

**MONTHLY PROGRESS REPORT #217  
FOR APRIL 2015**

**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 April to 30 April 2015.

**1. SUMMARY OF REMEDIATION ACTIONS**

The following is a description of Remediation Actions (RA) underway at Camp Edwards as of April 2015. Remediation Actions may include Rapid Response Actions (RRA). An RRA is an interim action that may be conducted prior to risk assessments or remedial investigations to address a known, ongoing threat of contamination to groundwater and/or soil.

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, and the Base Boundary 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 was operating at a flow rate of 250 gpm with over 2.208 billion gallons of water treated and re-injected as of 24 April 2015. No shut downs of the Frank Perkins Road facility occurred in April.

The Pew Road Mobile Treatment Unit (MTU) continues to operate at a flow rate of 105 gpm with over 409 million gallons of water treated and re-injected as of 24 April 2015. The following Pew Road MTU shut down occurred in April:

- Shut down on 28 April 2015 at 1643 due to a system alarm, and was restarted on 29 April 2015 at 0748.

The Base Boundary RA continues to operate at a flow rate of 65 gpm with over 109.7 million gallons of water treated and re-injected as of 24 April 2015. No Base Boundary MTU shut downs occurred in April.

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 April 2015, over 254 million gallons of water have been treated and re-injected. The following J-1 Range Southern system shut downs occurred in April:

- Shut down on 14 April 2015 at 1043 for system maintenance and was restarted on 14 April 2015 at 1113; and
- Shut down on 17 April 2015 at 1128 for system maintenance and was restarted on 17 April 2015 at 1323.

#### 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 will continue to operate at a total system flow rate of 250 gpm. As of 24 April 2015, over 152 million gallons of water have been treated and re-injected. No J-1 Range Northern MTU shut downs occurred in April.

#### J-3 Range Groundwater RRA

The J-3 Range Groundwater RRA consists of removal and treatment of contaminated groundwater to control further migration of explosives compounds and perchlorate. The ETR system includes three 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 continues to operate at a flow rate of 195 gpm. As of 24 April, over 803 million gallons of water have been treated and re-injected. The following J-3 system shut downs occurred in April:

- Shut down on 9 April 2015 at 2042 due to system alarm and was restarted on 10 April 2015 at 0907; and
- Extraction wells EW-001 and EW-0032 were shut down on 20 April 2015 at 2017 due to system alarm; the wells were restarted on 21 April at 0938.

#### 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 Infiltration (ETI) 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 April 2015, over 593 million gallons of water have been treated and re-injected. No Northern Treatment Building shut downs occurred in April.

The Northern MTUs E and F continue to operate at a flow rate of 250 gpm. As of 24 April 2015, over 985 million gallons of water have been treated and re-injected. The following J-2 Range Northern MTUs shut downs occurred in April:

- MTUs E and F shut down on 16 April 2015 at 0913 and 0903, respectively, due to system alarm and were restarted on 16 April 2015 at 1108 and 1102, respectively; and
- MTUs E and F shut down on 21 April 2015 at 1233 for system maintenance and were restarted on 23 April 2015 at 1019.

### 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 April 2015, over 673 million gallons of water have been treated and re-injected. No shut downs of MTUs H and I occurred in April.

MTU J continues to operate at a flow rate of 120 gpm. As of 24 April 2015, over 318 million gallons of water have been treated and re-injected. No shut downs of MTU J occurred in April.

MTU K continues to operate at a flow rate of 125 gpm. As of 24 April 2015, over 381 million gallons of water have been treated and re-injected. No shut downs of MTU K occurred in April.

### 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: two 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 two infiltration galleries to return treated water to the aquifer. The CIA systems 1 and 2 continue to run at a combined total flow rate of 500 gpm. As of 24 April 2015, over 325 million gallons of water have been treated and re-injected. No CIA treatment facility shutdowns occurred in April.

## 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, 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 from Demolition Area 1, J-2 Range Eastern, J-1 Range Northern, and CIA.

Collected additional delineation soil samples at Small Arms Ranges.

Metalmapper was remobilized and equipment setup at CIA. Collected cued Metalmapper data in phase II area 1 (10 acres), and commenced intrusive investigation of the 16-acre area (phase I blue grids).

## JBCC IAGWSP Tech Update Meeting Minutes 9 April 2015

### Project and Field Work Update

Metal Mapper crews mobilized to the site last week. Only one crew is operating due to trouble with some of the equipment. They are working in the Phase II area (northern 10 acres) collecting cued data. Dawson also mobilized to the site and are re-acquiring targets in the Phase I 16 acre area. They will be digging approximately 8,000 items this summer. USACE reported that training areas sampling at IBC, U and KD Ranges was completed last week. Results from initial sampling look good. Training areas MEC investigations, along with investigations in the J-2 Range, will begin early summer although UXO technicians may be able to begin clearing grids in the training areas sooner. Watermark will be performing sampling at the Small Arms Ranges during the last two weeks of April. Groundwater sampling will begin in the Central Impact Area over the last three weeks of April. All of the treatment plants have been running uninterrupted.

### Demo 1

USACE reported the Mendes family agreed to extend the right-of-entry through August 31. The contract for the archeological survey should be awarded next week and fieldwork will begin in May. IAGWSP noted that are continuing to move forward in parallel and will do as much of the design work as possible (e.g. Watermark will mark the centerline for the road and effluent pipeline). Once all the environmental paperwork is completed, it will take about 6 to 9 months to get to system start-up. IAGWSP will continue to provide updates at tech meetings.

### Action Items

The action items were discussed and updated.

### L Range Monitoring Presentation

A monitoring presentation was provided on the L Range annual monitoring report. It was noted that no new fieldwork was conducted during the reporting period (February 2014 to January 2015). Groundwater monitoring results were reviewed and discussed. The maximum detection was 3.85 ppb for RDX and 0.3 ppb for perchlorate. A comparison to the Decision Document criteria was reviewed. The 2010 DD predicted that the health advisory of 2 ppb would be reached by 2013, the risk based cleanup level of 0.6 ppb by 2027 and the reporting limit of 0.25 ppb would be reached by 2040. It was noted that the most recent data provides a more realistic prediction of cleanup timeframes. The 2015 annual report predictions that the 2 ppb will be reached by 2022, 0.6 ppb by 2032 and 0.25 ppb by 2040.

It was noted that there have been no detections of perchlorate above 2 ppb since September 2003 and all wells were below background concentration in 2015. Because of this, IAGWSP is recommending to remove all the perchlorate monitoring from the sampling program. In addition, they recommend installing two profile borings to better define the leading and western edges of the RDX plume. IAGWSP will develop a project note with proposed monitoring well locations.

### **JBCC Cleanup Team Meeting**

The JBCC Cleanup Team (JBCCCT), formerly the MMR Cleanup Team (MMRCT), met on April 8, 2015, and is next scheduled to meet on July 8, 2015. 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 April through 30 April 2015. 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, Jonathan Bourne Library, Falmouth Public Library, and Sandwich Public Library).

## 2. DELIVERABLES SUBMITTED

Deliverables submitted during the reporting period include the following:

- Monthly Progress Report No. 216 for March 2015 4/10/2015
- Changes to the Central Impact Area Chemical Monitoring Well Network Project Note 4/02/2015
- Demolition Area 2 Final 2014 Annual Environmental Monitoring Report 4/06/2015
- Changes to the L Range Chemical Monitoring Well Network Project Note 4/09/2015
- Final L Range 2015 Annual Environmental Monitoring Report 4/13/2015
- Western Boundary Operable Unit Residual Risk Assessment Work Plan Project Note 4/23/2015
- Draft J-1 Range Northern and J-1 Range Southern 2015 Annual Environmental Monitoring Report 4/24/2015

## 3. SCHEDULED ACTIONS

The following documents are being prepared or revised during May 2015:

- CIA 2014 Source Report;
- CIA 2013 BIP Report;
- Demolition Area 1 Startup Plan;
- J-2 Range Project Note for Additional Wells to Evaluate Source Response;
- J-3 Range Decision Document;
- J-3 Range Draft Post-Decision Document Field Work Project Notes;
- Small Arms Ranges Decision Document;
- Training Areas Draft Investigation Report;
- Demolition Area 2 Decision Document Addendum;
- CIA 2014 Interim Environmental Monitoring Report;
- J-3 Range 2014 Environmental Monitoring Report;
- J-2 Range Eastern and J-2 Range Northern 2014 Environmental Monitoring Report;
- J-1 Range Northern and J-1 Range Southern 2015 Environmental Monitoring Report; and
- Gun & Mortar Firing Positions Groundwater Monitoring Well Abandonment Project Note.

**TABLE 1**  
**Sampling Progress: 31 March through 30 April 2015**

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-39M1	MW-39M1_S15	N	04/30/2015	Ground Water	220	230
Central Impact Area	MW-39M1	MW-39M1_S15D	FD	04/30/2015	Ground Water	220	230
Central Impact Area	MW-209M2	MW-209M2_S15	N	04/30/2015	Ground Water	220	230
Central Impact Area	MW-209M1	MW-209M1_S15	N	04/30/2015	Ground Water	240	250
Central Impact Area	MW-624M2	MW-624M2_S15	N	04/30/2015	Ground Water	254	264
Central Impact Area	MW-624M1	MW-624M1_S15	N	04/30/2015	Ground Water	284	294
Central Impact Area	MW-212M1	MW-212M1_S15	N	04/30/2015	Ground Water	333	343
Central Impact Area	MW-43M2	MW-43M2_S15	N	04/29/2015	Ground Water	200	210
Central Impact Area	MW-43M1	MW-43M1_S15	N	04/29/2015	Ground Water	223	233
Central Impact Area	MW-88M2	MW-88M2_S15	N	04/29/2015	Ground Water	213	223
Central Impact Area	MW-88M2	MW-88M2_S15D	FD	04/29/2015	Ground Water	213	223
Central Impact Area	MW-95M2	MW-95M2_S15	N	04/29/2015	Ground Water	167	177
Central Impact Area	MW-95M1	MW-95M1_S15	N	04/29/2015	Ground Water	202	212
Central Impact Area	MW-89M3	MW-89M3_S15	N	04/29/2015	Ground Water	174	184
Central Impact Area	MW-89M2	MW-89M2_S15	N	04/29/2015	Ground Water	214	224
Central Impact Area	MW-89M2	MW-89M2_S15D	FD	04/29/2015	Ground Water	214	224
Central Impact Area	MW-89M1	MW-89M1_S15	N	04/29/2015	Ground Water	234	244
Central Impact Area	MW-86S	MW-86S_S15	N	04/28/2015	Ground Water	143	153
Central Impact Area	MW-86M2	MW-86M2_S15	N	04/28/2015	Ground Water	158	168
Former B Range	FBR03	MISFBR03-A	N	04/28/2015	Soil	0	0.25
Central Impact Area	MW-203M2	MW-203M2_S15	N	04/28/2015	Ground Water	176	186
N Range	NR04	MISNR04-A	N	04/28/2015	Soil	0	0.25
Central Impact Area	MW-208M1	MW-208M1_S15	N	04/28/2015	Ground Water	195	205
N Range	NR03	MISNR03-A	N	04/28/2015	Soil	0	0.25
Central Impact Area	MW-96M2	MW-96M2_S15	N	04/28/2015	Ground Water	160	170
Central Impact Area	MW-115M1	MW-115M1_S15	N	04/28/2015	Ground Water	138	148
Central Impact Area	MW-87M1	MW-87M1_S15	N	04/27/2015	Ground Water	194	204
Central Impact Area	MW-87M1	MW-87M1_S15D	FD	04/27/2015	Ground Water	194	204
Former B Range	FBR04	MISFBR04-A	N	04/27/2015	Soil	0	0.25
Central Impact Area	MW-38M4	MW-38M4_S15	N	04/27/2015	Ground Water	132	142
Former B Range	FBR05	MISFBR05-A	N	04/27/2015	Soil	0	0.25
Central Impact Area	MW-38M3	MW-38M3_S15	N	04/27/2015	Ground Water	170	180
Central Impact Area	MW-184M1	MW-184M1_S15	N	04/27/2015	Ground Water	186	196
Central Impact Area	MW-184M1	MW-184M1_S15D	FD	04/27/2015	Ground Water	186	196
Former B Range	FBR06	MISFBR06-A_R2	FR	04/27/2015	Soil	0	0.25
Former B Range	FBR06	MISFBR06-A_R1	FR	04/27/2015	Soil	0	0.25
Central Impact Area	MW-204M2	MW-204M2_S15	N	04/27/2015	Ground Water	76	86
Former B Range	FBR06	MISFBR06-A	N	04/27/2015	Soil	0	0.25
Central Impact Area	MW-204M1	MW-204M1_S15	N	04/27/2015	Ground Water	141	151
Central Impact Area	MW-03M2	MW-03M2_S15	N	04/27/2015	Ground Water	180	185
Central Impact Area	MW-25	MW-25_S15	N	04/24/2015	Ground Water	108	118
Central Impact Area	MW-37M2	MW-37M2_S15	N	04/24/2015	Ground Water	145	155
Central Impact Area	MW-486M1	MW-486M1_S15	N	04/24/2015	Ground Water	185.7	195.7
Central Impact Area	MW-485M1	MW-485M1_S15	N	04/24/2015	Ground Water	125.3	135.3
Central Impact Area	MW-27	MW-27_S15	N	04/24/2015	Ground Water	117	127
Central Impact Area	MW-99S	MW-99S_S15	N	04/23/2015	Ground Water	133	143
J1 Range Northern	MW-106M1	MW-106M1_S15	N	04/23/2015	Ground Water	170.5	180.5
Central Impact Area	MW-98M1	MW-98M1_S15	N	04/23/2015	Ground Water	164	175
G Range	GR04	MISGR04-A	N	04/23/2015	Soil	0	0.25
Central Impact Area	MW-02M2	MW-02M2_S15	N	04/23/2015	Ground Water	170	175
B Range	BR06	MISBR06-A	N	04/23/2015	Soil	0	0.25
Central Impact Area	MW-112M2	MW-112M2_S15	N	04/23/2015	Ground Water	165	175
Central Impact Area	MW-113M2	MW-113M2_S15	N	04/23/2015	Ground Water	190	200
Former D Range	FDR07	MISFDR07-A	N	04/23/2015	Soil	0	0.25
Central Impact Area	MW-179M1	MW-179M1_S15	N	04/23/2015	Ground Water	187	197
Central Impact Area	MW-180M3	MW-180M3_S15	N	04/22/2015	Ground Water	171	181
Former D Range	FDR05	MISFDR05-A	N	04/22/2015	Soil	0	0.25
Former D Range	FDR06	MISFDR06-A_R2	FR	04/22/2015	Soil	0	0.25

N = Normal Sample  
 FD = Field Duplicate

**TABLE 1**  
**Sampling Progress: 31 March through 30 April 2015**

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
Former D Range	FDR06	MISFDR06-A_R1	FR	04/22/2015	Soil	0	0.25
Demolition Area 1	MW-582M2	MW-582M2_S15	N	04/22/2015	Ground Water	84	94
Demolition Area 1	MW-582M2	MW-582M2_S15D	FD	04/22/2015	Ground Water	84	94
Former D Range	FDR06	MISFDR06-A	N	04/22/2015	Soil	0	0.25
Demolition Area 1	MW-582M1	MW-582M1_S15	N	04/22/2015	Ground Water	134	144
Demolition Area 1	MW-433	MW-433_S15	N	04/22/2015	Ground Water	180.2	190.2
Former C Range	FCR07	MISFCR07-A	N	04/22/2015	Soil	0	0.25
Former C Range	FCR04	MISFCR04-A	N	04/22/2015	Soil	0	0.25
Demolition Area 1	MW-258M3	MW-258M3_S15	N	04/21/2015	Ground Water	77	82
Demolition Area 1	MW-258M2	MW-258M2_S15	N	04/21/2015	Ground Water	87	92
Former C Range	FCR136	MISFCR136-B_R2	FR	04/21/2015	Soil	1.5	2
Demolition Area 1	MW-258M1	MW-258M1_S15	N	04/21/2015	Ground Water	109	119
Demolition Area 1	MW-248M3	MW-248M3_S15	N	04/21/2015	Ground Water	143	153
Former C Range	FCR136	MISFCR136-B_R1	FR	04/21/2015	Soil	1.5	2
Demolition Area 1	MW-248M2	MW-248M2_S15	N	04/21/2015	Ground Water	178	188
Former C Range	FCR136	MISFCR136-B	N	04/21/2015	Soil	1.5	2
Demolition Area 1	MW-73S	MW-73S_S15	N	04/21/2015	Ground Water	52.2	61.7
Demolition Area 1	MW-258M1	MW-258M1_S15D	FD	04/21/2015	Ground Water	109	119
Demolition Area 1	MW-531M1	MW-531M1_S15	N	04/20/2015	Ground Water	138	148
Demolition Area 1	MW-542M1	MW-542M1_S15	N	04/20/2015	Ground Water	144	154
Former C Range	FCR03	MISFCR03-A	N	04/20/2015	Soil	0	0.25
Demolition Area 1	MW-532M2	MW-532M2_S15	N	04/20/2015	Ground Water	138	148
Demolition Area 1	MW-532M1	MW-532M1_S15	N	04/20/2015	Ground Water	168	178
Former C Range	FCR05	MISFCR05-A	N	04/20/2015	Soil	0	0.25
Former C Range	FCR06	MISFCR06-A	N	04/20/2015	Soil	0	0.25
Demolition Area 1	MW-210M2	MW-210M2_S15	N	04/20/2015	Ground Water	156	166
Former C Range	FCR02	MISFCR02-A	N	04/20/2015	Soil	0	0.25
Demolition Area 1	MW-210M1	MW-210M1_S15	N	04/20/2015	Ground Water	201	211
Demolition Area 1	MW-532M2	MW-532M2_S15D	FD	04/20/2015	Ground Water	138	148
Central Impact Area	MW-623M3	MW-623M3_S15	N	04/17/2015	Ground Water	275	285
Central Impact Area	MW-623M2	MW-623M2_R3	N	04/17/2015	Ground Water	291.8	301.8
Central Impact Area	MW-623M1	MW-623M1_S15	N	04/17/2015	Ground Water	340	350
Central Impact Area	MW-628M2	MW-628M2_R3	N	04/17/2015	Ground Water	120.8	130.8
Central Impact Area	MW-628M1	MW-628M1_R3	N	04/17/2015	Ground Water	230.8	240.8
Central Impact Area	MW-625M2	MW-625M2_R3	N	04/16/2015	Ground Water	230	240
Central Impact Area	MW-625M1	MW-625M1_R3	N	04/16/2015	Ground Water	260	270
Central Impact Area	MW-616M2	MW-616M2_R3	N	04/16/2015	Ground Water	107.1	117.1
Central Impact Area	MW-616M1	MW-616M1_R3	N	04/16/2015	Ground Water	217.1	227.1
Central Impact Area	MW-617M2	MW-617M2_R3	N	04/16/2015	Ground Water	118.3	128.3
Central Impact Area	MW-617M1	MW-617M1_R3	N	04/16/2015	Ground Water	175.8	185.8
Demolition Area 1	MW-19S	MW-19S_S15	N	04/15/2015	Ground Water	52.7	62.7
Demolition Area 1	MW-19S	MW-19S_S15D	FD	04/15/2015	Ground Water	52.7	62.7
Demolition Area 1	MW-571M2	MW-571M2_S15	N	04/13/2015	Ground Water	74	84
Demolition Area 1	MW-571M1	MW-571M1_S15	N	04/13/2015	Ground Water	114	124
Demolition Area 1	MW-571M1	MW-571M1_S15D	FD	04/13/2015	Ground Water	114	124
Demolition Area 1	MW-569M2	MW-569M2_S15	N	04/13/2015	Ground Water	84	94
Demolition Area 1	MW-569M1	MW-569M1_S15	N	04/13/2015	Ground Water	114	124
Demolition Area 1	MW-569M1	MW-569M1_S15D	FD	04/13/2015	Ground Water	114	124
J2 Range Eastern	J2MW-04M2	J2MW-04M2_S15	N	04/13/2015	Ground Water	210	200
J2 Range Eastern	J2MW-04M1	J2MW-04M1_S15	N	04/13/2015	Ground Water	257	267
J1 Range Southern	J1S-EFF	J1S-EFF-89A	N	04/09/2015	Process Water	0	0
J1 Range Southern	J1S-MID	J1S-MID-89A	N	04/09/2015	Process Water	0	0
J1 Range Southern	J1S-INF-2	J1S-INF-2-89A	N	04/09/2015	Process Water	0	0
J3 Range	J3-EFF	J3-EFF-103A	N	04/09/2015	Process Water	0	0
J3 Range	J3-MID-2	J3-MID-2-103A	N	04/09/2015	Process Water	0	0
J3 Range	J3-MID-1	J3-MID-1-103A	N	04/09/2015	Process Water	0	0
J3 Range	J3-INF	J3-INF-103A	N	04/09/2015	Process Water	0	0
Central Impact Area	CIA2-EFF	CIA2-EFF-15A	N	04/09/2015	Process Water	0	0

N = Normal Sample  
FD = Field Duplicate



**TABLE 1**  
**Sampling Progress: 31 March through 30 April 2015**

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	CIA2-MID2	CIA2-MID2-15A	N	04/09/2015	Process Water	0	0
Central Impact Area	CIA2-MID1	CIA2-MID1-15A	N	04/09/2015	Process Water	0	0
Central Impact Area	CIA2-INF	CIA2-INF-15A	N	04/09/2015	Process Water	0	0
Central Impact Area	CIA1-EFF	CIA1-EFF-15A	N	04/09/2015	Process Water	0	0
Central Impact Area	CIA1-MID2	CIA1-MID2-15A	N	04/09/2015	Process Water	0	0
Central Impact Area	CIA1-MID1	CIA1-MID1-15A	N	04/09/2015	Process Water	0	0
Central Impact Area	CIA1-INF	CIA1-INF-15A	N	04/09/2015	Process Water	0	0
Central Impact Area	MW-477M2	MW-477M2_S15	N	04/08/2015	Ground Water	145.6	155.6
Central Impact Area	MW-477M2	MW-477M2_S15D	FD	04/08/2015	Ground Water	145.6	155.6
Central Impact Area	MW-477M1	MW-477M1_S15	N	04/08/2015	Ground Water	187.5	197.5
Central Impact Area	MW-105M1	MW-105M1_S15	N	04/08/2015	Ground Water	205	215
Central Impact Area	MW-487M2	MW-487M2_S15	N	04/08/2015	Ground Water	195	205
J1 Range Northern	MW-487M2	MW-487M2_S15	N	04/08/2015	Ground Water	195	205
J2 Range Eastern	J2E-EFF-IH	J2E-EFF-IH-79A	N	04/08/2015	Process Water	0	0
J2 Range Eastern	J2E-MID-2H	J2E-MID-2H-79A	N	04/08/2015	Process Water	0	0
J2 Range Eastern	J2E-MID-1H	J2E-MID-1H-79A	N	04/08/2015	Process Water	0	0
J2 Range Eastern	J2E-MID-2I	J2E-MID-2I-79A	N	04/08/2015	Process Water	0	0
J2 Range Eastern	J2E-MID-1I	J2E-MID-1I-79A	N	04/08/2015	Process Water	0	0
J2 Range Eastern	J2E-INF-I	J2E-INF-I-79A	N	04/08/2015	Process Water	0	0
Central Impact Area	MW-44M1	MW-44M1_S15	N	04/08/2015	Ground Water	182	192
J2 Range Eastern	J2E-EFF-K	J2E-EFF-K-79A	N	04/08/2015	Process Water	0	0
J2 Range Eastern	J2E-MID-2K	J2E-MID-2K-79A	N	04/08/2015	Process Water	0	0
J2 Range Eastern	J2E-MID-1K	J2E-MID-1K-79A	N	04/08/2015	Process Water	0	0
J2 Range Eastern	J2E-INF-K	J2E-INF-K-79A	N	04/08/2015	Process Water	0	0
J2 Range Eastern	J2E-EFF-J	J2E-EFF-J-79A	N	04/08/2015	Process Water	0	0
J2 Range Eastern	J2E-MID-2J	J2E-MID-2J-79A	N	04/08/2015	Process Water	0	0
J2 Range Eastern	J2E-MID-1J	J2E-MID-1J-79A	N	04/08/2015	Process Water	0	0
J2 Range Eastern	J2E-INF-J	J2E-INF-J-79A	N	04/08/2015	Process Water	0	0
Central Impact Area	OW-2	OW-2_S15	N	04/08/2015	Ground Water	175	185
Central Impact Area	MW-235M1	MW-235M1_S15	N	04/07/2015	Ground Water	154	164
Central Impact Area	MW-01S	MW-01S_S15	N	04/07/2015	Ground Water	114	124
Central Impact Area	MW-01M2	MW-01M2_S15	N	04/07/2015	Ground Water	160	165
J2 Range Northern	J2N-EFF-G	J2N-EFF-G-103A	N	04/07/2015	Process Water	0	0
J2 Range Northern	J2N-MID-2G	J2N-MID-2G-103A	N	04/07/2015	Process Water	0	0
J2 Range Northern	J2N-MID-1G	J2N-MID-1G-103A	N	04/07/2015	Process Water	0	0
J2 Range Northern	J2N-INF-G	J2N-INF-G-103A	N	04/07/2015	Process Water	0	0
Central Impact Area	MW-40S	MW-40S_S15	N	04/07/2015	Ground Water	115.5	126
J2 Range Northern	J2N-EFF-EF	J2N-EFF-EF-103A	N	04/07/2015	Process Water	0	0
J2 Range Northern	J2N-MID-2F	J2N-MID-2F-103A	N	04/07/2015	Process Water	0	0
J2 Range Northern	J2N-MID-1F	J2N-MID-1F-103A	N	04/07/2015	Process Water	0	0
J2 Range Northern	J2N-INF-EF	J2N-INF-EF-103A	N	04/07/2015	Process Water	0	0
J2 Range Northern	J2N-MID-2E	J2N-MID-2E-103A	N	04/07/2015	Process Water	0	0
J2 Range Northern	J2N-MID-1E	J2N-MID-1E-103A	N	04/07/2015	Process Water	0	0
Central Impact Area	MW-107M2	MW-107M2_S15	N	04/07/2015	Ground Water	125	135
J1 Range Northern	J1N-EFF	J1N-EFF-18A	N	04/07/2015	Process Water	0	0
J1 Range Northern	J1N-MID2	J1N-MID2-18A	N	04/07/2015	Process Water	0	0
J1 Range Northern	J1N-MID1	J1N-MID1-18A	N	04/07/2015	Process Water	0	0
J1 Range Northern	J1N-INF2	J1N-INF2-18A	N	04/07/2015	Process Water	0	0
Central Impact Area	MW-90S	MW-90S_S15	N	04/06/2015	Ground Water	118	128
Central Impact Area	MW-90S	MW-90S_S15D	FD	04/06/2015	Ground Water	118	128
Central Impact Area	MW-91S	MW-91S_S15	N	04/06/2015	Ground Water	124	134
Central Impact Area	MW-91S	MW-91S_S15D	FD	04/06/2015	Ground Water	124	134
Central Impact Area	MW-91M1	MW-91M1_S15	N	04/06/2015	Ground Water	170	180
Central Impact Area	MW-93M1	MW-93M1_S15	N	04/06/2015	Ground Water	185	195
Demolition Area 1	FPR-2-EFF-B	FPR-2-EFF-B-109A	N	04/06/2015	Process Water	0	0
Demolition Area 1	FPR-2-GAC-MID3B	FPR-2-GAC-MID3B-109A	N	04/06/2015	Process Water	0	0
Demolition Area 1	FPR2-POST-IX-B	FPR2-POST-IX-B-109A	N	04/06/2015	Process Water	0	0
Demolition Area 1	FPR-2-INF	FPR-2-INF-109A	N	04/06/2015	Process Water	0	0

N = Normal Sample  
FD = Field Duplicate

**TABLE 1**  
**Sampling Progress: 31 March through 30 April 2015**

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-101M1	MW-101M1_S15	N	04/06/2015	Ground Water	158	168
Demolition Area 1	D1-EFF	D1-EFF-57A	N	04/06/2015	Process Water	0	0
Demolition Area 1	D1-MID-2	D1-MID-2-57A	N	04/06/2015	Process Water	0	0
Demolition Area 1	D1-MID-1	D1-MID-1-57A	N	04/06/2015	Process Water	0	0
Demolition Area 1	D1-INF	D1-INF-57A	N	04/06/2015	Process Water	0	0
Central Impact Area	MW-100M1	MW-100M1_S15	N	04/06/2015	Ground Water	179	189
Demolition Area 1	PR-EFF	PR-EFF-109A	N	04/06/2015	Process Water	0	0
Demolition Area 1	PR-MID-2	PR-MID-2-109A	N	04/06/2015	Process Water	0	0
Demolition Area 1	PR-MID-1	PR-MID-1-109A	N	04/06/2015	Process Water	0	0
Demolition Area 1	PR-INF	PR-INF-109A	N	04/06/2015	Process Water	0	0
Demolition Area 1	MW-76S	MW-76S_S15	N	04/03/2015	Ground Water	85	95
Demolition Area 1	MW-76M2	MW-76M2_S15	N	04/03/2015	Ground Water	105	115
Demolition Area 1	MW-76M1	MW-76M1_S15	N	04/03/2015	Ground Water	125	135
Demolition Area 1	MW-77S	MW-77S_S15	N	04/02/2015	Ground Water	83	93
Demolition Area 1	MW-77M2	MW-77M2_S15	N	04/02/2015	Ground Water	120	130
Demolition Area 1	MW-77M2	MW-77M2_S15D	FD	04/02/2015	Ground Water	120	130
Demolition Area 1	MW-77M1	MW-77M1_S15	N	04/02/2015	Ground Water	180	190
Demolition Area 1	MW-75M2	MW-75M2_S15	N	04/02/2015	Ground Water	115	125
Demolition Area 1	MW-75M1	MW-75M1_S15	N	04/02/2015	Ground Water	140	150
Demolition Area 1	MW-225M3	MW-225M3_S15	N	04/01/2015	Ground Water	125	135
Demolition Area 1	MW-225M2	MW-225M2_S15	N	04/01/2015	Ground Water	145	155
Demolition Area 1	MW-240M2	MW-240M2_S15	N	04/01/2015	Ground Water	125	135
Demolition Area 1	MW-78M2	MW-78M2_S15	N	04/01/2015	Ground Water	115	125
Demolition Area 1	MW-78M1	MW-78M1_S15	N	04/01/2015	Ground Water	135	145
KD Range	SSKDWTG01	KDWTG01C	FR	03/31/2015	Soil	0	0.25
KD Range	SSKDWTG01	KDWTG01B	FR	03/31/2015	Soil	0	0.25
U Range	SSURFL02	UR2A	N	03/31/2015	Soil	0	0.25
KD Range	SSKDWTG01	KDWTG01A	N	03/31/2015	Soil	0	0.25
Former R Range	SSIBCFL01	IBCFLC	FR	03/31/2015	Soil	0	0.25

**TABLE 2**  
**VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS**  
**Data Received April 2015**

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-477M2	MW-477M2_S15	145.6	155.6	04/08/2015	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.55		UG/L	400		0.019	0.20
Central Impact Area	MW-477M2	MW-477M2_S15	145.6	155.6	04/08/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	10.1		UG/L	0.60	X	0.025	0.20
Central Impact Area	MW-477M2	MW-477M2_S15D	145.6	155.6	04/08/2015	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.54		UG/L	400		0.019	0.20
Central Impact Area	MW-477M2	MW-477M2_S15D	145.6	155.6	04/08/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	10.1		UG/L	0.60	X	0.025	0.20
Central Impact Area	MW-105M1	MW-105M1_S15	205	215	04/08/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.25		UG/L	0.60		0.025	0.20
Central Impact Area	MW-487M2	MW-487M2_S15	195	205	04/08/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.74		UG/L	0.60	X	0.025	0.20
Central Impact Area	OW-2	OW-2_S15	175	185	04/08/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.66		UG/L	0.60	X	0.025	0.20
Central Impact Area	MW-01S	MW-01S_S15	114	124	04/07/2015	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.47		UG/L	400		0.019	0.20
Central Impact Area	MW-01S	MW-01S_S15	114	124	04/07/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	6.2		UG/L	0.60	X	0.025	0.20
Central Impact Area	MW-01M2	MW-01M2_S15	160	165	04/07/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.25		UG/L	0.60		0.025	0.20
Central Impact Area	MW-107M2	MW-107M2_S15	125	135	04/07/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.70		UG/L	0.60	X	0.025	0.20
Central Impact Area	MW-90S	MW-90S_S15	118	128	04/06/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.6		UG/L	0.60	X	0.025	0.20
Central Impact Area	MW-90S	MW-90S_S15D	118	128	04/06/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.6		UG/L	0.60	X	0.025	0.20
Central Impact Area	MW-91S	MW-91S_S15	124	134	04/06/2015	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.39		UG/L	400		0.019	0.20
Central Impact Area	MW-91S	MW-91S_S15	124	134	04/06/2015	SW8330	4-Amino-2,6-dinitrotoluene	0.47		UG/L	7.3		0.023	0.20
Central Impact Area	MW-91S	MW-91S_S15	124	134	04/06/2015	SW8330	2-Amino-4,6-dinitrotoluene	0.53		UG/L	7.3		0.023	0.20
Central Impact Area	MW-91S	MW-91S_S15	124	134	04/06/2015	SW8330	2,4,6-Trinitrotoluene	4.1		UG/L	2.0	X	0.028	0.20
Central Impact Area	MW-91S	MW-91S_S15	124	134	04/06/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	4.1	J	UG/L	0.60	X	0.025	0.20
Central Impact Area	MW-91S	MW-91S_S15D	124	134	04/06/2015	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.37		UG/L	400		0.019	0.20
Central Impact Area	MW-91S	MW-91S_S15D	124	134	04/06/2015	SW8330	4-Amino-2,6-dinitrotoluene	0.45		UG/L	7.3		0.023	0.20
Central Impact Area	MW-91S	MW-91S_S15D	124	134	04/06/2015	SW8330	2-Amino-4,6-dinitrotoluene	0.50		UG/L	7.3		0.023	0.20
Central Impact Area	MW-91S	MW-91S_S15D	124	134	04/06/2015	SW8330	2,4,6-Trinitrotoluene	4.0		UG/L	2.0	X	0.028	0.20
Central Impact Area	MW-91S	MW-91S_S15D	124	134	04/06/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	4.0	J	UG/L	0.60	X	0.025	0.20
Central Impact Area	MW-91M1	MW-91M1_S15	170	180	04/06/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.81		UG/L	0.60	X	0.025	0.20
Central Impact Area	MW-93M1	MW-93M1_S15	185	195	04/06/2015	SW6850	Perchlorate	0.20		UG/L	2.0		0.019	0.20
Central Impact Area	MW-93M1	MW-93M1_S15	185	195	04/06/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.85		UG/L	0.60	X	0.025	0.20
Central Impact Area	MW-101M1	MW-101M1_S15	158	168	04/06/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.1		UG/L	0.60	X	0.025	0.20
Central Impact Area	MW-100M1	MW-100M1_S15	179	189	04/06/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.2		UG/L	0.60	X	0.025	0.20
Demolition Area 1	MW-76S	MW-76S_S15	85	95	04/03/2015	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.23		UG/L	400		0.019	0.20
Demolition Area 1	MW-76S	MW-76S_S15	85	95	04/03/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.71		UG/L	0.60	X	0.025	0.20
Demolition Area 1	MW-76M2	MW-76M2_S15	105	115	04/03/2015	SW8330	4-Amino-2,6-dinitrotoluene	0.22		UG/L	7.3		0.023	0.20
Demolition Area 1	MW-76M2	MW-76M2_S15	105	115	04/03/2015	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.39		UG/L	400		0.019	0.20
Demolition Area 1	MW-76M2	MW-76M2_S15	105	115	04/03/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.52		UG/L	0.60		0.025	0.20
Demolition Area 1	MW-77M2	MW-77M2_S15	120	130	04/02/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.71		UG/L	0.60	X	0.025	0.20
Demolition Area 1	MW-77M2	MW-77M2_S15	120	130	04/02/2015	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.91		UG/L	400		0.019	0.20
Demolition Area 1	MW-77M2	MW-77M2_S15D	120	130	04/02/2015	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-77M2	MW-77M2_S15D	120	130	04/02/2015	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.92		UG/L	400		0.019	0.20
Demolition Area 1	MW-225M3	MW-225M3_S15	125	135	04/01/2015	SW6850	Perchlorate	0.032	J	UG/L	2.0		0.019	0.20
Demolition Area 1	MW-240M2	MW-240M2_S15	125	135	04/01/2015	SW6850	Perchlorate	0.35		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 April 2015**

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-31S	MW-31S_S15	98	103	03/31/2015	SW8330	4-Amino-2,6-dinitrotoluene	0.27		UG/L	7.3		0.023	0.20
Demolition Area 1	MW-31S	MW-31S_S15	98	103	03/31/2015	SW8330	2-Amino-4,6-dinitrotoluene	0.56		UG/L	7.3		0.023	0.20
Demolition Area 1	MW-31S	MW-31S_S15	98	103	03/31/2015	SW8330	2,4,6-Trinitrotoluene	0.86		UG/L	2.0		0.028	0.20
Demolition Area 1	MW-31S	MW-31S_S15	98	103	03/31/2015	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.88		UG/L	400		0.019	0.20
Demolition Area 1	MW-31S	MW-31S_S15	98	103	03/31/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.8		UG/L	0.60	X	0.025	0.20
Demolition Area 1	MW-31S	MW-31S_S15D	98	103	03/31/2015	SW8330	4-Amino-2,6-dinitrotoluene	0.27		UG/L	7.3		0.023	0.20
Demolition Area 1	MW-31S	MW-31S_S15D	98	103	03/31/2015	SW8330	2-Amino-4,6-dinitrotoluene	0.54		UG/L	7.3		0.023	0.20
Demolition Area 1	MW-31S	MW-31S_S15D	98	103	03/31/2015	SW8330	2,4,6-T trinitrotoluene	0.85		UG/L	2.0		0.028	0.20
Demolition Area 1	MW-31S	MW-31S_S15D	98	103	03/31/2015	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.88		UG/L	400		0.019	0.20
Demolition Area 1	MW-31S	MW-31S_S15D	98	103	03/31/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.8		UG/L	0.60	X	0.025	0.20
Demolition Area 1	MW-31M	MW-31M_S15	113	123	03/31/2015	SW8330	2-Amino-4,6-dinitrotoluene	0.21		UG/L	7.3		0.023	0.20
Demolition Area 1	MW-31M	MW-31M_S15	113	123	03/31/2015	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.87		UG/L	400		0.019	0.20
Demolition Area 1	MW-31M	MW-31M_S15	113	123	03/31/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.1		UG/L	0.60	X	0.025	0.20
Demolition Area 1	MW-31M	MW-31M_S15D	113	123	03/31/2015	SW8330	2-Amino-4,6-dinitrotoluene	0.21		UG/L	7.3		0.023	0.20
Demolition Area 1	MW-31M	MW-31M_S15D	113	123	03/31/2015	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.89		UG/L	400		0.019	0.20
Demolition Area 1	MW-31M	MW-31M_S15D	113	123	03/31/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.2		UG/L	0.60	X	0.025	0.20
J2 Range Eastern	MW-307M3	MW-307M3_S15	125.8	135.8	03/31/2015	SW6850	Perchlorate	1.5		UG/L	2.0		0.019	0.20
J2 Range Eastern	MW-436M1	MW-436M1_S15	295.5	305.5	03/30/2015	SW6850	Perchlorate	0.068	J	UG/L	2.0		0.019	0.20
J2 Range Eastern	MW-228S	MW-228S_S15	104	114	03/30/2015	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.29		UG/L	400		0.019	0.20
J2 Range Eastern	MW-339M1	MW-339M1_S15	233	243	03/30/2015	SW6850	Perchlorate	0.94		UG/L	2.0		0.019	0.20
J2 Range Northern	MW-640M2	MW-640M2_R3	216	226	03/26/2015	SW6850	Perchlorate	0.78		UG/L	2.0		0.019	0.20
J2 Range Northern	MW-640M1	MW-640M1_R3	246	256	03/26/2015	SW6850	Perchlorate	0.30		UG/L	2.0		0.019	0.20
Central Impact Area	MW-108M4	MW-108M4_S15	240	250	03/25/2015	SW6850	Perchlorate	0.072	J	UG/L	2.0		0.019	0.20
Central Impact Area	MW-108M1	MW-108M1_S15	297	307	03/25/2015	SW6850	Perchlorate	0.18	J	UG/L	2.0		0.019	0.20
Central Impact Area	MW-178M1	MW-178M1_S15	257	267	03/25/2015	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.20		UG/L	400		0.019	0.20
Central Impact Area	MW-178M1	MW-178M1_S15	257	267	03/25/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.30		UG/L	0.60		0.025	0.20
Central Impact Area	MW-615M2	MW-615M2_S15	200	210	03/24/2015	SW6850	Perchlorate	0.021	J	UG/L	2.0		0.019	0.20
Central Impact Area	MW-615M1	MW-615M1_S15	260	270	03/24/2015	SW6850	Perchlorate	0.97		UG/L	2.0		0.019	0.20
Central Impact Area	MW-615M1	MW-615M1_S15	260	270	03/24/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	7.2	J	UG/L	0.60	X	0.025	0.20
Central Impact Area	MW-615M1	MW-615M1_S15D	260	270	03/24/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.5		UG/L	0.60	X	0.025	0.20
Central Impact Area	MW-614M2	MW-614M2_S15	215	225	03/24/2015	SW6850	Perchlorate	0.031	J	UG/L	2.0		0.019	0.20
Central Impact Area	MW-102M2	MW-102M2_S15	237	247	03/23/2015	SW6850	Perchlorate	0.37		UG/L	2.0		0.019	0.20
Central Impact Area	MW-123M1	MW-123M1_S15	291	301	03/23/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.64		UG/L	0.60	X	0.025	0.20
Central Impact Area	MW-23M1	MW-23M1_S15	225	235	03/23/2015	SW6850	Perchlorate	0.92		UG/L	2.0		0.019	0.20
Central Impact Area	MW-23M1	MW-23M1_S15	225	235	03/23/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.5		UG/L	0.60	X	0.025	0.20
Demolition Area 1	MW-597M2	MW-597M2_S15	118	128	03/19/2015	SW6850	Perchlorate	0.036	J	UG/L	2.0		0.019	0.20
Demolition Area 1	MW-597M1	MW-597M1_S15	148	158	03/19/2015	SW6850	Perchlorate	0.14	J	UG/L	2.0		0.019	0.20
Demolition Area 1	MW-352M1	MW-352M1_S15	115	125	03/19/2015	SW6850	Perchlorate	0.095	J	UG/L	2.0		0.019	0.20
Demolition Area 1	MW-353M1	MW-353M1_S15	107	117	03/19/2015	SW6850	Perchlorate	0.17	J	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 April 2015**

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-165M2	MW-165M2_S15	124.5	134.5	03/18/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.44		UG/L	0.60		0.025	0.20
Demolition Area 1	MW-165M2	MW-165M2_S15	124.5	134.5	03/18/2015	SW6850	Perchlorate	0.52		UG/L	2.0		0.019	0.20
J2 Range Eastern	MW-368M2	MW-368M2_S15	202.7	212.7	03/18/2015	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1.4		UG/L	400		0.019	0.20
J2 Range Eastern	MW-368M2	MW-368M2_S15	202.7	212.7	03/18/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	10.7		UG/L	0.60	X	0.025	0.20
J2 Range Eastern	MW-368M2	MW-368M2_S15	202.7	212.7	03/18/2015	SW6850	Perchlorate	31.3		UG/L	2.0	X	0.076	0.80
J2 Range Eastern	MW-368M2	MW-368M2_S15D	202.7	212.7	03/18/2015	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1.4		UG/L	400		0.019	0.20
J2 Range Eastern	MW-368M2	MW-368M2_S15D	202.7	212.7	03/18/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	10.2		UG/L	0.60	X	0.025	0.20
J2 Range Eastern	MW-368M2	MW-368M2_S15D	202.7	212.7	03/18/2015	SW6850	Perchlorate	30.1		UG/L	2.0	X	0.076	0.80
Demolition Area 1	MW-431	MW-431_S15	88	188	03/16/2015	SW6850	Perchlorate	0.12	J	UG/L	2.0		0.019	0.20
Demolition Area 1	MW-431	MW-431_S15	88	188	03/16/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.35		UG/L	0.60		0.025	0.20
Demolition Area 1	MW-431	MW-431_S15	88	188	03/16/2015	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.35		UG/L	400		0.019	0.20
Demolition Area 1	MW-432	MW-432_S15	88	188	03/12/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.28		UG/L	0.60		0.025	0.20
Demolition Area 1	MW-432	MW-432_S15	88	188	03/12/2015	SW6850	Perchlorate	0.47		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-139M2	MW-139M2_S15	154	164	03/12/2015	SW6850	Perchlorate	0.098	J	UG/L	2.0		0.019	0.20
Demolition Area 1	MW-36M2	MW-36M2_S15	131	141	03/11/2015	SW6850	Perchlorate	0.45		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-36M1	MW-36M1_S15	152	162	03/11/2015	SW6850	Perchlorate	0.15	J	UG/L	2.0		0.019	0.20
Demolition Area 1	MW-34M2	MW-34M2_S15	131	141	03/11/2015	SW6850	Perchlorate	0.19	J	UG/L	2.0		0.019	0.20
Demolition Area 1	MW-34M1	MW-34M1_S15	151	161	03/11/2015	SW6850	Perchlorate	0.28		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-611M2	MW-611M2_S15	91	101	02/24/2015	SW6850	Perchlorate	0.79		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-611M1	MW-611M1_S15	141	151	02/24/2015	SW6850	Perchlorate	0.97		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-598M2	MW-598M2_S15	88	98	02/24/2015	SW6850	Perchlorate	2.7		UG/L	2.0	X	0.019	0.20
Demolition Area 1	MW-598M2	MW-598M2_S15D	88	98	02/24/2015	SW6850	Perchlorate	2.7		UG/L	2.0	X	0.019	0.20
Demolition Area 1	MW-598M1	MW-598M1_S15	122	132	02/24/2015	SW6850	Perchlorate	1.7		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-610M2	MW-610M2_S15	85	95	02/23/2015	SW6850	Perchlorate	1.3		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-610M1	MW-610M1_S15	110	120	02/23/2015	SW6850	Perchlorate	1.5		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-641M2	MW-641M2_S15	86.2	96.2	02/23/2015	SW6850	Perchlorate	0.48		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-641M1	MW-641M1_S15	113.2	123.2	02/23/2015	SW6850	Perchlorate	0.95		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-558M2	MW-558M2_S15	98	108	02/19/2015	SW6850	Perchlorate	0.42		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-558M1	MW-558M1_S15	134	144	02/19/2015	SW6850	Perchlorate	1.9		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-559M2	MW-559M2_S15	87	97	02/19/2015	SW6850	Perchlorate	0.32		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-559M1	MW-559M1_S15	135.6	145.6	02/19/2015	SW6850	Perchlorate	2.5		UG/L	2.0	X	0.019	0.20
Demolition Area 1	MW-556M2	MW-556M2_S15	111	121	02/18/2015	SW6850	Perchlorate	1.9		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-556M1	MW-556M1_S15	153	163	02/18/2015	SW6850	Perchlorate	2.6		UG/L	2.0	X	0.019	0.20
Demolition Area 1	MW-556M1	MW-556M1_S15D	153	163	02/18/2015	SW6850	Perchlorate	2.7		UG/L	2.0	X	0.019	0.20
Demolition Area 1	MW-554M2	MW-554M2_S15	89.1	99.1	02/18/2015	SW6850	Perchlorate	0.13	J	UG/L	2.0		0.019	0.20
Demolition Area 1	MW-554M1	MW-554M1_S15	120	130	02/18/2015	SW6850	Perchlorate	0.34		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-211M2	MW-211M2_S15	175	185	02/17/2015	SW6850	Perchlorate	0.041	J	UG/L	2.0		0.019	0.20
Demolition Area 1	MW-211M1	MW-211M1_S15	200	210	02/17/2015	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.39		UG/L	400		0.023	0.20
Demolition Area 1	MW-211M1	MW-211M1_S15	200	210	02/17/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.6		UG/L	0.60	X	0.026	0.20

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

**TABLE 2**  
**VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS**  
**Data Received April 2015**

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-211M1	MW-211M1_S15	200	210	02/17/2015	SW6850	Perchlorate	4.6		UG/L	2.0	X	0.019	0.20
Demolition Area 1	MW-211M1	MW-211M1_S15D	200	210	02/17/2015	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.40		UG/L	400		0.023	0.20
Demolition Area 1	MW-211M1	MW-211M1_S15D	200	210	02/17/2015	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.5		UG/L	0.60	X	0.026	0.20
Central Impact Area	MW-624M2	MW-624M2_JUN14	254	264	06/17/2014	SW6850	Perchlorate	0.020	J	UG/L	2.0		0.019	0.20
Central Impact Area	MW-624M1	MW-624M1_JUN14	284	294	06/17/2014	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.046	J	UG/L	0.60		0.026	0.20
Central Impact Area	MW-623M1	MW-623M1_JUN14	340	350	06/16/2014	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.10	J	UG/L	0.60		0.026	0.20
Central Impact Area	MW-623M3	MW-623M3_JUN14	275	285	06/16/2014	SW6850	Perchlorate	0.069	J	UG/L	2.0		0.019	0.20
Central Impact Area	MW-623M3	MW-623M3_JUN14	275	285	06/16/2014	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.19	J	UG/L	400		0.023	0.20
Central Impact Area	MW-623M3	MW-623M3_JUN14	275	285	06/16/2014	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.9		UG/L	0.60	X	0.026	0.20
Central Impact Area	MW-614M2	MW-614M2_JUN14	215	225	06/16/2014	SW6850	Perchlorate	0.051	J	UG/L	2.0		0.019	0.20
Central Impact Area	MW-614M2	MW-614M2_JUN14	215	225	06/16/2014	SW6850	Perchlorate	0.040	J	UG/L	2.0		0.019	0.20
Central Impact Area	MW-614M1	MW-614M1_JUN14	275	285	06/16/2014	SW6850	Perchlorate	0.021	J	UG/L	2.0		0.019	0.20
Central Impact Area	MW-614M1	MW-614M1_JUN14	275	285	06/16/2014	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.5		UG/L	0.60	X	0.026	0.20
Central Impact Area	MW-615M1	MW-615M1_JUN14	260	270	06/16/2014	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.14	J	UG/L	400		0.023	0.20
Central Impact Area	MW-615M1	MW-615M1_JUN14	260	270	06/16/2014	SW6850	Perchlorate	1.1		UG/L	2.0		0.019	0.20
Central Impact Area	MW-615M1	MW-615M1_JUN14	260	270	06/16/2014	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.5		UG/L	0.60	X	0.026	0.20
Central Impact Area	MW-615M2	MW-615M2_JUN14	200	210	06/16/2014	SW6850	Perchlorate	0.038	J	UG/L	2.0		0.019	0.20
J1 Range Southern	MW-524M1	MW-524M1_S14	148	158	06/02/2014	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.49		UG/L	400		0.023	0.20
J1 Range Southern	MW-524M1	MW-524M1_S14	148	158	06/02/2014	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.8		UG/L	0.60	X	0.026	0.20
J1 Range Southern	MW-524M1	MW-524M1_S14D	148	158	06/02/2014	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.49		UG/L	400		0.023	0.20
J1 Range Southern	MW-524M1	MW-524M1_S14D	148	158	06/02/2014	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.8		UG/L	0.60	X	0.026	0.20
J1 Range Southern	MW-592M1	MW-592M1_S14	201	211	06/02/2014	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.0		UG/L	0.60	X	0.026	0.20

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