

RECR - 17

FIELD NOTES

YEAR(S):

2007

Purpose: Dig + Haul remediation

Dig and Haul remediation of former work over production pit. Kleinfelder will perform a Naturally Occurring Radioactive Materials Survey (NORM) survey at the Site to determine if NORM is present in scale near former production equipment locations and crude oil contaminated soils at the Sites. The presence of NORM above NMOCD or NMED standards may require revisions to the project HASP and scope of services. Given that NORM is below standard, ~800 yd³ of petroleum impacted soil will be excavated and taken to Gandy Corp. Landfarm. Clean topsoil will be brought in by Gandy Corp. to be used as backfill material for the excavation.

06/22/07

34034

Black Oil
N.O.R.M. Clean-up

Buf

- 1034 B. Luera on site from ABO. Larry Gandy (Gandy Corp) and Noel Savignac (Radiation Protection consultant on-site).
1045 Gandy has constructed bermed containment pad to west of pit. Per conversation w/ Gandy, was only suitable location to build containment area due to location of buried gas lines, wind direction etc. N. Savignac + B. Luera preparing to conduct N.O.R.M. survey of pit. Per N. Savignac: will take two background surveys, then survey inside pit.
1058 Background at ground level on north side of pit, ~15 ft out of pit = 8 pCi/hr. Soil sample background #1 taken.
1105 Background at ground level on north side of pit, ~75 ft from edge of pit = 10 pCi/hr. Soil sample background #2 taken.

06/27/07

84084

Black Oil

N.O.P.M. Clean-up

Blf. 06/27/07

1112 Preparing to conduct contamination survey of backhoe using Ludlum Model 17 survey meter, SN 232131 using model #44-9 pancake probe, SN PA 248260. Calibrated 6/20/07 by ORCA. Background in truck = 60 cpm. Sandy backhoe is unit #727, John Deere 50K # truckhoe. Bucket survey registers between 40 & 60 cpm. Truck survey registers ~20 cpm. Undercarriage survey: 40-45 cpm. Cab interior survey: 55-60 cpm. Levels indicate no contamination based on background, per N. Savigne.

1179 Preparing to survey pit.
1210 Have conducted informal (non-measured) survey of interior of pit. Readings were between 15 and 65 $\mu\text{P/hr}$, but averaged between 30 & 40 $\mu\text{P/hr}$ over the majority of the pit. The areas with the highest readings are

84084

Black Oil

N.O.P.M. Clean-up

Blf 5

cont a ~1 ft x 1 ft area in the northeast corner that read 65 $\mu\text{P/hr}$, and a ~2 ft x 2 ft area near the southwest corner that read ~55-60 $\mu\text{P/hr}$. Because the requirements for N.O.P.M. removal are levels below 50 $\mu\text{P/hr}$, the majority of the pit already meets those requirements. Called Justin Ball (Kleinfielder) w/ results, per J. Ball, will excavate material in northeast corner w/ backhoe bucket, clearing material in bucket, and re-survey. There may not be a need to remove entire surface of ~~pit~~ ^{and} of pit as levels are not high enough. Per N. Savigne, levels are not high enough to require use of Tyvek & respirators.
1243 have scraped the northeast corner of the pit in a triangular pattern roughly 12 ft on a side,

06/22/67

84084
Black oil

N.D.P.M. Clean-up

cont screening levels are still in the 50-70 $\mu\text{P/hr}$ range. Scraped a small area in the middle of the pit where surface readings were $\sim 44 \mu\text{P/hr}$, and the levels $\sim 8-10$ in. below the surface were $32-34 \mu\text{P/hr}$. Per discussion w/ J. Ball, will continue removing material from northeast corner w/ periodic surveying. Material will be thin-spread on bermed plastic that has been set-up by Bandy. Goal is to excavate minimal material in order to reach acceptable screening levels.

1332 Continue to excavate northwest corner - levels along east edge of excavation have been as high as $100 \mu\text{P/hr}$ $\sim 1\text{ ft}$ below the surface. Material in bermed containment area registered 25-35 $\mu\text{P/hr}$.

1400 Per survey excavation - east edge of

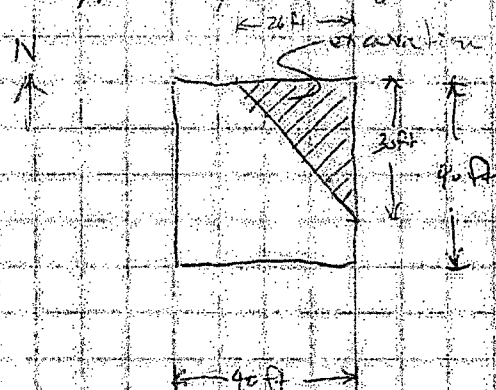
B.P.G. 06/22/67

84084
Black oil

N.D.P.M. Clean-up

B.P.G.

cont excavation has levels $\sim 80-85 \mu\text{P/hr}$, rest of excavation ranges between 40-60 $\mu\text{P/hr}$. 1536 Have excavated as follows:



Screening levels are $\sim 45-60 \mu\text{P/hr}$ in bottom of excavation, 55-70 $\mu\text{P/hr}$ along east end of north wall. Excavation is $\sim 9\text{ ft}$ deep along pit edges, $\sim 5\text{ ft}$ deep towards middle of pit. Readings $\sim 2\text{ ft}$ below surface towards middle of pit are $\sim 50-60 \mu\text{P/hr}$. Bandy is moving excavated material to bermed containment pad, but pad is almost full.

04/22/07

84089

Black Oil

BRJ

04/22/07

84089

Black Oil

BRJ

N.O.R.M. Clean-Up

cont

per Justin Ball (KA), will suspend excavation pending discussion w/ OCD. Actual excavation was stopped ~1500 hrs. Subsequent time has been spent moving excavated material into bermed containment. Note: screening levels have been recorded by N. Savigne, who will provide copies to Kleinfelder.

1546 per L. Bondy, quoted price for today of \$4,000⁰⁰ was lump sum, not to exceed. Given the time and uncertainty of future plans, will prepare to decon bucket of backhoe.

1601 Bermed containment pad is nearly full. L. Bondy estimates 60-70 yd³ in containment, 30-40 yd³ of material still in pit. Have screened backhoe at same points as earlier - levels are the same, does not require

west decon.

T638 All personnel off-site. Per conversation w/ J. Ball, will continue to excavate N.O.R.M. contaminated material in A.M. on 06/23/07 and will stage on additional plastic-lined bermed pads. Note: B. Lewis performed HASP briefing after arrival on-site @ 1035. Pit and pad have been secured and fencing has been reattached.

Summary

Began excavation of N.O.R.M. material from pit. Have set-up bermed containment pad 25ft x 50ft x 2ft (deep). By end of day, had excavated ~100 yd³ of material from northeast portion of pit.

BRJ

06/27/07

8/23/07

84684
Black Oil

N.O.B.M. Clean-Up

Bof

8/23/07

84684
Black Oil

N.O.B.M. Clean-Up

Bof

0730 B. L. on-site from Russell

0735 W. Savighan on-site

0740 L. bands on-site. Performed HAZOP briefing & tailgate HFS briefing.

0820 Have surveyed excavation - hot spots remain on east wall, along NE corner, and along trench along north side. Hot spots registered from 50-80 $\mu\text{ft/hr}$. Hot spots have been worked & preparing to continue excavation.

0831 Have excavated 40-50 yd^3 so far - majority of excavation is clean except for two spots ~ 2 ft in diameter on east wall towards corner. Values were 45-60 $\mu\text{ft/hr}$. Will continue to excavate that area, then clean the bottom of the excavation.

1027 Excavation of northwest corner is complete. Excavation is roughly 30 ft x 32 ft on square sides, estimate of total of ~160 yd^3 .

cont has been removed. Screening levels were under 46 $\mu\text{ft/hr}$ at all locations. L. bands is moving excavated dirt out of pit onto bench containment.

1122 All excavated material has been removed from pit. Re-surveyed southwest wall of excavation, as well as bottom of excavation - screening values are typically below 38 $\mu\text{ft/hr}$. Hot spot reading in very bottom was 45 $\mu\text{ft/hr}$. L. bands is preparing to excavate southwest corner (2nd of 2 original hot spots).

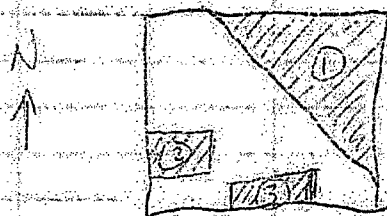
1142 Have excavated second hotspot near SW corner - screening levels are typically below 40 $\mu\text{ft/hr}$, will consider clean. During surface survey along south end of pit, readings were between 55-70 $\mu\text{ft/hr}$. After excavation, values are down 55-110 $\mu\text{ft/hr}$, will continue to excavate.

8/23/07

84084
Black Oil

N.O.D.M. Clean-up

cont this area:



Area 1-2

char @ 1192

Area 3

but @ 1172

1236 Have excavated ~16 yd³ from area #3 and re-surveyed. Readings are similar to before, but are relegated to north and east walls (levels btwn 55 + 100 μ R/hr). South wall surveyed clear ($\approx$ 45 μ R/hr).

1254 Collected one 4-oz jar of soil from bottom of first excavation for potential chlorides analysis. Collected one quart-sized ziplock baggie of material for possible rad analysis.

1334 Excavation has grown to include southeast corner - is ~20 x 30 ft on sides at a right angle. Majority of pit screens as clear, but there is a patch of blue-grey-stained

8/23/07

84084
Black Oil

N.O.D.M. Clean-up

Bkg

cont (HC stained) soil in the very bottom that reads btwn 55 - 80 μ R/hr. Stained soil has a strong HC odor.

1427 Per discussion btwn L. Bandy, N. Swignac, and J. Ball, will continue excavating until ~1700 hrs today, then stop work until Monday. Due to extent of excavation, there is concern about 1) backhoe's reach into the pit and access to the pit, and 2) staging of excavated material. L. Bandy has moved excavated material back into west end of pit to create access for backhoe per direction from J. Ball, will continue excavating HC stained material until end of shift. Visibly stained material appears to have followed some sort of flow path, causing concern that it could extend to great depths.

1350 Excavation has continued only

6/23/07 14

84064
Black Oil

Bluf

NORM. Clean Up

1230 went on the area of visible contamination. L. Hardy has measured total depth at 13 ft. Hys. Have collected samples from bottom of area #3 (12 1/4 oz jar and 10 quart baggie for possible analysis. All samples screened w/ simulation, less than 50 within Rev. consultation w/ T. Ball, will suspend work until Monday.
1628 All personnel off-site. B. Lewis to HBD.

1754 HBD B. Lewis @ KA office.
~~Continued~~

Continued excavation of pit. discovered deep plane of hydrocarbon stained soil. Suspend excavation here for stress and

1834 Soil Staging concerns.

John
6/23/07

6/25/07

15

NORM Clean Up

0645: met B. Lewis @ ABC office to pick up truck.

0655: Leave KA office for site.

1120: on-site.

↳ met w/ Rick Donlap. Rick & his crew have been on-site since just after 7am building a liner pad w/ berm.

↳ review HASP.

1146: Leave a message w/ Justin Ball.

1153: Speak w/ Larry Gandy to find out that we are waiting on OGD to make a decision about what will be done w/ the stock piled soil from the production pit.

1244: Speak w/ Justin Ball.

Justin is waiting to hear from OGD. He will call later w/ guidance.

1251: Fence crew off-site.

1350: per Justin Ball / conversation w/ ED Vigil () collect one composite sample from

6/25/07

16

LWB

Norm cleanup

cont both stockpiles (3 samples/stockpile)
 Collect Scintillator readings from
 all 6 sample locations. Also
 will take a background reading
 + check Scintillator battery
 prior to sampling.

1354: Ludlum Model 19 Scintillator
 battery check = OK
 background @ 8-10 μ R/hr
 @ 100' west of stockpile.

Sample location #

 μ R/hr

1

16

2

28

3

26

4

24

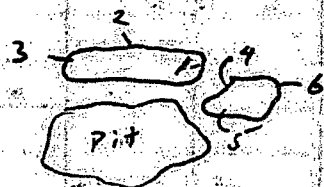
5

22

6

26

Stockpile Location Map (not to scale)



6/25/07

LWB

17

Norm cleanup

1429: Completed composite sample
 collection. Sample collected

@ 1411.

1510: off-site to OPS - store
 Roswell, NM w/ composite
 sample

1625: @ OPS store.

↳ Will spend the night in Roswell.

6/25/07
 LWB

6/26/07

18

Norm cleanup

0630: leave Roswell for ABQ

1030: arrive @ ABQ. office.

6/26/07
LWS

LWS

6/27/07

LWS

19

Norm cleanup

0315: Leave ABQ for site

0731: L. Dutton on-site

0800: Gandy Loading crew on-site
(Spartky + Clyde)

↳ Review HNSP

0840: backhoe is moving to the new
limb stockpile area for
Rad swipe out / Decon.↳ Obtain background readings
on the Front End Loader
w/ the Ludlum Model 14
 pancake GM meter.

Serial # PR 248560

Battery Test = OK. Background 20-40
cpmLoader LocationReading (cpm)

bucket

30-50

LWS
6/27/07 Truck Tires

30-50

Undercarriage

30-40

Cab

40-60

0857: Phone call from Justin Ball:

The Tractor has already been
screened + cleared for decon.

0900: Begin loading Haul trucks.

LWS

6/27/07

20

LWD

Norm. Cleanup

0902: Phone conversation w/ Justin Ball
Our Target haul load is 440 yd?

0940: Clyde is off-site w/ the backhoe.

1049: Haul trucks returning w/ clean topsoil.

LHT

1238: Haul trucks returning w/ clean topsoil.

LHT

1427: Haul trucks returning w/ clean topsoil.

LHT

1530: L. Dalton off-site to Hutcherson job site (photos)

1745: L. Dalton on-site.

Summary of events while absent

- Two loads of contaminated soil hauled off.

(7) seven!
LWD 6/27/07
Five loads of clean top soil brought in.

- Fence put up around pit + stockpile area.

1750: Prepare to take readings w/ the Model 19 Scintillator

6/27/07

LWD

21

Norm. Cleanup

Serial # 144790. LWD 6/27/07

↳ Background @ 7.5 μ R/hr

↳ battery test OK.

1755: Readings from original stockpile

North end @ 10 μ R/hr

Middle @ 19 μ R/hr

South end @ 7 μ R/hr

LWD
6/27/07

↳ Readings from 2nd stockpile on western edge.

North end @ 13 μ R/hr

Middle @ 17 μ R/hr

South end @ 17 μ R/hr

1810: Will now swipe out Loader w/ the Model 12 pancake meter. Serial # PR298560

Background @ 20-40 cpm

Battery test OK

Loader Location	Reading (cpm)
bucket	20-40
Tines	40-50
Undercarriage	50-40
Cab	20-40

6/27/07

22

Pom Cleanup

Total hauled of contaminated soil = 22 loads = 440 yd³.

Total clean top soil hauled in = 22 loads = 440 yd³.

There is approximately 3-5 yd³ of contaminated soil remaining on the 2nd liner (western liner) that will need to be over-excavated or wrapped up in the liner & disposed of.

No attempt was made to remove this material because I didn't want to damage the liner that can be used for future work @ this site.

1827: Per Justin Ball, post Rad signs around fence that is surrounding the pit & liner.

1900: L. Dalton off-site

2015: arrive @ hotel in Roswell.

LWD
6/27/07

6/28/07

LWD

23

Pom Cleanup

0800: L. Dalton leaves Roswell

1230: L. Dalton arrives @ ABCQ office.

6/28/07
LWD