MONTHLY PROGRESS REPORT #265
FOR APRIL 2019

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

JOINT BASE CAPE COD (JBCC)
TRAINING RANGE AND IMPACT AREA

The following summary of progress is for the period from 1 April to 30 April 2019.

1. SUMMARY OF REMEDIATION ACTIONS

The following is a description of Remediation Actions (RA) underway at Camp Edwards as of April 2019.

Demolition Area 1 Comprehensive Groundwater RA

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

The Frank Perkins Road Treatment Facility has been optimized as part of the Environmental and System Performance Monitoring (ESPM) program at Demolition Area 1. The treatment facility continues to operate at a flow rate of 175 gpm, with over 2.637 billion gallons of water treated and re-injected as of 26 April 2019. The following Frank Perkins Road Treatment Facility shutdown(s) occurred during the April reporting period:

- Frank Perkins extraction well EW-658 shut down due to a power supply interruption. EW-658 shut down at 1110 h on 21 April 2019 and was restarted at 0715 h on 22 April 2019.

The Pew Road Mobile Treatment Unit (MTU) continues to operate at a flow rate of 65 GPM, with over 612.3 million gallons of water treated and re-injected as of 26 April 2019. The following Pew Road MTU shutdown(s) occurred during the April reporting period:

- The Pew Road MTU shut down due to a power supply interruption. The MTU shut down at 1110 h on 21 April 2019 and was restarted at 0753 h on 22 April 2019.

The Base Boundary MTU continues to operate at a flow rate of 65 gpm, with over 228.0 million gallons of water treated and re-injected as of 26 April 2019. No shutdowns of the Base Boundary MTU occurred during the April reporting period.

The Leading Edge system continues to operate at a flow rate of 100 gpm, with over 143.3 million gallons of water treated and re-injected as of 26 April 2019. No shutdowns of the Leading Edge system occurred during the April reporting period.

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 26 April 2019, over 1.116 billion gallons of water have been treated and re-injected. No shutdowns of the Northern Treatment Building occurred in the April reporting period.

The Northern MTUs E and F continue to operate at a flow rate of 250 gpm. As of 26 April 2019, over 1.573 billion gallons of water have been treated and re-injected. No J-2 Range Northern system shutdowns occurred during the April reporting period.

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 26 April 2019, over 1.222 billion gallons of water have been treated and re-injected. No shutdowns of MTUs H and I occurred during the April reporting period.

MTU J continues to operate at a flow rate of 120 gpm. As of 26 April 2019, over 556.9 million gallons of water have been treated and re-injected. The following shutdowns of MTU J occurred during the April reporting period:

- MTU J was turned off to replace a leaking valve, two frozen valves, a hose, and the bag filters. MTU J was turned off at 1130 h on 30 April 2019 and was restarted at 1340 h on 30 April 2019.

MTU K continues to operate at a flow rate of 125 gpm. As of 26 April 2019, over 672.4 million gallons of water have been treated and re-injected. No shutdowns of MTU K occurred during the April reporting period.

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 is currently operating at a flow rate of 255 gpm (while J3EW0032 is running at 45 gpm instead of 65 gpm). As of 26 April 2019, over 1.233 billion gallons of water have been treated and re-injected. The following J-3 Range system shutdown(s) occurred during the April reporting period:

- The System shut down due to an FS-12 shut down. The System shut down at 1003 h on 11 April 2019 and was restarted at 1120 h on 11 April 2019.

- The System shut down due to an FS-12 shut down. The System shut down at 2206 h on 11 April 2019 and was restarted at 0914 h on 12 April 2019.
- The System shut down due to an FS-12 shut down. The System shut down at 1012 h on 12 April 2019 and was restarted at 1046 h on 12 April 2019.
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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 26 April 2019, over 534.1 million gallons of water have been treated and re-injected. The following shutdowns of the J-1 Range Southern system occurred during the April reporting period:

- J1SEW0002 was turned off so J1SEW0001 could be turned on for the semi-annual SPM groundwater sampling. J1SEW0002 was turned off at 0850 h on 11 April 2019 and restarted at 0939 h on 11 April 2019.

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 26 April 2019, over 695.7 million gallons of water have been treated and re-injected. The following shutdowns of the J-1 Range Northern MTU occurred during the April reporting period:

- Extraction well J1NEW0002 shut down due to a power supply interruption caused by thunderstorms. J1NEW0002 shut down at 0806 h on 15 April 2019 and was restarted at 1153 h on 15 April 2019.

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 26 April 2019, over 1.671 billion gallons of water have been treated and re-injected. The following CIA treatment facility shutdowns occurred during the April reporting period:

- System 2 shut down due to a power supply interruption. The MTU shut down at 1110 h on 21 April 2019 and was restarted at 0832 h on 22 April 2019.

SUMMARY OF ACTIONS TAKEN

CIA

- Performed routine inspections of BEM cover at the Central Impact Area to ensure cover is secure and intact.
- Performed vegetation clearance in 15-acre P3A2.
- Commenced re-digs/intrusive investigation in P3A1.
- Completed blind seeding for P3A1 re-digs.
- Blind seeding in P3A2 deferred until vegetation clearance is complete.

Demolition Area 1

- No activity.

Small Arms Ranges

- Site grading at Former M2, C, G and U Ranges.

J-1 Range

- No activity.

J-2 Range

- No activity.

J-3 Range

- No activity.

L Range

- No activity.

Training Areas

- No activity.

Other

- Process water samples were collected from the Central Impact Area, Demolition Area 1, J-1 Range Northern, J-1 Range Southern, J-2 Range Eastern, J-2 Range Northern, and J-3 Range.
- Groundwater samples were collected from the Central Impact Area, Demolition Area 2, J-1 Range Northern, J-1 Range Southern, and Northwest Corner.

JBCC IAGWSP Tech Update Meeting Minutes 11 April 2019

CIA Fieldwork Kickoff Discussion

A presentation as provided on the plans for the upcoming CIA source removal field season. It was noted that the key elements for the 2019 field season are the intrusive re-investigation of 6,700 anomalies including QC seeding and intrusive re-investigation as well as the removal action over 15 acres. The removal action will consist of vegetation removal/surface sweep, tree clearance, QC seeding, a DGM survey, cued MetalMapper survey and an intrusive survey.

A schedule overview was displayed and reviewed. It was explained that the schedule assumes the team will work all available Monday through Friday work days that are available on the range and a 6:30 a.m. to 4:30 p.m. work day.

A figure showing the 15 acres of Phase III Area 2 was displayed and explained. It was noted that the survey and sub-survey units were numbered one through five and the team would work in chronological order. The teams that mobilized this week have begun with vegetation removal and surface sweep. It is estimated that this work will be completed by May 1. Vegetation and trees less than five inches in diameter are being cut. In addition the team has begun blind seeding for the intrusive re-investigation of Phase III Area 1 and Phase III Area 2.

Beginning April 22nd through July 8th the team will be performing the intrusive re-investigation of 6,700 Phase III Area 1 digs. The team estimates that they will have a production rate of 50 – 55 digs per day per team. Currently it is planned for three intrusive teams with a contingency for an additional intrusive team if needed.

May 13th through June 7th the team will perform the DGM survey of 15 acres. The work has been sequenced to expedite the start of the cued MetalMapper surveys and they estimate a production rate of 0.75 acres/day.

The MetalMapper cued surveys of approximately 33,000 targets will begin May 28th and go through September 12th. The estimated production rate is 250 points per day per team. The area has been broken into five survey units to expedite the dig list for each survey unit for intrusive teams. Challenges include creating locations for cued background shots.

The intrusive teams from Area 1 will roll over into Area 2 approximately on July 8th and work through November 7th. There is an estimated production rate of 40-45 digs per day per team. Currently there are four intrusive teams planned with a contingency for additional team if needed.

Project and Fieldwork Update

Currently there is no drilling. All treatment systems are up and running. The J-1 South project note was signed so the team is working on a mobilization date for the drillers, most likely early spring.

In the Small Arms Ranges, crews are performing grading and excavation to prevent erosion. Contractors will be coming back the last week of April to perform the additional lifts at D Range and Former B Range. A site visit was scheduled for April 17 or 18 to visit all Small Arms Ranges sites where excavation work was conducted.

Action Items

The action items were discussed and updated.

J-1 Range Northern Annual Environmental Monitoring Report Presentation

A presentation was provided on the J-1 Range Northern Annual Environmental Monitoring Report. It was noted that during the reporting period (January 2018 to December 2018), no new work was conducted. The J-1 Range Northern groundwater treatment system performance statistics were reviewed and discussed. During the reporting period, at the J-1 North MTU, 129 million gallons of groundwater were treated, 0.77 pounds of perchlorate and 0.09 pounds of RDX were removed.

Sampling locations, groundwater monitoring results, and trends were reviewed and discussed. For Perchlorate concentrations in Zone 1, there is a slight increase from 2017 in the trailing edge at MW-346M1 (11.7 µg/L, Nov 2017 to 14.4 µg/L, Nov 2018). Low concentrations continue in trailing edge well MW-346M2 (0.37 µg/L, Nov 2018). There is a declining trend in the mid-plume at MW-265M2 (13.9 µg/L, Dec 2018) and a declining trend continues at MW-245M2 (15.1 µg/L /7.7 µg/L in May/Nov 2018, respectively). For RDX, there is a steady trend in the trailing edge well at MW-303M2 (8.9 µg/L/7.3 µg/L, May/Nov 2018, respectively) and there continues to be a slight increasing trend in the mid-plume MW-346M1(11.5µg/L in Nov 2018). The maximum RDX concentration was detected at MW-245M2 (45.4 µg/L/35.9 µg/L in May/Nov, respectively).

For Perchlorate concentrations in Zone 2, there continues to be a <0.35 µg/L concentration trend in the trailing edge (MW-370M2). Concentrations in the mid-plume wells were slightly lower or steady during this reporting period. The maximum perchlorate detected was in MW-564M1 (24.8 µg/L and 14.8 µg/L in May and Nov 2018). For RDX, there is a continued non-detect in the trailing edge (MW-370M2, since 2014). The first low detections were seen in the deep trailing edge (MW-370M1) of 0.21 µg/L /0.53 µg/L in May/Dec, respectively). There is a constant trend of concentrations between 2.6 µg/L – 3.2 µg/L in the mid-plume (MW564M1). The maximum RDX concentration was detected at MW-564M1 (3.2 µg/L in Nov 2018).

The hydraulic monitoring and capture zone analysis was displayed. There was one synoptic water lever round in November 2018 and hydraulic measurements were consistent with past results. The capture zones were developed manually and by model. The model predicted and observed capture zones include the entire plumes. The observed capture zone is slightly smaller than the model predicted one.

Decision Document cleanup timelines were discussed. Perchlorate and RDX observed measurements does not indicate any obvious delays in cleanup timeline. Perchlorate concentrations in MW-370M1 above 2.0 µg/L, if sustained, could impact cleanup timelines. IAGWSP recommends making no modifications to treatment system operations or changes to the hydraulic or chemical monitoring networks.

J-1 Southern Annual Environmental Monitoring Report Presentation

A presentation was provided on the J-1 Range Southern Annual Environmental Monitoring Report. It was noted that during the reporting period (January 2018 to December 2018), a source area drive point program was conducted in Zone 1. The J-1 Range Southern groundwater treatment system performance statistics were reviewed and discussed. During the reporting period, 61.6 million gallons of groundwater was treated and 0.14 pounds of RDX were removed.

Sampling locations, groundwater monitoring results, and trends were reviewed and discussed. The RDX concentration in Zone 1 (source area to J1SEW0001) was ND at MW-360M2; a decline from 6.44 µg/L in 2016. The Zone 1 plume was depicted using revised plume shell based on completion of drive point program in 2018. The RDX plume is currently interpreted to be above the risk-based concentration east of MW-528M1 and between MW-131S/MW-360 and base boundary. The maximum RDX concentration is 23 µg/L at drivepoint DP-718 south of Greenway Road at base boundary.

In Zone 2 (J1SEW0001 to J1SEW0002), the maximum concentration is 3.5 µg/L (MW-647M1). MW-524M1 (Upgradient of J1SEW0002) has been < 6 µg/L since Oct 2013; < 2 µg/L 2018. At Windsong Road, MW-482M2 has been consistently 1.0 µg/L Oct 2018; MW-645M1 0.61 µg/L (slight decline from 2017). At Song Bird Circle, MW-592M1 has been consistently < 1 µg/L since 2015. The Leading Edge Eastern Lobe wells on Pleasant Wood Drive (MW-646M1/M2) have been ND since 2015. Leading Edge wells MW-647M1: saw 3.5 µg/L (Apr 2018 maximum annual); declined to 1.9 µg/L in Oct 2018. There was

ND to <0.6 µg/L at MW-400M1/M2, MW- 402M1/M2, MW-403M1/M2 and ND at MW-525M1/M2, MW-526M1, MW-527M1. The Western Extent is constrained by NDs in MW-481M1/M2, MW-521M1, MW-522M1/M2 and the Eastern Extent constrained by ND to <0.6 µg/L in MW-591M1/M2, MW-592M1/M2.

The hydraulic monitoring and capture zone analysis was displayed. There was one synoptic water level round in July 2017 and hydraulic measurements were generally consistent with past results. Water levels from the top of the mound increased by 2.5 to 3 feed from last year. The capture zones were developed manually and by model. The United States Geological Survey top of mound well is trending higher to levels last measured in 2013/2014 (> 71 ft msl). The capture zone was confirmed on the eastern boundary (Songbird Circle). The extent horizontally and vertically downgradient of J1SEW0002 is similar to July 2017. Most of the leading edge of the plume is captured under slightly steeper hydraulic gradient (stagnation point similar position downgradient compared to July 2017).

Decision Document cleanup timelines were discussed. The DD timeline was based on the 2009 Plume Shell. The May 2011 DD cleanup timeline (< 0.6 µg/L) was 2024 but the September 2011 project note that located the leading edge extraction well predicted 2032. Predictions based on the 2017 plume shell estimates that upgradient of J1SEW0001 will be < 0.6 µg/L in 2031, upgradient of J1SEW0002 will be < 0.6 µg/L in 2035, downgradient of J1SEW0002 will be < 2.0 µg/L in 2038 and downgradient of J1SEW0002 will be < 0.6 µg/L in 2047.

IAGWSP recommends making no modifications to treatment system operations or changes to the hydraulic or chemical monitoring networks. In Zone 1, per the approved project note dated March 2019, three additional monitoring wells will be installed in 2019 and incorporated into the monitoring network.

JBCC IAGWSP Tech Update Meeting Minutes 25 April 2019

Project and Fieldwork Update

There is a tentative mobilization date for the drill rig of June 3. The drillers will start with the three J-1 South locations and then move to the westernmost CIA location to keep out of the way of UXO work. A project note was submitted for the two well locations off-base in Demolition Area 1 Zone 4. It was noted that the location to the north is situated as far north as is feasible as there is a salt marsh and woods abutting the area. The remaining CIA wells will be installed this winter once the UXO crews are out of the way. Long-term monitoring sampling is underway in J-1 North. All groundwater treatment systems are up and running. There was a power outage on the base grid over the weekend and systems were down for about a day.

In the Small Arms Ranges, crews are performing grading and excavation to prevent erosion. Contractors will be coming back the second week in May to perform the additional lifts at D Range and Former B Range. It was noted that there are a lot of random soil piles on the reserve. It was suggested that a site visit should be conducted to GPS and map the locations so it can be determined who owns them and if the soil can be reused or needs to be disposed off-site.

In the Central Impact Area, there are three crews working. One is finishing the brush cutting and the other two are in Area A of Area 1 performing re-digs. They began yesterday and have not found anything yet.

Action Items

The action items were discussed and updated.

JBCC Cleanup Team Meeting

The next meeting of the JBCC Cleanup Team (JBCCCT) has yet to be scheduled (previous meeting was 13 March 2019). 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 1 summarizes sampling for all media from 1 April to 30 April 2019. Table 2 summarizes the validated detections of explosives compounds and perchlorate for all groundwater results received from 1 April to 30 April. 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.

Twelve operable units (OU) are 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 Area, 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. 264 for March 2019	11 Apr 2019
• Central Impact Area Proposed Wells Project Note	1 Apr 2019
• Draft J-1 Northern and J-1 Range Southern 2019 Annual Environmental Monitoring Report	5 Apr 2019
• J-2 Range Northern/Eastern Additional Explosives/Perchlorate Sampling Project Note	11 Apr 2019
• Confirmatory Geophysical Investigation (EM-61 Survey) at J-3 Range Study Area 6 (Barrage Rocket Area) Project Note	11 Apr 2019
• Final Sampling Work Plan for Per- and Polyfluoroalkyl Substances (PFAS)	17 Apr 2019
• Final J-3 Range 2018 Annual Environmental Monitoring Report	19 Apr 2019
• Memorandum of Resolution for the Draft J-2 Range Eastern 2018 Environmental Monitoring Report and J-2 Range Northern 2018 Environmental Monitoring Report	25 Apr 2019
• Demolition Area 1 Leading Edge Profile Borings Project Note	30 Apr 2019

3. SCHEDULED ACTIONS

The following documents are being prepared or revised during May 2019:

<u>Training Areas</u>

- MassDEP to submit comments on project notes (Pyrotechnics, Engineer Training Site, and Former E Range) on supplemental work.

<u>Annual Reports/Environmental Monitoring Reports/Work Plans</u>

- EPA to provide feedback/approval of Memorandum of Resolution on draft J-2 Range Northern and J-2 Range Eastern Annual Environmental Monitoring Report.

- EPA to provide comments on draft J-1 Range Northern and J-1 Range Southern Annual Environmental Monitoring Report.
- IAGWSP to provide Draft L Range 2019 Environmental Monitoring Report.

Central Impact Area

- IAGWSP to provide Memorandum of Resolution on 2019 Workplan project note.
- EPA and MassDEP to provide comments on 2018 Source Report.

Miscellaneous

- IAGWSP to provide responses to comments on the draft Five Year Review report.
- EPA to provide comments on draft final completion of work report for J-2 Range geophysical work and additional well locations.
- EPA to provide input on next steps for obtaining Certificates of Compliance for sites that are completed, e.g. Former A Range and Western Boundary.
- IAGWSP to schedule sampling for PFAS sampling for a few wells downgradient of OB/OD sites. (Demolition Area 1, J-2 North, J-2 East, and J-3 Range).
- EPA to provide feedback on recommendations for BEM disposal of the rockets found in the CIA and on the J-2 Range.
- EPA to provide comments on KD Range project note.
- IAGWSP to provide draft joint IAGWSP/IRP program fact sheet.
- IAGWSP to provide draft Land Use Controls report.

TABLE 1
Sampling Progress: 1 April to 30 April 2019

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
Demolition Area 2	MW-380M2	MW-380M2_S19	N	04/30/2019	Ground Water	205.66	215.66
Demolition Area 2	MW-380M1	MW-380M1_S19	N	04/30/2019	Ground Water	226.55	236.55
Demolition Area 2	MW-404M2	MW-404M2_S19	N	04/30/2019	Ground Water	200.04	210.04
Demolition Area 2	MW-404M2	MW-404M2_S19D	FD	04/30/2019	Ground Water	200.04	210.04
Demolition Area 2	MW-404M1	MW-404M1_S19	N	04/30/2019	Ground Water	219.48	229.48
Demolition Area 2	MW-406M2	MW-406M2_S19	N	04/30/2019	Ground Water	202.54	212.54
Demolition Area 2	MW-406M1	MW-406M1_S19	N	04/30/2019	Ground Water	224.72	229.72
Demolition Area 2	MW-654M1	MW-654M1_S19	N	04/29/2019	Ground Water	154	164
Demolition Area 2	MW-655M2	MW-655M2_S19	N	04/29/2019	Ground Water	156	166
Demolition Area 2	MW-655M1	MW-655M1_S19	N	04/29/2019	Ground Water	178	188
J1 Range Northern	MW-590M2	MW-590M2_S19	N	04/29/2019	Ground Water	238	248
J1 Range Northern	MW-590M1	MW-590M1_S19	N	04/29/2019	Ground Water	258	268
J1 Range Northern	MW-303M2	MW-303M2_S19	N	04/25/2019	Ground Water	235.09	245.1
J1 Range Northern	MW-245M2	MW-245M2_S19	N	04/25/2019	Ground Water	204	214
J1 Range Northern	MW-245M2	MW-245M2_S19D	FD	04/25/2019	Ground Water	204	214
J1 Range Northern	J1N-INF1B	J1N-INF1B_S19	N	04/25/2019	Process Water	0	0
J1 Range Northern	J1N-INF1A	J1N-INF1A_S19	N	04/25/2019	Process Water	0	0
J1 Range Northern	MW-430M2	MW-430M2_S19	N	04/25/2019	Ground Water	188.41	198.41
J1 Range Northern	MW-540M1	MW-540M1_S19	N	04/24/2019	Ground Water	258	268
J1 Range Northern	MW-430M1	MW-430M1_S19	N	04/24/2019	Ground Water	245.23	255.23
J1 Range Northern	MW-541M1	MW-541M1_S19	N	04/24/2019	Ground Water	210	220
J1 Range Northern	MW-689M2	MW-689M2_S19	N	04/23/2019	Ground Water	231.4	241.4
J1 Range Northern	MW-689M1	MW-689M1_S19	N	04/23/2019	Ground Water	253.5	263.5
J1 Range Northern	MW-688M2	MW-688M2_S19	N	04/23/2019	Ground Water	227.8	237.8
J1 Range Northern	MW-688M1	MW-688M1_S19	N	04/23/2019	Ground Water	255.2	265.2
J1 Range Northern	MW-584M2	MW-584M2_S19	N	04/22/2019	Ground Water	228	238
J1 Range Northern	MW-584M1	MW-584M1_S19	N	04/22/2019	Ground Water	248	258
J1 Range Northern	MW-401M3	MW-401M3_S19	N	04/22/2019	Ground Water	228.5	238.5
J1 Range Northern	MW-401M1	MW-401M1_S19	N	04/22/2019	Ground Water	256.1	266.1
J1 Range Northern	MW-606M2	MW-606M2_S19	N	04/22/2019	Ground Water	193.2	203.2
J1 Range Northern	MW-606M1	MW-606M1_S19	N	04/22/2019	Ground Water	233.3	243.3
J1 Range Northern	MW-566M1	MW-566M1_S19	N	04/18/2019	Ground Water	232	242
J1 Range Northern	MW-564M1	MW-564M1_S19	N	04/18/2019	Ground Water	227	237
J1 Range Northern	MW-564M1	MW-564M1_S19D	FD	04/18/2019	Ground Water	227	237
J1 Range Northern	MW-549M2	MW-549M2_S19	N	04/18/2019	Ground Water	187.3	197.3
J1 Range Northern	MW-549M1	MW-549M1_S19	N	04/18/2019	Ground Water	227.4	237.4
J1 Range Northern	MW-370M2	MW-370M2_S19	N	04/18/2019	Ground Water	215.54	225.54
J1 Range Northern	MW-370M1	MW-370M1_S19	N	04/18/2019	Ground Water	245	255
J1 Range Northern	MW-370M1	MW-370M1_S19D	FD	04/18/2019	Ground Water	245	255
J1 Range Northern	MW-567M1	MW-567M1_S19	N	04/17/2019	Ground Water	215.5	225.5
J1 Range Northern	MW-605M2	MW-605M2_S19	N	04/17/2019	Ground Water	182.2	192.2
J1 Range Northern	MW-605M1	MW-605M1_S19	N	04/17/2019	Ground Water	220.2	230.2
J1 Range Southern	MW-592M2	MW-592M2_S19	N	04/17/2019	Ground Water	158	168
J1 Range Southern	MW-592M1	MW-592M1_S19	N	04/17/2019	Ground Water	201	211
J1 Range Southern	MW-591M2	MW-591M2_S19	N	04/16/2019	Ground Water	165	175
J1 Range Southern	MW-591M1	MW-591M1_S19	N	04/16/2019	Ground Water	200	210
J1 Range Southern	MW-403M2	MW-403M2_S19	N	04/16/2019	Ground Water	127.26	137.36
J1 Range Southern	MW-403M1	MW-403M1_S19	N	04/16/2019	Ground Water	159.9	169.89
J1 Range Southern	MW-669M2	MW-669M2_S19	N	04/16/2019	Ground Water	201.7	211.7
J1 Range Southern	MW-669M1	MW-669M1_S19	N	04/16/2019	Ground Water	223.7	233.7
Central Impact Area	MW-710M1	MW-710M1_S19	N	04/15/2019	Ground Water	247.5	257.5
Central Impact Area	MW-699M2	MW-699M2_S19	N	04/15/2019	Ground Water	221	231
Central Impact Area	MW-699M1	MW-699M1_S19	N	04/15/2019	Ground Water	261.5	271.5
J1 Range Southern	MW-524M1	MW-524M1_S19	N	04/11/2019	Ground Water	148	158
J1 Range Southern	MW-524M1	MW-524M1_S19D	FD	04/11/2019	Ground Water	148	158
J1 Range Southern	MW-670M2	MW-670M2_S19	N	04/11/2019	Ground Water	198.5	208.5
J1 Range Southern	MW-670M1	MW-670M1_S19	N	04/11/2019	Ground Water	220.5	230.5
J1 Range Southern	J1S-EW1-INF	J1S-EW1-INF_S19	N	04/11/2019	Process Water	0	0
J1 Range Southern	J1S-EW2-INF	J1S-EW2-INF_S19	N	04/11/2019	Process Water	0	0

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 1 April to 30 April 2019

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
J1 Range Southern	MW-647M2	MW-647M2_S19	N	04/10/2019	Ground Water	189.3	199.3
J1 Range Southern	MW-647M1	MW-647M1_S19	N	04/10/2019	Ground Water	211.3	221.3
J1 Range Southern	MW-647M1	MW-647M1_S19D	FD	04/10/2019	Ground Water	211.3	221.3
J1 Range Southern	MW-402M2	MW-402M2_S19	N	04/10/2019	Ground Water	155.24	165.27
J1 Range Southern	MW-402M1	MW-402M1_S19	N	04/10/2019	Ground Water	190.14	200.13
J1 Range Southern	MW-400M2	MW-400M2_S19	N	04/10/2019	Ground Water	138.9	148.9
J1 Range Southern	MW-400M1	MW-400M1_S19	N	04/10/2019	Ground Water	192.76	202.75
J1 Range Southern	MW-646M2	MW-646M2_S19	N	04/09/2019	Ground Water	168	178
J1 Range Southern	MW-646M1	MW-646M1_S19	N	04/09/2019	Ground Water	198	208
Central Impact Area	MW-614M2	MW-614M2_S19	N	04/09/2019	Ground Water	215	225
Central Impact Area	MW-614M1	MW-614M1_S19	N	04/09/2019	Ground Water	275	285
Northwest Corner	MW-279S	MW-279S_S19	N	04/08/2019	Ground Water	66	76
Northwest Corner	MW-279M2	MW-279M2_S19	N	04/08/2019	Ground Water	83	88
Northwest Corner	MW-278S	MW-278S_S19	N	04/08/2019	Ground Water	80	90
Northwest Corner	MW-278M2	MW-278M2_S19	N	04/08/2019	Ground Water	97	102
Central Impact Area	MW-344M2	MW-344M2_S19	N	04/04/2019	Ground Water	145	155
Central Impact Area	MW-344M2	MW-344M2_S19D	FD	04/04/2019	Ground Water	145	155
Demolition Area 1	PR-EFF	PR-EFF-157A	N	04/04/2019	Process Water	0	0
Demolition Area 1	PR-MID-2	PR-MID-2-157A	N	04/04/2019	Process Water	0	0
Demolition Area 1	PR-MID-1	PR-MID-1-157A	N	04/04/2019	Process Water	0	0
Demolition Area 1	PR-INF	PR-INF-157A	N	04/04/2019	Process Water	0	0
Demolition Area 1	FPR-2-EFF-A	FPR-2-EFF-A-157A	N	04/04/2019	Process Water	0	0
Demolition Area 1	FPR-2-GAC-MID1A	FPR-2-GAC-MID1A-157A	N	04/04/2019	Process Water	0	0
Demolition Area 1	FPR2-POST-IX-A	FPR2-POST-IX-A-157A	N	04/04/2019	Process Water	0	0
Demolition Area 1	FPR-2-INF	FPR-2-INF-157A	N	04/04/2019	Process Water	0	0
Demolition Area 1	D1LE-EFF	D1LE-EFF-33A	N	04/04/2019	Process Water	0	0
Demolition Area 1	D1LE-MID2	D1LE-MID2-33A	N	04/04/2019	Process Water	0	0
Demolition Area 1	D1LE-MID1	D1LE-MID1-33A	N	04/04/2019	Process Water	0	0
Demolition Area 1	D1LE-INF	D1LE-INF-33A	N	04/04/2019	Process Water	0	0
Demolition Area 1	D1-EFF	D1-EFF-105A	N	04/04/2019	Process Water	0	0
Demolition Area 1	D1-MID-2	D1-MID-2-105A	N	04/04/2019	Process Water	0	0
Demolition Area 1	D1-MID-1	D1-MID-1-105A	N	04/04/2019	Process Water	0	0
Demolition Area 1	D1-INF	D1-INF-105A	N	04/04/2019	Process Water	0	0
J2 Range Eastern	J2E-EFF-K	J2E-EFF-K-127A	N	04/03/2019	Process Water	0	0
J2 Range Eastern	J2E-MID-2K	J2E-MID-2K-127A	N	04/03/2019	Process Water	0	0
J2 Range Eastern	J2E-MID-1K	J2E-MID-1K-127A	N	04/03/2019	Process Water	0	0
J2 Range Eastern	J2E-INF-K	J2E-INF-K-127A	N	04/03/2019	Process Water	0	0
Central Impact Area	MW-623M3	MW-623M3_S19	N	04/03/2019	Ground Water	275	285
J2 Range Eastern	J2E-EFF-J	J2E-EFF-J-127A	N	04/03/2019	Process Water	0	0
J2 Range Eastern	J2E-MID-2J	J2E-MID-2J-127A	N	04/03/2019	Process Water	0	0
J2 Range Eastern	J2E-MID-1J	J2E-MID-1J-127A	N	04/03/2019	Process Water	0	0
J2 Range Eastern	J2E-INF-J	J2E-INF-J-127A	N	04/03/2019	Process Water	0	0
Central Impact Area	MW-623M2	MW-623M2_S19	N	04/03/2019	Ground Water	291.8	301.8
J2 Range Eastern	J2E-EFF-IH	J2E-EFF-IH-127A	N	04/03/2019	Process Water	0	0
J2 Range Eastern	J2E-MID-2H	J2E-MID-2H-127A	N	04/03/2019	Process Water	0	0
J2 Range Eastern	J2E-MID-1H	J2E-MID-1H-127A	N	04/03/2019	Process Water	0	0
J2 Range Eastern	J2E-MID-2I	J2E-MID-2I-127A	N	04/03/2019	Process Water	0	0
J2 Range Eastern	J2E-MID-1I	J2E-MID-1I-127A	N	04/03/2019	Process Water	0	0
J2 Range Eastern	J2E-INF-I	J2E-INF-I-127A	N	04/03/2019	Process Water	0	0
Central Impact Area	CIA2-EFF	CIA2-EFF-63A	N	04/03/2019	Process Water	0	0
Central Impact Area	MW-623M1	MW-623M1_S19	N	04/03/2019	Ground Water	340	350
Central Impact Area	CIA2-MID2	CIA2-MID2-63A	N	04/03/2019	Process Water	0	0
Central Impact Area	CIA2-MID1	CIA2-MID1-63A	N	04/03/2019	Process Water	0	0
Central Impact Area	CIA2-INF	CIA2-INF-63A	N	04/03/2019	Process Water	0	0
Central Impact Area	CIA1-EFF	CIA1-EFF-63A	N	04/03/2019	Process Water	0	0
Central Impact Area	CIA1-MID2	CIA1-MID2-63A	N	04/03/2019	Process Water	0	0
Central Impact Area	CIA1-MID1	CIA1-MID1-63A	N	04/03/2019	Process Water	0	0
Central Impact Area	CIA1-INF	CIA1-INF-63A	N	04/03/2019	Process Water	0	0
Central Impact Area	MW-284M2	MW-284M2_S19	N	04/02/2019	Ground Water	45	55

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 1 April to 30 April 2019

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
Central Impact Area	MW-284M2	MW-284M2_S19	N	04/02/2019	Ground Water	45	55
Northwest Corner	MW-284M2	MW-284M2_S19	N	04/02/2019	Ground Water	45	55
Northwest Corner	MW-284M2	MW-284M2_S19	N	04/02/2019	Ground Water	45	55
Central Impact Area	MW-284M1	MW-284M1_S19	N	04/02/2019	Ground Water	115	125
Central Impact Area	MW-284M1	MW-284M1_S19	N	04/02/2019	Ground Water	115	125
Northwest Corner	MW-284M1	MW-284M1_S19	N	04/02/2019	Ground Water	115	125
Northwest Corner	MW-284M1	MW-284M1_S19	N	04/02/2019	Ground Water	115	125
Northwest Corner	MW-270M1	MW-270M1_S19	N	04/02/2019	Ground Water	74	79
Central Impact Area	MW-270D	MW-270D_S19	N	04/02/2019	Ground Water	132	137
Central Impact Area	CIA3-EFF	CIA3-EFF-34A	N	04/02/2019	Process Water	0	0
Central Impact Area	CIA3-MID2	CIA3-MID2-34A	N	04/02/2019	Process Water	0	0
Central Impact Area	CIA3-MID1	CIA3-MID1-34A	N	04/02/2019	Process Water	0	0
Central Impact Area	CIA3-INF	CIA3-INF-34A	N	04/02/2019	Process Water	0	0
Central Impact Area	MW-624M2	MW-624M2_S19	N	04/01/2019	Ground Water	254	264
J3 Range	J3-EFF	J3-EFF-151A	N	04/01/2019	Process Water	0	0
J3 Range	J3-MID-2	J3-MID-2-151A	N	04/01/2019	Process Water	0	0
Central Impact Area	MW-624M1	MW-624M1_S19	N	04/01/2019	Ground Water	284	294
J3 Range	J3-MID-1	J3-MID-1-151A	N	04/01/2019	Process Water	0	0
J3 Range	J3-INF	J3-INF-151A	N	04/01/2019	Process Water	0	0
J1 Range Southern	J1S-EFF	J1S-EFF-137A	N	04/01/2019	Process Water	0	0
J1 Range Southern	J1S-MID	J1S-MID-137A	N	04/01/2019	Process Water	0	0
J1 Range Southern	J1S-INF-2	J1S-INF-2-137A	N	04/01/2019	Process Water	0	0
Central Impact Area	MW-625M2	MW-625M2_S19	N	04/01/2019	Ground Water	230	240
Central Impact Area	MW-625M1	MW-625M1_S19	N	04/01/2019	Ground Water	260	270
J2 Range Northern	J2N-EFF-G	J2N-EFF-G-151A	N	04/01/2019	Process Water	0	0
J2 Range Northern	J2N-MID-2G	J2N-MID-2G-151A	N	04/01/2019	Process Water	0	0
J2 Range Northern	J2N-MID-1G	J2N-MID-1G-151A	N	04/01/2019	Process Water	0	0
J2 Range Northern	J2N-INF-G	J2N-INF-G-151A	N	04/01/2019	Process Water	0	0
J2 Range Northern	J2N-EFF-EF	J2N-EFF-EF-151A	N	04/01/2019	Process Water	0	0
J2 Range Northern	J2N-MID-2F	J2N-MID-2F-151A	N	04/01/2019	Process Water	0	0
Central Impact Area	MW-616M2	MW-616M2_S19	N	04/01/2019	Ground Water	107.1	117.1
J2 Range Northern	J2N-MID-1F	J2N-MID-1F-151A	N	04/01/2019	Process Water	0	0
J2 Range Northern	J2N-INF-EF	J2N-INF-EF-151A	N	04/01/2019	Process Water	0	0
J2 Range Northern	J2N-MID-2E	J2N-MID-2E-151A	N	04/01/2019	Process Water	0	0
J2 Range Northern	J2N-MID-1E	J2N-MID-1E-151A	N	04/01/2019	Process Water	0	0
Central Impact Area	MW-616M1	MW-616M1_S19	N	04/01/2019	Ground Water	217.1	227.1
J1 Range Northern	J1N-EFF	J1N-EFF-66A	N	04/01/2019	Process Water	0	0
J1 Range Northern	J1N-MID2	J1N-MID2-66A	N	04/01/2019	Process Water	0	0
J1 Range Northern	J1N-MID1	J1N-MID1-66A	N	04/01/2019	Process Water	0	0
J1 Range Northern	J1N-INF2	J1N-INF2-66A	N	04/01/2019	Process Water	0	0

N = Normal Sample
FD = Field Duplicate

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received April 2019

Area of Concern	Location ID	Field Sample ID	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Date Sampled	Test Method	Analyte	Result Value	Qualifier	Units	MCL/HA	> MCL/HA	MDL	RL
Central Impact Area	MW-249M2	MW-249M2_S19	174	184	03/21/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.095	J	ug/L	0.60		0.036	0.20
Central Impact Area	MW-124M1	MW-124M1_S19	234	244	03/21/2019	SW6850	Perchlorate	0.065	J	ug/L	2.0		0.027	0.20
Central Impact Area	MW-209M2	MW-209M2_S19	220	230	03/19/2019	SW6850	Perchlorate	0.58		ug/L	2.0		0.027	0.20
Central Impact Area	MW-209M1	MW-209M1_S19	240	250	03/19/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.36		ug/L	400		0.025	0.20
Central Impact Area	MW-209M1	MW-209M1_S19	240	250	03/19/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.0		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-209M1	MW-209M1_S19	240	250	03/19/2019	SW6850	Perchlorate	2.0		ug/L	2.0	X	0.027	0.20
Central Impact Area	MW-209M1	MW-209M1_S19D	240	250	03/19/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.37		ug/L	400		0.025	0.20
Central Impact Area	MW-209M1	MW-209M1_S19D	240	250	03/19/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.9		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-209M1	MW-209M1_S19D	240	250	03/19/2019	SW6850	Perchlorate	2.0		ug/L	2.0	X	0.027	0.20
Central Impact Area	MW-609M1	MW-609M1_S19	210.39	220.39	03/19/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.076	J	ug/L	400		0.025	0.20
Central Impact Area	MW-609M1	MW-609M1_S19	210.39	220.39	03/19/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.8		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-609M1	MW-609M1_S19D	210.39	220.39	03/19/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.069	J	ug/L	400		0.025	0.20
Central Impact Area	MW-609M1	MW-609M1_S19D	210.39	220.39	03/19/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.8		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-178M1	MW-178M1_S19	257	267	03/18/2019	SW8330	4-Amino-2,6-dinitrotoluene	0.10	J	ug/L	7.3		0.015	0.20
Central Impact Area	MW-51M1	MW-51M1_S19	234	244	03/18/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.26		ug/L	0.60		0.036	0.20
Central Impact Area	MW-87M1	MW-87M1_S19	194	204	03/13/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.071	J	ug/L	400		0.025	0.20
Central Impact Area	MW-87M1	MW-87M1_S19	194	204	03/13/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.22		ug/L	0.60		0.036	0.20
Central Impact Area	MW-87M1	MW-87M1_S19	194	204	03/13/2019	SW6850	Perchlorate	1.0		ug/L	2.0		0.082	0.50
Central Impact Area	MW-86S	MW-86S_S19	143	153	03/13/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.047	J	ug/L	400		0.025	0.20
Central Impact Area	MW-86S	MW-86S_S19	143	153	03/13/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.40		ug/L	0.60		0.036	0.20
Central Impact Area	MW-86M2	MW-86M2_S19	158	168	03/13/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.035	J	ug/L	400		0.025	0.20
Central Impact Area	MW-86M2	MW-86M2_S19	158	168	03/13/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.22		ug/L	0.60		0.036	0.20
Central Impact Area	MW-88M2	MW-88M2_S19	213	223	03/12/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.14	J	ug/L	400		0.025	0.20
Central Impact Area	MW-88M2	MW-88M2_S19	213	223	03/12/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.45		ug/L	0.60		0.036	0.20
Central Impact Area	MW-88M2	MW-88M2_S19	213	223	03/12/2019	SW6850	Perchlorate	2.9		ug/L	2.0	X	0.082	0.50
Central Impact Area	MW-88M2	MW-88M2_S19D	213	223	03/12/2019	SW6850	Perchlorate	3.0		ug/L	2.0	X	0.082	0.50
Central Impact Area	MW-88M1	MW-88M1_S19	233	243	03/12/2019	SW6850	Perchlorate	0.14	J	ug/L	2.0		0.082	0.50
Central Impact Area	MW-88M1	MW-88M1_S19	233	243	03/12/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.41		ug/L	0.60		0.036	0.20
Central Impact Area	MW-95M1	MW-95M1_S19	202	212	03/11/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.097	J	ug/L	400		0.025	0.20
Central Impact Area	MW-95M1	MW-95M1_S19	202	212	03/11/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.6		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-95M1	MW-95M1_S19	202	212	03/11/2019	SW6850	Perchlorate	2.0		ug/L	2.0		0.082	0.50
Central Impact Area	MW-89M3	MW-89M3_S19	174	184	03/11/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.032	J	ug/L	400		0.025	0.20
Central Impact Area	MW-89M3	MW-89M3_S19	174	184	03/11/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.37		ug/L	0.60		0.036	0.20
Central Impact Area	MW-89M2	MW-89M2_S19	214	224	03/11/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.90		ug/L	400		0.025	0.20
Central Impact Area	MW-89M2	MW-89M2_S19	214	224	03/11/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	10.3		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-89M2	MW-89M2_S19	214	224	03/11/2019	SW6850	Perchlorate	4.2		ug/L	2.0	X	0.082	0.50
Central Impact Area	MW-89M2	MW-89M2_S19D	214	224	03/11/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.91		ug/L	400		0.025	0.20
Central Impact Area	MW-89M2	MW-89M2_S19D	214	224	03/11/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	10.2		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-89M2	MW-89M2_S19D	214	224	03/11/2019	SW6850	Perchlorate	4.2		ug/L	2.0	X	0.082	0.50
Central Impact Area	MW-89M1	MW-89M1_S19	234	244	03/11/2019	SW6850	Perchlorate	0.40	J	ug/L	2.0		0.082	0.50
Central Impact Area	MW-89M1	MW-89M1_S19	234	244	03/11/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.49		ug/L	0.60		0.036	0.20
Central Impact Area	MW-108M4	MW-108M4_S19	240	250	03/07/2019	SW6850	Perchlorate	0.25	J	ug/L	2.0		0.082	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 April 2019

Area of Concern	Location ID	Field Sample ID	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Date Sampled	Test Method	Analyte	Result Value	Qualifier	Units	MCL/HA	> MCL/HA	MDL	RL
Central Impact Area	MW-108M1	MW-108M1_S19	297	307	03/07/2019	SW6850	Perchlorate	0.26	J	ug/L	2.0		0.082	0.50
Central Impact Area	MW-176M2	MW-176M2_S19	229	239	03/07/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.074	J	ug/L	400		0.025	0.20
Central Impact Area	MW-176M2	MW-176M2_S19	229	239	03/07/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.62		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-176M1	MW-176M1_S19	270	280	03/07/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.3		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-102M2	MW-102M2_S19	237	247	03/06/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.17	J	ug/L	400		0.025	0.20
Central Impact Area	MW-102M2	MW-102M2_S19	237	247	03/06/2019	SW6850	Perchlorate	0.39	J	ug/L	2.0		0.082	0.50
Central Impact Area	MW-102M2	MW-102M2_S19	237	247	03/06/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.58		ug/L	0.60		0.036	0.20
Central Impact Area	MW-102M1	MW-102M1_S19	267	277	03/06/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.16	J	ug/L	0.60		0.036	0.20
Central Impact Area	MW-123M1	MW-123M1_S19	291	301	03/05/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.086	J	ug/L	0.60		0.036	0.20
Central Impact Area	MW-23M1	MW-23M1_S19	225	235	03/05/2019	SW6850	Perchlorate	0.20	J	ug/L	2.0		0.082	0.50
Central Impact Area	MW-23D	MW-23D_S19	272	282	03/05/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.74		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-615M1	MW-615M1_S19	260	270	03/04/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.22		ug/L	400		0.025	0.20
Central Impact Area	MW-615M1	MW-615M1_S19	260	270	03/04/2019	SW6850	Perchlorate	1.6	J	ug/L	2.0		0.082	0.50
Central Impact Area	MW-615M1	MW-615M1_S19	260	270	03/04/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.6		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-615M1	MW-615M1_S19D	260	270	03/04/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.22		ug/L	400		0.025	0.20
Central Impact Area	MW-615M1	MW-615M1_S19D	260	270	03/04/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.7		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-113M2	MW-113M2_S19	190	200	02/28/2019	SW8330	4-Amino-2,6-dinitrotoluene	0.056	J	ug/L	7.3		0.015	0.20
Central Impact Area	MW-113M2	MW-113M2_S19	190	200	02/28/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.14	J	ug/L	400		0.025	0.20
Central Impact Area	MW-113M2	MW-113M2_S19	190	200	02/28/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.31		ug/L	0.60		0.036	0.20
Central Impact Area	MW-113M2	MW-113M2_S19D	190	200	02/28/2019	SW8330	4-Amino-2,6-dinitrotoluene	0.056	J	ug/L	7.3		0.015	0.20
Central Impact Area	MW-113M2	MW-113M2_S19D	190	200	02/28/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.15	J	ug/L	400		0.025	0.20
Central Impact Area	MW-113M2	MW-113M2_S19D	190	200	02/28/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.31		ug/L	0.60		0.036	0.20
Central Impact Area	MW-113M1	MW-113M1_S19	240	250	02/28/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.15	J	ug/L	0.60		0.036	0.20
Central Impact Area	MW-38M4	MW-38M4_S19	132	142	02/27/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.74		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-38M3	MW-38M3_S19	170	180	02/27/2019	SW8330	4-Amino-2,6-dinitrotoluene	0.035	J	ug/L	7.3		0.015	0.20
Central Impact Area	MW-38M3	MW-38M3_S19	170	180	02/27/2019	SW6850	Perchlorate	0.14	J	ug/L	2.0		0.027	0.20
Central Impact Area	MW-38M3	MW-38M3_S19	170	180	02/27/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.47		ug/L	0.60		0.036	0.20
Central Impact Area	MW-59S	MW-59S_S19	128	138	02/27/2019	SW6850	Perchlorate	0.043	J	ug/L	2.0		0.027	0.20
Central Impact Area	MW-695S	MW-695S_S19	130	140	02/27/2019	SW8330	1,3,5-Trinitrobenzene	0.045	J	ug/L	1090		0.024	0.20
Central Impact Area	MW-695S	MW-695S_S19	130	140	02/27/2019	SW6850	Perchlorate	0.052	J	ug/L	2.0		0.027	0.20
Central Impact Area	MW-695S	MW-695S_S19	130	140	02/27/2019	SW8330	2,4-Dinitrotoluene	0.095	J	ug/L	5.0		0.054	0.20
Central Impact Area	MW-695S	MW-695S_S19	130	140	02/27/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.17	J	ug/L	0.60		0.036	0.20
Central Impact Area	MW-695S	MW-695S_S19	130	140	02/27/2019	SW8330	4-Amino-2,6-dinitrotoluene	0.24		ug/L	7.3		0.015	0.20
Central Impact Area	MW-695S	MW-695S_S19	130	140	02/27/2019	SW8330	2-Amino-4,6-dinitrotoluene	0.26		ug/L	7.3		0.016	0.20
Central Impact Area	MW-695S	MW-695S_S19	130	140	02/27/2019	SW8330	2,4,6-Trinitrotoluene	0.55		ug/L	2.0		0.027	0.20
Central Impact Area	MW-695S	MW-695S_S19D	130	140	02/27/2019	SW8330	1,3,5-Trinitrobenzene	0.043	J	ug/L	1090		0.024	0.20
Central Impact Area	MW-695S	MW-695S_S19D	130	140	02/27/2019	SW8330	2,4-Dinitrotoluene	0.088	J	ug/L	5.0		0.054	0.20
Central Impact Area	MW-695S	MW-695S_S19D	130	140	02/27/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.20		ug/L	0.60		0.036	0.20
Central Impact Area	MW-695S	MW-695S_S19D	130	140	02/27/2019	SW8330	4-Amino-2,6-dinitrotoluene	0.25		ug/L	7.3		0.015	0.20
Central Impact Area	MW-695S	MW-695S_S19D	130	140	02/27/2019	SW8330	2-Amino-4,6-dinitrotoluene	0.27		ug/L	7.3		0.016	0.20
Central Impact Area	MW-695S	MW-695S_S19D	130	140	02/27/2019	SW8330	2,4,6-Trinitrotoluene	0.53		ug/L	2.0		0.027	0.20
Central Impact Area	MW-25	MW-25_S19	108	118	02/26/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.98		ug/L	0.60	X	0.036	0.20

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

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received April 2019

Area of Concern	Location ID	Field Sample ID	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Date Sampled	Test Method	Analyte	Result Value	Qualifier	Units	MCL/HA	> MCL/HA	MDL	RL
Central Impact Area	MW-112M1	MW-112M1_S19	195	205	02/26/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.13	J	ug/L	400		0.025	0.20
Central Impact Area	MW-112M1	MW-112M1_S19	195	205	02/26/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.4	J	ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-85S	MW-85S_S19	116	126	02/25/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.31	J	ug/L	0.60		0.036	0.20
Central Impact Area	MW-43M1	MW-43M1_S19	223	233	02/21/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.58		ug/L	0.60		0.036	0.20
Central Impact Area	MW-42M1	MW-42M1_S19	205.8	216	02/21/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.41		ug/L	0.60		0.036	0.20
Central Impact Area	MW-686M2	MW-686M2_S19	194.3	204.3	02/20/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.4		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-687M2	MW-687M2_S19	188	198	02/20/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.31		ug/L	0.60		0.036	0.20
Central Impact Area	MW-203M2	MW-203M2_S19	176	186	02/20/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.33		ug/L	0.60		0.036	0.20
Central Impact Area	MW-39M1	MW-39M1_S19	220	230	02/19/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.13	J	ug/L	0.60		0.036	0.20
Central Impact Area	MW-184M1	MW-184M1_S19	186	196	02/19/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.79		ug/L	400		0.025	0.20
Central Impact Area	MW-184M1	MW-184M1_S19	186	196	02/19/2019	SW6850	Perchlorate	1.6		ug/L	2.0		0.027	0.20
Central Impact Area	MW-184M1	MW-184M1_S19	186	196	02/19/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	4.9		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-184M1	MW-184M1_S19D	186	196	02/19/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.82		ug/L	400		0.025	0.20
Central Impact Area	MW-184M1	MW-184M1_S19D	186	196	02/19/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.2		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-607M3	MW-607M3_S19	157.4	167.4	02/19/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.60		ug/L	0.60		0.036	0.20
Central Impact Area	MW-607M2	MW-607M2_S19	177.4	187.4	02/19/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.2		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-607M2	MW-607M2_S19D	177.4	187.4	02/19/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.2		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-607M1	MW-607M1_S19	207.4	217.4	02/19/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.0		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-485M1	MW-485M1_S19	125.32	135.32	02/14/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1.4		ug/L	400		0.025	0.20
Central Impact Area	MW-485M1	MW-485M1_S19	125.32	135.32	02/14/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	8.2		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-485M1	MW-485M1_S19D	125.32	135.32	02/14/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1.4	J	ug/L	400		0.025	0.20
Central Impact Area	MW-485M1	MW-485M1_S19D	125.32	135.32	02/14/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	8.5	J	ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-477M2	MW-477M2_S19	145.62	155.62	02/14/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.77		ug/L	400		0.025	0.20
Central Impact Area	MW-477M2	MW-477M2_S19	145.62	155.62	02/14/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	18.2		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-477M2	MW-477M2_S19D	145.62	155.62	02/14/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.77		ug/L	400		0.025	0.20
Central Impact Area	MW-477M2	MW-477M2_S19D	145.62	155.62	02/14/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	18.0		ug/L	0.60	X	0.036	0.20
Central Impact Area	OW-1	OW-1_S19	126	136	02/14/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.064	J	ug/L	400		0.025	0.20
Central Impact Area	OW-1	OW-1_S19	126	136	02/14/2019	SW8330	1,3,5-Trinitrobenzene	0.089	J	ug/L	1090		0.024	0.20
Central Impact Area	OW-1	OW-1_S19	126	136	02/14/2019	SW8330	Picric acid	0.10	J	ug/L	365		0.020	0.20
Central Impact Area	OW-1	OW-1_S19	126	136	02/14/2019	SW8330	2,4-Dinitrotoluene	0.13	J	ug/L	5.0		0.054	0.20
Central Impact Area	OW-1	OW-1_S19	126	136	02/14/2019	SW8330	2-Amino-4,6-dinitrotoluene	0.40		ug/L	7.3		0.016	0.20
Central Impact Area	OW-1	OW-1_S19	126	136	02/14/2019	SW8330	4-Amino-2,6-dinitrotoluene	0.59		ug/L	7.3		0.015	0.20
Central Impact Area	OW-1	OW-1_S19	126	136	02/14/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.83		ug/L	0.60	X	0.036	0.20
Central Impact Area	OW-1	OW-1_S19	126	136	02/14/2019	SW8330	2,4,6-Trinitrotoluene	1.7		ug/L	2.0		0.027	0.20
Central Impact Area	OW-2	OW-2_S19	175	185	02/14/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.53		ug/L	0.60		0.036	0.20
Central Impact Area	MW-01S	MW-01S_S19	114	124	02/13/2019	SW8330	4-Amino-2,6-dinitrotoluene	0.027	J	ug/L	7.3		0.015	0.20
Central Impact Area	MW-01S	MW-01S_S19	114	124	02/13/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.25		ug/L	0.60		0.036	0.20
Central Impact Area	MW-01S	MW-01S_S19D	114	124	02/13/2019	SW8330	4-Amino-2,6-dinitrotoluene	0.024	J	ug/L	7.3		0.015	0.20
Central Impact Area	MW-01S	MW-01S_S19D	114	124	02/13/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.24		ug/L	0.60		0.036	0.20
Central Impact Area	MW-01M2	MW-01M2_S19	160	165	02/13/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.091	J	ug/L	400		0.025	0.20
Central Impact Area	MW-01M2	MW-01M2_S19	160	165	02/13/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.28		ug/L	0.60		0.036	0.20
Central Impact Area	MW-01M2	MW-01M2_S19D	160	165	02/13/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.086	J	ug/L	400		0.025	0.20

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VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received April 2019

Area of Concern	Location ID	Field Sample ID	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Date Sampled	Test Method	Analyte	Result Value	Qualifier	Units	MCL/HA	> MCL/HA	MDL	RL
Central Impact Area	MW-01M2	MW-01M2_S19D	160	165	02/13/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.28		ug/L	0.60		0.036	0.20
Central Impact Area	MW-98S	MW-98S_S19	137	147	02/13/2019	SW8330	2-Amino-4,6-dinitrotoluene	0.13	J	ug/L	7.3		0.016	0.20
Central Impact Area	MW-98S	MW-98S_S19	137	147	02/13/2019	SW8330	4-Amino-2,6-dinitrotoluene	0.23		ug/L	7.3		0.015	0.20
Central Impact Area	MW-98S	MW-98S_S19	137	147	02/13/2019	SW8330	2,4,6-Trinitrotoluene	0.24		ug/L	2.0		0.027	0.20
Central Impact Area	MW-98M1	MW-98M1_S19	164	174	02/13/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.096	J	ug/L	400		0.025	0.20
Central Impact Area	MW-98M1	MW-98M1_S19	164	174	02/13/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.2		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-100M1	MW-100M1_S19	179	189	02/12/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.083	J	ug/L	400		0.025	0.20
Central Impact Area	MW-100M1	MW-100M1_S19	179	189	02/12/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.59		ug/L	0.60		0.036	0.20
Central Impact Area	MW-90S	MW-90S_S19	118	128	02/11/2019	SW8330	4-Amino-2,6-dinitrotoluene	0.038	J	ug/L	7.3		0.015	0.20
Central Impact Area	MW-90S	MW-90S_S19	118	128	02/11/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.19	J	ug/L	400		0.025	0.20
Central Impact Area	MW-90S	MW-90S_S19	118	128	02/11/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	4.5		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-90M1	MW-90M1_S19	145	155	02/11/2019	SW8330	4-Amino-2,6-dinitrotoluene	0.12	J	ug/L	7.3		0.015	0.20
Central Impact Area	MW-90M1	MW-90M1_S19	145	155	02/11/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.13	J	ug/L	0.60		0.036	0.20
Central Impact Area	MW-40S	MW-40S_S19	115.5	126	02/11/2019	SW8330	2,4,6-Trinitrotoluene	0.12	J	ug/L	2.0		0.027	0.20
Central Impact Area	MW-40M1	MW-40M1_S19	132.5	142.5	02/11/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.48		ug/L	0.60		0.036	0.20
Central Impact Area	MW-107M2	MW-107M2_S19	125	135	02/11/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.22		ug/L	0.60		0.036	0.20
Central Impact Area	MW-101M1	MW-101M1_S19	158	168	02/07/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.14	J	ug/L	400		0.025	0.20
Central Impact Area	MW-101M1	MW-101M1_S19	158	168	02/07/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.3		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-93M2	MW-93M2_S19	145	155	02/07/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.27		ug/L	0.60		0.036	0.20
Central Impact Area	MW-93M1	MW-93M1_S19	185	195	02/07/2019	SW6850	Perchlorate	0.061	J	ug/L	2.0		0.027	0.20
Central Impact Area	MW-93M1	MW-93M1_S19	185	195	02/07/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.072	J	ug/L	400		0.025	0.20
Central Impact Area	MW-93M1	MW-93M1_S19	185	195	02/07/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.29		ug/L	0.60		0.036	0.20
Central Impact Area	MW-91S	MW-91S_S19	124	134	02/07/2019	SW8330	2,4-Dinitrotoluene	0.086	J	ug/L	5.0		0.054	0.20
Central Impact Area	MW-91S	MW-91S_S19	124	134	02/07/2019	SW8330	1,3,5-Trinitrobenzene	0.18	J	ug/L	1090		0.024	0.20
Central Impact Area	MW-91S	MW-91S_S19	124	134	02/07/2019	SW8330	2-Amino-4,6-dinitrotoluene	0.29		ug/L	7.3		0.016	0.20
Central Impact Area	MW-91S	MW-91S_S19	124	134	02/07/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.57		ug/L	400		0.025	0.20
Central Impact Area	MW-91S	MW-91S_S19	124	134	02/07/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.8	J	ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-91S	MW-91S_S19	124	134	02/07/2019	SW8330	2,4,6-Trinitrotoluene	5.3		ug/L	2.0	X	0.027	0.20
Central Impact Area	MW-91S	MW-91S_S19D	124	134	02/07/2019	SW8330	2,4-Dinitrotoluene	0.078	J	ug/L	5.0		0.054	0.20
Central Impact Area	MW-91S	MW-91S_S19D	124	134	02/07/2019	SW8330	1,3,5-Trinitrobenzene	0.19	J	ug/L	1090		0.024	0.20
Central Impact Area	MW-91S	MW-91S_S19D	124	134	02/07/2019	SW8330	2-Amino-4,6-dinitrotoluene	0.25		ug/L	7.3		0.016	0.20
Central Impact Area	MW-91S	MW-91S_S19D	124	134	02/07/2019	SW8330	4-Amino-2,6-dinitrotoluene	0.40	J	ug/L	7.3		0.015	0.20
Central Impact Area	MW-91S	MW-91S_S19D	124	134	02/07/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.55		ug/L	400		0.025	0.20
Central Impact Area	MW-91S	MW-91S_S19D	124	134	02/07/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.3	J	ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-91S	MW-91S_S19D	124	134	02/07/2019	SW8330	2,4,6-Trinitrotoluene	5.3		ug/L	2.0	X	0.027	0.20
Central Impact Area	MW-91M1	MW-91M1_S19	170	180	02/07/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.15	J	ug/L	400		0.025	0.20
Central Impact Area	MW-91M1	MW-91M1_S19	170	180	02/07/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.0		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-91M1	MW-91M1_S19D	170	180	02/07/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.18	J	ug/L	400		0.025	0.20
Central Impact Area	MW-91M1	MW-91M1_S19D	170	180	02/07/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.1		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-37M2	MW-37M2_S19	145	155	02/04/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.30	J	ug/L	0.60		0.036	0.20
Central Impact Area	MW-235M1	MW-235M1_S19	154	164	02/04/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.17	J	ug/L	0.60		0.036	0.20
Central Impact Area	MW-487M2	MW-487M2_S19	195.84	205.84	02/04/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.4		ug/L	0.60	X	0.036	0.20

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 April 2019

Area of Concern	Location ID	Field Sample ID	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Date Sampled	Test Method	Analyte	Result Value	Qualifier	Units	MCL/HA	> MCL/HA	MDL	RL
Central Impact Area	MW-487M2	MW-487M2_S19D	195.84	205.84	02/04/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.087	J	ug/L	400		0.025	0.20
Central Impact Area	MW-487M2	MW-487M2_S19D	195.84	205.84	02/04/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.6		ug/L	0.60	X	0.036	0.20
Central Impact Area	MW-629M2	MW-629M2_S19	186.9	196.9	01/31/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.20		ug/L	0.60		0.036	0.20
Central Impact Area	MW-629M1	MW-629M1_S19	216.9	226.9	01/31/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.19	J	ug/L	400		0.025	0.20
Central Impact Area	MW-629M1	MW-629M1_S19	216.9	226.9	01/31/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.23		ug/L	0.60		0.036	0.20
Central Impact Area	MW-204M1	MW-204M1_S19	141	151	01/30/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.14	J	ug/L	400		0.025	0.20
Central Impact Area	MW-204M1	MW-204M1_S19	141	151	01/30/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.8		ug/L	0.60	X	0.036	0.20
J2 Range Eastern	MW-339M1	MW-339M1_S19	233	243	01/29/2019	SW6850	Perchlorate	0.56		ug/L	2.0		0.012	0.20
J2 Range Eastern	MW-368M2	MW-368M2_S19	202.73	212.73	01/29/2019	SW6850	Perchlorate	11.8		ug/L	2.0	X	0.012	0.20
J2 Range Eastern	MW-368M2	MW-368M2_S19	202.73	212.73	01/29/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	6.2		ug/L	0.60	X	0.036	0.20
J2 Range Eastern	MW-368M2	MW-368M2_S19	202.73	212.73	01/29/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	8.0		ug/L	400		0.025	0.20
J2 Range Eastern	MW-368M2	MW-368M2_S19D	202.73	212.73	01/29/2019	SW6850	Perchlorate	11.8		ug/L	2.0	X	0.012	0.20
J2 Range Eastern	MW-368M2	MW-368M2_S19D	202.73	212.73	01/29/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	6.4		ug/L	0.60	X	0.036	0.20
J2 Range Eastern	MW-368M2	MW-368M2_S19D	202.73	212.73	01/29/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	7.9		ug/L	400		0.025	0.20
J2 Range Eastern	MW-324M2	MW-324M2_S19	203.74	214.74	01/29/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.20	J	ug/L	0.60		0.036	0.20
J2 Range Eastern	MW-324M2	MW-324M2_S19	203.74	214.74	01/29/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.51		ug/L	400		0.025	0.20
J2 Range Eastern	MW-324M2	MW-324M2_S19	203.74	214.74	01/29/2019	SW6850	Perchlorate	0.91		ug/L	2.0		0.012	0.20
J2 Range Eastern	MW-324M1	MW-324M1_S19	234.85	244.85	01/29/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.099	J	ug/L	0.60		0.036	0.20
J2 Range Eastern	MW-324M1	MW-324M1_S19	234.85	244.85	01/29/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.54		ug/L	400		0.025	0.20
J2 Range Eastern	MW-324M1	MW-324M1_S19	234.85	244.85	01/29/2019	SW6850	Perchlorate	0.65		ug/L	2.0		0.012	0.20
J2 Range Eastern	J2MW-04M2	J2MW-04M2_S19	210	220	01/28/2019	SW6850	Perchlorate	0.056	J	ug/L	2.0		0.012	0.20
J2 Range Eastern	J2MW-04M1	J2MW-04M1_S19	257	267	01/28/2019	SW6850	Perchlorate	0.099	J	ug/L	2.0		0.012	0.20
J2 Range Eastern	J2MW-04M1	J2MW-04M1_S19	257	267	01/28/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.17	J	ug/L	400		0.025	0.20
G Range	MW-470S	MW-470S_S19	76.32	86.32	01/22/2019	SW6020B	Antimony	0.23	J	ug/L	0.60		0.18	2.0
C Range	MW-456S	MW-456S_S19	150.34	160.34	01/17/2019	SW6010D	Copper	26.8		ug/L	#VALUE!	#VALUE!	1.7	25.0
B Range	MW-537M1	MW-537M1_S19	106	116	01/16/2019	SW6020B	Tungsten	0.19	J	ug/L	#VALUE!	#VALUE!	0.14	2.0
B Range	MW-72S	MW-72S_S19	106	116	01/16/2019	SW6020B	Tungsten	3.2		ug/L	#VALUE!	#VALUE!	0.14	2.0
B Range	MW-72S	MW-72S_S19D	106	116	01/16/2019	SW6020B	Tungsten	3.2		ug/L	#VALUE!	#VALUE!	0.14	2.0
J2 Range Northern	J2EW0001	J2EW0001_S19	179	234	01/14/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.083	J	ug/L	0.60		0.036	0.20
J2 Range Northern	J2EW0001	J2EW0001_S19	179	234	01/14/2019	SW6850	Perchlorate	1.1		ug/L	2.0		0.012	0.20
J2 Range Northern	J2EW0001	J2EW0001_S19D	179	234	01/14/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.11	J	ug/L	0.60		0.036	0.20
J2 Range Northern	J2EW0002	J2EW0002_S19	198	233	01/14/2019	SW6850	Perchlorate	4.9		ug/L	2.0	X	0.012	0.20
J2 Range Northern	J2EW0002	J2EW0002_S19D	198	233	01/14/2019	SW6850	Perchlorate	4.9		ug/L	2.0	X	0.012	0.20
J2 Range Northern	J2EW0003	J2EW0003_S19	202	232	01/14/2019	SW6850	Perchlorate	0.43		ug/L	2.0		0.012	0.20
L Range	MW-242M1	MW-242M1_S19	235	245	01/10/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.3	J	ug/L	0.60	X	0.036	0.20
L Range	MW-242M1	MW-242M1_S19D	235	245	01/10/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.1		ug/L	0.60	X	0.036	0.20
L Range	MW-595M1	MW-595M1_S19	255.3	265.3	01/10/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.1		ug/L	0.60	X	0.036	0.20
L Range	90MW0031	90MW0031_S19	195.32	200.22	01/10/2019	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.078	J	ug/L	400		0.025	0.20
L Range	90MW0031	90MW0031_S19	195.32	200.22	01/10/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.64		ug/L	0.60	X	0.036	0.20
L Range	MW-651M1	MW-651M1_S19	242.3	252.3	01/09/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.0		ug/L	0.60	X	0.036	0.20
L Range	MW-650M1	MW-650M1_S19	260	270	01/09/2019	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.35	J	ug/L	0.60		0.036	0.20

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

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