Location NFSS Date 11-26-13

Project / Client NFSS - BOP Field Investigation 2013

cold, rain, 31°

0715 arrive on [redacted]

0800 [redacted] perform rad equipment source checks

0815 [redacted] onsite, [redacted] arrived

safety meeting

0830 [redacted] survey frac tank

0930 finished frac tank survey, survey outgoing coolers.

0945 mobilize to location 4A014-1, EU2

0950 ~~[illegible]~~ JTK 11-26-13 poor recovery, ~5%, move 5, poor recovery. Consult with [redacted], we will sample recovery we have and not make additional attempts to relocate point

~~0950~~ sample 0.0-0.5 4A014-1SS00-0.5-0606

~~0955~~ 0.5-1.5 4A014-1SB05-1.0'-0607

Hit hard slag, causing poor recovery.

1100 move to location 4A003-1

1105 sample 0.0-0.5 (1 rad, 1 chem)

4A003-1SS00-0.5-0608

1110 sample 0.5-2.0 (1 rad, 1 chem)

4A003-1SB05-2.0-0609

1115 sample 2.0-3.0 (1 rad, 1 chem)

4A003-1SB2.0-3.0-0610

Location NFSS Date 11-26-13

Project / Client NFSS - BOP Field Investigation 2013

1120 move to location 4A003-2

1125 Sample 0.0-0.5 (1 rad, 1 chem)

4A003-2SS00-0.5-0611

1130 0.5-2.0 (1 chem, 1 rad)

4A003-2SB05-2.0-0612

1135 Sample 2.0-3.0 (1 chem, 1 rad)

4A003-2SB2.0-3.0-0613

1300 consult with [redacted] locations in area EU3, some flags missing from locations JTK 11-26-13

1310 set up at location 4B014-~~4~~3 4

1315 sample 0.0-0.5 (1 chem, 1 rad)

4B014-~~4~~3SS00-0.5-0614

1320 0.5-2.0 (1 chem, 1 rad)

4B014-~~4~~3SB05-2.0-0615

1325 2.0-3.0 (1 chem, 1 rad)

4B014-~~4~~3SB2.0-3.0-0616

1330 move to location SP14 (bias point)

1335 sample 0.0-0.5 SP14SS00-0.5-0617

1340 0.5-2.0 SP14SB05-2.0-0618

1340 dup 0.5-2.0 SP14SB05-2.0D-0617

1345 2.0-3.0 SP14SB2.0-3.0-0619

~~M. Legza at location, eliminated one point~~ JTK 11-26-13

M. Legza at location to verify boring locations

Location NFSJ Date 11-26-13

Project / Client NFSJ - BOP Field Investigation 2013

11-26-13

1350 move to location 4B014-1

1355 sample 0.0-0.5 4B014-1SS0.0-0.5-0620

1400 0.5-2.0 4B014-1SB0.5-2.0-0621

1400 [redacted] 0.5-2.0 4B014-1SB0.5-2.0MS-9118

1400 [redacted] 0.5-2.0 4B014-1SB0.5-2.0MSD-9119

1405 2.0-3.0 4B014-1SB2.0-3.0-0622

1410 move to 4B017-1

1415 sample 0.0-0.5 4B017-1SS0.0-0.5-0623

1420 0.5-2.0 4B017-1SB0.5-2.0-0624

1422 2.0-3.0 4B017-1SB2.0-3.0-0625

1425 move to 4B017-2

1430 sample 0.0-0.5 4B017-2SS0.0-0.5-0626

1435 0.5-2.0 4B017-2SB0.5-2.0-0627

1440 2.0-3.0 4B017-2SB2.0-3.0-0628

1445 move to location 4B017-3

1450 Sample 0.0-0.5 4B017-3SS0.0-0.5-0629

1452 0.5-2.0 4B017-3SB0.5-2.0-0630

1455 2.0-3.0 4B017-3SB2.0-3.0-0631

1500 move to location GWS-8

1505 sample 0.0-0.5 GWS-8SS0.0-0.5-0632

1510 0.5-2.0 GWS-8SB0.5-2.0-0633

1515 2.0-3.0 GWS-8SB2.0-3.0-0634

1520 move to location 4B001-1 (chem only)

1530 sample 0.0-0.5 4B001-1SS0.0-0.5-0635

Location NFSJ Date 11-26-13

Project / Client NFSJ - BOP Field Investigation 2013

4B001-1

1535 Sample 0.5-2.0 4B001-1SB0.5-2.0-0636

1535 dup 0.5-2.0 4B001-1SB0.5-2.0D-9120

1540 2.0-3.0 4B001-1SB2.0-3.0-0637

1545 move to location 4B014-2

1550 sample 0.0-0.5 4B014-2SS0.0-0.5-0638

1555 0.5-2.0 4B014-2SB0.5-2.0-0639

1600 2.0-3.0 4B014-2SB2.0-3.0-0640

1630 collect rinsate EB1-112613

1700 Clean area, complete C-O-C, perform rad equipment source checks

1730 depart site

[redacted]

Location NFSS Date 11-27-13

Project / Client NFSS BOP Field Investigation 2013

Snow, 32°

0715 onsite P[redacted], [redacted] J [redacted]

[redacted]

0730 M[redacted] calibrate rad meters

0800 [redacted] arrive, safety meeting

0830 mobilize to EU3, stake location.

0845 set up at location 4B014-3

0850 sample 0.0-0.5 4B014-3SS0.0-0.5-0641

0855 0.5-2.0 4B014-3SB0.5-2.0-0642

0855 dup 0.5-2.0 4B014-3SB0.5-2.0D-9121

0900 2.0-3.0 4B014-3SB2.0-3.0-0643

0915 move to location 4B010-1

0920 sample 0.0-0.5 4B010-1SS0.0-0.5-0644

0925 0.5-2.0 4B010-1SB0.5-2.0-0645

0925 MS 0.5-2.0 4B010-1SB0.5-2.0MS-9122

0925 MSD 0.5-2.0 4B010-1SB0.5-2.0MSD-9123

0930 2.0-3.0 4B010-1SB2.0-3.0-0646

0940 move to location 4B010-2

0945 sample 0.0-0.5 4B010-2SS0.0-0.5-0647

0950 0.5-2.0 4B010-2SB0.5-2.0-0648

0955 2.0-3.0 4B010-2SB2.0-3.0-0649

1000 move to location 4B010-3

1005 sample 0.0-0.5 4B010-3SS0.0-0.5-0650

1010 0.5-2.0 4B010-3SB0.5-2.0-0651

1015 2.0-3.0 4B010-3SB2.0-3.0-0652

Location NFSS Date 11-27-13

Project / Client NFSS BOP Field Investigation 2013

1030 move to location GWS-9

1035 sample 0.0-0.5 GWS-9SS0.0-0.5-0653

1040 0.5-2.0 GWS-9SB0.5-2.0-0654

(+ split sample to USACE)

1045 2.0-3.0 GWS-9SB2.0-3.0-0655

1050 move to bias point SP15

1100 sample 0.0-0.5 ~~SP15SS0.0-0.5~~ SP15SS0.0-0.5-0656 JTK 11-27-13

1105 0.5-2.0 SP15SB0.5-2.0-0657

(+ split sample to USACE)

1110 2.0-3.0 SP15SB2.0-3.0-0658

1110 dup 2.0-3.0 SP15SB2.0-3.0D-9124

1300 mobilize to location 4B021-1

1305 sample 0.0-0.5 4B021-1SS0.0-0.5-0659

1310 0.5-2.0 4B021-1SB0.5-2.0-0660

1315 2.0-3.0 4B021-1SB2.0-3.0-0661

1320 move to location 4B021-2

1325 sample 0.0-0.5 4B021-2SS0.0-0.5-0662

1330 0.5-2.0 4B021-2SB0.5-2.0-0663

1335 2.0-3.0 4B021-2SB2.0-3.0-0664

1340 move to location 4B021-3

1345 sample 0.0-0.5 4B021-3SS0.0-0.5-0665

1350 0.5-2.0 4B021-3SB0.5-2.0-0666

1355 2.0-3.0 4B021-3SB2.0-3.0-0667

Location NFSS Date 11-27-13

Project / Client NFSS BOP Field Investigation 2013

1405 4B021-4 location

1405 sample 0.0-0.5 4B021-4SS00-0.5-0668

1410 0.5-2.0 4B021-4SB0.5-2.0-0669

1410 dup 0.5-2.0 4B021-4SB0.5-2.0D-9125

1415 2.0-3.0 4B021-4SB2.0-3.0-0670

1420 move to location 4B009-1

1425 sample 0.0-0.5 4B009-1SS0.0-0.5-0671

1430 0.5-2.0 4B009-1SB0.5-2.0-0672

1435 2.0-3.0 4B009-1SB2.0-3.0-0673

1440 move to location 4B009-2

1442 sample 0.0-0.5 4B009-2SS0.0-0.5-0674

1445 0.5-2.0 4B009-2SB0.5-2.0-0675

1445 MS 0.5-2.0 4B009-2SB0.5-2.0MS-9126

1445 MSD 0.5-2.0 4B009-2SB0.5-2.0MSD-9127

1450 2.0-3.0 4B009-2SB2.0-3.0-0676

1455 move to location 4B009-3

1500 sample 0.0-0.5 4B009-3SS00-0.5-0677

1505 0.5-2.0 4B009-3SB0.5-2.0-0678

1510 2.0-3.0 4B009-3SB2.0-3.0-0679

1530 collect rinsate blank with tooling

EB1-112713

1600 clean up, complete C-O-C

[redacted] perform end of day

rad equipment source checks [redacted]

Location NFSS Date 12-2-13

Project / Client NFSS - BOP Field Investigation 2013

overcast, 34°

0710 arrive onsite [redacted] perform

rad equipment source checks

0800 [redacted] onsite, safety meeting

0830 mobilize at EU3, location 4B009-4

0840 sample 0.0-0.5 4B009-4SS00-0.5-0680

0845 0.5-2.0 4B009-4SB0.5-2.0-0681

0845 dup 0.5-2.0 4B009-4SB0.5-2.0D-9128

0850 2.0-3.0 4B009-4SB2.0-3.0-0682

0855 move to location TB411_03-1

0900 sample 0.0-0.5 TB411-03-1SS00-0.5-0683

0905 0.5-2.0 TB411-03-1SB0.5-2.0-0684

0905 MS 0.5-2.0 TB411-03-1SB0.5-2.0MS-9129

0905 MSD 0.5-2.0 TB411-03-1SB0.5-2.0MSD-9130

0910 2.0-3.0 TB411-03-1SB2.0-3.0-0685

0920 move to location TB411-03-2

0925 sample 0.0-0.5 TB411-03-2SS00-0.5-0686

0930 0.5-2.0 TB411-03-2SB0.5-2.0-0687

0935 2.0-3.0 TB411-03-2SB2.0-3.0-0688

0945 move to location TB411-03-3

0950 sample 0.0-0.5 TB411-03-3SS00-0.5-0689

0955 0.5-2.0 TB411-03-3SB0.5-2.0-0690

1000 2.0-3.0 TB411-03-3SB2.0-3.0-0691

Location NFSS Date 12-2-13

Project / Client NFSS BOP Field Investigation 2013

1010 move to location TB411-03-4
1020 sample 0.0-0.5 TB411-03-4SS0.0-0.5-0692
1025 0.5-2.0 TB411-03-4SB0.5-2.0-0693
1025 dup 0.5-2.0 TB411-03-4SB0.5-2.0D-9131
1030 2.0-3.0 TB411-03-4SB2.0-3.0-0694
1045 move to location 4A013-1
sample all slag took picture of sample
1100 sample 0.0-0.5 4A013-1SS0.0-0.5-0695
1105 0.5-2.0 4A013-1SB0.5-2.0-0696
1110 2.0-3.0 4A013-1SB2.0-3.0-0697
Took split sample of slag 0.5-2.0 for USACE due to slightly elevated readings
1130 move to location 4A013-2
1135 sample 0.0-0.5 4A013-2SS0.0-0.5-0698
1140 0.5-2.0 4A013-2SB0.5-2.0-0699
1145 2.0-3.0 4A013-2SB2.0-3.0-0700
1300 mobilize to location 4A013-3
1305 sample 0.0-0.5 4A013-3SS0.0-0.5-0701
1310 0.5-2.0 4A013-3SB0.5-2.0-0702
1315 2.0-3.0 4A013-3SB2.0-3.0-0703
1320 move to location 4A013-4
1325 sample 0.0-0.5 4A013-4SS0.0-0.5-0704
1330 0.5-2.0 4A013-4SB0.5-2.0-0705
1335 2.0-3.0 4A013-4SB2.0-3.0-0706

Location NFSS Date 12-2-13

Project / Client NFSS - BOP Field Investigation 2013

1345 mobilize to EU 8, location 312-1
1310 sample 0.0-0.5 312-1SS0.0-0.5-0707
1355 0.5-2.0 312-1SB0.5-2.0-0708
1355 dup 0.5-2.0 312-1SB0.5-2.0D-9132
1400 2.0-3.0 312-1SB2.0-3.0-0709
1410 move to location 312-2
1415 sample 0.0-0.5 312-2SS0.0-0.5-0710
1420 0.5-2.0 312-2SB0.5-2.0-0711
1425 2.0-3.0 312-2SB2.0-3.0-0712
1430 move to location 312-3
1435 sample 0.0-0.5 312-3SS0.0-0.5-0713
1440 0.5-2.0 312-3SB0.5-2.0-0714
1445 2.0-3.0 312-3SB2.0-3.0-0715
1500 move to location 3A013-1
1505 sample 0.0-0.5 3A013-1SS0.0-0.5-0716
1510 0.5-2.0 3A013-1SB0.5-2.0-0717
1510 MS 0.5-2.0 3A013-1SB0.5-2.0MS-9133
1510 MSD 0.5-2.0 3A013-1SB0.5-2.0MSD-9134
1515 2.0-3.0 3A013-1SB2.0-3.0-0718
1520 move to location 3A013-2
1525 sample 0.0-0.5 3A013-2SS0.0-0.5-0719
1530 0.5-2.0 3A013-2SB0.5-2.0-0720
1530 dup 0.5-2.0 3A013-2SB0.5-2.0D-9135
1535 2.0-3.0 3A013-2SB2.0-3.0-0721

Location NFSS Date 12-2-13

Project / Client NFSJ- BOP Field Investigation 2013

1535 received call for [redacted] to assist with excavation rad survey

1545 collect rinsate blank EBI-120213

Clean up area, head to excavation

1600 [redacted] performs rad equipment source checks

[redacted]

Location NFSJ Date 12-3-13

Project / Client NFSJ- BOP Field Investigation 2013

sunny, 25°

0715 arrive onsite [redacted]

0800 [redacted] arrive onsite, safety meeting [redacted] perform rad equipment source checks

0830 mobilize to EU12, contact [redacted] to mark locations, flags missing

0845 [redacted] marks locations, set-up at location 2A008-2

0855 sample 00-0.5 2A008-2SS00-0.5-0722

0900 0.5-2.0 2A008-2SB0.5-2.0-0723

0900 dup 0.5-2.0 2A008-2SB0.5-2.0D-0136

0905 2.0-3.0 2A008-2SB2.0-3.0-0724

0910 move to location 2A008-1, refusal at 1.5'

move location 13' east, full recovery

0920 sample 00-0.5 2A008-1SS00-0.5-0725

0930 0.5-2.0 2A008-1SB0.5-2.0-0726

0930 ms 0.5-2.0 2A008-1SB0.5-2.0ms-0137

0930 msD 0.5-2.0 2A008-1SB0.5-2.0msD-0138

0935 2.0-3.0 2A008-1SB2.0-3.0-0727

0940 move to location 2A008-4

0945 sample 00-0.5 2A008-4SS00-0.5-0728

0948 0.5-2.0 2A008-4SB0.5-2.0-0729

0950 2.0-3.0 2A008-4SB2.0-3.0-0730

Location NFSS Date 12-3-13

Project / Client NFSS-BOP Field Investigation 2013

2A008-4

location was moved 2' west of original point due to ditch

1000 move to location 2A008-3

1005 sample 0.0-0.5 2A008-3SS00-05-0731

1010 0.5-2.0 2A008-3SB0.5-2.0-0732

1015 2.0-3.0 2A008-3SB2.0-3.0-0733

sample 3-4' due to slightly elevated readings at the 0.5-2' interval, dropped down 3-4'

1020 3-4' 2A008-3SB3.0-4.0-0734

1030 mobilize to EU12, 218-1

1040 sample 0.0-0.5 218-1SS0.0-0.5-0735

1042 0.5-2.0 218-1SB0.5-2.0-0736

1042 dup 0.5-2.0 218-1SB0.5-2.0D-9139

1045 2.0-3.0 218-1SB2.0-3.0-0737

1050 move to location 220-1

1055 sample 0.0-0.5 220-1SS0.0-0.5-0738

1100 0.5-2.0 220-1SB0.5-2.0-0739

1105 2.0-3.0 220-1SB2.0-3.0-0740

1110 move to location 218-2

1115 Sample 0.0-0.5 218-2SS00-0.5-0741

1120 0.5-2.0 218-2SB0.5-2.0-0742

1125 2.0-3.0 218-2SB2.0-3.0-0743

1130 move to location 218-3

1135 sample 0.0-0.5 218-3SS0.0-0.5-0744

Location NFSS Date 12-3-13

Project / Client NFSS-BOP Field Investigation 2013

218-3

1140 Sample 0.5-2.0 218-3SB0.5-2.0-0745

1145 2.0-3.0 218-3SB2.0-3.0-0746

1300 move to location 218-4

1305 Sample 0.0-0.5 218-4SS00-0.5-0747

1310 0.5-2.0 218-4SB0.5-2.0-0748

1310 dup 0.5-2.0 218-4SB0.5-2.0D-9140

1315 2.0-3.0 218-4SB2.0-3.0-0749

1320 move to location 220-2

1325 sample 0.0-0.5 220-2SS0.0-0.5-0750

1330 0.5-2.0 220-2SB0.5-2.0-0751

1335 2.0-3.0 220-2SB2.0-3.0-0752

1340 move to location 220-3

1345 Sample 0.0-0.5 220-3SS0.0-0.5-0753

1350 0.5-2.0 220-3SB0.5-2.0-0754

1355 2.0-3.0 220-3SB2.0-3.0-0755

1400 move to location 220-4

1405 sample 0.0-0.5 220-4SS0.0-0.5-0756

1410 0.5-2.0 220-4SB0.5-2.0-0757

1410 MS 0.5-2.0 220-4SB0.5-2.0MS-9141

1410 MSD 0.5-2.0 220-4SB0.5-2.0MSD-9142

1415 2.0-3.0 220-4SB2.0-3.0-0758

1420 mobilize to location GWS-14, EU13

[redacted] at location, verifying the correct location of the points in the 221 grid.

Location NFSS Date 12-3-13

Project / Client NFSS-BOP Field Investigation 2013

GWS-14

1425 sample 0.0-0.5 GWS-14SS0.0-0.5-0759
1430 0.5-2.0 GWS-14SB0.5-2.0-0760
1435 2.0-3.0 GWS-14SB2.0-3.0-0761
1440 move to location 221-1
1445 sample 0.0-0.5 221-1SS0.0-0.5-0762
1450 0.5-2.0 221-1SB0.5-2.0-0763
1450 dup 0.5-2.0 221-1SB0.5-2.0D-9143
1455 2.0-3.0 221-1SB2.0-3.0-0764
1450 location 221-2 located in concrete, consult with [redacted] move point 3.5' east of original point
1455 sample 0.0-0.5 221-2SS0.0-0.5-0765
1500 0.5-2.0 221-2SB0.5-2.0-0766
1505 2.0-3.0 221-2SB2.0-3.0-0767
1510 move to location 221-3
1515 sample 0.0-0.5 221-3SS0.0-0.5-0768
1520 0.5-2.0 221-3SB0.5-2.0-0769
1525 2.0-3.0 221-3SB2.0-3.0-0770
1530 move to location 221-4
1535 sample 0.0-0.5 221-4SS0.0-0.5-0771
1540 0.5-2.0 221-4SB0.5-2.0-0772
1545 2.0-3.0 221-4SB2.0-3.0-0773
1600 collect rinsate sample from sampling tools
EB1-120313 [redacted]

Location NFSS Date 12-4-13

Project / Client NFSS BOP Field Investigation 2013

overcast. 45°

0710 arrive onsite; [redacted]
0800 [redacted] arrive onsite, safety meeting [redacted] perform rad equipment source checks
0845 mobilize to EU3, location 203-1
0850 sample 0.0-0.5 203-1SS0.0-0.5-0774
0855 0.5-2.0 203-1SB0.5-2.0-0775
0855 dup 0.5-2.0 203-1SB0.5-2.0D-9144
0900 2.0-3.0 203-1SB2.0-3.0-0776
0905 move to location 203-2
0910 sample 0.0-0.5 203-2SS0.0-0.5-0777
0915 0.5-2.0 203-2SB0.5-2.0-0778
0915 MS 0.5-2.0 203-2SB0.5-2.0MS-9145
0915 MSD 0.5-2.0 203-2SB0.5-2.0MSD-9146
0920 2.0-3.0 203-2SB2.0-3.0-0779
0930 move to location 203-3
0935 sample 0.0-0.5 203-3SS0.0-0.5-0780
0938 0.5-2.0 203-3SB0.5-2.0-0781
0940 2.0-3.0 203-3SB2.0-3.0-0782
0945 move to location 203-4
0950 sample 0.0-0.5 203-4SS0.0-0.5-0783
0955 0.5-2.0 203-4SB0.5-2.0-0784

Location MFSJ Date 12-4-13

Project / Client MFSJ-BOP Field Investigation 2013

203-4

1000 sample 2.0-3.0 203-45B2.0-3.0-0785

1015 mobilize to EU11, location 2A003-2 (chem only)

verify location with [redacted] due to numbering not consistent with other points

1020 sample 0.0-0.5 2A003-25S0.0-0.5-0786

1025 0.5-2.0 2A003-25B0.5-2.0-0787

1030 2.0-3.0 2A003-25B2.0-3.0-0788

1035 move to location 2A003-3 (chem only)

1040 sample 0.0-0.5 2A003-35S0.0-0.5-0789

1042 0.5-2.0 2A003-35B0.5-2.0-0790

1045 2.0-3.0 2A003-35B2.0-3.0-0791

1050 move to location 2A003-1 (chem only)

1055 sample 0.0-0.5 2A003-15S0.0-0.5-0792

1100 0.5-2.0 2A003-15B0.5-2.0-0793

1105 2.0-3.0 2A003-15B2.0-3.0-0794

1115 mobilize to location 8H002-2

consult with [redacted] regarding 8H002-1 location to ensure no utility line exists in area

Refusal at 1', slag material, move 8' east

1300 sample 0.0-0.5 8H002-25S0.0-0.5-0795

1305 0.5-2.0 8H002-25B0.5-2.0-0796

1305 dup 0.5-2.0 8H002-25B0.5-2.0D-9147

1310 2.0-3.0 8H002-25B2.0-3.0-0797

1315 [redacted] (URS) onsite

Location MFSJ Date 12-4-13

Project / Client MFO-BOP Field Investigation 2013

1320 move to location 8H002-1, no utility lines in location per USACE

1325 sample 0.0-0.5 8H002-15S0.0-0.5-0798

1328 0.5-2.0 8H002-15B0.5-2.0-0799

1330 2.0-3.0 8H002-15B2.0-3.0-0800

1335 move to location 8H002-3

1340 sample 0.0-0.5 8H002-35S0.0-0.5-0801

1342 0.5-2.0 8H002-35B0.5-2.0-0802

1345 2.0-3.0 8H002-35B2.0-3.0-0803

1350 move to location 8H002-4

1355 sample 0.0-0.5 8H002-45S0.0-0.5-0804

1400 0.5-2.0 8H002-45B0.5-2.0-0805

1405 2.0-3.0 8H002-45B2.0-3.0-0806

1415 move to location 8H001-1, consult with [redacted] regarding location due to original point in middle of road, moved point off road to west

1425 sample 0.0-0.5 8H001-1S0.0-0.5-0807

1430 0.5-2.0 8H001-1SB0.5-2.0-0808

1430 dup 0.5-2.0 8H001-1SB0.5-2.0D-9148

1435 2.0-3.0 8H001-1SB2.0-3.0-0809

1440 move to location 8H001-2, refusal at 1.5' due to asphalt, move location 8' east, refusal at 1.5', [redacted]

Location NFSS Date 12-4-13

Project / Client NFSS - BOP Field Investigation

1450
8H001-2, waiting on direction for relocation, advance to location 8H001-3

1455 sample 0.0-0.5 8H001-3SS0.0-0.5-0810
1500 0.5-2.0 8H001-3SB0.5-2.0-0811
1505 2.0-3.0 8H001-3SB2.0-3.0-0812

Need to relocate 8H001-4 due to proximity to road, waiting on USACE direction, advance to location 827-2

1530 sample 0.0-0.5 827-2SS0.0-0.5-0813
1535 0.5-2.0 827-2SB0.5-2.0-0814
1535 MS 0.5-2.0 827-2SB0.5-2.0MS-9149
1535 MSD 0.5-2.0 827-2SB0.5-2.0MSD-9150
1540 2.0-3.0 827-2SB2.0-3.0-0815

1600 collect rinse blank off sampling tools EBI-120413
1630 clean-up area, complete C-OCs [redacted] perform end of day rad equipment checks

[redacted]

Location NFSS Date 12-5-13

Project / Client NFSS - BOP Field Investigation

Overcast, light wind, 55°
0715 arrive onsite: [redacted]
0800 [redacted] arrive onsite [redacted], [redacted] perform rad equip. source check
0830 speak with [redacted] refusals at yesterday's 8H001 location. Per [redacted], we will sample any recovery at original points 8H001-2 and 8H001-4. We will add two points east of 8H001-2 and -4, labeled 8H001-5 and 8H001-6 to obtain full recovery.
[redacted] at location to verify EU II points.
0900 move to location 8H001-4
Obtained ~8" recovery
0905 sample 0.0-0.5 8H001-4SS0.0-0.5-0816
0915 move to location 8H001-6, 13' east, full recovery
0920 sample 0.0-0.5 8H001-6SS0.0-0.5-0817
0925 0.5-2.0 8H001-6SB0.5-2.0-0818
0925 dup 0.5-2.0 8H001-6SB0.5-2.0-9151
0930 2.0-3.0 8H001-6SB2.0-3.0-0819
0935 move to location 8H001-2
approximately 6" recovery

Location NFSJ Date 12-5-13

Project / Client NFSJ - BOP Field Investigation 2013

SH001-2

0940 sample 0.0-0.5 SH001-2SS0.0-0.5-0820
0947 move to location SH001-5, 15' east SH001-2
0950 sample 0.0-0.5 SH001-5SS0.0-0.5-0821
0955 0.5-2.0 SH001-5SB0.5-2.0-0822
0955 MS 0.5-2.0 SH001-5SB0.5-2.0MS-9152
0955 MSD 0.5-2.0 SH001-5SB0.5-2.0MSD-9153
1000 2.0-3.0 SH001-5SB2.0-3.0-0823
1010 move to location S27-3
1015 sample 0.0-0.5 S27-3SS0.0-0.5-0824
1020 0.5-2.0 S27-3SB0.5-2.0-0825
1020 dup 0.5-2.0 S27-3SB0.5-2.0D 9154
1025 2.0-3.0 S27-3SB2.0-3.0-0826
1030 move to location S27-4
1035 sample 0.0-0.5 S27-4SS0.0-0.5-0827
1040 0.5-2.0 S27-4SB0.5-2.0-0828
1040 dup 0.5-2.0 S27-4SB0.5-2.0D-9155
1045 2.0-3.0 S27-4SB2.0-3.0-0829
1050 move to location S27-1
refusal at 1.5', sample 0.0-1.5'
1055 sample 0.0-0.5 S27-1SS0.0-0.5-0830
1100 0.5-1.5 S27-1SB0.5-2.0-0831
consult D. Miller regarding refusal, waiting for further direction
1105 move to location SP17 (bias point)

Location NFSJ Date 12-5-13

Project / Client NFSJ - BOP Field Investigation 2013

SP17

1110 sample 0.0-0.5 SP17SS0.0-0.5-0832
1115 0.5-2.0 SP17SB0.5-2.0-0833
1115 dup 0.5-2.0 SP17SB0.5-2.0D-9156
1120 2.0-3.0 SP17SB2.0-3.0-0834
1125 move to location GWS-11
1130 sample 0.0-0.5 GWS-11SS0.0-0.5-0835
1135 0.5-2.0 GWS-11SB0.5-2.0-0836
1135 MS 0.5-2.0 GWS-11SB0.5-2.0MS-9157
1135 MSD 0.5-2.0 GWS-11SB0.5-2.0MSD-9158
1140 2.0-3.0 GWS-11SB2.0-3.0-0837
1145 move to location S30-1
1150 sample 0.0-0.5 S30-1SS0.0-0.5-0838
1152 0.5-2.0 S30-1SB0.5-2.0-0839
1155 2.0-3.0 S30-1SB2.0-3.0-0840
1200 move to location S30-2
1202 sample 0.0-0.5 S30-2SS0.0-0.5-0841
1205 0.5-2.0 S30-2SB0.5-2.0-0842
1205 dup 0.5-2.0 S30-2SB0.5-2.0D-9159
1208 2.0-3.0 S30-2SB2.0-3.0-0843
1330 move to location TS812_04-1
1340 sample 0.0-0.5 TS812-04-1SS0.0-0.5-0844
1345 0.5-2.0 TS812_04-1SB0.5-2.0-0845
1350 2.0-3.0 TS812_04-1SB2.0-3.0-0846
1400 move to location TS812_04-2

Location NFSS Date 12-5-13

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TS812-04-2

1405 sample 0.0-0.5 TS812-04-2SS0.0-0.5-0847

1410 0.5-2.0 TS812-04-2SB0.5-2.0-0848

1410 dup 0.5-2.0 TS812-04-2SB0.5-2.0D-9160

1415 2.0-3.0 TS812-04-2SB2.0-3.0-0849

1420 move to location TS812-04-3

1425 sample 0.0-0.5 TS812-04-3SS0.0-0.5-0850

1430 0.5-2.0 TS812-04-3SB0.5-2.0-0851

1430 ms 0.5-2.0 TS812-04-3SB0.5-2.0MS-9161

1430 ms 0.5-2.0 TS812-04-3SB0.5-2.0MSD-9162

1435 2.0-3.0 TS812-04-3SB2.0-3.0-0852

1440 move to location TS812-04-4

1445 sample 0.0-0.5 TS812-04-4SS0.0-0.5-0853

1450 0.5-2.0 TS812-04-4SB0.5-2.0-0854

1450 dup 0.5-2.0 TS812-04-4SB0.5-2.0D-9163

1455 2.0-3.0 TS812-04-4SB2.0-3.0-0855

1500 move to location 827-5, per consult with N. Miller, adding this location due to refusal at 827-1

1505 sample 0.0-0.5 827-5SS0.0-0.5-0856

1510 0.5-2.0 827-5SB0.5-2.0-0857

1515 2.0-3.0 827-5SB2.0-3.0-0858

~~1530~~ 1530 mob. 12c to EU11, GWS-13

1535 sample 0.0-0.5 GWS-13SS0.0-0.5-0859

1540 0.5-2.0 GWS-13SB0.5-2.0-0860

Location NFSS Date 12-5-13

Project / Client NFSS-BOP Field Investigation 2013

GWS-13

1545 sample 2.0-3.0 GWS-13SB2.0-3.0-0861

1550 move to location GWS-12

1555 sample 0.0-0.5 GWS-12SS0.0-0.5-0862

1600 0.5-2.0 GWS-12SB0.5-2.0-0863

1600 dup 0.5-2.0 GWS-12SB0.5-2.0D-9164

1605 2.0-3.0 GWS-12SB2.0-3.0-0864

1630 collect rinsate blank with sampling tools EBI-120513

clean-up, fill out C-O-C.

[redacted], [redacted] perform rad equipment source checks.

[redacted]

Location NFSS Date 12-6-13

Project / Client NFSS BOP Field Investigation 2013

overcast, 38°

[redacted]

0800 Russo onsite, safety meeting

[redacted] perform rad equipment source checks.

0830 N. Connare onsite

0845 mobilize to EU11, 826-1

0905 sample 0.0-0.5 826-1SS0.0-0.5-0865

0908 0.5-2.0 826-1SB0.5-2.0-0866

0908 dup 0.5-2.0 826-1SB0.5-2.0D-9165

0910 2.0-3.0 826-1SB2.0-3.0-0867

0915 move to location 826-3

0920 sample 0.0-0.5 826-3SS0.0-0.5-0868

0925 0.5-2.0 826-3SB0.5-2.0-0869

0925 MS 0.5-2.0 826-3SB0.5-2.0MS-9166

0925 MSD 0.5-2.0 826-3SB0.5-2.0MSD-9167

0930 2.0-3.0 826-3SB2.0-3.0-0870

0935 move to location 826-4

0940 sample 0.0-0.5 826-4SS0.0-0.5-0871

0945 0.5-2.0 826-4SB0.5-2.0-0872

0950 2.0-3.0 826-4SB2.0-3.0-0873

1000 move to location 826-2

1005 sample 0.0-0.5 826-2SS0.0-0.5-0874

1010 0.5-2.0 826-2SB0.5-2.0-0875

Location NFSS Date 12-6-13

Project / Client NFSS BOP Field Investigation 2013

826-2

1015 sample 2.0-3.0 826-2SB2.0-3.0-0876

1020 move to location 8A009-1

1025 sample 0.0-0.5 8A009-1SS0.0-0.5-0877

1030 0.5-2.0 8A009-1SB0.5-2.0-0878

1030 dup 0.5-2.0 8A009-1SB0.5-2.0D-9168

1035 2.0-3.0 8A009-1SB2.0-3.0-0879

1040 move to location 8A009-2

1045 sample 0.0-0.5 8A009-2SS0.0-0.5-0880

1050 0.5-2.0 8A009-2SB0.5-2.0-0881

1055 2.0-3.0 8A009-2SB2.0-3.0-0882

1100 move to location 8A009-3

1105 sample 0.0-0.5 8A009-3SS0.0-0.5-0883

1110 0.5-2.0 8A009-3SB0.5-2.0-0884

1115 2.0-3.0 8A009-3SB2.0-3.0-0885

1120 move to location 8A009-4

1125 sample 0.0-0.5 8A009-4SS0.0-0.5-0886

1130 0.5-2.0 8A009-4SB0.5-2.0-0887

1135 2.0-3.0 8A009-4SB2.0-3.0-0888

1300 performed recon of remaining locations to check access and survey points were marked. [redacted] of unmarked points.

1500 obtain rinsate blank from sampling travel EB1-120613

CONTENTS

PAGE	REFERENCE	DATE

Location NFSS Date 12-9-13

Project / Client NFSS - BOP Field Investigation 2013

Overcast, windy, 32°

0715 onsite [redacted]

0800 Russo onsite

0845 Jkly onsite

[redacted] performed rad equipment source checks

0900 A. [redacted] begin gamma walkover

0915 head to EU4, location 4C002-1

0935 sample 00-0.5 4C002-1SS00-0.5-0889

0940 0.5-2.0 4C002-1SB0.5-2.0-0890

0940 dup 0.5-2.0 4C002-1SB0.5-2.0D-9169

0945 2.0-3.0 4C002-1SB2.0-3.0-0891

0950 move to location 4C002-2

0955 sample 00-0.5 4C002-2SS00-0.5-0892

1000 0.5-2.0 4C002-2SB0.5-2.0-0893

1005 2.0-3.0 4C002-2SB2.0-3.0-0894

1010 move to location 4C002-3

1015 sample 00-0.5 4C002-3SS00-0.5-0895

1020 0.5-2.0 4C002-3SB0.5-2.0-0896

1025 2.0-3.0 4C002-3SB2.0-3.0-0897

1030 move to location 4C002-4

1035 sample 00-0.5 4C002-4SS00-0.5-0898

1040 0.5-2.0 4C002-4SB0.5-2.0-0899

1040 MS 0.5-2.0 4C002-4SB0.5-2.0MS-9170

Location NFSJ Date 12-9-13

Project / Client NFSJ BOP Field Investigation 2013

4C002-4

1040 sample mD 0-2.0 4C002-4SB0.5-2.0mSD - 9171

1045 2.0-3.0 4C002-4SB2.0-3.0 - 0900

1100 mobilize to EU4, location TB408-02-1 (chem only)

1120 sample 0.0-0.5 TB408-02-1SS0.0-0.5-0901

1125 0.5-2.0 TB408-02-1SB0.5-2.0-0902

1130 2.0-3.0 TB408-02-1SB2.0-3.0-0903

1145 mobilize to EU2, location 8F006

[redacted] consulted with [redacted] regarding elevated surface readings at location 8F006, USACE added two(2) additional points 8F006-5 and 8F006-6

1300 mobilize to location 8F006-5

1310 Sample 0.0-0.5 8F006-5SS0.0-0.5-0904

1315 0.5-2.0 8F006-5SB0.5-2.0-0905

1320 2.0-3.0 8F006-5SB2.0-3.0-0906

1325 move to location 8F006-6

1330 Sample 0.0-0.5 8F006-6SS0.0-0.5-0907

1335 0.5-2.0 8F006-6SB0.5-2.0-0908

1335 dup 0.5-2.0 8F006-6SB0.5-2.0D-9172

1340 2.0-3.0 8F006-6SB2.0-3.0-0909

1400 mobilize to EU8, location 314-1

1500 Collect frac tank sample.

1505 Sample 314-1 0.0-0.5 314-1SS0.0-0.5-0910

Location NFSJ Date 12-9-13

Project / Client NFSJ BOP Field Investigation 2013

314-1

1510 sample 0.5-2.0 314-1SB0.5-2.0-0911

1515 2.0-3.0 314-1SB2.0-3.0-0912

1520 move to location 314-2

1525 sample 0.0-0.5 314-2SS0.0-0.5-0913

1530 0.5-2.0 314-2SB0.5-2.0-0914

1535 2.0-3.0 314-2SB2.0-3.0-0915

1540 move to location 314-3

1545 sample 0.0-0.5 314-3SS0.0-0.5-0916

1550 0.5-2.0 314-3SB0.5-2.0-0917

1555 2.0-3.0 314-3SB2.0-3.0-0918

1600 move to location 314-4

1605 sample 0.0-0.5 314-4SS0.0-0.5-0919

1610 0.5-2.0 314-4SB0.5-2.0-0920

1615 2.0-3.0 314-4SB2.0-3.0-0921

1615 dup 2.0-3.0 314-4SB2.0-3.0D-9173

1630 collect rinse blank off of sampling trowel EBI-120913

1700 [redacted] perform rad equipment source checks

[redacted]

Location NFSS Date 12-10-13

Project / Client NFSS-BOP Field Investigation 2013

Clear. light snow, 21°

[redacted]

0800 RWSO onsite, safety meeting

[redacted] perform rad equipment source checks

0830 mobilize to location 3D007-1

poor recovery ~1.0', move 1' north, fill recovery

0840 sample 0.0-0.5 3D007-1SS00-0.5-0922

0845 0.5-2.0 3D007-1SB0.5-2.0-0923

0845 dup 0.5-2.0 3D007-1SB0.5-2.0D-9174

0850 2.0-3.0 3D007-1SB2.0-3.0-0924

Equipment freezing due to low temp

0900 move to location 3D007-2

0905 sample 0.0-0.5 3D007-2SS00-0.5-0925

0910 0.5-2.0 3D007-2SB0.5-2.0-0926

0915 2.0-3.0 3D007-2SB2.0-3.0-0927

0930 move to location 3D007-3 (chem + rad)

0935 sample 0.0-0.5 3D007-3SS00-0.5-0928

0940 0.5-2.0 3D007-3SB0.5-2.0-0929

0945 2.0-3.0 3D007-3SB2.0-3.0-0930

1000 move to location ~~3D007~~ 3C008-1 (chem and rad)

1005 sample 0.0-0.5 3C008-1SS00-0.5-0931

1010 0.5-2.0 3C008-1SB0.5-2.0-0932

Location NFSS Date 12-10-13

Project / Client NFSS - BOP Field Investigation 2013

3C008-1

1015 sample 2.0-3.0 3C008-1SB2.0-3.0-0933

1020 move to location 3C008-2

1020 sample 0.0-0.5 3C008-2SS00-0.5-0934

1025 0.5-2.0 3C008-2SB0.5-2.0-0935

1025 dup 0.5-2.0 3C008-2SB0.5-2.0D-9175

1030 2.0-3.0 3C008-2SB2.0-3.0-0936

1035 move to location 3C008-3

1045 sample 0.0-0.5 3C008-3SS00-0.5-0937

1050 0.5-2.0 3C008-3SB0.5-2.0-0938

1055 ~~dup~~ STR 12-10-13 2.0-3.0 3C008-3SB2.0-3.0-0939

1055 dup 2.0-3.0 3C008-3SB2.0-3.0D-9176

1115 move to location 308-2 (chem + rad)

1120 sample 0.0-0.5 308-2SS00-0.5-0940

1125 0.5-2.0 308-2SB0.5-2.0-0941

1125 MS 0.5-2.0 308-2SB0.5-2.0MS-9177

1125 MSD 0.5-2.0 308-2SB0.5-2.0MSD-9178

1130 2.0-3.0 308-2SB2.0-3.0-0942

1300 move to location 308-1 (chem + rad)

1310 sample 0.0-0.5 308-1SS00-0.5-0943

1315 0.5-2.0 308-1SB0.5-2.0-0944

1320 2.0-3.0 308-1SB2.0-3.0-0945

1330 move to location 3C007-2 (chem + rad)

1335 sample 0.0-0.5 3C007-2SS00-0.5-0946

1340 0.5-2.0 3C007-2SB0.5-2.0-0947

Location NFSJ Date 12-10-13

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3C007-2

1340 dup 0.5-2.0 3C007-25B0.5-2.0D-9179

1345 2.0-3.0 3C007-25B2.0-3.0-0948

3C007-1 mobilize at location (chem + rad)

1350 sample 0.0-0.5 3C007-15S0.0-0.5-0949

1355 0.5-2.0 3C007-15B0.5-2.0-0950

1400 2.0-3.0 3C007-15B2.0-3.0-0951

1405 move to location 3C006-2 (chem + rad)

1405 sample 0.0-0.5 3C006-25S0.0-0.5-0952

1410 0.5-2.0 3C006-25B0.5-2.0-0953

1415 2.0-3.0 3C006-25B2.0-3.0-0954

1430 move to location 3C006-1 (chem + rad)

1435 sample 0.0-0.5 3C006-15S0.0-0.5-0955

1440 0.5-2.0 3C006-15B0.5-2.0-0956

1440 dup 0.5-2.0 3C006-15B0.5-2.0D-9180

1445 2.0-3.0 3C006-15B2.0-3.0-0957

1450 move to location 3C006-3 (chem + rad)

1455 sample 0.0-0.5 3C006-3S0.0-0.5-0958

1500 0.5-2.0 3C006-3SB0.5-2.0-0959

1505 2.0-3.0 3C006-3SB2.0-3.0-0960

1515 move to location 309-1 (chem only)

1520 sample 0.0-0.5 309-1S0.0-0.5-0961

1525 0.5-2.0 309-1SB0.5-2.0-0962

1530 2.0-3.0 309-1SB2.0-3.0-0963

1630 collect rinse blank EB1-121113 [redacted]

Location NFSJ Date 12-11-13

Project / Client NFSJ - BOP Field Investigation 2013

overcast, windy, 25°

0715 onsite [redacted]

0730 [redacted] onsite - [redacted]

safety meeting [redacted]

perform rad equipment source checks.

0845 mobilize to location 3D006-1 (chem + rad)

0930 sample 0.0-0.5 3D006-1S0.0-0.5-0964

0935 0.5-2.0 3D006-1SB0.5-2.0-0965

0940 2.0-3.0 3D006-1SB2.0-3.0-0966

1000 move to location 3D006-2 (chem + rad)

1005 sample 0.0-0.5 3D006-2S0.0-0.5-0967

1010 0.5-2.0 3D006-2SB0.5-2.0-0968

1015 2.0-3.0 3D006-2SB2.0-3.0-0969

1015 dup 2.0-3.0 3D006-2SB2.0-3.0D-9181

1020 move to location 3D006-3

1025 sample 0.0-0.5 3D006-3S0.0-0.5-0970

1030 0.5-2.0 3D006-3SB0.5-2.0-0971

1030 MS 0.5-2.0 3D006-3SB0.5-2.0MS-9182

1030 MSD 0.5-2.0 3D006-3SB0.5-2.0MSD-9183

1035 2.0-3.0 3D006-3SB2.0-3.0-0972

1045 move to location 3D006-4

1050 sample 0.0-0.5 3D006-4S0.0-0.5-0973

1055 0.5-2.0 3D006-4SB0.5-2.0-0974

Location NFSS Date 12-11-13

Project / Client NFSS - BOY Field Investigation

3D006-4

1100 sample 2.0-3.0 3D006-4SB2.0-3.0-0975

1110 move to location 3C014-1

1115 Sample 0.0-0.5 3C014-1SS00-0.5-0976

1118 0.5-2.0 3C014-1SB0.5-2.0-0977

1120 2.0-3.0 3C014-1SB2.0-3.0-0978

1130 move to location 3C014-2

1135 Sample 0.0-0.5 3C014-2SS0.0-0.5-0979

1140 0.5-2.0 3C014-2SB0.5-2.0-0980

1140 dup 0.5-2.0 3C014-2SB0.5-2.0D-9184

1145 2.0-3.0 3C014-2SB2.0-3.0-0981

1315 move to location 3C014-3

1325 sample 0.0-0.5 3C014-3SS0.0-0.5-0982

1330 0.5-2.0 3C014-3SB0.5-2.0-0983

1335 2.0-3.0 3C014-3SB2.0-3.0-0984

1345 move to location 3C014-4

1350 sample 0.0-0.5 3C014-4SS0.0-0.5-0985

1355 0.5-2.0 3C014-4SB0.5-2.0-0986

1400 2.0-3.0 3C014-4SB2.0-3.0-0987

1405 move to location 3C011-1 (chem only)

1410 Sample 0.0-0.5 3C011-1SS0.0-0.5-0988

1412 0.5-2.0 3C011-1SB0.5-2.0-0989

1415 2.0-3.0 3C011-1SB2.0-3.0-0990

1445 move to EU8 location 3B004-1

1450 sample 0.0-0.5 3B004-1SS0.0-0.5-0991

Location NFSS Date 12-11-13

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3B004-1

1455 sample 0.5-2.0 3B004-1SB0.5-2.0-0992

1455 MS 0.5-2.0 3B004-1SB0.5-2.0MS-9185

1455 MSD 0.5-2.0 3B004-1SB0.5-2.0MSD-9186

1500 2.0-3.0 3B004-1SB2.0-3.0-0993

1510 move to location 3B004-2

1515 sample 0.0-0.5 3B004-2SS0.0-0.5-0994

1520 0.5-2.0 3B004-2SB0.5-2.0-0995

1525 2.0-3.0 3B004-2SB2.0-3.0-0996

1530 move to location 3B004-3

1535 sample 0.0-0.5 3B004-3SS0.0-0.5-0997

1540 0.5-2.0 3B004-3SB0.5-2.0-0998

1545 2.0-3.0 3B004-3SB2.0-3.0-0999

1600 collect rinse blank with towel

EB1-121113

1630 clean area, complete C-O-C's

[redacted] to perform rad equipment source check

[redacted]