4.0 POST DISPOSAL ACTIVITIES

The final action at the collection and disposal site occurred 24 August 1995. Due to scheduling problems, the sampling took place on 31 October 1995. Figures 4.1 through 4.4 show the appearance of the disposal area. It is nearly devoid of vegetation and shows that considerable erosion has occurred in the two months. Not enough, however, to account for an approximately two foot lower elevation over the eastern and northern portion of the filled crater with respect to the original contour. There was a ponding area on the west side where run off from the crater area collected and as water evaporated, eroded soil built up. Beyond this area, there was some evidence of runoff toward a low, drainage ditch-like depression. Again, there was no apparent dieposition here. If soil made it that far it was taken further north and dispersed.

The exact location of the crater center was not apparent. A series of 18 inch deep trenches were dug and core samples taken to determine the deepest part of the crater. This was accomplished by inspection of the core sample — heavy red clay (other than clumps from backfill) indicated edges of the crater.

When a location was found that revealed unusual soil texture to the maximum depth of the core sampler, the sampler was cleaned and driven into a slightly removed location and a sample taken. It is interesting to note that the core sample tube could be pushed in by hand over the last 8 inches (approximately) and the sample was very moist and gray in appearance. The depth to the bottom of the core is approximately 6 feet below the original ground level. We did not in all likelihood reach the true bottom of the crater, but felt this to be close enough. Samples at the deepest point and at approximately 4 feet depth were taken. Only the deepest sample was analyzed by the Laboratory — the “mid” core sample was frozen.

From the appearance of the core sample near the bottom of the now backfilled crater and knowledge of the nature of the original layering (18 inches of top soil and heavy clay at lower depths) it appears that the crater is holding water which filters down through the loose backfill. Potential seepage of metals, semivolatiles and explosive products to this lower layer is possible. Thus as contaminated material around the crater area is scraped and used as backfill, extra layers of contamination occur with the potential for a buildup. As will be shown by laboratory results, levels are below Method Detection Limits and appear no worse than after the first detonation.

Samples were collected as shown in Figure 2.1. All surface samples were taken from the first 1/4 inch to fill a sample bottle. Fresh tongue depressors were used to scrape and handle the soil. Samples collected from the two rings at 25 and 50 meters

were consolidated into one sample for each ring. Remaining samples were take to the laboratory and frozen in case needed to resolve any anomalies. Crater area sampling was conducted differently — 1/5 of the sample jar volume was collected from 5 separate locations outside the area where scraping for crater backfill was evident.

A sample was taken from the ponding area by collecting from several dispersed locations (inter and at mid radii).

Results of the laboratory analyses are summarized in Tables 2.1, 4.1, and 4.2 and the original laboratory report is included in Appendix F. As before, one of the pthalates (Butylbenzlphthalate) is reflecting contamination from plastics probably in the laboratory and can be disregarded. All other levels are below the MDL for each background.

Figure 4.1. View of Backfill Looking S-E Showing Erosion and Underfill

Figure 4.2. Close-up of Backfilled Crater Looking S-E Showing Erosion and Underfill

**Figure 4.3. View of Backfilled Crater Looking S-W.
Ponding Area Is At Right of Photo.**

Figure 4.4. Ponding Area Showing Deposits of Fine Soil and Erosion Patterns

TABLE 4.1 POST DISPOSAL SEMIVOLATILE CONCENTRATIONS FOR CAMP CLAIBORNE

	1205	1213	1220	1240	1239							
Compounds (1)	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg							
Bis(2-chloroethyl)ether	<330	<330	<330	<330	<330							
1,3-Dichlorobenzene	<330	<330	<330	<330	<330							
1,2-Dichlorobenzene	<330	<330	<330	<330	<330							
1,4-Dichlorobenzene	<330	<330	<330	<330	<330							
Bis(2-chloroisopropyl)ether	<330	<330	<330	<330	<330							
N-Nitrosodi-n-propylamine	<330	<330	<330	<330	<330							
Hexachloroethane	<330	<330	<330	<330	<330							
Nitrobenzene	<330	<330	<330	<330	<330							
Isophorone	<330	<330	<330	<330	<330							
Bis(2-chloroethoxy)methane	<330	<330	<330	<330	<330							
1,2,4-Trichlorobenzene	<330	<330	<330	<330	<330							
Naphthalene	<330	<330	<330	<330	<330							
Hexachlorobutadiene	<330	<330	<330	<330	<330							
2-Chloronaphthalene	<330	<330	<330	<330	<330							
Dimethyl phthalate	<330	<330	<330	<330	<330							
2,6-Dinitrotoluene	<330	<330	<330	<330	<330							
Acenaphthylene	<330	<330	<330	<330	<330							
2,4-Dinitrotoluene	<330	<330	<330	<330	<330							
Diethyl phthalate	<330	<330	<330	<330	<330							
Benzidine	<660	<660	<660	<660	<660							
4-Bromophenyl phenyl ether	<330	<330	<330	<330	<330							
N-nitrosodimethylamine	<330	<330	<330	<330	<330							
Hexachlorocyclopentadiene	<330	<330	<330	<330	<330							
4,Chlorophenyl phenylether	<330	<330	<330	<330	<330							
Fluorene	<330	<330	<330	<330	<330							
Azobenzene	<330	<330	<330	<330	<330							
Hexachlorobenzene	<330	<330	<330	<330	<330							
Phenanthrene	<330	<330	<330	<330	<330							
Anthracene	<330	<330	<330	<330	<330							
Dibutyl phthalate	<330(2)	<330	<330	<330	<330							
Fluoranthene	<330	<330	<330	<330	<330							
Pyrene	<330	<330	<330	<330	<330							
Butylbenzyl phthalate	<330	<330	353	<330	<330(2)							
3,3'-Dichlorobenzidine	<330	<330	<330	<330	<330							

(1) < N means N is method detection limit and concentration is <N.
(2) Presence indicated, but less than detection limit.
(3) Tentatively identified and quantitatively estimated.

TABLE 4.1 POST DISPOSAL SEMIVOLATILE CONCENTRATIONS FOR CAMP CLAIBORNE
(Continued)

	1205	1213	1220	1240	1239							
Compounds (1)	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg							
Benzo(a)anthracene	<330	<330	<330	<330	<330							
Chrysene	<330	<330	<330	<330	<330							
Bis(2-ethylhexyl)phthalate	<330	<330	<330(2)	<330	<330(2)							
Di-n-octyl phthalate	<330	<330	<330	<330	<330							
Benzo(b)fluoranthene	<330	<330	<330	<330	<330							
Benzo(k)fluoranthene	<330	<330	<330	<330	<330							
Benzo(a)pyrene	<330	<330	<330	<330	<330							
Indeno(1,2,3-cd)pyrene	<330	<330	<330	<330	<330							
Dibenzo(a,h)anthracene	<330	<330	<330	<330	<330							
Benzo(g,h,i)perylene	<330	<330	<330	<330	<330							
N-Nitrosodiphenylamine	<330	<330	<330	<330	<330							
Phenol	<330	<330	<330	<330	<330							
2-Chlorophenol	<330	<330	<330	<330	<330							
2-Nitrophenol	<330	<330	<330	<330	<330							
2,4-Dimethylphenol	<330	<330	<330	<330	<330							
2,4-Dichlorophenol	<330	<330	<330	<330	<330							
4-Chloro-3-Methylphenol	<330	<330	<330	<330	<330							
2,4,6-Trichlorophenol	<330	<330	<330	<330	<330							
2,4-Dinitrophenol	<1650	<1650	<1650	<1650	<1650							
4-Nitrophenol	<1650	<1650	<1650	<1650	<1650							
2-Methyl-4,6-Dinitrophenol	<1650	<1650	<1650	<1650	<1650							
Pentachlorophenol	<1650	<1650	<1650	<1650	<1650							
1-Methylnaphthalene	<----------DELETED---------->											
Acetophenone	<10	<10	<10	<10	<10							
Diphenylamine	<10	<10	<10	<10	<10							
2-Aminonaphthalene	<10	<10	<10	<10	<10							
1-Nitropyrene	<10	<10	<10	<10	<10							
2,5-Diphenyloxazole	<10	<10	<10	<10	<10							
2-Nitronaphthalene	<-----NOT EXTRACTED----->											
2-Methylnaphthalene (3)	<330	<330	<330	<330	<330							
2-&/or 3-Methylphenol	<330	<330	<330	<330	<330							
4-Methylphenol	<330	<330	<330	<330	<330							
2,4,5-Trichlorophenol	<330	<330	<330	<330	<330							

(1) < N means N is method detection limit and concentration is <N.
(2) Presence indicated, but less than detection limit.
(3) Tentatively identified and quantitatively estimated.

TABLE 4.2 POST DISPOSAL NITROAROMATICS AND NITRAMINES FOR CAMP CLAIBORNE

	1205	1216	1220	1240	1239						
Compound	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg						
HMX	<18.3	<17.4	<16.6	<18.3	<17.4						
RDX	<28.4	<27.1	<25.8	<28.4	<27.1						
1,3,5 TNB	<32.1	<30.5	<29.1	<32.1	<30.5						
1,3 DNB	—	—	—	—	—						
NB	—	—	—	—	—						
2,4,6 TNT	<21.1	<20.1	<19.2	<21.1	<20.1						
2 AM DNT	—	—	—	—	—						
2,4 DNT	<77.7	<74.0	<70.6	<77.7	<74.0						
2,6 DNT	<56.9	<54.2	<51.7	<56.9	<54.2						

Key:

RDX -	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine
HMX -	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine
NB -	Nitrobenzene
DNB -	Dinitrobenzene
TNB -	Trinitrobenzene
TNT -	Trinitrotoluene
DNT -	Dinitrotoluene
2 AmDNT -	2 Amino-DNT