HEALTH, SAFETY, ENVIRONMENTAL AND REMEDIATION WEEKLY REPORT
Williams AFB ST012

Site No.: 9101-11-0001

Week Ending 16 September 2016

I. SITE SUBCONTRACTOR SUMMARY

Company	Sat	Sun	Mon	Tue	Wed	Thu	Fri
Amec Foster Wheeler			X	X	X	X	X
Terra Therm							
MP Environmental							
Yellow Jacket							

II. SCHEDULE / SITE ACTIVITIES REVIEW

A. SEE Demolition - None

B. Well Drilling and Development - None

C. EBR Construction - None

D. Sampling/Monitoring

- Perimeter well monitoring
- SEE/EBR well LNAPL monitoring/removal
- Quarterly soil vapor sampling
- Groundwater sampling in select CZ and UWBZ well locations

E. SVE System Operation/Optimization

- Routine operation
- Operated the flame-oxidizer in parallel with the thermal oxidizer.
    1. There was one shutdown of the thermal oxidizer due to a high LEL alarm on 12 September. The dilution valve was opened and the thermal oxidizer was restarted successfully.
    2. There were four shutdowns of the flame oxidizer due to high LEL this week.
        a. Three shutdowns occurred on 12 September, two of which occurred during attempted restart.
        b. The fourth shutdown occurred on 16 September. The dilution valve was opened and restarted successfully.

III. SVE OPERATING DATA

A. Thermal Oxidizer Destruction Efficiency/Mass Removal Summary

The destruction efficiency and mass removal calculations for the thermal oxidizer are tabulated below. A correction factor was applied to PID readings based on available analytical data and corresponding PID data. This factor is updated each time new analytical data is available and may retroactively alter previously reported data.

Date Period Began	Date Period Ended	Days in Period	Time Thermal Oxidizer Operated	Thermal Oxidizer Uptime	Date of Influent Laboratory TPH Result	Influent Concentration (PID)(c)	Influent Concentration (Adjusted PID)(c)	Effluent Concentration (PID)	Effluent Concentration (Adjusted PID)	Calculated Destruction Efficiency(a)	Flowrate into Oxidizer (End of Period)(a)	Estimated VOC Mass Removed(b)	Average Daily Removal Rate(b)	Estimated VOC Mass Released to Atmosphere(b)	Average VOC Mass Released to Atmosphere(b)
---	---	days	hrs	%		ppmv	mg/m^3	ppmv	mg/m^3	%	scfm	lbs/period	lbs/day	lbs/period	lbs/day
4/7/2016	4/15/2016	8	112	58%	3/11/2016	560	56,313	4.6	4.2	99.99%	1,396	32,984	4,123	2	0.31
4/15/2016	4/21/2016	6	147	102%	3/11/2016	342	34,391	1.0	0.9	100.00%	1,571	29,743	4,957	0.8	0.13
4/21/2016	4/29/2016	8	188	98%	4/25/2016	296	7,980	2.6	2.4	99.97%	1,396	7,846	981	2.3	0.29
4/29/2016	5/5/2016	6	130	90%	4/25/2016	179	4,826	1.6	1.5	99.97%	1,396	3,281	547	1.0	0.16
5/5/2016	5/20/2016	15	323	90%	4/25/2016	394	10,622	0.5	0.5	100.00%	1,047	13,457	897	0.6	0.04
5/20/2016	5/26/2016	6	146	101%	5/23/2016	699	18,340	42.2	38	99.79%	698	7,002	1,167	14.6	2.44
5/26/2016	6/2/2016	7	166	99%	5/23/2016	340	9,166	62.2	56	99.38%	698	3,979	568	24.5	3.50
6/2/2016	6/10/2016	8	164	85%	6/9/2016	679	17,325	1.2	1.1	99.99%	1,309	13,933	1,742	0.9	0.11
6/10/2016	6/17/2016	7	167	99%	6/9/2016	462	11,788	12.7	12	99.90%	1,047	7,721	1,103	7.5	1.08
6/17/2016	6/24/2016	7	165	98%	6/9/2016	179	4,567	0.6	0.5	99.99%	1,466	4,139	591	0.5	0.07
6/24/2016	6/27/2016	3	74	103%	6/27/2016	431	4,850	0.0	0.0	100.00%	1,920	2,581	860	0.0	0.00
6/27/2016	6/29/2016	2	47	98%	6/27/2016	N/A	4,850	N/A	0.0	100.00%	1,152	984	492	0.0	0.00
6/29/2016	7/8/2016	9	215	100%	6/27/2016	697	7,843	0.2	0.8	99.99%	524	3,310	368	0.3	0.04
7/8/2016	7/14/2016	6	128	89%	7/12/2016	1080	24,311	1.3	5.1	99.98%	489	5,700	950	1.2	0.20
7/14/2016	7/22/2016	8	56	29%	7/12/2016	848	19,088	7.6	30	99.85%	698	2,795	349	4.3	0.54
7/22/2016	7/29/2016	7	163	97%	7/26/2016	636	19,714	10.2	40	99.80%	628	7,560	1,080	15.2	2.17
7/29/2016	8/4/2016	6	84	58%	7/26/2016	681	21,109	1.5	6	99.97%	1,466	9,737	1,623	2.7	0.45
8/4/2016	8/11/2016	7	168	100%	8/4/2016	475	12,555	1.2	5	99.96%	698	5,515	788	2.0	0.29
8/11/2016	8/18/2016	7	120	71%	8/4/2016	476	12,581	1.6	6	99.95%	768	4,344	621	2.1	0.31
8/18/2016	8/25/2016	7	168	100%	8/4/2016	285	7,533	2.2	9	99.89%	628	2,978	425	3.4	0.48
8/25/2016	9/1/2016	7	167	99%	8/25/2016	498	13,163 *	1.4	5	99.96%	489	4,027	575	1.7	0.24
9/1/2016	9/8/2016	7	169	101%	8/25/2016	986	26,062 *	3.7	14	99.94%	986	16,269	2,324	9.0	1.28
9/8/2016	9/15/2016	7	145	86%	8/25/2016	605	15,991 *	12.5	49	99.70%	419	3,638	520	11.1	1.58

Notes:

% - percent
hrs - hours
JP-4 - jet petroleum fuel grade four
lbs - pounds
mg/m^3 - milligrams per cubic meter
ppmv - parts per million by volume
scfm - standard cubic feet per minute
TPH - total petroleum hydrocarbons
PID - photoionization detector
SVE - soil vapor compound
VOC - volatile organic compound

* Concentration and associated calculated values may change after receipt of subsequent analytical data.
(a) Calculated destruction efficiencies are calculated using a single sampling event for each quarter, not using the average influent and effluent results.
(b) Mass and volumes are calculated based on laboratory data for TPH reported as JP-4. As has been the basis for previous calculations at ST012, the average molecular weight of TPH as JP-4 is assumed equivalent to xylene (106.168 grams per mole). The assumed liquid density of the fuel is 6.57 lbs per gallon.
(c) The PID correction factor for the 23 May 2016 sample was anomalous compared to historical values. An average of correction factors from samples before and after this date was used.
(d) The PID correction factor for the 25 August 2016 sample was anomalous compared to historical values. An average of correction factors from samples before and after this date was used.
(e) Inconsistent influent PID and flow rate measurements have been observed during system monitoring and are being investigated for the root cause and potential resolution.

B. Flame Oxidizer Destruction Efficiency/Mass Removal Summary

The destruction efficiency and mass removal calculations for the flame oxidizer are tabulated below. A correction factor was applied to PID readings based on available analytical data and corresponding PID data. This factor is updated each time new analytical data is available and may retroactively alter previously reported data.

Date Period Began	Date Period Ended	Days in Period	Time Flame Oxidizer Operated[d]	Flame Oxidizer Uptime[a]	Date of Influent Laboratory TPH Result	Influent Concentration (PID)[c]	Influent Concentration (Adjusted PID)	Effluent Concentration (PID)	Effluent Concentration (Adjusted PID)	Calculated Destruction Efficiency[b]	Flowrate into Oxidizer (End of Period)[e]	Estimated VOC Mass Removed[c]	Average Daily Removal Rate[c]	Estimated VOC Mass Released to Atmosphere[c]	Average VOC Mass Released to Atmosphere[c]
---	---	days	hrs	%		ppmv	mg/m^3	ppmv	mg/m^3	%	scfm	lbs/period	lbs/day	lbs/period	lbs/day
8/4/2016	8/11/2016	7	107	64%	8/4/2016	509	12,666	17.1	1.1	99.99%	768	3,898	557	0.3	0.05
8/11/2016	8/18/2016	7	91	54%	8/4/2016	428	10,650	16.4	1.1	99.99%	768	2,788	398	0.3	0.04
8/18/2016	8/25/2016	7	78	46%	8//2016	483	12,019	8.9	0.6	100.00%	838	2,942	420	0.1	0.02
8/25/2016	9/1/2016	7	112	67%	8/25/2016	433	12,551 *	5.6	0.4	100.00%	768	4,044	578	0.1	0.02
9/1/2016	9/8/2016	7	102	61%	8/25/2016	414	12,000 *	7.2	0.5	100.00%	942	4,319	617	0.2	0.02
9/8/2016	9/15/2016	7	140	83%	8/25/2016	868	25,159 *	13.6	0.9	100.00%	1,047	13,815	1,974	0.5	0.07

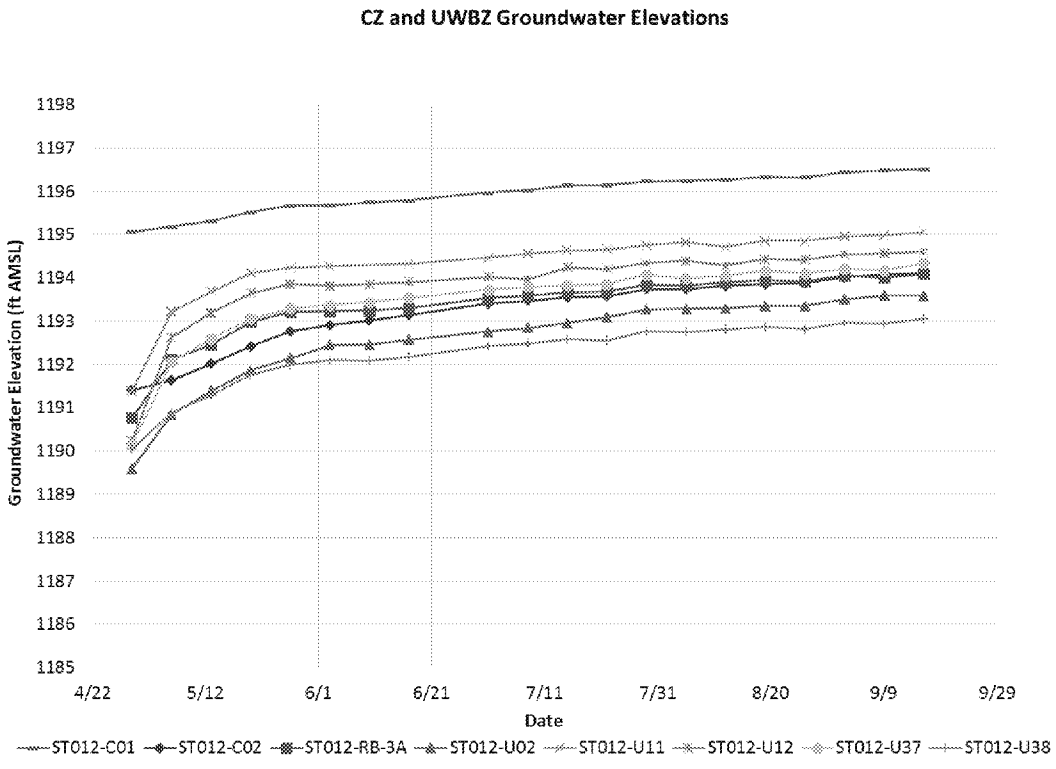
Notes:
% - percent
hrs - hours
JP-4 - jet petroleum fuel grade four
lbs - pounds
mg/m^3 - milligrams per cubic meter
ppmv - parts per million by volume
scfm - standard cubic feet per minute
TPH - total petroleum hydrocarbons
PID - photoionization detector
SVE - soil vapor compound
VOC - volatile organic compound

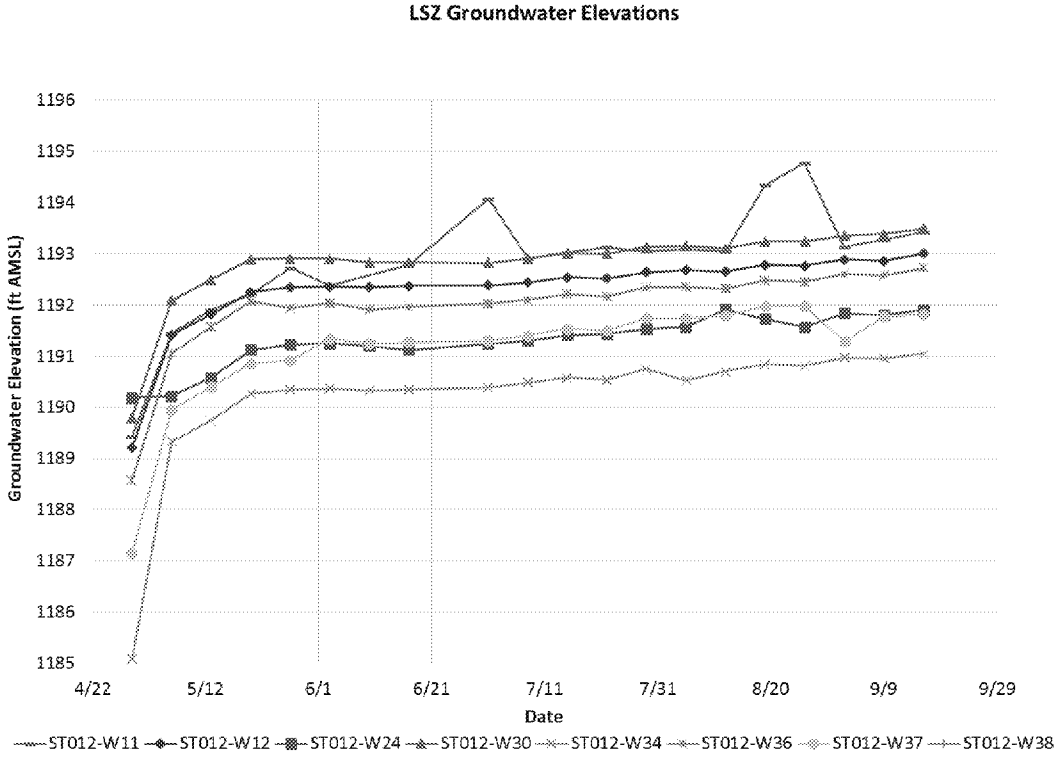
* Concentration and associated calculated values may change after receipt of subsequent analytical data.
(a) Discrepancies in runtime clocks for the flame oxidizer have been observed since restart. The system is being observed and diagnosed. The primary blower hours are currently used to calculate uptime.
(b) Calculated destruction efficiencies are calculated using a single sampling event for each quarter, not using the average influent and effluent results.
(c) Mass and volumes are calculated based on laboratory data for TPH reported as JP-4. As has been the basis for previous calculations at ST012, the average molecular weight of TPH as JP-4 is assumed equivalent to xylene (106.168 grams per mole). The assumed liquid density of the fuel is 6.57 lbs per gallon.

(d) An error in hour recording caused an anomaly in hours that the flame oxidizer operated for the weeks ending 25 August and 2 September. The operation hours were estimated based on the flame oxidizer temperature chart recorder.
(e) Inconsistent influent PID and flow rate measurements have been observed during system monitoring and are being investigated for the root cause and potential resolution.

IV. ROUNDWATER ELEVATION MONITORING

Groundwater elevations monitored since the shutdown of the final extraction phase of SEE (29 April 2016).

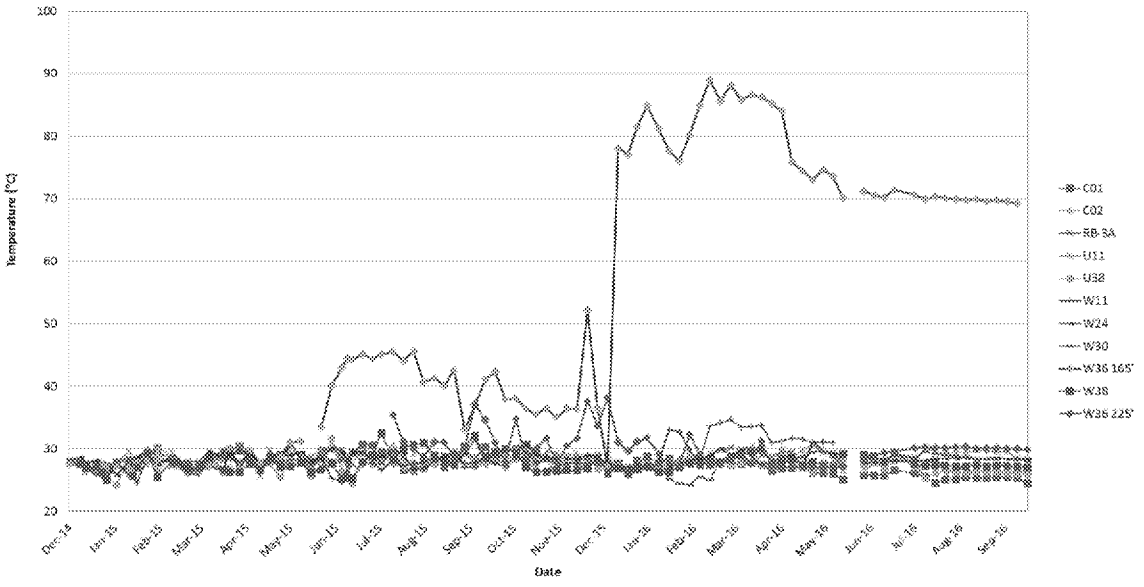




Note: Increased groundwater elevation in ST012-W11 on 19 August and 26 August 2016 are suspected to be influenced by LNAPL in the monitoring well caused by malfunctioning measuring equipment.

V. SUBSURFACE TEMPERATURE MONITORING

A. Perimeter Monitoring Well Temperatures



Note: Thermocouples are measured at approximate depths as follows (in feet below top of casing): C01=162; C02=168; RB-3A=161; U11=180; U38=164; W24=230; W30=231; W36=225; W11=228; and W38=228.

VI. SEE TEMPERATURE MONITORING POINTS

This section will be updated periodically with new temperature monitoring point (TMP) data. No TMP data was collected this week.

VII. LNAPL MONITORING

A. Perimeter LNAPL Thickness (ft)

	9/2/2016			9/9/2016			9/9/2016			9/16/2016		
Monitoring Well	Before bailing/ pumping	After Bailing/ pumping	Weekly Gallons Removed	Before bailing/ pumping	After Bailing/ pumping	Weekly Gallons Removed	Before bailing/ pumping	After Bailing/ pumping	Weekly Gallons Removed	Before bailing/ pumping	After Bailing/ pumping	Weekly Gallons Removed
CZ/UWBZ Wells												
ST012-C01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST012-C02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UWBZ Wells												
ST012-U02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST012-U11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST012-U12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST012-U37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST012-U38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST012-RB-3A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LSZ Wells												
ST012-W11	8.08	0.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00	2.12	NA	NA
ST012-W12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST012-W24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST012-W30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST012-W34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST012-W36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ST012-W37	2.24	0.00	3.50	7.06	7.06	0.00	0.00	0.00	0.00	3.03	0.00	13
ST012-W38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

B. LNAPL Monitoring and Removal

The table included with this report as Attachment 1 summarizes the removal and monitoring performed at LNAPL screened wells.

VIII. WASTE GENERATION AND RECYCLING

No site-derived waste or recyclable material was removed this week.

IX. TWO WEEK LOOK AHEAD

A. SEE Demolition - None

B. EBR Construction - None

C. Well Drilling/Development - None

D. Sampling Activities

1. Pumping and bailing to remove NAPL from SEE wells
2. Continued NAPL screening in SEE extraction and injection wells

E. SVE System Operation/Optimization

1. Continue operation of flame oxidizer and thermal oxidizer with SVE system.

X. ATTACHMENTS

1. LNAPL Monitoring and Removal Table
2. LNAPL Screening Figures based on table in Attachment 1.

Attachment 1. LNAPL Monitoring and Removal

The following table summarizes the removal and monitoring performed at LNAPL screened wells. LNAPL monitoring of wells was prioritized based on expected future usage of each well as part of EBR. Subsequent LNAPL monitoring/removal frequency was prioritized based on the amount of LNAPL, the observed LNAPL recharge, and the temperature of each well. LNAPL monitoring and removal is initially conducted weekly at wells with LNAPL and the frequency may be reduced depending on whether LNAPL returns after pumping/bailing. Wells with high temperatures were not able to be bailed, or NAPL thicknesses recorded because of temperature interference with equipment. Currently 19 SEE wells have eductors or pumps in them that have not been removed and cannot be effectively screened for LNAPL (CZ13, CZ15, CZ17, UWBZ01, UWBZ04, UWBZ05, UWBZ06, UWBZ30, LSZ01, LSZ02, LSZ04, LSZ05, LSZ06, LSZ08, LSZ13, LSZ16, LSZ30, LSZ33, LSZ40). Eductor removal was put on hold along with SEE decommissioning. Any additional wells that are monitored in future weeks will be included on this table:

Well	Date	Able to Use Interface Probe?	NAPL Present (Y/N)	Before Pumping			Bailed/ Pumped (Y/N)	NAPL Remaining (Y/N)	After Pumping			LNAPL Removed (Gallons)
				Depth to Product (ft. bgs)	Depth to Water (ft. bgs)	NAPL Thickness (ft.)			Depth to Product (ft. bgs)	Depth to Water (ft. bgs)	NAPL Thickness (ft.)	
CZ01	7/19/2016	N	Y	NM	146 (2)	0.3 (1)	N	Y	---	---	---	0
	7/25/2016	N	Y	NM	145 (2)	0.08 (1)	N	Y	---	---	---	0
	8/2/2016	N	Sheen	144 (2)	144 (2)	Sheen	N	Sheen	---	---	---	0
	8/10/2016	N	Y	NM	144 (2)	0.02 (1)	N	Y	---	---	---	0
	8/15/2016	N	Y	NM	147 (2)	0.04 (1)	N	Y	---	---	---	0
	8/23/2016	N	Y	NM	147 (2)	0.08 (1)	N	Y	---	---	---	0
	8/29/2016	N	Y	NM	147 (2)	0.06 (1)	N	Y	---	---	---	0
	9/14/2016	N	Y	NM	147 (2)	0.08 (1)	N	Y	---	---	---	0
CZ02	7/12/2016	N	N	---	144 (2)	---	N	N	---	---	---	0
	7/27/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	8/2/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	8/23/2016	N	Y	NM	147 (2)	0.25 (1)	N	Y	---	---	---	0
	8/29/2016	N	N	---	147 (2)	---	N	N	---	---	---	0
	9/14/2016	N	Y	NM	147 (2)	0.25 (1)	N	Y	---	---	---	0
CZ03	7/7/2016	N	N	---	---	---	N	N	---	---	---	0
	7/11/2016	N	N	---	142 (2)	---	N	N	---	---	---	0
	7/27/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	8/2/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	8/29/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
CZ04	7/7/2016	N	N	---	---	---	N	N	---	---	---	0
	7/12/2016	N	N	---	147 (2)	---	N	N	---	---	---	0
	7/27/2016	N	N	---	147 (2)	---	N	N	---	---	---	0
	8/2/2016	N	N	---	147 (2)	---	N	N	---	---	---	0
	8/30/2016	N	N	---	147 (2)	---	N	N	---	---	---	0
CZ05	7/7/2016	N	N	---	---	---	N	N	---	---	---	0
	7/12/2016	N	N	---	145 (2)	---	N	N	---	---	---	0
	7/28/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	8/3/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	8/30/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
CZ06	7/11/2016	N	N	---	145 (2)	---	N	N	---	---	---	0
	7/28/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	8/2/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	8/23/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
CZ07	7/13/2016	N	Y	NM	142 (2)	0.04 (1)	N	Y	---	---	---	0
	7/25/2016	N	Y	144 (2)	144 (2)	0.50 (1)	N	Y	---	---	---	0
	8/2/2016	N	Y	NM	144 (2)	0.01 (1)	N	Y	---	---	---	0
	8/16/2016	N	N	---	146 (2)	---	N	N	---	---	---	0
	8/30/2016	N	N	---	146 (2)	---	N	N	---	---	---	0
CZ08	7/13/2016	N	Y	NM	147 (2)	0.04 (1)	N	Y	---	---	---	0
	7/25/2016	N	Y	NM	146 (2)	0.02 (1)	N	Y	---	---	---	0
	8/2/2016	N	Sheen	146 (2)	146 (2)	Sheen	N	Sheen	---	---	---	0
	8/16/2016	N	Y	NM (2)	146 (2)	0.02 (1)	N	Y	---	---	---	0
	8/23/2016	N	Y	NM (2)	146 (2)	0.02 (1)	N	Y	---	---	---	0
CZ09	6/22/2016	N	Y	NR	NR	0.13 (1)	N	Y	---	---	---	0
	7/18/2016	N	N	---	145 (2)	---	N	N	---	---	---	0
	7/25/2016	N	N	---	145 (2)	---	N	N	---	---	---	0
	8/2/2016	N	N	---	145 (2)	---	N	N	---	---	---	0
	8/23/2016	N	Y	---	146 (2)	0.08 (1)	N	Y	---	---	---	0
CZ10	6/23/2016	N	N	---	---	---	N	N	---	---	---	0
	7/12/2016	N	Sheen	146 (2)	146 (2)	Sheen	N	Sheen	---	---	---	0
	7/27/2016	N	Sheen	148 (2)	148 (2)	Sheen	N	Sheen	---	---	---	0
	8/2/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	8/23/2016	N	N	---	147 (2)	---	N	N	---	---	---	0
	5/23/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	7/7/2016	N	Sheen	---	NM	---	N	Sheen	---	---	---	0
	7/12/2016	N	N	---	145 (2)	---	N	N	---	---	---	0
	7/27/2016	N	N	---	149 (2)	---	N	N	---	---	---	0

	8/2/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	8/16/2016	N	Y	NM	148 (2)	0.01 (1)	N	Y	---	---	---	0
CZ11	8/29/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	5/24/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/7/2016	N	Y	149 (2)	NM	NM	Y	N	NR	NR	NR	1
	6/23/2016	N	N	---	---	---	N	N	---	---	---	0
	6/29/2016	N	N	NM	156 (2)	NM	N	N	---	---	---	0
	7/13/2016	N	Y	143 (2)	150 (2)	7	N	Y	---	---	---	0
	7/19/2016	N	Sheen	---	146 (2)	Sheen	N	Sheen	---	---	---	0
	7/25/2016	N	Sheen	---	148 (2)	Sheen	N	Sheen	---	---	---	0
	8/2/2016	N	Sheen	---	148 (2)	Sheen	N	Sheen	---	---	---	0
	8/17/2016	N	N	---	147 (2)	---	N	N	---	---	---	0
CZ12	8/23/2016	N	Y	---	146 (2)	0.02 (1)	N	Y	---	---	---	0
	5/22/2016	N	N	---	---	---	N	N	---	---	---	0
	5/26/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/7/2016	N	Y	148 (2)	NM	NM	Y	N	NR	NR	NR	3
	6/22/2016	N	N	---	---	---	N	N	---	---	---	0
	6/29/2016	N	Sheen	NM	152 (2)	NM	N	Sheen	---	---	---	0
	7/7/2016	N	Sheen	---	NM	---	N	Sheen	---	---	---	0
	7/11/2016	N	Sheen	142 (2)	142 (2)	Sheen	N	Sheen	---	---	---	0
	7/25/2016	N	Sheen	149 (2)	149 (2)	Sheen	N	Sheen	---	---	---	0
	8/2/2016	N	Sheen	NM	149 (2)	Sheen	N	Sheen	---	---	---	0
	8/16/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
CZ14	8/30/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	5/19/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/7/2016	N	Y	151 (2)	NM	NM	Y	N	151	NR	NR	1
	6/22/2016	N	N	---	---	---	N	N	---	---	---	0
	6/29/2016	N	N	---	152 (2)	---	N	N	---	---	---	0
	7/11/2016	N	N	---	141 (2)	---	N	N	---	---	---	0
	7/25/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	8/3/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
CZ16	8/30/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	5/31/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/15/2016	N	N	NM	149 (2)	NM	N	N	---	---	---	0
	6/22/2016	N	Y	NM	NM	0.13 (1)	N	Y	---	---	---	0
	6/29/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	7/12/2016	N	Y	---	144 (2)	0.02 (1)	N	Y	---	---	---	0
	7/28/2016	N	Y	---	148 (2)	0.01 (1)	N	Y	---	---	---	0
	8/3/2016	N	Y	---	148 (2)	0.01 (1)	N	Y	---	---	---	0
	8/10/2016	N	Sheen	148 (2)	148 (2)	Sheen	N	Sheen	---	---	---	0
	8/15/2016	N	Y	NM	147 (2)	0.01 (1)	N	Y	---	---	---	0
	8/23/2016	N	Y	NM	148 (2)	0.01 (1)	N	Y	---	---	---	0
	8/29/2016	N	Y	NM	147 (2)	0.01 (1)	N	Y	---	---	---	0
CZ18	9/14/2016	N	Y	NM	148 (2)	0.02 (1)	N	Y	---	---	---	0
	5/31/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/22/2016	N	N	---	NM (2)	---	N	N	---	---	---	0
	6/29/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	7/12/2016	N	Sheen	147 (2)	147 (2)	Sheen	N	Sheen	---	---	---	0
	7/28/2016	N	Y	NM	147 (2)	0.01 (1)	N	Y	---	---	---	0
	8/3/2016	N	N	---	147 (2)	---	N	N	---	---	---	0
	8/15/2016	N	Sheen	148 (2)	148 (2)	Sheen	N	Sheen	---	---	---	0
	8/23/2016	N	Y	NM	149 (2)	0.01 (1)	N	Y	---	---	---	0
CZ19	8/30/2016(7)	---	---	---	---	---	---	---	---	---	---	---
	7/12/2016	N	N	---	145 (2)	---	N	N	---	---	---	0
	7/28/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	8/3/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
CZ20	8/29/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	7/20/2016	N	N	---	145 (2)	---	N	N	---	---	---	0
	7/25/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	8/2/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
CZ21*	8/29/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	7/20/2015	N	N	---	---	---	N	N	---	---	---	0
CZ22/	9/2/2016(5)	Y	N	---	143.64	---	N	N	---	---	---	0
UWBZ35*	9/2/2016(6)	Y	N	---	143.58	---	N	N	---	---	---	0
	7/12/2016	N	Y	142 (2)	169 (2)	27 (1)	Y	N	NR	NR	0	25
	7/27/2016	N	Y	NM	149 (2)	0.25 (1)	N	Y	---	---	---	0
	8/2/2016	N	Sheen	149 (2)	149 (2)	Sheen	N	Sheen	---	---	---	0
	8/10/2016	N	Sheen	149 (2)	149 (2)	Sheen	N	Sheen	---	---	---	0
	8/15/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	8/26/2016	N	N	---	152 (2)	---	N	N	---	---	---	0
	8/30/2016	N	N	---	150 (2)	---	N	N	---	---	---	0
UWBZ02	9/14/2016	N	N	---	151 (2)	---	N	N	---	---	---	0

	7/7/2016	N	N	---	---	---	N	N	---	---	---	0
	7/12/2016	N	N	---	145 (2)	---	N	N	---	---	---	0
	7/27/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	8/3/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
UWBZ03	8/30/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	7/7/2016	N	N	---	---	---	N	N	---	---	---	0
	7/12/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	7/27/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	8/2/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
UWBZ07	8/30/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	7/19/2016	N	Y	---	144 (2)	0.4 (1)	N	Y	---	---	---	0
	7/25/2016	N	Y	---	145 (2)	0.33 (1)	N	Y	---	---	---	0
	8/2/2016	N	Y	---	145 (2)	0.01 (1)	N	Y	---	---	---	0
	8/12/2016	N	Sheen	145 (2)	145 (2)	Sheen	N	Sheen	---	---	---	0
	8/15/2016	N	Y	---	147 (2)	0.04 (1)	N	Y	---	---	---	0
	8/26/2016	N	Y	---	150 (2)	0.01 (1)	N	Y	---	---	---	0
	8/30/2016	N	Y	---	150 (2)	0.5 (1)	N	Y	---	---	---	0
UWBZ09	9/14/2016	N	Y	---	151 (2)	0.01 (1)	N	Y	---	---	---	0
	5/24/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/3/2016	N	Y	143 (3)	NM	NM	Y	N	NR	NR	NR	13
	6/23/2016	N	N	---	---	---	N	N	---	---	---	0
	6/29/2016	N	Y	151 (2)	151 (2)	0.08 (1)	N	Y	---	---	---	0
	7/12/2016	N	Y	142 (2)	152 (2)	10 (1)	N	Y	---	---	---	0
	7/13/2016	N	Y	NR	NR	NR	Y	N	NR	NR	0	18
	7/27/2016	N	Y	NM	148 (2)	0.2 (1)	N	Y	---	---	---	0
	8/2/2016	N	Sheen	148 (2)	148 (2)	Sheen	N	Sheen	---	---	---	0
	8/10/2016	N	Sheen	148 (2)	148 (2)	Sheen	N	Sheen	---	---	---	0
	8/15/2016	N	Y	NM	148 (2)	0.2 (1)	N	Y	---	---	---	0
	8/23/2016	N	Y	NM	148 (2)	0.25 (1)	N	Y	---	---	---	0
	8/30/2016	N	Y	NM	149 (2)	0.02 (1)	N	Y	---	---	---	0
UWBZ10	9/14/2016	N	Y	NM	148 (2)	0.25 (1)	N	Y	---	---	---	0
	7/18/2016	N	Y	142 (2)	158 (2)	16 (1)	N	Y	---	---	---	0
	7/29/2016	N	Y	144 (2)	151 (2)	7 (1)	Y	N	NR	148	0	20
	8/3/2016	N	Y	NM	149 (2)	0.2 (1)	N	Y	---	---	---	0
	8/10/2016	N	Y	NM	148 (2)	0.2 (1)	N	Y	---	---	---	0
	8/15/2016	N	Y	146 (2)	148 (2)	2 (1)	N	Y	---	---	---	0
	8/18/2016	N	Y	146 (2)	147 (2)	1 (1)	Y	Y	147 (2)	147 (2)	0.01 (1)	10
	8/26/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
UWBZ11	8/30/2016	N	Y	NM	148 (2)	0.1 (1)	N	Y	---	---	---	0
	7/19/2016	N	Sheen	145 (2)	145 (2)	Sheen	N	Sheen	---	---	---	0
	7/25/2016	N	Y	NM	145 (2)	0.1 (1)	N	Y	---	---	---	0
	8/2/2016	N	N	---	146 (2)	---	N	N	---	---	---	0
	8/16/2016	N	Y	NM	146 (2)	0.02 (1)	N	Y	---	---	---	0
	8/29/2016	N	Sheen	NM	145 (2)	Sheen	N	Sheen	---	---	---	0
UWBZ12	9/14/2016	N	Y	NM	147 (2)	0.02 (1)	N	Y	---	---	---	0
	7/7/2016	N	Y	NM	NM	<0.02 (1)	N	Y	---	---	---	0
	7/12/2016	N	Y	140 (2)	165 (2)	25 (1)	N	Y	---	---	---	0
	7/13/2016	N	Y	NR	NR	NR	Y	N	NR	NR	0	40
	7/27/2016	N	Y	NM	148 (2)	0.4 (1)	N	Y	---	---	---	0
	8/3/2016	N	Sheen	NM	148 (2)	Sheen	N	Sheen	---	---	---	0
	8/10/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	8/15/2016	N	Y	---	149 (2)	0.02 (1)	N	Y	---	---	---	0
	8/23/2016	N	Y	---	148 (2)	0.02 (1)	N	Y	---	---	---	0
	8/30/2016	N	Y	---	148 (2)	0.02 (1)	N	Y	---	---	---	0
UWBZ13	9/14/2016	N	Y	---	148 (2)	0.02 (1)	N	Y	---	---	---	0
	7/7/2016	N	Y	NM	NM	0.02 (1)	N	Y	---	---	---	0
	7/11/2016	N	Y	NM	144 (2)	0.02 (1)	N	Y	---	---	---	0
	7/25/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	8/2/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	8/17/2016	N	Y	NM	148 (2)	0.25 (1)	N	Y	---	---	---	0
	8/30/2016	N	Y	NM	148 (2)	0.01 (1)	N	Y	---	---	---	0
UWBZ14	9/14/2016	N	Y	NM	148 (2)	0.01 (1)	N	Y	---	---	---	0
	7/12/2016	N	Y	140 (2)	170 (2)	30 (1)	N	Y	---	---	---	0
	7/18/2016	N	Y	140 (2)	150 (2)	10 (1)	Y	N	NR	147 (2)	0	55
	7/27/2016	N	Y	147 (2)	152 (2)	5 (1)	N	Y	---	---	---	0
	8/3/2016	N	Y	NM	149 (2)	0.08 (1)	N	Y	---	---	---	0
	8/10/2016	N	Y	NM	148 (2)	0.6 (1)	N	Y	---	---	---	0
	8/15/2016	N	Y	146 (2)	149 (2)	3 (1)	N	Y	---	---	---	0
	8/23/2016	N	Y	146 (2)	149 (2)	3 (1)	N	Y	---	---	---	0
	8/30/2016	N	Y	NM	148 (2)	0.17 (1)	N	Y	---	---	---	0
	9/6/2016	N	Y	147 (2)	152 (2)	5 (1)	N	Y	---	---	---	0
	9/9/2016	N	Y	147 (2)	152 (2)	5 (1)	Y	Y	---	145 (2)	0.4 (2)	25
UWBZ15	9/14/2016	N	Y	148 (2)	148 (2)	0.25 (1)	N	Y	---	---	---	0

	7/11/2016	N	Y	NM	143 (2)	0.02 (1)	N	Y	---	---	---	0
	7/25/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	8/3/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	8/16/2016	N	Y	NM	146 (2)	0.01 (1)	N	Y	---	---	---	0
	8/30/2016	N	Y	NM	148 (2)	0.01 (1)	N	Y	---	---	---	0
UWBZ16	9/14/2016	N	Y	NM	150 (2)	0.08 (1)	N	Y	---	---	---	0
	7/25/2016	N	Y	143 (2)	150 (2)	7 (1)	N	Y	---	---	---	0
	8/3/2016	N	Y	143 (2)	150 (2)	7 (1)	Y	N	NR	142 (2)	0 (1)	36
	8/10/2016	N	Sheen	150 (2)	150 (2)	Sheen	N	Sheen	---	---	---	0
	8/16/2016	N	Y	146 (2)	148 (2)	2 (1)	N	Y	---	---	---	0
	8/23/2016	N	Y	146 (2)	148 (2)	2 (1)	N	Y	---	---	---	0
	8/30/2016	N	Sheen	148 (2)	148 (2)	Sheen	N	Sheen	---	---	---	0
	9/6/2016	N	Y	145 (2)	149 (2)	4 (1)	N	Y	---	---	---	0
	9/9/2016	N	Y	145 (2)	149 (2)	4 (1)	Y	N	---	145 (2)	0.6 (1)	15
UWBZ17	9/14/2016	N	Y	149 (2)	149 (2)	Sheen	N	Sheen	---	---	---	0
	6/22/2016	N	Y	NM	NM	3 (1)	N	Y	---	---	---	0
	6/30/2016	N	Y	147 (2)	NM	NM	Y	N	NR	NR	0	20
	7/19/2016	N	Y	NM	145 (2)	0.2 (1)	N	Y	---	---	---	0
	7/25/2016	N	Y	NM	145 (2)	0.7 (1)	N	Y	---	---	---	0
	8/2/2016	N	Sheen	145 (2)	145 (2)	Sheen	N	Sheen	---	---	---	0
	8/12/2016	N	Sheen	145 (2)	145 (2)	Sheen	N	Sheen	---	---	---	0
	8/15/2016	N	Y	145 (2)	147 (2)	2 (1)	N	Y	---	---	---	0
	8/23/2016	N	Y	146 (2)	148 (2)	2 (1)	N	Y	---	---	---	0
	8/30/2016	N	Y	NM	148 (2)	0.02 (1)	N	Y	---	---	---	0
	9/6/2016	N	Y	NM	145 (2)	0.13 (1)	N	Y	---	---	---	0
UWBZ18	9/14/2016	N	Y	NM	148 (2)	0.13 (1)	N	Y	---	---	---	0
	6/6/2016	N	Y	150 (2)	NM	NM	Y	N	NR	NR	0	1
	6/22/2016	N	Y	NM	NM	3 (1)	N	Y	---	---	---	0
	7/11/2016	N	Y	138 (2)	164 (2)	26 (1)	N	Y	---	---	---	0
	7/12/2016	N	Y	142 (2)	162 (2)	20 (1)	Y	N	---	144 (2)	0	28
	7/25/2016	N	Y	NM	147 (2)	0.2 (1)	N	Y	---	---	---	0
	8/3/2016	N	Y	NM	147 (2)	0.02 (1)	N	Y	---	---	---	0
	8/10/2016	N	Y	NM	147 (2)	0.02 (1)	N	Y	---	---	---	0
	8/16/2016	N	Y	147 (2)	148 (2)	1 (1)	N	Y	---	---	---	0
	8/26/2016	N	N	---	147 (2)	---	N	N	---	---	---	0
	8/30/2016	N	Y	NM	147 (2)	0.02 (1)	N	Y	---	---	---	0
UWBZ19	9/14/2016	N	N	---	147 (2)	---	N	N	---	---	---	0
	5/26/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/14/2016	N	Y	148 (2)	NM	NM	Y	N	NR	NR	0	24
	6/23/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/29/2016	N	Y	155 (2)	157.5 (2)	2.5 (1)	N	Y	---	---	---	0
	7/7/2016	N	Y	NM	NM	0.08 (1)	N	Y	---	---	---	0
	7/29/2016	N	Y	146 (2)	152 (2)	6 (1)	Y	N	NR	148 (2)	0.1 (1)	20
	8/2/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	8/10/2016	N	Sheen	148 (2)	148 (2)	Sheen	N	Sheen	---	---	---	0
	8/15/2016	N	Y	NM	147 (2)	0.01 (1)	N	Y	---	---	---	0
	8/23/2016	N	Y	NM	147 (2)	0.01 (1)	N	Y	---	---	---	0
	8/30/2016	N	Y	NM	148 (2)	Sheen	N	Sheen	---	---	---	0
UWBZ21	9/14/2016	N	Y	NM	147 (2)	0.04 (1)	N	Y	---	---	---	0
	5/19/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/8/2016	N	Y	149 (2)	NM	NM	Y	N	NR	NR	0	1
	6/29/2016	N	Y	147.5 (2)	147 (2)	0.5 (1)	N	Y	---	---	---	0
	7/7/2016	N	Y	NM	NM	0.02 (1)	N	Y	---	---	---	0
	7/12/2016	N	Y	NM	146 (2)	0.04 (1)	N	Y	---	---	---	0
	7/28/2016	N	Y	NM	150 (2)	0.4 (1)	N	Y	---	---	---	0
	8/3/2016	N	Y	NM	150 (2)	0.02 (1)	N	Y	---	---	---	0
	8/10/2016	N	Y	NM	149 (2)	0.04 (1)	N	Y	---	---	---	0
	8/15/2016	N	Y	NM	147 (2)	0.2 (1)	N	Y	---	---	---	0
	8/23/2016	N	Y	NM	148 (2)	0.08 (1)	N	Y	---	---	---	0
UWBZ22	8/29/2016	N	Y	NM	147 (2)	0.01 (1)	N	Y	---	---	---	0
	5/18/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/9/2016	N	Y	148 (2)	NM	NM	Y	N	NR	NR	0	35
	6/29/2016	N	Y	153 (2)	154.5 (2)	1.5 (1)	N	Y	---	---	---	0
	7/11/2016	N	Y	142 (2)	148 (2)	6 (1)	N	Y	---	---	---	0
	7/25/2016	N	Y	NM	149 (2)	0.8 (1)	N	Y	---	---	---	0
	8/2/2016	N	Y	NM	149 (2)	0.02 (1)	N	Y	---	---	---	0
	8/10/2016	N	Sheen	149 (2)	149 (2)	Sheen	N	Sheen	---	---	---	0
	8/16/2016	N	Y	146 (2)	149 (2)	3 (1)	N	Y	---	---	---	0
	8/22/2016	N	Y	146 (2)	149 (2)	3 (1)	Y	N	---	148 (2)	0	15
	8/26/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	8/30/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
UWBZ23	9/14/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	7/20/2016	N	N	---	146 (2)	---	N	N	---	---	---	0

	8/12/2016	N	N	---	146 [2]	---	N	N	---	---	---	0
UWBZ24	8/25/2016	N	Y	---	147 [2]	0.01 [1]	N	Y	---	---	---	0
	7/19/2016	N	Sheen	145 [2]	145 [2]	Sheen	N	Sheen	---	---	---	0
	7/25/2016	N	N	---	146 [2]	---	N	N	---	---	---	0
	8/2/2016	N	N	---	146 [2]	---	N	N	---	---	---	0
	8/16/2016	N	N	---	146 [2]	---	N	N	---	---	---	0
UWBZ25	8/23/2016	N	N	---	146 [2]	---	N	N	---	---	---	0
	6/29/2016	N	Y	141.5 [2]	170 [2]	28.5 [1]	N	Y	---	---	---	0
	7/5/2016	Y	Y	140.4	167.1	26.61	Y	Y	142.2	162.9	20.7	10
	7/6/2016	Y	Y	142	163	20.99	Y	Y	147.3	147.8	0.45	40
	7/12/2016	N	Y	NM	142 [2]	0.17 [1]	N	Y	---	---	---	0
	7/28/2016	N	Y	147 [2]	148 [2]	1 [1]	N	Y	---	---	---	0
	8/3/2016	N	Y	147 [2]	148 [2]	0.01 [1]	N	Y	---	---	---	0
	8/12/2016	N	Y	NM	148 [2]	0.04 [1]	N	Y	---	---	---	0
	8/16/2016	N	Y	NM	148 [2]	0.2 [1]	N	Y	---	---	---	0
	8/26/2016	N	N	---	148 [2]	---	N	N	---	---	---	0
UWBZ26	8/30/2016	N	Y	---	148 [2]	0.1 [1]	N	Y	---	---	---	0
	5/24/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/8/2016	N	Y	143 [2]	NM	NM	Y	N	NR	NR	NR	32
	6/29/2016	N	Y	148 [2]	148 [2]	0.02 [1]	N	Y	---	---	---	0
	7/12/2016	N	N	---	143 [2]	---	N	N	---	---	---	0
	7/28/2016	N	N	---	147 [2]	---	N	N	---	---	---	0
	8/2/2016	N	N	---	147 [2]	---	N	N	---	---	---	0
UWBZ27	8/30/2016	N	N	---	147 [2]	---	N	N	---	---	---	0
UWBZ28/ LSZ51*	7/20/2016	N	N	NM	NM	---	N	N	---	---	---	0
	7/20/2016	N	N	---	145 [2]	---	N	N	---	---	---	0
	7/27/2016	N	N	---	146 [2]	---	N	N	---	---	---	0
	8/2/2016	N	N	---	146 [2]	---	N	N	---	---	---	0
UWBZ29	8/30/2016	N	N	---	146 [2]	---	N	N	---	---	---	0
	7/20/2016	N	N	---	146 [2]	---	N	N	---	---	---	0
	7/25/2016	N	N	---	146 [2]	---	N	N	---	---	---	0
	8/2/2016	N	N	---	146 [2]	---	N	N	---	---	---	0
	8/16/2016	N	N	---	146 [2]	---	N	N	---	---	---	0
UWBZ31	8/30/2016	N	N	---	146 [2]	---	N	N	---	---	---	0
UWBZ32/ LSZ47*	7/20/2016	N	N	NM	NM	---	N	N	---	---	---	0
	8/23/2016[6]	N	N	---	146 [2]	---	N	N	---	---	---	0
UWBZ33/ LSZ48*	7/12/2016[5]	Y	Y	144.9	146.55	1.65	Y	Y	145.2	145.4	0.13	2
	7/25/2016[5]	N	Sheen	NM	NM	Sheen	Y	Sheen	---	---	---	0
	7/20/2016	N	N	---	145 [2]	---	N	N	---	---	---	0
	7/29/2016	Y	N	---	144.49	---	N	N	---	---	---	0
	8/5/2016	Y	N	---	144.55	---	N	N	---	---	---	0
	8/19/2016	Y	N	---	144.42	---	N	N	---	---	---	0
UWBZ34	9/2/2016	Y	N	---	144.38	---	N	N	---	---	---	0
	7/15/2016	Y	N	---	144.31	---	N	N	---	---	---	0
	7/29/2016	Y	N	---	144.07	---	N	N	---	---	---	0
	8/5/2016	Y	N	---	144.21	---	N	N	---	---	---	0
UWBZ36	9/2/2016	Y	N	---	144.02	---	N	N	---	---	---	0
	7/7/2016	N	N	---	---	---	N	N	---	---	---	0
	7/12/2016	N	N	---	145 [2]	---	N	N	---	---	---	0
	7/28/2016	N	N	---	148 [2]	---	N	N	---	---	---	0
	8/3/2016	N	N	---	148 [2]	---	N	N	---	---	---	0
LSZ03	8/30/2016	N	N	---	148 [2]	---	N	N	---	---	---	0
	7/7/2016	N	N	---	---	---	N	N	---	---	---	0
	7/12/2016	N	N	---	145 [2]	---	N	N	---	---	---	0
	7/28/2016	N	N	---	146 [2]	---	N	N	---	---	---	0
	8/2/2016	N	N	---	147 [2]	---	N	N	---	---	---	0
LSZ07	8/30/2016	N	N	---	147 [2]	---	N	N	---	---	---	0
	5/26/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/29/2016	N	Y	152 [2]	152 [2]	<0.08 [1]	N	Y	---	---	---	0
	7/7/2016	N	Y	NM	NM	<0.08 [1]	N	Y	---	---	---	0
	7/12/2016	N	Sheen	144 [2]	144 [2]	Sheen	N	Sheen	---	---	---	0
	7/27/2016	N	Y	NM	149 [2]	0.1 [1]	N	Y	---	---	---	0
	8/3/2016	N	Y	NM	148 [2]	0.1 [1]	N	Y	---	---	---	0
	8/12/2016	N	Sheen	148 [2]	148 [2]	Sheen	N	Sheen	---	---	---	0
	8/16/2016	N	Y	NM	149 [2]	0.04 [1]	N	Y	---	---	---	0
LSZ09	8/30/2016	N	Y	NM	149 [2]	0.02 [1]	N	Y	---	---	---	0
	7/12/2016	N	N	---	142 [2]	---	N	N	---	---	---	0
	7/28/2016	N	N	---	149 [2]	---	N	N	---	---	---	0
	8/3/2016	N	N	---	149 [2]	---	N	N	---	---	---	0
LSZ10	8/30/2016	N	N	---	149 [2]	---	N	N	---	---	---	0
	5/24/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/1/2016	N	Y	NM	NM	NM	Y	N	NR	NR	0	10 [4]
	6/29/2016	N	N	---	147	---	N	N	---	---	---	0
	7/7/2016	N	Y	NM	NM	<0.02 [1]	N	Y	---	---	---	0
	7/11/2016	N	Y	NM	145 [2]	0.08 [1]	N	Y	---	---	---	0

	7/28/2016	N	N	---	150 (2)	---	N	N	---	---	---	0
	8/3/2016	N	N	---	150 (2)	---	N	N	---	---	---	0
	8/16/2016	N	N	---	150 (2)	---	N	N	---	---	---	0
	8/23/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
LSZ11	8/29/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	5/19/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/14/2016	N	Y	NM	NM	NM	Y	N	NR	NR	0	50
	6/24/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/29/2016	N	Y	148 (2)	158 (2)	10 (1)	Y	Y	NR	NR	<0.08	25
	7/12/2016	N	N	---	147 (2)	---	N	N	---	---	---	0
	7/25/2016	N	Y	---	148 (2)	0.2	N	Y	---	---	---	0
	8/2/2016	N	Sheen	148 (2)	148 (2)	Sheen	N	Sheen	---	---	---	0
	8/10/2016	N	Sheen	148 (2)	148 (2)	Sheen	N	Sheen	---	---	---	0
	8/16/2016	N	Y	NM	150 (2)	0.02 (1)	N	Y	---	---	---	0
	8/26/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	8/30/2016	N	Y	NM	149 (2)	0.01 (1)	N	Y	---	---	---	0
LSZ12	9/14/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	5/18/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/13/2016	N	Y	144 (2)	NM	NM	Y	N	NR	NR	0	26
	6/29/2016	N	N	---	150 (2)	---	N	N	---	---	---	0
	7/7/2016	N	Y	146 (2)	165 (2)	21 (1)	N	Y	148 (2)	NR	NR	35
	7/25/2016	N	Y	NM	147 (2)	0.2 (1)	N	Y	---	---	---	0
	8/2/2016	N	Y	NM	148 (2)	0.2 (1)	N	Y	---	---	---	0
	8/10/2016	N	Y	NM	148 (2)	0.04 (1)	N	Y	---	---	---	0
	8/15/2016	N	Y	NM	149 (2)	0.58 (1)	N	Y	---	---	---	0
	8/23/2016	N	Y	NM	149 (2)	0.5 (1)	N	Y	---	---	---	0
	8/30/2016	N	Y	NM	149 (2)	0.04 (1)	N	Y	---	---	---	0
	9/6/2016	N	Y	NM	150 (2)	0.33 (1)	N	Y	---	---	---	0
LSZ14	9/14/2016	N	Y	NM	149 (2)	0.5 (1)	N	Y	---	---	---	0
	7/12/2016	N	Y	135 (2)	NM	>35 (1)	N	Y	---	---	---	0
	7/14/2016	N	Y	144 (2)	159 (2)	15 (1)	Y	N	NR	147 (2)	Sheen	100
	7/25/2016	N	Y	NM	147 (2)	0.2 (1)	N	Y	---	---	---	0
	8/3/2016	N	Sheen	147 (2)	147 (2)	Sheen	N	Sheen	---	---	---	0
	8/10/2016	N	Sheen	147 (2)	147 (2)	Sheen	N	Sheen	---	---	---	0
	8/15/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	8/23/2016	N	N	---	148 (2)	0.01 (1)	N	Y	---	---	---	0
	8/30/2016	N	Sheen	147 (2)	148 (2)	Sheen	N	Sheen	---	---	---	0
LSZ15	8/30/2016	N	Y	NM	148 (2)	0.04 (1)	N	Y	---	---	---	0
	5/24/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/2/2016	N	Y	130 (2)	NM	NM	Y	N	NR	NR	0	50 (4)
	6/23/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/29/2016	N	Y	150 (2)	150 (2)	0.08 (1)	N	Y	---	---	---	0
	7/12/2016	N	Y	NM	145 (2)	0.08 (1)	N	Y	---	---	---	0
	7/27/2016	N	Y	NM	148 (2)	0.2 (1)	N	Y	---	---	---	0
	8/3/2016	N	Y	NM	148 (2)	0.2 (1)	N	Y	---	---	---	0
	8/10/2016	N	Y	NM	148 (2)	0.04 (1)	N	Y	---	---	---	0
	8/15/2016	N	Y	NM	148 (2)	0.04 (1)	N	Y	---	---	---	0
	8/23/2016	N	Y	NM	148 (2)	0.08 (1)	N	Y	---	---	---	0
	8/30/2016	N	Y	NM	148 (2)	0.04 (1)	N	Y	---	---	---	0
LSZ17	9/14/2016	N	Y	NM	148 (2)	0.08 (1)	N	Y	---	---	---	0
	7/18/2016	N	N	---	145 (2)	---	N	N	---	---	---	0
	7/25/2016	N	N	---	146 (2)	---	N	N	---	---	---	0
	8/2/2016	N	N	---	146 (2)	---	N	N	---	---	---	0
	8/16/2016	N	N	---	146 (2)	---	N	N	---	---	---	0
	8/23/2016	N	N	---	146 (2)	---	N	N	---	---	---	0
LSZ18	8/30/2016	N	N	---	146 (2)	---	N	N	---	---	---	0
	7/7/2016	N	Y	NM	NM	0.02 (1)	N	Y	---	---	---	0
	7/12/2016	N	Y	NM	144 (2)	0.04 (1)	N	Y	---	---	---	0
	7/27/2016	N	Y	NM	148 (2)	0.2 (1)	N	Y	---	---	---	0
	8/3/2016	N	Y	NM	148 (2)	0.2 (1)	N	Y	---	---	---	0
	8/10/2016	N	Sheen	148 (2)	148 (2)	Sheen	N	Y	---	---	---	0
	8/16/2016	N	Y	NM	148 (2)	0.08 (1)	N	Y	---	---	---	0
	8/23/2016	N	Y	NM	148 (2)	0.04 (1)	N	Y	---	---	---	0
	8/29/2016	N	Y	NM	148 (2)	0.08 (1)	N	Y	---	---	---	0
LSZ19	9/14/2016	N	Y	NM	147 (2)	0.04 (1)	N	Y	---	---	---	0
	7/7/2016	N	Sheen	---	NM	---	N	Y	---	---	---	0
	7/11/2016	N	Sheen	142 (2)	142 (2)	Sheen	N	Sheen	---	---	---	0
	7/25/2016	N	Sheen	149 (2)	149 (2)	Sheen	N	Sheen	---	---	---	0
	8/2/2016	N	Sheen	149 (2)	149 (2)	Sheen	N	Sheen	---	---	---	0
	8/16/2016	N	Y	NM	149 (2)	0.01 (1)	N	Y	---	---	---	0
	8/30/2016	N	Sheen	149 (2)	149 (2)	Sheen	N	Sheen	---	---	---	0
LSZ20	9/14/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	7/19/2016	N	Sheen	NM	144 (2)	Sheen	N	Sheen	---	---	---	0
	7/25/2016	N	Sheen	NM	146 (2)	Sheen	N	Sheen	---	---	---	0
	8/3/2016	N	Sheen	NM	146 (2)	Sheen	N	Sheen	---	---	---	0

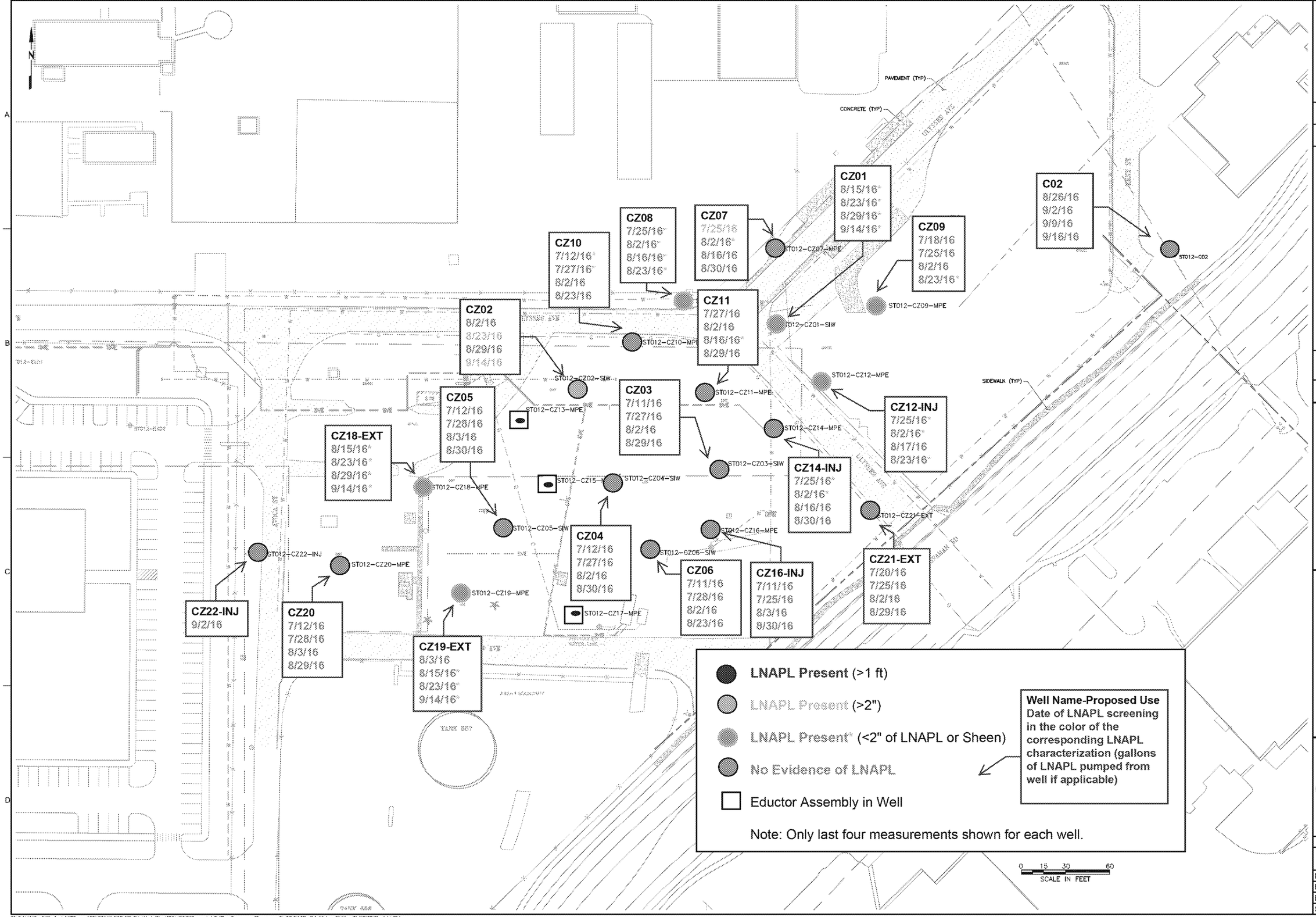
	8/16/2016	N	N	---	146 (2)	---	N	N	---	---	---	0
	8/23/2016	N	N	---	146 (2)	---	N	N	---	---	---	0
LSZ21	8/30/2016	N	Sheen	NM	146 (2)	Sheen	N	Sheen	---	---	---	0
	7/25/2016	N	Sheen	NM	148 (2)	Sheen	N	Sheen	---	---	---	0
	8/3/2016	N	Sheen	NM	148 (2)	Sheen	N	Sheen	---	---	---	0
	8/12/2016	N	Sheen	NM	148 (2)	Sheen	N	Sheen	---	---	---	0
	8/15/2016	N	N	---	150 (2)	---	N	N	---	---	---	0
	8/23/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
LSZ22	8/30/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	5/26/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/20/2016	N	N	---	151 (2)	---	N	N	---	---	---	0
	6/29/2016	N	N	---	152 (2)	---	N	N	---	---	---	0
	7/7/2016	N	N	---	NM	---	N	N	---	---	---	0
	7/12/2016	N	N	---	147 (2)	---	N	N	---	---	---	0
	7/28/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	8/3/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
LSZ23	8/30/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	7/12/2016	N	N	---	142 (2)	---	N	N	---	---	---	0
	7/28/2016	N	N	---	147 (2)	---	N	N	---	---	---	0
	8/3/2016	N	N	---	147 (2)	---	N	N	---	---	---	0
LSZ24	8/23/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	7/11/2016	N	Sheen	143 (2)	143 (2)	Sheen	N	Sheen	---	---	---	0
	7/25/2016	N	Sheen	149 (2)	149 (2)	Sheen	N	Sheen	---	---	---	0
	8/2/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	8/16/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
LSZ25	8/29/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	5/16/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/14/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	6/29/2016	N	N	---	153 (2)	---	N	N	---	---	---	0
	7/11/2016	N	N	---	146 (2)	---	N	N	---	---	---	0
	7/25/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	8/2/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
LSZ26	8/29/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	7/7/2016	N	N	---	---	---	N	N	---	---	---	0
	7/12/2016	N	N	---	145 (2)	---	N	N	---	---	---	0
	7/27/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	8/3/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
LSZ27	8/23/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	5/24/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/3/2016	N	Y	146	NM	NM	Y	N	NR	NR	0	5
	6/23/2016	N	N	---	NM	---	N	N	---	---	---	0
	6/29/2016	N	N	---	151 (2)	---	N	N	---	---	---	0
	7/12/2016	N	Sheen	145 (2)	145 (2)	Sheen	N	Sheen	---	---	---	0
	7/27/2016	N	Sheen	148 (2)	148 (2)	Sheen	N	Sheen	---	---	---	0
	8/2/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	8/16/2016	N	N	---	149 (2)	---	N	N	---	---	---	0
	8/23/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
LSZ28	8/30/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	5/18/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/6/2016	N	Y	142 (2)	NM	NM	Y	Y	NR	NR	NR	3
	6/29/2016	N	Y	152 (2)	152 (2)	<0.01 (1)	N	Y	NR	NR	<0.01	0
	7/20/2016	N	N	---	150 (2)	---	N	N	---	---	---	0
	7/25/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	8/2/2016	N	N	---	148 (2)	---	N	N	---	---	---	0
	8/23/2016	N	Y	NM	149 (2)	0.01 (1)	N	Y	---	---	---	0
LSZ29	8/30/2016	N	Sheen	149 (2)	149 (2)	Sheen	N	Sheen	---	---	---	0
	6/6/2016	N	Y	151 (2)	NM	NM	Y	N	NR	NR	0	20
	7/25/2016	N	Y	NM	145 (2)	0.2 (1)	N	Y	---	---	---	0
	8/3/2016	N	Sheen	145 (2)	145 (2)	Sheen	N	Sheen	---	---	---	0
LSZ31	8/23/2016	N	Y	NM	146 (2)	0.5 (1)	N	Y	---	---	---	0
	7/25/2016	N	Y	144.8 (2)	145 (2)	1.2 (1)	N	Y	---	---	---	0
	8/2/2016	N	Y	NM (2)	147 (2)	0.02 (1)	N	Y	---	---	---	0
	8/12/2016	N	Y	NM (2)	147 (2)	0.02 (1)	N	Y	---	---	---	0
	8/15/2016	N	Y	NM	148 (2)	0.08 (1)	N	Y	---	---	---	0
	8/23/2016	N	Y	NM	147 (2)	0.08 (1)	N	Y	---	---	---	0
LSZ32	8/30/2016	N	Y	NM	146 (2)	0.1 (1)	N	Y	---	---	---	0
	5/17/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/14/2016	N	Y	148 (2)	NM	NM	Y	N	NR	NR	0	38
	6/29/2016	N	Y	152 (2)	152 (2)	<0.08 (1)	N	Y	---	---	---	0
	7/11/2016	N	Y	NM	145 (2)	0.08 (1)	N	Y	---	---	---	0
	7/25/2016	N	Y	NM	149 (2)	0.2 (1)	N	Y	---	---	---	0
	8/2/2016	N	Sheen	148 (2)	148 (2)	Sheen	N	Sheen	---	---	---	0
	8/10/2016	N	Sheen	148 (2)	148 (2)	Sheen	N	Sheen	---	---	---	0
	8/15/2016	N	Y	NM (2)	149 (2)	0.01 (1)	N	Y	---	---	---	0

	8/26/2016	N	Y	NM [2]	148 [2]	0.01 [1]	N	Y	---	---	---	0
	8/30/2016	N	Y	NM [2]	148 [2]	0.01 [1]	N	Y	---	---	---	0
LSZ34	9/14/2016	N	Y	NM [2]	148 [2]	0.04 [1]	N	Y	---	---	---	0
	6/29/2016	N	Y	147 [2]	NM	NM	Y	N	NR	NR	0	65
	7/12/2016	N	Y	140 [2]	168 [2]	28 [1]	N	Y	---	---	---	0
	7/18/2016	N	Y	143 [2]	149 [2]	6 [1]	Y	N	NR	146 [2]	Sheen	35
	7/25/2016	N	Y	NM	149 [2]	0.2 [1]	N	Y	---	---	---	0
	8/3/2016	N	Y	NM	150 [2]	0.08 [1]	N	Y	---	---	---	0
	8/10/2016	N	Y	NM	149 [2]	0.06 [1]	N	Y	---	---	---	0
	8/16/2016	N	Y	146 [2]	149 [2]	3 [1]	N	Y	---	---	---	0
	8/22/2016	N	Y	146 [2]	149 [2]	3 [1]	Y	N	---	149 [2]	0	10
	8/23/2016	N	N	---	149 [2]	---	N	N	---	---	---	0
	8/30/2016	N	Y	NM	149 [2]	0.06 [1]	N	Y	---	---	---	0
LSZ35	9/14/2016	N	N	---	149 [2]	---	N	N	---	---	---	0
	5/19/2016	N	Y	NM	NM	NM	N	Y	---	---	---	0
	6/10/2016	N	Y	144 [2]	NM	NM	Y	N	NR	NR	0	86
	6/29/2016	N	Y	152 [2]	152 [2]	0.08 [1]	N	Y	---	---	---	0
	7/7/2016	N	Y	NM	NM	0.06 [1]	N	Y	---	---	---	0
	7/11/2016	N	Y	NM	145 [2]	0.08 [1]	N	Y	---	---	---	0
	8/2/2016	N	Y	NM	145 [2]	0.04 [1]	N	Y	---	---	---	0
	8/10/2016	N	Y	NM	145 [2]	0.04 [1]	N	Y	---	---	---	0
	8/15/2016	N	Y	NM	146 [2]	0.01 [1]	N	Y	---	---	---	0
	8/26/2016	N	N	---	148 [2]	---	N	N	---	---	---	0
	8/30/2016	N	Y	NM	148 [2]	0.17 [1]	N	Y	---	---	---	0
LSZ36	9/14/2016	N	N	---	148 [2]	---	N	N	---	---	---	0
	5/23/2016	Y	Y	138.40	185.80	47.40	N	Y	---	---	---	0
	5/24/2016	Y	Y	NR	NR	NR	Y	Y	145.1	161.7	16.56	60
	5/25/2016	Y	Y	NR	NR	NR	Y	Y	148.6	149.6	1.05	25
	5/25/2016	Y	Y	148.45	149.51	1.06	N	Y	---	---	---	0
	5/26/2016	Y	Y	148.46	149.5	1.04	N	Y	---	---	---	0
	5/26/2016	Y	Y	148.42	149.54	1.12	N	Y	---	---	---	0
	5/27/2016	Y	Y	148.31	149.5	1.19	N	Y	---	---	---	0
LSZ37	5/31/2016	Y	Y	148.31	149.49	1.18	N	N	---	---	---	0
	6/2/2016	Y	Y	NR	NR	NR	Y	Y	149.12	150.11	0.99	17
	6/3/2016	Y	Y	148.66	148.7	0.04	N	Y	---	---	---	0
	7/1/2016	Y	N	---	148.58	---	N	N	---	---	---	0
	7/15/2016	Y	N	---	148.45	---	N	N	---	---	---	0
	7/29/2016	Y	N	---	148.29	---	N	N	---	---	---	0
	8/5/2016	Y	N	---	148.45	---	N	N	---	---	---	0
	9/2/2016	Y	Y	148.11	148.16	0.05	N	Y	---	---	---	0
	5/23/2016	Y	Y	145.33	156.19	10.86	N	Y	---	---	---	0
	5/24/2016	Y	Y	NR	NR	NR	Y	Y	148.5	149.58	1.08	15
	5/25/2016	Y	Y	148.55	149.7	1.15	N	Y	---	---	---	0
	5/25/2016	Y	Y	148.47	149.66	1.19	N	Y	---	---	---	0
	5/26/2016	Y	Y	148.51	149.76	1.25	N	Y	---	---	---	0
	5/26/2016	Y	Y	148.42	149.61	1.19	N	Y	---	---	---	0
	5/27/2016	Y	Y	148.34	149.58	1.24	N	Y	---	---	---	0
LSZ38	5/31/2016	Y	Y	148.33	149.61	1.28	N	Y	---	---	---	0
	6/3/2016	Y	Y	148.41	149.62	1.21	N	Y	---	---	---	0
	7/1/2016	Y	N	---	148.33	---	N	N	---	---	---	0
	7/15/2016	Y	N	---	148.22	---	N	N	---	---	---	0
	7/29/2016	Y	N	---	148.02	---	N	N	---	---	---	0
	8/5/2016	Y	N	---	148.65	---	N	N	---	---	---	0
	9/2/2016	Y	Y	147.87	149.07	1.20	N	Y	---	---	---	0
	5/19/2016	Y	Y	NR	NR	NR	N	Y	---	---	---	0
	5/23/2016	Y	Y	135.78	191.02	55.24	N	Y	---	---	---	0
	5/26/2016	Y	Y	135.91	191.2	55.29	N	Y	---	---	---	0
	6/1/2016	Y	Y	135.85	190.8	54.95	Y	Y	150.16	152.45	2.29	80
	6/1/2016	Y	Y	148.49	150.82	2.33	N	Y	---	---	---	0
	6/1/2016	Y	Y	148.71	151.09	2.38	N	Y	---	---	---	0
LSZ39	6/3/2016	Y	Y	148.71	151.11	2.40	N	Y	---	---	---	0
	7/1/2016	Y	N	---	149.18	---	N	N	---	---	---	0
	7/15/2016	Y	N	---	149.05	---	N	N	---	---	---	0
	7/29/2016	Y	N	---	148.81	---	N	N	---	---	---	0
	8/5/2016	Y	N	---	148.83	---	N	N	---	---	---	0
	9/2/2016	Y	Y	148.71	148.83	0.07	N	N	---	---	---	0
	7/20/2016	N	N	---	147 [2]	---	N	N	---	---	---	0
	7/28/2016	N	N	---	150 [2]	---	N	N	---	---	---	0
	8/2/2016	N	N	---	150 [2]	---	N	N	---	---	---	0
	8/16/2016	N	N	---	148 [2]	---	N	N	---	---	---	0
LSZ41	8/30/2016	N	N	---	148 [2]	---	N	N	---	---	---	0
	7/19/2016	N	Y	143 [2]	151 [2]	8 [1]	N	Y	---	---	---	0
	7/29/2016	N	Y	143 [2]	149 [2]	6 [1]	Y	Y	NR	148 [2]	0.5 [1]	36
	8/3/2016	N	Y	NM	148 [2]	0.04 [1]	N	Y	---	---	---	0
	8/10/2016	N	Y	NM	148 [2]	0.02 [1]	N	Y	---	---	---	0
	8/15/2016	N	Y	NM	148 [2]	0.04 [1]	N	Y	---	---	---	0
	8/23/2016	N	Y	NM	147 [2]	0.5 [1]	N	Y	---	---	---	0
	8/30/2016	N	Y	NM	148 [2]	0.02 [1]	N	Y	---	---	---	0
	9/6/2016	N	Y	NM	148 [2]	0.08 [1]	N	Y	---	---	---	0

LSZ42	9/14/2016	N	Y	NM	147 (2)	0.04 (1)	N	Y	---	---	---	0
	7/20/2016	N	N	---	146 (2)	---	N	N	---	---	---	0
	7/25/2016	N	N	---	145 (2)	---	N	N	---	---	---	0
	8/2/2016	N	N	---	145 (2)	---	N	N	---	---	---	0
	8/16/2016	N	N	---	146 (2)	---	N	N	---	---	---	0
LSZ43*	8/30/2016	N	N	---	146 (2)	---	N	N	---	---	---	0
	7/8/2016	Y	N	---	144.70	---	N	N	---	---	---	0
	7/15/2016	Y	N	---	150.33	---	N	N	---	---	---	0
	7/29/2016	Y	N	---	150.12	---	N	N	---	---	---	0
	8/5/2016	Y	N	---	150.15	---	N	N	---	---	---	0
LSZ44*	9/2/2016	Y	N	---	150.14	---	N	N	---	---	---	0
	6/27/2016	Y	N	---	151.61	---	N	N	---	---	---	0
	7/8/2016	Y	N	---	148.94	---	N	N	---	---	---	0
	7/11/2016	Y	N	---	145.00	---	N	N	---	---	---	0
	7/15/2016	Y	N	---	148.89	---	N	N	---	---	---	0
	7/22/2016	Y	N	---	148.65	---	N	N	---	---	---	0
	8/5/2016	Y	N	---	148.73	---	N	N	---	---	---	0
LSZ45*	9/2/2016	Y	N	---	148.46	---	N	N	---	---	---	0
	6/27/2016	Y	N	---	148.05	---	N	N	---	---	---	0
	7/8/2016	Y	N	---	147.95	---	N	N	---	---	---	0
	7/15/2016	Y	N	---	147.87	---	N	N	---	---	---	0
	7/29/2016	Y	N	---	147.71	---	N	N	---	---	---	0
	8/5/2016	Y	N	---	147.73	---	N	N	---	---	---	0
LSZ46*	9/2/2016	Y	Y	147.47	147.48	0.01	N	Y	---	---	---	0
	6/14/2016	Y	N	---	145.67	---	N	N	---	---	---	0
	7/8/2016	Y	N	---	145.93	---	N	N	---	---	---	0
	7/15/2016	Y	N	---	145.85	---	N	N	---	---	---	0
	7/29/2016	Y	N	---	145.74	---	N	N	---	---	---	0
	8/5/2016	Y	N	---	145.69	---	N	N	---	---	---	0
LSZ49*	9/2/2016	Y	Y	145.50	145.51	0.01	N	Y	---	---	---	0
	6/14/2016	Y	N	---	145.26	---	N	N	---	---	---	0
	7/8/2016	Y	N	---	144.70	---	N	N	---	---	---	0
	7/15/2016	Y	N	144.60	146.82	2.22	N	Y	---	---	---	0
	7/29/2016	Y	N	144.48	146.69	2.21	N	Y	---	---	---	0
	8/5/2016	Y	N	---	144.42	---	N	N	---	---	---	0
	8/12/2016	Y	Y	144.42	146.62	2.20	N	Y	---	---	---	0
	8/19/2016	Y	Y	144.46	146.56	2.10	N	Y	---	---	---	0
	8/26/2016	Y	N	---	144.36	---	N	N	---	---	---	0
	9/2/2016	Y	Y	144.20	146.44	2.24	Y	N	---	147.00	0.00	5
LSZ50*	9/9/2016	Y	Y	144.78	144.81	0.03	N	Y	---	---	---	0
	7/8/2016	Y	N	---	149.00	---	N	N	---	---	---	0
	7/15/2016	Y	N	---	148.89	---	N	N	---	---	---	0
	7/29/2016	Y	N	---	148.71	---	N	N	---	---	---	0
	8/5/2016	Y	N	---	148.74	---	N	N	---	---	---	0
LSZ52*	9/2/2016	Y	N	---	148.50	---	N	N	---	---	---	0

NM = Not measured due to temperature interference.
NR = Not recorded.
--- = No NAPL present. Measurement not performed.
* = Newly installed well.

Notes:
(1) LNAPL estimated using PTFE bailer, not interface probe.
(2) Depth measured using a bailer.
(3) Depth measured using a tagline.
(4) LNAPL recovered included water.
(5) Dual screened well location monitored for LNAPL in the upper interval only.
(6) Dual screened well location monitored for LNAPL in the lower interval only.



NO.	DATE	REVISION	DR	CHK	APVD	BY	APVD
DSGN							

REMEDIAL DESIGN/ REMEDIAL ACTION
WORK PLAN
ST012-FORMER WILLIAMS AIR FORCE BASE
MESA, ARIZONA

DRAWING STATUS
CONSTRUCTION RFP DRAWINGS

amec foster wheeler
Environment & Infrastructure, Inc.
511 Congress Street, Suite 200
Portland, ME, 04112
(207) 775 - 5401

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE
PROJ 9101-11-0001
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LNAPL Present (>1 ft)

LNAPL Present (>2")

LNAPL Present* (<2" of LNAPL or Sheen)

No Evidence of LNAPL

Eductor Assembly or Pump in Well

Note: Only last four measurements shown for each well.

Well Name-Proposed Use
Date of LNAPL screening in the color of the corresponding LNAPL characterization (gallons of LNAPL pumped from well if applicable)

UWBZ17
8/30/16*
9/6/16
9/9/16 (15)
9/14/16*

UWBZ11
8/15/16
8/18/16 (10)
8/26/16
8/30/16*

UWBZ25
7/25/16
8/2/16
8/16/16
8/23/16

UWBZ09
8/15/16*
8/26/16*
8/30/16
9/14/16*

UWBZ10-EXT
8/15/16
8/23/16
8/30/16*
9/14/16

UWBZ28-INJ
7/20/16

UWBZ02
8/10/16*
8/15/16
8/26/16
8/30/16

U12
8/26/16
9/2/16
9/9/16
9/16/16

UWBZ03
7/12/16
7/27/16
8/3/16
8/30/16

UWBZ18
8/15/16
8/23/16
8/30/16*
9/6/16*

UWBZ12
8/2/16
8/16/16*
8/29/16*
9/14/16*

U02
8/26/16
9/2/16
9/9/16
9/16/16

UWBZ19
8/16/16
8/26/16
8/30/16*
9/14/16

UWBZ36-INJ
7/15/16
7/29/16
8/5/16
9/2/16

UWBZ26-EXT
8/12/16*
8/16/16
8/26/16
8/30/16*

UWBZ13
8/15/16*
8/23/16*
8/30/16*
8/30/16*

UWBZ29-INJ
7/20/16
7/27/16
8/2/16
8/30/16

UWBZ35-INJ
7/20/16
9/2/16

UWBZ15
8/30/16
9/6/16
9/9/16 (25)
8/30/16

UWBZ14
8/2/16
8/17/16
8/30/16*
9/14/16*

UWBZ21-INJ
8/10/16*
8/15/16*
8/23/16*
8/30/16*

UWBZ27-EXT
7/12/16
7/28/16
8/2/16
8/30/16

UWBZ07
7/12/16
7/27/16
8/2/16
8/30/16

UWBZ23-INJ
8/22/16 (15)
8/26/16
8/30/16
9/14/16

UWBZ24
7/20/16
8/12/16
8/25/16*

UWBZ16
8/3/16
8/16/16*
8/30/16*
9/14/16*

UWBZ22-EXT
8/16/16
8/23/16*
8/29/16*
9/14/16*

UWBZ31-EXT
7/25/16
8/2/16
8/16/16
8/30/16

UWBZ34-INJ
7/29/16
8/5/16
8/19/16
9/2/2016

RB-3A
8/26/16
9/2/16
9/9/16
9/16/16

UWBZ33-INJ
7/12/16 (2)
7/25/16*

U37
8/26/16
9/2/16
9/9/16
9/16/16

U11-INJ
8/26/16
9/2/16
9/9/16
9/16/16

UWBZ32
7/20/16

PAVEMENT (TYP)
CONCRETE (TYP)
SIDEWALK (TYP)
ULIVERSITY AVE
ROOSEVELT ST
LIPTON AVE
BASEBALL DIAMOND
SOCCER FIELD

0 15 30 60
SCALE IN FEET

NO.	DATE	DSGN	REVISION	BY	CHK	APVD

REMEDIAL DESIGN/ REMEDIAL ACTION
WORK PLAN
ST012-FORMER WILLIAMS AIR FORCE BASE
MESA, ARIZONA

DRAWING STATUS
CONSTRUCTION RFP DRAWINGS

amec foster wheeler
Environment & Infrastructure, Inc.
511 Congress Street, Suite 200
Portland, ME 04112
(207) 775 - 5401

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE
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FILE NAME: \\FLD2-FS1\Project\Projects\CADD-PORT\Projects\Williams AFB\ST012 FFS-RD-RA-Work-Files\FIGURES\Figure 1.2 Drilling Sequence Plan.dwg PLOT DATE: Mon, 08 Aug 2016 PLOT TIME: 9:25 AM

LNAPL Present (>1 ft)

LNAPL Present (>2")

LNAPL Present* (<2" of LNAPL or Sheen)

No Evidence of LNAPL

Eductor Assembly in Well

Note: Only last four measurements shown for each well.

Well Name-Proposed Use
Date of LNAPL screening in the color of the corresponding LNAPL characterization (gallons of LNAPL pumped from well if applicable)

W12 8/26/16 9/2/16 9/9/16 9/16/16

W30-INJ 8/26/16 9/2/16 9/9/16 9/16/16

LSZ50-INJ 8/19/16 8/26/16 **9/2/16 (5)** 9/9/16*

LSZ09-EXT 8/3/16* 8/12/16* 8/16/16* 8/30/16*

LSZ38-EXT 7/15/16 7/29/16 8/5/16 **9/2/16**

LSZ23-EXT 7/12/16 7/28/16 8/3/16 8/30/16

LSZ49-INJ 7/15/16 7/29/16 8/5/16 9/2/16*

LSZ39-EXT 7/15/16 7/29/16 8/5/16 9/2/16*

W11-INJ 9/2/16 (15) 9/7/16 9/9/16 **9/16/16**

LSZ10 7/12/16 7/28/16 8/3/16 8/30/16

LSZ37-EXT 7/1/16 7/15/16 7/29/16 8/5/16 9/2/16*

LSZ27 7/12/16 7/27/16 8/3/16 8/23/16

LSZ17-EXT 8/15/16* 8/23/16* 8/30/16* 9/14/16*

LSZ51 7/20/16

LSZ28-EXT 8/2/16 8/16/16 8/23/16 8/30/16

LSZ03 7/12/16 7/28/16 8/3/16 8/30/16

LSZ19 8/16/16* 8/23/16* 8/29/16* 9/14/16*

LSZ07 7/12/16 7/28/16 8/2/16 8/30/16

LSZ15 8/15/16 8/23/16* 8/30/16* 9/14/16*

LSZ24 7/12/16 7/28/16 8/3/16 8/23/16

LSZ25 7/25/16* 8/2/16 8/16/16 8/29/16

LSZ35 8/22/16 (10) 8/23/16 8/30/16* 9/14/16

LSZ48 7/20/16

LSZ11-EXT 8/3/16 8/16/16 8/23/16 8/29/16

LSZ47 7/20/16 8/23/16

LSZ41 7/28/16 8/2/16 8/16/16 8/30/16

LSZ46-INJ 7/15/16 7/29/16 8/5/16 9/2/16*

W36-INJ 8/26/16 9/2/16 9/9/16 9/16/16

LSZ43-INJ 7/25/16 8/2/16 8/16/16 8/30/16

LSZ18 8/2/16 8/16/16 8/23/16 8/30/16

LSZ31 6/6/16 (20) 7/25/16 8/3/16* 8/23/16

LSZ20 8/2/16* 8/16/16* 8/30/16* 9/14/16

LSZ44-INJ 7/15/16 7/29/16 8/5/16 9/2/16

LSZ32 8/12/16* 8/15/16* 8/23/16* 8/30/16*

LSZ29-EXT 7/25/16 8/2/16 8/23/16* 8/30/16*

LSZ22 8/12/16* 8/15/16 8/23/16 8/30/16

LSZ21 8/3/16* 8/16/16 8/23/16 8/30/16*

LSZ14-EXT 8/23/16 8/30/16* 9/6/16* 9/14/16*

W34-INJ 8/26/16 9/2/16 9/9/16 9/16/16

LSZ26-EXT 7/11/16 7/25/16 8/2/16 8/29/16

LSZ42 8/23/16 8/30/16* 9/6/16* 9/14/16*

LSZ34 8/15/16* 8/26/16* 8/30/16* 9/14/16*

LSZ12-EXT 8/16/16* 8/26/16 8/30/16* 9/14/16

LSZ36-EXT 8/15/16* 8/26/16 8/30/16 9/14/16

LSZ45-INJ 7/15/16 7/22/16 8/5/16 9/2/16

W37-INJ 9/2/16 (2) 9/9/16 9/13/16 (13) 9/16/16 (13)

LSZ52 7/15/16 7/29/16 8/5/16 9/2/16

W24 8/26/16 9/2/16 9/9/16 9/16/16

PAVEMENT (TYP)

CONCRETE (TYP)

SIDEWALK (TYP)

0 15 30 60
SCALE IN FEET

NO.	DSGN	DATE	DR	CHK	REVISION	BY	APVD

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0 1"

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FILE NAME: Z:\Projects\Williams AFB\ST012 FFS-RD-RA-Work-Plan\FIGURES\Figure 1.3 Drilling Sequence Plan.dwg PLOT DATE: Fri 05 Aug 2016 PLOT TIME: 4:15 PM