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NSA MID SOUTH
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LETTER DISCUSSING PROPOSED PATH FORWARD FOR REMEDIAL ACTIVITIES AT
UNEXPLODED ORDNANCE SITE UXO 3 MILLINGTON SUPPACT TN

9/2/2011

TETRA TECH



DATE: September 2, 2011

TO: Roger Donovan, TDEC; Nashville, TN
Charles Burroughs, TDEC; Nashville, TN

FROM: Lawson Anderson, Tetra Tech; Little Rock, AR
Geoff Pope, Tetra Tech; Memphis, TN

COPIES: Mr. Benjamin Simes, NAVFAC Midwest
Mr. Howard Hickey, NAVFAC Midwest
Mr. Rob Williamson, NSA Mid-South
Mr. Jim Heide, NSA Mid-South
Mr. Ralph Basinski, Tetra Tech
Project File – CTO F275

SUBJECT: Naval Support Activity (NSA) Mid-South
Proposed Path Forward for Remedial Activities at Horse Stables Skeet Range #1 (HSSR#1)

This letter summarizes the remedial activities performed to date at the HSSR #1 and the path forward proposed by Tetra Tech NUS, Inc. (Tetra Tech), on behalf of the Navy. The activities to date have been performed by Tetra Tech personnel (and Eagle-SWS, Inc., the excavation subcontractor) in accordance with the recommendations presented in the September 2010 Site Inspection (SI) Report; and accepted by the Tennessee Department of Environment and Conservation (TDEC) at the September 8, 2010, NSA Mid-South Base Closure Team meeting.

Initial test pit excavation and confirmatory sampling activities were performed on June 7, 2011, at the two “hot spots”, as identified in Appendix D of the SI Report (Figure 1). One 4-point composite soil sample was collected from each of the four sidewalls and the bottom of each test pit and sent to Empirical Laboratories, LLC, of Nashville, TN for analysis of polynuclear aromatic hydrocarbons (PAHs), in accordance with the approved December 2009 Sampling and Analysis Plan (SAP) .

A Benzo(a)pyrene Equivalent (BEQ) calculation was performed on the PAH concentrations reported in each confirmation sample. The analytical results and BEQ concentrations for the confirmation samples are presented in Tables 1 and 2 and described in the following paragraphs.

Northern “Hot Spot” Excavation

The composite soil sample collected from the floor of the test pit at the northern “hot spot” at HSSR #1, and the corresponding field duplicate, contained BEQ concentrations exceeding the established NSA

To address the observed BEQ exceedances in the sidewalls of the test pit and at the “step out” sampling locations, the Navy proposes that the reported analytical results for the “step out” samples be used in a conservative, prescriptive manner to pre-determine the extent of over-excavation for Areas A and B as described in the following paragraphs. Pre-determining the initial extent of over-excavation should reduce the potential for multiple rounds of excavation and sampling at the site and ensure the most efficient use of the limited Navy funding available to remediate the site.

The Navy proposes to over-excavate the southern portion of the arcs (Area A) out to 30 feet and down to a depth of 2 feet bgs. Excavation of Area A out 30 feet will address the BEQ exceedances noted in this area, while reaching the areas previously confirmed to contain BEQ concentrations below the NSA Mid-South background screening level (Figures 2 and 3). Excavation to a depth of 2 feet bgs should address any BEQ exceedances on the excavation floor, based upon the results of vertical profiling performed at the three sampling locations with the highest initial BEQ concentrations.

The Navy proposes to over-excavate the eastern portion of the arcs (Area B) out to 70 to 80 feet and to a depth of 2 feet bgs. Similarly, excavation of Area B outward 70 to 80 feet will address the BEQ exceedances noted in this area, while reaching the areas previously confirmed to contain BEQ concentrations below the background screening level (Figures 2 and 3). Excavation to a depth of 2 feet bgs should address any BEQ exceedances on the excavation floor, based upon the results of vertical profiling performed at the three sampling locations with the highest initial BEQ concentrations.

The final portion of the excavation, Area C, will extend the current “step out” sampling arcs westward, and to a depth of 2 feet bgs, to ensure that those locations with BEQ exceedances (specifically, sample locations 103, 131, and 132) are over-excavated. The proposed limits of excavation for Area C will also extend northward from locations 110 and 111 where BEQ concentrations exceeded the background screening level (Figure 3). A representative, four-point composite sample will be collected from every 50 linear feet along each sidewall of excavation Area C to confirm that any remaining BEQ concentrations are below 0.565 mg/kg (Figure 3). Composite soil samples collected from the sidewalls of Area C will be submitted to a Navy-approved laboratory in accordance with the SAP for analysis of PAHs on an expedited, 72-hour schedule.

Should the results from any sidewall confirmation sample exceed the background screening level, that sidewall will be over-excavated and additional confirmation samples collected until laboratory analysis confirms the removal of the observed BEQ exceedance. The limits for the initial excavation, as well as any over-excavation, performed in Area C will be determined by Tetra Tech personnel in the field based

TABLES

Table 1
Soil Analytical Results
PAH and BEQ Concentrations
Horse Stables Skeet Range #1
NSA Mid-South
Millington, Tennessee

SAMPLE ID	NSA Mid-South Background Value	HSSR1-SS061A-0001 6/7/2011	HSSR1-SS061B-0001 6/7/2011	HSSR1-SS061C-0001 6/7/2011	HSSR1-SS061D-0001 6/7/2011	HSSR1-SS061E-0001 6/7/2011	HSSR1-SS061E-0001-D 6/7/2011
POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)							
BAP EQUIVALENT-HALFND	0.565	0.518368	0.256928	0.233383	0.112512	0.381344	1.8832
BENZO(A)ANTHRACENE	N/A	0.357	0.18	0.146	0.0721	0.235 J	1.32 J
BENZO(A)PYRENE	N/A	0.352	0.175	0.161	0.0783	0.255 J	1.28 J
BENZO(B)FLUORANTHENE	N/A	0.482	0.243	0.213	0.114	0.344 J	1.63 J
BENZO(K)FLUORANTHENE	N/A	0.182	0.0909	0.0796	0.0401	0.126 J	0.648 J
CHRYSENE	N/A	0.448	0.219	0.187	0.0912	0.284 J	1.52 J
DIBENZO(A,H)ANTHRACENE	N/A	0.0564	0.0272	0.0254	0.0094	0.0497 J	0.22 J
INDENO(1,2,3-CD)PYRENE	N/A	0.238	0.113	0.101	0.0571	0.172 J	0.802 J

SAMPLE ID	NSA Mid-South Background Value	HSSR1-SS062A-0001 6/7/2011	HSSR1-SS062B-0001 6/7/2011	HSSR1-SS062C-0001 6/7/2011	HSSR1-SS062D-0001 6/7/2011	HSSR1-SS062E-0001 6/7/2011
POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)						
BAP EQUIVALENT-HALFND	0.565	68.2904	2.21223	0.555489	0.504381	0.114245
BENZO(A)ANTHRACENE	N/A	44.6	0.948	0.306	0.262	0.0579
BENZO(A)PYRENE	N/A	49.4	1.53	0.375	0.343	0.0772
BENZO(B)FLUORANTHENE	N/A	63.2	1.78	0.509	0.43	0.0915
BENZO(K)FLUORANTHENE	N/A	21.3	0.72	0.181	0.177	0.0399
CHRYSENE	N/A	47.4	1.23	0.379	0.311	0.0666
DIBENZO(A,H)ANTHRACENE	N/A	5.82	0.291	0.0716	0.0698 J	0.0165
INDENO(1,2,3-CD)PYRENE	N/A	20.3	1.1	0.252	0.203	0.0514

All concentrations reported in milligram per kilogram (mg/kg).

Exceedances of the NSA Mid-South Background BEQ concentration (0.565 mg/kg) are bolded.

N/A - Not applicable.

U - Not detected above laboratory method detection limits (consistent with USEPA protocols, concentrations are presented at 1/2 detection limit).

J - Not detected above laboratory method reporting limits (values presented are estimated by laboratory).

Table 2
Soil Analytical Results
PAH and BEQ Concentrations
Horse Stables Skeet Range #1
NSA Mid-South
Millington, Tennessee

SAMPLE ID	NSA Mid-South Background Value (mg/kg)	HSSR1-SS063-0001	HSSR1-SS063-0001RE1	HSSR1-SS064-0001	HSSR1-SS064-0001RE1	HSSR1-SS065-0001
SAMPLE DATE		06/28/2011	06/28/2011	06/28/2011	06/28/2011	06/28/2011
POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)						
BAP EQUIVALENT-HALFND	0.565	4.08364	4.72558	44.9744	45.7397	1.284007
BENZO(A)ANTHRACENE	N/A	2.76	2.91	30.4	25.6	0.812
BENZO(A)PYRENE	N/A	2.82	3.3	30.7	32	0.883
BENZO(B)FLUORANTHENE	N/A	3.51	3.97	35.8	39	1.16
BENZO(K)FLUORANTHENE	N/A	1.45	1.72	16	16	0.426
CHRYSENE	N/A	3.14	3.38	34.4	29.7	0.947
DIBENZO(A,H)ANTHRACENE	N/A	0.463	0.514	5.62	5.38	0.146
INDENO(1,2,3-CD)PYRENE	N/A	1.56	2.03	18.4	17.1	0.526

SAMPLE ID	NSA Mid-South Background Value (mg/kg)	HSSR1-SS066-0001	HSSR1-SS067-0001	HSSR1-SS068-0001	HSSR1-SS069-0001	HSSR1-SS070-0001
SAMPLE DATE		06/28/2011	06/28/2011	06/28/2011	06/28/2011	06/28/2011
POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)						
BAP EQUIVALENT-HALFND	0.565	1.226725	0.246099	0.1148123	2.54123	0.290372
BENZO(A)ANTHRACENE	N/A	0.793 N	0.129	0.0702	1.34	0.166
BENZO(A)PYRENE	N/A	0.819 N	0.17	0.0769	1.74	0.194
BENZO(B)FLUORANTHENE	N/A	1.08 N	0.212	0.105	2.18	0.291
BENZO(K)FLUORANTHENE	N/A	0.383 N	0.0843	0.0398	0.876	0.118
CHRYSENE	N/A	0.895 N	0.156	0.0743	1.47	0.192
DIBENZO(A,H)ANTHRACENE	N/A	0.163 N	0.0299	0.0145	0.336	0.0366
INDENO(1,2,3-CD)PYRENE	N/A	0.527 N	0.111	0.0542	1.03	0.127

SAMPLE ID	NSA Mid-South Background Value (mg/kg)	HSSR1-SS071-0001	HSSR1-SS072-0001	HSSR1-SS073-0001	HSSR1-SS074-0001	HSSR1-SS075-0001
SAMPLE DATE		06/28/2011	06/28/2011	06/28/2011	06/28/2011	06/28/2011
POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)						
BAP EQUIVALENT-HALFND	0.565	11.81994	5.72698	2.45075	0.00803	55.9519
BENZO(A)ANTHRACENE	N/A	6.58	2.36	0.997	0.00803 U	24.2
BENZO(A)PYRENE	N/A	8.17	4.04	1.69	0.00803 U	39.4
BENZO(B)FLUORANTHENE	N/A	10.6	5.19	2.09	0.00803 U	48.7
BENZO(K)FLUORANTHENE	N/A	3.64	1.97	0.777	0.00803 U	16.7
CHRYSENE	N/A	7.54	3.28	1.28	0.00803 U	34.9
DIBENZO(A,H)ANTHRACENE	N/A	1.42	0.651	0.329	0.00803 U	6.57
INDENO(1,2,3-CD)PYRENE	N/A	4.68	2.58	1.14	0.00803 U	24.9

All concentrations reported in milligram per kilogram (mg/kg).

Exceedances of the NSA Mid-South Background BEQ concentration (0.565 mg/kg) are bolded.

N/A - Not applicable.

U - Not detected above laboratory method detection limits (consistent with USEPA protocols, concentrations are presented at 1/2 detection limit).

J - Not detected above laboratory method reporting limits (values presented are estimated by laboratory).

Table 2
Soil Analytical Results
PAH and BEQ Concentrations
Horse Stables Skeet Range #1
NSA Mid-South
Millington, Tennessee

SAMPLE ID	NSA Mid-South Background Value (mg/kg)	HSSR1-SS075-0001RE1	HSSR1-SS076-0001	HSSR1-SS077-0001	HSSR1-SS078-0001	HSSR1-SS079-0001
SAMPLE DATE		06/28/2011	06/28/2011	06/28/2011	06/28/2011	06/28/2011
POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)						
BAP EQUIVALENT-HALFND	0.565	66.0611	14.7869	2.37108	15.8922	0.1477105
BENZO(A)ANTHRACENE	N/A	25	11.6	1.85	12.1	0.076
BENZO(A)PYRENE	N/A	45.7	10	1.6	10.6	0.0971
BENZO(B)FLUORANTHENE	N/A	52.1	11.7	2.06	12.6	0.108
BENZO(K)FLUORANTHENE	N/A	20.5	5.18	0.68	5.29	0.0443
CHRYSENE	N/A	36.1	13.1	2.08	14.3	0.0975
DIBENZO(A,H)ANTHRACENE	N/A	9.21	1.83	0.281	2.09	0.0237
INDENO(1,2,3-CD)PYRENE	N/A	32	5.62	0.902	6.65	0.0797

SAMPLE ID	NSA Mid-South Background Value (mg/kg)	HSSR1-SS080-0001	HSSR1-SS081-0001	HSSR1-089-0001	HSSR1-090-0001	HSSR1-091-SS0001
SAMPLE DATE		06/28/2011	06/28/2011	07/27/2011	07/27/2011	07/27/2011
POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)						
BAP EQUIVALENT-HALFND	0.565	0.0463096	0.00778	0.341	1.027196	0.691
BENZO(A)ANTHRACENE	N/A	0.0335	0.00778 U	0.341 U	0.452 J	0.691 U
BENZO(A)PYRENE	N/A	0.0322	0.00778 U	0.341 U	0.516 J	0.691 U
BENZO(B)FLUORANTHENE	N/A	0.0418	0.00778 U	0.341 U	0.693 J	0.691 U
BENZO(K)FLUORANTHENE	N/A	0.0155	0.00778 U	0.341 U	0.22 J	0.691 U
CHRYSENE	N/A	0.0396	0.00778 U	0.341 U	0.496 J	0.691 U
DIBENZO(A,H)ANTHRACENE	N/A	0.00739 U	0.00778 U	0.341 U	0.719 U	0.691 U
INDENO(1,2,3-CD)PYRENE	N/A	0.0269	0.00778 U	0.341 U	0.345 J	0.691 U

SAMPLE ID	NSA Mid-South Background Value (mg/kg)	HSSR1-092-SS0001	HSSR1-093-SS0001	HSSR1-094-SS0001	HSSR1-095-SS0001	HSSR1-131-SS0001
SAMPLE DATE		07/27/2011	07/27/2011	07/27/2011	07/27/2011	07/27/2011
POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)						
BAP EQUIVALENT-HALFND	0.565	26.105	12.86499	34.5136	15.2084	25.2826
BENZO(A)ANTHRACENE	N/A	17.6	8.7	21.1	9.09	9.23
BENZO(A)PYRENE	N/A	17	8.65	22.1	10.4	17.1
BENZO(B)FLUORANTHENE	N/A	26.2	11.8	33.6	13.3	23.1
BENZO(K)FLUORANTHENE	N/A	3.88	4.34	8.26	5.38	6.69
CHRYSENE	N/A	16.2	9.59	21	10.6	12.7
DIBENZO(A,H)ANTHRACENE	N/A	3.61	1.53 J	5.37	1.79	3.45
INDENO(1,2,3-CD)PYRENE	N/A	10.6	5.82	14.7	7.15	14.2

All concentrations reported in milligram per kilogram (mg/kg).

Exceedances of the NSA Mid-South Background BEQ concentration (0.565 mg/kg) are bolded.

N/A - Not applicable.

U - Not detected above laboratory method detection limits (consistent with USEPA protocols, concentrations are presented at 1/2 detection limit).

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Soil Analytical Results
PAH and BEQ Concentrations
Horse Stables Skeet Range #1
NSA Mid-South
Millington, Tennessee

SAMPLE ID	NSA Mid-South Background Value (mg/kg)	HSSR1-SS104-0001	HSSR1-SS105-0001	HSSR1-SS106-0001	HSSR1-SS107-0001	HSSR1-SS108-0001
SAMPLE DATE		07/27/2011	07/27/2011	07/27/2011	07/27/2011	07/27/2011
POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)						
BAP EQUIVALENT-HALFND	0.565	0.349	0.353	1.376281	0.848183	0.45149
BENZO(A)ANTHRACENE	N/A	0.349 U	0.353 U	0.762 J	0.263 J	0.226 J
BENZO(A)PYRENE	N/A	0.349 U	0.353 U	0.707 J	0.387 J	0.206 J
BENZO(B)FLUORANTHENE	N/A	0.349 U	0.353 U	1.02	0.521 J	0.3 J
BENZO(K)FLUORANTHENE	N/A	0.349 U	0.353 U	0.371 J	0.196 J	0.124 J
CHRYSENE	N/A	0.349 U	0.353 U	0.871 J	0.323 J	0.25 J
DIBENZO(A,H)ANTHRACENE	N/A	0.349 U	0.353 U	0.873 U	0.696 U	0.353 U
INDENO(1,2,3-CD)PYRENE	N/A	0.349 U	0.353 U	0.5 J	0.325 J	0.149 J

SAMPLE ID	NSA Mid-South Background Value (mg/kg)	HSSR1-SS109-0001	HSSR1-SS132-0001	HSSR1-SS097-0001	HSSR1-SS098-0001	HSSR1-SS098-0001-D
SAMPLE DATE		07/27/2011	07/27/2011	7/28/2011	7/28/2011	7/28/2011
POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)						
BAP EQUIVALENT-HALFND	0.565	0.353959	1.799985	0.1050263	0.290014	0.453689
BENZO(A)ANTHRACENE	N/A	0.126 J	0.748	0.0866 U	0.194 J	0.326 J
BENZO(A)PYRENE	N/A	0.128 J	1.22	0.0929 J	0.304 J	0.484
BENZO(B)FLUORANTHENE	N/A	0.173 J	1.66	0.0866 U	0.0871 U	0.139 J
BENZO(K)FLUORANTHENE	N/A	0.353 U	0.641 J	0.0866 U	0.0905 J	0.223 J
CHRYSENE	N/A	0.144 J	0.975	0.0866 U	0.204 J	0.334 J
DIBENZO(A,H)ANTHRACENE	N/A	0.353 U	0.24 J	0.0866 U	0.0871 U	0.0855 U
INDENO(1,2,3-CD)PYRENE	N/A	0.353 U	0.918	0.101 J	0.25 J	0.406

SAMPLE ID	NSA Mid-South Background Value (mg/kg)	HSSR1-SS101-0001	HSSR1-SS102-0001	HSSR1-SS110-0001	HSSR1-SS111-0001	HSSR1-SS112-0001
SAMPLE DATE		7/28/2011	7/28/2011	7/28/2011	7/28/2011	7/28/2011
POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)						
BAP EQUIVALENT-HALFND	0.565	1.228341	0.087 U	3.32363	0.765638	0.0894 U
BENZO(A)ANTHRACENE	N/A	0.923	0.087 U	2.37	0.558	0.0894 U
BENZO(A)PYRENE	N/A	1.31	0.087 U	3.24	0.79	0.0894 U
BENZO(B)FLUORANTHENE	N/A	0.51	0.087 U	1.58	0.327 J	0.0894 U
BENZO(K)FLUORANTHENE	N/A	0.495	0.087 U	1.1	0.33 J	0.0894 U
CHRYSENE	N/A	0.941	0.087 U	1.63	0.588	0.0894 U
DIBENZO(A,H)ANTHRACENE	N/A	0.0849 U	0.087 U	0.358	0.0863 U	0.0894 U
INDENO(1,2,3-CD)PYRENE	N/A	1.05	0.087 U	0.876	0.599	0.0894 U

All concentrations reported in milligram per kilogram (mg/kg).

Exceedances of the NSA Mid-South Background BEQ concentration (0.565 mg/kg) are bolded.

N/A - Not applicable.

U - Not detected above laboratory method detection limits (consistent with USEPA protocols, concentrations are presented at 1/2 detection limit).

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Table 2
Soil Analytical Results
PAH and BEQ Concentrations
Horse Stables Skeet Range #1
NSA Mid-South
Millington, Tennessee

SAMPLE ID	NSA Mid-South Background Value (mg/kg)	HSSR1-SS113-0001	HSSR1-SS114-0001	HSSR1-SS115-0001	HSSR1-SS116-0001	HSSR1-SS117-0001
SAMPLE DATE		7/28/2011	7/28/2011	7/28/2011	7/28/2011	7/28/2011
POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)						
BAP EQUIVALENT-HALFND	0.565	0.0882 U	0.17328	0.1086328	0.175 U	0.564078
BENZO(A)ANTHRACENE	N/A	0.0882 U	0.0986 J	0.0896 U	0.175 U	0.375 J
BENZO(A)PYRENE	N/A	0.0882 U	0.163 J	0.0958 J	0.175 U	0.524 J
BENZO(B)FLUORANTHENE	N/A	0.0882 U	0.0868 U	0.0896 U	0.175 U	0.172 U
BENZO(K)FLUORANTHENE	N/A	0.0882 U	0.0868 U	0.0896 U	0.175 U	0.208 J
CHRYSENE	N/A	0.0882 U	0.106 J	0.0896 U	0.175 U	0.398 J
DIBENZO(A,H)ANTHRACENE	N/A	0.0882 U	0.0868 U	0.0896 U	0.175 U	0.172 U
INDENO(1,2,3-CD)PYRENE	N/A	0.0882 U	0.179 J	0.0896 U	0.175 U	0.507 J

SAMPLE ID	NSA Mid-South Background Value (mg/kg)	HSSR1-SS118-0001
SAMPLE DATE		7/28/2011
POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)		
BAP EQUIVALENT-HALFND	0.565	0.448 U
BENZO(A)ANTHRACENE	N/A	0.448 U
BENZO(A)PYRENE	N/A	0.448 U
BENZO(B)FLUORANTHENE	N/A	0.448 U
BENZO(K)FLUORANTHENE	N/A	0.448 U
CHRYSENE	N/A	0.448 U
DIBENZO(A,H)ANTHRACENE	N/A	0.448 U
INDENO(1,2,3-CD)PYRENE	N/A	0.448 U

All concentrations reported in milligram per kilogram (mg/kg).

Exceedances of the NSA Mid-South Background BEQ concentration (0.565 mg/kg) are bolded.

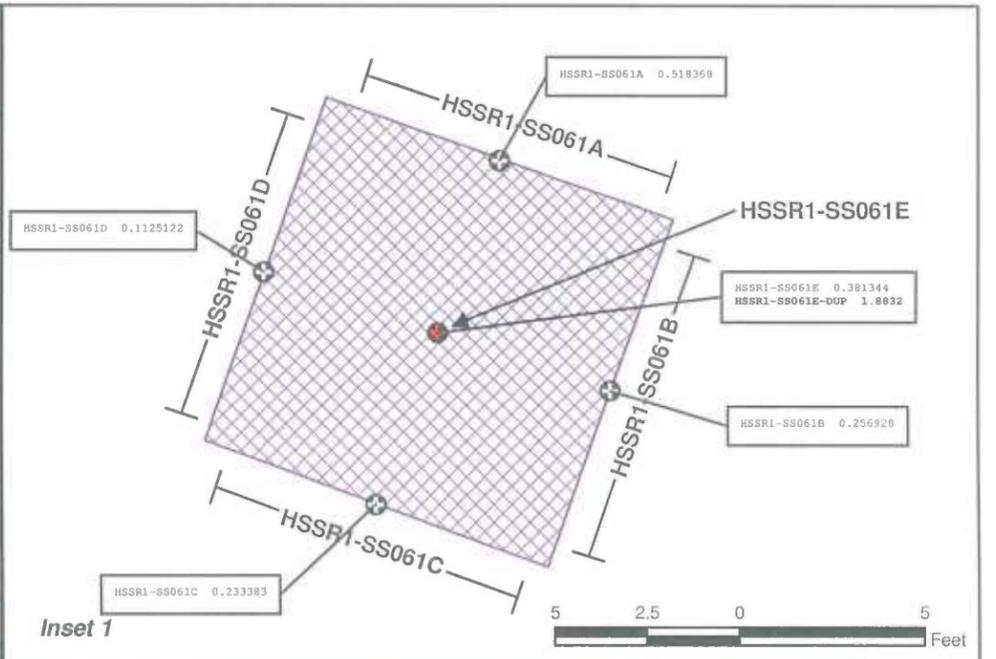
N/A - Not applicable.

U - Not detected above laboratory method detection limits (consistent with USEPA protocols, concentrations are presented at 1/2 detection limit).

J - Not detected above laboratory method reporting limits (values presented are estimated by laboratory).

FIGURES

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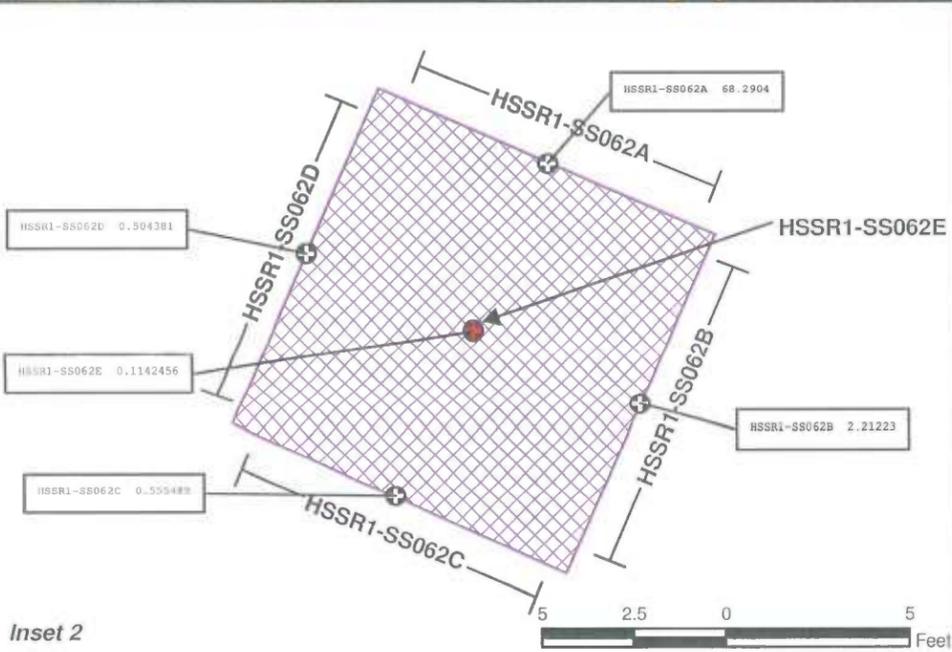
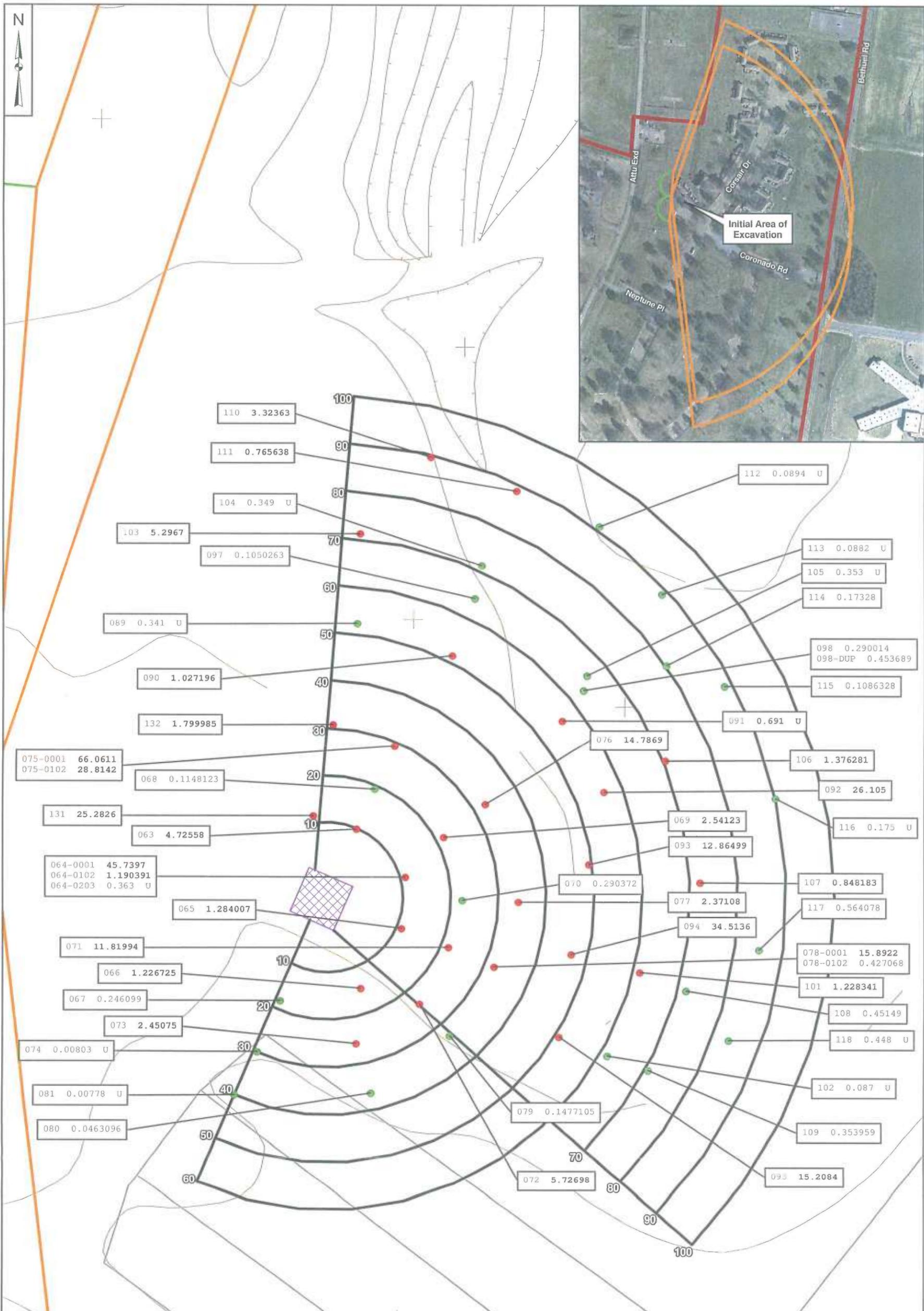


Figure 1
Initial Test Pit Excavations North and South
Horse Stables Skeet Range #1
NSA Mid-South
Millington, Tennessee

- Legend**
- Composite Floor Sample
 - ⊕ Composite Wall Sample
 - Horse Stables Skeet Range #1
 - Initial Test Pit Excavation
 - Firing Line
 - Road
 - Contour (1-ft interval)



Drawn By: T. WHEATON 06/23/11
 Checked By: G. POPE 08/22/11
 Revised By: K. MOORE 8/19/11
 Contract Number: 112G01642



TETRA TECH

Figure 2
BAP Equivalents (BEQ) in Surface Soil
Excavation Area South
Horse Stables Skeet Range #1
NSA Mid-South
Millington, Tennessee

Legend

BEQ Concentration

- BEQ < 0.565 mg/kg
- BEQ > 0.565 mg/kg
- ▨ Initial Area of Excavation
- ▭ Horse Stables Skeet Range #1
- ▭ Former Firing Line

- Sample Grid
- Road
- ▭ Installation Boundary
- Contour (1-ft interval)



Drawn By: T. WHEATON 08/11/11
 Checked By: G. POPE 08/17/11
 Revised By:
 Contract Number: 112G01642

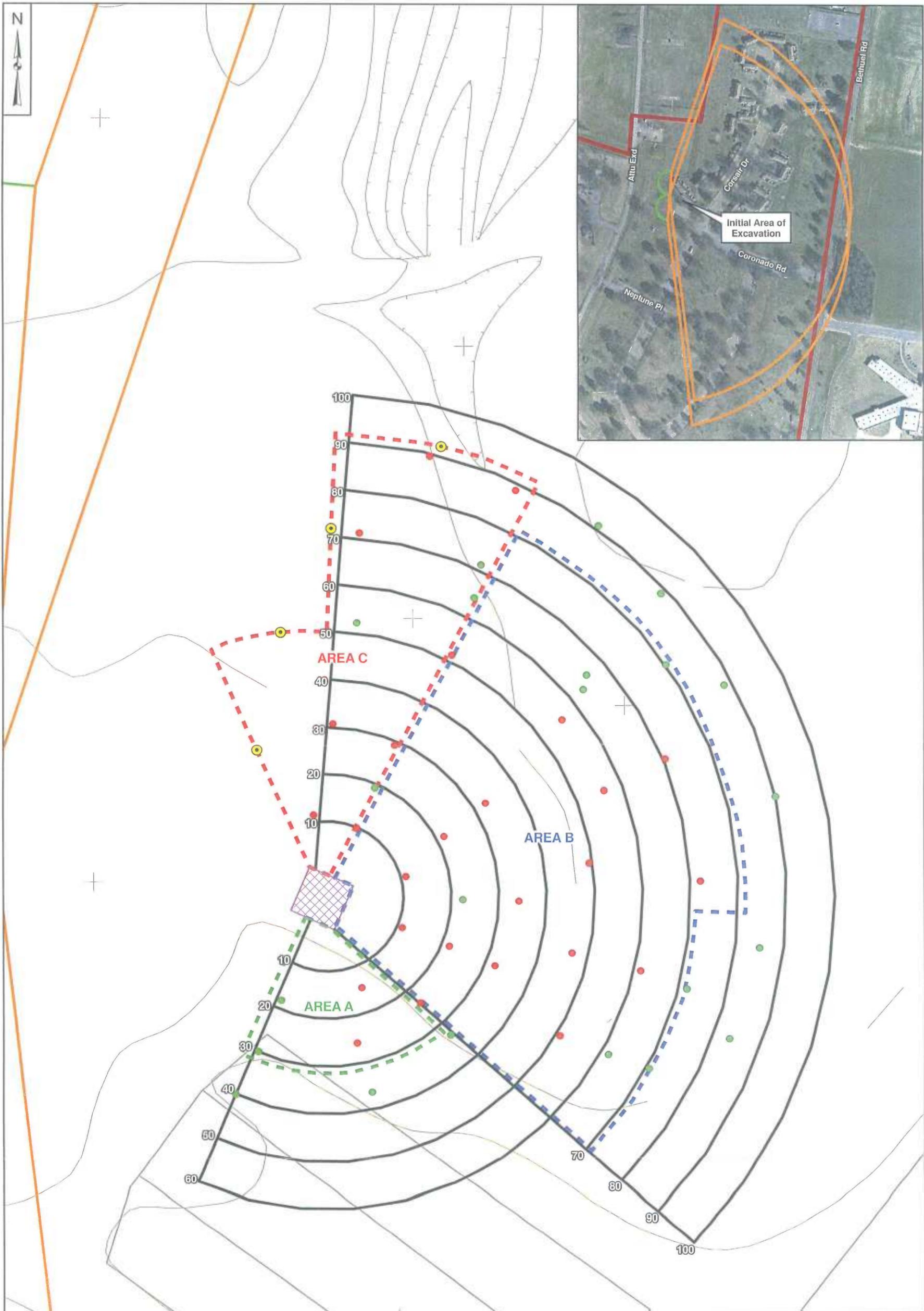


Figure 3
Proposed Limits of Excavation
Horse Stables Skeet Range #1
NSA Mid-South
Millington, Tennessee

Legend

- | | |
|------------------------------|--------------------------------|
| ● BEQ < 0.565 mg/kg | ▭ Horse Stables Skeet Range #1 |
| ● BEQ > 0.565 mg/kg | ▭ Initial Area of Excavation |
| ● Proposed Composite Sample | ▭ Former Firing Line |
| ▭ Proposed Excavation Area A | ▭ Sample Grid |
| ▭ Proposed Excavation Area B | ▭ Road |
| ▭ Proposed Excavation Area C | ▭ Installation Boundary |
| | ▭ Contour (1-ft interval) |



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