LOGBOOK – SITE RECONNAISSANCE

T. MALOOLY (PROJECT MANAGER)

DECEMBER 2, 2014

Storm water only → WATER lined. Full

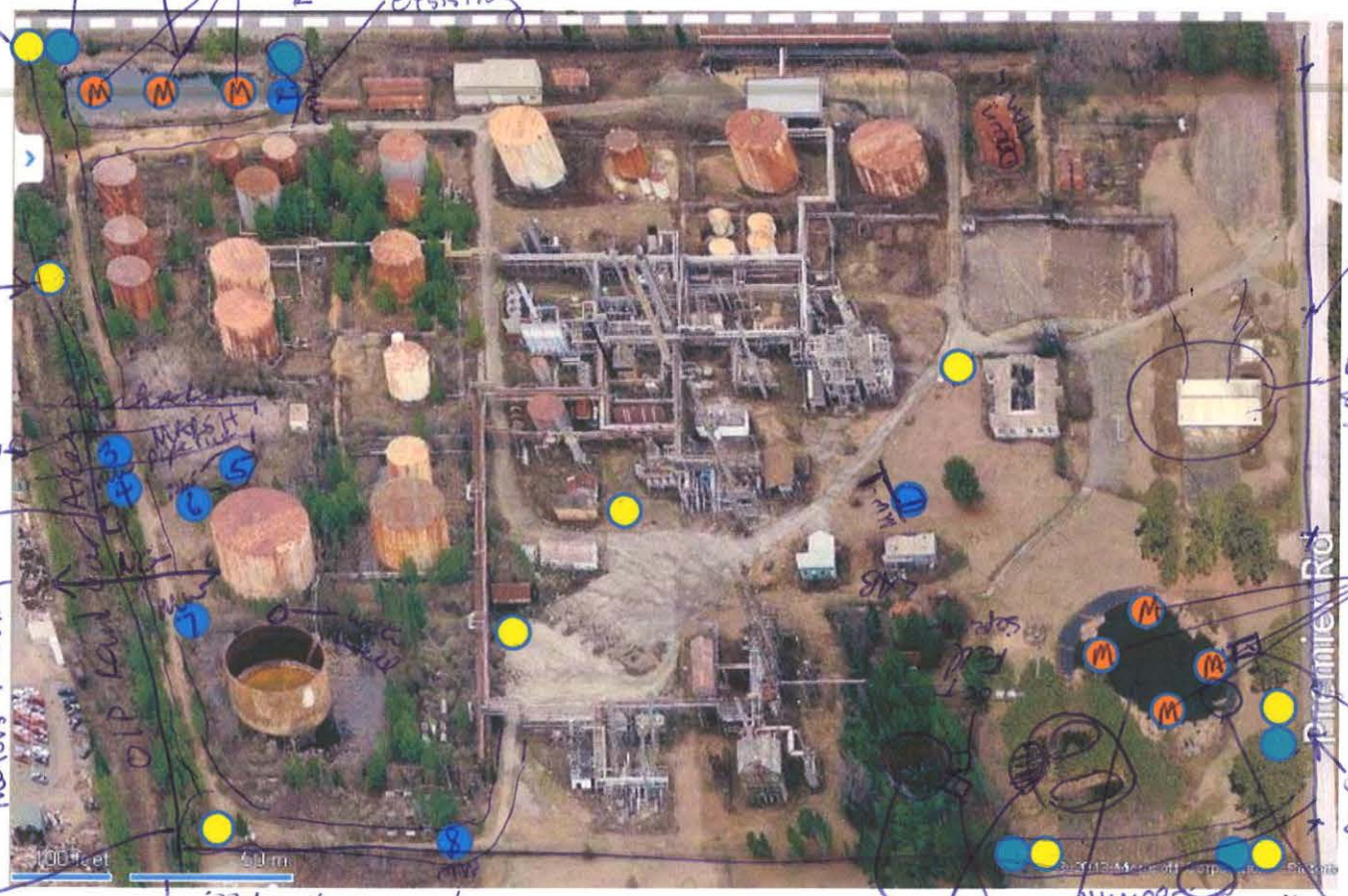
Performance Work Statement
Sampling and Analysis Support at Gregg County Refining

Region 6, Dallas, 1445 Ross Ave, Ste 1200. TX, 75202

Boring logs

shallow deep Sed. SXs VC contamination shallow

existing



Possible Flush? Mount

Power lines

waste storage

Power Pad Lines Transformer 2456

Sed SXs

High Merc Metals Facility

5' off fence

Prop boundary

gates stay locked - Keys needed

2/4/13

Lined great shape!

Separator

EXHIBIT A
SITE MAP

- Find Storage Loc for Drums
- Hights of pipe Lines
- Call Driller about hight issues & width

2

3 4

8 5

6

7

1

Keyed Mike Lock

TARA's GPS model

Proposed shallow monitoring wells

Existing Monitoring Wells

Proposed sediment samples

Proposed deep monitoring wells

MW#'s are not actual MW#s marked different.

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Gregg County Refinery, L.L.C.
Site Visit, 601 Premier Road
Longview, Texas 10:00 AM
Monday December 02, 2013

(1) Kenneth D. Williams
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(2) David Rowlands
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(5) Rich Mayer
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Gregg County Refining. ①

12/2/13 601 Premier Rd T. Malooly
Longview, Tx Toerock Assc.

Exit to site. 2.5 hour drive
meet EPA R6 TARA Hubner,
Rich Mayar, Wendy Jacques + Bill
Mansfield @ Whataburger in White
Oak, Tx @ 9:30 am.

10:00 Exit to site following EPA.
10:10 Onsite with all participants
of site walk. All sign in -
(list of attendees provided
post walk)
* Camera is not working - personal
camera no way to take pictures
TM will talk w/ Mrs. Hubner who is
taking pictures & see if we can get
a copy. Walk begins.

Start @ MW-1 exsisting + shallow
well TB Installed.
We all walked in a group to
each area starting at MW-1 and
in order MW-7, 6, 5, 4, 8, 3 + 2.
** Existing wells are marked differently
than on map we have.

12/2/13 cont

Grey Co Refining
601 Premier
Longview, Tx

T. Malooly
Toeroekasse

MWs existing:

Field Marked	-	Map Marked
mw-1		mw-1
mw-2		mw-2
mw-3		mw-3
mw-4		mw-8
mw-5		mw-4
mw-6		mw-5
mw-7		mw6
mw-8		mw-7

Determined initial pond sed sampling will be changed due to liners. Also the shallow well install North of mw-3 will be a Flush mount due to site conditions.

*Other than brush removal no obstacles or overhead hazards are apparent.

EPA is contemplating installing all deep wells w/ double wall casing to prevent cross contamination.

12/2/13 cont

Gregg Co. Refining
601 Premier Rd
Longview, TX

TMalloy
Toerock

Waste storage area will be the open transfer building Due East adjacent to the main parking area this area was cleared by EPA as a good place for temp storage.

* All gates must stay locked while work is going on-on site. A lock on lock system will be used to gain access as needed after first day.

According to owner consultant VC contamination is adjacent to MW-2 but off site.

Since we will not be collecting sediment from SE Pond, additional locations of SE outfall & older sludge ponds in the wooded areas will be located by EPA on new map Prior to site work.

Grays County Refining
12/2/13 cont. 601 Premier T. Malone
Lonsdale, TX Toerock Assoc

13:00 Approx. Post meeting about access issues, security & a reminder to not access any building onsite as some are not in good condition and may collapse. Also there is wildlife onsite including deer & snakes & bugs of all kind. Many areas of burrow holes found & care must be taken to avoid stepping into one mostly in the SE corner of property. Exit site.

17:00 Offsite out 273 miles RT.

LOGBOOK 1

P. KIELER (FIELD TEAM LEAD)

APRIL 7, 2014 THROUGH APRIL 18, 2014

CONTENTS

PAGE	REFERENCE	DATE

geotech

Geotech Environmental Equipment, Inc.
2650 East 40th Avenue
Denver, CO 80205 (800) 833-7958 Fax (303) 322-7242
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ALL WEATHER
LEVEL
FIELD BOOK

TOEROEK ASSOCIATES

PAUL KIELER

300 UNION BLVD. STE 520
LAKEWOOD CO 80228
303.407.7735

GREGG COUNTY REFINERY

SAMPLING AND ANALYSIS SUPPORT
#6609

REWARD IF FOUND

RiteInTheRain.com

4-7-14

750 Arrive onsite, Paul Kieler and Susan Walden (TA) Gregg County Refinery. 43° misty, w/ 8 WNE,

800 Met Gregg County Representative Ken Williams - discussed field effort and access issues Tara Hubner and Wendy Jacques from epa region 6 arrive onsite

805 Jason Whiteside from Lonestar land clearing arrives onsite

900 Walk site with EPA to determine Borehole locations. Site is very soggy with lots of standing water in low areas several areas draining / moving water is occurring. EPA identifies wells

915 Andy Mix from GPRS, GPA services arrives on site and setups equipment to clear locations

940 Joey Whiteside from Center Point arrives on site for utility/line clearance

1000 Tom Maloody arrive(s) onsite

1030 Safety meeting with Lone Star

PK 4/7/14

4-7-14

Clearing conducted, H/S form completed for HASP and HSP briefing - will follow GPRS and brushclear well locations following utility clearance

1040 EPA will locate surface soil sample locations. Locations are move due to standing water at many locations. Drill access will be an issue and may result in change project schedule and sample locations

1109 Several relocates may be require based on Whiteside and Mix utility clearances. MW-11, MW-17, MW-16, MW-12 will be offset by ~12 feet from utility, MW- is located on road and will be flush mount

1200 Kieler / Walden depart site for Grainger to get drum labels and well locks

1250 return to site Kieler and Walden de

1310 Precision drilling arrives ons

PK 4/7/14

4-7-14

1330 Decon pad supplies unload and IDW drums delivered. Decontamination of pumps for development started

1350 brushclearing continues move to MW-9 then on to MW-17 next.

210 Tom Maloody and GPR guys leave site for day. Tom McDede final locations with Laura to determine if offset was needed

212 make call to Wade ? to check MWII location w/in easement prepare H/S mtg

250 EPA returns to site to finish the I.D. of sample locations (SS).

PK 4/7/14 230 H/S mtg w/ drilling contractors see sign in sheet

300 Prepare for well development at MW2. Oversee decontamination pad construction and staging of drilling trailer

310 check on lonestar clearing progress, waiting on MWII clearance of MWII location Wade still on site

RORh 4/7/14

RR

4-7-14

340 check on MW2 well development activity and oversee SOP procedures and set up

400 spoke with Tara and Wendy regarding SS locations and discussed EPA edit map. we discussed soil locations and water stand in many designated sampling areas. these areas were re located from the standing water areas. EPA will go over locations and walk the site tomorrow.

430 Lone star offsite, staged brush hog by decon area asphalt.

530 meet Precision to discuss soil boring locations and review with Laura. Site cleanup and staging for overnight pesins

630 Depart site and lock gate

RORh 4/7/14

4-8-14

530 load van supplies & water/
610 calibrate instruments, see calibration log
630 depart for site / ice
700 safety mtg w/ precision drilling
800 Lone Star arrives onsite
820 Crew #2 will start at MW-15 and go to MW16 Crew 1 will sample SS locations, begin decon
840 Visit Crew 2 on MW16/SB15 location to oversee cores and sample collection. This is low 2 inch recovery w/ contamination/impacted soil at an MS/MSD location. Will collect MS/MSD from whole interval to make enough sample volume. Per EPA discussion this is acceptable since entire BH is appears impacted. Partly cloudy 50's slight wind
855 return to decon pad to collect EB rinsate on sediment trowels sampling equipment
900 ERBSS1 collected

4/8/14

4-8-14

1015 talk to Tara regarding MS/MSD collected at SB15A. She state it is ok to proceed
1030 collect rinsate from drilling subsurface soil equipment 4/8/14 ~~ERSB~~ ERBSB1 from micro core sleeve and then will meet EPA for surface soil location
1045 drove final grab sites with Lone Star to check out work and sig off and demob
1055 Walk surface soil sample loc
1110 EPA offsite, Lone Star offsite, windy 25mph NNE sunny
1120 inspect drilling locations with driller. All locations too saturated for drill rig! Must stay on roads. Jackie Raines is not comfortable with sites and MW-9 corner 8 inches standing water - probably will not support rig.
1116 Walden and Kieler to SS locations prep bottles & field blank
1150 collect SS13 and SS13DUP

4/8/14

4-8-14

PID breathing zone: 0 ppm
sample location: 0 ppm
sweet odor coming from Bldg adjacent to the hose/loading area. sample collected adjacent to to hose/loading area on the down hill edge. Damp, rocky soil

1200 #SFB1 field blank collected at this location. 0-ppm reading PID

110 Depart location for SB16 location

125 Walden collect #SFB2 field blank at SB16 location re-ice sample and prep samples for shipment

210 Discuss drilling locations with Jackie Raines and outstanding utility locate items.

240 Depart for SS sample locations

310 Collect SS11 and SS11 DUP SS samples, West NW Side of Tank 0-6"
PID breathing zone: 0, thin stained area 3" in depth sample location: 0 ppm

335 meet Laura for new supply of subsoil containers

[signature] 4/8/14

4-8-14

402 arrive at SS12 breathing zone PID: 0
sample location: 0 ppm

408 collect SS12 sample, 0-6" from north side of tank, 3 Enlores VOCs, 8oz jar SVOCs and 8oz jar TAL Metals and Mercury (Hg) 8260C, 8270D, 6020A/7040A/7041A

450 clean up and return to staging area/decon pad for sample QC, package COC and ready for shipment

640 Depart site for Fed Ex - 4 coolers 1-4

700 Depart Fed Ex and return to site for final check and to lock gates Will email scribe COC file and XML sheet to EPA Region 6 lab. ERBSB1, ERBSS1, SFB1, SFB2, SS11/DUP, SS12, SS13/DUP, SB15A, B, C, SB16A/DUP SB16B, C, SB17A, B/DUP and C samples

730 DEPART SITE

[signature]

4-9-14

0700 Arrive onsite
Discuss housekeeping and decon procedures with Precision.
Health & Safety mtg to discuss holes and obstruction, hospital route (revised from H&S as revised to nearest location.
Eye/ear protection
Drillers to set up on SB18

720 Laura arrives onsite PK

900 depart site to pick up ~~misc.~~ miscellaneous supplies

920 arrive back on site, TB3 collected

930 collect SS1 location 0-6 inches, 0 ppm in breathing zone and 0 ppm at sample location, collect SFB3 at SS1 location

1000 return to SB18 location to Double up support personnel of BH work and discuss drum mgt. issues

1037 Phone conversation with Christ Warren regarding sample shipment Coolers 1 34 arrived but #2 is

PK 4/9/14

4-9-14

missing. I will call FedEx and track package then call Warren Back. Additionally coolers #3 and 4 are missing one half of COC SB15ABC and SB16ABC, SB17A and SS1 are not with the COC documentation. Only 1 of 2 COC pages is existing with cooler. PK will check COC and call back. Fed ex billing #8987-3425-2505 is not at lab but could be at sister lab down the street. C. Warren will follow up.

PK 4/9/14 1040 Call / check w Susan regarding COCs and identify 2 page(s), one each from COC 3 and COC 4 that were not included in the cooler shipped via fed ex. Check on phone and see by fed ex web site the cooler #2 was listed as delivered

1104 call Tara and Rich to discuss issue with COCs and missing cooler

PK 4/9/14

4-9-14

1115 Visit Tara, Rich, Paul to discuss problems and current action to resolve missing COC and missing cooler.

1145 Crew 2 move to next BH location SB12

Notify Tom Malooly Toeroek of COC problem and discuss options/Corrective Actions

1225 SF134, Field blank collected at SB12 location

1300 Departed site for Grainger to pick up like-keyed well locks 20, 18 wells, one for front gate and an extra keys to EPA and Mr. Williams per EPA direction

1340 arrive onsite, prep for SS sampling

1410 collected SS8 on south/SW side of tank near value station 90° near MW/SB15 Parking lot 0-6 inches 0ppm b2 and faint odor return to Decon Pad for phone

4-9-14

calls and action plan for sample QC and packaging schedule

1552 collect ERB SB2 from barrel, sleeve, rod at decon area following decon procedures. Note decon includes an extra DI rinse from 500 gallon poly tank in addition to potable rinse.

Updated EPA on COC situation, 2 pages, 1 each, from COC 3 and 4 were not included in cooler. SB15ABC, SB16A/DUP, B, C, SB17A and SS11/DUP will need to be re-collected at a later date. Toeroek will allow more time for QC, change existing QC procedures and add a QC procedure for tags. Also, the scribe procedure will be looked at to see if we can improve this process. Tara will be updated.

1700 sample prep and QA/QC 3 coolers

1830 depart site for Fed Ex. return to site to clear area and lock gate. See Scribe for COCs.

13

Gregg County

4-10-14

Weather 48° Windy NE.

0625 arrive onsite
0635 Precision / Lawn onsite for safety mtg
648 with move to SB-13 and setup coolers, collect TB11
830 depart for decon pad and prep SS containers and sampling supplies
909 collect SS12, no odor/staining 0ppm breathing zone, 0ppm sample location, north of MW11
959 collected SS14 no odor or stain, 0ppm breathing zone & sample location, north of MW7 location inside berm area pk
1114 collect SS15 ppm MSD breathing zone sample location silty no odor no stain, SW side of AST across from SS9 location
1206 Collect SS3 MS/MSD triple volume sand 0-3 inches clay balls, stain at 6-7 inches 0ppm breathing, 2.8ppm sample location located north of SS9 at the next AST

[signature]

Gregg County

14

4-10-14

prep samples with sample tags and reload existing ice
1330 depart site for new ice
1340 return to site, driller decon barrel and rods, prep for EB sampling
1400 collect TB14
1440 collect ERBSB3, prep sample coolers
1500 collect SFB5 FB sample at SB11 location
begin prep 4 coolers and QA/QC #8-11. Will plan to develop all wells over the weekend if possible
1830 Depart for fed EX after getting more ice
1900 returned to site for cleanup and lockup
See field forms for details: Soil boring logs, monitoring well const. diagrams, SOSS log, well development sheets, QAPP notification forms, Photos log, dam log, H/S inspection, audit forms and SOPs are in QAPP/SAP.

Gregg County

4-11-14 Sunny breezy 44°, Walden/Keler
700 arrive onsite, prep decon
health and safety mtg
800 Arrive at MW3 for development
well zip-tie at well casing
no lock, calibrate YSI556 2005
834 0 ppm breathing zone
1.2 ppm well head
0 ppm Ground
837 WL 5.15 TD 15.62, 1.7 gal volume
will setup decontaminated pumps
and new hose in well, begin purge
lifting pump to surge well and
remove sediment from well collect
ing a minimum of 3 gallons
and reaching below 50 NTU
turbidity, for discussions with
EPA a maximum of 6 well volume
will be purged, A Goal of 10%
variance within water quality parameters
should be achieved if possible.
851 purge begin and stopped - pump
setup issue, with batter, and
uneven terrain will reset
and begin again

RLK 4/11/14

4-11-14 EXISTING WELL DEVELOPMENT

857 1.9 gallons purged see development sheet
900 1.7 gallons purged
903 1.7 gallons purged
907 .7 gallons purged (well dry)
913 .5 gallons purged (well dry) low volume
919 .5 gallons purged (well dry)
925 .5 gallons purged (dry) well to low volume
7.5 total gallons purged
last NTU readings 35.4 and 28.6
below 50 and well volume(s)
diminishing between dry purges
932 WL = 9.32 BTOC (black notch)
decon water level indicator
dispose of hose
940 Discuss with EPA development
of this and all wells. So far
older wells have some bacterial
components/coloration and sediment
turbidity is improving with pumping
will move to MW4
1000 well has no lock, closed with black
zip tie, is vented WL = 8
TD = 15.9 black notch BTOC notch
1.28 gal purge volume, 0 ppm breathing

RLK 4/11/14

Cregg County

4-11-14 EXISTING WELL DEVELOPMENT

zone, 0ppm well head, 0ppm Ground
setup pump/surge will begin
at purge, see develop/low sheet
1008 begin purge, sulphur, black water
1010 1.3 gallons purged
1016 1.4 gallons purged
1019 1.4 gallons purged
1022 1.4 gallons purged
1023 .1 purged dry
1025 DRY attempt purge
5.6 total gallons, well pumped dry
last turbidity readings below 50
NTUS
1038 final WL = 9.7 BTOC, will
decon water level indicator and
2 pumps. Decon of pumps
includes Alconox wash and scrub
with brush running wash through
pump. Then soap wiped with towel
and transferred to potable water
wash/rinse pumping again through
pump and then a DI water
spray, rinse and pump drain
Tubing is only used new and only

RKh 4/11/14

Cregg County

4-11-14 EXISTING WELL DEVELOPMENT

used once. Decon equipment is
bagged in new trash bags
1116 move to MW-7
1118 arrive MW-7 well zipped tied
not locked vented casing, 0ppm breath.
zone, 0ppm well head, 0ppm Ground
1125 WL = 7 TD = 22.91 2.6 gallons
purge volume
1128 begin purge
1132 2.8 gallons purged
1134 2.6 gallons purged
1139 2.6 gallons purged
1143 2.6 gallons purged
1149 2.6 gallons purged
1136 2.6 gallons purged
RK 4/11/14
1149 15.8 total gallons purged, 6
volumes, turbidity below 50 NTUs
Development procedure after
calculating purge volumes with
decontaminated WL probe. The
decontaminated pump (whale #6012
25 stage submersible) is lower to
well bottom and surged during development

RKh 4/11/14

Gregscounty

4-12 63° cloudy overcast 84% humidity
arrive onsite for health safety mtg
704

804 arrive at MW 1 0 headspace
0ppm breathing zone, 0ppm ground
W_L = 5.5 TD = 16.97 1.86 gallon

Pekin 4/12/14

Pekin 4/12/14

GREGG COUNTY

4-11-14 WELL DEVELOPMENT

1214 WL 8.22 Depart for MW6

1220 MW6 no lock breathing zone 0, well head 0.2 ppm and ground 0
WL=5.22 TD 15.34 1.65 gallons purge volume

1237 1.7 gallons purged

1239 1.5 gallons purged, well dry

1242 .2 well dry

1242 .1 well dry

1253 1.6 gallons purged well dry

1255 .2 well dry

1307 1.5 gallons purged until well dry

6.8 total purged

1317 WL=8.75
6.8 gallons purged, well dried 4 times, below 50 NTUs
Decon pumps and water level

1408 Arrive at MW5, well pad covered by water, water inside protective casing 0 ppm breathing zone, 20 ppm well head 0 ppm ground

4/11/14

4-11-14 WELL DEVELOPMENT

WL=2.35 TD 14.5 1.98 gallons

226 begin purge purge rate 2.2 gal. est.

1428 3.2 gallons purged

1433 2.2 gallons purged

1440 1.5 purged dry

1453 2.2 gallons purged

1455 .2 purged dry

1503 2 purged dry

11.3 total gallons purged
well dried three times and turbidity below 50 NTUs

1630 arrive at MW5, no lock rusted casing

1633 WL=7.4 TD=18.95 1.88 gal per volume

1639 begin purge no odor

1641 1.8 gallons purged

1642 3.2 gallons

1645 2 gallons

1647 2 gallons

1649 3.5 gallons

1651 3.5 gallons

1651 3 gallons, cloudy still

1655 3 gallons 22 total gallons purged

4/11/14

4-11-14 WELL DEVELOPMENT
1700 Breakdown equipment
1702 WL = 9.32

4-12-14 Cloudy 65°
700 arrive onsite with precision probe and Brian Matherne - Titanium
715 Health/Safety meeting
730 Instrument calibration drilling crew review and staging as well as decon pad clean up from well completion activities yesterday. completion will continue today at last 4 remaining wells
804 KIELER/RAINES will develop wells on crew 1 while Walden/Matherne will develop as crew 2. PK start at last existing well MW while crew 2 starts at MW13, 11 etc..
804 arrive at MW1 0ppm BZ 0ppm well head, 0ppm ground WL = 5.5 TD = 16.97 1.86 gallons purge volume
849 begin purge
851 2.0 gallons purged
854 2.2 gallons purged
857 2.3 gallons purged
859 2.2 gallons purged
902 2.2 gallons purged

GREGG COUNTY

4-12-14 WELL DEVELOPMENT

904 2 gallons purged
12.9 total gallons purged
930 departs site
945 Arrive at MW10, flush mount new MS good condition, 0.2 ppm bz
4.9 ppm wellhead, 12 ppm ground
953 WL=4.15 TD=20.32 2.63 gallons per purge
957 begin purge

~~PLT009~~	5	gallons purged	959
~~PLT013~~	15	gallons purged	1009
~~PLT017~~	4	gallons purged	1013
~~PLT021~~	3	gallons purged	1017
1027 *	8	gallons purged stop to recharge	1027
1037	5	gallons purged	1037

40 gallons total purge meet <50 NTUs, decon eq. prevent
1120 arrive at MW18 0ppm bz 0ppm wellhead, 0ppm ground
1126 WL=6 TD=23.3 2.8 gallons per purge volume setup pump and buckets with new decon water
1129 begin purge
1131 3 gallons purged

4/12/14

4-12-14 WELL DEVELOPMENT

1135 3 gallons purged
1135 3 gallons purge
1138 3 gallons purged
1143 6 gallons purged
1146 3 gallons purged
1149 2 gallons purged
1154 3 gallons purged
1159 2.1 gallons purged very low flow
1203 1 gallons purged very low flow
29 gallons purged total, very low flow well clearing at low flow
1216 arrive at MW17 0ppm bz, 0ppm, wellhead 0ppm ground
1220 WL=6.45 TD=23.3 2.42 gallons purge volume
1226 begin purge
1228 2.5 gallons purged
1230 2.7 gallons purged
1232 2.5 gallons purged
1237 1.8 gallons purged
1240 2 gallon purged
1243 2.5 gallons purged
1246 2.5 gallons purged

4/12/14

4-12-14 WELL DEVELOPMENT
1255 2.5 gallons purged
19 gallons total purge, very low flow clearing turbidity
Decon equipment
1315 arrive onsite 0ppm bz, 0ppm WH
0.2 ground MW16
1320 WL=7.67 TD=23.3
1324 begin purge
1327 4 gallons purged
1328 2.5 gallons purged
1329 2.5 gallons purged well dry at 9 gal
1334 2.2 gallons purged well dry at 10 gal.
1341 2 gallons purged
1343 1 gallon purged, varying flow
14.2 total gallons purged
1351 WL=18.21
1415 arrive MW15 0ppm breathing zone
0ppm well head 0ppm ground
1425 WL 2.5 TD 18.16 2.55 gallons per volume purge
1438 begin purge
1440 4 gallons purged
1442 2 gallons purged
1445 2.5 gallons purged

RK 4/12/14

4-12-14
1447 2.5 gallons purged, slowing
1448 1 dry, no water
1508 1 gallons purged
1511 sputtering flow stopping
11 gallons total purge
1515 Scott from precision starts to clear area and decon pump and water level after final WL
1517 14.23 WL, will meet Susan for conference at decon pad. Will clean up decon station except for field van, site clean up, drilling equipment decon dam staging etc. - precision offsite
MW9 0ppm breathing zone
0ppm well head, 0ppm ground
1644 WL=3.6 TD 23.24
3.2 gallons purge volume
1704 begin purge / surge
1704 3 gallons purged
1710 3 gallons purged
1714 3 gallons purged
1719 2 gallons purged

RK 4/12/14

4/12/14 WELL DEVELOPMENT MET
1726 4 gallons purged
1732 3 gallons purged
1737 2 gallons purged well dry
20 gallons total purge
Site clean up / Decon
Depart site

RLH 4/12/14

04-13-14
1345 arrived on site to collect GPS and start on photologging locations, and inspect MW completion pads.
Mr. Williams drove the site and discussed field operations and schedule
All MW completions were accepted minus MW10 - surface mount lock and bolts missing and extra soil piles along roadways, MW18 - bollard post does not have enough concrete and need plug for top; MW15 needs bolts and seal/lock. Cleanup of bentonite at decon pad also needed.
1630 Drum inventory and QC log entries SO IDW

RLH 4/13/14

4-14-14 cloudy, upper 60°Fs

530 load supplies, calibrate instruments

600 arrive onsite to decon sediment core collection equipment, set up decon station for mobile locations - at drum storage area

640 go to staging area for H&S tailgate and discuss sed. sampling. Laura R will be resampling SB19-21 for replacement of missing COC samples: SB19 = SB15, SB20 = SB16 and SB21 = SB17. Similar boring strategies will remain as they did for original 4/8/14 sampling although the sample intervals will be matched to field conditions, at each step-out location marked by EPA(S). The original Precision Probe members Tim Cooper, Jackie Raines, Scott Crawford James Ruth will be with Laura while 2 Titanium samplers will assist P/C with sediment sampling. Holden will work sample management for sed and SB work. H/S mtg for SB work and discuss communication protocol at/

RLKh

4-14-14 Sediment sampling

from sed locations in the event of problems/or emergency. One shore person will be responsible for phone tree to communicate needs in case of trouble. 2 land lines will be used to secure john boat/flat-bottom at shore. One or two person shall use sediment core to collect from sediment locations. VOC will be collected directly while SVOC and metals will be composited. SE01 is non-boat outfall location and will start there to review techniques. Life jackets, communication and steady safe slow work will be employed to reduce risk while over water. 3 Encore, 2 8oz jars for SVOC and metals/Hg will be collected for regular/normal sample locations. / MSD and 1 Dup will be collected with a ERB and FB blank at sed locations. TB collected and supplies and coolers for sampling

755 will move to SE01 for additional

RLKh

4-14-14 Sediment Sample

H/S with Titanium personnel.

8:04 begin sample collection at SED 1 (MSD) location. Patrick Ireland and Logan Arthur are Titanium person assisting in sediment sampling today - very humid conditions. SED 1 collected at confluence of culverts at SE area of property - where very saturated soils and surface water drainages form a drainage area discharge from 2 pipe (concrete) and one overland surface flow are present. Concrete splash pad are (or hard surface) requires that surface footings be used to collect sediment sample(s). Sample locations approximate previous marked by EPA is used for sample location. Sample collected from center of drainage area from western edge of bank - only area accessible to sediment area.

RLK

4-14-14 sediment sampling

will move to SED 2 following final collection at SED 1 - set up boat, decon station, test phones etc... will also meet with EPA to review procedures, location etc for approval. Sediment core is lined w/ acetate sleeve and has core catchers and end caps for sampler retention. Sample recovery and sediment composition may dictate the number times sampling cores are required. Susan Belden will help with samples and containers as we concentrate on safe work / sample collection etc.

8:55 move to SED 2 set up boat procedures Titanium personnel will alternate in boat with the second person manning safety line and handling the sediment core as it comes ashore

RLK

4-14-14

0927 collected sediments from core onshore after draining sediment sampler into boat, mobilized sediment. Encore sampled directly from core. SED2 and SED2DUP 25 feet offshore from center of impoundment northcentral area. Stainless shoe used for homogenizing samples for SVOCs/metals/Hg. Sample has odor and dark coloration. New acetate liner core catchers & caps will be used at each location and a decon procedure performed for sediment core shoe and assembly between locations

1020 collect SED3 sample from south central portion of impoundment area. sample has less odor and staining than SED2

1100 sprinkles begin on and off, some small hail

1130 SED6 collected, as sample

4-14-14 Sediment Sampling

came ashore heavy rains began PK directs Titanium to cover supplies and head to vehicles while PK finish sample collection heavy rain, hail and thunderstorm requires stop work. PK brings samples to van. SB work has ceased due to lightning/rain/hail. Will take safety/lunch stop for personnel while Susan and I work on cleanup. Several labels and paperwork have been ruined by hail and rain. ½ inch hail is everywhere. EPA calls & checks in - will depart for break more cells are on the way per Rehm - EPA. Drillers are in trucks at decon rd. Titanium and EPA off site for a while.

1215 decon and cleanup at decon area - move boat and ready for sampling at other end of second impoundment (southwest)

1232 collect SED7 sample

4.14.14 Sediment Sampling

decon, move boat supplies to western most impoundment

1317 collect SED4 sample from larger impoundment ~15 to 20 South of aerator(?) structure located central-north end odor and staining present after sample collection will conduct decon and collect ERB sample with shoe, sediment core and sampling equipment.

1400 collect ERB SED2 on sed equipment

1412 collect SFB6 field blank at impoundment shore location SED4/SED5, transfer cooler back to van and clean up area

1442 collect SED5 from south central location near south aerator located on southern end of pond. Odor and staining present.

1500 begin cleaning decon, police

4.14.14

area and moving equipment out

1530 Met Rich Nendy Ken Williams at van to discuss sediment sampling, weather, and plan for rest of day. PK and EPA agreed to document sediment in trip report and noted some areas/location required multiple sediment core locations to obtain full volume for SVOCs and reliable

1550 Susan working on samples and SB samples. Will complete boat work clean up and aid QA/QC sample work ASAP. Wet and Cold! Weather continues without lightning and heavy rain is gone - precip. is sporadic

1630 depart site for additional ice then to hotel for dry clothes to prevent hypothermia. Then to Fed Ex for shipment Return to site for inspection and clearance. Lock gate

4.14.14

Drilling is completed and Precision Probe has completed checklist/punchlist and demob completed. PP left 6/7 drums for gw mw purge/sampling at drum storage area. Drums were combined to reduced total # of drums used. Road damage is present in NW and SW corners of facility with tracks in grass near mw 1, 9 11, 13, 14 wells. 4 cooler shipped FedEx COC 12-15.

4.15.14

630 arrive onsite prep materials and calibrate instruments see logs

700 H/S with Susan for well gw work. Will address each team throughout day since we have new Titanium and previous Titanium site experience

Onsite for GW: Paul Kieler, Susan Walden, Logan Arthur, Jamie Thompson Lauren Konvalin. Susan and Lauren will work on team and Logan and Jamie will work on team. PKieler will start with a common well to ensure similar procedures are follow and SOPs are reviewed. Rich and Wendy will also be onsite for oversight and will float as they please between sites. Groundwater sampling sheets will be used. Decon procedures and calibration are discussed and sites will be checked for accessibility and safety. Field procedures will be checked by

PKieler

4.15.14 Groundwater

P Kieler today follow the first well MW18, Susan will lead one crew and Jamie will lead other. PK will float between wells interface with EPA, recon remain locations and work on printer and computer issues. Following decon, calibration and setup and testing of equipment and supplies for 2 teams will will purge MW18 as one team and then split into 2 for the remainder of the day. EPA onsite to observe "startup" well and training for MW18. Susan/Lauren will fill out forms, Jamie will work equipment with Logan on purge and then prior to sample we can split into 2 teams. Input and comment was encouraged for Rich and Wendy. Susan will get TBs.

900 MW18 general procedures
SOP review
arrival

4/15/14 Groundwater

well inspection/integrity
PID readings breathing zone, well head, groundsurface
weather
samplers, date time
top of riser measurement pvc
top of protective casing measure
north mark check
WL or DTW and TD measure
calculate volume
pump/purge adjust rate
take initial WL but look for minimum WL drop as possible via flow rate
flow rate max/min
sample for volume/flow - probably adjust this based on WL responses max 6 volumes or possibly more if stabilizing
measurement, readings and WL, DO sensitive, parameters:
depth to water try to stabilize
pH + 0.1 Temp
Cond: ±3% Turb ±10% or

Cregg County
Groundwater

4/15/14

DO ± 13 * astrix parameter
ORP ± 1
if water level is rising this is good but try and purge lower to begin with, minimize WL drawdown.

1050 Jamie and Logan split off to begin a new well, cell phone(s) # traded for contacts/emergency MW-7

1100 MW7 arrive setup Rich/Wendy oversight, Initiate well purge

1138 collect MW7

1150 collect MW18/MW18 Dup
Jamie and Logan will dump purge water in drums and decon upon finishing, same for Susan and Lauren

1250 Jamie/Logan will go to MW6 while Susan/Lauren will go to MW8

1400 sample MW6 Note change/conflict with QAPP table vs 2008 vs. EPA map on well designations will document the conflict in trip report per

[signature]

Cregg County
Groundwater

4/15/14

EPA Rich/Wendy's request - also via phone with Tara

1419 collect WFB1 at MW8
Field blank prior to GW sampling

1422 MW8 sample collected
teams will move to MW3 and MW12

1520 ERBGW1 collected using disposable tubing and water level interface probe

1620 MW3 collected 1st VOCs, 2nd SVOCs, 3rd 4 metals/HG, EDB (not in that order - corrected PK)

1625 MW12 collected
teams will dump purge water decon and begin QA/QC sample prep and packing

1830 depart for Fed Ex 3 coolers return to site for final inspection and lock gate

[signature]

4/16/14

600 load van get equipment together pickup supplies a power outlet for van. Susan Walden will depart today and will not be onsite for remainder of fieldwork

700 onsite for prep and cooler work, Titanium decon, cal and load equipment, PK will sched 2 teams for the day & do TBs Logan Arthur and James Van Dyke will sample MW2, MW14 and MW13, Lauren Konvalin and Kirian will sample MW17, MW16 and MW-1

730 H/S meeting PK will be SS sampling and will be close but must have cell phone contact in case of emergency

745 depart for sites Rich and Wendy onsite today sometime

810 James and Logan at MW2 Kirian Heffentrager and Lauren at MW17
PK will prep for SS and GW

PKL

4/16/14 Groundwater/Surface Soil

920 MW17 sample collected

930 MW2 was also collected

(920) at 920 arrived at MW2, James and Logan will move to MW14 next following decon

1015 KH and LK will be moving to MW16 PK will collect FB at this location

1058 WFB2 collected at MW16 EDB bottles are shattered no replace available.

1101 MW16 sample collected while I am filling WFB2 samples

1129 SS6 surface soil 0-6 inches 0 ppm breathing zone, located under piping and catwalk area in central refining area, concrete underneath some areas - will notify EPA

1140 collect SS7 approximately 200 feet east of SS6 under refining equipment 0-6

PKL

4/16/14 Surface Soil

inches, 0ppm bz, SE of cylindrical tank

1200 collect SS5, located on the south side of AST tank with staining off to the side 0ppm bz, 0-6inches, sample is very wet, saturated

1250 collect SS10 in open non vegetated area west of AST no staining, dry area with open flat-ground

1314 collect SS9 0-6inches 0ppm bz inside of 90 pipe bend on east side tank by valve

Note: at 1120 MW14 groundwater sample was collected

1330 MW1 sample collected

1335 MW13 sampled, after completion team will move on to sample MW10 if time permits. The other team can also move on to MW4 if possible to complete prior to

4/16

QA sample prep and packaging - computer pattern is dead, no dB teams will decon while I work on sample labels and packaging / COC - no scribe is available to crosscheck COCs

1700 Teams QA/QC

1810 depart for FedEX w/ coolers

Gregg County

Groundwater / Surface Soil

4/17/14 Prep van and load up at hotel

700 Onsite

730 H/S meeting Kieler, Kirian, Logan, James, Lauren, Patrick Rich and Wendy will be onsite today also

Kirian/Lauren will sample MW15 and MW5, James and Logan will sample MW9 and MW11, Crew 1 and Crew 2 respectively

810 collect trip blanks TB24, 25, 26 and 28 prep coolers / ice etc... depart for wells MW9

815 (MSD) location, triple volume collected there

900 collected WFB3 at MW11, gas smell heavy pungent odor from station across fence to south

907 collect SS16/SS16 DUP

4/17/14 Groundwater

940 collect MW15 sample

1020 collect SS4

James & Logan sampled MW9 MS/MSD at 940 PK will work with Patrick for drum sampling

1200 MW5 sampled

1232 MW11 sampled

Drum sampling details contained in Logbook 3 and on Drum Inventory Log, Face surveys onsite

Rich and Wendy are onsite observing gw sampling and drum sampling. For single location drums a grab sample is collected for TCLP. For multi-location drums a shallow and deep auger sample are collected, composited for TCLP sample. Tools include hand auger, trowel and stainless steel bowl - decon between drums.

5 coolers for FedEx

48 Gregg County

4/18/14

500 load pack clean out hole room and supplies, recyz pack and ready ship items and rentals. pack load and ready computer and printer

730 onsite
N/S mtg
Logan / Kibian / Kieler onsite for cleanup
WL measurements
GPS of SS locs
GW MW surveyed yesterday
photos of SS locations as well
Rich and Wendy onsite for GW WL monitoring and site closeout
PKieler transfers extra locks and keys to Rich of EPA after securing site gate and doing final check on site

[signature]

LOGBOOK 2

L. RECTENWALD (PROJECT GEOLOGIST)

APRIL 7, 2014 THROUGH APRIL 16, 2014

CONTENTS

PAGE	REFERENCE	DATE

2

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GREGG COUNTY REFINERY
LONGVIEW, TEXAS

SAMPLING AND ANALYSIS SUPPORT
#6609

REWARD IF FOUND

April 7 2014 10:00 A Gregg Refining Longview TX
50°F overcast. Met with Paul Kieler, Tom Malody, Susan,
Lone Star Landscape Service (Mulcher), Tara and Wendy
with USEPA. Walked to all western boring/locations with
GPRadar representative. Discussed request by LR to be
12' from utilities. Viewed marks & and made
adjusiments to MW17, MW18 and MW11.
Dig Tess locator returned @ 2:40pm, went back to
MW-11 location. He's going to call Atmos and reopen
ticket. At 3:25 temp 60°F, set up on MW-2 to
develop well. Eqt includes Mult, Rae 3000 #3233
calibrated by Susan on April 7 YSI , Hach NTU
purge completed @ 4:34 pm. upon taking
DTW/TD after development, it felt as if
an object might be floating @ 17.7ft below TOC
At close of day at 5:20pm temp 55° mostly
cloudy. All personnel donned Level D ppe
for day: Steel toed boots, safety vest, safety glasses,
nitrile gloves. Attempted to call Delhi
gas @ number 903 753 3358, number not
working LR

April 8 2014 scattered clouds
48°F 7:00 am · Paul Kmet with driller to discuss
security, rinsate samples first, two sets of
labels ready on bottles, others printed
and taped. All boring log forms separately
printed on site in the rain green paper.

8:10 Set up table, alconox wash, rinse at SB15
Multi Rae PID clean plastic sheets for table,
Photo 1 8:10, Photo 2 8:10 view of work table
0.5' interval & from S to N facing ~~MW~~ SB15
Sample SB15A collected 9 encores at 9:00 (grab)
from 2.5-4.0 ft BGS collected 6 9oz soil jars
(composite from 2.0 - 7.0 ft, Placed in bag
and homogenized then distributed among jars
taped & tagged all bottles. Bubble wrap
2 Photos of core and bottles w/ tags See green
~~SB15B 7-12 (VOC 9:05)~~ boring log.
SB 15 B 12 - 17 (VOC 12.0 - 12.5) and photo
~~SB 15 C 14-17 (VOC 14.5 14.7)~~ log for list
SB 15 C 17 - 20 VOC 19-20 of all photos.

Sample list. Times separated due to time required to bag and tag.
SB15A Comp time 9:30 VOC time 9:00
SB15B comp time 1030 VOC time 1005
SB15C comp time 1040 VOC time 1020
provided instructions and well was
Completed, Started SB16 @ 1140 See green boring log.
Note: For PID screen results see log.
Sample list SB16, VOC screening 3 bags per 5' interval
SB16A 4.2-4.5 grab 1220 3-7 comp 1250
SB16B 10 - 12 comp 1325 11-11.3 ~~10.5-10~~ grab 1240
SB16C 14.07 - 20 comp VOC 1335 14-19.5 1335
Set well as shown on log.
Started SB17 at 16:00 WINDY & 40°F See green boring log
SB17A 2 - 4 comp 1759 grab 2.7-3.0 1615
SB17B 10 - 15 1750 comp grab 7.7-8.0 1701
SB17C 17 - 20 comp grab 19-19.5 1721
Set well as shown on log. 805 LR

7:25 am 4/9/14 arrived on site
50° clear conducted safety
meeting and gathered sample bottles,
ice, and PID. Discussed need for
boat for pond and made arrangments
Left site at 8:10 to use facility
and sign/seal other non-project
report at my office. Return to site
at 9:00 am. Driller was set but
had not brought IDW barrel to set
up my table. Directed driller to show
each measurement point. received and labeled barrel
and two cores 0-5, 5-10 at 9:30 am.
Bagged PID & waited 5 min
(9:40 - 9:45) to commence. Tested and labeled
bags for monitoring as for all other VOC screenings.

SB18A grab 2.7-3.0 time 952 comp 2-5 1002
SB18B grab 12.7-130 time 10:31 comp 10-~~20~~ 15 1102
SB18C grab ~~12.7~~ ~~12.9~~ ~~17.0~~ 19-19.5 time 1046 comp 17-20 1115

See green boring log. Directed install of screen, sand, hole plug.
Started SB12 at 11:45 See green boring log.
set up tables and saw first core at 12:00
very clean core, took photo
Note used plastic under tables to
catch any incidental dropped soil
used new plastic on top of table

at each location. Sarler met Paul James
with EPA - probably about 9:45 or 10 ish
met Rich & Tara later. Discussed use of
bags to mix SVOA samples due to small
amt of core volume and large sample
volume. Later spoke w/ Paul Kiefer and
suggested field blank using filter sand mixed
in a plastic bag. Susan Walden assisting
me all day including w/ SB18
samples for SB12. Bagged and labeled VOC samples, screened

SB12A ~~2.5~~ 2.7-3.0 grab 1225 A Comp ~~2-5~~ 2-4 ft 1300
SB12B ~~4~~ 4.2-4.5 1232B Comp ~~4.0~~ 4.0-6.0 ft 1304
SB12C 19-19.5 Grab 1247 Core 17-19 1315

well completed at 13:40. Core described on green boring log.
Started SB14 at 1445. all samples labeled
bagged and ready to screen at 15:10
Took 3 photos of tables and drilling
rig from north facing south. Recorded on
green boring log.
Tara and Rich stopped at location at 1455

SB14A grab 2.7-3 1525 comp ~~2-5~~ 1-3 1624
SB14B grab 4.45 1540 comp 3-6 ~~3-5~~ 1630
SB14C grab 19-19.5 1550 comp 17-19 1629

Bagged composites after collecting grabs
and describing core. Afterwards
cleaned up tables and stowed equipment.
QC coolers and depart site at 1815

Start at 6:30 am 55° clear 4/10/14
Safety meeting Start at SB13
rig up & set up tables, cal. brate PID. Took photo.
Start drilling at 7:07. Described on green boring log.
Screen VOC, added MS MSD + c B sample
Collect all VOC samples. Directed well completion.
describe core & write sample information
SB 13 A grab 4-4.5 7:45 comp 2-5 (910)
SB 13 B grab 7.7-8 9:00 6-12 (906)
SB 13 C grab 19.0-19.5 ~~17-19~~ 15-20 (900)
moved to SB10 at 9:30
Set up tables, plastic, completed green boring log form,
screened for VOCs at 10:15 took photos
collected VOC samples until 11
SB 10A grab 9-9.5 1030 comp 6-10
SB 10B grab 15.7-16 1040 comp 14-16
SB 10C grab 19-19.5 1050 comp 16-20
completed SB10C by 11:15 by directing well completion.
prepared table for SB9 at 1140
sample on table at 11:55 in sleeve
SB9 samples opened at 1230
Screened for VOCs. Completed green boring log form.
SB9A grab 4-4.5 1-5 composite
SB9B grab 7.8-8.0 6-10 composite
SB9C grab 19.5-20 16-20 composite
Tried to reach tara by phone 1300

give inst to set well w/15 ft of screen.
Discuss screen length with Rich and Tara at SB10 because of Road
found similar DTW in SB9 which is not up on the road. Decided to use 15 ft of screen b/c well seemed clean, clearly a zone at 5-7 ft bgs in addition to ~~6-6.5~~ 11-11.5 and 15-16 ft. Supervised well installation and completed core at ~~12~~ 1400 and moved to next location to start at ~~12~~ 1400.
SB11 Started at 14:45. Very wet area. Set up tables, drum and plastic as on each of other locations
Opened cores at 15 20 and bagged samples for VOCs
Marked depth intervals on each bag as for all previous locations. Chose well screen interval of ~~15~~ 5-20 for consistency with other wells on this side of the site. Photographed cores after collection of VOC samples

Sample times and interval as follows

SB11A	5.7-6.0	1550	5-10 comp
SB11B	10.7-11.0	1555	10-15 comp
SB11C	~~15.7-16.0~~ 19.0-19.5	1600	15-20 comp

Directed well installation.
Bagged and blended composites, jarred, tagged
Completed boring at 1610 and filled out green logbook.
Cleaned up tables, put all IDW in labelled drum. Jackie Raines used bobcat skidsteer to pick up drums and haul back to main parking area.
Assisted Paul Kieler and Susan Walden with QC of coolers. Verified all temp blanks and trip blanks, Gathered trash and discussed personnel needs for 4/11/14, weekend and next week.
Spoke w/ TES personnel by phone and found limited availability for Friday. Spoke w Paul and determined no TES personnel needed on Friday 4/11/14.
PK

4 14 14 6:30 A arrival on site. overcast breezy and ~65°F discussed protocol with Paul Kieler. Resample at SB15, SB16, SB17 due to lack of printed COC in cooler with samples collected 4/8/14.

former SB15 = New SB19 offset @ 8ft
former SB16 = New SB20 offset @ 5ft
former SB17 = New SB21 offset @ 5ft
only A interval from SB17 = SB21
A, B, & C interval from SB 20 & SB19
Dup on SB21A
trip blank 4 14 14 7:40
SB21A grab 2.0-2.5 (above PID at 2.5-27 because capped had indicated highest VOC at that location, Completed log.
time 7:45 AM Samp 21 A composite 1.7-5.0. (Note: on previous samples I noted VOC grab time then subsequent SVOC and metals composite times due to duration of time required to jar samples and composite SVOCs and metals COC limits samples to one time per Paul and Susan so same VOC time applied to composites later in project.) For location SB21, only A interval needed.
Completed boring and moved to SB20 at 8:30 am. Set up table with new plastic.
No well constructed.

Bagged samples for PID screening
and took 2 photos from W to E
showing table and 0-5, 5-10
cores as well as rig set up
behind table and 5' off set
from SB16/MW16. Labeled
all bottles for A sample including
duplicate. Temperature dropping now 50°
9:00AM, No well to be completed, just soil samples.
SB20A & SB20A Dup 8:50
Grab 4-4.5 comp 3-7
SB20B MS MSD 10:15
Grab 14.7-14.9
Comp 12.7-17
SB20C 11:00
Grab 19.5-19.7
Comp 17-20. Completed bottles & put in cooler
Cleaned up and took break at 11:15
due to severe thunderstorm
Started SB19 at 12:05
Set up table under shed and
labeled all bottles
SB19A 1250 1.7-2 Grab 1250 1-5 comp ~~grab~~
SB19B 1315 11-11.2 Grab 1315 10-15 comp
SB19C 1345 18-18.2 Grab 1345 15-20 comp

Received and opened 4 cores
starting at 12:30. Bagged
all samples for VOCs. Photos taken.
Very sandy sample and noted
eyes were stinging and sample
had mild odor. PID reading
0.1 ppm in ambient air.
Allowed samples to vent in bags
while bags were sealed then
screened for VOCs. Rich & Wendy
with USEPA and Ken Williams
were present while samples
were collected and placed on
ice. Completed sampling, wrote
down PID reading and transferred
waste materials to drum.
Dated and labeled, closed waste
drum. Decontaminated and
returned tools to Toeroek Van.
Assisted with cooler QC
prior to all departure. Each
day cores were also described
on a soil boring log. The
boring logs contain the screened
intervals for each location as

well as a "▽" mark at the top of each separate wet interval. The screened intervals for the wells were selected with the intent of allowing water from each saturated interval to enter the screen. Although this site is being managed by EPA at this time, TCEQ guidance regarding monitoring well screen placement was considered in well construction. Static water level is anticipated to rise above the saturated intervals in the wells. TCEQ prefers 5' screen above observed water so that screen is above possible location of NAPL. Because Tara and I agree that zones above screen were dry, should this occur, where water level in wells is above screen it is because groundwater is confined by overlying stiff or very dense sa cl or cl si as applicable. JK

4/15/14

Logan Arthur and Jamie Thompson of Titanium Environmental, arrived onsite at 0730. Paul Keeler of Toeroek Associates, Inc. conducted a health and safety meeting at 0800. Necessary equipment was gathered for ground water sampling to be conducted on 4/15/14. Jamie Thompson and Logan Arthur sampled wells MW7, MW6, and MW3. All equipment was decontaminated prior to starting the first sampling event, then again ~~aft~~ at the conclusion of sampling before starting the next well. All sampling was conducted with oversight from the EPA. All purge water was placed in drums after each well was sampled. Sample Coolers were QC inspected after all samples were collected. TES personnel left the site after QC at 1830.

4/16/14

Logan Arthur, James Van Dyke, and Lauren Kowalian of Titanium Environmental Services, LLC arrived onsite at 0700. Paul Keeler of of Toeroek Associates, Inc. conducted a health and safety meeting at 0730. All equipment was decontaminated and loading for sampling to be conducted on 4/16/14. James Van Dyke and Logan Arthur sampled wells MW2, MW14, MW13, and MW10. All equipment was decontaminated after sampling each well before moving to the next well. Purge water was placed in drums onsite. All sampling was conducted with EPA oversite.

LOGBOOK 3

S. WALDEN (FIELD TEAM MEMBER)

APRIL 8, 2014 THROUGH APRIL 15, 2014

AND

L. ARTHUR (FIELD TEAM MEMBER)

APRIL 16, 2014 THROUGH APRIL 18, 2014

CONTENTS

PAGE	REFERENCE	DATE

3

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GREGG COUNTY REFINERY
LONGVIEW, TEXAS

SAMPLING AND ANALYSIS SUPPORT
#6609

4/8/14
5:30 Parking lot Wingate motel
Calibration of 2 miniRae, 2
Hach turbidity - refer to calibration
log. Stopped at 6:20 loaded
van, got ice arrived at site
6:45 Unlocked gate - locked
after everyone arrived.
7:00 Daily brief, health + safety
meeting, Laura, Jackie, Paul, Susan
Scott, James, Jim - last names on
sign in sheet
7:30 set up decon station, decon of
trowels for surface soil samples
8:55 taking ERBSS1 sample
time 9:00 - ERBSB1 sample
10:30 / 10:36 site recon
w/ Tara + Wendy from EPA to
determine locations of SS samples
11:27 started entering info for COCs
12:00 Sample SFB1 location
SS13 - 12:45 photo facing ~~north~~ west
at SS13 #1 general location photo
#3
SFB2 at SB16 location (SB16)

at 1:25. Created COC #2 for
SFB1 and SFB2 at 1:50
TB1 labeled 8:00 AM assigned to
cooler #1 COC #1, TB2 labeled
at 8:00 AM assigned to cooler 2
COC #2 - Moved to SS locations 11,
and 12 3:10 collected SS11 and
SS11-Dup Picture #3 SS11 location
facing east. Field decon for T
handle between sample locations
4:50 Photo #4 SS12 facing west
on north side of tank after sampling
showing hole has been filled.
5:00 QC of coolers / COCs, left
site at 6:40 for FedEx to ship
4 coolers. Returned to site for final
check. Samples completed 4/8/14 =
13 SBs, 5 SS, 3 TB, 2 SFB, and
2 ERB.
7:30 off site for day - gates secured

4/9/14 Gregg County Refinery
7:00 Onsite, calibrated 2 PID to 100 ppm isobutylene
7:30 health & safety meeting, Tim, James, Scott, Laura, Sean, Paul
9:00 Started SS sampling ready SS1, PID reading 0.0 ppm photo #1 facing
9:30 SS1, SFB3 taken at same location at 9:25
8987 3425 2490 Fed Ex #7
8987 3425 2424 Fed Ex #6
8987 3425 2435 Fed Ex #5
10:00 Started assisting Laura R with PID and head space measurement, labeling, and bagging, of soil boring samples at SB18, SB12, and SB14
5:00 Entered all samples into Scribe and assigned samples to COC/cooler numbers 5, 6, and 7. QA/QC of coolers w/ Laura and Paul, iced, and packed to ship
6:30 Off site to Fed Ex.

4/10/14 Gregg County Refinery
6:30 arrived onsite
7:30 calibrated 2 PID mini Rae ~~Collected~~ TB10 logged for cooler at 8:00. Health + Safety meeting
7:45 Left staging area to help Laura R with labeling, tags, bottle prep, logged all samples into scribe. Drillers completed 4 MWs, by 5:00
5:00 Returned to staging area to QA coolers and COCs. Coolers were iced and packed w/ bubble wrap
6:15 Left site for FedEx and to get more ice on the way
6:30 Arrived at FedEx - rechecked coolers, COCs and labels for shipping
7:00 Returned to site to verify locks.
7:30 Off site for day

4/11/14 Gregg County Refinery
7:00 Onsite with drilling crew
Tim, James, Scott, Health & Safety meeting. Reviewed hazards of pads - lifting. stressed safety at all times.
7:28 Began calibrating equipment YSI, turbidity and Mini RAE. Prepared decon water + rinse in buckets
7:30 Arrived at MW 3 to develop
YSI pH 7.31 ppm (1.563)
Conductivity 100.7
DO 102.2
Never accept out of range
Pre rinse w/conductivity
past site port no bubbles
Issues w/conductivity
Calibrate specific conductance
1.413 hold enter + esc
prompt uncal - yes
erase forced calibrations
post circle on side of probe
then recalibrate
9:30 finished MW3 development

10:00 Moved to MW4 began well development. Info on data sheet.
11:16 moved to MW 7 refer to data sheet
12:15 moved to MW 6 refer to data sheet
2:08 moved to MW 5 refer to data sheet
4:30 moved to MW refer to data sheet
5:00 done at location MW8 returned to decon site complete decon of pumps and tape.
5:55 left site for the day

4/12/14 Gregg County Refinery
7:00 65° overcast, onsite, well development planned
7:15 Health & Safety meeting, route to hosp, tripping, traffic, splash and other well hazards, emerg evacuation.
7:30 Calibrated 2 Ysi and 2 PID see calibration log
8:50 left staging area for MW13 developed well and deconed equipment with James and Brian
11:10 left MW13, moved to MW 14 for development & decon w/same team, Refer to groundwater data sheets.
12:50 moved to MW 12 for development and decon w/same team. See well data sheet.
2:20 moved to MW 11 for development and decon w/same team. See well data sheet.
3:35 left MW11 for staging area. Drilling team packing to leave and left site around 4:20
4:20 left staging area w/ Paul to develop remaining GW well MW9. Refer to well data sheet. Finished at well at 6:00 and completed decon. Returned to barrel storage to dispose of purge water and secure decon area. Checked site before leaving
6:50 left site for the day, locked and secured gate

Gregg County Refinery (Paul & Susan only)
4-13-14 1:45 onsite to GPS SS locations and MWs. Walked the site w/ Paul as he took photographs of the SS locations photos, times and directions were logged. Mr Williams showed up at 3:45 when Paul and I were in the vicinity of SS14. I directed him to Paul.
Unable to record GPS locations for SS15 and SS3 due to lack of satellite coverage, proximity to tanks, and overcast skies. Will attempt on another day. Recorded 26 locations. Will download and check if data is valid.
4:30 Stopped GPS & Photos, returned to drum storage area to begin drum inventory. Inventory not completed when we left at 6:11.
6:11 Paul locked and secured gate

AW

04-14-14 Gregg County Refinery
5:30 Calculated 2 PID
5:45 Left for site, 69°, humidity 96%, 6 wind
6:00 Onsite
6:05 Decon sed equipment
6:40 Staging area for H&S
7:30 ~~TB15~~ SED2 TB7
7:57 ~~TB4~~ SED1 TB15
7:58 Moved to SED1 location 8:04
9:27 SED2
10:20 SED3
11:30 SED6 Hail/Pouring Rain
12:32 SED7 TB16 at 12:00
1:17 SED4 north/center pond
SED6 was originally 4 on the map
SED7 was originally 5 on the map
SED4 was originally 6 on the map
SED5 was originally 7 on the map
ERBSED at SED4/SED5 location at 2:00 and SFB6 at 2:20
3:00 QA of Laura's SB samples and labeling for SED5, SFB6 and ERBSED2
4:30 Left site for ice to QA and package coolers. Still Raining/cold.

AW

4-15-14 GREGG COUNTY REFINERY
6:30 Onsite bagg ice and prepare for 2nd team groundwater Samplers
7:00 Health + Safety mtg with team
Calibrated PIDs, Turbidity, and YSIs
10:00 TB8
1118 TB17
1150 MW18 + MW18-Dup
1147 ~~MW17~~
Completed sampling

4-16-14 Gregg County Refinery

7:00 Onsite / Prep Coolers etc.

7:30 Health + Safety
- Decon + Load Equip.

810 Arrive at well 2 (JV & LA of TES)
0815 0 ppm VOC @ breathing level
18.6 ppm VOC @ ~~riser~~ riser
0.2 ppm VOC @ ground level
slight odor present

0831 Start Purge
~~1030~~ 0930 stop purge

0920 Sampled

1000 ~~[illegible]~~ loaded equip for decon

1025 Arrived @ Well 14 (JV & LA of TES)
0 ppm VOC @ breath level
0.1 ppm VOC @ Top of riser
0 ppm VOC @ GL
No odor detected
DTW 8.45'

1040 Start Purge

1041 Slow Rate After Purge
- DTW 8.59

sampled @ 1120 to 1142

1143 stop purge

1235 Arrived at Well 13 (JV & LA of TES)
0 ppm VOC @ breathing level
0 ppm VOC @ ground level
0.2 ppm VOC @ top of riser (humidity)

1500 Arrived at Well 10 (JV & LA of TES)

4.17.14 Arrived at Safety meeting 0730
Drove to Well No. 9
JV & LA Used car battery to power pump

0 ppm VOC @ breathing level
0 ppm VOC @ ground level
2 ppm VOC @ top of riser (no odor)

Start purge @ 0835
increased purge rate @ 0840
decreased rate @ 0850
begin sampling @ 0940
stop sampling/purge @ 1025

Risk of EPA monitored from 0900 - 0920

Collected 3X sample volumes
(matrix spike/dup/sample)
Blind collection
sample order: 1. volatiles
2. SVOCs
3. metals
Left site @ 1055

Arrived @ Well No. 11 @ 1115
Noticable gas(vapor) smell from gas processing facility due S (S Wind)
Left ~~facility~~ site @ 1315
(Clarification: "Comments" on Groundwater Sampling Data Sheet - 'No odor' refers to water produced from the well.
Consistent odor from gas facility due ~~at~~ S.

Single Contents
DRUM Sampling 4/17/2014

Drum #	Sample #	Sample time	misc/contents
SB15 (SO) 4-8-14	IDW1	1230	soil-full
SB15 (SO) 4-8-14	IDW2	1238	soil-full
SB16 (SO) 4-8-14	IDW3	1332	soil-full
SB-17 (SO) 4-8-14	IDW4	1340	soil-full
SB-18 4-9-14	IDW6 *	1148	identical to first 2 jars, not full (soil-full)
SB14 4-9-14	IDW9	1412	soil full
SB9 4-10-14	IDW10	1424	soil full
SB10 (soil) 4-10-14	IDW12	1444	soil full
SB13 4-10-14	IDW13	1502	soil full
SB9 + Decon soil 4/10-4/11/14	IDW15	1550	→ filled w/ plastic → ~~added letters "PPE"~~ → moved to another drum labeled "IDW15 - PPE"
~~IDW~~	~~IDW soil~~		

~~* IDW6 in jars that said IDW1 - name changed to IDW6~~

multi-contents DRUMS - 4/17/14

SIDE LABEL	Sample name	time	contents	
Plastic cover/PPE SB13, SB11	IDW-16	—	plastic trash/no soil	
	IDW-14	1545	soil	2/3 full
SB14 + SB11	IDW-11	1600	soil	full
plastic/ppe	IDW-5	—	plastic trash drum	full
SB16 SB18 SB12	IDW 7	1615	soil	full
SB17 (SO) SB12	IDW 8	1620	soil	1/2 full

surface soil samples (earlier in day 4/17/2014)

SS16 (flag has SS11)
- 6 en-cores, 4 soil jars (need duplicate)

SS4 - Environmental Norm 10:20 AM
3 en-core, 2 soil jars

4/18/14

7:30 Arrived onsite
7:40 HSE Meeting
7:45 Prepared Decon Equipment

	Time	DTW	DTB	
MW1	0820	5.61	17.80	* No Cap
MW2	1059	4.28	17.97	
MW3	1005	5.43	15.78	
MW4	1015	5.31	15.20	
MW5	1118	2.76	14.49	
MW6	0958	5.90	15.40	
MW7	0938	7.69	23.14	
MW8	0918	8.47	19.10	
MW9	1107	3.83	23.35	
MW10	1023	4.49	20.51	
MW11	0928	8.80	23.57	
MW12	0908	5.41	23.43	
MW13	0836	4.45	24.60	
MW14	0828	8.57	24.50	
MW15	1048	2.87	18.19	

4/18/14

	Time	DTW	DTB.
MW16	0810	7.50	23.43
MW17	0848	7.81	23.55
MW18	0858	6.44	23.50

Time.	Location
~~1146~~	~~SS6~~
1150	SS7
1155	SS5
1158	SS10
1201	SS13
1202	SS4
1204	SS3
1206	SS15
1216	SS9 * Unable To Obtain GPS Coordinates
1222	SS16
1223	SS12
1226	SS6
1233	SS1
1240	SS2
	SS14

Time: 1340 Date: 4/18/14

Drum #	Contents	Date
IDW1-SO	SB15	4-8-14
IDW2-SO	SB15	
IDW3-SO	SB16	4-8-14
IDW4-SO	SB17	
IDW5-SO	SB 12 and 14-18	4-8-14
IDW6-SO	SB18	4-9-14
IDW7-SO	SB16	4-8-14 SB18 + 12
IDW8-SO	SB12 + 17	4-8-14
IDW9-SO	SB14	4-9-14
IDW10-SO	SB9	4-10-14
IDW11-SO	SB14 + 11	4-9-14
IDW12-SO	SB10	4-10-14
IDW13-SO	SB13	4-10-14
IDW14-SO	SB11 + 13	4-10-14
IDW15-SO	PPE, CORE PLASTIC	4-14-14
IDW16-SO	PPE, CORE PLASTIC	4-14-14
IDW17-SO	SB9, 10, 13	4-10-14

Date: 4/18/14
Time: 1445

Drum #	Contents	Date
IDW1-WA	DECON WA	4-8-14
IDW2-WA	DECON WA	4-8-14
IDW3-WA	DECON WA	4-9-14
IDW4-WA	DECON WA	4-9-14
IDW5-WA	DECON WA	4-10-14
IDW6-WA	PURGE WA / MW2	4-17-14
IDW7-WA	DECON WA	4-10-14
IDW8-WA	PURGE WA	4-10-14
IDW9-WA	DECON WA	4-10-14
IDW10-WA	MW2	4-11-14
IDW11-WA	MW3, 4, 5, 6	4-11-14
IDW12-WA	MW 10	4-11-14
IDW13-WA	DECON WA	4-11-14
IDW14-WA	PURGE WA / MW1, 18	4-11-14
IDW15-WA	PURGE WA / MW 18, 17, 16, 5, 11	4-12-14
IDW16-WA	DECON WA / MW9	4-12-14
IDW17-WA	DECON WA / MW10, 11, 12	4-10-14