MONTHLY PROGRESS REPORT #208
FOR JULY 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 July to 31 July 2014.

1. SUMMARY OF REMEDIATION ACTIONS

The following is a description of Remediation Actions (RA) underway at Camp Edwards as of July 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 was operating at a flow rate of 400 gpm (reduced to 250 gpm as of 30 July 2014 due to EWD1-1 being shut down as part of the optimization program) with over 2.095 billion gallons of water treated and re-injected as of 1 August 2014. No Frank Perkins Road facility shut downs occurred in July.

The Pew Road Mobile Treatment Unit (MTU) continues to operate at a flow rate of 105 gpm with over 372 million gallons of water treated and re-injected as of 1 August 2014. The following Pew Road MTU shut downs occurred in July:

- Shut down on 21 July 2014 at 1809 due to a power outage and was restarted on 22 July 2014 at 0805; and
- Extraction well EWD1-1 was shut down on 30 July 2014 at 0945. This extraction well will remain off as part of the optimization program.

The Base Boundary RA continues to operate at a flow rate of 65 gpm with over 84.2 million gallons of water treated and re-injected as of 1 August 2014. No Base Boundary MTU shut downs occurred in July.

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 1 August 2014, over 222 million gallons of water have been treated and re-injected. No Southern MTU shut downs occurred in July.

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 1 August 2014, over 79 million gallons of water have been treated and re-injected. No Northern MTU shut downs occurred in July.

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 1 August 2014, over 736 million gallons of water have been treated and re-injected. The following J-3 system shut downs and re-starts occurred in July:

- EW-0001 and EW0032 shut down on 16 July 2014 at 0445 due to a power failure and were restarted on 16 July 2014 at 0945; and
- The Treatment Plant shut down on 16 July 2014 at 1548 due to an FS-12 High Tank Alarm and was restarted on 17 July 2014 at 0957.

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 1 August 2014, over 520 million gallons of water have been treated and re-injected. No Northern Treatment Building shut downs occurred in July.

The Northern MTUs E and F continue to operate at a flow rate of 250 gpm. As of 1 August 2014, over 912 million gallons of water have been treated and re-injected. The following Northern MTU shut downs and system re-starts occurred in July:

- MTU E shut down on 15 July 2014 at 1631 due to a power failure and was restarted on 16 July 2014 at 0824; and
- MTU F shut down on 15 July 2014 at 1619 due to a mechanical issue and was restarted on 16 July 2014 at 0821.

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 1 August 2014, over 602 million gallons of water have been treated and re-injected. No shut downs and system re-starts of MTUs H and I occurred in July.

MTU J continues to operate at a flow rate of 120 gpm. As of 1 August 2014, over 282 million gallons of water have been treated and re-injected. The following shut downs and system re-starts of MTU J occurred in July:

- MTUs H and I were shut down on 11 July 2014 at 1512 due to a mechanical issue and were restarted on 14 July 2014 at 1158.

MTU K continues to operate at a flow rate of 125 gpm. As of 1 August 2014, over 345 million gallons of water have been treated and re-injected. No shut downs of MTU K occurred in July.

<u>Central Impact Area RA</u>

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 1 August 2014, over 137 million gallons of water have been treated and re-injected. No CIA treatment facility shutdowns occurred in July.

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 J-2 Range Northern, J-3 Range, and L Range.

Soil samples were collected from CIA and Small Arms Ranges.

Surface water samples were collected from J-3 Range.

Profile samples were collected from J-2 Range Northern (BH-640).

Completed drilling and installed well screens at J-2 Range Northern (BH-640).

Continued vegetation clearance at J-2 Range.

Continued collection of cued Metal Mapper data 16-Acre area, and continued reacquiring and investigating of Metal Mapper anomalies in the 8-Acre area and 16-Acre area at the CIA.

Completed watering operations/site restoration at Former A Range.

JBCC IAGWSP Tech Update Meeting Minutes 10 July 2014

Construction Update

An update was provided on the J-1 Range construction project. The construction for the trench for the new reinjection gallery has been completed and the trench is operating as designed. All IAGWSP treatment systems are up and running smoothly.

Project and Fieldwork Update

An update was provided on Central Impact Area fieldwork. Figures depicting clearance work to date was shown and distributed. IAGWSP outlined where crews are currently working and the next steps. Discussion was held on the definition of “Target of Interest” as it pertains to the 2013 source report. IAGWSP will revise the report to clarify the definition.

Drilling Update

IAGWSP reviewed drilling progress and explained that since the last tech meeting, two well screens were installed at CIA-14 and the well is being developed and sampled. The next steps are to review the results and determine if the treatment system design should be adjusted to better capture the plume. IAGWSP will send a recommendation to the agencies for review.

The town of Bourne returned a signed right of entry for up to two monitoring well locations on Michael Road in Pocasset. The REC can be finalized as soon as concurrence from the State Historic Preservation Officer is received.

Demo 1
An update was provided on the appraisal of property in Pocasset. The USACE appraiser has completed the appraisal and the package is being reviewed by ACOE Real Estate. The appraisal documents are on track to be delivered to the Mendes family at the end of July. It was noted that the process was delayed somewhat because Mr. Mendes has become unresponsive to repeated requests from the appraiser. IAGWSP will provide an update of progress at the next tech meeting.

Action Items
The action items were discussed and updated.

Small Arms Ranges Decision Document Status
The Small Arms Ranges DD was discussed. The document is being routed through MassDEP. It was noted that the recent revisions to the MCP potentially impact a couple of sites in the Small Arms Ranges DD. It was agreed to hold an RPM meeting to discuss further. IAGWSP noted that recent lysimeter results from the soil stockpiled at the D Range had lead and antimony detections and the Mass Guard is hesitant to reuse the soil. IAGWSP is going to contact the Bourne Landfill to determine if the soil can be used at their facility.

Training Areas Table of Contents
A draft table of contents for the Training Areas Investigation Report was distributed. EPA and MassDEP approved the proposed layout.

Small Arms Ranges Groundwater Monitoring Presentation
A presentation was provided on the Small Arms Ranges Annual Groundwater Monitoring Report. It was explained that the draft report was submitted to agencies in late May, and covers sampling results from January 2013 through February 2014. Tungsten, metals and perchlorate monitoring results and trends were reviewed. It was recommended that four wells be removed from the sampling program for metals. There were no suggested changes to the current monitoring program for perchlorate. It was noted that MassDEP had no comments on the annual report and that EPA comments were pending.

JBCC IAGWSP Tech Update Meeting Minutes 24 July 2014

Construction/System Updates
All IAGWSP treatment systems are up and running smoothly. It was noted that the CIA startup report would be submitted to the agencies in a few weeks.

Project and Fieldwork Update
An update was provided on Central Impact Area fieldwork. Figures depicting clearance work to date were shown and distributed. IAGWSP outlined where crews are currently working: there are two metal mapper teams operating in Area 9. Dawson has completed approximately 1/3 clearance of the QA grid. EPA requested a list of items found to date (metal mapper). IAGWSP noted that they are working towards scheduling another annual technology demonstration day towards the end of August. An invitation will be sent via email once details are finalized.

Small arms ranges sampling locations have been staked and it is anticipated that they will begin sampling next week. Vegetation and surface clearance is underway at the J-2 grids. Sampling in the training

areas is coming up in August. It was agreed that the proposed meandering path would be reviewed by the agencies prior to the geophysical surveys.

Drilling Update
IAGWSP reviewed drilling progress and explained that since the last tech meeting, two well screens were installed at CIA-14 and the well is being developed and sampled. USACE is working on reviewing the design capture zone to determine if the treatment system design should be adjusted to better capture the plume. IAGWSP will send a recommendation to the agencies for review.

The REC for the two monitoring well locations on Michael Road in Pocasset has been finalized and drilling will be scheduled. The neighborhood notice has been finalized and will be sent prior to the start of drilling.

Updated monitoring well drilling maps were displayed and provided.

Demo 1
An update was provided on the appraisal of property in Pocasset. The USACE appraiser has completed the appraisal and the package is being reviewed by ACOE Real Estate. The appraisal documents are on track to be delivered to the Mendes family at the end of July. IAGWSP will provide an update of progress at the next tech meeting.

Action Items
The action items were discussed and updated.

Small Arms Ranges Decision Document Status
The Small Arms Ranges DD was discussed. The document is being routed through MassDEP. Discussion was held on the GA/GB project note. MassDEP requested that text be added to describe bullets in samples, that clarification was provided on the sampling methodology and depth of the MIS samples and that the site boundary be revised on the figure. Discussion was held on the bullets being left in place on the GA/GB range. EPA noted that in light of the number of bullets, they would need to review the Decision Document to make sure that it clearly conveys why it is acceptable to leave the bullets in place. The DD will also be reviewed with respect to the MCP's recently adopted changes in standards.

J-1 Range Groundwater Monitoring Presentation
Presentations were provided on the J-1 Northern and J-1 Southern Annual Environmental Monitoring Reports. It was explained that the draft report was submitted to agencies in early July, and covers sampling results from January 2013 through January 2014. For J-1 Northern, explosives and perchlorate monitoring results and trends were reviewed. It was noted that the maximum perchlorate and RDX detections during the reporting period was 70.6 and 70.0, respectively. It was recommended that six wells be added to the annual round of sampling and two synoptic rounds be added to the hydraulic monitoring program.
For J-1 Southern, new work since the last reporting period was reviewed. Explosives and monitoring results and trends and system performance were reviewed. It was noted that the maximum RDX detections during the reporting period was 7.6 ppb on-base and 11.5 off-base. Recommendations included removing two drivepoint wells from the hydraulic monitoring program due to anomalous results, performing an update to the plume shell, the redevelopment of two wells and the addition of two eastern boundary plume wells to the program.

It was noted that MassDEP had provided comments on the annual report and that EPA comments were pending.

JBCC Cleanup Team Meeting

The JBCC Cleanup Team (JBCCCT), formerly the MMR Cleanup Team (MMRCT) is scheduled to meet on August 13, 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 July through 31 July 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. 207 for June 2014 7/10/2014
- Demolition Area 1 Optimized Hydraulic and Chemical Monitoring Network Project Note 7/01/2014
- Draft J-1 Range Northern 2014 Interim Environmental Monitoring Report and J-1 Range Southern 2014 Annual Environmental Monitoring Report 7/08/2014
- Final L Range 2014 Annual Environmental Monitoring Report 7/14/2014
- Demolition Area 1- Shutdown of D1-EW-1 Project Note 7/21/2014
- Changes to Small Arms Ranges Chemical Monitoring Well Network Project Note 7/25/2014

3. SCHEDULED ACTIONS

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

- CIA Project Note for ESTCP Metal Mapper Results;
- CIA 2013 Source Report;
- CIA System Start-up Report;
- J-2 Range Project Note for Additional Wells to evaluate source response;
- J-3 Range Draft RI/FS;
- J-3 Range Draft Remedy Selection Plan;
- Small Arms Ranges Decision Document;

- Training Areas Draft Investigation Report;
- J-1 Range Southern 6 Month System Start-up Report;
- J-1 Range Northern System Start-up 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;
- J-1 Range Northern and J-1 Range Southern 2014 Annual Interim Environmental Monitoring Report; Land Use Controls Monitoring Report;
- Former A Range 2014 Annual Environmental Monitoring Report, and
- Demolition Area 2 2014 Annual Environmental Monitoring Report.

TABLE 1
Sampling Progress: 1 July - 31 July 2014

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
Small Arms Ranges	FBR140L	MISFBR140L-A	N	07/31/2014	SOIL	0	0.25
Small Arms Ranges	FBR140L	MISFBR140L-A_R1	FR	07/31/2014	SOIL	0	0.25
Small Arms Ranges	FBR140L	MISFBR140L-A_R2	FR	07/31/2014	SOIL	0	0.25
Small Arms Ranges	FBR140L	MISFBR140L-B	N	07/31/2014	SOIL	1.75	2
J2 Range Northern	J2EW0001	J2EW0001_F14	N	07/30/2014	Ground Water	179	234
J2 Range Northern	J2EW0001	J2EW0001_F14D	FD	07/30/2014	Ground Water	179	234
J2 Range Northern	J2EW0002	J2EW0002_F14	N	07/30/2014	Ground Water	198	233
J2 Range Northern	J2EW0003	J2EW0003_F14	N	07/30/2014	Ground Water	202	232
J2 Range Northern	MW-348M2	MW-348M2_F14	N	07/30/2014	Ground Water	206.5	216.5
J2 Range Northern	MW-302M2	MW-302M2_F14	N	07/30/2014	Ground Water	194.4	204.4
J2 Range Northern	MW-302M1	MW-302M1_F14	N	07/30/2014	Ground Water	299.6	309.6
J2 Range Northern	MW-331M2	MW-331M2_F14	N	07/30/2014	Ground Water	195.3	205.3
J2 Range Northern	MW-331M1	MW-331M1_F14	N	07/30/2014	Ground Water	235.4	245.4
Small Arms Ranges	FNR03FL	MISFNR03FL-A	N	07/30/2014	SOIL	0	0.25
Small Arms Ranges	FNR03FL	MISFNR03FL-A_R1	FR	07/30/2014	SOIL	0	0.25
Small Arms Ranges	FNR03FL	MISFNR03FL-A_R2	FR	07/30/2014	SOIL	0	0.25
Small Arms Ranges	FNR02FL	MISFNR02FL-A	N	07/30/2014	SOIL	0	0.25
J2 Range Northern	MW-318M2	MW-318M2_F14	N	07/29/2014	Ground Water	205.8	215.8
J2 Range Northern	MW-318M1	MW-318M1_F14	N	07/29/2014	Ground Water	305.8	315.8
J2 Range Northern	MW-296M2	MW-296M2_F14	N	07/29/2014	Ground Water	215	225
J2 Range Northern	MW-296M1	MW-296M1_F14	N	07/29/2014	Ground Water	255.1	265.1
J3 Range	LKSNK0007	LKSNK0007_J14	N	07/29/2014	SURFACE WATER	0	4
J3 Range	LKSNK0005	LKSNK0005_J14	N	07/29/2014	SURFACE WATER	0	4
J3 Range	LKSNK0006	LKSNK0006_J14	N	07/29/2014	SURFACE WATER	0	1
Small Arms Ranges	BR02DR	MISBR02DR-A	N	07/29/2014	SOIL	0	0.25
Small Arms Ranges	BR02DR	MISBR02DR-A	N	07/29/2014	SOIL	0	0.25
Small Arms Ranges	BR02DR	MISBR02DR-A_R1	FR	07/29/2014	SOIL	0	0.25
Small Arms Ranges	BR02DR	MISBR02DR-A_R1	FR	07/29/2014	SOIL	0	0.25
Small Arms Ranges	BR02DR	MISBR02DR-A_R2	FR	07/29/2014	SOIL	0	0.25
Small Arms Ranges	BR02DR	MISBR02DR-A_R2	FR	07/29/2014	SOIL	0	0.25
Small Arms Ranges	FNR01FL	MISFNR01FL-A	N	07/29/2014	SOIL	0	0.25
J2 Range Northern	MW-337M1	MW-337M1_F14	N	07/28/2014	Ground Water	243.7	253.7
J2 Range Northern	MW-305M1	MW-305M1_F14	N	07/28/2014	Ground Water	202.8	212.8
J2 Range Northern	MW-300M3	MW-300M3_F14	N	07/28/2014	Ground Water	135.3	145.3
J2 Range Northern	MW-300M2	MW-300M2_F14	N	07/28/2014	Ground Water	197.2	207.2
J2 Range Northern	MW-300M1	MW-300M1_F14	N	07/28/2014	Ground Water	293	303
Small Arms Ranges	KDR44	MISKDR44-A	N	07/28/2014	SOIL	0	0.25
Small Arms Ranges	KDR44	MISKDR44-A	N	07/28/2014	SOIL	0	0.25
Small Arms Ranges	KDR44	MISKDR44-A_R1	FR	07/28/2014	SOIL	0	0.25
Small Arms Ranges	KDR44	MISKDR44-A_R1	FR	07/28/2014	SOIL	0	0.25
Small Arms Ranges	KDR44	MISKDR44-A_R2	FR	07/28/2014	SOIL	0	0.25
Small Arms Ranges	KDR44	MISKDR44-A_R2	FR	07/28/2014	SOIL	0	0.25
Small Arms Ranges	GR01DR	MISGR01DR-A	N	07/28/2014	SOIL	0	0.25
Small Arms Ranges	GR01DR	MISGR01DR-A	N	07/28/2014	SOIL	0	0.25
Small Arms Ranges	GR01DR	MISGR01DR-A_R1	FR	07/28/2014	SOIL	0	0.25
Small Arms Ranges	GR01DR	MISGR01DR-A_R1	FR	07/28/2014	SOIL	0	0.25
Small Arms Ranges	GR01DR	MISGR01DR-A_R2	FR	07/28/2014	SOIL	0	0.25
Small Arms Ranges	GR01DR	MISGR01DR-A_R2	FR	07/28/2014	SOIL	0	0.25
J2 Range Northern	MW-330M2	MW-330M2_F14	N	07/24/2014	Ground Water	238	248
J2 Range Northern	MW-63M2	MW-63M2_F14	N	07/24/2014	Ground Water	214	224
J2 Range Northern	MW-63M1	MW-63M1_F14	N	07/24/2014	Ground Water	244	254
J2 Range Northern	MW-345M2	MW-345M2_F14	N	07/24/2014	Ground Water	236.6	246.6
L Range	MW-242M1	MW-242M1_F14	N	07/23/2014	Ground Water	235	245
L Range	MW-595M2	MW-595M2_F14	N	07/23/2014	Ground Water	205.3	215.3
L Range	MW-595M1	MW-595M1_F14	N	07/23/2014	Ground Water	255.3	265.3
L Range	MW-596M1	MW-596M1_F14	N	07/23/2014	Ground Water	231.1	241.1
J3 Range	90MW0014	90MW0014_F14	N	07/23/2014	Ground Water	103	108
J3 Range	MW-361M3	MW-361M3_F14	N	07/21/2014	Ground Water	60	70
J3 Range	MW-361M2	MW-361M2_F14	N	07/21/2014	Ground Water	104	114
J3 Range	MW-361M1	MW-361M1_F14	N	07/21/2014	Ground Water	134	144
J3 Range	RS0011OSNK	RS0011OSNK_F14	N	07/17/2014	Ground Water	0	0
J3 Range	90PZ0204	90PZ0204_F14	N	07/17/2014	Ground Water	80	85
J3 Range	MW-217M3	MW-217M3_F14	N	07/17/2014	Ground Water	101	106
J3 Range	MW-217M2	MW-217M2_F14	N	07/17/2014	Ground Water	138	143

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 1 July - 31 July 2014

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
J3 Range	90PZ0211	90PZ0211_F14	N	07/17/2014	Ground Water	80	110
J3 Range	MW-155M1	MW-155M1_F14	N	07/16/2014	Ground Water	124	134
J3 Range	MW-227M3	MW-227M3_F14	N	07/16/2014	Ground Water	65	75
J3 Range	MW-227M2	MW-227M2_F14	N	07/16/2014	Ground Water	110	120
J3 Range	MW-227M2	MW-227M2_F14D	FD	07/16/2014	Ground Water	110	120
J3 Range	MW-227M1	MW-227M1_F14	N	07/16/2014	Ground Water	130	140
J2 Range Northern	MW-620M1	MW-620M1_R2	N	07/16/2014	Ground Water	268.6	278.6
J3 Range	MW-343M2	MW-343M2_F14	N	07/15/2014	Ground Water	166.8	171.8
J3 Range	MW-343M1	MW-343M1_F14	N	07/15/2014	Ground Water	214.8	224.8
J3 Range	MW-343M1	MW-343M1_F14D	FD	07/15/2014	Ground Water	214.8	224.8
J3 Range	MW-243M2	MW-243M2_F14	N	07/15/2014	Ground Water	84.5	94.5
J3 Range	MW-243M1	MW-243M1_F14	N	07/15/2014	Ground Water	114.5	124.5
J3 Range	MW-295M2	MW-295M2_F14	N	07/15/2014	Ground Water	117	127
J3 Range	MW-295M1	MW-295M1_F14	N	07/15/2014	Ground Water	145	155
J3 Range	MW-359M2	MW-359M2_F14	N	07/15/2014	Ground Water	148.6	158.6
J3 Range	MW-163S	MW-163S_F14	N	07/14/2014	Ground Water	38	48
J3 Range	MW-163S	MW-163S_F14D	FD	07/14/2014	Ground Water	38	48
J3 Range	MW-232M2	MW-232M2_F14	N	07/14/2014	Ground Water	61	66
J3 Range	MW-232M1	MW-232M1_F14	N	07/14/2014	Ground Water	77.5	82.5
J3 Range	MW-198M4	MW-198M4_F14	N	07/14/2014	Ground Water	70	75
J3 Range	MW-198M4	MW-198M4_F14D	FD	07/14/2014	Ground Water	70	75
J3 Range	MW-198M3	MW-198M3_F14	N	07/14/2014	Ground Water	100	105
J3 Range	MW-198M3	MW-198M3_F14D	FD	07/14/2014	Ground Water	100	105
J3 Range	MW-198M2	MW-198M2_F14	N	07/14/2014	Ground Water	120	125
J3 Range	MW-198M1	MW-198M1_F14	N	07/14/2014	Ground Water	150	155
Demolition Area 1	FPR-2-EFF	FPR-2-EFF-100A	N	07/10/2014	Process Water	0	0
Demolition Area 1	FPR-2-GAC-MID3B	FPR-2-GAC-MID3B-100A	N	07/10/2014	Process Water	0	0
Demolition Area 1	FPR-2-GAC-MID2A	FPR-2-GAC-MID2A-100A	N	07/10/2014	Process Water	0	0
Demolition Area 1	FPR2-POST-IX-B	FPR2-POST-IX-B-100A	N	07/10/2014	Process Water	0	0
Demolition Area 1	FPR2-POST-IX-A	FPR2-POST-IX-A-100A	N	07/10/2014	Process Water	0	0
Demolition Area 1	FPR-2-INF	FPR-2-INF-100A	N	07/10/2014	Process Water	0	0
J3 Range	MW-218M3	MW-218M3_F14	N	07/10/2014	Ground Water	78	83
Demolition Area 1	PR-EFF	PR-EFF-100A	N	07/10/2014	Process Water	0	0
Demolition Area 1	PR-MID-2	PR-MID-2-100A	N	07/10/2014	Process Water	0	0
Demolition Area 1	PR-MID-1	PR-MID-1-100A	N	07/10/2014	Process Water	0	0
Demolition Area 1	PR-INF	PR-INF-100A	N	07/10/2014	Process Water	0	0
J3 Range	MW-218M2	MW-218M2_F14	N	07/10/2014	Ground Water	98	103
J3 Range	MW-218M1	MW-218M1_F14	N	07/10/2014	Ground Water	128	133
J3 Range	90MP0059B	90MP0059B_F14	N	07/10/2014	Ground Water	116.4	118.9
J2 Range Eastern	J2E-EFF-IH	J2E-EFF-IH-70A	N	07/10/2014	Process Water	0	0
J2 Range Eastern	J2E-MID-2H	J2E-MID-2H-70A	N	07/10/2014	Process Water	0	0
J2 Range Eastern	J2E-MID-1H	J2E-MID-1H-70A	N	07/10/2014	Process Water	0	0
J2 Range Eastern	J2E-MID-2I	J2E-MID-2I-70A	N	07/10/2014	Process Water	0	0
J2 Range Eastern	J2E-MID-1I	J2E-MID-1I-70A	N	07/10/2014	Process Water	0	0
J3 Range	MW-144M2	MW-144M2_F14	N	07/10/2014	Ground Water	130	140
J2 Range Eastern	J2E-INF-I	J2E-INF-I-70A	N	07/10/2014	Process Water	0	0
J2 Range Eastern	J2E-EFF-K	J2E-EFF-K-70A	N	07/10/2014	Process Water	0	0
J2 Range Eastern	J2E-MID-2K	J2E-MID-2K-70A	N	07/10/2014	Process Water	0	0
J2 Range Eastern	J2E-MID-1K	J2E-MID-1K-70A	N	07/10/2014	Process Water	0	0
J2 Range Eastern	J2E-INF-K	J2E-INF-K-70A	N	07/10/2014	Process Water	0	0
J2 Range Eastern	J2E-EFF-J	J2E-EFF-J-70A	N	07/10/2014	Process Water	0	0
J2 Range Eastern	J2E-MID-2J	J2E-MID-2J-70A	N	07/10/2014	Process Water	0	0
J2 Range Eastern	J2E-MID-1J	J2E-MID-1J-70A	N	07/10/2014	Process Water	0	0
J2 Range Eastern	J2E-INF-J	J2E-INF-J-70A	N	07/10/2014	Process Water	0	0
J3 Range	MW-143M3	MW-143M3_F14	N	07/10/2014	Ground Water	107	112
J2 Range Northern	BH-640	J2N-14_321-326	N	07/09/2014	GW Profile	321	326
J3 Range	MW-143M2	MW-143M2_F14	N	07/09/2014	Ground Water	117	122
J3 Range	MW-143M2	MW-143M2_F14D	FD	07/09/2014	Ground Water	117	122
Demolition Area 1	D1-EFF	D1-EFF-48A	N	07/09/2014	Process Water	0	0
Demolition Area 1	D1-MID-2	D1-MID-2-48A	N	07/09/2014	Process Water	0	0
Demolition Area 1	D1-MID-1	D1-MID-1-48A	N	07/09/2014	Process Water	0	0
Demolition Area 1	D1-INF	D1-INF-48A	N	07/09/2014	Process Water	0	0
J3 Range	MW-143M1	MW-143M1_F14	N	07/09/2014	Ground Water	144	154
J3 Range	J3-EFF	J3-EFF-94A	N	07/09/2014	Process Water	0	0

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 1 July - 31 July 2014

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
J3 Range	J3-MID-2	J3-MID-2-94A	N	07/09/2014	Process Water	0	0
J3 Range	J3-MID-1	J3-MID-1-94A	N	07/09/2014	Process Water	0	0
J3 Range	J3-INF	J3-INF-94A	N	07/09/2014	Process Water	0	0
J1 Range Southern	J1S-EFF	J1S-EFF-80A	N	07/09/2014	Process Water	0	0
J1 Range Southern	J1S-MID-2	J1S-MID-2-80A	N	07/09/2014	Process Water	0	0
J1 Range Southern	J1S-INF-2	J1S-INF-2-80A	N	07/09/2014	Process Water	0	0
J2 Range Northern	BH-640	J2N-14_311-316	N	07/09/2014	GW Profile	311	316
J3 Range	SP3-91M	SP3-91M_F14	N	07/09/2014	Ground Water	50	70
J2 Range Northern	BH-640	J2N-14_301-306	N	07/09/2014	GW Profile	301	306
J2 Range Northern	J2N-EFF-G	J2N-EFF-G-94A	N	07/09/2014	Process Water	0	0
J2 Range Northern	J2N-MID-2G	J2N-MID-2G-94A	N	07/09/2014	Process Water	0	0
J2 Range Northern	J2N-MID-1G	J2N-MID-1G-94A	N	07/09/2014	Process Water	0	0
J2 Range Northern	BH-640	J2N-14_291-296	N	07/09/2014	GW Profile	291	296
J2 Range Northern	J2N-INF-G	J2N-INF-G-94A	N	07/09/2014	Process Water	0	0
J2 Range Northern	J2N-EFF-EF	J2N-EFF-EF-94A	N	07/09/2014	Process Water	0	0
J2 Range Northern	J2N-MID-2F	J2N-MID-2F-94A	N	07/09/2014	Process Water	0	0
J2 Range Northern	J2N-MID-1F	J2N-MID-1F-94A	N	07/09/2014	Process Water	0	0
J3 Range	90MW0104C	90MW0104C_F14	N	07/09/2014	Ground Water	84.8	89.8
J2 Range Northern	J2N-INF-EF	J2N-INF-EF-94A	N	07/09/2014	Process Water	0	0
J2 Range Northern	J2N-MID-2E	J2N-MID-2E-94A	N	07/09/2014	Process Water	0	0
J2 Range Northern	J2N-MID-1E	J2N-MID-1E-94A	N	07/09/2014	Process Water	0	0
J1 Range Northern	J1N-EFF	J1N-EFF-09A	N	07/09/2014	Process Water	0	0
J1 Range Northern	J1N-MID2	J1N-MID2-09A	N	07/09/2014	Process Water	0	0
J1 Range Northern	J1N-MID1	J1N-MID1-09A	N	07/09/2014	Process Water	0	0
J3 Range	90MW0104B	90MW0104B_F14	N	07/09/2014	Ground Water	115	120
J1 Range Northern	J1N-INF2	J1N-INF2-09A	N	07/09/2014	Process Water	0	0
J2 Range Northern	BH-640	J2N-14_281-286	N	07/09/2014	GW Profile	281	286
J2 Range Northern	BH-640	J2N-14_271-276	N	07/08/2014	GW Profile	271	276
J3 Range	MW-142M2	MW-142M2_F14	N	07/08/2014	Ground Water	140	150
J3 Range	MW-142M2	MW-142M2_F14D	FD	07/08/2014	Ground Water	140	150
J2 Range Northern	BH-640	J2N-14_261-266	N	07/08/2014	GW Profile	261	266
J3 Range	90MW0054	90MW0054_F14	N	07/08/2014	Ground Water	107	112
J2 Range Northern	BH-640	J2N-14_251-256	N	07/08/2014	GW Profile	251	256
J3 Range	MW-157M3	MW-157M3_F14	N	07/08/2014	Ground Water	70	80
J2 Range Northern	BH-640	J2N-14_241-246	N	07/08/2014	GW Profile	241	246
J3 Range	MW-157M2	MW-157M2_F14	N	07/08/2014	Ground Water	110	120
J3 Range	MW-157M1	MW-157M1_F14	N	07/08/2014	Ground Water	154	164
Central Impact Area	CIA2-EFF	CIA2-EFF-06A	N	07/08/2014	Process Water	0	0
Central Impact Area	CIA2-MID2	CIA2-MID2-06A	N	07/08/2014	Process Water	0	0
Central Impact Area	CIA2-MID1	CIA2-MID1-06A	N	07/08/2014	Process Water	0	0
Central Impact Area	CIA2-INF	CIA2-INF-06A	N	07/08/2014	Process Water	0	0
J3 Range	MW-329M2	MW-329M2_F14	N	07/08/2014	Ground Water	150.1	160.1
J3 Range	MW-329M1	MW-329M1_F14	N	07/07/2014	Ground Water	180	190
Central Impact Area	CIA1-EFF	CIA1-EFF-06A	N	07/07/2014	Process Water	0	0
Central Impact Area	CIA1-MID2	CIA1-MID2-06A	N	07/07/2014	Process Water	0	0
Central Impact Area	CIA1-MID1	CIA1-MID1-06A	N	07/07/2014	Process Water	0	0
Central Impact Area	CIA1-INF	CIA1-INF-06A	N	07/07/2014	Process Water	0	0
J2 Range Northern	BH-640	J2N-14_231-236	N	07/07/2014	GW Profile	231	236
J2 Range Northern	BH-640	J2N-14_231-236D	FD	07/07/2014	GW Profile	231	236
J3 Range	MW-247M3	MW-247M3_F14	N	07/07/2014	Ground Water	95	105
J2 Range Northern	BH-640	J2N-14_221-226	N	07/07/2014	GW Profile	221	226
J3 Range	MW-247M2	MW-247M2_F14	N	07/07/2014	Ground Water	125	135
J2 Range Northern	BH-640	J2N-14_211-216	N	07/07/2014	GW Profile	211	216
J3 Range	MW-247M1	MW-247M1_F14	N	07/07/2014	Ground Water	180	190
J2 Range Northern	BH-640	J2N-14_201-206	N	07/07/2014	GW Profile	201	206
J3 Range	MW-250M3	MW-250M3_F14	N	07/07/2014	Ground Water	95	105
J3 Range	MW-250M3	MW-250M3_F14D	FD	07/07/2014	Ground Water	95	105
J2 Range Northern	BH-640	J2N-14_191-196	N	07/07/2014	GW Profile	191	196
J2 Range Northern	BH-640	J2N-14_181-186	N	07/07/2014	GW Profile	181	186
J3 Range	MW-250M2	MW-250M2_F14	N	07/07/2014	Ground Water	145	155
J3 Range	MW-250M1	MW-250M1_F14	N	07/07/2014	Ground Water	185	195
J3 Range	MW-193S	MW-193S_F14	N	07/03/2014	Ground Water	32.5	37.5
J3 Range	MW-193M1	MW-193M1_F14	N	07/03/2014	Ground Water	57.5	62.5
J3 Range	MW-197M3	MW-197M3_F14	N	07/03/2014	Ground Water	60.2	65.2

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 1 July - 31 July 2014

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
J3 Range	MW-197M2	MW-197M2_F14	N	07/03/2014	Ground Water	80.2	85.2
J3 Range	90EW0001	90EW0001_F14	N	07/03/2014	Ground Water	83.1	143.8
J3 Range	J3EW0032	J3EW0032_F14	N	07/03/2014	Ground Water	102	152
J3 Range	J3EW0032	J3EW0032_F14D	FD	07/03/2014	Ground Water	102	152
J3 Range	J3EWIP1	J3EWIP1_F14	N	07/03/2014	Ground Water	153	193
J3 Range	J3EWIP1	J3EWIP1_F14D	FD	07/03/2014	Ground Water	153	193
J3 Range	J3-MW-1-B	J3-MW-1-B_F14	N	07/02/2014	Ground Water	175.6	185.6
J3 Range	J3-MW-1-C	J3-MW-1-C_F14	N	07/02/2014	Ground Water	203.6	213.6
Central Impact Area	SSCIA6AC50	DA110413CIA01_30C	FR	07/01/2014	SOIL	0	0.25
Central Impact Area	SSCIA6AC50	DA110413CIA01_30B	FR	07/01/2014	SOIL	0	0.25
Central Impact Area	SSCIA6AC50	DA110413CIA01_30A	N	07/01/2014	SOIL	0	0.25
Central Impact Area	SSCIA8AC87	DA082013CIA01_30C	FR	07/01/2014	SOIL	0	0.25
Central Impact Area	SSCIA8AC87	DA082013CIA01_30B	FR	07/01/2014	SOIL	0	0.25
Central Impact Area	SSCIA8AC87	DA082013CIA01_30A	N	07/01/2014	SOIL	0	0.25
Central Impact Area	SSCIA8AC100	DA090913CIA02_30C	FR	07/01/2014	SOIL	0	0.25
Central Impact Area	SSCIA8AC100	DA090913CIA02_30B	FR	07/01/2014	SOIL	0	0.25
Central Impact Area	SSCIA8AC100	DA090913CIA02_30A	N	07/01/2014	SOIL	0	0.25

N = Normal Sample
FD = Field Duplicate

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received July 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
J2 Range Northern	MW-612M2	MW-612M2_R2	267	277	06/24/2014	SW6860	Perchlorate	0.020	J	UG/L	2.0		0.011	0.050
J2 Range Northern	MW-612M1	MW-612M1_R2	297	307	06/24/2014	SW6860	Perchlorate	0.036	J	UG/L	2.0		0.011	0.050
J2 Range Northern	MW-613M2	MW-613M2_R2	246.1	256.1	06/24/2014	SW6860	Perchlorate	0.019	J	UG/L	2.0		0.011	0.050
J2 Range Northern	MW-613M1	MW-613M1_R2	267.1	277.1	06/24/2014	SW6860	Perchlorate	0.022	J	UG/L	2.0		0.011	0.050
J2 Range Northern	MW-619M2	MW-619M2_R2	234.1	244.1	06/24/2014	SW6860	Perchlorate	0.048	J	UG/L	2.0		0.011	0.050
J2 Range Northern	MW-619M1	MW-619M1_R2	255.1	265.1	06/24/2014	SW6860	Perchlorate	0.61		UG/L	2.0		0.011	0.050
Northwest Corner	MW-278S	MW-278S_S14	80	90	06/18/2014	SW6860	Perchlorate	0.35		UG/L	2.0		0.011	0.050
Northwest Corner	MW-278M2	MW-278M2_S14	97	102	06/18/2014	SW6860	Perchlorate	0.74		UG/L	2.0		0.011	0.050
Northwest Corner	MW-278M1	MW-278M1_S14	113	123	06/18/2014	SW6860	Perchlorate	0.59		UG/L	2.0		0.011	0.050
Northwest Corner	MW-279S	MW-279S_S14	66	76	06/18/2014	SW6860	Perchlorate	0.46		UG/L	2.0		0.011	0.050
Northwest Corner	MW-279M2	MW-279M2_S14	83	88	06/18/2014	SW6860	Perchlorate	1.4		UG/L	2.0		0.11	0.50
Northwest Corner	MW-279M2	MW-279M2_S14D	83	88	06/18/2014	SW6860	Perchlorate	1.5		UG/L	2.0		0.11	0.50
Northwest Corner	MW-279M1	MW-279M1_S14	96	106	06/18/2014	SW6860	Perchlorate	0.28		UG/L	2.0		0.011	0.050
Northwest Corner	MW-270S	MW-270S_S14	22	32	06/17/2014	SW6860	Perchlorate	0.24		UG/L	2.0		0.011	0.050
Northwest Corner	MW-270M1	MW-270M1_S14	74	79	06/17/2014	SW6860	Perchlorate	0.34		UG/L	2.0		0.011	0.050
Northwest Corner	MW-270D	MW-270D_S14	132	137	06/17/2014	SW6860	Perchlorate	0.093		UG/L	2.0		0.011	0.050
Northwest Corner	MW-283M1	MW-283M1_S14	38	48	06/17/2014	SW6860	Perchlorate	0.15		UG/L	2.0		0.011	0.050
Central Impact Area	MW-624M2	MW-624M2_JUN14	254	264	06/17/2014	SW6850	Perchlorate	0.020	J	UG/L	2.0		0.019	0.20
Northwest Corner	MW-284M2	MW-284M2_S14	45	55	06/17/2014	SW6860	Perchlorate	1.2		UG/L	2.0		0.11	0.50
Northwest Corner	MW-284M2	MW-284M2_S14D	45	55	06/17/2014	SW6860	Perchlorate	1.3		UG/L	2.0		0.11	0.50
Central Impact Area	MW-624M1	MW-624M1_JUN14	284	294	06/17/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.046	J	UG/L	0.60		0.026	0.20
Northwest Corner	MW-284M1	MW-284M1_S14	115	125	06/17/2014	SW6860	Perchlorate	0.20		UG/L	2.0		0.011	0.050
Northwest Corner	MW-344S	MW-344S_S14	115.5	125.5	06/16/2014	SW6860	Perchlorate	0.23		UG/L	2.0		0.011	0.050
Central Impact Area	MW-623M1	MW-623M1_JUN14	340	350	06/16/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.10	J	UG/L	0.60		0.026	0.20
Central Impact Area	MW-623M3	MW-623M3_JUN14	275	285	06/16/2014	SW6850	Perchlorate	0.069	J	UG/L	2.0		0.019	0.20
Central Impact Area	MW-623M3	MW-623M3_JUN14	275	285	06/16/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	0.19	J	UG/L	400		0.023	0.20
Central Impact Area	MW-623M3	MW-623M3_JUN14	275	285	06/16/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	2.9		UG/L	0.60	X	0.026	0.20
Northwest Corner	MW-344M2	MW-344M2_S14	145	155	06/16/2014	SW6860	Perchlorate	2.0		UG/L	2.0		0.011	0.050
Central Impact Area	MW-614M2	MW-614M2_JUN14	215	225	06/16/2014	SW6850	Perchlorate	0.051	J	UG/L	2.0		0.019	0.20
Central Impact Area	MW-614M2	MW-614M2_JUN14D	215	225	06/16/2014	SW6850	Perchlorate	0.040	J	UG/L	2.0		0.019	0.20
Central Impact Area	MW-614M1	MW-614M1_JUN14	275	285	06/16/2014	SW6850	Perchlorate	0.021	J	UG/L	2.0		0.019	0.20
Central Impact Area	MW-614M1	MW-614M1_JUN14	275	285	06/16/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	1.5		UG/L	0.60	X	0.026	0.20
Northwest Corner	MW-441M1	MW-441M1_S14	204.6	214.6	06/16/2014	SW6860	Perchlorate	0.052		UG/L	2.0		0.011	0.050
Central Impact Area	MW-615M1	MW-615M1_JUN14	260	270	06/16/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	0.14	J	UG/L	400		0.023	0.20
Central Impact Area	MW-615M1	MW-615M1_JUN14	260	270	06/16/2014	SW6850	Perchlorate	1.1		UG/L	2.0		0.019	0.20
Central Impact Area	MW-615M1	MW-615M1_JUN14	260	270	06/16/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	2.5		UG/L	0.60	X	0.026	0.20
Central Impact Area	MW-615M2	MW-615M2_JUN14	200	210	06/16/2014	SW6850	Perchlorate	0.038	J	UG/L	2.0		0.019	0.20
Western Boundary	MW-213M3	MW-213M3_S14	77	82	06/12/2014	SW6860	Perchlorate	0.20		UG/L	2.0		0.011	0.050
Western Boundary	MW-213M2	MW-213M2_S14	89	99	06/12/2014	SW6860	Perchlorate	0.28		UG/L	2.0		0.011	0.050
Western Boundary	MW-213M2	MW-213M2_S14D	89	99	06/12/2014	SW6860	Perchlorate	0.28		UG/L	2.0		0.011	0.050
Western Boundary	MW-02-09M2	MW-02-09M2_S14	59	69	06/11/2014	SW6860	Perchlorate	0.14		UG/L	2.0		0.011	0.050
Western Boundary	MW-02-09M1	MW-02-09M1_S14	74	84	06/11/2014	SW6860	Perchlorate	0.21		UG/L	2.0		0.011	0.050
Western Boundary	MW-02-09M1	MW-02-09M1_S14D	74	84	06/11/2014	SW6860	Perchlorate	0.22		UG/L	2.0		0.011	0.050
Western Boundary	MW-02-08M3	MW-02-08M3_S14	62	67	06/11/2014	SW6860	Perchlorate	0.097		UG/L	2.0		0.011	0.050
Western Boundary	MW-02-08M2	MW-02-08M2_S14	82	87	06/11/2014	SW6860	Perchlorate	0.14		UG/L	2.0		0.011	0.050
Western Boundary	MW-02-07M3	MW-02-07M3_S14	47	57	06/11/2014	SW6860	Perchlorate	0.17		UG/L	2.0		0.011	0.050

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

MCL/HA= Either the MCL or Lowest Health Advisory Limit

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received July 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
Western Boundary	MW-80M2	MW-80M2_S14	99	109	06/10/2014	SW6860	Perchlorate	0.047	J	UG/L	2.0		0.011	0.050
Western Boundary	MW-80M1	MW-80M1_S14	130	140	06/10/2014	SW6860	Perchlorate	0.13		UG/L	2.0		0.011	0.050
Western Boundary	MW-233M3	MW-233M3_S14	231	241	06/10/2014	SW6860	Perchlorate	0.093		UG/L	2.0		0.011	0.050
Western Boundary	MW-280M3	MW-280M3_S14	185	195	06/10/2014	SW6860	Perchlorate	0.042	J	UG/L	2.0		0.011	0.050
Western Boundary	MW-280M2	MW-280M2_S14	202	212	06/10/2014	SW6860	Perchlorate	0.033	J	UG/L	2.0		0.011	0.050
Western Boundary	MW-280M1	MW-280M1_S14	255	265	06/10/2014	SW6860	Perchlorate	0.051		UG/L	2.0		0.011	0.050
Western Boundary	MW-268M1	MW-268M1_S14	97	107	06/09/2014	SW6860	Perchlorate	0.050		UG/L	2.0		0.011	0.050
Demolition Area 2	MW-380M2	MW-380M2_S14	205.7	215.7	06/09/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.39		UG/L	0.60		0.026	0.20
Demolition Area 2	MW-161S	MW-161S_S14	145.5	155.5	06/04/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	1.3		UG/L	0.60	X	0.026	0.20
Demolition Area 2	MW-161S	MW-161S_S14D	145.5	155.5	06/04/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	1.3		UG/L	0.60	X	0.026	0.20
Demolition Area 2	MW-573M2	MW-573M2_S14	155.4	165.4	06/03/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	2.6		UG/L	0.60	X	0.026	0.20
Demolition Area 2	MW-573M2	MW-573M2_S14D	155.4	165.4	06/03/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	2.7		UG/L	0.60	X	0.026	0.20
Demolition Area 2	MW-572M1	MW-572M1_S14	164.9	174.9	06/03/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.61		UG/L	0.60	X	0.026	0.20
Demolition Area 2	MW-435M2	MW-435M2_S14	149.6	159.9	06/03/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.31		UG/L	0.60		0.026	0.20
J1 Range Southern	MW-524M1	MW-524M1_S14	148	158	06/02/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	0.49		UG/L	400		0.023	0.20
J1 Range Southern	MW-524M1	MW-524M1_S14	148	158	06/02/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	1.8		UG/L	0.60	X	0.026	0.20
J1 Range Southern	MW-524M1	MW-524M1_S14D	148	158	06/02/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	0.49		UG/L	400		0.023	0.20
J1 Range Southern	MW-524M1	MW-524M1_S14D	148	158	06/02/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	1.8		UG/L	0.60	X	0.026	0.20
J1 Range Southern	MW-592M2	MW-592M2_S14	158	168	06/02/2014	SW8330	3-Nitrotoluene	0.56		UG/L	120		0.053	0.20
J1 Range Southern	MW-592M1	MW-592M1_S14	201	211	06/02/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	1.0		UG/L	0.60	X	0.026	0.20
Former A Range	MW-536S	MW-536S_S14	158	168	05/28/2014	SW6860	Perchlorate	0.66		UG/L	2.0		0.011	0.050
J1 Range Northern	MW-605M2	MW-605M2_R3	182.2	192.2	05/27/2014	SW6860	Perchlorate	0.086		UG/L	2.0		0.011	0.050
J1 Range Northern	MW-605M1	MW-605M1_R3	220.2	230.2	05/27/2014	SW6860	Perchlorate	0.024	J	UG/L	2.0		0.011	0.050
J1 Range Northern	MW-606M2	MW-606M2_R3	193.2	203.2	05/20/2014	SW6860	Perchlorate	0.031	J	UG/L	2.0		0.011	0.050
J1 Range Northern	MW-606M1	MW-606M1_R3	233.2	243.2	05/20/2014	SW6860	Perchlorate	0.021	J	UG/L	2.0		0.011	0.050
J1 Range Northern	MW-590M2	MW-590M2_S14	238	248	05/20/2014	SW6860	Perchlorate	2.2		UG/L	2.0	X	0.011	0.050
J1 Range Northern	MW-590M1	MW-590M1_S14	258	268	05/20/2014	SW6860	Perchlorate	0.035	J	UG/L	2.0		0.011	0.050
J1 Range Northern	MW-303M3	MW-303M3_S14	139.7	149.7	05/20/2014	SW6860	Perchlorate	0.027	J	UG/L	2.0		0.011	0.050
J1 Range Northern	MW-303M3	MW-303M3_S14	139.7	149.7	05/20/2014	SW8330	4-Amino-2,6-Dinitrotoluene	0.37		UG/L	7.3		0.017	0.20
J1 Range Northern	MW-303M2	MW-303M2_S14	235.1	245.1	05/20/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	16.7		UG/L	0.60	X	0.026	0.20
J1 Range Northern	MW-303M2	MW-303M2_S14	235.1	245.1	05/20/2014	SW6860	Perchlorate	3.7		UG/L	2.0	X	0.011	0.050
J1 Range Northern	MW-303M2	MW-303M2_S14	235.1	245.1	05/20/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	4.4		UG/L	400		0.023	0.20
J1 Range Northern	MW-245M2	MW-245M2_S14	204	214	05/20/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	4.2		UG/L	400		0.023	0.20
J1 Range Northern	MW-245M2	MW-245M2_S14	204	214	05/20/2014	SW6860	Perchlorate	71.1		UG/L	2.0	X	0.11	0.50
J1 Range Northern	MW-245M2	MW-245M2_S14	204	214	05/20/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	82.1		UG/L	0.60	X	0.13	1.0
J1 Range Northern	MW-245M2	MW-245M2_S14D	204	214	05/20/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	4.1		UG/L	400		0.023	0.20
J1 Range Northern	MW-245M2	MW-245M2_S14D	204	214	05/20/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	69.5		UG/L	0.60	X	0.13	1.0
J1 Range Northern	MW-245M2	MW-245M2_S14D	204	214	05/20/2014	SW6860	Perchlorate	71.3		UG/L	2.0	X	0.11	0.50
J1 Range Northern	MW-584M2	MW-584M2_S14	228	238	05/19/2014	SW6860	Perchlorate	0.16		UG/L	2.0		0.011	0.050
J1 Range Northern	MW-584M1	MW-584M1_S14	248	258	05/19/2014	SW6860	Perchlorate	3.1		UG/L	2.0	X	0.011	0.050
J1 Range Northern	MW-566M1	MW-566M1_S14	232	242	05/19/2014	SW6860	Perchlorate	10.4		UG/L	2.0	X	0.11	0.50
J1 Range Northern	MW-549M2	MW-549M2_S14	187.3	197.3	05/19/2014	SW6860	Perchlorate	0.060		UG/L	2.0		0.011	0.050
J1 Range Northern	MW-549M1	MW-549M1_S14	227.4	237.4	05/19/2014	SW6860	Perchlorate	3.5		UG/L	2.0	X	0.011	0.050
J1 Range Northern	MW-564M1	MW-564M1_S14	227	237	05/19/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	1.9		UG/L	0.60	X	0.026	0.20
J1 Range Northern	MW-564M1	MW-564M1_S14	227	237	05/19/2014	SW6860	Perchlorate	55.3		UG/L	2.0	X	0.11	0.50
J1 Range Northern	MW-564M1	MW-564M1_S14D	227	237	05/19/2014	SW6860	Perchlorate	55.5		UG/L	2.0	X	0.11	0.50

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

MCL/HA= Either the MCL or Lowest Health Advisory Limit

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received July 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
J1 Range Northern	MW-370M2	MW-370M2_S14	215.5	225.5	05/19/2014	SW6860	Perchlorate	0.30		UG/L	2.0		0.011	0.050
J1 Range Northern	MW-567M1	MW-567M1_S14	215.5	225.5	05/19/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	3.8		UG/L	0.60	X	0.026	0.20
J1 Range Northern	MW-567M1	MW-567M1_S14	215.5	225.5	05/19/2014	SW6860	Perchlorate	34.4		UG/L	2.0	X	0.11	0.50
J1 Range Northern	MW-401M3	MW-401M3_S14	228.5	238.5	05/15/2014	SW6860	Perchlorate	0.18		UG/L	2.0		0.011	0.050
J1 Range Northern	MW-430M2	MW-430M2_S14	188.4	198.4	05/15/2014	SW6860	Perchlorate	0.063		UG/L	2.0		0.011	0.050
J1 Range Northern	MW-430M1	MW-430M1_S14	245.2	255.2	05/15/2014	SW6860	Perchlorate	0.022	J	UG/L	2.0		0.011	0.050
J1 Range Northern	MW-541M1	MW-541M1_S14	210	220	05/15/2014	SW6860	Perchlorate	0.028	J	UG/L	2.0		0.011	0.050
J3 Range	MW-576M3	MW-576M3_R1	99.4	109.4	05/14/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	0.29		UG/L	400		0.023	0.20
J3 Range	MW-576M3	MW-576M3_R1	99.4	109.4	05/14/2014	SW6860	Perchlorate	0.77		UG/L	2.0		0.011	0.050
J3 Range	MW-576M2	MW-576M2_R1	134.4	144.4	05/14/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	2.0		UG/L	400		0.023	0.20
J3 Range	MW-576M2	MW-576M2_R1	134.4	144.4	05/14/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	2.8		UG/L	0.60	X	0.026	0.20
J3 Range	MW-576M2	MW-576M2_R1	134.4	144.4	05/14/2014	SW6860	Perchlorate	46.0		UG/L	2.0	X	1.1	5.0
J3 Range	MW-576M1	MW-576M1_R1	174.4	184.4	05/14/2014	SW6860	Perchlorate	0.74		UG/L	2.0		0.011	0.050
J3 Range	MW-637M2	MW-637M2_R1	213.8	223.8	05/12/2014	SW6860	Perchlorate	2.7		UG/L	2.0	X	0.011	0.050
Demolition Area 1	MW-341M3	MW-341M3_S14	209.5	219.5	05/12/2014	SW6860	Perchlorate	0.086		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-341M2	MW-341M2_S14	264.5	269.5	05/12/2014	SW6860	Perchlorate	1.00		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-432	MW-432_S14	88	188	05/06/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.52		UG/L	0.60		0.026	0.20
Demolition Area 1	MW-432	MW-432_S14	88	188	05/06/2014	SW6860	Perchlorate	0.73		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-431	MW-431_S14	88	188	05/06/2014	SW6860	Perchlorate	0.18		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-431	MW-431_S14	88	188	05/06/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.65		UG/L	0.60	X	0.026	0.20
Demolition Area 1	MW-431	MW-431_S14	88	188	05/06/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	0.70		UG/L	400		0.023	0.20
Demolition Area 1	MW-431	MW-431_S14D	88	188	05/06/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.64		UG/L	0.60	X	0.026	0.20
Demolition Area 1	MW-431	MW-431_S14D	88	188	05/06/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	0.70		UG/L	400		0.023	0.20
Demolition Area 1	MW-274	MW-274_S14	109	199	05/06/2014	SW6860	Perchlorate	0.25		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-210M2	MW-210M2_S14	156	166	05/06/2014	SW6860	Perchlorate	1.0		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-353M1	MW-353M1_S14	107	117	05/05/2014	SW6860	Perchlorate	0.22		UG/L	2.0		0.011	0.050
Demolition Area 1	XX9514	XX9514_S14	102	112	05/05/2014	SW6860	Perchlorate	1.3		UG/L	2.0		0.011	0.050
Demolition Area 1	XX9514	XX9514_S14D	102	112	05/05/2014	SW6860	Perchlorate	1.3		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-76S	MW-76S_S14	85	95	04/30/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.63		UG/L	0.60	X	0.026	0.20
Demolition Area 1	MW-76S	MW-76S_S14	85	95	04/30/2014	SW6860	Perchlorate	0.81		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-76M2	MW-76M2_S14	105	115	04/30/2014	SW6860	Perchlorate	0.32		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-76M2	MW-76M2_S14	105	115	04/30/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.60		UG/L	0.60		0.026	0.20
Demolition Area 1	MW-76M2	MW-76M2_S14	105	115	04/30/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	0.90		UG/L	400		0.023	0.20
Demolition Area 1	MW-76M1	MW-76M1_S14	125	135	04/30/2014	SW6860	Perchlorate	0.063		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-77M2	MW-77M2_S14	120	130	04/30/2014	SW6860	Perchlorate	0.28		UG/L	2.0		0.011	0.050
Demolition Area 1	MW-77M2	MW-77M2_S14	120	130	04/30/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	1.8		UG/L	400		0.023	0.20
Demolition Area 1	MW-77M2	MW-77M2_S14	120	130	04/30/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	2.3		UG/L	0.60	X	0.026	0.20
Demolition Area 1	MW-77M2	MW-77M2_S14D	120	130	04/30/2014	SW8330	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	1.9		UG/L	400		0.023	0.20
Demolition Area 1	MW-77M2	MW-77M2_S14D	120	130	04/30/2014	SW8330	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	2.4		UG/L	0.60	X	0.026	0.20

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