

**MONTHLY PROGRESS REPORT #206  
FOR MAY 2014**

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

**JOINT BASE CAPE COD (JBCC)  
(FORMERLY THE MASSACHUSETTS MILITARY RESERVATION (MMR))  
TRAINING RANGE AND IMPACT AREA**

The following summary of progress is for the period from 1 May to 31 May 2014.

**1. SUMMARY OF REMEDIATION ACTIONS**

The following is a description of Remediation Actions (RA) underway at Camp Edwards as of May 2014. 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 operates at a flow rate of 400 gpm with over 2.074 billion gallons of water treated and re-injected as of 30 May 2014. No Frank Perkins Road facility shut downs occurred in May.

The Pew Road Mobile Treatment Unit (MTU) continues to operate at a flow rate of 105 gpm with over 364 million gallons of water treated and re-injected as of 30 May 2014. The following Pew Road MTU shut downs occurred in May:

- Shut down on 4 May 2014 at 2302 due to a system alarm and was restarted on 6 May 2014 at 1425;
- Shut down on 20 May 2014 at 1249 due to a power interruption and was restarted on 21 May 2014 at 0933;
- Shut down on 22 May 2014 at 2156 due to a power interruption and was restarted on 23 May 2014 at 0903;
- Shut down on 23 May 2014 at 1145 due to a power interruption and was restarted on 27 May 2014 at 0927; and
- Shut down on 30 May 2014 at 2347 due to a power interruption and was restarted on 2 June 2014 at 1101.

The Base Boundary RA continues to operate at a flow rate of 65 gpm with over 78.4 million gallons of water treated and re-injected as of 30 May 2014. No Base Boundary MTU shut downs occurred in May.

### 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 30 May 2014, over 213 million gallons of water have been treated and re-injected. No Southern MTU shut downs occurred in May.

#### 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 30 May 2014, over 64 million gallons of water have been treated and re-injected. No Northern MTU shut downs occurred in May.

### 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 30 May 2014, over 721 million gallons of water have been treated and re-injected. The following J-3 system shut downs and re-starts occurred in May:

- Shut down on 15 May 2014 at 1800 due to a system alarm and was restarted on 16 May 2014 at 0935; and
- Shut down on 22 May 2014 at 1831 due to a power interruption and was restarted on 23 May 2014 at 0846.

### 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 30 May 2014, over 502 million gallons of water have been treated and re-injected. No Northern Treatment Building shut downs occurred in May.

The Northern MTU F continue to operate at a flow rate of 100 gpm; MTU E is currently off-line (see below). As of 30 May 2014, over 898 million gallons of water have been treated and re-injected. The following Northern MTU shut downs and system re-starts occurred in May:

- MTU E shut down on 8 May 2014 at 0914 due to a system alarm and was restarted on 8 May 2014 at 1152;
- MTU F shut down on 8 May 2014 at 0902 due to a system alarm and was restarted on 8 May 2014 at 1149;
- MTU E shut down on 18 May 2014 at 0605 due to a power interruption and was restarted on 19 May 2014 at 0935;
- MTU F shut down on 18 May 2014 at 0553 due to a power interruption and was restarted on 19 May 2014 at 0932;
- MTU E shut down on 24 May 2014 at 0605 due to a pump fault and was restarted on 27 May 2014 at 1132;
- MTU E shut down on 27 May 2014 at 2344 due to a pump failure. MTU E (Extraction well EW-001) will remain off for approximately three weeks waiting for pump and motor replacements; and
- MTU F shut down on 30 May 2014 at 1917 due to a power interruption and was restarted on 2 June 2014 at 1424.

#### 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 30 May 2014, over 584 million gallons of water have been treated and re-injected. The following shut downs and system re-starts of MTUs H and I occurred in May:

- MTUs H and I were shut down on 1 May 2014 at 2208 due to a power outage and were restarted on 2 May 2014 at 1134.

MTU J continues to operate at a flow rate of 120 gpm. As of 30 May 2014, over 273 million gallons of water have been treated and re-injected. The following shut downs and system re-starts of MTU J occurred in May:

- MTU J was shut down on 22 May 2014 at 1528 due to a power interruption and was restarted on 23 May 2014 at 0958.

MTU K continues to operate at a flow rate of 125 gpm. As of 30 May 2014, over 336 million gallons of water have been treated and re-injected. The following shut downs and system re-starts of MTU K occurred in May:

- MTU K was shut down on 22 May 2014 at 1527 due to a power interruption and was restarted on 23 May 2014 at 1057.

### 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 30 May 2014, over 92 million gallons of water have been treated and re-injected. No CIA treatment facility shutdowns occurred in May.

### **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, CIA, J-1 Range Northern, J-1 Range Southern, J-2 Range Northern, J-2 Range Eastern, J-3 Range and Former A Range.

Surface water samples were collected from J-3 Range.

Continued well development at J-2 Range Northern (MW-634) and J-2 Range Eastern (MW-627).

Semi-annual hydraulic event was conducted at J-1 Range Northern.

Continued collecting Metal Mapper data and intrusive investigation of polygons in the 8-Acre and 16-Acre areas at the CIA.

Conducted site/access road preparation for well CIA-14.

Continued site restoration at Former A Range.

**JBCC IAGWSP Tech Update Meeting Minutes 15 May 2014****Construction Update**

An update was provided on CIA treatment system. The system has been operating as designed since start-up with no down time. Restoration activities were performed on the access road leading to the northern infiltration gallery and a vacuum break was installed. USACE produced a figure with initial capture zone analysis which will be distributed to the agencies. An update was provided on the J-1 Range construction project. USACE explained that the contract for the trench for the new reinjection gallery was awarded. Construction is expected to start within three weeks. The treatment system is operating as designed.

**Project and Fieldwork Update**

Former A Range and fieldwork is underway. The topsoil and erosion control barriers are in place. A site visit was scheduled for 2:00 p.m.

An update was provided on the Monument Beach Sportsman's Club. It was explained that IAGWSP staff and JBCC officials met with the MBSC to request that they extend their current cease-fire schedule for at least one month. The MBSC has installed additional baffle berms on the long rifle range. The Guard will survey the berms and send the measurements to Picatinny so that they can determine if the berms will change the safety distance zones for the range. It was noted that there are several on-going and long-term activities that are affected by the SDZ; access to CIA-14 and the treatment plant, the Former A Range restoration work and routine sampling of monitoring wells in the area. IAGWSP will provide an update once information is received from Picatinny.

An update was provided on Central Impact Area fieldwork. The comprehensive map that shows where each UXO team is working in the CIA was reviewed. It was noted that the map was updated daily. IAGWSP presented a conceptual layout for Phase II removal areas and explained that they would be proposing some changes to where the next twenty-eight acres of fieldwork will be. This will include focusing on areas with higher density in order to remove UXO rather than demonstrating "drop-off" and squaring off some areas so that complete grids are being cleared. IAGWSP will make a presentation and provide the rationale for selection. In addition, IAGWSP will prepare a project note to begin vegetation removal in the first part of the Phase II area (approximately 10-acres) so that Metal Mapper can move to that area after it finishes its Phase I work. USACE noted that they had purchased a skid steer Metal Mapper for the project

which has proven better from a safety and production perspective. EPA requested a site visit for personnel from headquarters sometime in early June.

**Drilling Update**

IAGWSP reviewed drilling progress and explained that drilling is scheduled to begin on location CIA-14 the first week in June. If there are no surprises with the results, the modeling and the location for the extraction well will be reviewed and a determination if the location needs to be adjusted will be made.

Recently obtained monitoring well results from J-2 Range Northern plume were discussed. It was noted that a post optimization hydraulic analysis was being compared to the most recent drilling data to determine travel times and a location upgradient of J2N-9 may be proposed. It was explained that while contamination would be captured by the current system in the timeframe outlined in the Decision Document, it may not be captured by the closest extraction well, i.e. contamination would migrate from EW-1 and be captured by EW-2. EPA noted that scenario was not acceptable and that the DD indicates that contamination must be captured by the nearest extraction well. They requested that IAGWSP

determine what steps could be taken to achieve that goal, including adding additional treatment system infrastructure to the system if necessary.

### **Demo 1**

An update was provided on steps taken to access property in Pocasset. The site was surveyed and a second site visit was completed to determine locations for treatment system infrastructure. The USACE appraiser will be meeting with the property owner next week to see what additional information about the property he may have. USACE Real Estate is working on easement language. IAGWSP will provide an update of progress at the next tech meeting.

### **Small Arms Ranges Decision Document Status**

The Small Arms Ranges DD was discussed. It was explained that the document had gone through a few rounds of edits and a final draft was submitted to MassDEP today. MassDEP noted that a determination on a way forward would need to be made on the GA/GB Range in order to finalize the DD. IAGWSP has submitted a project note with a proposed restriction on the area downgradient of the Range. MassDEP will review the project note and the DD and provide comments and see if it is sufficient to finalize the DD or if it is more prudent to remove GA/GB from the SAR DD and move it to the Training Areas DD.

### **Action Items**

The action items were discussed and updated.

### **Monitoring Presentation – Demo 1**

A presentation was provided on the Demo 1 environmental and system performance monitoring report. The report covers from April through December 2013. It was noted that during this reporting period, two new monitoring well clusters were installed off-base and extraction well EW-503 was shut down. It was explained that the plume is broken into four Zones for reporting purposes: Zone 1 consists of the source area to Pew Road, Zone 2 is from Frank Perkins Road to Pew Road, Zone 3 represents from Pew Road to the Base Boundary and Zone 4 is off-base. Treatment system performance summaries for the Pew Road, Frank Perkins Road and Base Boundary extraction treatment and reinjection systems were reviewed.

Groundwater monitoring results and trends were discussed. It was explained that during the reporting period, two synoptic water level rounds were collected. Hydraulic monitoring observations are consistent with past reporting periods. In addition, a capture zone analysis was performed and the existing systems appear to be adequately capturing the plumes. Several recommendations are proposed in the report. They include shutting down extraction well EW-1 as it has been non-detect since 2011, below 2 ppb since 2010 and there is no longer a plume between this well and EW-502. Recommendations for adjustments to the sampling program were presented. EPA and MassDEP will provide feedback on the proposed changes in their comments on the report.

### **Monitoring Presentation – L Range**

A presentation was provided on the L Range annual monitoring report. The report covers from July 2013 through January 2014. Groundwater sampling results were reviewed and it was noted that there were no perchlorate detections above 2 ppb and there were two detections of RDX above 0.6 ppb. IAGWSP made several recommendations for changes to the sampling program. EPA provided feedback on the report and added additional recommendations for optimization of the sampling program. IAGWSP concurred with EPA comments and will revise the report accordingly. MassDEP will check the status of their comments on the report and submit them.

## **JBCC IAGWSP Tech Update Meeting Minutes 29 May 2014**

### **Construction Update**

An update was provided on the CIA treatment system. Construction is done. Restoration activities were completed on the access road leading to the northern infiltration gallery. A six-month start-up report will be submitted to the agencies in late-July.

An update was provided on the J-1 Range construction project. The construction for the trench for the new reinjection gallery will start mid-June and take approximately two weeks.

### **Project and Fieldwork Update**

An update was provided on Central Impact Area fieldwork. A figure depicting clearance work to date was shown. IAGWSP outlined where crews are currently working and the next steps.

In addition, IAGWSP submitted a project note for vegetation removal in the first part of the Phase II area (approximately 10-acres) so that Metal Mapper can move to that area after it finishes its Phase I work. USACE stated they would like to be able to send crews to the area in June to conduct the work, when schedules permit.

### **Drilling Update**

IAGWSP reviewed drilling progress and explained that drilling is scheduled to begin on location CIA-14 next week.

### **Demo 1**

An update was provided on steps taken to access property in Pocasset. The USACE appraiser met with the town planner on 5/21. Mr. Mendes did not attend that meeting. USACE noted that the appraisal process can still continue since contact has been attempted with Mr. Mendes. EPA expressed concern about the process stalling down the line when Mr. Mendes' approval on documents is required for the final actions to be implemented. EPA is considering what recourse it has for next steps. IAGWSP will provide an update of progress at the next tech meeting.

IAGWSP showed a figure of two potential downgradient monitoring well locations for the Demo 1 off-base plume. EPA will consider the options.

### **Small Arms Ranges Decision Document Status**

The Small Arms Ranges DD was discussed. MassDEP needs to review the GA/GB site reconnaissance project note and the DD and provide comments and see if it is sufficient to finalize the DD or if it is more prudent to remove GA/GB from the SAR DD and move it to the Training Areas DD.

### **Action Items**

The action items were discussed and updated.

## **JBCC Cleanup Team Meeting**

The JBCC Cleanup Team (JBCCCT), formerly the MMR Cleanup Team (MMRCT) met on May 14, 2014. The Cleanup Team meeting discusses late breaking news and responses to action items, as well as updates from the IAGWSP and IRP. The JBCCCT meetings provide a forum for community input regarding issues related to both the IRP and the IAGWSP.

**SUMMARY OF DATA RECEIVED**

Table 2 summarizes the validated detections of explosives compounds and perchlorate for all groundwater results received from 1 May through 31 May 2014. 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. 205 for April 2014 5/10/2014
- Draft Demolition Area 1 2014 Environmental and System Performance Monitoring Report Response Action Groundwater Treatment Systems 5/01/2014
- Project Note - Sampling, Soil Removal, and Monitoring at Small Arms Ranges 5/12/2014
- Draft Small Arms Ranges 2014 Annual Interim Environmental Monitoring Report 5/30/2014

**3. SCHEDULED ACTIONS**

The following documents are being prepared or revised during June 2014:

- CIA Project Note for ESTCP Metal Mapper Results;
- CIA AFRL Completion of Work Report;
- CIA 2013 Source Report;
- CIA Phase II Area 1 Vegetation Removal Project Note;
- J-2 Range Project Note for Additional Wells to evaluate source response;
- J-3 Range Draft RI/FS;
- Small Arms Ranges Decision Document;
- Small Arms Ranges Post-Decision Document Field Work Project Note;
- Training Areas U, KD and IBC Ranges Field Work Project Note;
- J-1 Southern 6-month System Start-up Report;
- L Range 2014 Environmental Monitoring Report;
- Demolition Area 1 2014 Environmental and System Performance Monitoring Report Response Action Groundwater Treatment Systems;
- Small Arms Range 2014 Annual Interim Environmental Monitoring Report; and
- J-1 Range Northern and J-1 Range Southern 2014 Annual Interim Environmental Monitoring Report.



**TABLE 1**  
**Sampling Progress: 1 May - 31 May 2014**

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
J1 Range Southern	MW-403M2	MW-403M2_S14	N	05/30/2014	Ground Water	127.3	137.4
J1 Range Southern	MW-403M1	MW-403M1_S14	N	05/30/2014	Ground Water	159.9	169.9
J1 Range Southern	MW-400M2	MW-400M2_S14	N	05/30/2014	Ground Water	138.9	148.9
J1 Range Southern	MW-400M1	MW-400M1_S14	N	05/30/2014	Ground Water	192.8	202.8
J1 Range Southern	MW-402M2	MW-402M2_S14	N	05/30/2014	Ground Water	155.2	165.3
J1 Range Southern	MW-402M1	MW-402M1_S14	N	05/30/2014	Ground Water	190.1	200.1
Former A Range	MW-206S	MW-206S_S14	N	05/29/2014	Ground Water	156	166
Central Impact Area	MW-633M2	MW-633M2_R1	N	05/29/2014	Ground Water	197	207
Central Impact Area	MW-633M1	MW-633M1_R1	N	05/29/2014	Ground Water	282	292
J3 Range	LKSNK0006	LKSNK0006_M14	N	05/29/2014	SURFACE WATER	0	1
J3 Range	LKSNK0007	LKSNK0007_M14	N	05/29/2014	SURFACE WATER	0	4
J3 Range	LKSNK0005	LKSNK0005_M14	N	05/29/2014	SURFACE WATER	0	4
Former A Range	MW-536S	MW-536S_S14	N	05/28/2014	Ground Water	158	168
J2 Range Eastern	MW-627M1	MW-627M1_R1	N	05/28/2014	Ground Water	269	279
J3 Range	MW-636M2	MW-636M2_R1	N	05/28/2014	Ground Water	109.5	119.5
J3 Range	MW-636M1	MW-636M1_R1	N	05/28/2014	Ground Water	140.6	150.6
Central Impact Area	MW-629M2	MW-629M2_R1	N	05/27/2014	Ground Water	185.8	195.8
Central Impact Area	MW-629M2	MW-629M2_R1D	FD	05/27/2014	Ground Water	185.8	195.8
Central Impact Area	MW-629M1	MW-629M1_R1	N	05/27/2014	Ground Water	215.8	225.8
Central Impact Area	MW-629M1	MW-629M1_R1D	FD	05/27/2014	Ground Water	215.8	225.8
Central Impact Area	MW-638M2	MW-638M2_R1	N	05/27/2014	Ground Water	203.7	213.7
Central Impact Area	MW-638M1	MW-638M1_R1	N	05/27/2014	Ground Water	260.7	270.7
J1 Range Northern	MW-605M2	MW-605M2_R3	N	05/27/2014	Ground Water	182.2	192.2
J1 Range Northern	MW-605M1	MW-605M1_R3	N	05/27/2014	Ground Water	220.2	230.2
J2 Range Northern	MW-631M2	MW-631M2_R1	N	05/23/2014	Ground Water	199	209
J2 Range Northern	MW-631M1	MW-631M1_R1	N	05/23/2014	Ground Water	232	242
J2 Range Northern	MW-622M2	MW-622M2_R1	N	05/23/2014	Ground Water	219.9	229.9
J2 Range Northern	MW-622M1	MW-622M1_R1	N	05/23/2014	Ground Water	244.9	254.9
J2 Range Northern	MW-630M1	MW-630M1_R1	N	05/22/2014	Ground Water	216.3	226.3
J2 Range Northern	MW-634M3	MW-634M3_R1	N	05/22/2014	Ground Water	170.2	180.2
J2 Range Northern	MW-634M2	MW-634M2_R1	N	05/22/2014	Ground Water	200.2	210.2
J2 Range Northern	MW-634M2	MW-634M2_R1D	FD	05/22/2014	Ground Water	200.2	210.2
J2 Range Northern	MW-634M1	MW-634M1_R1	N	05/22/2014	Ground Water	305.2	315.2
J2 Range Northern	MW-632M2	MW-632M2_R1	N	05/21/2014	Ground Water	228.3	238.3
J2 Range Northern	MW-632M1	MW-632M1_R1	N	05/21/2014	Ground Water	253.3	263.3
J1 Range Northern	MW-606M2	MW-606M2_R3	N	05/20/2014	Ground Water	193.2	203.2
J1 Range Northern	MW-606M1	MW-606M1_R3	N	05/20/2014	Ground Water	233.2	243.2
J1 Range Northern	MW-590M2	MW-590M2_S14	N	05/20/2014	Ground Water	238	248
J1 Range Northern	MW-590M1	MW-590M1_S14	N	05/20/2014	Ground Water	258	268
J1 Range Northern	MW-303M3	MW-303M3_S14	N	05/20/2014	Ground Water	139.7	149.7
J1 Range Northern	MW-303M2	MW-303M2_S14	N	05/20/2014	Ground Water	235.1	245.1
J1 Range Northern	MW-245M2	MW-245M2_S14	N	05/20/2014	Ground Water	204	214
J1 Range Northern	MW-245M2	MW-245M2_S14D	FD	05/20/2014	Ground Water	204	214
J1 Range Northern	MW-584M2	MW-584M2_S14	N	05/19/2014	Ground Water	228	238
J1 Range Northern	MW-584M1	MW-584M1_S14	N	05/19/2014	Ground Water	248	258
J1 Range Northern	MW-566M1	MW-566M1_S14	N	05/19/2014	Ground Water	232	242
J1 Range Northern	MW-549M2	MW-549M2_S14	N	05/19/2014	Ground Water	187.3	197.3
J1 Range Northern	MW-549M1	MW-549M1_S14	N	05/19/2014	Ground Water	227.4	237.4
J1 Range Northern	MW-564M1	MW-564M1_S14	N	05/19/2014	Ground Water	227	237
J1 Range Northern	MW-564M1	MW-564M1_S14D	FD	05/19/2014	Ground Water	227	237
J1 Range Northern	MW-370M2	MW-370M2_S14	N	05/19/2014	Ground Water	215.5	225.5
J1 Range Northern	MW-567M1	MW-567M1_S14	N	05/19/2014	Ground Water	215.5	225.5
J1 Range Northern	MW-540M1	MW-540M1_S14	N	05/15/2014	Ground Water	258	268
J1 Range Northern	MW-401M3	MW-401M3_S14	N	05/15/2014	Ground Water	228.5	238.5
J1 Range Northern	MW-401M1	MW-401M1_S14	N	05/15/2014	Ground Water	256.1	266.1
J1 Range Northern	MW-430M2	MW-430M2_S14	N	05/15/2014	Ground Water	188.4	198.4
J1 Range Northern	MW-430M1	MW-430M1_S14	N	05/15/2014	Ground Water	245.2	255.2
J1 Range Northern	J1N-INF1B	J1N-INF1B_S14	N	05/15/2014	Process Water	0	0
J1 Range Northern	J1N-INF1A	J1N-INF1A_S14	N	05/15/2014	Process Water	0	0
J1 Range Northern	MW-541M1	MW-541M1_S14	N	05/15/2014	Ground Water	210	220
J3 Range	MW-576M3	MW-576M3_R1	N	05/14/2014	Ground Water	99.4	109.4
J3 Range	MW-576M2	MW-576M2_R1	N	05/14/2014	Ground Water	134.4	144.4
J3 Range	MW-576M1	MW-576M1_R1	N	05/14/2014	Ground Water	174.4	184.4
J3 Range	MW-637M3	MW-637M3_R1	N	05/14/2014	Ground Water	173.8	183.8
J3 Range	MW-637M2	MW-637M2_R1	N	05/12/2014	Ground Water	213.8	223.8
J3 Range	MW-637M1	MW-637M1_R1	N	05/12/2014	Ground Water	235.8	245.8
Demolition Area 1	MW-341M4	MW-341M4_S14	N	05/12/2014	Ground Water	181.5	186.5
Demolition Area 1	MW-341M3	MW-341M3_S14	N	05/12/2014	Ground Water	209.5	219.5
Demolition Area 1	MW-341M2	MW-341M2_S14	N	05/12/2014	Ground Water	264.5	269.5
Central Impact Area	MW-623M2	MW-623M2_R1	N	05/08/2014	Ground Water	291.8	301.8

N = Normal Sample  
FD = Field Duplicate

**TABLE 1**  
**Sampling Progress: 1 May - 31 May 2014**

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
J2 Range Northern	MW-635M1	MW-635M1_R1	N	05/08/2014	Ground Water	264.6	274.6
J2 Range Northern	MW-621M2	MW-621M2_R1	N	05/08/2014	Ground Water	218.8	228.8
Former A Range	MW-149S	MW-149S_S14	N	05/07/2014	Ground Water	106	116
Demolition Area 1	FPR-2-EFF	FPR-2-EFF-98A	N	05/07/2014	Process Water	0	0
Demolition Area 1	FPR-2-GAC-MID3B	FPR-2-GAC-MID3B-98A	N	05/07/2014	Process Water	0	0
Demolition Area 1	FPR-2-GAC-MID2A	FPR-2-GAC-MID2A-98A	N	05/07/2014	Process Water	0	0
Demolition Area 1	FPR2-POST-IX-B	FPR2-POST-IX-B-98A	N	05/07/2014	Process Water	0	0
Demolition Area 1	FPR2-POST-IX-A	FPR2-POST-IX-A-98A	N	05/07/2014	Process Water	0	0
Demolition Area 1	FPR-2-INF	FPR-2-INF-98A	N	05/07/2014	Process Water	0	0
Demolition Area 1	PR-EFF	PR-EFF-98A	N	05/07/2014	Process Water	0	0
Demolition Area 1	PR-MID-2	PR-MID-2-98A	N	05/07/2014	Process Water	0	0
Demolition Area 1	PR-MID-1	PR-MID-1-98A	N	05/07/2014	Process Water	0	0
Demolition Area 1	PR-INF	PR-INF-98A	N	05/07/2014	Process Water	0	0
Demolition Area 1	D1-EFF	D1-EFF-46A	N	05/07/2014	Process Water	0	0
Demolition Area 1	D1-MID-2	D1-MID-2-46A	N	05/07/2014	Process Water	0	0
Demolition Area 1	D1-MID-1	D1-MID-1-46A	N	05/07/2014	Process Water	0	0
Demolition Area 1	D1-INF	D1-INF-46A	N	05/07/2014	Process Water	0	0
Demolition Area 1	MW-432	MW-432_S14	N	05/06/2014	Ground Water	88	188
Central Impact Area	CIA2-EFF	CIA2-EFF-04A	N	05/06/2014	Process Water	0	0
Central Impact Area	CIA2-MID2	CIA2-MID2-04A	N	05/06/2014	Process Water	0	0
Central Impact Area	CIA2-MID1	CIA2-MID1-04A	N	05/06/2014	Process Water	0	0
Central Impact Area	CIA2-INF	CIA2-INF-04A	N	05/06/2014	Process Water	0	0
Demolition Area 1	MW-431	MW-431_S14	N	05/06/2014	Ground Water	88	188
Demolition Area 1	MW-431	MW-431_S14D	FD	05/06/2014	Ground Water	88	188
Demolition Area 1	MW-274	MW-274_S14	N	05/06/2014	Ground Water	109	199
Central Impact Area	CIA1-EFF	CIA1-EFF-04A	N	05/06/2014	Process Water	0	0
Central Impact Area	CIA1-MID2	CIA1-MID2-04A	N	05/06/2014	Process Water	0	0
Central Impact Area	CIA1-MID1	CIA1-MID1-04A	N	05/06/2014	Process Water	0	0
Central Impact Area	CIA1-INF	CIA1-INF-04A	N	05/06/2014	Process Water	0	0
Demolition Area 1	MW-210M3	MW-210M3_S14	N	05/06/2014	Ground Water	121	131
Demolition Area 1	MW-210M2	MW-210M2_S14	N	05/06/2014	Ground Water	156	166
J2 Range Eastern	J2E-EFF-IH	J2E-EFF-IH-68A	N	05/06/2014	Process Water	0	0
J2 Range Eastern	J2E-MID-2H	J2E-MID-2H-68A	N	05/06/2014	Process Water	0	0
J2 Range Eastern	J2E-MID-1H	J2E-MID-1H-68A	N	05/06/2014	Process Water	0	0
J2 Range Eastern	J2E-MID-2I	J2E-MID-2I-68A	N	05/06/2014	Process Water	0	0
J2 Range Eastern	J2E-MID-1I	J2E-MID-1I-68A	N	05/06/2014	Process Water	0	0
J2 Range Eastern	J2E-INF-I	J2E-INF-I-68A	N	05/06/2014	Process Water	0	0
Demolition Area 1	MW-210M1	MW-210M1_S14	N	05/06/2014	Ground Water	201	211
J2 Range Eastern	J2E-EFF-K	J2E-EFF-K-68A	N	05/06/2014	Process Water	0	0
J2 Range Eastern	J2E-MID-2K	J2E-MID-2K-68A	N	05/06/2014	Process Water	0	0
J2 Range Eastern	J2E-MID-1K	J2E-MID-1K-68A	N	05/06/2014	Process Water	0	0
J2 Range Eastern	J2E-INF-K	J2E-INF-K-68A	N	05/06/2014	Process Water	0	0
J2 Range Eastern	J2E-EFF-J	J2E-EFF-J-68A	N	05/06/2014	Process Water	0	0
J2 Range Eastern	J2E-MID-2J	J2E-MID-2J-68A	N	05/06/2014	Process Water	0	0
J2 Range Eastern	J2E-MID-1J	J2E-MID-1J-68A	N	05/06/2014	Process Water	0	0
J2 Range Eastern	J2E-INF-J	J2E-INF-J-68A	N	05/06/2014	Process Water	0	0
Demolition Area 1	MW-433	MW-433_S14	N	05/06/2014	Ground Water	180	190
Demolition Area 1	MW-352M2	MW-352M2_S14	N	05/05/2014	Ground Water	65	75
J3 Range	J3-EFF	J3-EFF-92A	N	05/05/2014	Process Water	0	0
J3 Range	J3-MID-2	J3-MID-2-92A	N	05/05/2014	Process Water	0	0
J3 Range	J3-MID-1	J3-MID-1-92A	N	05/05/2014	Process Water	0	0
Demolition Area 1	MW-352M1	MW-352M1_S14	N	05/05/2014	Ground Water	115	125
J3 Range	J3-INF	J3-INF-92A	N	05/05/2014	Process Water	0	0
J1 Range Southern	J1S-EFF	J1S-EFF-78A	N	05/05/2014	Process Water	0	0
J1 Range Southern	J1S-MID-2	J1S-MID-2-78A	N	05/05/2014	Process Water	0	0
J1 Range Southern	J1S-INF-2	J1S-INF-2-78A	N	05/05/2014	Process Water	0	0
Demolition Area 1	MW-353M2	MW-353M2_S14	N	05/05/2014	Ground Water	57	67
Demolition Area 1	MW-353M1	MW-353M1_S14	N	05/05/2014	Ground Water	107	117
J2 Range Northern	J2N-EFF-G	J2N-EFF-G-92A	N	05/05/2014	Process Water	0	0
J2 Range Northern	J2N-MID-2G	J2N-MID-2G-92A	N	05/05/2014	Process Water	0	0
J2 Range Northern	J2N-MID-1G	J2N-MID-1G-92A	N	05/05/2014	Process Water	0	0
Demolition Area 1	XX9514	XX9514_S14	N	05/05/2014	Ground Water	102	112
Demolition Area 1	XX9514	XX9514_S14D	FD	05/05/2014	Ground Water	102	112
J2 Range Northern	J2N-INF-G	J2N-INF-G-92A	N	05/05/2014	Process Water	0	0
J2 Range Northern	J2N-EFF-EF	J2N-EFF-EF-92A	N	05/05/2014	Process Water	0	0
J2 Range Northern	J2N-MID-2F	J2N-MID-2F-92A	N	05/05/2014	Process Water	0	0
J2 Range Northern	J2N-MID-1F	J2N-MID-1F-92A	N	05/05/2014	Process Water	0	0
J2 Range Northern	J2N-INF-EF	J2N-INF-EF-92A	N	05/05/2014	Process Water	0	0
J2 Range Northern	J2N-MID-2E	J2N-MID-2E-92A	N	05/05/2014	Process Water	0	0
J2 Range Northern	J2N-MID-1E	J2N-MID-1E-92A	N	05/05/2014	Process Water	0	0

**TABLE 1**  
**Sampling Progress: 1 May - 31 May 2014**

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
J1 Range Northern	J1N-EFF	J1N-EFF-07A	N	05/05/2014	Process Water	0	0
J1 Range Northern	J1N-MID2	J1N-MID2-07A	N	05/05/2014	Process Water	0	0
J1 Range Northern	J1N-MID1	J1N-MID1-07A	N	05/05/2014	Process Water	0	0
J1 Range Northern	J1N-INF2	J1N-INF2-07A	N	05/05/2014	Process Water	0	0
Central Impact Area	MW-628M2	MW-628M2_R1	N	05/02/2014	Ground Water	119.7	129.7
Central Impact Area	MW-628M1	MW-628M1_R1	N	05/02/2014	Ground Water	229.7	239.7
Central Impact Area	MW-625M2	MW-625M2_R1	N	05/02/2014	Ground Water	230	240
Central Impact Area	MW-625M1	MW-625M1_R1	N	05/02/2014	Ground Water	260	270
J2 Range Northern	MW-621M1	MW-621M1_R1	N	05/01/2014	Ground Water	248.8	258.8
Demolition Area 1	MW-76S	MW-76S_S14	N	04/30/2014	Ground Water	85	95
Demolition Area 1	MW-76M2	MW-76M2_S14	N	04/30/2014	Ground Water	105	115
Demolition Area 1	MW-76M1	MW-76M1_S14	N	04/30/2014	Ground Water	125	135
Demolition Area 1	MW-76M1	MW-76M1_S14D	FD	04/30/2014	Ground Water	125	135
Demolition Area 1	MW-77S	MW-77S_S14	N	04/30/2014	Ground Water	83	93
Demolition Area 1	MW-77M2	MW-77M2_S14	N	04/30/2014	Ground Water	120	130
Demolition Area 1	MW-77M2	MW-77M2_S14D	FD	04/30/2014	Ground Water	120	130
Demolition Area 1	MW-77M1	MW-77M1_S14	N	04/30/2014	Ground Water	180	190

**TABLE 2**  
**VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS**  
 Data Received May 2014

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-78M2	MW-78M2_S14	115	125	04/29/2014	SW6860	Perchlorate	0.30		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-78M1	MW-78M1_S14	135	145	04/29/2014	SW6860	Perchlorate	0.041	J	UG/L	2.0		0.011	0.050
Demolition Area 1	MW-75M2	MW-75M2_S14	115	125	04/29/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.078	J	UG/L	0.60		0.026	0.20
Demolition Area 1	MW-75M2	MW-75M2_S14	115	125	04/29/2014	SW6860	Perchlorate	0.19		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-75M1	MW-75M1_S14	140	150	04/29/2014	SW6860	Perchlorate	0.054		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-31S	MW-31S_S14	98	103	04/29/2014	SW6860	Perchlorate	0.11		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-31S	MW-31S_S14	98	103	04/29/2014	SW8330	2,4-Dinitrotoluene	0.15	J	UG/L	5.0		0.026	0.20
Demolition Area 1	MW-31S	MW-31S_S14	98	103	04/29/2014	SW8330	4-Amino-2,6-Dinitrotoluene	0.47		UG/L	7.3		0.017	0.20
Demolition Area 1	MW-31S	MW-31S_S14	98	103	04/29/2014	SW8330	2-Amino-4,6-dinitrotoluene	0.60		UG/L	7.3		0.016	0.20
Demolition Area 1	MW-31S	MW-31S_S14	98	103	04/29/2014	SW8330	2,4,6-Trinitrotoluene	1.2		UG/L	2.0		0.029	0.20
Demolition Area 1	MW-31S	MW-31S_S14	98	103	04/29/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	2.2		UG/L	400		0.023	0.20
Demolition Area 1	MW-31S	MW-31S_S14	98	103	04/29/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	3.9		UG/L	0.60	X	0.026	0.20
Demolition Area 1	MW-31S	MW-31S_S14D	98	103	04/29/2014	SW8330	2,4-Dinitrotoluene	0.14	J	UG/L	5.0		0.026	0.20
Demolition Area 1	MW-31S	MW-31S_S14D	98	103	04/29/2014	SW8330	4-Amino-2,6-Dinitrotoluene	0.44		UG/L	7.3		0.017	0.20
Demolition Area 1	MW-31S	MW-31S_S14D	98	103	04/29/2014	SW8330	2-Amino-4,6-dinitrotoluene	0.57		UG/L	7.3		0.016	0.20
Demolition Area 1	MW-31S	MW-31S_S14D	98	103	04/29/2014	SW8330	2,4,6-Trinitrotoluene	1.1		UG/L	2.0		0.029	0.20
Demolition Area 1	MW-31S	MW-31S_S14D	98	103	04/29/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	2.2		UG/L	400		0.023	0.20
Demolition Area 1	MW-31S	MW-31S_S14D	98	103	04/29/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	3.9		UG/L	0.60	X	0.026	0.20
Demolition Area 1	MW-31M	MW-31M_S14	113	123	04/29/2014	SW6860	Perchlorate	0.10		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-31M	MW-31M_S14	113	123	04/29/2014	SW8330	4-Amino-2,6-Dinitrotoluene	0.18	J	UG/L	7.3		0.017	0.20
Demolition Area 1	MW-31M	MW-31M_S14	113	123	04/29/2014	SW8330	2-Amino-4,6-dinitrotoluene	0.35		UG/L	7.3		0.016	0.20
Demolition Area 1	MW-31M	MW-31M_S14	113	123	04/29/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	1.5		UG/L	400		0.023	0.20
Demolition Area 1	MW-31M	MW-31M_S14	113	123	04/29/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	1.7		UG/L	0.60	X	0.026	0.20
Demolition Area 1	MW-73S	MW-73S_S14	52.2	61.7	04/29/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	0.14	J	UG/L	400		0.023	0.20
Demolition Area 1	MW-73S	MW-73S_S14	52.2	61.7	04/29/2014	SW6860	Perchlorate	0.29		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-73S	MW-73S_S14	52.2	61.7	04/29/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.53		UG/L	0.60		0.026	0.20
Demolition Area 1	MW-19S	MW-19S_S14	52.7	62.7	04/28/2014	SW8330	2-Amino-4,6-dinitrotoluene	0.14	J	UG/L	7.3		0.016	0.20
Demolition Area 1	MW-19S	MW-19S_S14	52.7	62.7	04/28/2014	SW8330	4-Amino-2,6-Dinitrotoluene	0.21		UG/L	7.3		0.017	0.20
Demolition Area 1	MW-19S	MW-19S_S14	52.7	62.7	04/28/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	1.1		UG/L	400		0.023	0.20
Demolition Area 1	MW-19S	MW-19S_S14	52.7	62.7	04/28/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	4.0		UG/L	0.60	X	0.026	0.20
Demolition Area 1	MW-19S	MW-19S_S14D	52.7	62.7	04/28/2014	SW8330	2-Amino-4,6-dinitrotoluene	0.13	J	UG/L	7.3		0.016	0.20
Demolition Area 1	MW-19S	MW-19S_S14D	52.7	62.7	04/28/2014	SW8330	4-Amino-2,6-Dinitrotoluene	0.20		UG/L	7.3		0.017	0.20
Demolition Area 1	MW-19S	MW-19S_S14D	52.7	62.7	04/28/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	1.1		UG/L	400		0.023	0.20
Demolition Area 1	MW-19S	MW-19S_S14D	52.7	62.7	04/28/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	4.0		UG/L	0.60	X	0.026	0.20
Demolition Area 1	MW-172M2	MW-172M2_S14	169	179	04/28/2014	SW6860	Perchlorate	0.052		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-165M2	MW-165M2_S14	124.5	134.5	04/28/2014	SW6860	Perchlorate	0.12		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-165M1	MW-165M1_S14	184.5	194.5	04/28/2014	SW6860	Perchlorate	0.042	J	UG/L	2.0		0.011	0.050
Demolition Area 1	MW-139M2	MW-139M2_S14	154	164	04/28/2014	SW6860	Perchlorate	0.14		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-139M1	MW-139M1_S14	194	204	04/28/2014	SW6860	Perchlorate	0.046	J	UG/L	2.0		0.011	0.050
Demolition Area 1	MW-255M2	MW-255M2_S14	170	180	04/28/2014	SW6860	Perchlorate	0.19		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-611M2	MW-611M2_APR14A	91	101	04/15/2014	SW6850	Perchlorate	0.46		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-611M1	MW-611M1_APR14A	141	151	04/15/2014	SW6850	Perchlorate	0.70		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-571M2	MW-571M2_APR14A	74	84	04/14/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.085	J	UG/L	0.60		0.026	0.20
Demolition Area 1	MW-571M2	MW-571M2_APR14A	74	84	04/14/2014	SW6850	Perchlorate	3.1		UG/L	2.0	X	0.019	0.20
Demolition Area 1	MW-610M2	MW-610M2_APR14A	85	95	04/14/2014	SW6850	Perchlorate	1.5		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-610M1	MW-610M1_APR14A	110	120	04/14/2014	SW6850	Perchlorate	1.1		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 May 2014**

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-597M2	MW-597M2_APR14A	118	128	04/11/2014	SW6850	Perchlorate	0.077	J	UG/L	2.0		0.019	0.20
Demolition Area 1	MW-597M1	MW-597M1_APR14A	148	158	04/11/2014	SW6850	Perchlorate	0.13	J	UG/L	2.0		0.019	0.20
Demolition Area 1	MW-598M2	MW-598M2_APR14A	88	98	04/10/2014	SW6850	Perchlorate	2.7		UG/L	2.0	X	0.019	0.20
Demolition Area 1	MW-598M1	MW-598M1_APR14A	122	132	04/10/2014	SW6850	Perchlorate	1.3		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-571M1	MW-571M1_APR14A	114	124	04/09/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.19	J	UG/L	0.60		0.026	0.20
Demolition Area 1	MW-571M1	MW-571M1_APR14A	114	124	04/09/2014	SW6850	Perchlorate	3.9		UG/L	2.0	X	0.019	0.20
Demolition Area 1	MW-569M2	MW-569M2_APR14A	84	94	04/09/2014	SW6850	Perchlorate	1.7		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-569M1	MW-569M1_APR14A	114	124	04/09/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.21	J	UG/L	0.60		0.026	0.20
Demolition Area 1	MW-569M1	MW-569M1_APR14A	114	124	04/09/2014	SW6850	Perchlorate	5.3		UG/L	2.0	X	0.019	0.20
Demolition Area 1	MW-582M2	MW-582M2_APR14A	84	94	04/07/2014	SW6850	Perchlorate	3.3		UG/L	2.0	X	0.019	0.20
Demolition Area 1	MW-582M1	MW-582M1_APR14A	134	144	04/07/2014	SW6850	Perchlorate	1.6		UG/L	2.0		0.019	0.20
Central Impact Area	MW-617M2	MW-617M2_R1	117.5	127.5	04/07/2014	SW6860	Perchlorate	0.025	J	UG/L	2.0		0.011	0.050
Central Impact Area	MW-617M1	MW-617M1_R1	175	185	04/01/2014	SW6860	Perchlorate	0.036	J	UG/L	2.0		0.011	0.050
Central Impact Area	MW-208M1	MW-208M1_S14	195	205	04/01/2014	SW6860	Perchlorate	0.022	J	UG/L	2.0		0.011	0.050
Central Impact Area	MW-43M2	MW-43M2_S14	200	210	04/01/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.27		UG/L	0.60		0.026	0.20
Central Impact Area	MW-86S	MW-86S_S14	143	153	03/31/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.48		UG/L	0.60		0.026	0.20
Central Impact Area	MW-86M2	MW-86M2_S14	158	168	03/31/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.55		UG/L	0.60		0.026	0.20
Central Impact Area	MW-89M2	MW-89M2_S14	214	224	03/31/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	0.96		UG/L	400		0.023	0.20
Central Impact Area	MW-89M2	MW-89M2_S14	214	224	03/31/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	14.3		UG/L	0.60	X	0.026	0.20
Central Impact Area	MW-89M2	MW-89M2_S14	214	224	03/31/2014	SW6860	Perchlorate	8.0		UG/L	2.0	X	0.11	0.50
Central Impact Area	MW-89M2	MW-89M2_S14D	214	224	03/31/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	0.98		UG/L	400		0.023	0.20
Central Impact Area	MW-89M2	MW-89M2_S14D	214	224	03/31/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	14.8		UG/L	0.60	X	0.026	0.20
Central Impact Area	MW-89M2	MW-89M2_S14D	214	224	03/31/2014	SW6860	Perchlorate	7.9		UG/L	2.0	X	0.11	0.50
Central Impact Area	MW-89M1	MW-89M1_S14	234	244	03/31/2014	SW6860	Perchlorate	0.16		UG/L	2.0		0.011	0.050
Central Impact Area	MW-95M2	MW-95M2_S14	167	177	03/31/2014	SW6860	Perchlorate	0.088		UG/L	2.0		0.011	0.050
Central Impact Area	MW-95M1	MW-95M1_S14	202	212	03/31/2014	SW6860	Perchlorate	0.70		UG/L	2.0		0.011	0.050
Central Impact Area	MW-95M1	MW-95M1_S14	202	212	03/31/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	1.1		UG/L	0.60	X	0.026	0.20
Central Impact Area	MW-616M2	MW-616M2_R1	106.2	116.2	03/27/2014	SW6860	Perchlorate	0.034	J	UG/L	2.0		0.011	0.050
Central Impact Area	MW-616M1	MW-616M1_R1	216.2	226.2	03/27/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.45		UG/L	0.60		0.058	0.44
Central Impact Area	MW-102M2	MW-102M2_S14	237	247	03/14/2014	SW6860	Perchlorate	0.41		UG/L	2.0		0.011	0.050
Central Impact Area	MW-102M2	MW-102M2_S14	237	247	03/14/2014	SW8330	3-Nitrotoluene	0.60	J	UG/L	120		0.11	0.42
Central Impact Area	MW-108M4	MW-108M4_S14	240	250	03/14/2014	SW6860	Perchlorate	0.31		UG/L	2.0		0.011	0.050
Central Impact Area	MW-108M1	MW-108M1_S14	297	307	03/14/2014	SW6860	Perchlorate	0.28		UG/L	2.0		0.011	0.050
Central Impact Area	MW-178M1	MW-178M1_S14	257	267	03/14/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	1.2	J	UG/L	0.60	X	0.055	0.43
Central Impact Area	MW-123M1	MW-123M1_S14	291	301	03/13/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	3.7	J	UG/L	0.60	X	0.054	0.41
Central Impact Area	MW-123M1	MW-123M1_S14D	291	301	03/13/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	3.7	J	UG/L	0.60	X	0.054	0.41
Central Impact Area	MW-209M2	MW-209M2_S14	220	230	03/13/2014	SW6860	Perchlorate	1.1		UG/L	2.0		0.011	0.050
Central Impact Area	MW-209M1	MW-209M1_S14	240	250	03/13/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	0.45	J	UG/L	400		0.048	0.42
Central Impact Area	MW-209M1	MW-209M1_S14	240	250	03/13/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	3.4	J	UG/L	0.60	X	0.054	0.42
Central Impact Area	MW-209M1	MW-209M1_S14D	240	250	03/13/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	0.54	J	UG/L	400		0.047	0.41
Central Impact Area	MW-209M1	MW-209M1_S14D	240	250	03/13/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	4.1	J	UG/L	0.60	X	0.053	0.41
Central Impact Area	MW-23M1	MW-23M1_S14	225	235	03/12/2014	SW6860	Perchlorate	0.49		UG/L	2.0		0.011	0.050
Central Impact Area	MW-23M1	MW-23M1_S14	225	235	03/12/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	1.3	J	UG/L	0.60	X	0.053	0.41
Central Impact Area	MW-176M1	MW-176M1_S14	270	280	03/12/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	2.5		UG/L	0.60	X	0.055	0.42
Central Impact Area	MW-207M1	MW-207M1_S14	254	264	03/12/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	0.45	J	UG/L	400		0.047	0.41
Central Impact Area	MW-207M1	MW-207M1_S14	254	264	03/12/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	3.6	J	UG/L	0.60	X	0.053	0.41

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

**TABLE 2**  
**VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS**  
 Data Received May 2014

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-223M2	MW-223M2_S14	185	195	03/11/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	1.0	J	UG/L	0.60	X	0.053	0.41
J2 Range Eastern	MW-436M1	MW-436M1_S14	295.5	305.5	03/11/2014	SW6860	Perchlorate	0.075		UG/L	2.0		0.011	0.050
J2 Range Eastern	MW-307M3	MW-307M3_S14	125.8	135.8	03/10/2014	SW6860	Perchlorate	0.41		UG/L	2.0		0.011	0.050
J2 Range Eastern	MW-319M1	MW-319M1_S14	200.3	210.3	03/10/2014	SW6860	Perchlorate	0.23		UG/L	2.0		0.011	0.050
J2 Range Eastern	MW-310M1	MW-310M1_S14	171.4	181.4	03/10/2014	SW6860	Perchlorate	0.16		UG/L	2.0		0.011	0.050
J2 Range Eastern	MW-339M1	MW-339M1_S14	233	243	03/10/2014	SW6860	Perchlorate	1.1		UG/L	2.0		0.011	0.050
J2 Range Eastern	MW-368M2	MW-368M2_S14	202.7	212.7	03/07/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	0.66	J	UG/L	400		0.049	0.43
J2 Range Eastern	MW-368M2	MW-368M2_S14	202.7	212.7	03/07/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	10.8	J	UG/L	0.60	X	0.055	0.43
J2 Range Eastern	MW-368M2	MW-368M2_S14	202.7	212.7	03/07/2014	SW6860	Perchlorate	38.8		UG/L	2.0	X	0.11	0.50
J2 Range Eastern	MW-368M2	MW-368M2_S14D	202.7	212.7	03/07/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	0.74		UG/L	400		0.051	0.44
J2 Range Eastern	MW-368M2	MW-368M2_S14D	202.7	212.7	03/07/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	12.3		UG/L	0.60	X	0.057	0.44
J2 Range Eastern	MW-368M2	MW-368M2_S14D	202.7	212.7	03/07/2014	SW6860	Perchlorate	38.3		UG/L	2.0	X	0.11	0.50
J2 Range Eastern	MW-324M2	MW-324M2_S14	203.7	214.7	03/07/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	1.2		UG/L	0.60	X	0.056	0.43
J2 Range Eastern	MW-324M2	MW-324M2_S14	203.7	214.7	03/07/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	1.7		UG/L	400		0.049	0.43
J2 Range Eastern	MW-324M2	MW-324M2_S14	203.7	214.7	03/07/2014	SW6860	Perchlorate	8.5		UG/L	2.0	X	0.011	0.050
J2 Range Eastern	MW-324M1	MW-324M1_S14	234.9	244.9	03/07/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	1.1		UG/L	400		0.051	0.44
J2 Range Eastern	MW-324M1	MW-324M1_S14	234.9	244.9	03/07/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	1.3		UG/L	0.60	X	0.057	0.44
J2 Range Eastern	MW-324M1	MW-324M1_S14	234.9	244.9	03/07/2014	SW6860	Perchlorate	5.4		UG/L	2.0	X	0.011	0.050
J2 Range Eastern	MW-335M2	MW-335M2_S14	215.3	225.3	03/07/2014	SW6860	Perchlorate	0.099		UG/L	2.0		0.011	0.050
J2 Range Eastern	MW-335M1	MW-335M1_S14	255.2	265.2	03/07/2014	SW6860	Perchlorate	0.28		UG/L	2.0		0.011	0.050
J2 Range Eastern	J2MW-04M2	J2MW-04M2_S14	210	220	03/06/2014	SW6860	Perchlorate	0.030	J	UG/L	2.0		0.011	0.050
J2 Range Eastern	J2MW-04M1	J2MW-04M1_S14	257	267	03/06/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	0.71	J	UG/L	400		0.048	0.42
J2 Range Eastern	J2MW-04M1	J2MW-04M1_S14	257	267	03/06/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	1.1	J	UG/L	0.60	X	0.054	0.42
J2 Range Eastern	J2MW-04M1	J2MW-04M1_S14	257	267	03/06/2014	SW6860	Perchlorate	1.4		UG/L	2.0		0.011	0.050
J2 Range Eastern	MW-354M1	MW-354M1_S14	274.5	284.5	03/06/2014	SW6860	Perchlorate	0.072		UG/L	2.0		0.011	0.050
J2 Range Eastern	MW-351M1	MW-351M1_S14	278.6	288.6	03/06/2014	SW6860	Perchlorate	0.092		UG/L	2.0		0.011	0.050
MP-1	MW-68S	MW-68S_S14	84	94	03/05/2014	SW6860	Perchlorate	0.42		UG/L	2.0		0.011	0.050

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