	PR-MID-1	PR-MID-1-146A	N	05/03/2018	Process Water	0	0
Demolition Area 1	PR-INF	PR-INF-146A	N	05/03/2018	Process Water	0	0
Central Impact Area	MW-638M2	MW-638M2_S18	N	05/03/2018	Ground Water	204.2	214.2
Demolition Area 1	FPR-2-EFF-A	FPR-2-EFF-A-146A	N	05/03/2018	Process Water	0	0
Demolition Area 1	FPR-2-GAC-MID1A	FPR-2-GAC-MID1A-146A	N	05/03/2018	Process Water	0	0

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 1 May to 31 May 2018

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
Demolition Area 1	FPR2-POST-IX-A	FPR2-POST-IX-A-146A	N	05/03/2018	Process Water	0	0
Demolition Area 1	FPR-2-INF	FPR-2-INF-146A	N	05/03/2018	Process Water	0	0
Central Impact Area	MW-638M1	MW-638M1_S18	N	05/03/2018	Ground Water	261.2	271.2
Demolition Area 1	D1LE-EFF	D1LE-EFF-22A	N	05/03/2018	Process Water	0	0
Demolition Area 1	D1LE-MID2	D1LE-MID2-22A	N	05/03/2018	Process Water	0	0
Demolition Area 1	D1LE-MID1	D1LE-MID1-22A	N	05/03/2018	Process Water	0	0
Demolition Area 1	D1LE-INF	D1LE-INF-22A	N	05/03/2018	Process Water	0	0
Demolition Area 1	D1-EFF	D1-EFF-94A	N	05/03/2018	Process Water	0	0
Demolition Area 1	D1-MID-2	D1-MID-2-94A	N	05/03/2018	Process Water	0	0
Demolition Area 1	D1-MID-1	D1-MID-1-94A	N	05/03/2018	Process Water	0	0
Demolition Area 1	D1-INF	D1-INF-94A	N	05/03/2018	Process Water	0	0
J1 Range Northern	MW-245M2	MW-245M2_S18	N	05/02/2018	Ground Water	204	214
J1 Range Northern	MW-245M2	MW-245M2_S18D	FD	05/02/2018	Ground Water	204	214
J3 Range	J3-EFF	J3-EFF-140A	N	05/02/2018	Process Water	0	0
J3 Range	J3-MID-2	J3-MID-2-140A	N	05/02/2018	Process Water	0	0
J3 Range	J3-MID-1	J3-MID-1-140A	N	05/02/2018	Process Water	0	0
J3 Range	J3-INF	J3-INF-140A	N	05/02/2018	Process Water	0	0
J1 Range Northern	MW-605M2	MW-605M2_S18	N	05/02/2018	Ground Water	182.2	192.2
J1 Range Northern	MW-605M1	MW-605M1_S18	N	05/02/2018	Ground Water	220.2	230.2
J1 Range Southern	J1S-EFF	J1S-EFF-126A	N	05/02/2018	Process Water	0	0
J1 Range Southern	J1S-MID-2	J1S-MID-2-126A	N	05/02/2018	Process Water	0	0
J1 Range Southern	J1S-INF-2	J1S-INF-2-126A	N	05/02/2018	Process Water	0	0
J1 Range Northern	MW-567M1	MW-567M1_S18	N	05/02/2018	Ground Water	215.5	225.5
J2 Range Northern	J2N-EFF-G	J2N-EFF-G-140A	N	05/02/2018	Process Water	0	0
J2 Range Northern	J2N-MID-2G	J2N-MID-2G-140A	N	05/02/2018	Process Water	0	0
J2 Range Northern	J2N-MID-1G	J2N-MID-1G-140A	N	05/02/2018	Process Water	0	0
J2 Range Northern	J2N-INF-G	J2N-INF-G-140A	N	05/02/2018	Process Water	0	0
J1 Range Northern	MW-564M1	MW-564M1_S18	N	05/02/2018	Ground Water	227	237
J1 Range Northern	MW-564M1	MW-564M1_S18D	FD	05/02/2018	Ground Water	227	237
J2 Range Northern	J2N-EFF-EF	J2N-EFF-EF-140A	N	05/02/2018	Process Water	0	0
J2 Range Northern	J2N-MID-2F	J2N-MID-2F-140A	N	05/02/2018	Process Water	0	0
J2 Range Northern	J2N-MID-1F	J2N-MID-1F-140A	N	05/02/2018	Process Water	0	0
J2 Range Northern	J2N-INF-EF	J2N-INF-EF-140A	N	05/02/2018	Process Water	0	0
J2 Range Northern	J2N-MID-2E	J2N-MID-2E-140A	N	05/02/2018	Process Water	0	0
J1 Range Northern	J1N-INF1B	J1N-INF1B_S18	N	05/02/2018	Process Water	0	0
J2 Range Northern	J2N-MID-1E	J2N-MID-1E-140A	N	05/02/2018	Process Water	0	0
J1 Range Northern	J1N-INF1A	J1N-INF1A_S18	N	05/02/2018	Process Water	0	0
J1 Range Northern	J1N-EFF	J1N-EFF-55A	N	05/02/2018	Process Water	0	0
J1 Range Northern	J1N-MID2	J1N-MID2-55A	N	05/02/2018	Process Water	0	0
J1 Range Northern	J1N-MID1	J1N-MID1-55A	N	05/02/2018	Process Water	0	0
J1 Range Northern	J1N-INF2	J1N-INF2-55A	N	05/02/2018	Process Water	0	0
J1 Range Northern	MW-370M2	MW-370M2_S18	N	05/01/2018	Ground Water	215.54	225.54
J1 Range Northern	MW-370M1	MW-370M1_S18	N	05/01/2018	Ground Water	245	255
J1 Range Northern	MW-370M1	MW-370M1_S18D	FD	05/01/2018	Ground Water	245	255
J1 Range Northern	MW-549M2	MW-549M2_S18	N	05/01/2018	Ground Water	187.3	197.3
Central Impact Area	CIA2-EFF	CIA2-EFF-52A	N	05/01/2018	Process Water	0	0
Central Impact Area	CIA2-MID2	CIA2-MID2-52A	N	05/01/2018	Process Water	0	0
J1 Range Northern	MW-549M1	MW-549M1_S18	N	05/01/2018	Ground Water	227.4	237.4
Central Impact Area	CIA2-MID1	CIA2-MID1-52A	N	05/01/2018	Process Water	0	0
Central Impact Area	CIA2-INF	CIA2-INF-52A	N	05/01/2018	Process Water	0	0
Central Impact Area	CIA1-EFF	CIA1-EFF-52A	N	05/01/2018	Process Water	0	0
J1 Range Northern	MW-566M1	MW-566M1_S18	N	05/01/2018	Ground Water	232	242
Central Impact Area	CIA1-MID2	CIA1-MID2-52A	N	05/01/2018	Process Water	0	0
Central Impact Area	CIA1-MID1	CIA1-MID1-52A	N	05/01/2018	Process Water	0	0
Central Impact Area	CIA1-INF	CIA1-INF-52A	N	05/01/2018	Process Water	0	0
Central Impact Area	CIA3-EFF	CIA3-EFF-23A	N	05/01/2018	Process Water	0	0
Central Impact Area	CIA3-MID2	CIA3-MID2-23A	N	05/01/2018	Process Water	0	0
Central Impact Area	CIA3-MID1	CIA3-MID1-23A	N	05/01/2018	Process Water	0	0
Central Impact Area	CIA3-INF	CIA3-INF-23A	N	05/01/2018	Process Water	0	0

N = Normal Sample
FD = Field Duplicate

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
 Data Received May 2018

Area of Concern	Location ID	Field Sample ID	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Date Sampled	Test Method	Analyte	Result Value	Qualifier	Units	MCL/HA	> MCL/HA	MDL	RL
Central Impact Area	MW-628M1	MW-628M1_S18	230.8	240.8	04/13/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.23		ug/L	0.60		0.036	0.20
Central Impact Area	MW-441M2	MW-441M2_S18	109.5	119.5	04/13/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.45		ug/L	400		0.025	0.20
Central Impact Area	MW-441M2	MW-441M2_S18	109.5	119.5	04/13/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.8		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-625M1	MW-625M1_S18	260	270	04/13/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.48		ug/L	0.60		0.036	0.20
Central Impact Area	MW-86S	MW-86S_S18	143	153	04/04/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.25		ug/L	0.60		0.036	0.20
Central Impact Area	MW-86M2	MW-86M2_S18	158	168	04/04/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.35		ug/L	0.60		0.036	0.20
Central Impact Area	MW-89M3	MW-89M3_S18	174	184	04/04/2018	SW6850	Perchlorate	0.024	J	ug/L	2.0		0.012	0.20
Central Impact Area	MW-89M3	MW-89M3_S18	174	184	04/04/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.46		ug/L	0.60		0.036	0.20
Central Impact Area	MW-89M2	MW-89M2_S18	214	224	04/04/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1.0		ug/L	400		0.025	0.20
Central Impact Area	MW-89M2	MW-89M2_S18	214	224	04/04/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	12.4		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-89M2	MW-89M2_S18	214	224	04/04/2018	SW6850	Perchlorate	5.2		ug/L	2.0	X	0.012	0.20
Central Impact Area	MW-89M2	MW-89M2_S18D	214	224	04/04/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1.0		ug/L	400		0.025	0.20
Central Impact Area	MW-89M2	MW-89M2_S18D	214	224	04/04/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	12.3		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-89M2	MW-89M2_S18D	214	224	04/04/2018	SW6850	Perchlorate	5.2		ug/L	2.0	X	0.012	0.20
Central Impact Area	MW-89M1	MW-89M1_S18	234	244	04/04/2018	SW6850	Perchlorate	0.37		ug/L	2.0		0.012	0.20
Central Impact Area	MW-89M1	MW-89M1_S18	234	244	04/04/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.54		ug/L	0.60		0.036	0.20
Central Impact Area	MW-39M1	MW-39M1_S18	220	230	04/03/2018	SW6850	Perchlorate	0.045	J	ug/L	2.0		0.012	0.20
Central Impact Area	MW-87M2	MW-87M2_S18	169	179	04/03/2018	SW6850	Perchlorate	0.020	J	ug/L	2.0		0.012	0.20
Central Impact Area	MW-87M1	MW-87M1_S18	194	204	04/03/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.30		ug/L	0.60		0.036	0.20
Central Impact Area	MW-87M1	MW-87M1_S18	194	204	04/03/2018	SW6850	Perchlorate	1.6		ug/L	2.0		0.012	0.20
Central Impact Area	MW-87M1	MW-87M1_S18D	194	204	04/03/2018	SW6850	Perchlorate	1.5		ug/L	2.0		0.012	0.20
Central Impact Area	MW-95M2	MW-95M2_S18	167	177	04/03/2018	SW6850	Perchlorate	0.030	J	ug/L	2.0		0.012	0.20
Central Impact Area	MW-95M1	MW-95M1_S18	202	212	04/03/2018	SW6850	Perchlorate	0.79		ug/L	2.0		0.012	0.20
Central Impact Area	MW-95M1	MW-95M1_S18	202	212	04/03/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.2		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-88M2	MW-88M2_S18	213	223	04/03/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.37		ug/L	400		0.025	0.20
Central Impact Area	MW-88M2	MW-88M2_S18	213	223	04/03/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.2		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-88M2	MW-88M2_S18	213	223	04/03/2018	SW6850	Perchlorate	3.0		ug/L	2.0	X	0.012	0.20
Central Impact Area	MW-88M2	MW-88M2_S18D	213	223	04/03/2018	SW6850	Perchlorate	2.9		ug/L	2.0	X	0.012	0.20
Central Impact Area	MW-88M1	MW-88M1_S18	233	243	04/03/2018	SW6850	Perchlorate	0.029	J	ug/L	2.0		0.012	0.20
Central Impact Area	MW-25	MW-25_S18	108	118	04/02/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.90		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-104S	MW-104S_S18	118	128	04/02/2018	SW6850	Perchlorate	0.022	J	ug/L	2.0		0.012	0.20
Central Impact Area	MW-104M2	MW-104M2_S18	135	145	04/02/2018	SW6850	Perchlorate	0.032	J	ug/L	2.0		0.012	0.20
Central Impact Area	MW-104M1	MW-104M1_S18	155	165	04/02/2018	SW6850	Perchlorate	0.022	J	ug/L	2.0		0.012	0.20
Central Impact Area	MW-107M2	MW-107M2_S18	125	135	03/29/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.23		ug/L	0.60		0.036	0.20
Central Impact Area	MW-477M2	MW-477M2_S18	145.6	155.6	03/29/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.46		ug/L	400		0.025	0.20
Central Impact Area	MW-477M2	MW-477M2_S18	145.6	155.6	03/29/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	7.9		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-477M2	MW-477M2_S18D	145.6	155.6	03/29/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.45		ug/L	400		0.025	0.20
Central Impact Area	MW-477M2	MW-477M2_S18D	145.6	155.6	03/29/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	7.6		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-485M1	MW-485M1_S18	125.3	135.3	03/29/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.72		ug/L	400		0.025	0.20
Central Impact Area	MW-485M1	MW-485M1_S18	125.3	135.3	03/29/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.8		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-485M1	MW-485M1_S18D	125.3	135.3	03/29/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.71		ug/L	400		0.025	0.20
Central Impact Area	MW-485M1	MW-485M1_S18D	125.3	135.3	03/29/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.8		ug/L	0.60	X	0.036	0.20

J = Estimated Result
 MDL = Method Detection Limit
 RL = Reporting Limit

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
 Data Received May 2018

Area of Concern	Location ID	Field Sample ID	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Date Sampled	Test Method	Analyte	Result Value	Qualifier	Units	MCL/HA	> MCL/HA	MDL	RL
Central Impact Area	MW-124M1	MW-124M1_S18	234	244	03/22/2018	SW6850	Perchlorate	0.026	J	ug/L	2.0		0.012	0.20
Central Impact Area	MW-23M1	MW-23M1_S18	225	235	03/22/2018	SW6850	Perchlorate	0.14	J	ug/L	2.0		0.012	0.20
Central Impact Area	MW-23D	MW-23D_S18	272	282	03/22/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.1		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-184M1	MW-184M1_S18	186	196	03/21/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.82		ug/L	400		0.025	0.20
Central Impact Area	MW-184M1	MW-184M1_S18	186	196	03/21/2018	SW6850	Perchlorate	1.6		ug/L	2.0		0.012	0.20
Central Impact Area	MW-184M1	MW-184M1_S18	186	196	03/21/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.0		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-184M1	MW-184M1_S18D	186	196	03/21/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.82		ug/L	400		0.025	0.20
Central Impact Area	MW-184M1	MW-184M1_S18D	186	196	03/21/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	4.9		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-38M4	MW-38M4_S18	132	142	03/21/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.40		ug/L	0.60		0.036	0.20
Central Impact Area	MW-38M3	MW-38M3_S18	170	180	03/21/2018	SW6850	Perchlorate	0.14	J	ug/L	2.0		0.012	0.20
Central Impact Area	MW-38M3	MW-38M3_S18	170	180	03/21/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.44		ug/L	0.60		0.036	0.20
Central Impact Area	MW-01S	MW-01S_S18	114	124	03/20/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.37		ug/L	400		0.025	0.20
Central Impact Area	MW-01S	MW-01S_S18	114	124	03/20/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.0		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-01S	MW-01S_S18D	114	124	03/20/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.38		ug/L	400		0.025	0.20
Central Impact Area	MW-01S	MW-01S_S18D	114	124	03/20/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.9		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-01M2	MW-01M2_S18	160	165	03/20/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.38		ug/L	400		0.025	0.20
Central Impact Area	MW-01M2	MW-01M2_S18	160	165	03/20/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	4.9		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-90S	MW-90S_S18	118	128	03/19/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.5		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-91S	MW-91S_S18	124	134	03/19/2018	SW8330	1,3,5-Trinitrobenzene	0.22		ug/L	1,090		0.024	0.20
Central Impact Area	MW-91S	MW-91S_S18	124	134	03/19/2018	SW8330	2-Amino-4,6-dinitrotoluene	0.33		ug/L	7.3		0.016	0.20
Central Impact Area	MW-91S	MW-91S_S18	124	134	03/19/2018	SW8330	4-Amino-2,6-dinitrotoluene	0.39		ug/L	7.3		0.015	0.20
Central Impact Area	MW-91S	MW-91S_S18	124	134	03/19/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.53		ug/L	400		0.025	0.20
Central Impact Area	MW-91S	MW-91S_S18	124	134	03/19/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.1	J	ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-91S	MW-91S_S18	124	134	03/19/2018	SW8330	2,4,6-Trinitrotoluene	5.3		ug/L	2.0	X	0.027	0.20
Central Impact Area	MW-91S	MW-91S_S18D	124	134	03/19/2018	SW8330	1,3,5-Trinitrobenzene	0.23		ug/L	1,090		0.024	0.20
Central Impact Area	MW-91S	MW-91S_S18D	124	134	03/19/2018	SW8330	2-Amino-4,6-dinitrotoluene	0.32		ug/L	7.3		0.016	0.20
Central Impact Area	MW-91S	MW-91S_S18D	124	134	03/19/2018	SW8330	4-Amino-2,6-dinitrotoluene	0.38		ug/L	7.3		0.015	0.20
Central Impact Area	MW-91S	MW-91S_S18D	124	134	03/19/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.50		ug/L	400		0.025	0.20
Central Impact Area	MW-91S	MW-91S_S18D	124	134	03/19/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.0	J	ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-91S	MW-91S_S18D	124	134	03/19/2018	SW8330	2,4,6-Trinitrotoluene	5.2		ug/L	2.0	X	0.027	0.20
Central Impact Area	MW-91M1	MW-91M1_S18	170	180	03/19/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.8		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-93M1	MW-93M1_S18	185	195	03/19/2018	SW6850	Perchlorate	0.088	J	ug/L	2.0		0.012	0.20
Central Impact Area	MW-93M1	MW-93M1_S18	185	195	03/19/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.67		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-235M1	MW-235M1_S18	154	164	03/12/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.47		ug/L	0.60		0.036	0.20
Central Impact Area	OW-1	OW-1_S18	126	136	03/12/2018	SW8330	2-Amino-4,6-dinitrotoluene	0.35		ug/L	7.3		0.016	0.20
Central Impact Area	OW-1	OW-1_S18	126	136	03/12/2018	SW8330	4-Amino-2,6-dinitrotoluene	0.49		ug/L	7.3		0.015	0.20
Central Impact Area	OW-1	OW-1_S18	126	136	03/12/2018	SW8330	2,4,6-Trinitrotoluene	1.5		ug/L	2.0		0.027	0.20
Central Impact Area	OW-1	OW-1_S18	126	136	03/12/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.0	J	ug/L	0.60	X	0.036	0.20
Central Impact Area	OW-2	OW-2_S18	175	185	03/12/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.35		ug/L	0.60		0.036	0.20
Central Impact Area	MW-695S	MW-695S_S18	130	140	03/08/2018	SW6850	Perchlorate	0.054	J	ug/L	2.0		0.012	0.20
Central Impact Area	MW-695S	MW-695S_S18	130	140	03/08/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.33		ug/L	400		0.025	0.20
Central Impact Area	MW-695S	MW-695S_S18	130	140	03/08/2018	SW8330	2-Amino-4,6-dinitrotoluene	0.40		ug/L	7.3		0.016	0.20

J = Estimated Result
 MDL = Method Detection Limit
 RL = Reporting Limit

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
 Data Received May 2018

Area of Concern	Location ID	Field Sample ID	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Date Sampled	Test Method	Analyte	Result Value	Qualifier	Units	MCL/HA	> MCL/HA	MDL	RL
Central Impact Area	MW-695S	MW-695S_S18	130	140	03/08/2018	SW8330	2,4,6-Trinitrotoluene	0.48		ug/L	2.0		0.027	0.20
Central Impact Area	MW-695S	MW-695S_S18	130	140	03/08/2018	SW8330	4-Amino-2,6-dinitrotoluene	0.51		ug/L	7.3		0.015	0.20
Central Impact Area	MW-695S	MW-695S_S18	130	140	03/08/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.0		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-695S	MW-695S_S18D	130	140	03/08/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.34		ug/L	400		0.025	0.20
Central Impact Area	MW-695S	MW-695S_S18D	130	140	03/08/2018	SW8330	2-Amino-4,6-dinitrotoluene	0.38		ug/L	7.3		0.016	0.20
Central Impact Area	MW-695S	MW-695S_S18D	130	140	03/08/2018	SW8330	2,4,6-Trinitrotoluene	0.48		ug/L	2.0		0.027	0.20
Central Impact Area	MW-695S	MW-695S_S18D	130	140	03/08/2018	SW8330	4-Amino-2,6-dinitrotoluene	0.49		ug/L	7.3		0.015	0.20
Central Impact Area	MW-695S	MW-695S_S18D	130	140	03/08/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.1		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-101M1	MW-101M1_S18	158	168	03/08/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.8		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-100M1	MW-100M1_S18	179	189	03/08/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.1		ug/L	0.60	X	0.036	0.20

J = Estimated Result
 MDL = Method Detection Limit
 RL = Reporting Limit