

**MONTHLY PROGRESS REPORT #239  
FOR FEBRUARY 2017**

**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 February to 28 February 2017.

**1. SUMMARY OF REMEDIATION ACTIONS**

The following is a description of Remediation Actions (RA) underway at Camp Edwards as of February 2017.

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 2.464 billion gallons of water treated and re-injected as of 24 February 2017. The following Frank Perkins Road facility shut down occurred in February:

- Shut down at 1400 on 9 February 2017 due to a power outage caused by a snow storm and was restarted at 1514 on 10 February 2017; and
- Shut down at 1120 on 11 February 2017 due to a power outage caused by high winds and was restarted at 1030 on 13 February 2017.

The Pew Road Mobile Treatment Unit (MTU) continues to operate at a flow rate of 105 gpm with over 508.2 million gallons of water treated and re-injected as of 24 February 2017. The following Pew Road MTU shut downs occurred in February:

- Shut down at 1240 on 9 February 2017 due to a power outage caused by the snow storm. The MTU was initially unable to restart due to a motor starter being damaged during the snow storm. BETCO was contacted and replaced two coils in the motor starter on 13 February 2017 and the MTU was restarted at 1507 on 13 February 2017.

The Base Boundary RA is operating at a flow rate of 65 gpm with over 156.1 million gallons of water treated and re-injected as of 24 February 2017. No Base Boundary MTU shut downs occurred in February.

The Leading Edge system continues to operate at a flow rate of 100 gpm with over 32.6 million gallons of water treated and re-injected as of 24 February 2017. The following shut downs occurred in February:

- Shut down at 0351 on 13 February 2017 due to a power outage caused by high winds and was restarted at 1443 on 13 February 2017.

### 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 24 February 2017, over 384.8 million gallons of water have been treated and re-injected. No J-1 Range Southern system shut downs occurred in February.

#### 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 24 February 2017, over 375.4 million gallons of water have been treated and re-injected. The following J-1 Range Northern MTU shut down occurred in February:

- Shut down at 1517 on 9 February 2017 due to a power outage caused by a snow storm and was restarted at 1125 on 10 February 2017.

### 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 was operating at a reduced flow rate for much of February (see shut downs noted below), but as of 2 March is operating at a flow rate of 255 gpm. As of 24 February 2017, over 983.2 million gallons of water have been treated and re-injected. The following J-3 Range system shut downs occurred in February:

- Shut down at 1547 on 31 January 2017 due to a power outage. J3EWIP1 and J3EWIP2 were restarted at 0944 on 1 February 2017. 90EW0001 and J3EW0032 were not able to be restarted due to communication issues with the PLC. PLC Programmer was onsite on 3 February 2017 to assess the communication issues with 90EW0001 and J3EW0032. It was determined that the programs had been lost at 1547 on 31 January 2017 during the power outage. The programs were reloaded onto the PLC, and both wells were restarted at 0932 on 3 February 2017;
- Shut down at 1500 on 8 February 2017 due to FS-12 being shut down prior to the snow storm. The system (with the exception of J3EWIP2) was restarted at 1130 on 14 February 2017;

- Shut down at 1450 on 19 February 2017 due to a power outage and was restarted at 1500 on 21 February 2017;
- Todd Farmer was on site and restored communications to 90EW0001 at 0800 on 24 February 2017;
- Shut down at 2237 on 24 February 2017; the alarm condition was “Treatment Facility Storage Tank High Level” due to FS-12 being off. 90EW0001, J3EW0032 and J3EWIP1 were restarted at 0835 on 27 February 2017; and
- J3EWIP2 shut down at 1500 on 8 February 2017 due to FS-12 being turned off prior to the snow storm on 9 February 2017. The extraction well was damaged due to a power surge during the storm. BETCO was onsite on 2 March 2017 to address the electrical issues with J3EWIP2. It was determined that one of the motor starter coils in the well vault VFD panel had been damaged during the power outage. A new motor starter coil was installed, and J3EWIP2 was restarted on 0802 on 2 March 2017.

### 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 24 February 2017, over 840.5 million gallons of water have been treated and re-injected. The following Northern Treatment Building shut down occurred in February:

- Shut down at 1431 on 1 February 2017; alarm was “EW Vault Flood Alarm.” Well vault was pumped out and plant was restarted at 1523 on 1 February 2017;
- Shut down at 1430 on 9 February 2017 due to a power outage caused by the snow storm and was restarted at 1141 on 10 February 2017; and
- Shut down at 0856 on 14 February 2017 due to a lost phase in the power supply and was restarted at 1250 on 15 February 2017.

The Northern MTUs E and F continue to operate at a flow rate of 250 gpm. As of 24 February 2017, over 1.333 billion gallons of water have been treated and re-injected. The following J-2 Range Northern MTU shut downs occurred in February:

- MTUs E and F were shut down at 2357 on 10 February 2017 due to a power outage caused by high winds and were restarted at 1200 on 13 February 2017.

#### 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 24 February 2017, over 919.2 million gallons of water have been treated and re-injected. The following MTUs H and I shut downs occurred in February:

- MTUs H and I shut down at 1421 on 9 February 2017 due to a power outage caused by a snow storm and were restarted at 1117 on 10 February 2017.

MTU J continues to operate at a flow rate of 120 gpm. As of 24 February 2017, over 414.8 million gallons of water have been treated and re-injected. The following shut downs of MTU J occurred in February:

- MTU J shut down at 1545 on 31 January 2017 due to a power outage and was restarted at 1115 on 1 February 2017; and
- MTU J shut down at 1436 on 19 February 2017 due to a power outage and was restarted at 0915 on 21 February 2017.

MTU K continues to operate at a flow rate of 125 gpm. As of 24 February 2017, over 530 million gallons of water have been treated and re-injected. The following shut downs of MTU K occurred in February:

- MTU K shut down at 1545 on 31 January 2017 due to a power outage and was restarted at 1143 on 1 February 2017;
- MTU K shut down at 1311 on 9 February 2017 due to a power outage caused by a snow storm and was restarted at 1255 on 10 February 2017; and
- MTU K shut down at 1436 on 19 February 2017 due to a power outage and was restarted at 0840 on 21 February 2017.

### 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 24 February 2017, over 858.6 million gallons of water have been treated and re-injected. The following CIA treatment facility shut downs occurred in February:

- System 1 shut down at 1346 on 9 February 2017 due to a power outage caused by a snow storm and was restarted at 1416 on 10 February 2017;
- System 2 shut down at 1403 on 9 February 2017 due to a power outage caused by a snow storm and was restarted at 1414 on 10 February 2017;
- System 2 shut down at 2303 on 12 February 2017 due to a power outage caused by high winds and was restarted at 1335 on 13 February 2017;
- System 3 shut down at 1010 on 12 February 2017 due to a power outage caused by a snow storm and was restarted at 0735 on 17 February 2017;
- System 2 shut down 0905 on 24 February 2017 to allow telemetry to be reprogrammed and was restarted at 0935 on 24 February 2017; and

- System 3 shut down at 0440 on February 24, 2017 due to a power outage and was restarted at 0746 on 22 February 2017.

## **SUMMARY OF ACTIONS TAKEN**

Samples collected during the reporting period are summarized in Table 1.

Process water samples were collected at Frank Perkins Road, Pew Road, Base Boundary, Leading Edge, J-1 Range Southern, J-1 Range Northern, J-2 Range Northern, J-2 Range Eastern, J-3 Range, and Central Impact Area (CIA).

Environmental and system performance monitoring groundwater samples were collected at Northwest Corner, J-2 Range Northern, J-2 Range Eastern and CIA.

Soil samples were collected at J-2 Range, Former B Range, B Range, C Range, G Range and U Range.

Continued excavation and stockpiling of previously staged soil at D Range.

Completed excavation (3rd lift) at one U Range grid.

Completed excavation (6<sup>th</sup> lifts) at three C Range grids.

Continued transportation and disposal of soil from Small Arms Ranges.

Performed daily inspection of BEM cover at the CIA to ensure cover is secure and intact.

Performed scrap management at the CIA.

Began drilling at CIA (BH-686).

Continued drilling at J-1 Range Northern.

Completed drive point investigation at J-1 Range Southern.

Completed excavation (3<sup>rd</sup> lift) at one grid at J-2 Range.

Removed pumps from wells in Western Boundary LTM.

Installed pumps in MW-659M1/M2 (Demolition Area 1).

Performed vegetation clearance on well pads and roads.

Continued telemetry work on treatment facilities, including installation of antennae, installation of radios, verification of antennae reception, and programming of the SCADA system communications configuration and IP addresses.

## Project and Fieldwork Update

The drill rig arrived and will start at MW-686 today. UXO clearance for the J-1 North access roads was completed and vegetation clearance north of Wood Road is underway. The rig will move to the first J-1 North location after MW-686. In addition to the J-1 North and CIA wells, a water table well at GA/GB will be completed as part of this mobilization. Data is expected from the last two J-1 South drive point locations next week. Nine locations were completed, four are left to be finished. The contract is being modified in order to complete the work as originally scoped. It was noted that the base boundary extraction well at J-1 South was shut off a few weeks ago the pumping rate had been increased at the off-base extraction well. Samples were collected and data is expected back soon. Results from samples from the new monitoring wells that had been installed downgradient of the off-base extraction well were all below 2 parts per billion. Sampling crews were moving from the J-2 Range to the CIA and will be coordinating with the Monument Beach Sportsman's Club and UXO teams for escort. With the exception of a three day power outage during the recent blizzard, the treatment systems are up and running and operating as designed.

In the CIA, teams are processing scrap in the area across from the BEM. Soil results were received for samples taken from the BEM. Levels of RDX are still relatively low however IAGWSP will discuss whether or not to change out the sand at the BEM in the near future.

At the Small Arms Ranges, the soil that failed the TCLP test for lead has been shipped off-site to Canada; approximately 100 truckloads. Teams are now working on the non-hazardous stockpile. Soil removals continue, five of ten ranges are complete. Post excavation results are pending at B, Former B and G Ranges and additional excavations are scheduled for C and D Ranges based on post excavation results.

## Action Items

The action items were discussed and updated.

## J-2 Range Northern Annual Environmental Monitoring Report Presentation

A presentation was provided on the J-2 Range Northern Annual Environmental Monitoring Report. It was noted that during the reporting period (October 2015 to October 2016), no new field work was conducted. The J-2 Range Northern groundwater treatment system performance statistics were reviewed and discussed. During the reporting period, at MTUs E and F (Wood Road) 137 million

gallons of groundwater were treated, 3.95 pounds of perchlorate and 0.18 pounds of RDX were removed. At MTU G (Jefferson Road) 127 million gallons of water were treated, 0.68 pounds of perchlorate and zero pounds of RDX were removed.

Sampling locations, groundwater monitoring results, and trends were reviewed and discussed. Perchlorate concentrations ranged from non-detect to 39.6 µg/L (MW-587M2) and there were 15 wells with concentrations above 2 µg/L and 3 wells with concentrations above 15 µg/L. RDX concentrations ranged from non-detect to 1.9 µg/L (MW-585M3) and there were 4 wells with concentrations above 0.6 µg/L and no wells with concentrations above 2 µg/L. An overview of the hydraulic analysis completed in August 2016 was presented. It was noted that the numerical model indicates that the perchlorate plume is being captured and that the smaller plumelets are expected to diminish based on long-term modeling. Also, stagnation points downgradient of each extraction well are creating a disjointed plume.

Decision Document cleanup timelines were discussed. Perchlorate and RDX measurements indicate that the plume is reasonably well predicted by the fate and transport model and cleanup times are consistent

with the DD timelines. IAGWSP recommends making no modifications to plant operations or extraction rates and no changes to the hydraulic or chemical monitoring programs. Perchlorate and RDX plume shells will be updated.

### **J-2 Range Eastern Annual Environmental Monitoring Report Presentation**

A presentation was provided on the J-2 Range Eastern Annual Environmental Monitoring Report. It was noted that during the reporting period (October 2015 to October 2016), new field work included drilling five new profiles to further define the magnitude and extent of perchlorate and explosives and installing monitoring wells at various depths based on profile concentrations of perchlorate and RDX. The J-2 Range Eastern groundwater treatment system performance statistics were reviewed and discussed. During the reporting period, at MTU J, 63.6 million gallons of groundwater was treated, 0.33 pounds of perchlorate and 0.07 pounds of RDX were removed. At MTUs H and I, 137 million gallons of water were treated, 1.74 pounds of perchlorate and 0.37 pounds of RDX were removed. At MTU K, 69.5 million gallons of water were treated, 0.14 pounds of perchlorate and 0.34 pounds of RDX were removed.

Sampling locations, groundwater monitoring results, and trends were reviewed and discussed. Perchlorate concentrations ranged from non-detect to 72.9 µg/L (MW-368M1) and there were 8 wells with concentrations above 2 µg/L and 2 wells with concentrations above 15 µg/L. RDX concentrations ranged from non-detect to 9.4 µg/L (MW-368M2) and there were 2 wells with concentrations above 0.6 µg/L, 1 well with concentrations above 2 µg/L, and no wells greater than 20 µg/L. An overview of the hydraulic analyses completed in January and September 2016 was presented. It was noted that the numerical model indicates that the perchlorate and RDX plumes are being captured and that stagnation points downgradient of each extraction well are creating a disjointed plume.

Decision Document cleanup timelines were discussed. Perchlorate and RDX measurements indicate that the plume is reasonably well predicted by the fate and transport model and cleanup times are consistent with the DD timelines. IAGWSP recommends making no modifications to plant operations, extraction rates or hydraulic monitoring. They do recommend adding the newly installed well screens to the monitoring program.

### **J-3 Range Annual Environmental Monitoring Report Presentation**

A presentation was provided on the J-3 Range Annual Environmental Monitoring Report. It was noted that during the reporting period (August 2015 to July 2016), new field work included installing new in-plume extraction well J3EW-IP2 (per the September 2015 Decision Document) and pilot boring BH-653 was drilled and monitoring well screens (MW-653M1/M2) were constructed at this location. The J-3 Range groundwater treatment system performance statistics were reviewed and discussed. During the reporting period, 94 million gallons of groundwater was treated, 2.29 pounds of perchlorate and 0.43 pounds of RDX were removed. Perchlorate breakthrough was observed in December 2015 and the IX media was changed out in January 2016.

Sampling locations, groundwater monitoring results, and trends were reviewed and discussed. In Zone 1 (Source Area to Base Boundary), perchlorate concentrations ranged from non-detect to 15.1 µg/L (J3EW-IP1). RDX concentrations ranged from non-detect to 4.9 µg/L (MW-653M2). In Zone 2 (Downgradient of Base Boundary), perchlorate concentrations ranged from non-detect to 8.0 µg/L (MW-227M2) and RDX concentrations ranged from non-detect to 1.3 µg/L (J3EW-0032). An overview of the hydraulic analyses completed in July 2016 was presented. It was noted that the hydraulic data and gradients were consistent with past reporting periods and that flow direction is north to south with convergent flow near extraction wells.

The model plume vs. the observed plume was discussed. It was noted that the groundwater flow model simulated migration of the December 2013 plume shell. Notable observations were that in the downgradient area, the measured plumes were slightly smaller than the model predicted plumes. A capture zone analysis was developed using reverse particle tracking and it showed that the existing systems are adequately capturing the contaminant plumes.

Ecological impact monitoring results were reviewed and discussed. At Snake Pond, surface water samples were collected from three locations during two sampling events (May and July 2016). Explosives results were all non-detect and perchlorate samples were all below reporting limits. These results are consistent with past reporting periods. At the J-3 wetland, data indicates poor hydraulic connection between the aquifer and the wetland. The data is consistent with previous monitoring events and there is no evidence of impact from the operation of the J-3 System on wetland elevations or any observed ecological impacts on the J-3 Wetland.

Recommendations were reviewed and discussed. IAGWSP recommends adding J3EW-IP2 and MW-653M1/M2 to the hydraulic and chemical monitoring programs. Additionally, it was noted that IAGWSP had recommended in the 2015 report to discontinue Snake Pond surface water sampling. IAGWSP is awaiting feedback from the Town of Sandwich Department of Health on the request.

### **JBCC Cleanup Team Meeting**

The next meeting of the JBCC Cleanup Team (JBCCCT), formerly the MMR Cleanup Team (MMRCT) has not been 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 February to 28 February 2017. 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.

There are currently twelve operable units (OU) 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. 238 for January 2017 2/10/2017
- Changes to Northwest Corner Chemical Monitoring Well Network – Project Note 2/22/2017

## 3. SCHEDULED ACTIONS

The following documents are being prepared or revised during March 2017:

- Training Areas Draft Investigation Report;
- Training Areas Draft Remedy Selection Plan;
- CIA 2016 Annual Environmental Monitoring Report;
- CIA Draft Startup Report;
- 2016 CIA Source Removal Annual Report;
- Draft 2015 BIP Report;
- Demolition Area 1 Startup Report;
- J-3 Range 2016 Interim Environmental Monitoring Report;
- J-3 Range Startup Report;
- Northwest Corner 2016 Annual Environmental Monitoring Report;
- J-2 Range Eastern and J-2 Range Northern 2016 Environmental Monitoring Report;
- L Range 2017 Annual Environmental Monitoring Report;
- Small Arms Ranges Environmental Monitoring Work Plan;
- Land Use Control Monitoring Report;
- Five Year Review Report; and
- Former A Range Demonstration of Compliance Report.

**TABLE 1**  
**Sampling Progress: 1 February to 28 February**

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-02M2	MW-02M2_S17	N	02/27/2017	Ground Water	170	175
Central Impact Area	MW-112M2	MW-112M2_S17	N	02/27/2017	Ground Water	165	175
Central Impact Area	MW-112M1	MW-112M1_S17	N	02/27/2017	Ground Water	195	205
Central Impact Area	MW-113M2	MW-113M2_S17	N	02/27/2017	Ground Water	190	200
Central Impact Area	MW-113M2	MW-113M2_S17D	FD	02/27/2017	Ground Water	190	200
Central Impact Area	MW-113M1	MW-113M1_S17	N	02/27/2017	Ground Water	240	250
Central Impact Area	MW-179M1	MW-179M1_S17	N	02/27/2017	Ground Water	187	197
Northwest Corner	MW-441M2	MW-441M2_S17	N	02/23/2017	Ground Water	109.5	119.5
Northwest Corner	MW-441M1	MW-441M1_S17	N	02/23/2017	Ground Water	204.6	214.6
Central Impact Area	MW-616M2	MW-616M2_S17	N	02/23/2017	Ground Water	107.1	117.1
Central Impact Area	MW-616M1	MW-616M1_S17	N	02/23/2017	Ground Water	217.1	227.1
Central Impact Area	MW-617M2	MW-617M2_S17	N	02/23/2017	Ground Water	118.3	128.3
C Range	SSCRNGBR5-6A	CRNGBR5-6A_L	FR	02/23/2017	Soil	0	0.25
Central Impact Area	MW-617M1	MW-617M1_S17	N	02/23/2017	Ground Water	175.8	185.8
C Range	SSCRNGBR5-6A	CRNGBR5-6A_K	FR	02/23/2017	Soil	0	0.25
C Range	SSCRNGBR5-6A	CRNGBR5-6A_J	N	02/23/2017	Soil	0	0.25
C Range	SSCRNGMID02	CRNGMID02_D	N	02/23/2017	Soil	0	0.25
C Range	SSCRNGS02	CRNGS02_D	N	02/23/2017	Soil	0	0.25
Central Impact Area	MW-208M1	MW-208M1_S17	N	02/22/2017	Ground Water	195	205
Central Impact Area	MW-96M2	MW-96M2_S17	N	02/22/2017	Ground Water	160	170
Central Impact Area	MW-96M1	MW-96M1_S17	N	02/22/2017	Ground Water	206	216
Central Impact Area	MW-185M1	MW-185M1_S17	N	02/22/2017	Ground Water	247	257
Central Impact Area	MW-442M2	MW-442M2_S17	N	02/22/2017	Ground Water	215.3	225.3
Central Impact Area	MW-442M1	MW-442M1_S17	N	02/22/2017	Ground Water	247.6	257.6
Central Impact Area	MW-111M1	MW-111M1_S17	N	02/21/2017	Ground Water	224	234
Central Impact Area	MW-39M1	MW-39M1_S17	N	02/21/2017	Ground Water	220	230
Central Impact Area	MW-95M2	MW-95M2_S17	N	02/21/2017	Ground Water	167	177
Central Impact Area	MW-95M1	MW-95M1_S17	N	02/21/2017	Ground Water	202	212
Central Impact Area	MW-43M2	MW-43M2_S17	N	02/21/2017	Ground Water	200	210
Central Impact Area	MW-43M1	MW-43M1_S17	N	02/21/2017	Ground Water	223	233
J2 Range Eastern	SSJ2N15A	J2N15A_I	FR	02/20/2017	Soil	0	0.25
J2 Range Eastern	SSJ2N15A	J2N15A_H	FR	02/20/2017	Soil	0	0.25
J2 Range Eastern	SSJ2N15A	J2N15A_G	N	02/20/2017	Soil	0	0.25
U Range	SSURFL06A	URFL06A_E	FR	02/20/2017	Soil	0	0.25
U Range	SSURFL06A	URFL06A_D	FR	02/20/2017	Soil	0	0.25
U Range	SSURFL06A	URFL06A_C	N	02/20/2017	Soil	0	0.25
Central Impact Area	MW-86S	MW-86S_S17	N	02/16/2017	Ground Water	143	153
Central Impact Area	MW-86M2	MW-86M2_S17	N	02/16/2017	Ground Water	158	168
Central Impact Area	MW-86M1	MW-86M1_S17	N	02/16/2017	Ground Water	208	218
Central Impact Area	MW-87M2	MW-87M2_S17	N	02/15/2017	Ground Water	169	179
Central Impact Area	MW-87M1	MW-87M1_S17	N	02/15/2017	Ground Water	194	204
Central Impact Area	MW-87M1	MW-87M1_S17D	FD	02/15/2017	Ground Water	194	204
Central Impact Area	MW-203M2	MW-203M2_S17	N	02/15/2017	Ground Water	176	186
J2 Range Eastern	J2MW-04M2	J2MW-04M2_S17	N	02/15/2017	Ground Water	210	220
J2 Range Eastern	J2MW-04M1	J2MW-04M1_S17	N	02/15/2017	Ground Water	257	267
J2 Range Eastern	MW-339M1	MW-339M1_S17	N	02/14/2017	Ground Water	233	243
J2 Range Eastern	MW-368M2	MW-368M2_S17	N	02/14/2017	Ground Water	202.7	212.7
J2 Range Eastern	MW-368M2	MW-368M2_S17D	FD	02/14/2017	Ground Water	202.7	212.7
J2 Range Eastern	MW-324M2	MW-324M2_S17	N	02/14/2017	Ground Water	203.7	214.7
J2 Range Eastern	MW-324M1	MW-324M1_S17	N	02/14/2017	Ground Water	234.9	244.9
Former B Range	SSFBR12A	FBR12A_C	N	02/08/2017	Soil	0	0.25
Former B Range	SSFBR09A	FBR09A_C	N	02/08/2017	Soil	0	0.25
Former B Range	SSFBR08A	FBR08A_I	FR	02/08/2017	Soil	0	0.25
Former B Range	SSFBR08A	FBR08A_H	FR	02/08/2017	Soil	0	0.25
Former B Range	SSFBR08A	FBR08A_G	N	02/08/2017	Soil	0	0.25
Former B Range	SSFBR03A	FBR03A_C	N	02/08/2017	Soil	0	0.25
Former B Range	SSFBR140QRA	FBR140QRA_C	N	02/08/2017	Soil	0	0.25
Former B Range	SSFBR07A	FBR07A_C	N	02/08/2017	Soil	0	0.25

N = Normal Sample  
 FD = Field Duplicate

**TABLE 1**  
**Sampling Progress: 1 February to 28 February**

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
Former B Range	SSFBR15A	FBR15A_C	N	02/08/2017	Soil	0	0.25
Former B Range	SSFBR16A	FBR16A_I	FR	02/08/2017	Soil	0	0.25
Former B Range	SSFBR16A	FBR16A_H	FR	02/08/2017	Soil	0	0.25
Former B Range	SSFBR16A	FBR16A_G	N	02/08/2017	Soil	0	0.25
Former B Range	SSFBR140LA	FBR140LA_I	FR	02/08/2017	Soil	0	0.25
Former B Range	SSFBR140LA	FBR140LA_H	FR	02/08/2017	Soil	0	0.25
Former B Range	SSFBR140LA	FBR140LA_G	N	02/08/2017	Soil	0	0.25
J3 Range	J3-EFF	J3-EFF-125A	N	02/08/2017	Process Water	0	0
J3 Range	J3-MID-2	J3-MID-2-125A	N	02/08/2017	Process Water	0	0
J3 Range	J3-MID-1	J3-MID-1-125A	N	02/08/2017	Process Water	0	0
J3 Range	J3-INF	J3-INF-125A	N	02/08/2017	Process Water	0	0
B Range	SSBRNGSW02	BRNGSW02_L	FR	02/08/2017	Soil	0	0.25
Demolition Area 1	PR-EFF	PR-EFF-131A	N	02/08/2017	Process Water	0	0
B Range	SSBRNGSW02	BRNGSW02_K	FR	02/08/2017	Soil	0	0.25
Demolition Area 1	PR-MID-2	PR-MID-2-131A	N	02/08/2017	Process Water	0	0
Demolition Area 1	PR-MID-1	PR-MID-1-131A	N	02/08/2017	Process Water	0	0
B Range	SSBRNGSW02	BRNGSW02_J	N	02/08/2017	Soil	0	0.25
Demolition Area 1	PR-INF	PR-INF-131A	N	02/08/2017	Process Water	0	0
G Range	SSGR01A	GR01A_L	FR	02/08/2017	Soil	0	0.25
Demolition Area 1	FPR-2-EFF-A	FPR-2-EFF-A-131A	N	02/08/2017	Process Water	0	0
G Range	SSGR01A	GR01A_K	FR	02/08/2017	Soil	0	0.25
Demolition Area 1	FPR-2-GAC-MID1A	FPR-2-GAC-MID1A-131A	N	02/08/2017	Process Water	0	0
Demolition Area 1	FPR2-POST-IX-A	FPR2-POST-IX-A-131A	N	02/08/2017	Process Water	0	0
G Range	SSGR01A	GR01A_J	N	02/08/2017	Soil	0	0.25
Demolition Area 1	FPR-2-INF	FPR-2-INF-131A	N	02/08/2017	Process Water	0	0
Demolition Area 1	D1LE-EFF	D1LE-EFF-07A	N	02/08/2017	Process Water	0	0
Demolition Area 1	D1LE-MID2	D1LE-MID2-07A	N	02/08/2017	Process Water	0	0
Demolition Area 1	D1LE-MID1	D1LE-MID1-07A	N	02/08/2017	Process Water	0	0
Demolition Area 1	D1LE-INF	D1LE-INF-07A	N	02/08/2017	Process Water	0	0
Demolition Area 1	D1-EFF	D1-EFF-79A	N	02/08/2017	Process Water	0	0
Demolition Area 1	D1-MID-2	D1-MID-2-79A	N	02/08/2017	Process Water	0	0
Demolition Area 1	D1-MID-1	D1-MID-1-79A	N	02/08/2017	Process Water	0	0
Demolition Area 1	D1-INF	D1-INF-79A	N	02/08/2017	Process Water	0	0
J1 Range Northern	J1N-EFF	J1N-EFF-40A	N	02/07/2017	Process Water	0	0
J1 Range Northern	J1N-MID2	J1N-MID2-40A	N	02/07/2017	Process Water	0	0
J1 Range Northern	J1N-MID1	J1N-MID1-40A	N	02/07/2017	Process Water	0	0
J1 Range Northern	J1N-INF2	J1N-INF2-40A	N	02/07/2017	Process Water	0	0
J2 Range Northern	J2N-EFF-EF	J2N-EFF-EF-125A	N	02/07/2017	Process Water	0	0
J2 Range Northern	J2N-MID-2F	J2N-MID-2F-125A	N	02/07/2017	Process Water	0	0
J2 Range Northern	J2N-MID-1F	J2N-MID-1F-125A	N	02/07/2017	Process Water	0	0
J2 Range Northern	J2N-INF-EF	J2N-INF-EF-125A	N	02/07/2017	Process Water	0	0
J2 Range Northern	J2N-MID-2E	J2N-MID-2E-125A	N	02/07/2017	Process Water	0	0
J2 Range Northern	J2N-MID-1E	J2N-MID-1E-125A	N	02/07/2017	Process Water	0	0
J2 Range Northern	J2N-EFF-G	J2N-EFF-G-125A	N	02/07/2017	Process Water	0	0
J2 Range Northern	J2N-MID-2G	J2N-MID-2G-125A	N	02/07/2017	Process Water	0	0
J2 Range Northern	J2N-MID-1G	J2N-MID-1G-125A	N	02/07/2017	Process Water	0	0
J2 Range Northern	J2N-INF-G	J2N-INF-G-125A	N	02/07/2017	Process Water	0	0
J2 Range Eastern	J2E-EFF-IH	J2E-EFF-IH-101A	N	02/06/2017	Process Water	0	0
J2 Range Eastern	J2E-MID-2H	J2E-MID-2H-101A	N	02/06/2017	Process Water	0	0
J2 Range Eastern	J2E-MID-1H	J2E-MID-1H-101A	N	02/06/2017	Process Water	0	0
J2 Range Eastern	J2E-MID-2I	J2E-MID-2I-101A	N	02/06/2017	Process Water	0	0
J2 Range Eastern	J2E-MID-1I	J2E-MID-1I-101A	N	02/06/2017	Process Water	0	0
J2 Range Eastern	J2E-INF-I	J2E-INF-I-101A	N	02/06/2017	Process Water	0	0
J2 Range Eastern	J2E-EFF-K	J2E-EFF-K-101A	N	02/06/2017	Process Water	0	0
J2 Range Eastern	J2E-MID-2K	J2E-MID-2K-101A	N	02/06/2017	Process Water	0	0
J2 Range Eastern	J2E-MID-1K	J2E-MID-1K-101A	N	02/06/2017	Process Water	0	0
J2 Range Eastern	J2E-INF-K	J2E-INF-K-101A	N	02/06/2017	Process Water	0	0
J2 Range Eastern	J2E-EFF-J	J2E-EFF-J-101A	N	02/06/2017	Process Water	0	0

**TABLE 1**  
**Sampling Progress: 1 February to 28 February**

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
J2 Range Eastern	J2E-MID-2J	J2E-MID-2J-101A	N	02/06/2017	Process Water	0	0
J2 Range Eastern	J2E-MID-1J	J2E-MID-1J-101A	N	02/06/2017	Process Water	0	0
J2 Range Eastern	J2E-INF-J	J2E-INF-J-101A	N	02/06/2017	Process Water	0	0
J2 Range Northern	J2EW0001	J2EW0001_S17	N	02/02/2017	Ground Water	179	234
J2 Range Northern	J2EW0002	J2EW0002_S17	N	02/02/2017	Ground Water	198	233
J2 Range Northern	J2EW0002	J2EW0002_S17D	FD	02/02/2017	Ground Water	198	233
J2 Range Northern	J2EW0003	J2EW0003_S17	N	02/02/2017	Ground Water	202	232
J2 Range Northern	MW-613M2	MW-613M2_S17	N	02/01/2017	Ground Water	246.1	256.1
J1 Range Southern	J1S-EFF	J1S-EFF-111A	N	02/01/2017	Process Water	0	0
J2 Range Northern	MW-613M1	MW-613M1_S17	N	02/01/2017	Ground Water	267.1	277.1
J1 Range Southern	J1S-MID-2	J1S-MID-2-111A	N	02/01/2017	Process Water	0	0
J1 Range Southern	J1S-INF-2	J1S-INF-2-111A	N	02/01/2017	Process Water	0	0
Central Impact Area	CIA2-EFF	CIA2-EFF-37A	N	02/01/2017	Process Water	0	0
Central Impact Area	CIA2-MID2	CIA2-MID2-37A	N	02/01/2017	Process Water	0	0
Central Impact Area	CIA2-MID1	CIA2-MID1-37A	N	02/01/2017	Process Water	0	0
Central Impact Area	CIA2-INF	CIA2-INF-37A	N	02/01/2017	Process Water	0	0
J2 Range Northern	J2EW3-MW-2-B	J2EW3-MW-2-B_S17	N	02/01/2017	Ground Water	216.2	226.2
Central Impact Area	CIA1-EFF	CIA1-EFF-37A	N	02/01/2017	Process Water	0	0
Central Impact Area	CIA1-MID2	CIA1-MID2-37A	N	02/01/2017	Process Water	0	0
Central Impact Area	CIA1-MID1	CIA1-MID1-37A	N	02/01/2017	Process Water	0	0
Central Impact Area	CIA1-INF	CIA1-INF-37A	N	02/01/2017	Process Water	0	0
J2 Range Northern	J2EW1-MW1-C	J2EW1-MW1-C_S17	N	02/01/2017	Ground Water	240.8	250.8
Central Impact Area	CIA3-EFF	CIA3-EFF-08A	N	02/01/2017	Process Water	0	0
Central Impact Area	CIA3-MID2	CIA3-MID2-08A	N	02/01/2017	Process Water	0	0
Central Impact Area	CIA3-MID1	CIA3-MID1-08A	N	02/01/2017	Process Water	0	0
Central Impact Area	CIA3-INF	CIA3-INF-08A	N	02/01/2017	Process Water	0	0

**TABLE 2**  
**VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS**  
**Data Received February 2017**

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
J2 Range Eastern	MW-685M1	MW-685M1_R1	166.2	176.2	01/23/2017	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.51		ug/L	0.60		0.025	0.20
J2 Range Eastern	MW-685M1	MW-685M1_R1	166.2	176.2	01/23/2017	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.58		ug/L	400		0.019	0.20
J2 Range Eastern	MW-685M1	MW-685M1_R1	166.2	176.2	01/23/2017	SW6850	Perchlorate	0.72		ug/L	2.0		0.019	0.20
J2 Range Eastern	MW-668M1	MW-668M1_R1	168.7	178.7	01/23/2017	SW6850	Perchlorate	11.6		ug/L	2.0	X	0.019	0.20
J2 Range Eastern	MW-667M2	MW-667M2_R1	277.3	287.3	01/23/2017	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.42		ug/L	400		0.019	0.20
J2 Range Eastern	MW-667M2	MW-667M2_R1	277.3	287.3	01/23/2017	SW6850	Perchlorate	1.9		ug/L	2.0		0.019	0.20
J2 Range Eastern	MW-667M2	MW-667M2_R1	277.3	287.3	01/23/2017	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.0		ug/L	0.60	X	0.025	0.20
J2 Range Eastern	MW-667M1	MW-667M1_R1	302.3	312.3	01/23/2017	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.1		ug/L	0.60	X	0.025	0.20
J2 Range Eastern	MW-667M1	MW-667M1_R1	302.3	312.3	01/23/2017	SW6850	Perchlorate	4.7		ug/L	2.0	X	0.019	0.20
Demolition Area 1	MW-664M2	MW-664M2_R1	218.5	228.5	01/19/2017	SW6850	Perchlorate	0.028	J	ug/L	2.0		0.019	0.20
Demolition Area 1	MW-662D	MW-662D_R1	202.3	212.3	01/18/2017	SW6850	Perchlorate	0.57		ug/L	2.0		0.019	0.20
J2 Range Northern	MW-619M1	MW-619M1_S17	255.1	265.1	01/17/2017	SW6850	Perchlorate	0.24		ug/L	2.0		0.019	0.20
J2 Range Northern	MW-337M1	MW-337M1_S17	243.7	253.7	01/17/2017	SW6850	Perchlorate	0.078	J	ug/L	2.0		0.019	0.20
L Range	MW-650M1	MW-650M1_S17	260	270	01/12/2017	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.28		ug/L	0.60		0.025	0.20
L Range	MW-595M1	MW-595M1_S17	255.3	265.3	01/11/2017	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	4.4		ug/L	0.60	X	0.025	0.20
L Range	MW-595M1	MW-595M1_S17D	255.3	265.3	01/11/2017	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	4.4		ug/L	0.60	X	0.025	0.20
L Range	MW-651M1	MW-651M1_S17	242.3	252.3	01/11/2017	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.44		ug/L	0.60		0.025	0.20
L Range	MW-242M1	MW-242M1_S17	235	245	01/11/2017	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.8		ug/L	0.60	X	0.025	0.20
J3 Range	MW-653M2	MW-653M2_S17	59.3	69.3	01/09/2017	SW6850	Perchlorate	0.041	J	ug/L	2.0		0.019	0.20
J3 Range	MW-653M1	MW-653M1_S17	147.5	157.5	01/09/2017	SW6850	Perchlorate	0.50		ug/L	2.0		0.019	0.20
J3 Range	MW-637M2	MW-637M2_S17	214.1	224.1	01/05/2017	SW6850	Perchlorate	3.1		ug/L	2.0	X	0.019	0.20
J3 Range	MW-636M2	MW-636M2_S17	110.5	120.5	01/04/2017	SW6850	Perchlorate	0.58		ug/L	2.0		0.019	0.20
J3 Range	J3EWIP2	J3EWIP2_S17	149.5	169.5	01/04/2017	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.33		ug/L	400		0.019	0.20
J3 Range	J3EWIP2	J3EWIP2_S17	149.5	169.5	01/04/2017	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.95		ug/L	0.60	X	0.025	0.20
J3 Range	J3EWIP2	J3EWIP2_S17	149.5	169.5	01/04/2017	SW6850	Perchlorate	5.9		ug/L	2.0	X	0.019	0.20
J3 Range	J3EWIP2	J3EWIP2_S17D	149.5	169.5	01/04/2017	SW6850	Perchlorate	6.0		ug/L	2.0	X	0.019	0.20
J3 Range	J3EWIP1	J3EWIP1_S17	153	193	01/04/2017	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.73		ug/L	0.60	X	0.025	0.20
J3 Range	J3EWIP1	J3EWIP1_S17	153	193	01/04/2017	SW6850	Perchlorate	2.4		ug/L	2.0	X	0.019	0.20
J3 Range	J3EW0032	J3EW0032_S17	102	152	01/04/2017	SW6850	Perchlorate	0.51		ug/L	2.0		0.019	0.20
J3 Range	J3EW0032	J3EW0032_S17	102	152	01/04/2017	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.3		ug/L	0.60	X	0.025	0.20
J3 Range	J3EW0032	J3EW0032_S17D	102	152	01/04/2017	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.1		ug/L	0.60	X	0.025	0.20
J3 Range	90EW0001	90EW0001_S17	83.1	143.8	01/04/2017	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.25		ug/L	400		0.019	0.20
J3 Range	90EW0001	90EW0001_S17	83.1	143.8	01/04/2017	SW6850	Perchlorate	0.39		ug/L	2.0		0.019	0.20
Western Boundary	4036000-04G	4036000-04G_16Q4	55	65	01/04/2017	SW6850	Perchlorate	0.24		ug/L	2.0		0.019	0.20
Demolition Area 1	MW-341M2	MW-341M2_F16	264.5	269.5	12/29/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.94		ug/L	0.60	X	0.025	0.20
Demolition Area 1	MW-341M2	MW-341M2_F16	264.5	269.5	12/29/2016	SW6850	Perchlorate	4.3		ug/L	2.0	X	0.019	0.20
Demolition Area 1	MW-341M2	MW-341M2_F16D	264.5	269.5	12/29/2016	SW6850	Perchlorate	4.4		ug/L	2.0	X	0.019	0.20
Demolition Area 1	MW-211M1	MW-211M1_F16	200	210	12/29/2016	SW6850	Perchlorate	0.19	J	ug/L	2.0		0.019	0.20
Demolition Area 1	MW-659M2	MW-659M2_F16	85	95	12/28/2016	SW6850	Perchlorate	0.23		ug/L	2.0		0.019	0.20
Demolition Area 1	MW-659M1	MW-659M1_F16	120	130	12/28/2016	SW6850	Perchlorate	1.5		ug/L	2.0		0.019	0.20

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

**TABLE 2**  
**VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS**  
**Data Received February 2017**

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	XX9514	XX9514_F16	102	112	12/28/2016	SW6850	Perchlorate	3.5		ug/L	2.0	X	0.019	0.20
Demolition Area 1	MW-663D	MW-663D_R1	240.6	250.6	12/20/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.24		ug/L	0.60		0.025	0.20
Demolition Area 1	MW-663D	MW-663D_R1	240.6	250.6	12/20/2016	SW6850	Perchlorate	13.2		ug/L	2.0	X	0.019	0.20
Western Boundary	4036000-03G	4036000-03G_16Q4	50	60	12/20/2016	SW6850	Perchlorate	0.13	J	ug/L	2.0		0.019	0.20
Western Boundary	4036000-06G	4036000-06G_16Q4	108	128	12/20/2016	SW6850	Perchlorate	0.091	J	ug/L	2.0		0.019	0.20
Western Boundary	4036000-01G	4036000-01G_16Q4	38	70	12/20/2016	SW6850	Perchlorate	0.14	J	ug/L	2.0		0.019	0.20
J1 Range Southern	MW-669M2	MW-669M2_R1	201.7	211.7	12/19/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.50		ug/L	0.60		0.025	0.20
J1 Range Southern	MW-669M1	MW-669M1_R1	223.7	233.7	12/19/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.75	J	ug/L	0.60	X	0.025	0.20
Demolition Area 1	MW-231M1	MW-231M1_F16	210.5	220.5	12/15/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.0		ug/L	0.60	X	0.025	0.20
Demolition Area 1	MW-231M1	MW-231M1_F16	210.5	220.5	12/15/2016	SW6850	Perchlorate	8.0		ug/L	2.0	X	0.019	0.20
Demolition Area 1	MW-231M1	MW-231M1_F16D	210.5	220.5	12/15/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.1		ug/L	0.60	X	0.025	0.20
Demolition Area 1	MW-231M1	MW-231M1_F16D	210.5	220.5	12/15/2016	SW6850	Perchlorate	8.0		ug/L	2.0	X	0.019	0.20
Demolition Area 1	MW-431	MW-431_F16	88	188	12/15/2016	SW6850	Perchlorate	0.11	J	ug/L	2.0		0.019	0.20
Demolition Area 1	MW-431	MW-431_F16	88	188	12/15/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.29		ug/L	0.60		0.025	0.20
Demolition Area 1	EW-658	EW-658_F16	96	136	12/15/2016	SW6850	Perchlorate	0.059	J	ug/L	2.0		0.019	0.20
Demolition Area 1	EW-658	EW-658_F16	96	136	12/15/2016	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.20		ug/L	400		0.019	0.20
Demolition Area 1	EW-658	EW-658_F16	96	136	12/15/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.38		ug/L	0.60		0.025	0.20
Demolition Area 1	MW-19S	MW-19S_F16	52.7	62.7	12/15/2016	SW8330	4-Amino-2,6-dinitrotoluene	0.21		ug/L	7.3		0.023	0.20
Demolition Area 1	MW-19S	MW-19S_F16	52.7	62.7	12/15/2016	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2.6		ug/L	400		0.019	0.20
Demolition Area 1	MW-19S	MW-19S_F16	52.7	62.7	12/15/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.1		ug/L	0.60	X	0.025	0.20
Demolition Area 1	MW-19S	MW-19S_F16D	52.7	62.7	12/15/2016	SW8330	4-Amino-2,6-dinitrotoluene	0.21		ug/L	7.3		0.023	0.20
Demolition Area 1	MW-19S	MW-19S_F16D	52.7	62.7	12/15/2016	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2.6		ug/L	400		0.019	0.20
Demolition Area 1	MW-19S	MW-19S_F16D	52.7	62.7	12/15/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.1		ug/L	0.60	X	0.025	0.20
Demolition Area 1	MW-31S	MW-31S_F16	98	103	12/14/2016	SW8330	2-Amino-4,6-dinitrotoluene	0.25		ug/L	7.3		0.023	0.20
Demolition Area 1	MW-31S	MW-31S_F16	98	103	12/14/2016	SW8330	4-Amino-2,6-dinitrotoluene	0.27		ug/L	7.3		0.023	0.20
Demolition Area 1	MW-31S	MW-31S_F16	98	103	12/14/2016	SW8330	2,4,6-Trinitrotoluene	1.4		ug/L	2.0		0.028	0.20
Demolition Area 1	MW-31S	MW-31S_F16	98	103	12/14/2016	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2.6		ug/L	400		0.019	0.20
Demolition Area 1	MW-31S	MW-31S_F16	98	103	12/14/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.3		ug/L	0.60	X	0.025	0.20
Demolition Area 1	MW-31S	MW-31S_F16D	98	103	12/14/2016	SW8330	2-Amino-4,6-dinitrotoluene	0.25		ug/L	7.3		0.023	0.20
Demolition Area 1	MW-31S	MW-31S_F16D	98	103	12/14/2016	SW8330	4-Amino-2,6-dinitrotoluene	0.28		ug/L	7.3		0.023	0.20
Demolition Area 1	MW-31S	MW-31S_F16D	98	103	12/14/2016	SW8330	2,4,6-Trinitrotoluene	1.4		ug/L	2.0		0.028	0.20
Demolition Area 1	MW-31S	MW-31S_F16D	98	103	12/14/2016	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2.6		ug/L	400		0.019	0.20
Demolition Area 1	MW-31S	MW-31S_F16D	98	103	12/14/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.3		ug/L	0.60	X	0.025	0.20
Demolition Area 1	MW-31M	MW-31M_F16	113	123	12/14/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.68		ug/L	0.60	X	0.025	0.20
Demolition Area 1	MW-31M	MW-31M_F16	113	123	12/14/2016	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1.7		ug/L	400		0.019	0.20
Demolition Area 1	MW-76M2	MW-76M2_F16	105	115	12/14/2016	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.64		ug/L	400		0.019	0.20
Demolition Area 1	MW-77M2	MW-77M2_F16	120	130	12/14/2016	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.85		ug/L	400		0.019	0.20
Demolition Area 1	MW-77M2	MW-77M2_F16	120	130	12/14/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.88		ug/L	0.60	X	0.025	0.20
L Range	MW-651M1	MW-651M1_R3	242.3	252.3	12/06/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.52		ug/L	0.60		0.025	0.20
J3 Range	MW-653M1	MW-653M1_R3	147.5	157.5	12/05/2016	SW6850	Perchlorate	0.46		ug/L	2.0		0.019	0.20

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

**TABLE 2**  
**VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS**  
**Data Received February 2017**

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
J3 Range	MW-653M2	MW-653M2_R3	59.3	69.3	12/05/2016	SW6850	Perchlorate	0.061	J	ug/L	2.0		0.019	0.20

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