Air Force Civil Engineer Center

FORMER
WILLIAMS AIR FORCE BASE

Site ST012

Former Liquid Fuel Storage Area

BCT Update

16 November 2017

ED_005025_00012228-00001

Site ST012 Outline

- Summary of Activities Since October BCT update
- SVE Update
- LNAPL Monitoring/Removal Update

ED_005025_00012228-00002

Site ST012 Activities Since October

- Continued SVE operation
- Continued LNAPL screening in accessible SEE wells and Phase I characterization wells
- Annual/perimeter groundwater samples collected in early Nov (results not available yet)

ED_005025_00012228-00003

Soil Vapor Extraction System Update

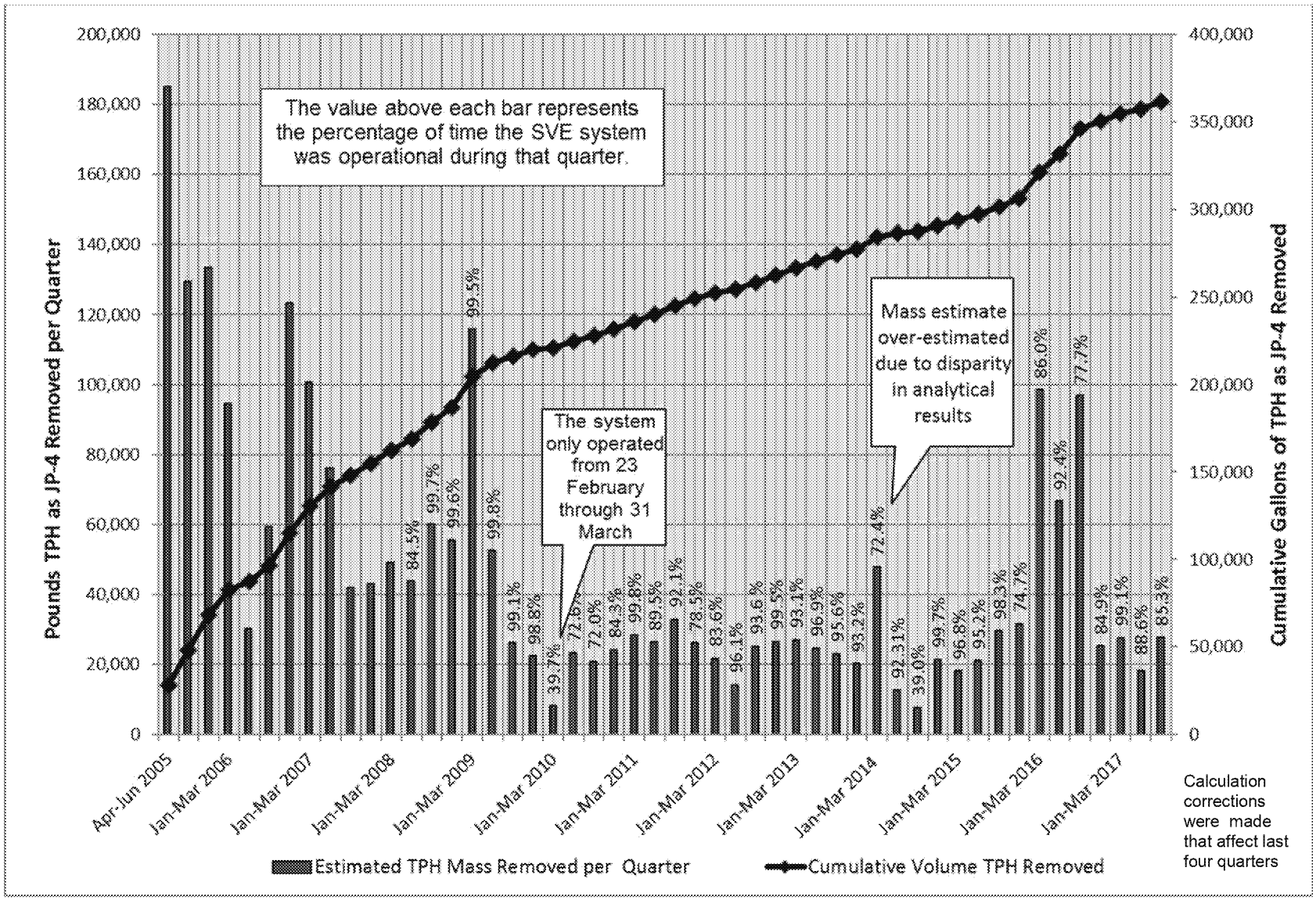
ED_005025_00012228-00004

ST012 SVE System Update

- **Jul – Sep 2017**
  - 85.7% operational uptime Thermox; 84.8% operational uptime Flamox
  - Total petroleum hydrocarbon (TPH) removed – 28,004 pounds or 4,263 gallons

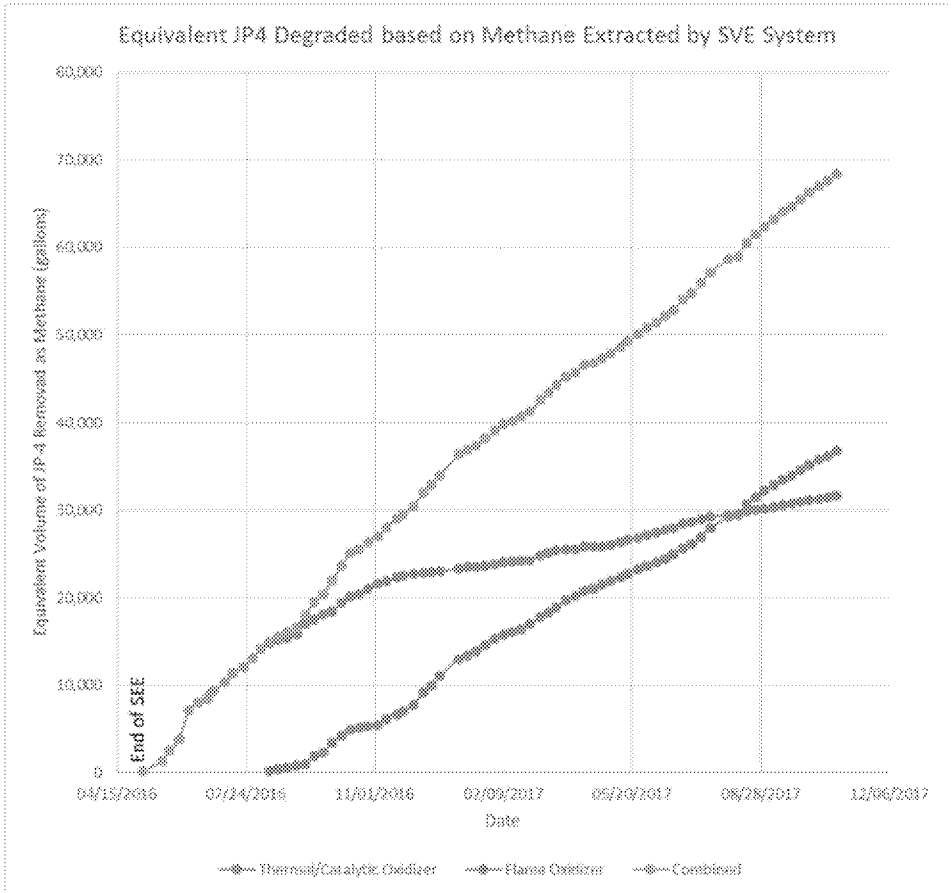
ED_005025_00012228-00005

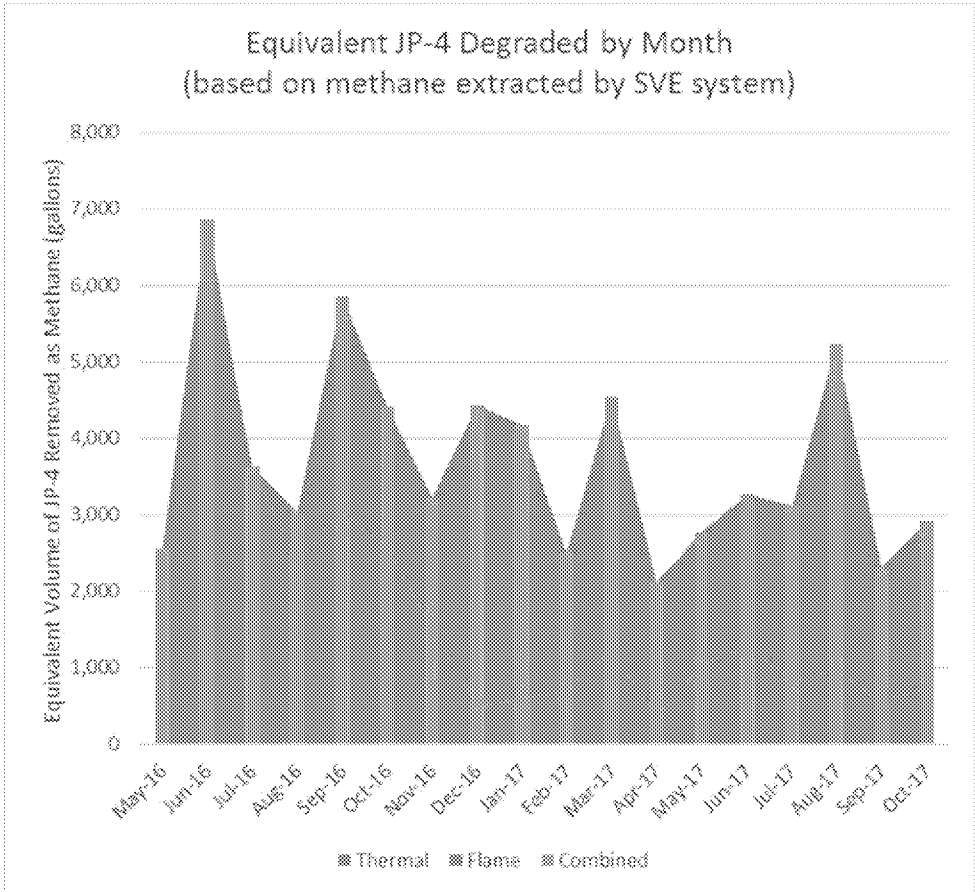
Site ST012 SVE System Performance



Calculation corrections were made that affect last four quarters

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





Estimates through 2 Nov 2017

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

ED_005025_00012228-00007

Site ST012 SVE System Summary

- TPH removed through Sep 2017 – 361,500 gallons (note – small increase in total since last update due to correction made to Apr - Jun estimates)
- Mass removal increased slightly in Jul through Sep period (28,004 pounds) compared to Apr through Jun period (18,480 pounds[corrected value])
- Continued significant methane concentrations in several deep wells (> 100% of LEL); an indicator of ongoing methanogenesis of petroleum hydrocarbons

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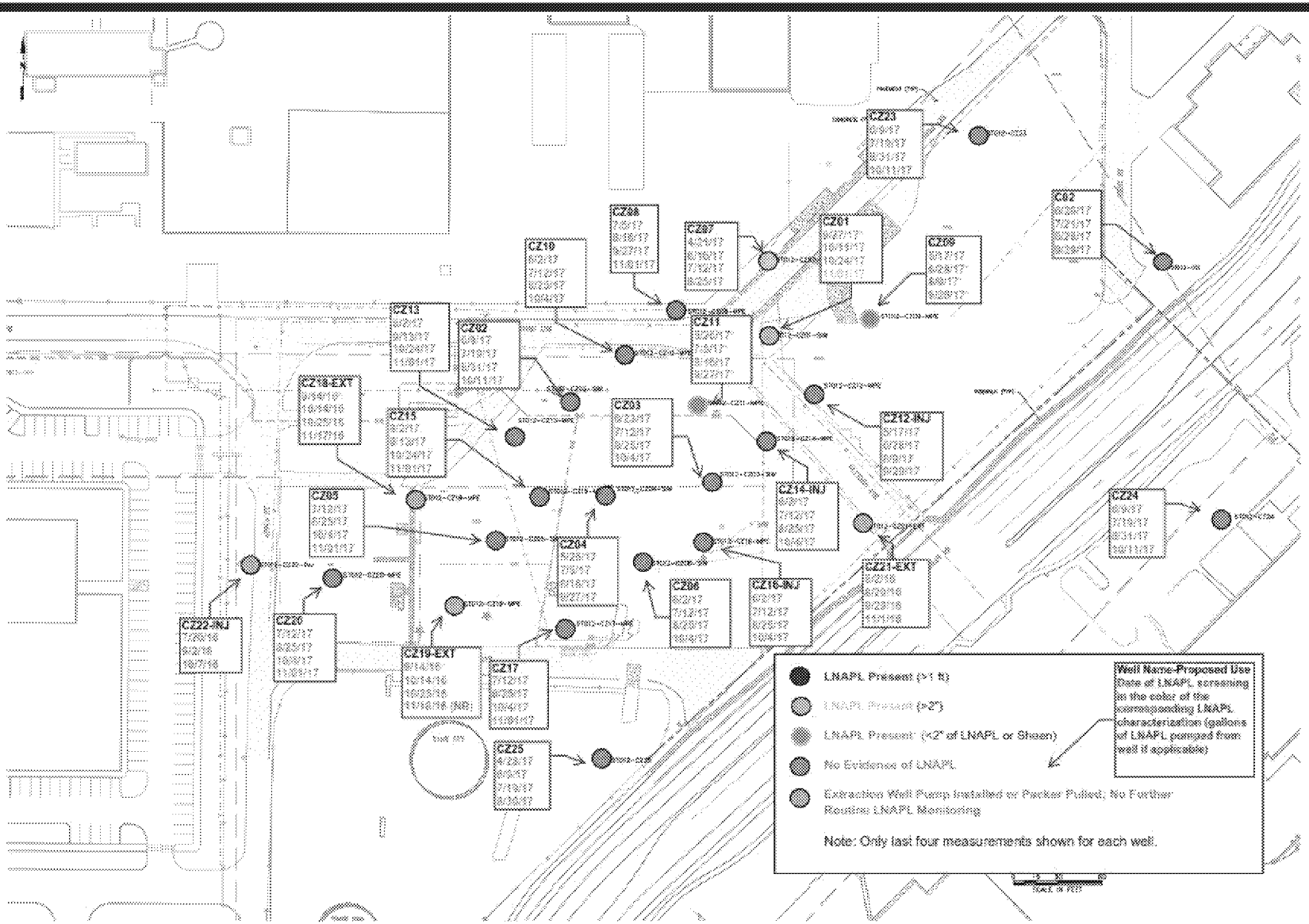
LNAPL Monitoring Update (through 3 Nov)

ED_005025_00012228-00009

LNAPL Monitoring/Removal Status
Cobble Zone



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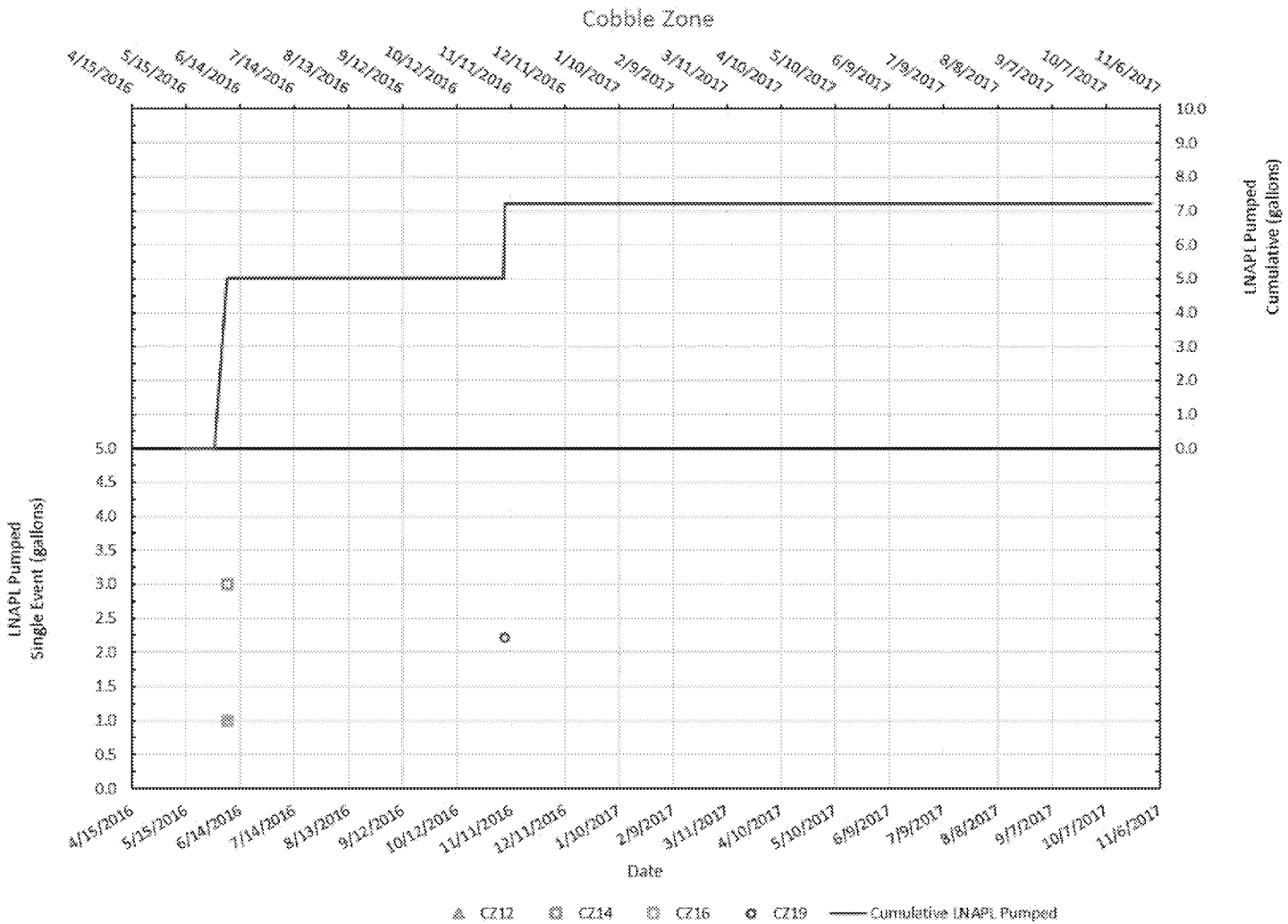
LNAPL Monitoring/Removal Status
Cobble Zone



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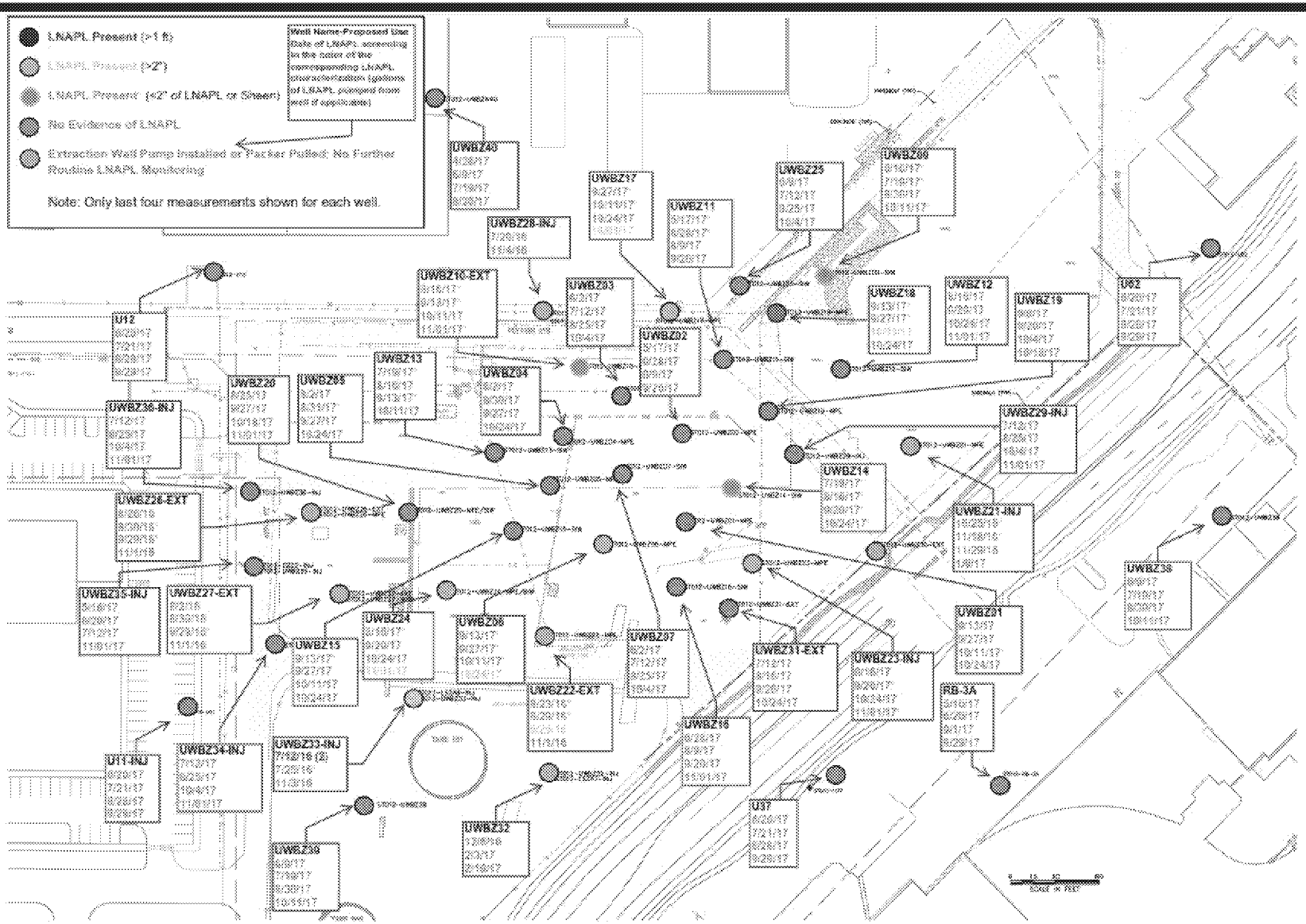
LNAPL Monitoring/Removal Status
Upper Water Bearing Zone



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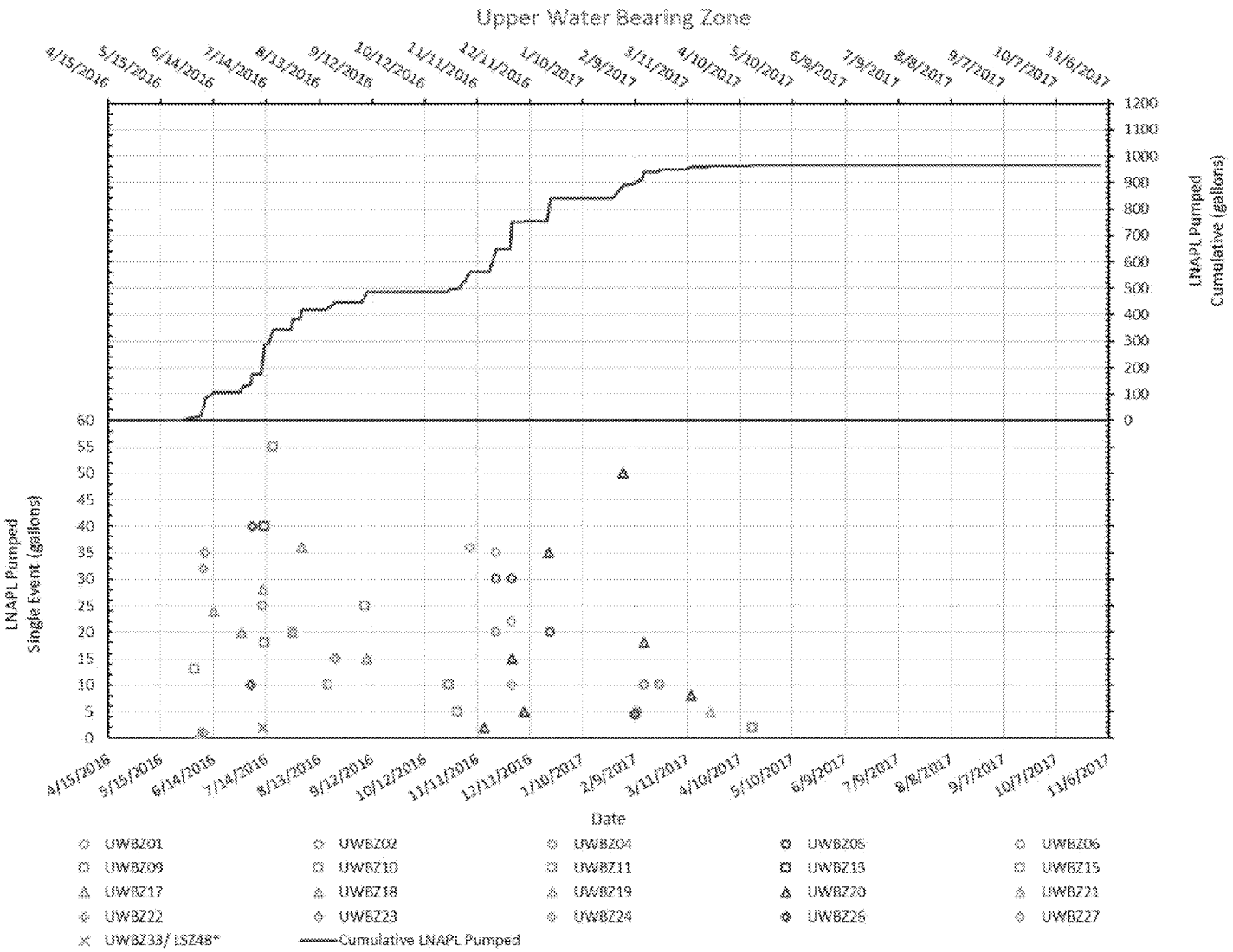
LNAPL Monitoring/Removal Status
Upper Water Bearing Zone



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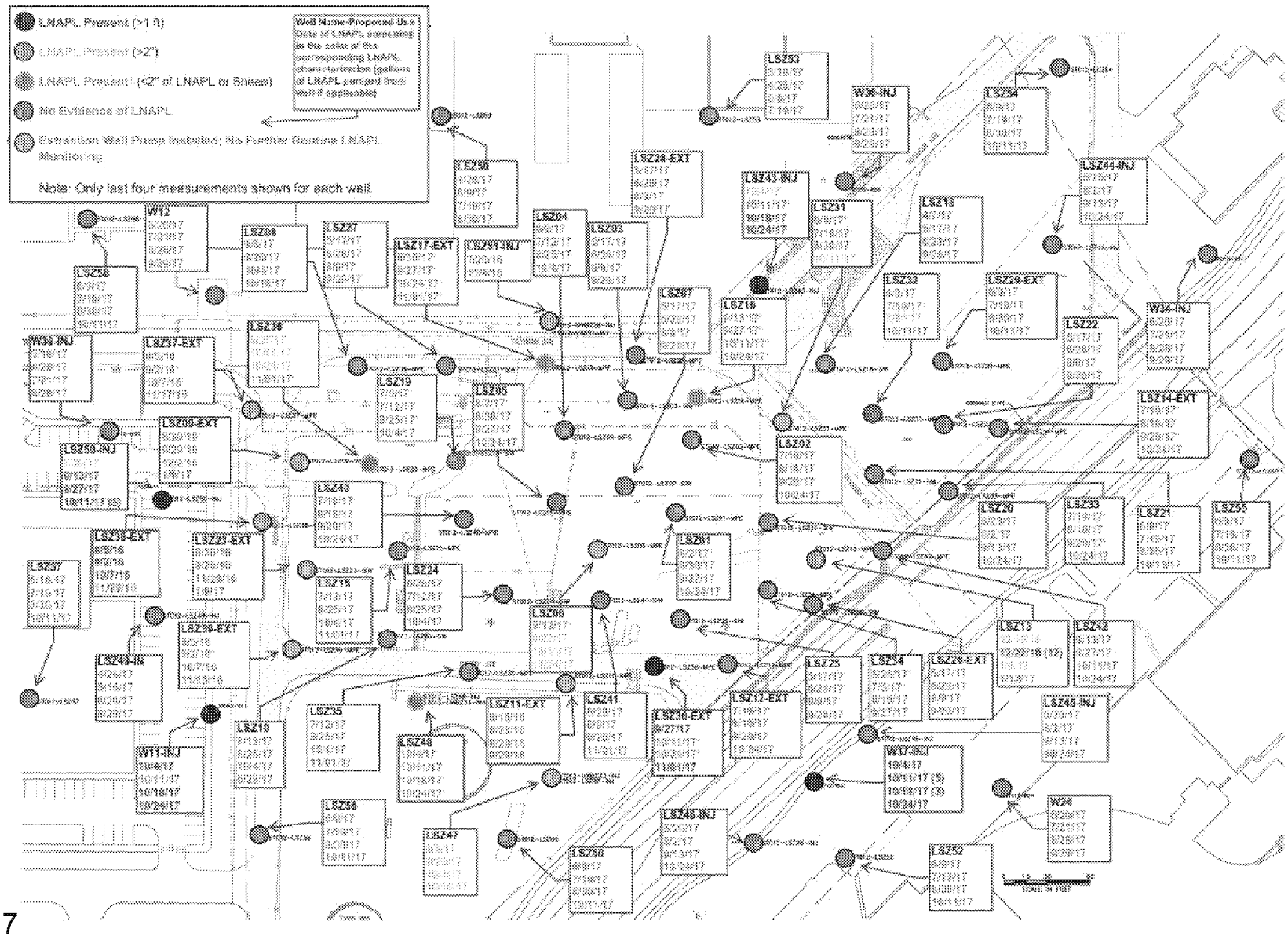
LNAPL Monitoring/Removal Status
Lower Saturated Zone



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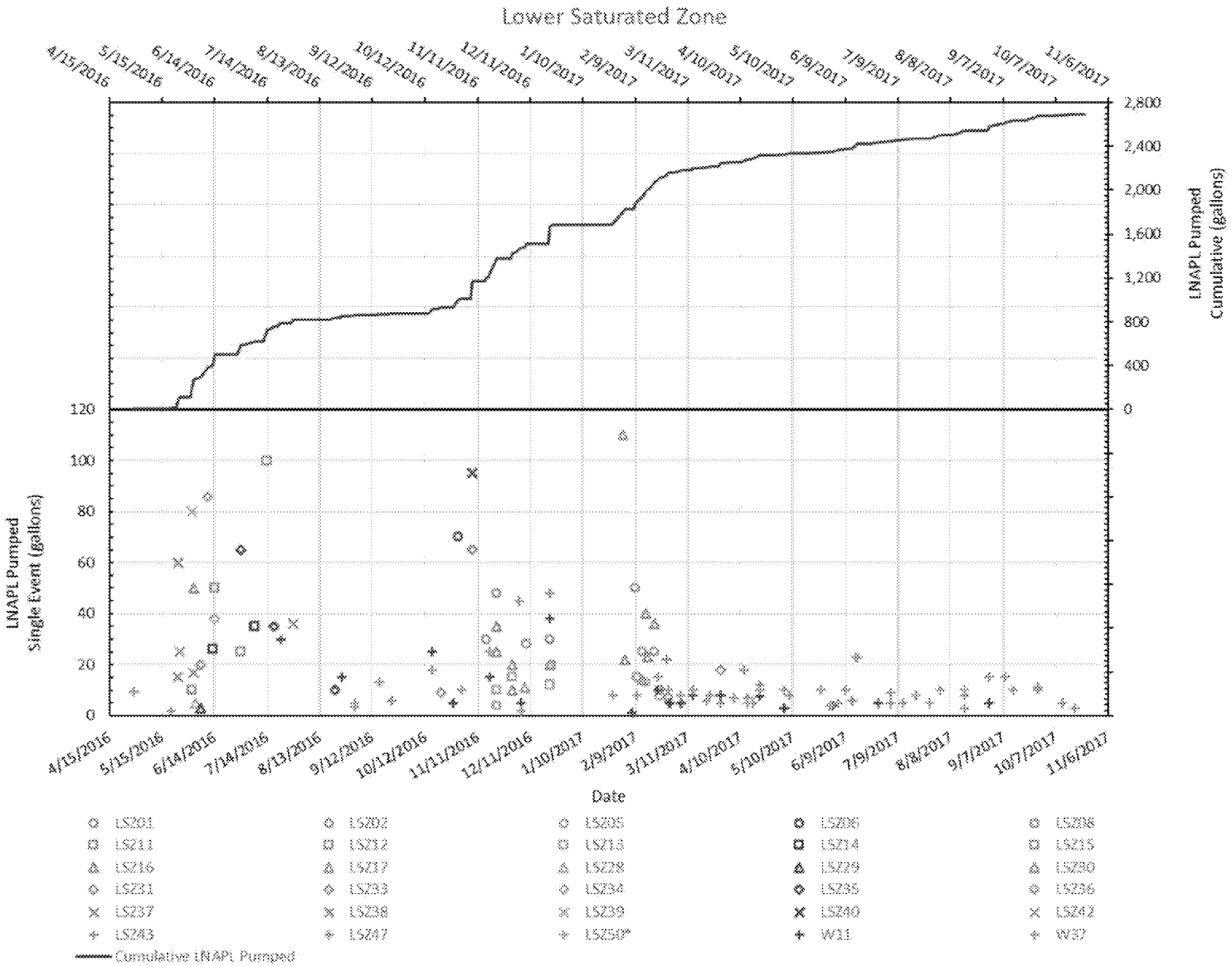
LNAPL Monitoring/Removal Status
Lower Saturated Zone



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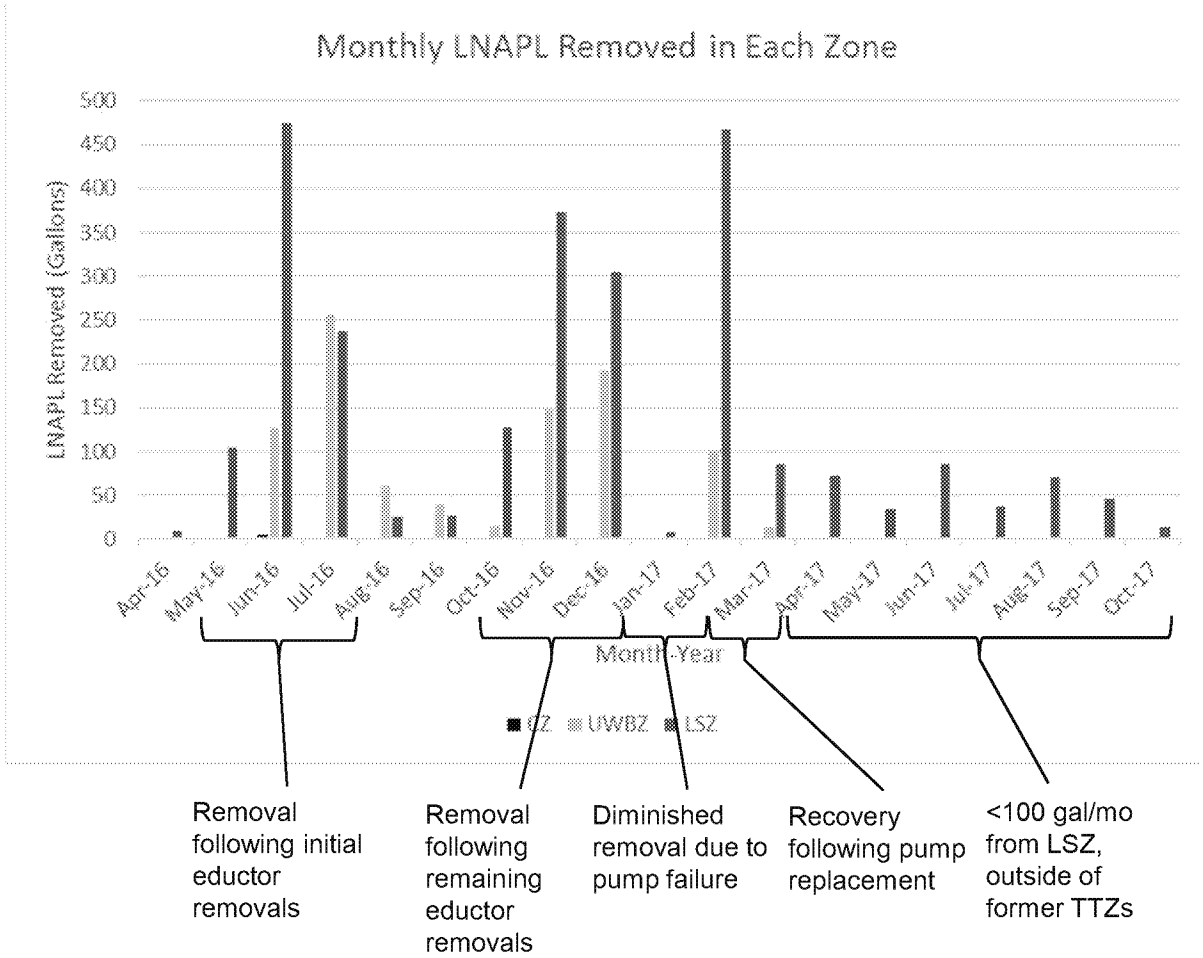
ST012 LNAPL Monitoring/Removal Summary

- CZ – ~7 gallons of LNAPL removed. None since Nov 2016
- UWBZ - ~950 gallons of LNAPL removed. None since Apr 2017.
- LSZ - ~Approximately 2,700 gallons of LNAPL removed. ~13 gallons (actual amount) removed since Oct 2017 update. All LNAPL removed since Oct 2017 update from wells outside TTZ perimeter (W37, LSZ50).



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Site ST012 Activities Nov-Dec

- Continued SVE operation
- Continued LNAPL screening in accessible SEE wells and Phase I characterization wells

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