

**MONTHLY PROGRESS REPORT #235
FOR OCTOBER 2016**

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 October to 31 October 2016.

1. SUMMARY OF REMEDIATION ACTIONS

The following is a description of Remediation Actions (RA) underway at Camp Edwards as of October 2016.

Demolition Area 1 Comprehensive Groundwater RA

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

The Frank Perkins Road Treatment Facility has been optimized as part of the Environmental and System Performance Monitoring (ESPM) program at Demolition Area 1. The treatment facility continues to operate at a flow rate of 325 gpm, with over 2.428 billion gallons of water treated and re-injected as of 28 October 2016. No Frank Perkins Road facility shut down occurred in October.

The Pew Road Mobile Treatment Unit (MTU) continues to operate at a flow rate of 105 gpm with over 492.2 million gallons of water treated and re-injected as of 28 October 2016. No Pew Road MTU shut downs occurred in October.

The Base Boundary RA was shut down on 3 April 2016 and is offline awaiting extraction well motor replacement, with over 147.6 million gallons of water treated and re-injected as of 28 October 2016.

The Leading Edge system continues to operate at a flow rate of 100 gpm with over 16.18 million gallons of water treated and re-injected as of 28 October 2016. The following system shut down occurred in October:

- Shut down on 22 October at 1113 due to a system alarm and was restarted on 27 October at 1145.

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 28 October 2016, over 366 million gallons of water have been treated and re-injected. The following J-1 Range Southern system shut down occurred in October:

- Shut down on 9 October at 2340 due to a power outage and was restarted on 10 October at 1305.

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 28 October 2016, over 344 million gallons of water have been treated and re-injected. The following J-1 Range Northern MTU shut downs occurred in October:

- Shut down on 4 October at 1013 for system maintenance and was restarted on 5 October at 1050;
- Shut down on 8 October at 1952 due to a system alarm and was restarted on 10 October at 1044; and
- Extraction well EW-0001 was shut down on 10 October at 1122 due to a system alarm and was restarted on 11 October at 1209.

J-3 Range Groundwater RA

The J-3 Range Groundwater RA consists of removal and treatment of contaminated groundwater to control further migration of explosives compounds and perchlorate. The ETR system includes four extraction wells, ex-situ treatment process to remove explosives compounds and perchlorate from the groundwater and use of the existing Fuel Spill-12 (FS-12) infiltration gallery to return treated water to the aquifer.

The J-3 system continues to operate at a flow rate of 255 gpm. As of 28 October 2016, over 948.7 million gallons of water have been treated and re-injected. The following J-3 Range system shut downs occurred in October:

- EWIP2 was shut down on 6 October at 1410 for a pump test (system operating at a flow rate of 195 gpm during pump test). The pump test was completed the week of 28 October 2016;
- Shut down on 9 October at 1626 due to a power outage and was restarted on 11 October at 0845;
- Shut down on 17 October at 0307 due to a FS-12 communication problem and was restarted on 17 October at 1254;
- Shut down on 18 October at 2058 due to a FS-12 communication problem and was restarted on 18 October at 0855; and
- Shut down on 20 October at 1536 due to a FS-12 communication problem and was restarted on 21 October at 1446.

J-2 Range Groundwater RA

Northern Plant

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

The Northern Treatment Building continues to operate at a flow rate of 225 gpm. As of 28 October 2016, over 805.5 million gallons of water have been treated and re-injected. No Northern Treatment Building shut down occurred in October.

The Northern MTUs E and F continue to operate at a flow rate of 250 gpm. As of 28 October 2016, over 1.292 billion gallons of water have been treated and re-injected. No J-2 Range Northern MTU shut downs occurred in October.

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 28 October 2016, over 882.5 million gallons of water have been treated and re-injected. The following MTUs H and I shut downs occurred in October:

- MTUs H and I shut down on 9 October at 2340 due to a power outage and were restarted on 11 October at 0940; and
- MTUs H and I shut down on 26 October at 1135 for a GAC media exchange and were restarted on 28 October at 0810.

MTU J continues to operate at a flow rate of 120 gpm. As of 28 October 2016, over 397 million gallons of water have been treated and re-injected. The following shut downs of MTU J occurred in October:

- MTU J shut down on 9 October at 2349 due to a power outage and was restarted on 10 October at 0910; and
- MTU J was shut down on 10 October at 1130 due to a power outage and was restarted on 10 October at 1322.

MTU K continues to operate at a flow rate of 125 gpm. As of 28 October 2016, over 502 million gallons of water have been treated and re-injected. The following shut down of MTU K occurred in October:

- MTU K shut down on 9 October at 2342 due to a power outage and was restarted on 11 October at 0833.

Central Impact Area RA

The Central Impact Area (CIA) Groundwater treatment facility consists of removal and treatment of groundwater to minimize downgradient migration of explosives compounds and perchlorate. The ETR system includes the following components: three extraction wells, an ex-situ treatment process consisting of an ion exchange (IX) resin and granular activated carbon (GAC) media to treat explosives compounds and three infiltration galleries to return treated water to the aquifer. The CIA systems 1, 2, and 3 continue to run at a combined total flow rate of 750 gpm. As of 28 October 2016, over 744 million gallons of water have been treated and re-injected. The following CIA treatment facility shut down occurred in October:

- System 2 was shut down on 26 October at 1020 for GAC media exchange and was restarted on 1 November at 0830.

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, J-1 Range Southern, J-1 Range Northern, J-2 Range Northern, J-2 Range Eastern, J-3 Range, and Central Impact Area (CIA).

Environmental and system performance monitoring groundwater samples were collected at CIA, J-2 Range Eastern, J-1 Range Northern, J-1 Range Southern, J-3 Range, and Small Arms Ranges.

Collected soil samples at B Range, C Range, D Range, G Range, and CIA.

Drilled and collected groundwater profile samples at J-2 Range Eastern (BH-685) and drilled and collected groundwater and soil profile samples at J-1 Range Southern (BH-669 and BH-670).

Completed excavation (3rd lifts) and post-excavation sampling at one D Range grid.

Completed excavation (3rd lifts) and post-excavation sampling at two G Range grids.

Completed excavation (4th lifts) and post-excavation sampling at three C Range grids.

Completed excavation (4th lifts) and post-excavation sampling at one B Range grid.

Continued excavation (3rd lifts) at ten Former B Range grids.

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

Continued intrusive investigation of anomalies in phase II area 2 and Metalmapper collection of cued data in Phase II area 3 at the CIA.

JBCC IAGWSP Tech Update Meeting Minutes 13 October 2016**Project and Field Work Update**

Crews are re-conducting the pump test at the J-3 Range per the original project note because of a technical problem with the test equipment. The original J-3 test was performed immediately after the Demolition Area 1 pump test, which had no issues with data. Results from the first J-3 test however indicated a cyclical response in the transducer data rather than a long draw-down. The extraction well was shut down on Friday and new transducers were reinstalled on Monday. The test began with three days of ambient monitoring and the pump test began today.

The drill rig is at 256 feet at BH-670 on Little Acorn Lane. Drilling is progressing slowly and it is anticipated there are approximately three more days of drilling. The rig will go back and install the screens at MW-669 on Grand Oak Road and then mobilize on base to drill the final J-2 East location. The drive point rig is scheduled to start the second week in November at the J-1 Range locations, which have been UXO cleared. EPA requested that IAGWSP map out a schedule for receiving data from the two new off-base well locations and for performing any necessary modeling to help make recommendations for next steps. Groundwater sampling is underway in CIA which will be followed by J-1 South.

All treatment systems are up and running with the exception of Demolition Area 1 base boundary system. Since the last tech meeting, there has been no change in the status with Eversource. They have indicated that they will be able to come and install the switch in late October but will try to do it sooner.

Results were received from ten grids that were excavated from the J-2 Range as part of the post-DD soil removal actions. One location had an exceedance (grid N-15) and will require another lift. Four grids were excavated at the U Range near the firing berm and three will require additional lifts.

At the Small Arms Ranges, crews have completed four of the ten Ranges where post-DD work is being done. Work is ongoing on multiple lifts at six ranges and post-excavation results are pending for all.

In the CIA, the Metal Mapper team completed Area 2 last week. They have moved into Area 3 and are performing vegetation clearance of regrowth. They project finishing Area 3 by June. Dawson has approximately 4,000 digs left in Area 2. When completed they will move into Area 3, de-mob in February and return in the beginning of April. There are 15,000 anomalies in Area 3, which is slightly less than Area 2 so they anticipate they can complete the work by the end of September 2017. After the draft 2016 Source Removal Report is submitted in mid-December, next steps will be discussed. The two 100% QA grids were completed and the results will be presented after the data is reviewed.

Lab Results – PDA Spectra Review

EPA wanted to make certain that laboratory protocols were being followed after an anomalous sample result. It was noted that it appeared to be an isolated one-time event based on multiple implementation issues with sample validation. A corrective action report will be provided by the next tech meeting.

Action Items

The action items were discussed and updated.

Demolition Area 1 Annual Environmental Monitoring Report Presentation

A presentation was provided on the Demolition Area 1 Environmental Monitoring Report. During the reporting period (May 2015 through May 2016), the off-base extraction, treatment and reinjection system was brought on-line and an additional near-source extraction well began operation. It was noted that due to a trend of rising perchlorate concentrations at deep well MW- 341M2, samples were collected from downgradient out of network locations which resulted in a proposal for additional deep well sampling to determine the extent of the contamination. This work was conducted outside of the reporting period and will be summarized in the 2017 report.

Treatment system performance, sampling locations, groundwater monitoring results, and trends were reviewed and discussed. For Zone 1 (source to Frank Perkins Road), the maximum RDX concentration was 5.16 µg/L (MW-19S) and the maximum perchlorate concentration was 0.46 µg/L (MW-165M2). For Zone 2 (Frank Perkins Road to Pew Road), the maximum RDX concentration was 0.21 µg/L (MW-211M1) and the maximum perchlorate concentration was 5.62 µg/L (MW-341M2). For Zone 3 (Pew Road to Base Boundary), the maximum RDX concentration was 1.69 µg/L (MW-258M1) and the maximum perchlorate concentration was 15.3 µg/L (MW- 231M1). For Zone 4 (off-base), RDX was non-detect for all wells during this reporting period and the maximum perchlorate concentration was 4.49 µg/L (MW-569M1).

Results of hydraulic monitoring and a capture zone analysis were discussed. For the aquifer hydraulic monitoring, one site-wide synoptic water level round was conducted in March 2016 and one limited round (only Zone 4) was completed in November 2015. Observations were consistent with past reporting periods and the groundwater flow direction in Zone 4 (off-base) is principally in a westerly direction. For the capture zone analysis, the capture zones were developed manually and indicate that the existing systems are adequately capturing the plumes. It was noted that in Zones 1 & 2, perchlorate concentrations in MW-341M2 are likely below a defined clay later and outside of the vertical capture zone for D1-EW-2; however, likely would be captured by the base boundary extraction well.

Decision Document (DD) cleanup timelines were discussed. The DD estimated perchlorate would clean up in 2025. Zones 1 through 3 are expected to clean up by 2022; Zone 4 (off-base) will be assessed after review of the off-base system performance. The DD estimates RDX will clean up by 2022. Current predictions extend beyond 2022; however, the installation of D1-EW4 should maintain the 2022 DD date. Model predicted vs. observed plume was reviewed.

IAGWSP is recommending that the pumping rate of extraction well D1-EW-501 be reduced from 150 gallon per minute (gpm) to 100 gpm and that D1-EW-502 discontinue pumping altogether. In addition, it is recommended to add the pilot boring MW-648M1 and the new extraction well D1- EW-4 to the hydraulic monitoring network; include new wells MW-661D, MW-662D, MW-663D, MW-664M1/M2, MW-569M1/M2, MW-641M1/M2, and MW-642M1/M2 and extraction well D1-EW-5 into the annual synoptic gauging, and reduce Zone 4 synoptic water level gauging from semi-annual to annual. Agency comments on the report are pending.

JBCC IAGWSP Tech Update Meeting Minutes 27 October 2016

Project and Field Work Update

The drill rig is at 216 feet at BH-685, the last of the J-2 eastern locations. Once they are completed the rig will return to MW-670 on Little Acorn Lane (J-1 southern) and install the screens. The fourteen drive point locations at the J-1 Range are scheduled to have vegetation cleared the second week in November. The drive points will end this phase of drilling.

The Demolition Area 1 base boundary system power line switch is supposed to be installed by Eversource today. Once it is installed, Eversource needs a week's written notice before the repair can be conducted. The Demolition Area 1 leading edge system went down over the weekend due to a power failure and crews were not able to restart it. There was an error in the computer software and it had to be reprogrammed. Contractors removed the computer and would reinstall the necessary software and reconnect later today. (Note the system was brought back online later that afternoon). The Central Impact Area (CIA2) infiltration gallery is still being observed to determine if a fix of the water ponding issue is required.

In the CIA, the Metal Mapper team continued working in Area 3. They estimate being able to finish Metal Mapping by February/March 2017, weather permitting. Dawson continues to work in Area 2. When completed they will move into Area 3, de-mob in February and return in the beginning of April. After the draft 2016 Source Removal Report is submitted in mid-December, CIA source area next steps will be discussed.

Results were received from ten grids that were excavated from the J-2 Range as part of the post- DD soil removal actions. One location will require another lift. Work will begin in the next few weeks and will be performed along with additional U Range lifts.

At the Small Arms Ranges, crews collected post-excavation samples. The 4th lifts at three grids at C Range, one grid at B Range and third lifts from ten grids at the Former B Range. Results are pending for all. IAGWSP will draft remedial action completion reports for all of the soil actions that are being conducted as part of the Decision Documents.

A corrective action report for the PDA spectra issue was provided prior to the tech meeting. EPA asked how many other SDGs were affected by the error. USACE will review and get back to EPA.

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 October 12, 2016. The next meeting of the JBCC Cleanup Team has not been scheduled. The Cleanup Team meeting discusses late breaking news and responses to action items, as well as updates from the IAGWSP and the Installation Restoration Program (IRP). The JBCCCT meetings provide a forum for community input regarding issues related to both the IRP and the IAGWSP.

SUMMARY OF DATA RECEIVED

Table 2 summarizes the validated detections of explosives compounds and perchlorate for all groundwater results received from 1 October to 31 October 2016. These results are compared to the Maximum Contaminant Levels/Health Advisory (MCL/HA) values for respective analytes. Explosives and perchlorate are the primary contaminants of concern (COC) at Camp Edwards.

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

2. DELIVERABLES SUBMITTED

Deliverables submitted during the reporting period include the following:

- | | |
|--|------------|
| • Monthly Progress Report No. 234 for September 2016 | 10/11/2016 |
| • Optimization of J-1 Range Northern and Southern Chemical and Hydraulic Monitoring Well Networks Project Note | 10/11/2016 |
| • Draft Northwest Corner 2016 Annual Environmental Monitoring Report | 10/21/2016 |
| • Final J-1 Range Northern and J-1 Range Southern 2016 Annual Environmental Monitoring Report | 10/27/2016 |
| • Final J-3 Range Environmental Monitoring Work Plan | 10/31/2016 |

3. SCHEDULED ACTIONS

The following documents are being prepared or revised during November 2016:

- Training Areas Draft Investigation Report;
- Training Areas Draft Remedy Selection Plan;
- CIA 2016 Annual Environmental Monitoring Report;
- CIA Draft Startup Report;
- Draft BIP Report;
- Demolition Area 1 2016 Annual Environmental Monitoring Report;
- Demolition Area 1 Startup Report;
- Demolition Area 2 Annual Environmental Monitoring Report;
- J-3 Range 2016 Interim Environmental Monitoring Report;
- Northwest Corner 2016 Annual Environmental Monitoring Report;
- J-2 Range Eastern and J-2 Range Northern 2016 Environmental Monitoring Report;
- Small Arms Ranges 2016 Annual Interim Environmental Monitoring Report;
- Small Arms Ranges Environmental Monitoring Work Plan;
- Western Boundary Monitoring Results Technical Memorandum; and
- Land Use Control Monitoring Report.

TABLE 1
Sampling Progress: 1 October to 31 October 2016

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	MW-303M3	MW-303M3_F16	N	10/31/2016	Ground Water	139.7	149.7
J1 Range Northern	MW-303M2	MW-303M2_F16	N	10/31/2016	Ground Water	235.1	245.1
J1 Range Northern	MW-303M2	MW-303M2_F16D	FD	10/31/2016	Ground Water	235.1	245.1
J1 Range Northern	MW-303M1	MW-303M1_F16	N	10/31/2016	Ground Water	299.1	309.1
J1 Range Southern	MW-360M2	MW-360M2_F16	N	10/31/2016	Ground Water	102	112
J1 Range Southern	MW-360M2	MW-360M2_F16D	FD	10/31/2016	Ground Water	102	112
J1 Range Southern	MW-131S	MW-131S_F16	N	10/31/2016	Ground Water	96	106
J1 Range Southern	J1S-EW2-INF	J1S-EW2-INF_F16	N	10/31/2016	Ground Water	0	0
J1 Range Southern	J1S-EW1-INF	J1S-EW1-INF_F16	N	10/31/2016	Ground Water	0	0
J1 Range Southern	DP-389	DP-389_F16	N	10/27/2016	Ground Water	157.7	162.7
J1 Range Southern	MW-488PZ	MW-488PZ_F16	N	10/27/2016	Ground Water	119.3	129.3
J2 Range Eastern	BH-685	J2EP-2_211-216	N	10/26/2016	GW Profile	211	216
J2 Range Eastern	BH-685	J2EP-2_201-206	N	10/26/2016	GW Profile	201	206
J2 Range Eastern	BH-685	J2EP-2_191-196	N	10/25/2016	GW Profile	191	196
J2 Range Eastern	BH-685	J2EP-2_181-186	N	10/25/2016	GW Profile	181	186
J1 Range Southern	MW-488M1	MW-488M1_F16	N	10/25/2016	Ground Water	149.6	159.6
J2 Range Eastern	BH-685	J2EP-2_171-176	N	10/25/2016	GW Profile	171	176
J2 Range Eastern	BH-685	J2EP-2_171-176D	FD	10/25/2016	GW Profile	171	176
J2 Range Eastern	BH-685	J2EP-2_161-166	N	10/25/2016	GW Profile	161	166
J2 Range Eastern	BH-685	J2EP-2_151-156	N	10/25/2016	GW Profile	151	156
J2 Range Eastern	BH-685	J2EP-2_141-146	N	10/25/2016	GW Profile	141	146
J2 Range Eastern	BH-685	J2EP-2_131-136	N	10/25/2016	GW Profile	131	136
J1 Range Southern	DP-379	DP-379_F16	N	10/25/2016	Ground Water	184.3	189.3
J3 Range	J3EWIP2	J3EWIP2_D7R	N	10/24/2016	Ground Water	149.5	169.5
J1 Range Southern	MW-403M2	MW-403M2_F16	N	10/24/2016	Ground Water	127.3	137.4
J1 Range Southern	MW-403M1	MW-403M1_F16	N	10/24/2016	Ground Water	159.9	169.9
J1 Range Southern	MW-400M2	MW-400M2_F16	N	10/24/2016	Ground Water	138.9	148.9
J1 Range Southern	MW-400M1	MW-400M1_F16	N	10/24/2016	Ground Water	192.8	202.8
J1 Range Southern	MW-647M2	MW-647M2_F16	N	10/24/2016	Ground Water	189.3	199.3
J1 Range Southern	MW-647M1	MW-647M1_F16	N	10/24/2016	Ground Water	211.3	221.3
J1 Range Southern	MW-647M1	MW-647M1_F16D	FD	10/24/2016	Ground Water	211.3	221.3
J1 Range Southern	MW-528M1	MW-528M1_F16	N	10/20/2016	Ground Water	117	127
IBC RANGE	MW-652S	MW-652S_R2	N	10/20/2016	Ground Water	106	116
U Range	MW-649S	MW-649S_R3	N	10/20/2016	Ground Water	113.5	123.5
J1 Range Southern	MW-524M1	MW-524M1_F16	N	10/20/2016	Ground Water	148	158
J1 Range Southern	MW-524M1	MW-524M1_F16D	FD	10/20/2016	Ground Water	148	158
J1 Range Southern	MW-526M1	MW-526M1_F16	N	10/20/2016	Ground Water	164	174
J1 Range Southern	MW-527M1	MW-527M1_F16	N	10/19/2016	Ground Water	165	175
J1 Range Southern	MW-402M2	MW-402M2_F16	N	10/19/2016	Ground Water	155.2	165.3
J1 Range Southern	MW-402M1	MW-402M1_F16	N	10/19/2016	Ground Water	190.1	200.1
J1 Range Southern	MW-592M2	MW-592M2_F16	N	10/19/2016	Ground Water	158	168
J1 Range Southern	MW-592M1	MW-592M1_F16	N	10/19/2016	Ground Water	201	211
J1 Range Southern	MW-646M2	MW-646M2_F16	N	10/18/2016	Ground Water	168	178
J1 Range Southern	MW-646M1	MW-646M1_F16	N	10/18/2016	Ground Water	198	208
J1 Range Southern	MW-591M2	MW-591M2_F16	N	10/18/2016	Ground Water	165	175
J1 Range Southern	MW-591M1	MW-591M1_F16	N	10/18/2016	Ground Water	200	210
J1 Range Southern	BH-670	J1SP-5_301-306	N	10/18/2016	GW Profile	301	306
J1 Range Southern	MW-481M2	MW-481M2_F16	N	10/18/2016	Ground Water	146.3	156.3
J1 Range Southern	MW-481M1	MW-481M1_F16	N	10/18/2016	Ground Water	189.7	199.7
J1 Range Southern	MW-480M2	MW-480M2_F16	N	10/17/2016	Ground Water	143.6	153.6
J1 Range Southern	MW-482M3	MW-482M3_F16	N	10/17/2016	Ground Water	98.2	108.2
J1 Range Southern	MW-482M2	MW-482M2_F16	N	10/17/2016	Ground Water	172.6	182.6
J1 Range Southern	MW-482M2	MW-482M2_F16D	FD	10/17/2016	Ground Water	172.6	182.6

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 1 October to 31 October 2016

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	BH-670	SSJ1SP-5_296-306	N	10/17/2016	Soil Profile	296	306
J1 Range Southern	MW-645M2	MW-645M2_F16	N	10/17/2016	Ground Water	143.5	153.5
J1 Range Southern	MW-645M1	MW-645M1_F16	N	10/17/2016	Ground Water	183.5	193.5
J1 Range Southern	BH-670	SSJ1SP-5_286-296	N	10/17/2016	Soil Profile	286	296
J1 Range Southern	BH-670	SSJ1SP-5_276-286	N	10/14/2016	Soil Profile	276	286
J1 Range Southern	BH-670	J1SP-5_271-276	N	10/14/2016	GW Profile	271	276
J3 Range	J3EWIP2	J3EWIP2_D1R	N	10/14/2016	Ground Water	149.5	169.5
J1 Range Southern	BH-670	SSJ1SP-5_266-276	N	10/14/2016	Soil Profile	266	276
J1 Range Southern	MW-523M1	MW-523M1_F16	N	10/13/2016	Ground Water	158	168
J1 Range Southern	BH-670	J1SP-5_261-266	N	10/13/2016	GW Profile	261	266
J1 Range Southern	MW-525M2	MW-525M2_F16	N	10/13/2016	Ground Water	148	158
J1 Range Southern	MW-525M1	MW-525M1_F16	N	10/13/2016	Ground Water	172	182
J1 Range Southern	BH-670	SSJ1SP-5_256-266	N	10/13/2016	Soil Profile	256	266
B Range	SSBRNGSW02	BRNGSW02_F	FR	10/13/2016	Soil	0	0.25
B Range	SSBRNGSW02	BRNGSW02_E	FR	10/13/2016	Soil	0	0.25
B Range	SSBRNGSW02	BRNGSW02_D	N	10/13/2016	Soil	0	0.25
J1 Range Southern	BH-670	J1SP-5_251-256	N	10/13/2016	GW Profile	251	256
J1 Range Southern	MW-522M2	MW-522M2_F16	N	10/13/2016	Ground Water	165	175
J1 Range Southern	MW-522M1	MW-522M1_F16	N	10/13/2016	Ground Water	198	208
C Range	SSCRNGMID02	CRNGMID02_B	N	10/13/2016	Soil	0	0.25
C Range	SSCRNGS02	CRNGS02_B	N	10/13/2016	Soil	0	0.25
J1 Range Southern	MW-521M1	MW-521M1_F16	N	10/13/2016	Ground Water	158	168
C Range	SSCRNGBR5-6A	CRNGBR5-6A_F	FR	10/13/2016	Soil	0	0.25
C Range	SSCRNGBR5-6A	CRNGBR5-6A_E	FR	10/13/2016	Soil	0	0.25
C Range	SSCRNGBR5-6A	CRNGBR5-6A_D	N	10/13/2016	Soil	0	0.25
J1 Range Southern	MW-483M1	MW-483M1_F16	N	10/12/2016	Ground Water	139.5	149.5
J1 Range Southern	BH-670	SSJ1SP-5_246-256	N	10/12/2016	Soil Profile	246	256
J1 Range Southern	MW-398M2	MW-398M2_F16	N	10/12/2016	Ground Water	131.5	141.5
J1 Range Southern	BH-670	J1SP-5_241-246	N	10/12/2016	GW Profile	241	246
J1 Range Southern	MW-398M1	MW-398M1_F16	N	10/12/2016	Ground Water	172.2	182.2
J1 Range Southern	BH-670	SSJ1SP-5_236-246	N	10/12/2016	Soil Profile	236	246
J2 Range Eastern	J2E-EFF-J	J2E-EFF-J-97A	N	10/12/2016	Process Water	0	0
Central Impact Area	MW-625M1	MW-625M1_F16	N	10/12/2016	Ground Water	260	270
J2 Range Eastern	J2E-MID-2J	J2E-MID-2J-97A	N	10/12/2016	Process Water	0	0
J2 Range Eastern	J2E-MID-1J	J2E-MID-1J-97A	N	10/12/2016	Process Water	0	0
J2 Range Eastern	J2E-INF-J	J2E-INF-J-97A	N	10/12/2016	Process Water	0	0
J1 Range Southern	BH-670	J1SP-5_231-236	N	10/12/2016	GW Profile	231	236
J2 Range Eastern	J2E-EFF-IH	J2E-EFF-IH-97A	N	10/12/2016	Process Water	0	0
J2 Range Eastern	J2E-MID-2H	J2E-MID-2H-97A	N	10/12/2016	Process Water	0	0
J2 Range Eastern	J2E-MID-1H	J2E-MID-1H-97A	N	10/12/2016	Process Water	0	0
Central Impact Area	MW-616M1	MW-616M1_F16	N	10/12/2016	Ground Water	217.1	227.1
J2 Range Eastern	J2E-MID-2I	J2E-MID-2I-97A	N	10/12/2016	Process Water	0	0
J2 Range Eastern	J2E-MID-1I	J2E-MID-1I-97A	N	10/12/2016	Process Water	0	0
J2 Range Eastern	J2E-INF-I	J2E-INF-I-97A	N	10/12/2016	Process Water	0	0
Central Impact Area	MW-617M1	MW-617M1_F16	N	10/12/2016	Ground Water	175.8	185.8
Central Impact Area	MW-623M3	MW-623M3_F16	N	10/11/2016	Ground Water	275	285
J2 Range Eastern	MW-321M2	MW-321M2_F16	N	10/11/2016	Ground Water	155.7	165.7
J2 Range Eastern	MW-321M2	MW-321M2_F16D	FD	10/11/2016	Ground Water	155.7	165.7
J1 Range Southern	BH-670	SSJ1SP-5_226-236	N	10/11/2016	Soil Profile	226	236
J1 Range Southern	BH-670	J1SP-5_221-226	N	10/11/2016	GW Profile	221	226
J2 Range Eastern	MW-321M1	MW-321M1_F16	N	10/11/2016	Ground Water	174.6	184.6
J2 Range Eastern	MW-388M2	MW-388M2_F16	N	10/11/2016	Ground Water	144.8	154.8
J1 Range Southern	BH-670	SSJ1SP-5_216-226	N	10/11/2016	Soil Profile	216	226

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 1 October to 31 October 2016

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
J2 Range Eastern	MW-388M1	MW-388M1_F16	N	10/11/2016	Ground Water	175.2	185.2
J1 Range Southern	BH-670	J1SP-5_211-216	N	10/10/2016	GW Profile	211	216
J1 Range Southern	BH-670	J1SP-5_211-216D	FD	10/10/2016	GW Profile	211	216
J1 Range Southern	BH-670	SSJ1SP-5_206-216	N	10/10/2016	Soil Profile	206	216
J1 Range Southern	BH-670	SSJ1SP-5_206-216D	FD	10/10/2016	Soil Profile	206	216
J2 Range Eastern	MW-307M3	MW-307M3_F16	N	10/10/2016	Ground Water	125.8	135.8
J1 Range Southern	BH-670	J1SP-5_201-206	N	10/10/2016	GW Profile	201	206
J1 Range Southern	BH-670	J1SP-5_201-206D	FD	10/10/2016	GW Profile	201	206
J2 Range Eastern	MW-319M2	MW-319M2_F16	N	10/10/2016	Ground Water	165.2	175.2
Central Impact Area	CIA2-EFF	CIA2-EFF-33A	N	10/10/2016	Process Water	0	0
J1 Range Southern	BH-670	SSJ1SP-5_196-206	N	10/10/2016	Soil Profile	196	206
J1 Range Southern	BH-670	SSJ1SP-5_196-206D	FD	10/10/2016	Soil Profile	196	206
Central Impact Area	CIA2-MID2	CIA2-MID2-33A	N	10/10/2016	Process Water	0	0
Central Impact Area	CIA2-MID1	CIA2-MID1-33A	N	10/10/2016	Process Water	0	0
J2 Range Eastern	MW-319M1	MW-319M1_F16	N	10/10/2016	Ground Water	200.3	210.3
Central Impact Area	CIA2-INF	CIA2-INF-33A	N	10/10/2016	Process Water	0	0
J1 Range Southern	BH-670	J1SP-5_191-196	N	10/10/2016	GW Profile	191	196
J1 Range Southern	BH-670	SSJ1SP-5_186-196	N	10/10/2016	Soil Profile	186	196
Central Impact Area	CIA1-EFF	CIA1-EFF-33A	N	10/10/2016	Process Water	0	0
Central Impact Area	CIA1-MID2	CIA1-MID2-33A	N	10/10/2016	Process Water	0	0
Central Impact Area	CIA1-MID1	CIA1-MID1-33A	N	10/10/2016	Process Water	0	0
Central Impact Area	CIA1-INF	CIA1-INF-33A	N	10/10/2016	Process Water	0	0
J1 Range Southern	BH-670	J1SP-5_181-186	N	10/10/2016	GW Profile	181	186
J1 Range Southern	BH-670	SSJ1SP-5_176-186	N	10/10/2016	Soil Profile	176	186
J1 Range Southern	BH-670	J1SP-5_171-176	N	10/10/2016	GW Profile	171	176
J1 Range Southern	BH-670	SSJ1SP-5_166-176	N	10/07/2016	Soil Profile	166	176
J1 Range Southern	BH-670	J1SP-5_161-166	N	10/07/2016	GW Profile	161	166
J1 Range Southern	BH-670	SSJ1SP-5_156-166	N	10/07/2016	Soil Profile	156	166
J1 Range Southern	BH-670	J1SP-5_151-156	N	10/07/2016	GW Profile	151	156
J2 Range Northern	J2N-EFF-G	J2N-EFF-G-121A	N	10/07/2016	Process Water	0	0
J2 Range Eastern	MW-399M1	MW-399M1_F16	N	10/07/2016	Ground Water	238.2	248.2
J2 Range Northern	J2N-MID-2G	J2N-MID-2G-121A	N	10/07/2016	Process Water	0	0
J2 Range Northern	J2N-MID-1G	J2N-MID-1G-121A	N	10/07/2016	Process Water	0	0
J2 Range Northern	J2N-INF-G	J2N-INF-G-121A	N	10/07/2016	Process Water	0	0
J1 Range Southern	BH-670	SSJ1SP-5_146-156	N	10/07/2016	Soil Profile	146	156
J2 Range Eastern	J2MW-05M2	J2MW-05M2_F16	N	10/07/2016	Ground Water	185	195
J1 Range Southern	BH-670	J1SP-5_141-146	N	10/07/2016	GW Profile	141	146
J2 Range Northern	J2N-EFF-EF	J2N-EFF-EF-121A	N	10/07/2016	Process Water	0	0
J2 Range Northern	J2N-MID-2F	J2N-MID-2F-121A	N	10/07/2016	Process Water	0	0
J2 Range Northern	J2N-MID-1F	J2N-MID-1F-121A	N	10/07/2016	Process Water	0	0
J2 Range Northern	J2N-INF-EF	J2N-INF-EF-121A	N	10/07/2016	Process Water	0	0
J2 Range Eastern	J2MW-05M1	J2MW-05M1_F16	N	10/07/2016	Ground Water	225	235
J2 Range Northern	J2N-MID-2E	J2N-MID-2E-121A	N	10/07/2016	Process Water	0	0
J2 Range Northern	J2N-MID-1E	J2N-MID-1E-121A	N	10/07/2016	Process Water	0	0
J2 Range Eastern	MW-215M2	MW-215M2_F16	N	10/07/2016	Ground Water	205	215
J2 Range Eastern	MW-215M2	MW-215M2_F16D	FD	10/07/2016	Ground Water	205	215
J1 Range Southern	BH-670	SSJ1SP-5_136-146	N	10/07/2016	Soil Profile	136	146
J1 Range Southern	BH-670	SSJ1SP-5_126-136	N	10/07/2016	Soil Profile	126	136
J1 Range Northern	J1N-EFF	J1N-EFF-36A	N	10/07/2016	Process Water	0	0
J1 Range Northern	J1N-MID2	J1N-MID2-36A	N	10/07/2016	Process Water	0	0
J1 Range Southern	BH-670	SSJ1SP-5_116-126	N	10/07/2016	Soil Profile	116	126
J2 Range Eastern	MW-215M1	MW-215M1_F16	N	10/07/2016	Ground Water	240	250
J1 Range Northern	J1N-MID1	J1N-MID1-36A	N	10/07/2016	Process Water	0	0

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 FD = Field Duplicate

TABLE 1
Sampling Progress: 1 October to 31 October 2016

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-INF2	J1N-INF2-36A	N	10/07/2016	Process Water	0	0
J1 Range Southern	BH-670	SSJ1SP-5_106-116	N	10/07/2016	Soil Profile	106	116
J1 Range Southern	BH-670	SSJ1SP-5_96-106	N	10/07/2016	Soil Profile	96	106
J1 Range Southern	BH-670	SSJ1SP-5_86-96	N	10/07/2016	Soil Profile	86	96
J3 Range	90PLT01006	90PLT01006_F16	N	10/06/2016	Process Water	0	0
J1 Range Southern	BH-670	SSJ1SP-5_74-86	N	10/06/2016	Soil Profile	74	86
J2 Range Eastern	J2MW-02PZ	J2MW-02PZ_F16	N	10/06/2016	Ground Water	191	201
Demolition Area 1	PR-EFF	PR-EFF-127A	N	10/06/2016	Process Water	0	0
Demolition Area 1	PR-MID-2	PR-MID-2-127A	N	10/06/2016	Process Water	0	0
Demolition Area 1	PR-MID-1	PR-MID-1-127A	N	10/06/2016	Process Water	0	0
Demolition Area 1	PR-INF	PR-INF-127A	N	10/06/2016	Process Water	0	0
Demolition Area 1	FPR-2-EFF-A	FPR-2-EFF-A-127A	N	10/06/2016	Process Water	0	0
Demolition Area 1	FPR-2-GAC-MID1A	FPR-2-GAC-MID1A-127A	N	10/06/2016	Process Water	0	0
Demolition Area 1	FPR2-POST-IX-A	FPR2-POST-IX-A-127A	N	10/06/2016	Process Water	0	0
Demolition Area 1	FPR-2-INF	FPR-2-INF-127A	N	10/06/2016	Process Water	0	0
J2 Range Eastern	J2E-EFF-K	J2E-EFF-K-97A	N	10/06/2016	Process Water	0	0
J2 Range Eastern	J2E-MID-2K	J2E-MID-2K-97A	N	10/06/2016	Process Water	0	0
J2 Range Eastern	J2E-MID-1K	J2E-MID-1K-97A	N	10/06/2016	Process Water	0	0
J2 Range Eastern	J2E-INF-K	J2E-INF-K-97A	N	10/06/2016	Process Water	0	0
Central Impact Area	SSCIAMM797	DA060916CIA02_30B	N	10/05/2016	Soil	0	0.25
J2 Range Eastern	J2MW-01M2	J2MW-01M2_F16	N	10/05/2016	Ground Water	245	255
J2 Range Eastern	J2MW-01M2	J2MW-01M2_F16D	FD	10/05/2016	Ground Water	245	255
J2 Range Eastern	J2MW-01M1	J2MW-01M1_F16	N	10/05/2016	Ground Water	275	285
J2 Range Eastern	MW-335M2	MW-335M2_F16	N	10/05/2016	Ground Water	215.3	225.3
J2 Range Eastern	MW-335M1	MW-335M1_F16	N	10/05/2016	Ground Water	255.2	265.2
J2 Range Eastern	MW-324M2	MW-324M2_F16	N	10/05/2016	Ground Water	203.7	214.7
J2 Range Eastern	MW-324M2	MW-324M2_F16D	FD	10/05/2016	Ground Water	203.7	214.7
J2 Range Eastern	MW-324M1	MW-324M1_F16	N	10/05/2016	Ground Water	234.9	244.9
J2 Range Eastern	MW-324M1	MW-324M1_F16D	FD	10/05/2016	Ground Water	234.9	244.9
J2 Range Eastern	J2MW-02M2	J2MW-02M2_F16	N	10/04/2016	Ground Water	236	246
J2 Range Eastern	J2MW-02M1	J2MW-02M1_F16	N	10/04/2016	Ground Water	271	281
J2 Range Eastern	J2MW-04M2	J2MW-04M2_F16	N	10/04/2016	Ground Water	210	220
J2 Range Eastern	J2MW-04M1	J2MW-04M1_F16	N	10/04/2016	Ground Water	257	267
J1 Range Southern	BH-669	SSJ1SP-4_301-309	N	10/04/2016	Soil Profile	301	309
G Range	SSGR01A	GR01A_F	FR	10/04/2016	Soil	0	0.25
J2 Range Eastern	MW-436M2	MW-436M2_F16	N	10/04/2016	Ground Water	235.5	245.5
G Range	SSGR01A	GR01A_E	FR	10/04/2016	Soil	0	0.25
G Range	SSGR01A	GR01A_D	N	10/04/2016	Soil	0	0.25
G Range	SSGR01DR	GR01DR_B	N	10/04/2016	Soil	0	0.25
J1 Range Southern	BH-669	J1SP-4_296-301	N	10/04/2016	GW Profile	296	301
J2 Range Eastern	MW-436M1	MW-436M1_F16	N	10/04/2016	Ground Water	295.5	305.5
D Range	SSDR01A	DR01A_F	FR	10/04/2016	Soil	0	0.25
D Range	SSDR01A	DR01A_E	FR	10/04/2016	Soil	0	0.25
D Range	SSDR01A	DR01A_D	N	10/04/2016	Soil	0	0.25
J2 Range Eastern	MW-357M1	MW-357M1_F16	N	10/03/2016	Ground Water	274.5	284.5
J1 Range Southern	BH-669	SSJ1SP-4_291-301	N	10/03/2016	Soil Profile	291	301
J2 Range Eastern	MW-170M1	MW-170M1_F16	N	10/03/2016	Ground Water	265	275
J1 Range Southern	J1S-EFF	J1S-EFF-107A	N	10/03/2016	Process Water	0	0
J1 Range Southern	J1S-MID-2	J1S-MID-2-107A	N	10/03/2016	Process Water	0	0
J1 Range Southern	J1S-INF-2	J1S-INF-2-107A	N	10/03/2016	Process Water	0	0
J2 Range Eastern	MW-170M2	MW-170M2_F16	N	10/03/2016	Ground Water	198	208
J2 Range Eastern	MW-354M2	MW-354M2_F16	N	10/03/2016	Ground Water	234.8	244.8
J3 Range	J3-EFF	J3-EFF-121A	N	10/03/2016	Process Water	0	0

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 1 October to 31 October 2016

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	BH-669	SSJ1SP-4_281-291	N	10/03/2016	Soil Profile	281	291
J3 Range	J3-MID-2	J3-MID-2-121A	N	10/03/2016	Process Water	0	0
J3 Range	J3-MID-1	J3-MID-1-121A	N	10/03/2016	Process Water	0	0
J3 Range	J3-INF	J3-INF-121A	N	10/03/2016	Process Water	0	0
J2 Range Eastern	MW-354M1	MW-354M1_F16	N	10/03/2016	Ground Water	274.5	284.5
J1 Range Southern	BH-669	SSJ1SP-4_271-281	N	10/03/2016	Soil Profile	271	281

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
 Data Received October 2016

Area of Concern	Location ID	Field Sample ID	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Date Sampled	Test Method	Analyte	Result Value	Qualifier	Units	MCL/HA	> MCL/HA	MDL	RL
J2 Range Northern	MW-634M3	MW-634M3_F16	170.6	180.6	09/01/2016	SW6850	Perchlorate	0.58		UG/L	2.0		0.019	0.20
J2 Range Northern	MW-634M2	MW-634M2_F16	200.6	210.6	09/01/2016	SW6850	Perchlorate	1.4		UG/L	2.0		0.019	0.20
J2 Range Northern	MW-634M1	MW-634M1_F16	305.6	315.6	09/01/2016	SW6850	Perchlorate	0.57		UG/L	2.0		0.019	0.20
J2 Range Northern	J2EW3-MW1-B	J2EW3-MW1-B_F16	210.7	220.7	08/31/2016	SW6850	Perchlorate	0.033	J	UG/L	2.0		0.019	0.20
J2 Range Northern	J2EW3-MW1-C	J2EW3-MW1-C_F16	245.7	255.7	08/31/2016	SW6850	Perchlorate	3.6		UG/L	2.0	X	0.019	0.20
J2 Range Northern	J2EW3-MW1-C	J2EW3-MW1-C_F16D	245.7	255.7	08/31/2016	SW6850	Perchlorate	3.6		UG/L	2.0	X	0.019	0.20
J2 Range Northern	J2EW3-MW-2-B	J2EW3-MW-2-B_F16	216.2	226.2	08/31/2016	SW6850	Perchlorate	0.026	J	UG/L	2.0		0.019	0.20
J2 Range Northern	J2EW3-MW-2-C	J2EW3-MW-2-C_F16	251.1	261.1	08/31/2016	SW6850	Perchlorate	0.044	J	UG/L	2.0		0.019	0.20
J2 Range Northern	MW-296M1	MW-296M1_F16	255.1	265.1	08/30/2016	SW6850	Perchlorate	0.60		UG/L	2.0		0.019	0.20
J2 Range Northern	MW-130S	MW-130S_F16	103	113	08/30/2016	SW6850	Perchlorate	0.15	J	UG/L	2.0		0.019	0.20
J2 Range Northern	MW-130S	MW-130S_F16	103	113	08/30/2016	SW8330	4-Amino-2,6-dinitrotoluene	0.43		UG/L	7.3		0.023	0.20
J2 Range Northern	MW-230M1	MW-230M1_F16	130	140	08/30/2016	SW6850	Perchlorate	0.079	J	UG/L	2.0		0.019	0.20
J2 Range Northern	MW-234M2	MW-234M2_F16	110	120	08/30/2016	SW6850	Perchlorate	0.12	J	UG/L	2.0		0.019	0.20
J2 Range Northern	MW-234M2	MW-234M2_F16	110	120	08/30/2016	SW8330	2,4-Dinitrotoluene	0.34		UG/L	5.0		0.027	0.20
J2 Range Northern	MW-234M2	MW-234M2_F16	110	120	08/30/2016	SW8330	4-Amino-2,6-dinitrotoluene	2.7		UG/L	7.3		0.023	0.20
J2 Range Northern	MW-234M2	MW-234M2_F16	110	120	08/30/2016	SW8330	2,4,6-Trinitrotoluene	4.4		UG/L	2.0	X	0.028	0.20
J2 Range Northern	MW-234M2	MW-234M2_F16	110	120	08/30/2016	SW8330	2-Amino-4,6-dinitrotoluene	5.8		UG/L	7.3		0.023	0.20
J2 Range Northern	MW-234M2	MW-234M2_F16D	110	120	08/30/2016	SW8330	2,4-Dinitrotoluene	0.34		UG/L	5.0		0.027	0.20
J2 Range Northern	MW-234M2	MW-234M2_F16D	110	120	08/30/2016	SW8330	4-Amino-2,6-dinitrotoluene	2.7		UG/L	7.3		0.023	0.20
J2 Range Northern	MW-234M2	MW-234M2_F16D	110	120	08/30/2016	SW8330	2,4,6-Trinitrotoluene	4.6		UG/L	2.0	X	0.028	0.20
J2 Range Northern	MW-234M2	MW-234M2_F16D	110	120	08/30/2016	SW8330	2-Amino-4,6-dinitrotoluene	5.7		UG/L	7.3		0.023	0.20
J2 Range Northern	MW-234M1	MW-234M1_F16	130	140	08/30/2016	SW6850	Perchlorate	0.13	J	UG/L	2.0		0.019	0.20
J2 Range Northern	MW-234M1	MW-234M1_F16	130	140	08/30/2016	SW8330	4-Amino-2,6-dinitrotoluene	1.3		UG/L	7.3		0.023	0.20
J2 Range Northern	MW-234M1	MW-234M1_F16	130	140	08/30/2016	SW8330	2-Amino-4,6-dinitrotoluene	1.4		UG/L	7.3		0.023	0.20
J2 Range Northern	MW-234M1	MW-234M1_F16	130	140	08/30/2016	SW8330	2,4,6-Trinitrotoluene	2.9		UG/L	2.0	X	0.028	0.20
J2 Range Northern	MW-632M2	MW-632M2_F16	229.5	239.5	08/29/2016	SW6850	Perchlorate	0.045	J	UG/L	2.0		0.019	0.20
J2 Range Northern	MW-632M1	MW-632M1_F16	254.5	264.5	08/29/2016	SW6850	Perchlorate	0.083	J	UG/L	2.0		0.019	0.20
J2 Range Northern	MW-305M1	MW-305M1_F16	202.8	212.8	08/29/2016	SW6850	Perchlorate	0.095	J	UG/L	2.0		0.019	0.20
J2 Range Northern	MW-63M2	MW-63M2_F16	214	224	08/24/2016	SW6850	Perchlorate	0.033	J	UG/L	2.0		0.019	0.20
J2 Range Northern	MW-63M1	MW-63M1_F16	244	254	08/24/2016	SW6850	Perchlorate	0.030	J	UG/L	2.0		0.019	0.20
J2 Range Northern	MW-340M2	MW-340M2_F16	215.8	225.1	08/24/2016	SW6850	Perchlorate	0.025	J	UG/L	2.0		0.019	0.20
J2 Range Northern	MW-345M2	MW-345M2_F16	236.6	246.6	08/23/2016	SW6850	Perchlorate	0.039	J	UG/L	2.0		0.019	0.20
J2 Range Northern	MW-612M2	MW-612M2_F16	267	277	08/23/2016	SW6850	Perchlorate	0.035	J	UG/L	2.0		0.019	0.20
J2 Range Northern	MW-612M1	MW-612M1_F16	297	307	08/23/2016	SW6850	Perchlorate	0.040	J	UG/L	2.0		0.019	0.20
Demolition Area 2	MW-655M1	MW-655M1_R2	178	188	08/23/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.23		UG/L	0.60		0.025	0.20
J3 Range	MW-653M2	MW-653M2_R2	59.3	69.3	08/23/2016	SW6850	Perchlorate	0.092	J	UG/L	2.0		0.019	0.20
J3 Range	MW-653M1	MW-653M1_R2	147.5	157.5	08/22/2016	SW6850	Perchlorate	0.050	J	UG/L	2.0		0.019	0.20
J3 Range	MW-653M1	MW-653M1_R2D	147.5	157.5	08/22/2016	SW6850	Perchlorate	0.029	J	UG/L	2.0		0.019	0.20
J1 Range Northern	MW-657M2	MW-657M2_R2	208.3	218.3	08/22/2016	SW6850	Perchlorate	0.20		UG/L	2.0		0.019	0.20
J1 Range Northern	MW-656M2	MW-656M2_R2	222.1	232.1	08/22/2016	SW6850	Perchlorate	0.85		UG/L	2.0		0.019	0.20
J1 Range Northern	MW-656M1	MW-656M1_R2	244.1	254.1	08/22/2016	SW6850	Perchlorate	0.026	J	UG/L	2.0		0.019	0.20

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TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
 Data Received October 2016

Area of Concern	Location ID	Field Sample ID	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Date Sampled	Test Method	Analyte	Result Value	Qualifier	Units	MCL/HA	> MCL/HA	MDL	RL
J2 Range Northern	MW-635M1	MW-635M1_F16	265.4	275.4	08/18/2016	SW6850	Perchlorate	0.098	J	UG/L	2.0		0.019	0.20
L Range	MW-651M1	MW-651M1_R2	242.3	252.3	08/17/2016	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-432	MW-432_T16	88	188	08/17/2016	SW6850	Perchlorate	0.11	J	UG/L	2.0		0.019	0.20
Demolition Area 1	MW-432	MW-432_T16	88	188	08/17/2016	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.20	J	UG/L	400		0.019	0.20
Demolition Area 1	MW-432	MW-432_T16	88	188	08/17/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.21		UG/L	0.60		0.025	0.20
Demolition Area 1	MW-431	MW-431_T16	88	188	08/17/2016	SW6850	Perchlorate	0.30		UG/L	2.0		0.019	0.20
Demolition Area 1	MW-258M1	MW-258M1_T16	109	119	08/17/2016	SW6850	Perchlorate	13.6		UG/L	2.0	X	0.019	0.20
Demolition Area 1	MW-532M2	MW-532M2_T16	138	148	08/17/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.29		UG/L	0.60		0.025	0.20
Demolition Area 1	MW-532M2	MW-532M2_T16	138	148	08/17/2016	SW6850	Perchlorate	2.6		UG/L	2.0	X	0.019	0.20
Demolition Area 1	MW-532M2	MW-532M2_T16D	138	148	08/17/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.31		UG/L	0.60		0.025	0.20
J3 Range	MW-247M3	MW-247M3_F16	95	105	08/16/2016	SW6850	Perchlorate	0.16	J	UG/L	2.0		0.019	0.20
J3 Range	MW-247M2	MW-247M2_F16	125	135	08/16/2016	SW6850	Perchlorate	0.069	J	UG/L	2.0		0.019	0.20
J3 Range	90MW0054	90MW0054_F16	107	112	08/16/2016	SW6850	Perchlorate	0.37		UG/L	2.0		0.019	0.20
J3 Range	90MW0054	90MW0054_F16D	107	112	08/16/2016	SW6850	Perchlorate	0.32		UG/L	2.0		0.019	0.20
J3 Range	J3EWIP1	J3EWIP1_F16	153	193	08/15/2016	SW6850	Perchlorate	15.1		UG/L	2.0	X	0.019	0.20
J3 Range	J3EWIP1	J3EWIP1_F16D	153	193	08/15/2016	SW6850	Perchlorate	15.1		UG/L	2.0	X	0.019	0.20
J3 Range	MW-250M3	MW-250M3_F16	95	105	08/15/2016	SW6850	Perchlorate	0.060	J	UG/L	2.0		0.019	0.20
J3 Range	MW-250M3	MW-250M3_F16	95	105	08/15/2016	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	3.1		UG/L	400		0.019	0.20
J3 Range	MW-250M3	MW-250M3_F16D	95	105	08/15/2016	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	3.1		UG/L	400		0.019	0.20
J3 Range	MW-250M2	MW-250M2_F16	145	155	08/15/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.21		UG/L	0.60		0.025	0.20
J3 Range	MW-250M2	MW-250M2_F16	145	155	08/15/2016	SW6850	Perchlorate	1.1		UG/L	2.0		0.019	0.20
J3 Range	J3EW0032	J3EW0032_F16	102	152	08/15/2016	SW6850	Perchlorate	0.50		UG/L	2.0		0.019	0.20
J3 Range	J3EW0032	J3EW0032_F16	102	152	08/15/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.2		UG/L	0.60	X	0.025	0.20
J3 Range	90EW0001	90EW0001_F16	83.1	143.8	08/15/2016	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.38		UG/L	400		0.019	0.20
J3 Range	90EW0001	90EW0001_F16	83.1	143.8	08/15/2016	SW6850	Perchlorate	0.40		UG/L	2.0		0.019	0.20
J3 Range	SP3-91M	SP3-91M_F16	50	70	08/15/2016	SW6850	Perchlorate	0.042	J	UG/L	2.0		0.019	0.20
J3 Range	MW-197M3	MW-197M3_F16	60.2	65.2	08/09/2016	SW6850	Perchlorate	0.18	J	UG/L	2.0		0.019	0.20
J3 Range	MW-197M3	MW-197M3_F16	60.2	65.2	08/09/2016	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	3.3		UG/L	400		0.019	0.20
J3 Range	MW-197M3	MW-197M3_F16	60.2	65.2	08/09/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.6	J	UG/L	0.60	X	0.025	0.20
J3 Range	MW-197M3	MW-197M3_F16D	60.2	65.2	08/09/2016	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	3.3		UG/L	400		0.019	0.20
J3 Range	MW-197M3	MW-197M3_F16D	60.2	65.2	08/09/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.7	J	UG/L	0.60	X	0.025	0.20
J3 Range	MW-197M2	MW-197M2_F16	80.2	85.2	08/09/2016	SW6850	Perchlorate	0.45		UG/L	2.0		0.019	0.20
J3 Range	MW-637M2	MW-637M2_F16	214.1	224.1	08/09/2016	SW6850	Perchlorate	3.5		UG/L	2.0	X	0.019	0.20
J3 Range	MW-637M2	MW-637M2_F16D	214.1	224.1	08/09/2016	SW6850	Perchlorate	3.5		UG/L	2.0	X	0.019	0.20
J3 Range	90PZ0211	90PZ0211_F16	80	110	08/08/2016	SW6850	Perchlorate	0.061	J	UG/L	2.0		0.019	0.20
L Range	MW-242M1	MW-242M1_F16	235	245	08/03/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.1		UG/L	0.60	X	0.025	0.20
L Range	MW-242M1	MW-242M1_F16D	235	245	08/03/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.0		UG/L	0.60	X	0.025	0.20
L Range	MW-595M1	MW-595M1_F16	255.3	265.3	08/03/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	4.0		UG/L	0.60	X	0.025	0.20
J3 Range	MW-329M2	MW-329M2_F16	150.1	160.1	07/14/2016	SW6850	Perchlorate	0.62		UG/L	2.0		0.019	0.20
J3 Range	MW-329M1	MW-329M1_F16	180	190	07/14/2016	SW6850	Perchlorate	0.27		UG/L	2.0		0.019	0.20
J3 Range	MW-227M3	MW-227M3_F16	65	75	07/14/2016	SW6850	Perchlorate	0.060	J	UG/L	2.0		0.019	0.20

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Area of Concern	Location ID	Field Sample ID	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Date Sampled	Test Method	Analyte	Result Value	Qualifier	Units	MCL/HA	> MCL/HA	MDL	RL
J3 Range	MW-163S	MW-163S_F16	38	48	07/13/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.6		UG/L	0.60	X	0.025	0.20
J3 Range	MW-163S	MW-163S_F16	38	48	07/13/2016	SW6850	Perchlorate	3.8		UG/L	2.0	X	0.019	0.20
J3 Range	MW-163S	MW-163S_F16D	38	48	07/13/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.6		UG/L	0.60	X	0.025	0.20
J3 Range	MW-198M4	MW-198M4_F16	70	75	07/13/2016	SW6850	Perchlorate	0.49		UG/L	2.0		0.019	0.20
J3 Range	MW-198M4	MW-198M4_F16	70	75	07/13/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.3		UG/L	0.60	X	0.025	0.20
J3 Range	MW-198M4	MW-198M4_F16	70	75	07/13/2016	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	4.3		UG/L	400		0.019	0.20
J3 Range	MW-198M4	MW-198M4_F16D	70	75	07/13/2016	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.3		UG/L	0.60	X	0.025	0.20
J3 Range	MW-198M4	MW-198M4_F16D	70	75	07/13/2016	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	4.2		UG/L	400		0.019	0.20
J3 Range	MW-198M3	MW-198M3_F16	100	105	07/13/2016	SW6850	Perchlorate	1.5		UG/L	2.0		0.019	0.20
J3 Range	MW-198M3	MW-198M3_F16D	100	105	07/13/2016	SW6850	Perchlorate	1.5		UG/L	2.0		0.019	0.20
J3 Range	MW-198M2	MW-198M2_F16	120	125	07/13/2016	SW6850	Perchlorate	1.3		UG/L	2.0		0.019	0.20

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