Air Force Civil Engineer Center

FORMER
WILLIAMS AIR FORCE BASE

Site ST012

Former Liquid Fuel Storage Area

BCT Conference Call

17 May 2018

Battle Ready…Built Right!

ED_005025_00007434-00001

Site ST012 Outline

- Summary of activities since April BCT meeting
- Soil vapor extraction update
- Update on JP-4 degradation based on methane at SVE system
- LNAPL monitoring/removal update
- Path forward

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Site ST012 Activities Since April

- Continued SVE operation
- Continued LNAPL screening in accessible wells
- Continued EBR pilot study re-baseline sampling (only limited preliminary data in)
- Continued EBR pilot study construction

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Soil Vapor Extraction System Update

ST012 SVE System Update

- **Jan – Mar 2018**
  - 98.9% operational uptime Thermox; 94.1% operational uptime Flamox
  - Total petroleum hydrocarbon (TPH) removed – 22,956 pounds or 3,494 gallons

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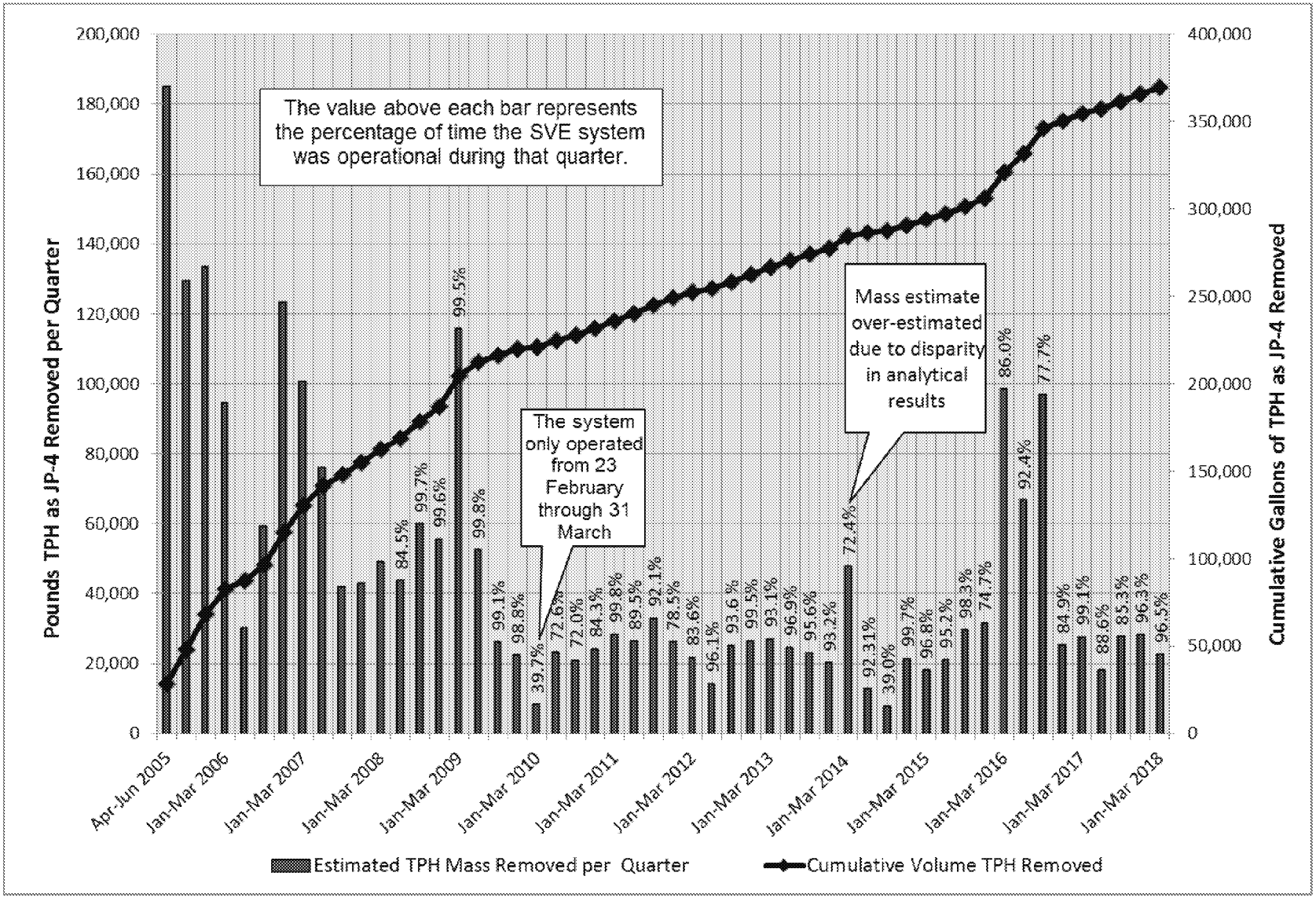
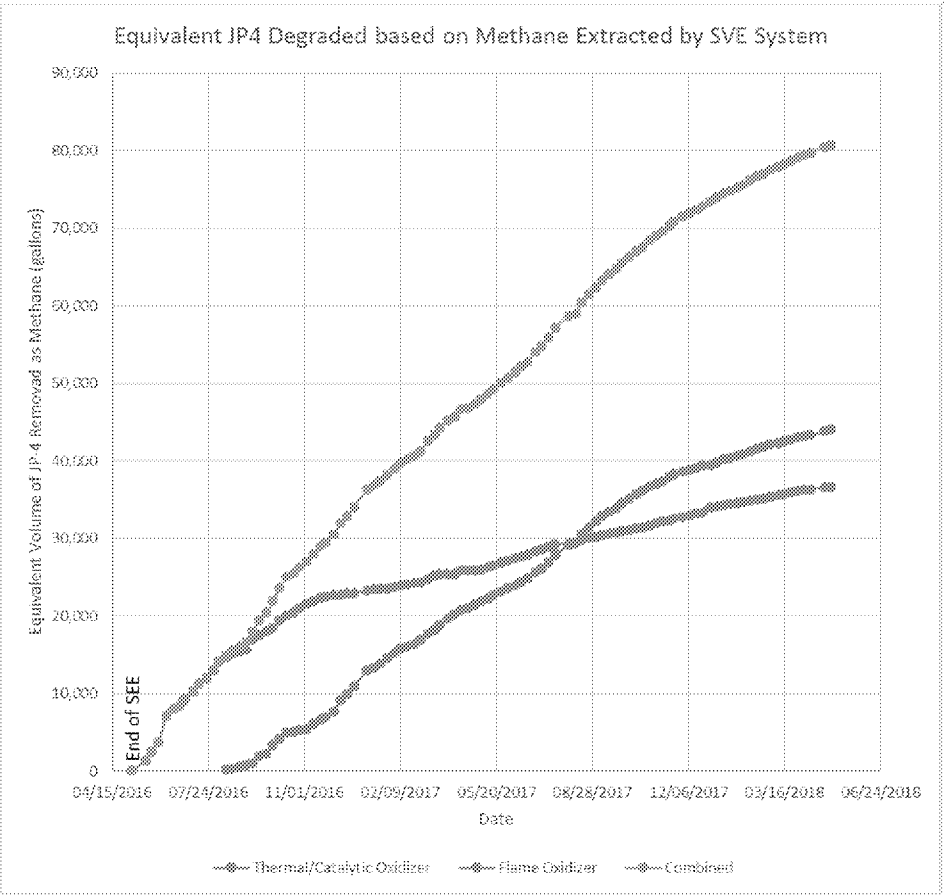
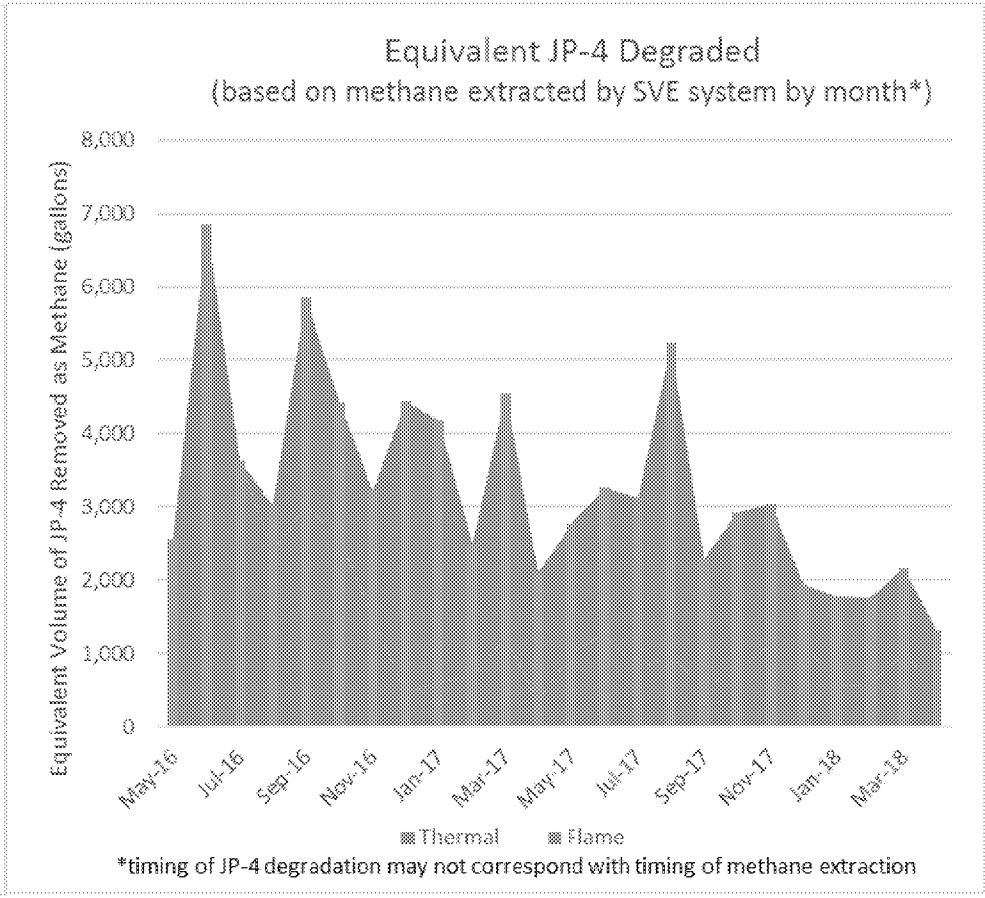
Site ST012 SVE System Performance



JP-4 Degradation Based on Methane Removed with SVE (through 3 May)

Site ST012 SVE System Equivalent JP-4 Degradation Based on Methane Removed



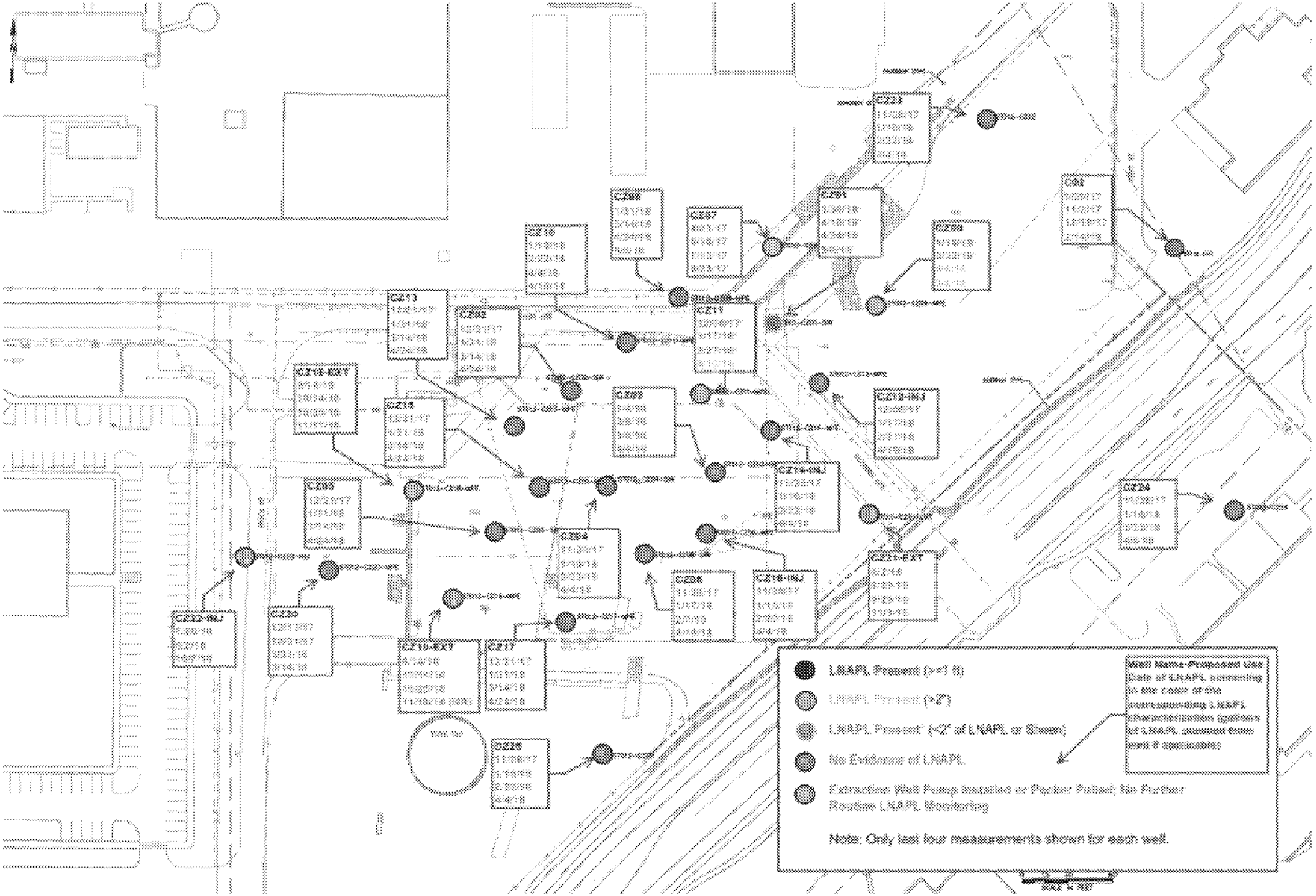


Estimates through 3 May 2018.

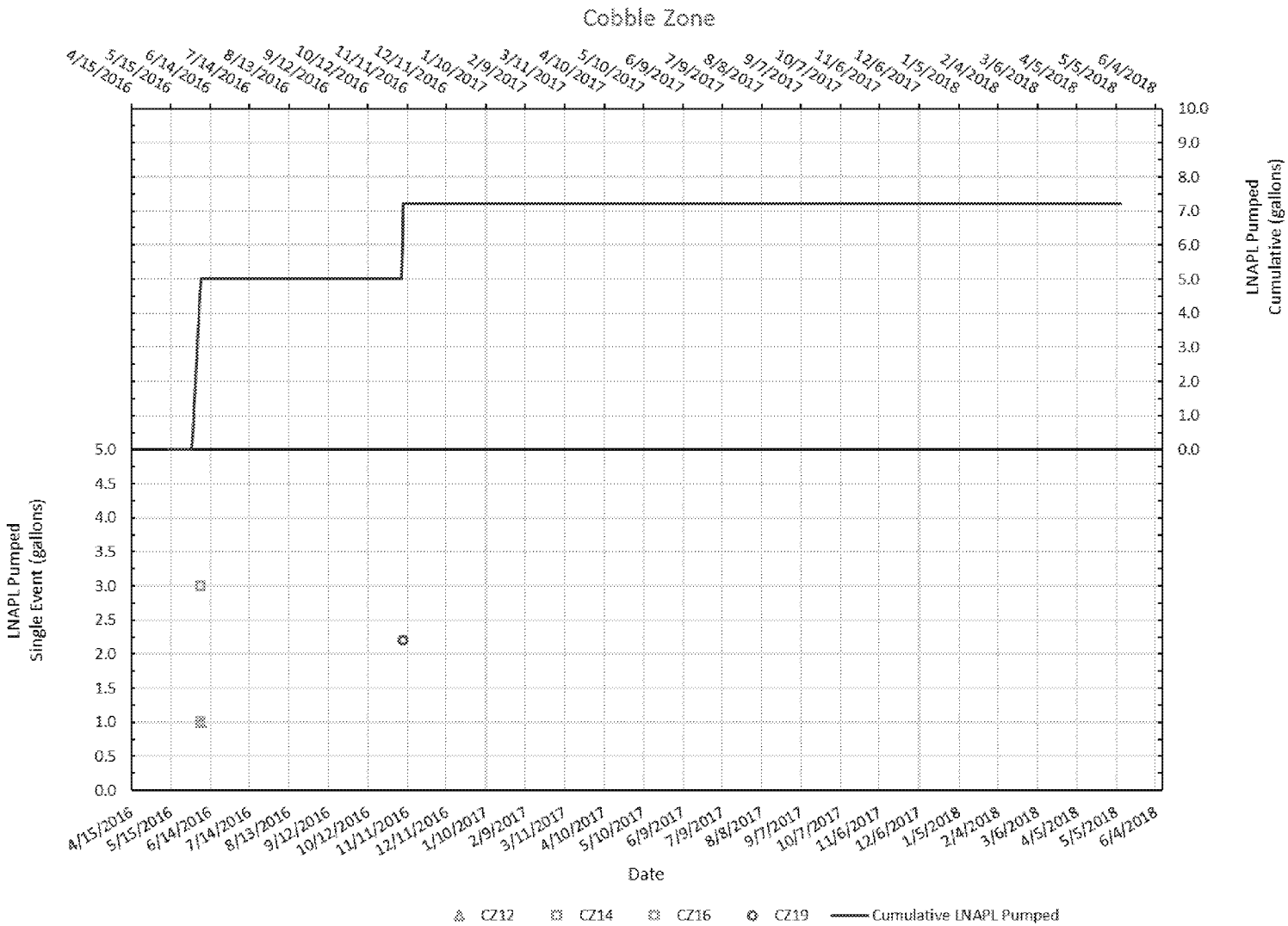
Estimated JP-4 degradation as methane is in addition to JP-4 removal reported for SVE

LNAPL Monitoring Update (through 8 May)

LNAPL Monitoring/Removal Status
Cobble Zone



LNAPL Monitoring/Removal Status
Cobble Zone



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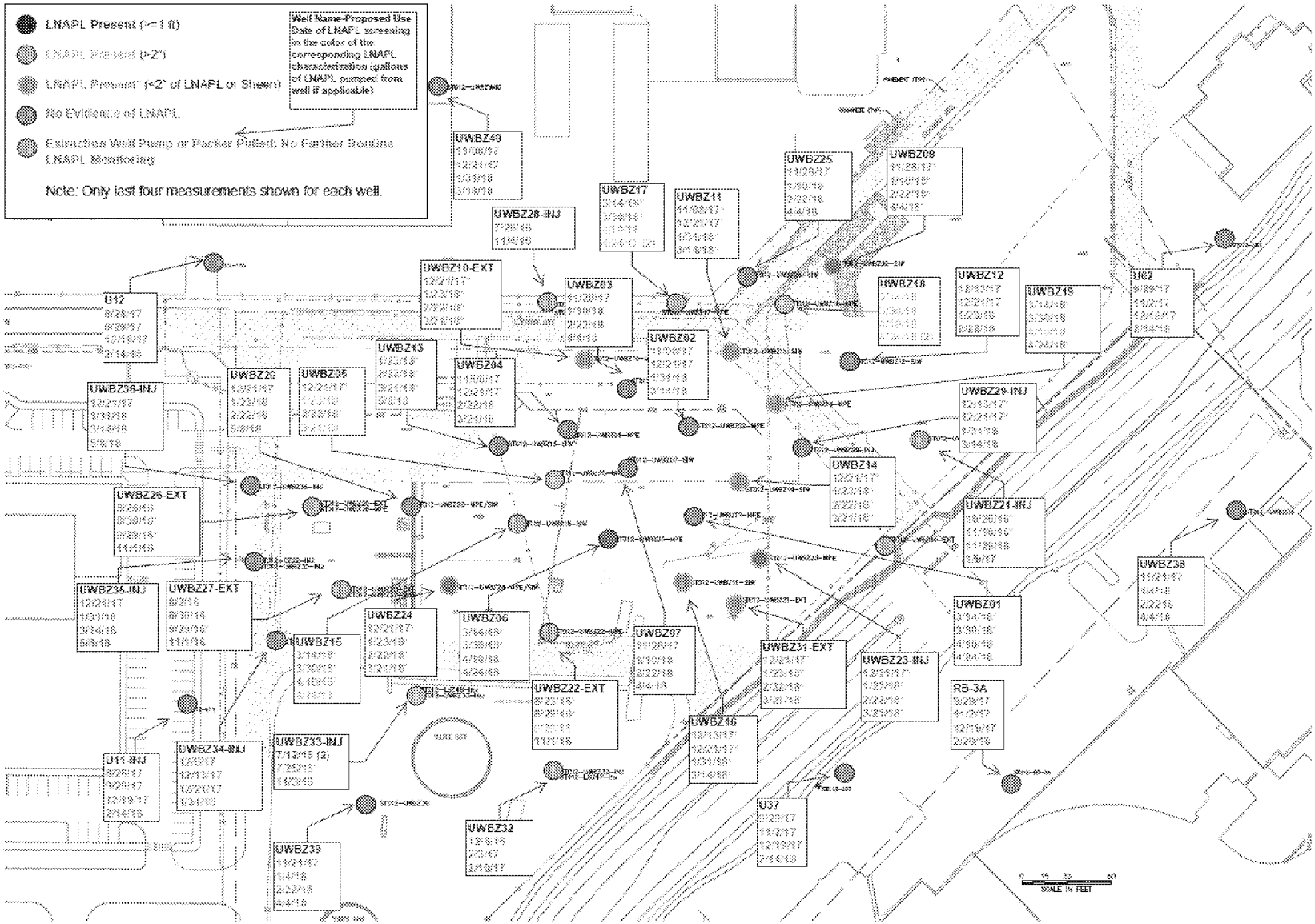
LNAPL Monitoring/Removal Status
Upper Water Bearing Zone



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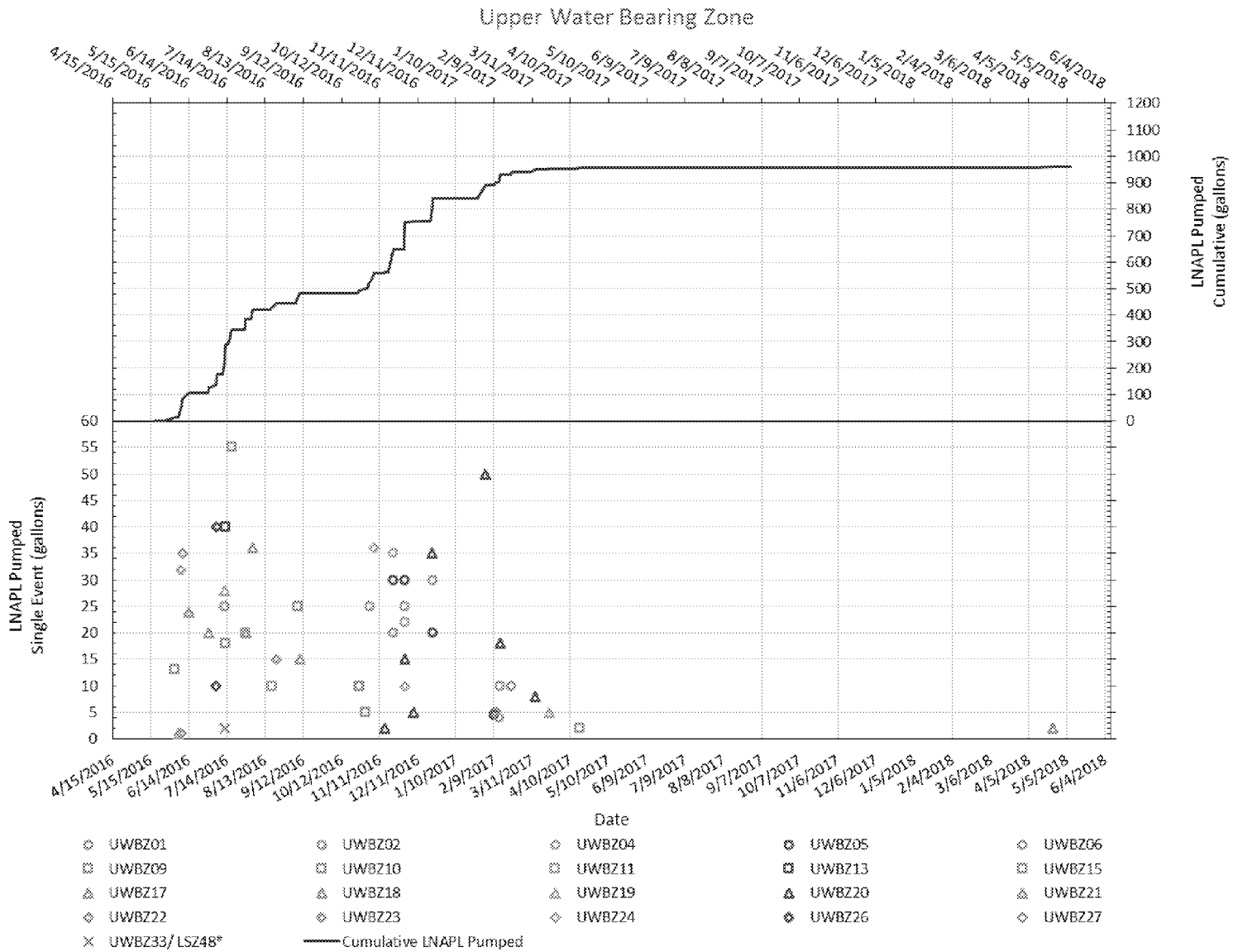
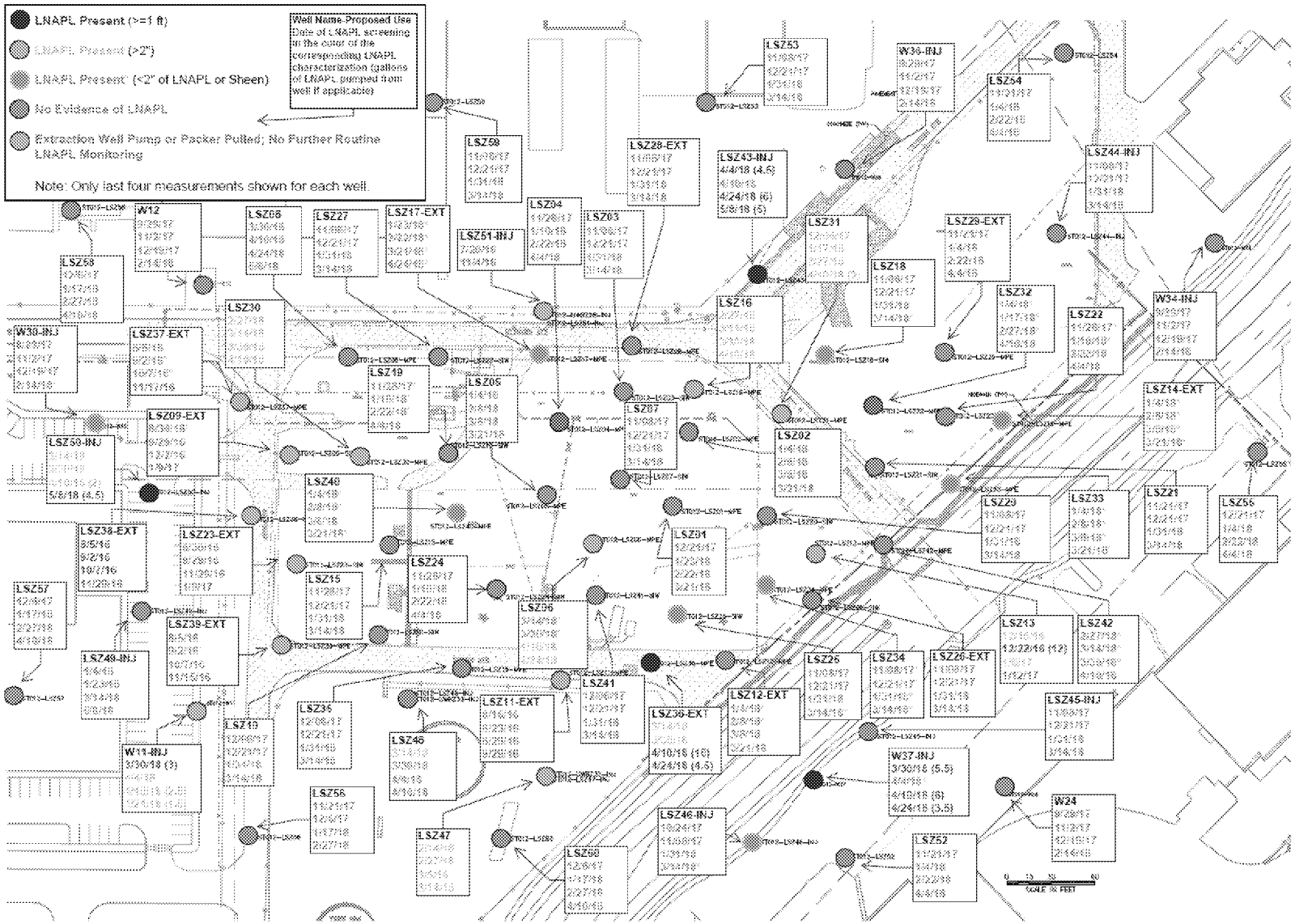
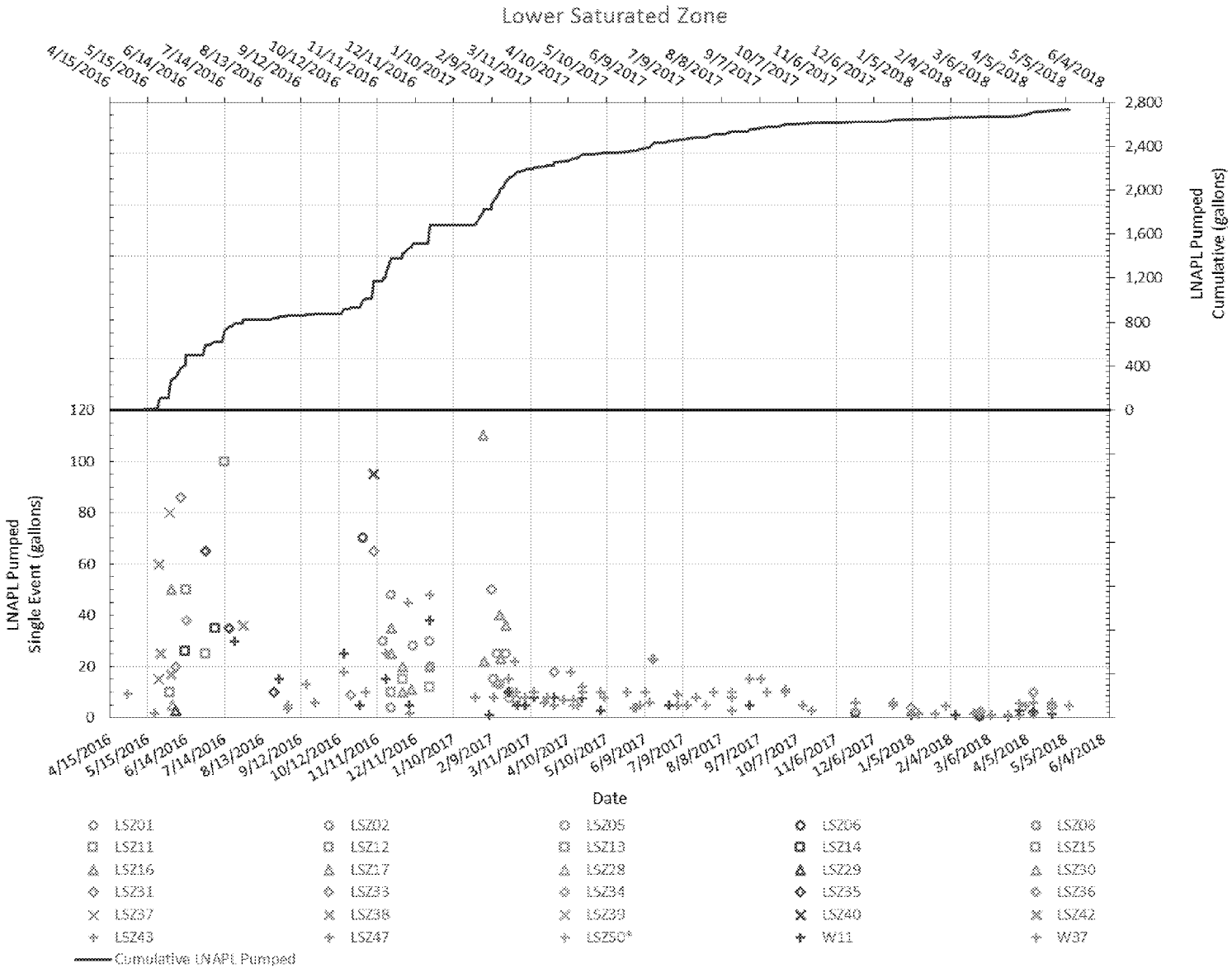
LNAPL Monitoring/Removal Status
Upper Water Bearing Zone



LNAPL Monitoring/Removal Status
Lower Saturated Zone



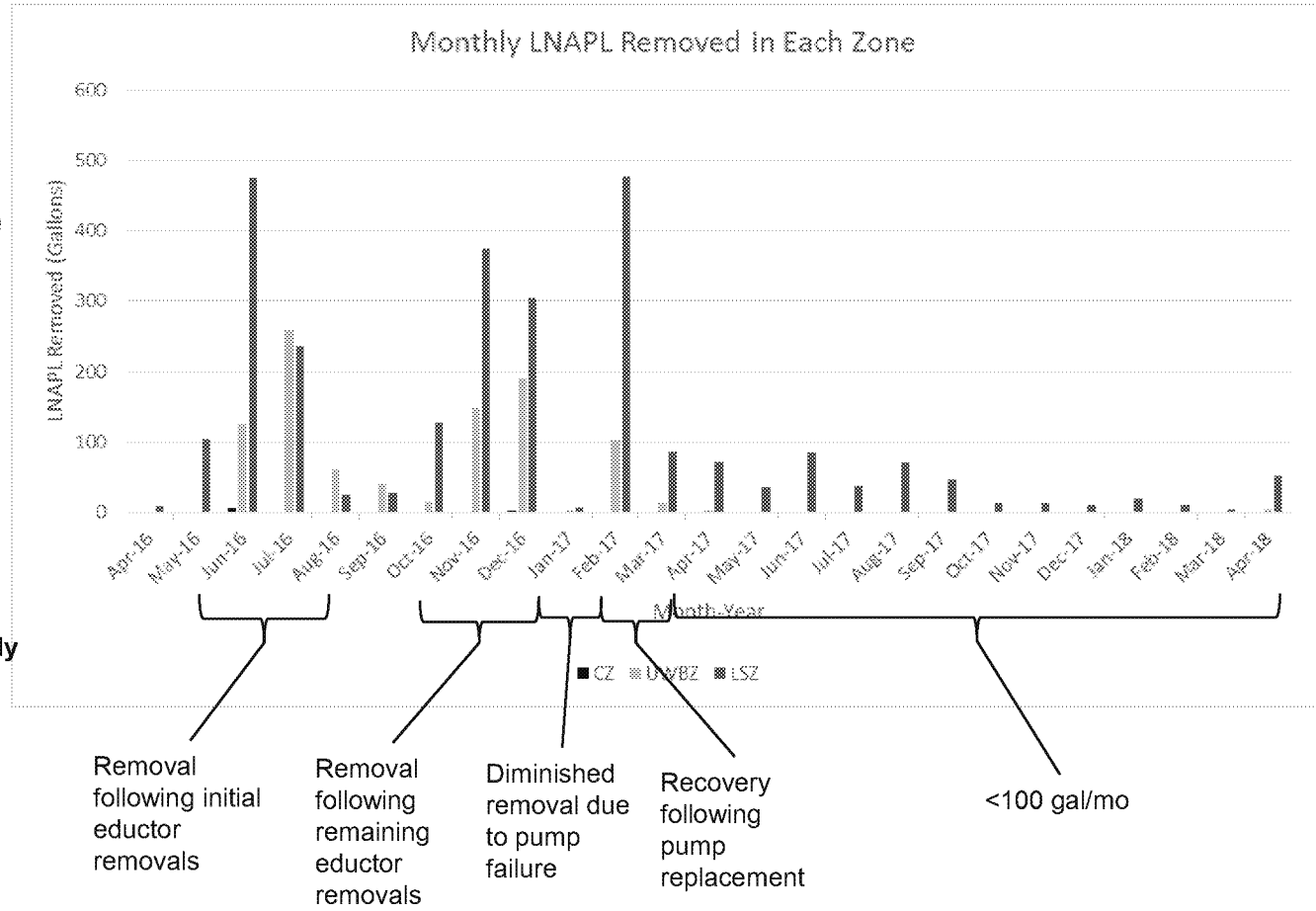
LNAPL Monitoring/Removal Status
Lower Saturated Zone



ST012 LNAPL Monitoring/Removal Summary

- CZ – 7 gallons of LNAPL removed. None since Nov 2016
- UWBZ - 960 gallons of LNAPL removed. 4* gallons since Apr update (UWBZ17, UWBZ18)
- LSZ - 2,731 gallons of LNAPL removed. 60* gallons removed since Apr update (W11, W37, LSZ31, LSZ36, LSZ43, LSZ50).

***Increase in LNAPL removal was primarily due to additional effort spent to remove LNAPL from wells with small volumes in them (less than a foot) prior to groundwater extraction well startup.**



Site ST012 Activities May-Jun

- Continued SVE operation
- Complete re-baseline Sampling — 18 May
  - All final re-baseline results expected — 12 Jun
- Complete EBR Construction
  - Complete Shade Structure Installation — 18 May
  - Receive and Install Sulfate Pre-Mix Tank — 31 May
  - Complete Injection piping — 8 Jun
  - Start receiving sodium sulfate — 1 Jun
- EBR
  - Startup extraction/shakedown treatment system
    - UWBZ26, LSZ37, LSZ38, LSZ39 — 1 May
    - CZ7 — 3 May
    - CZ18, CZ19, UWBZ27, UWBZ28/LSZ51, LSZ09, LSZ23 — 10 May
    - UWBZ22, LSZ11, LSZ12 — ~16 May
    - CZ21, UWBZ21, UWBZ30, LSZ28, LSZ29 — ~18 May
  - Evaluate effect on LNAPL accumulation/recovery — Ongoing
  - Injections — ~18 Jun (depending on LNAPL response)

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