

**MONTHLY PROGRESS REPORT #263
FOR FEBRUARY 2019**

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 1 to 28 February 2019.

1. SUMMARY OF REMEDIATION ACTIONS

The following is a description of Remediation Actions (RA) underway at Camp Edwards as of February 2019.

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 2.622 billion gallons of water treated and re-injected as of 22 February 2019. The following Frank Perkins Road Treatment Facility shutdown(s) occurred in the February reporting period:

- The Frank Perkins Facility shut down due to a power supply interruption, which was planned for the JBCC power grid. The Facility shut down at 0800 h on 20 February 2019 and was restarted at 0817 h on 20 February 2019.

The Pew Road Mobile Treatment Unit (MTU) flow rate was reduced to 65 GPM from 100 GPM on 01 February 2019 at 0755 h per the Final Project Note. The Pew Road MTU continues to operate at a flow rate of 65 GPM, with over 606.6 million gallons of water treated and re-injected as of 22 February 2019. The following Pew Road MTU shutdown(s) occurred in the February reporting period:

- The Pew Road MTU shut down due to a power supply interruption, which was planned for the JBCC power grid. The MTU shut down at 0800 h on 20 February 2019 and was restarted at 0810 h on 20 February 2019.
- The Pew Road MTU shut down due to a power supply interruption caused by strong winds. The MTU shut down at 1534 h on 25 February 2019 and was restarted at 0731 h on 26 February 2019.

The Base Boundary MTU is operating at a flow rate of 65 gpm, with over 220.9 million gallons of water treated and re-injected as of 22 February 2019. No Base Boundary MTU shutdowns occurred in the February reporting period.

The Leading Edge system continues to operate at a flow rate of 100 gpm, with over 134.1 million gallons of water treated and re-injected as of 22 February 2019. No Leading Edge system shutdowns occurred in the February reporting period.

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 22 February 2019, over 1.094 billion gallons of water have been treated and re-injected. No Northern Treatment Building shutdowns occurred in the February reporting period.

The Northern MTUs E and F continue to operate at a flow rate of 250 gpm. As of 22 February 2019, over 1.551 billion gallons of water have been treated and re-injected. The following J-2 Range Northern system shutdown(s) occurred in the February reporting period:

- MTU E shut down due to a power supply interruption. The MTU shut down at 0548 h on 01 February 2019 and was restarted at 0800 h on 01 February 2019.
- MTU E shut down due to a “Bag filter outlet pressure high” alarm. The MTU shut down at 2232 h on 01 February 2019 and was restarted at 0810 h on 04 February 2019.

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 22 February 2019, over 1.200 billion gallons of water have been treated and re-injected. The following MTU H and I shutdown(s) occurred in the February reporting period:

- MTUs H and I shut down due to a broken camlock fitting from the ball valve on the lag GAC influent hose in MTU H. The MTUs shut down at 1230 h on 20 February 2019 and were restarted once the fittings were replaced at 0843 h on 21 February 2019.

MTU J continues to operate at a flow rate of 120 gpm. As of 22 February 2019, over 546.1 million gallons of water have been treated and re-injected. The following MTU J shutdown(s) occurred in the February reporting period:

- MTU J shut down due to a power supply interruption caused by strong winds. The MTU shut down at 1954 h on 25 February 2019 and was restarted at 0758 h on 26 February 2019.

MTU K continues to operate at a flow rate of 125 gpm. As of 22 February 2019, over 661.1 million gallons of water have been treated and re-injected. No MTU K shutdowns occurred in the February reporting period.

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 255 gpm (while J3EW0032 is running at 45 gpm instead of 65 gpm). As of 22 February 2019, over 1.211 billion gallons of water have been treated and re-injected. No J-3 Range system shutdowns occurred in the February reporting period.

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 22 February 2019, over 523.5 million gallons of water have been treated and re-injected. The following J-1 Range Southern system shutdown(s) occurred in the February reporting period:

- The system shut down due to a power supply interruption. The system shut down at 0336 h on 13 February 2019 and could not be restarted due to a flooded hand hole on Grand Oak Road. The hand hole was pumped out, but the breaker would not reset. BETCo was onsite on 14 February 2019 to repair the 480-volt wire to J1SEW0002 and the system was restarted at 0915 h on 14 February 2019.

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 22 February 2019, over 673.6 million gallons of water have been treated and re-injected. No J-1 Range Northern MTU shutdowns occurred in the February reporting period.

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 22 February 2019, over 1.607 billion gallons of water have been treated and re-injected. The following CIA treatment facility shutdowns occurred in the February reporting period:

- System 1 shut down due to a power supply interruption, which was planned for the JBCC power grid. The MTU shut down at 0800 h on 20 February 2019 and was restarted at 0857 h on 20 February 2019.
- System 2 shut down due to a power supply interruption, which was planned for the JBCC power grid. The MTU shut down at 0800 h on 20 February 2019 and was restarted at 0916 h on 20 February 2019.
- System 1 shut down due to a “Pump P-201 Stability Failed” alarm for CIAEW0001. The MTU shut down at 2100 h on 23 February 2019 and was restarted at 0729 h on 25 February 2019.

SUMMARY OF ACTIONS TAKEN

CIA

- Groundwater sampling within the Central Impact Area SPM program.
- Hydraulic monitoring within the Central Impact Area SPM program.
- Performed routine inspections of BEM cover at the Central Impact Area to ensure cover is secure and intact.
- Conducted investigation of missed QC seeds.

Demolition Area 1

- Exchanged bag filters at the Leading Edge MTU.

Small Arms Ranges

- Groundwater sampling within the Small Arms Ranges LTM program.

J1 Range

- Groundwater sampling within the J1 North SPM program.
- Exchanged bag filters at the J-1 Range Northern MTU.
- Replaced faulty pressure gauge on the lead bag filter housing effluent at the J-1 Range Northern MTU.

J2 Range

- Groundwater sampling within the J2 East SPM program.
- Exchanged bag filters at the J-2 Range Eastern MTU H.

J3 Range

- No Activity

L Range

- No Activity

Training Areas

- Groundwater sampling within the Training Areas LTM program.

Other

- Process water samples were collected from the Central Impact Area, Demolition Area 1, J1 Range Northern, J1 Range Southern, J2 Range Eastern, J2 Range Northern, and J3 Range.
- Groundwater samples were collected from the Central Impact Area, Former A Range, J1 Range Northern, J2 Range Eastern, and Training Areas.

JBCC IAGWSP Tech Update Meeting Minutes 14 February 2019**Project and Fieldwork Update**

Currently there is no drilling. Long term monitoring sampling is underway in the Central Impact Area. The J-1 South treatment system went down February 13th due to an off-base electrical issue. Electricians will be on-site to hopefully repair the system and get it back online today. USGS is on-site installing equipment for water level monitoring in wells along the northern and western part of the base.

Since the last tech update, there has been no new fieldwork in the Small Arms Ranges. Contractors will be coming back this spring to perform the additional lifts at D Range and Former B Range. They will most likely do lifts of up to two feet at the Former B Range and one foot at the D Range. IAGWSP will send an email with the proposed procedure. EPA requested figures of all the ranges indicating the depths of excavation at each.

USGS will install water table wells along the north and western part of the base. The water table wells at J-2 were installed and sampled.

In the Central Impact Area, contractors spent the last few weeks trying to reacquire missed seeds and were met with limited success. They believe that the seeds may have not been properly marked and recorded initially. The team has de-mobbed until late March/early April. When the program resumes, there will be a new team with increased oversight. A variety of new seeds will be used.

Action Items

The action items were discussed and updated.

Status of Project Notes for Training Areas

The work at several sites was discussed:

- 1) 1949 Engineering Training Site - work was completed in June. IAGWSP is reviewing a project note that outlines a proposed investigation of a ¼-acre area with MEC removal. There is likely no further action required.
- 2) Pyrotechnics Training Sites - Work was performed at Deep Bottom Pond and the CS- 15 Landing Zone. A project note reporting results is under internal review. Nothing was detected in the soil. A project note will be prepared to document the findings and make recommendations for groundwater sampling.
- 3) KD Range - Geophysical and soil investigations were completed in July. Project Note was submitted concerning the investigation of a 35x35 feet grid centered along the APC primary target based on soils APC targets. No MEC was found.

- 4) Former E Range - Geophysical and soil investigations were initiated. Completed vegetation clearance and surface clearance of a 20-acre area. Collected soil samples. Next step is an EM61 survey of the area.

Review of GW Sampling Downgradient of J2 Plumes

In response to an RDX detection, EMC Commissioners have noted that additional protections for water supply wells in needed. MassDEP suggested that there are wells downgradient of the J-2 plume that should be sampled. IAGWSP/USACE agreed to look at backward and forward particle tracks from wells and determine existing areas that could be sampled. Plume maps with monitoring wells were reviewed. IAGWSP also agreed to look at the particle tracks from all supply wells.

IAGWSP will suggest sampling for PFAS to the Water Supply Coop at an upcoming meeting.

Review of CIA 2019 Source Removal Scope

IAGWSP proposed investigation areas for the upcoming CIA work at an additional ten acres. They looked at areas in the south based to extend the removal based on finds on the ground reviewing and the groundwater source area. A series of transects were identified based on high density, cratering, and former target locations. Additional vegetation clearance might be necessary or some of these transect locations.

EPA asked about the north-south transects, which would each be about a mile long. TetraTech noted that that area has not been investigated very heavily but the modeled plume indicates there might be something in that direction. He also noted that it would mean moving from a high area to a lower area. IAGWSP noted that this is an iterative process that could be completed with multiple transects over a period of years.

The group concurred that transects are the best approach to determine drop off. At a previous meeting, EPA and MassDEP looked at the proposed transects and the LIDAR data to determine what the best locations would be. They provided a modified proposal with three transects to the west, two to the east and one to the south, along grids around certain targets. Their proposed locations totaled 30 acres, which they noted could be reduced for the first round. Maps were reviewed. The agencies presented their proposed transect locations (based on density, cratering, target locations, data gaps, the CS-19 area). IAGWSP stressed the importance of doing areas that are not heavily cratered to calibrate the findings.

EPA noted that a southern transect is needed because there are no wells in the south and there were targets in the area. The length of transects and grid areas were discussed. TetraTech recommended not going less than ½ a grid in width. IAGWSP noted the importance of comparing information from transects of similar width.

IAGWSP will review the agencies' proposal.

JBCC Cleanup Team Meeting

The next meeting of the JBCC Cleanup Team is scheduled for March 13, 2019. The team meetings provide a forum for community input regarding issues related to the Installation Restoration Program, which is primarily focused on the environmental cleanup on the southern portion of the base, and the Impact Area Groundwater Study Program, which is responsible for the environmental cleanup of the northern 15,000 acres of Camp Edwards. For more information, contact Doug Karson at 508-968-4678,

ext. 2 at the Installation Restoration Program or Lori Boghdan at 508-968-5635 at the Impact Area Groundwater Study Program.

SUMMARY OF DATA RECEIVED

Table 1 summarizes sampling for all media from 1 February to 28 February 2019. Validated detections of explosives compounds and perchlorate for all groundwater results received from 1 February to 28 February 2019. The February treatment system influent summary is not included due to no validated perchlorate or explosives results available at report submittal time. 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:

- Monthly Progress Report No. 262 for January 2019 11 Feb 2019
- Final Northwest Corner 2018 Annual Environmental Monitoring Report 04 Feb 2019
- Permanent Solution Statement PSS 06 Feb 2019
- Demolition Area 1 Base Boundary Optimization 06 Feb 2019
- Decision Document - Training Areas Operable Unit 22 Feb 2019
- Final Training Areas Decision Document 27 Feb 2019

3. SCHEDULED ACTIONS

The following documents are being prepared or revised during February 2019:

Training Areas

- Final Training Areas Decision Document

Annual Reports/ Environmental Monitoring Reports/Work Plans

- Draft CIA Annual Monitoring Report response to comments (RTCs)
- Draft J-2 Range Northern and J-2 Range Eastern Annual Monitoring Report RTCs
- Draft J-3 Range Annual Monitoring Report RTCs

Central Impact Area

- 2019 Work Plan

Miscellaneous

- Draft Five Year Review Report
- J-2 Range Geophysical Completion of Work Report and additional well locations
- Certificates of Compliance

- PFAS sampling project note RTCs and revised Work Plan
- CIA and J-2 Range rocket disposal recommendations
- J-1 South project note for additional well locations

TABLE 1
Sampling Progress: 1 February to 28 February 2019

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
Central Impact Area	MW-38M4	MW-38M4_S19	N	02/27/2019	Ground Water	132	142
Central Impact Area	MW-38M3	MW-38M3_S19	N	02/27/2019	Ground Water	170	180
Central Impact Area	MW-59S	MW-59S_S19	N	02/27/2019	Ground Water	128	138
Central Impact Area	MW-695S	MW-695S_S19	N	02/27/2019	Ground Water	130	140
Central Impact Area	MW-695S	MW-695S_S19D	FD	02/27/2019	Ground Water	130	140
Central Impact Area	MW-25	MW-25_S19	N	02/26/2019	Ground Water	108	118
Central Impact Area	MW-112M2	MW-112M2_S19	N	02/26/2019	Ground Water	165	175
Central Impact Area	MW-112M1	MW-112M1_S19	N	02/26/2019	Ground Water	195	205
Central Impact Area	MW-115S	MW-115S_S19	N	02/26/2019	Ground Water	116	126
Central Impact Area	MW-115M1	MW-115M1_S19	N	02/26/2019	Ground Water	138	148
Central Impact Area	MW-92S	MW-92S_S19	N	02/25/2019	Ground Water	139	149
Central Impact Area	MW-02M2	MW-02M2_S19	N	02/25/2019	Ground Water	170	175
Central Impact Area	MW-02M1	MW-02M1_S19	N	02/25/2019	Ground Water	212	217
Central Impact Area	MW-27	MW-27_S19	N	02/25/2019	Ground Water	117	127
Central Impact Area	MW-85S	MW-85S_S19	N	02/25/2019	Ground Water	116	126
Central Impact Area	MW-43M2	MW-43M2_S19	N	02/21/2019	Ground Water	200	210
Central Impact Area	MW-43M1	MW-43M1_S19	N	02/21/2019	Ground Water	223	233
Central Impact Area	MW-42M3	MW-42M3_S19	N	02/21/2019	Ground Water	165.8	176
Central Impact Area	MW-42M2	MW-42M2_S19	N	02/21/2019	Ground Water	185.8	196
Central Impact Area	MW-42M1	MW-42M1_S19	N	02/21/2019	Ground Water	205.8	216
Former A Range	MW-42M1	MW-42M1_S19	N	02/21/2019	Ground Water	205.8	216
Central Impact Area	MW-686M2	MW-686M2_S19	N	02/20/2019	Ground Water	194.3	204.3
Central Impact Area	MW-686M1	MW-686M1_S19	N	02/20/2019	Ground Water	243.2	253.2
Central Impact Area	MW-687M2	MW-687M2_S19	N	02/20/2019	Ground Water	188	198
Central Impact Area	MW-687M1	MW-687M1_S19	N	02/20/2019	Ground Water	232.6	242.6
Central Impact Area	MW-203M2	MW-203M2_S19	N	02/20/2019	Ground Water	176	186
Central Impact Area	MW-39M1	MW-39M1_S19	N	02/19/2019	Ground Water	220	230
Central Impact Area	MW-184M1	MW-184M1_S19	N	02/19/2019	Ground Water	186	196
Central Impact Area	MW-184M1	MW-184M1_S19D	FD	02/19/2019	Ground Water	186	196
Central Impact Area	MW-607M3	MW-607M3_S19	N	02/19/2019	Ground Water	157.4	167.4
Central Impact Area	MW-607M2	MW-607M2_S19	N	02/19/2019	Ground Water	177.4	187.4
Central Impact Area	MW-607M2	MW-607M2_S19D	FD	02/19/2019	Ground Water	177.4	187.4
Central Impact Area	MW-607M1	MW-607M1_S19	N	02/19/2019	Ground Water	207.4	217.4
Central Impact Area	MW-485M1	MW-485M1_S19	N	02/14/2019	Ground Water	125.32	135.32
Central Impact Area	MW-485M1	MW-485M1_S19D	FD	02/14/2019	Ground Water	125.32	135.32
Central Impact Area	MW-477M2	MW-477M2_S19	N	02/14/2019	Ground Water	145.62	155.62
Central Impact Area	MW-477M2	MW-477M2_S19D	FD	02/14/2019	Ground Water	145.62	155.62
Central Impact Area	MW-477M1	MW-477M1_S19	N	02/14/2019	Ground Water	187.53	197.53
Central Impact Area	OW-1	OW-1_S19	N	02/14/2019	Ground Water	126	136
Central Impact Area	OW-2	OW-2_S19	N	02/14/2019	Ground Water	175	185
Central Impact Area	MW-486M1	MW-486M1_S19	N	02/13/2019	Ground Water	185.7	195.7
Central Impact Area	MW-01S	MW-01S_S19	N	02/13/2019	Ground Water	114	124
Central Impact Area	MW-01S	MW-01S_S19D	FD	02/13/2019	Ground Water	114	124
Central Impact Area	MW-01M2	MW-01M2_S19	N	02/13/2019	Ground Water	160	165
Central Impact Area	MW-01M2	MW-01M2_S19D	FD	02/13/2019	Ground Water	160	165
Central Impact Area	MW-98S	MW-98S_S19	N	02/13/2019	Ground Water	137	147
Central Impact Area	MW-98M1	MW-98M1_S19	N	02/13/2019	Ground Water	164	174
Central Impact Area	MW-99S	MW-99S_S19	N	02/12/2019	Ground Water	133	143
Central Impact Area	MW-99M1	MW-99M1_S19	N	02/12/2019	Ground Water	195	205
Central Impact Area	MW-100M2	MW-100M2_S19	N	02/12/2019	Ground Water	164	174
Central Impact Area	MW-100M1	MW-100M1_S19	N	02/12/2019	Ground Water	179	189
Central Impact Area	MW-90S	MW-90S_S19	N	02/11/2019	Ground Water	118	128
Central Impact Area	MW-90M1	MW-90M1_S19	N	02/11/2019	Ground Water	145	155
Central Impact Area	MW-40S	MW-40S_S19	N	02/11/2019	Ground Water	115.5	126
Central Impact Area	MW-40M1	MW-40M1_S19	N	02/11/2019	Ground Water	132.5	142.5
Central Impact Area	MW-107M2	MW-107M2_S19	N	02/11/2019	Ground Water	125	135
Central Impact Area	MW-101S	MW-101S_S19	N	02/07/2019	Ground Water	131	141
Central Impact Area	MW-101M1	MW-101M1_S19	N	02/07/2019	Ground Water	158	168
Demolition Area 1	PR-EFF	PR-EFF-155A	N	02/07/2019	Process Water	0	0

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 1 February to 28 February 2019

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	PR-MID-2	PR-MID-2-155A	N	02/07/2019	Process Water	0	0
Demolition Area 1	PR-MID-1	PR-MID-1-155A	N	02/07/2019	Process Water	0	0
Demolition Area 1	PR-INF	PR-INF-155A	N	02/07/2019	Process Water	0	0
Central Impact Area	MW-93M2	MW-93M2_S19	N	02/07/2019	Ground Water	145	155
Central Impact Area	MW-93M1	MW-93M1_S19	N	02/07/2019	Ground Water	185	195
Demolition Area 1	FPR-2-EFF-A	FPR-2-EFF-A-155A	N	02/07/2019	Process Water	0	0
Demolition Area 1	FPR-2-GAC-MID1A	FPR-2-GAC-MID1A-155A	N	02/07/2019	Process Water	0	0
Demolition Area 1	FPR2-POST-IX-A	FPR2-POST-IX-A-155A	N	02/07/2019	Process Water	0	0
Demolition Area 1	FPR-2-INF	FPR-2-INF-155A	N	02/07/2019	Process Water	0	0
Demolition Area 1	D1LE-EFF	D1LE-EFF-31A	N	02/07/2019	Process Water	0	0
Demolition Area 1	D1LE-MID2	D1LE-MID2-31A	N	02/07/2019	Process Water	0	0
Demolition Area 1	D1LE-MID1	D1LE-MID1-31A	N	02/07/2019	Process Water	0	0
Demolition Area 1	D1LE-INF	D1LE-INF-31A	N	02/07/2019	Process Water	0	0
Central Impact Area	MW-91S	MW-91S_S19	N	02/07/2019	Ground Water	124	134
Central Impact Area	MW-91S	MW-91S_S19D	FD	02/07/2019	Ground Water	124	134
Central Impact Area	MW-91M1	MW-91M1_S19	N	02/07/2019	Ground Water	170	180
Central Impact Area	MW-91M1	MW-91M1_S19D	FD	02/07/2019	Ground Water	170	180
Demolition Area 1	D1-EFF	D1-EFF-103A	N	02/07/2019	Process Water	0	0
Demolition Area 1	D1-MID-2	D1-MID-2-103A	N	02/07/2019	Process Water	0	0
Demolition Area 1	D1-MID-1	D1-MID-1-103A	N	02/07/2019	Process Water	0	0
Demolition Area 1	D1-INF	D1-INF-103A	N	02/07/2019	Process Water	0	0
J3 Range	J3-EFF	J3-EFF-149A	N	02/06/2019	Process Water	0	0
J3 Range	J3-MID-2	J3-MID-2-149A	N	02/06/2019	Process Water	0	0
J3 Range	J3-MID-1	J3-MID-1-149A	N	02/06/2019	Process Water	0	0
J3 Range	J3-INF	J3-INF-149A	N	02/06/2019	Process Water	0	0
Central Impact Area	MW-105M1	MW-105M1_S19	N	02/06/2019	Ground Water	205	215
J1 Range Southern	J1S-EFF	J1S-EFF-135A	N	02/06/2019	Process Water	0	0
J1 Range Southern	J1S-MID	J1S-MID-135A	N	02/06/2019	Process Water	0	0
J1 Range Southern	J1S-INF-2	J1S-INF-2-135A	N	02/06/2019	Process Water	0	0
Central Impact Area	MW-44M1	MW-44M1_S19	N	02/06/2019	Ground Water	182	192
J2 Range Northern	J2N-EFF-G	J2N-EFF-G-149A	N	02/06/2019	Process Water	0	0
J2 Range Northern	J2N-MID-2G	J2N-MID-2G-149A	N	02/06/2019	Process Water	0	0
J2 Range Northern	J2N-MID-1G	J2N-MID-1G-149A	N	02/06/2019	Process Water	0	0
J2 Range Northern	J2N-INF-G	J2N-INF-G-149A	N	02/06/2019	Process Water	0	0
Central Impact Area	MW-180M3	MW-180M3_S19	N	02/06/2019	Ground Water	171	181
J2 Range Northern	J2N-EFF-EF	J2N-EFF-EF-149A	N	02/06/2019	Process Water	0	0
J2 Range Northern	J2N-MID-2F	J2N-MID-2F-149A	N	02/06/2019	Process Water	0	0
J2 Range Northern	J2N-MID-1F	J2N-MID-1F-149A	N	02/06/2019	Process Water	0	0
J2 Range Northern	J2N-INF-EF	J2N-INF-EF-149A	N	02/06/2019	Process Water	0	0
J2 Range Northern	J2N-MID-2E	J2N-MID-2E-149A	N	02/06/2019	Process Water	0	0
J2 Range Northern	J2N-MID-1E	J2N-MID-1E-149A	N	02/06/2019	Process Water	0	0
Central Impact Area	MW-185M1	MW-185M1_S19	N	02/06/2019	Ground Water	247	257
J1 Range Northern	J1N-EFF	J1N-EFF-64A	N	02/06/2019	Process Water	0	0
J1 Range Northern	J1N-MID2	J1N-MID2-64A	N	02/06/2019	Process Water	0	0
J1 Range Northern	J1N-MID1	J1N-MID1-64A	N	02/06/2019	Process Water	0	0
J1 Range Northern	J1N-INF2	J1N-INF2-64A	N	02/06/2019	Process Water	0	0
Central Impact Area	CIA2-EFF	CIA2-EFF-61A	N	02/05/2019	Process Water	0	0
Central Impact Area	CIA2-MID2	CIA2-MID2-61A	N	02/05/2019	Process Water	0	0
Central Impact Area	CIA2-MID1	CIA2-MID1-61A	N	02/05/2019	Process Water	0	0
Central Impact Area	CIA2-INF	CIA2-INF-61A	N	02/05/2019	Process Water	0	0
Central Impact Area	CIA1-EFF	CIA1-EFF-61A	N	02/05/2019	Process Water	0	0
Central Impact Area	CIA1-MID2	CIA1-MID2-61A	N	02/05/2019	Process Water	0	0
Central Impact Area	CIA1-MID1	CIA1-MID1-61A	N	02/05/2019	Process Water	0	0
Central Impact Area	CIA1-INF	CIA1-INF-61A	N	02/05/2019	Process Water	0	0
Central Impact Area	CIA3-EFF	CIA3-EFF-32A	N	02/05/2019	Process Water	0	0
Central Impact Area	CIA3-MID2	CIA3-MID2-32A	N	02/05/2019	Process Water	0	0
Central Impact Area	CIA3-MID1	CIA3-MID1-32A	N	02/05/2019	Process Water	0	0
Central Impact Area	CIA3-INF	CIA3-INF-32A	N	02/05/2019	Process Water	0	0
Central Impact Area	MW-37M2	MW-37M2_S19	N	02/04/2019	Ground Water	145	155

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 1 February to 28 February 2019

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
Central Impact Area	MW-106M1	MW-106M1_S19	N	02/04/2019	Ground Water	170.5	180.5
Central Impact Area	MW-235M1	MW-235M1_S19	N	02/04/2019	Ground Water	154	164
J2 Range Eastern	J2E-EFF-K	J2E-EFF-K-125A	N	02/04/2019	Process Water	0	0
J2 Range Eastern	J2E-MID-2K	J2E-MID-2K-125A	N	02/04/2019	Process Water	0	0
J2 Range Eastern	J2E-MID-1K	J2E-MID-1K-125A	N	02/04/2019	Process Water	0	0
J2 Range Eastern	J2E-INF-K	J2E-INF-K-125A	N	02/04/2019	Process Water	0	0
Central Impact Area	MW-487M2	MW-487M2_S19	N	02/04/2019	Ground Water	195.84	205.84
Central Impact Area	MW-487M2	MW-487M2_S19D	FD	02/04/2019	Ground Water	195.84	205.84
J1 Range Northern	MW-487M2	MW-487M2_S19	N	02/04/2019	Ground Water	195.84	205.84
J1 Range Northern	MW-487M2	MW-487M2_S19D	FD	02/04/2019	Ground Water	195.84	205.84
J2 Range Eastern	J2E-EFF-J	J2E-EFF-J-125A	N	02/04/2019	Process Water	0	0
J2 Range Eastern	J2E-MID-2J	J2E-MID-2J-125A	N	02/04/2019	Process Water	0	0
J2 Range Eastern	J2E-MID-1J	J2E-MID-1J-125A	N	02/04/2019	Process Water	0	0
J2 Range Eastern	J2E-INF-J	J2E-INF-J-125A	N	02/04/2019	Process Water	0	0
Central Impact Area	MW-487M1	MW-487M1_S19	N	02/04/2019	Ground Water	240.29	250.29
J1 Range Northern	MW-487M1	MW-487M1_S19	N	02/04/2019	Ground Water	240.29	250.29
J2 Range Eastern	J2E-EFF-IH	J2E-EFF-IH-125A	N	02/04/2019	Process Water	0	0
J2 Range Eastern	J2E-MID-2H	J2E-MID-2H-125A	N	02/04/2019	Process Water	0	0
J2 Range Eastern	J2E-MID-1H	J2E-MID-1H-125A	N	02/04/2019	Process Water	0	0
J2 Range Eastern	J2E-MID-2I	J2E-MID-2I-125A	N	02/04/2019	Process Water	0	0
J2 Range Eastern	J2E-MID-1I	J2E-MID-1I-125A	N	02/04/2019	Process Water	0	0
J2 Range Eastern	J2E-INF-I	J2E-INF-I-125A	N	02/04/2019	Process Water	0	0

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received February 2019

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
Demolition Area 1	MW-659M1	MW-659M1_F18	120	130	12/27/2018	SW6850	Perchlorate	0.65		ug/L	2.0		0.012	0.20
Demolition Area 1	EW-658	EW-658_F18	96	136	12/27/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.044	J	ug/L	400		0.025	0.20
Demolition Area 1	EW-658	EW-658_F18	96	136	12/27/2018	SW6850	Perchlorate	0.078	J	ug/L	2.0		0.012	0.20
Demolition Area 1	EW-658	EW-658_F18	96	136	12/27/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.17	J	ug/L	0.60		0.036	0.20
Demolition Area 1	MW-431	MW-431_F18	88	188	12/27/2018	SW6850	Perchlorate	0.090	J	ug/L	2.0		0.012	0.20
Demolition Area 1	MW-431	MW-431_F18	88	188	12/27/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.14	J	ug/L	400		0.025	0.20
Demolition Area 1	MW-431	MW-431_F18	88	188	12/27/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.19	J	ug/L	0.60		0.036	0.20
Demolition Area 1	MW-341M3	MW-341M3_F18	209.5	219.5	12/27/2018	SW6850	Perchlorate	0.090	J	ug/L	2.0		0.012	0.20
Demolition Area 1	MW-341M2	MW-341M2_F18	264.5	269.5	12/27/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.77		ug/L	0.60	X	0.036	0.20
Demolition Area 1	MW-341M2	MW-341M2_F18	264.5	269.5	12/27/2018	SW6850	Perchlorate	1.4		ug/L	2.0		0.012	0.20
Demolition Area 1	MW-544M3	MW-544M3_F18	77.5	87.5	12/21/2018	SW6850	Perchlorate	0.096	J	ug/L	2.0		0.012	0.20
Demolition Area 1	MW-544M2	MW-544M2_F18	112	122	12/21/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.11	J	ug/L	0.60		0.036	0.20
Demolition Area 1	MW-544M2	MW-544M2_F18	112	122	12/21/2018	SW6850	Perchlorate	1.1		ug/L	2.0		0.012	0.20
Demolition Area 1	MW-544M1	MW-544M1_F18	162	172	12/21/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.14	J	ug/L	0.60		0.036	0.20
Demolition Area 1	MW-544M1	MW-544M1_F18	162	172	12/21/2018	SW6850	Perchlorate	7.8		ug/L	2.0	X	0.012	0.20
Demolition Area 1	MW-545M4	MW-545M4_F18	72	82	12/20/2018	SW6850	Perchlorate	0.51		ug/L	2.0		0.012	0.20
Demolition Area 1	MW-545M3	MW-545M3_F18	101.5	111.5	12/20/2018	SW6850	Perchlorate	0.18	J	ug/L	2.0		0.012	0.20
Demolition Area 1	MW-545M2	MW-545M2_F18	142	152	12/20/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.21	J	ug/L	0.60		0.036	0.20
Demolition Area 1	MW-545M2	MW-545M2_F18	142	152	12/20/2018	SW6850	Perchlorate	4.0		ug/L	2.0	X	0.012	0.20
Demolition Area 1	MW-545M1	MW-545M1_F18	162	172	12/20/2018	SW6850	Perchlorate	1.6		ug/L	2.0		0.012	0.20
Demolition Area 1	XX9514	XX9514_F18	102	112	12/20/2018	SW6850	Perchlorate	4.9		ug/L	2.0	X	0.012	0.20
Demolition Area 1	XX9514	XX9514_F18D	102	112	12/20/2018	SW6850	Perchlorate	4.9		ug/L	2.0	X	0.012	0.20
Demolition Area 1	MW-31S	MW-31S_F18	98	103	12/19/2018	SW8330	1,3,5-Trinitrobenzene	0.12	J	ug/L	1090		0.024	0.20
Demolition Area 1	MW-31S	MW-31S_F18	98	103	12/19/2018	SW8330	4-Amino-2,6-dinitrotoluene	0.13	J	ug/L	7.3		0.015	0.20
Demolition Area 1	MW-31S	MW-31S_F18	98	103	12/19/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.15	J	ug/L	400		0.025	0.20
Demolition Area 1	MW-31S	MW-31S_F18	98	103	12/19/2018	SW8330	2-Amino-4,6-dinitrotoluene	0.31	J	ug/L	7.3		0.016	0.20
Demolition Area 1	MW-31S	MW-31S_F18	98	103	12/19/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.39	J	ug/L	0.60		0.036	0.20
Demolition Area 1	MW-31S	MW-31S_F18	98	103	12/19/2018	SW8330	2,4,6-Trinitrotoluene	1.4		ug/L	2.0		0.027	0.20
Demolition Area 1	MW-31S	MW-31S_F18D	98	103	12/19/2018	SW8330	1,3,5-Trinitrobenzene	0.12	J	ug/L	1090		0.024	0.20
Demolition Area 1	MW-31S	MW-31S_F18D	98	103	12/19/2018	SW8330	4-Amino-2,6-dinitrotoluene	0.13	J	ug/L	7.3		0.015	0.20
Demolition Area 1	MW-31S	MW-31S_F18D	98	103	12/19/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.15	J	ug/L	400		0.025	0.20
Demolition Area 1	MW-31S	MW-31S_F18D	98	103	12/19/2018	SW8330	2-Amino-4,6-dinitrotoluene	0.24		ug/L	7.3		0.016	0.20
Demolition Area 1	MW-31S	MW-31S_F18D	98	103	12/19/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.40	J	ug/L	0.60		0.036	0.20
Demolition Area 1	MW-31S	MW-31S_F18D	98	103	12/19/2018	SW8330	2,4,6-Trinitrotoluene	1.4		ug/L	2.0		0.027	0.20
Demolition Area 1	MW-73S	MW-73S_F18	52.2	61.7	12/19/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.25		ug/L	0.60		0.036	0.20
Demolition Area 1	MW-19S	MW-19S_F18	52.7	62.7	12/19/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.97		ug/L	400		0.025	0.20
Demolition Area 1	MW-19S	MW-19S_F18	52.7	62.7	12/19/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.0		ug/L	0.60	X	0.036	0.20
Demolition Area 1	MW-19S	MW-19S_F18D	52.7	62.7	12/19/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.96		ug/L	400		0.025	0.20
Demolition Area 1	MW-19S	MW-19S_F18D	52.7	62.7	12/19/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.1		ug/L	0.60	X	0.036	0.20
Demolition Area 1	MW-231M1	MW-231M1_F18	210.5	220.5	12/18/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.26		ug/L	0.60		0.036	0.20
Demolition Area 1	MW-231M1	MW-231M1_F18	210.5	220.5	12/18/2018	SW6850	Perchlorate	1.7		ug/L	2.0		0.012	0.20
Demolition Area 1	MW-663D	MW-663D_F18	240.6	250.6	12/18/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.6		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 February 2019**

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
Demolition Area 1	MW-663D	MW-663D_F18	240.6	250.6	12/18/2018	SW6850	Perchlorate	19.2		ug/L	2.0	X	0.012	0.20
Demolition Area 1	MW-663D	MW-663D_F18D	240.6	250.6	12/18/2018	SW6850	Perchlorate	19.4		ug/L	2.0	X	0.012	0.20
Demolition Area 1	MW-700M2	MW-700M2_F18	147.7	157.7	12/18/2018	SW6850	Perchlorate	0.079	J	ug/L	2.0		0.012	0.20
Demolition Area 1	MW-700M1	MW-700M1_F18	197.9	207.9	12/18/2018	SW6850	Perchlorate	0.070	J	ug/L	2.0		0.012	0.20
Demolition Area 1	MW-76M2	MW-76M2_F18	105	115	12/17/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.069	J	ug/L	400		0.025	0.20
Demolition Area 1	MW-76M2	MW-76M2_F18	105	115	12/17/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.21		ug/L	0.60		0.036	0.20
Demolition Area 1	MW-77M2	MW-77M2_F18	120	130	12/17/2018	SW8330	2-Amino-4,6-dinitrotoluene	0.18	J	ug/L	7.3		0.016	0.20
Demolition Area 1	MW-77M2	MW-77M2_F18	120	130	12/17/2018	SW8330	4-Amino-2,6-dinitrotoluene	0.30		ug/L	7.3		0.015	0.20
Demolition Area 1	MW-77M2	MW-77M2_F18	120	130	12/17/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.8		ug/L	0.60	X	0.036	0.20
Demolition Area 1	MW-77M2	MW-77M2_F18	120	130	12/17/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2.7		ug/L	400		0.025	0.20
J1 Range Northern	MW-315M2	MW-315M2_F18	195.72	205.72	12/17/2018	SW6850	Perchlorate	0.051	J	ug/L	2.0		0.012	0.20
J1 Range Northern	MW-315M2	MW-315M2_F18	195.72	205.72	12/17/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.29		ug/L	0.60		0.036	0.20
J1 Range Northern	MW-315M1	MW-315M1_F18	245.49	255.49	12/17/2018	SW6850	Perchlorate	0.076	J	ug/L	2.0		0.012	0.20
J1 Range Northern	MW-566M1	MW-566M1_F18	232	242	12/13/2018	SW6850	Perchlorate	2.9		ug/L	2.0	X	0.012	0.20
J1 Range Northern	MW-590M2	MW-590M2_F18	238	248	12/13/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.18	J	ug/L	0.60		0.036	0.20
J1 Range Northern	MW-590M2	MW-590M2_F18	238	248	12/13/2018	SW6850	Perchlorate	5.6		ug/L	2.0	X	0.012	0.20
J1 Range Northern	MW-370M2	MW-370M2_F18	215.54	225.54	12/12/2018	SW6850	Perchlorate	0.093	J	ug/L	2.0		0.012	0.20
J1 Range Northern	MW-370M1	MW-370M1_F18	245	255	12/12/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.53		ug/L	0.60		0.036	0.20
J1 Range Northern	MW-370M1	MW-370M1_F18	245	255	12/12/2018	SW6850	Perchlorate	8.3		ug/L	2.0	X	0.012	0.20
J1 Range Northern	MW-370M1	MW-370M1_F18D	245	255	12/12/2018	SW6850	Perchlorate	8.3		ug/L	2.0	X	0.012	0.20
J1 Range Northern	MW-265M3	MW-265M3_F18	200	210	12/12/2018	SW6850	Perchlorate	0.10	J	ug/L	2.0		0.012	0.20
J1 Range Northern	MW-265M2	MW-265M2_F18	225	235	12/12/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.086	J	ug/L	400		0.025	0.20
J1 Range Northern	MW-265M2	MW-265M2_F18	225	235	12/12/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.1		ug/L	0.60	X	0.036	0.20
J1 Range Northern	MW-265M2	MW-265M2_F18	225	235	12/12/2018	SW6850	Perchlorate	13.9		ug/L	2.0	X	0.012	0.20
J1 Range Northern	MW-265M2	MW-265M2_F18D	225	235	12/12/2018	SW6850	Perchlorate	13.6		ug/L	2.0	X	0.012	0.20
J1 Range Northern	MW-265M1	MW-265M1_F18	265	275	12/12/2018	SW6850	Perchlorate	0.76		ug/L	2.0		0.012	0.20
Central Impact Area	MW-710M1	MW-710M1_F18	247.5	257.5	12/11/2018	SW6850	Perchlorate	0.090	J	ug/L	2.0		0.012	0.20
Central Impact Area	MW-710M1	MW-710M1_F18	247.5	257.5	12/11/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.64		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-699M1	MW-699M1_F18	261.5	271.5	12/11/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.59		ug/L	0.60		0.036	0.20
J1 Range Northern	MW-303M3	MW-303M3_F18	139.74	149.69	11/13/2018	SW8330	4-Amino-2,6-dinitrotoluene	0.15	J	ug/L	7.3		0.015	0.20
J1 Range Northern	MW-303M3	MW-303M3_F18	139.74	149.69	11/13/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.22		ug/L	0.60		0.036	0.20
J1 Range Northern	MW-303M2	MW-303M2_F18	235.09	245.1	11/13/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	4.2		ug/L	400		0.025	0.20
J1 Range Northern	MW-303M2	MW-303M2_F18	235.09	245.1	11/13/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	7.3		ug/L	0.60	X	0.036	0.20
J1 Range Northern	MW-303M2	MW-303M2_F18D	235.09	245.1	11/13/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	4.6		ug/L	400		0.025	0.20
J1 Range Northern	MW-303M2	MW-303M2_F18D	235.09	245.1	11/13/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	8.3		ug/L	0.60	X	0.036	0.20
J1 Range Northern	MW-166M3	MW-166M3_F18	125	135	11/13/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.12	J	ug/L	0.60		0.036	0.20
J1 Range Northern	MW-166M3	MW-166M3_F18	125	135	11/13/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.16	J	ug/L	400		0.025	0.20
J1 Range Northern	MW-166M3	MW-166M3_F18	125	135	11/13/2018	SW8330	4-Amino-2,6-dinitrotoluene	0.27	J	ug/L	7.3		0.015	0.20
J1 Range Northern	MW-166M3	MW-166M3_F18D	125	135	11/13/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.31	J	ug/L	0.60		0.036	0.20
J1 Range Northern	MW-166M3	MW-166M3_F18D	125	135	11/13/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.49	J	ug/L	400		0.025	0.20
J1 Range Northern	MW-166M3	MW-166M3_F18D	125	135	11/13/2018	SW8330	4-Amino-2,6-dinitrotoluene	0.80	J	ug/L	7.3		0.015	0.20
J1 Range Northern	MW-166M2	MW-166M2_F18	150	160	11/13/2018	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.30		ug/L	0.60		0.036	0.20

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

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received February 2019

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
J1 Range Northern	MW-166M2	MW-166M2_F18	150	160	11/13/2018	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.49		ug/L	400		0.025	0.20
J1 Range Northern	MW-166M2	MW-166M2_F18	150	160	11/13/2018	SW8330	4-Amino-2,6-dinitrotoluene	0.77		ug/L	7.3		0.015	0.20