2 weeks (M-F)

Soil = Surface and Subsurface (VOC's)

This is one bag of items.

Sample cooler items

8 items per cooler: (3) 5 gram samplers ≈ 3-40 mL VOA vi; (1) 4 oz jar

1 Trip blank = 3-40 mL VOA vial

28.25 coolers

8 ⟌226 Samples

VOC's

195 Field Samples

10⟌195 = 19.5 → 20 Field Duplicate Samples - (1/10)

10 Equipment Rinsate samples - (Based on 10 days)

0 Field Blank Samples

14 Trip Blank Samples (H_2O) - (1 per sample cooler)

will have to increase # due to # of samples to fit in a cooler.

215 Field Samples + Field Dups

ms/msD 1/20: 20 ⟌215 = 10.75 ⇒ 11 ms/msD samples

20 Dups, 11 ms/msD (31)

(*) 215 Total Soil Samples + Dups

+ 11 ms/msD samples

(*) 226 Total Soil Samples including Dups and ms/msD's.

(*) 31 Total Soil QC samples 11 ms/msD's + 20 field Dups.

(*) Trip blank # will have to increase to at least 28.

(*) 28 Total (Trip blank's) Water QC

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2 weeks (M-F)

Soil = Surface and Subsurface (SVOC's)

SVOC's

195 Field Samples

20 Field Duplicate samples

10 Equipment Rinsate samples (Based on 10 days) - 2-1L Ambers

0 Field Blank Samples

0 Trip Blank samples

215 Field Samples + Field Dups

ms/msD 1/20: 20 ⟌215 = 10.75 ⇒ 11 ms/msD samples

20 Dups, 11 ms/msD (31)

(*) 215 Total Soil Samples + Dups

11 ms/msD samples

(*) 226 Total Soil Samples including QC - (SVOC's)

(*) 10 Total (ER's) Water samples

(*) 31 Total Soil QC samples (11 ms/msD + 20 field Dups)

Sample cooler items

For Ambers:

* Can place 4-1L Ambers in a cooler.

10 × 2 = 20 1-L ambers

5

4⟌20

* Need 5 coolers for Ambers to be used for SVOC ER

* For Soil jars

Can place ≈ 10-8 oz soil jars in a cooler.

22.6

10 ⟌226

* Need 23 coolers for 8 oz soil jars to be used for SVOC samples

9598178

2 weeks (M-F)

Soil - Surface and Subsurface (metals)

metals

195 Field samples
20 Field Duplicate Samples (1/10)
10 Equipment Rinsate samples (Based on 10 days)
0 Field Blank Samples
0 Trip Blank Samples

215 Field samples + Field Dups
10.75 => 11 ms/MD samples

ms/MD 1/20 20 ⟌ 215

(*) 215 Total Soil Samples + DUPS - metals
11 ms/MD's samples
(*) 226 Total Soil Samples including QC - (metals)

20 Dups
11 ms/MD
31

(*) 10 Total (ER's) Water Samples

(*) 31 Total Soil QC Samples (11 ms/MD + 20 Field Dups)

Sample cooler items

For Soil jars.
Can place ≈ 10 - 8 oz soil jars in a cooler.

10 ⟌ 226 = 22.6

* Need 23 coolers for 8 oz soil jars to be used for metals

For 1-L HDPE poly.
Can place (8) - 1-L poly. in a cooler.

8 ⟌ 10 = 1.25

* Need 2 coolers for 1 L polys to be used for metals ER

Soil - surface and Subsurface (TOC)

195 Field Samples
20 Field Duplicate Samples (1/10)
0 Equipment Rinsate samples
0 Field Blank Samples
0 Trip Blank Samples

* 215 Field Samples + Field Dups

NO ms/msD count

(*) 20 Total (Dups) QC

(*) 215 Total samples + Field Dup

Sample cooler items

10 ⟌ 215

Need 22 coolers for 8 oz soil jars used for TOC.

Soil - Surface and Subsurface (Particle size)

195 Field Samples
20 Field Dup Samples
0 ER, FB, TB's

215 Field Samples + Field Dups
NO ms/msD count

(*) 20 Total (Dups) QC

(*) 215 Total Samples + Field Dups

Sample cooler items

(20) = 500 grams in a bag

? Need 11 coolers

2 weeks

Soil - Surface and Subsurface - (Tributyltin)

2 Field Samples
1 Field Dups 1/10
0 ER's, FB's, TB's

3 Field Samples + Dups

3 Total Soil Samples (Tributyltin)
+ 1 ms/msD sample

$\boxed{4}$ Total Soil Samples including QC

$\boxed{2}$ Total soil QC samples (1 ms/msD + 1 Dup)

One week

Sediment Samples - VOC

30 Field Samples
3 Field Dups 1/10
0 ER
0 FB
3 TB

Change to 5 TB's due to # of samples.

33 Total Sed. samples + Dups - VOC's

$20\overline{)33}$ = 1.65 2 ms/msD samples

33 Total Sed samples
+ 2 ms/msD's
* $\boxed{35}$ = Total sed. samples including Dup and ms/msDs

* $\boxed{5}$ Total Sed. Samples (2 ms/msDs + 3 Field Dups)

* $\boxed{5}$ Trip blanks = Total (TB) water QC.

Sample cooler Items

(3) .5 gram contains and (1) 4 oz jar.

$8\overline{)33}$ = 4.125

5 Coolers for VOC Sed Samples

One week

Sediment Samples - SVOC's

30 Field Samples
3 Field Dups 1/10
8 ER's 1/per day
0 FB's
0 TB's

Change to 5. Only doing Sed. Sampling for a week.

$\boxed{33}$ Total Sed samples + Dup - SVOC's

$20\overline{)33}$ = 1.65 2 ms/msD samples

33 Samples
+ 2 ms/msD
* $\boxed{35}$ Total sed samples + Dups + QC

* $\boxed{5}$ Total (ER) water samples.

3 FDup + 2 ms/msDs = 5

Sample cooler Items

$10\overline{)35}$ = 3.5

(4) Sample coolers for 8 oz Jars

Sample coolers for 1 L Ambers for ER

5 × 2 = 10

$4\overline{)10}$ = 2.5

3 coolers for 1-L ambers

one week

Sed Samples - (metals)

30 Field Samples
3 Duplicate samples
8 ER's 1/per day
0 FB's
0 TB's

Change to 5. Only doing Sed. sampling for a week

$\boxed{33}$ Total Sed samples + Dup's = metals

1/20 ms/mD $20\overline{)33}$ = 1.65 2 ms/mD's samples

33 Samples
+ 2 ms/mD's
3 Dups 2 ms/mD 5
(*) $\boxed{35}$ Total Sed. Samples + Dups + QC

(*) $\boxed{5}$ Total (ER) water samples

Sample cooler Items

Sample cooler for 8oz Jars
35 8 oz jars
$10\overline{)35}$ = 3.5
4 coolers for 8oz Sed. jars.

Sample cooler for 1-L polys

1 cooler for 1-L polys.

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one week
Sed. Samples - AVS/SEM
10 Field Samples
1 Field Dup 1/10
0 ER's
0 FB's
0 TB's

11 Total Sed Samples + Dups = AVS/SEM

1/20 ms/mD 1 ms/mD sample.

1 Dup 1 ms/msD 2
(*) $\boxed{12}$ Total Sed. Samples + Dups + QC

Sample cooler Items

Sample cooler for 4oz Jars

1 cooler 12 4oz jars.

One week
Sed Samples - (TOC)
30 Field Samples
3 Field Dups 1/10
0 ERs
0 FB's
0 TB's

(*) $\boxed{33}$ Total Sed Samples + Dups = TOC

No ms/msD samples

Sample cooler Items

$10\overline{)33}$ = 3.3

4 Sample coolers for 8oz jars used for TOC.

One week

Sed Sampling – (Particle size)

30 Samples
3 Field Dups
0 ER's
0 FB's
0 TB's

*$\boxed{33}$ Total Sed Samples + Dups – (TOC)

No MS/MSD samples

Sample cooler items

500 grams in a bag

Need 2 sample coolers

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one week

Surface water – VOC

33 Field samples
4 Dups 1/10
0 ER's
0 FB's
5 3 TB's

Change to 5. Doing Surface water sampling for a week.

37 Total surface water samples + Dups
+ 3 TBs
42 Total samples (Field samples + Dups + TBs)

1/20 MS/MSD

2.0
20)40 2 MS/MSD samples.

4 Dups
2 MS/MSDS
3 TBs
9

40
+ 2
*$\boxed{42}$ Total Samples (Field + Dups + TBs + MS/MSD)

33 + 4 + 3 + 2

Sample cooler items

89
× 3
120 VOA vials

2.6
45)120
3 sample coolers for VOAs

one week
Surface water – SVOC's

33 Field samples
4 Dup 1/10
0 ER's
0 FB's
0 TB's

37 Total Field Samples w/ Dups.

1/20 20) 37 = 1.85 2 ms/msDs

37
+ 2
39 Total samples (Field 33 + Dups 4 + ms/msD 2)

Sample coolers

39 samples x 2 = 78
4) 78 = 9.75

20 Sample coolers for 1-L Ambers.

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one week
Surface water – metals (unfiltered) TAL metals

33 Field samples
4 Dups
0 ER's
0 FB's
0 TB's

37 Total Field Samples + Dups

20) 37 = 1.85 = 2 ms/mD's

37
+ 2
39 Total samples (Field 33 + Dups 4 + ms/mD 2) – Filtered

Sample coolers

39 samples

13 Sample coolers for 1-L polys

---

one week
Surface water-metals (Filtered) Dissolved metals

33 Field samples
4 Dups
0 ER's
0 FB's
0 TB's

37 Total Field Samples + Dups

20) 37 = 1.85 = 2 ms/mD's

37
+ 2
39 Total samples (Field + Dups + ms/mD's) – filtered

Sample coolers

39 samples

13 sample coolers for 1-L polys.

One week

Surface water - TSS

33 Field Samples
4 Dups
0 ER's
0 FB's
0 TB's

37 Total Field Samples + Dups

0 ms/msD's

$\boxed{37}$ Total Field Samples + Dups

Sample coolers

$8 \overline{)37}$ 4.6

5 sample coolers for TSS 1-L polys.

One week

Ground Water - (VOC's)

27 Field Samples
3 Dups 1/10
0 ER's
0 FB's
3 TB's

33 Total Field Samples + Dups. + TB's

1/20 $20 \overline{)33}$ 1.65 2 - ms/msD's

33
+ 2
35 Total Field Samples + Dups + TB's + ms/msD's

Sample coolers

35 x 3 = 105

3 Sample coolers for GW - VOCS

One week

Ground Water - SVOC's

27 Field samples
3 Dups
5 8 ER's
0 FB's
0 TB's

35 Total Field samples + Dups + ER's

$20 \overline{)35}$ 1.75 2 ms/msDs

35
+ 2
37 Total Field Samples + Dups + ER's + ms/msDs

Sample coolers

37
x 2
74 answer

$4 \overline{)74}$ 18.5

19 coolers.

One week

Ground water – Metals – (Unfiltered) TAL metals

27 Field Samples
3 Dups
5 ~~8~~ ER's
0 FB's
0 TB's

35 Total Field samples + Dups + ER's

$20\overline{)35}$ 1.75 2 ms/mD's

35
+ 2
37 Total Field Samples + Dups + ER's + ms/mD's

Sample coolers

$8\overline{)37}$

5 sample coolers

One week

Ground water – metals (– filtered) Dissolved metals

27 Field Samples
3 Dups
5 ~~8~~ ER's
0 FB's
0 TB's

35 Total Field Samples + Dups + ERS

$20\overline{)35}$ 1.75 2 ms/mD's

35
+ 2
37 Total Field Samples + Dups + ER's + ms/mD's

5 sample coolers