

N60200.AR.003306
NAS CECIL FIELD, FL
5090.3a

DIG AND HAUL PACKAGE FOR OPERABLE UNIT 10 (OU 10) SITE 21 GOLF COURSE
MAINTENANCE AREA NAS CECIL FIELD FL
4/15/2002
TETRA TECH NUS INC

DIG AND HAUL PACKAGE
for
Site 21 – Golf Course Maintenance Area

SITE BACKGROUND

Soil contamination was delineated during the Potential Source of Contamination (PSC) investigation conducted from 1999 through 2000. Soil contaminated with arsenic, chlordane, toxaphene, and dieldrin was delineated for excavation as presented in the Action Memorandum (TtNUS, 2001a). The soil excavation was conducted from May 29 through June 26, 2001 (CH2M Hill, 2001). This excavation remediated the site to an Industrial Re-use, which required a Land Use Control. Using the post excavation soil concentration data, TtNUS prepared a Feasibility Study Report (TtNUS, 2001b) which evaluated the requirements for unrestricted use which would not require institutional controls. The unrestricted reuse alternative evaluated the exposure point concentrations for ½ acre parcels, which would be representative of residential exposure units. The exposure point concentrations are represented by the 95% upper confidence limit of the mean (UCL). Arsenic was the only contaminant with UCL concentrations exceeding the Florida Department of Environmental Protection (FDEP) criteria for residential land use. The NAS Cecil Field Inorganic Background Data Set was also exceeded, thus additional excavation would be required to a residential land use. The results of this evaluation were reviewed by the Base Realignment and Closure (BRAC) Cleanup Team (BCT), and a decision was made to excavate soils that exceed the residential pick-up level as shown on figure E-1.

GUIDANCE NOTES

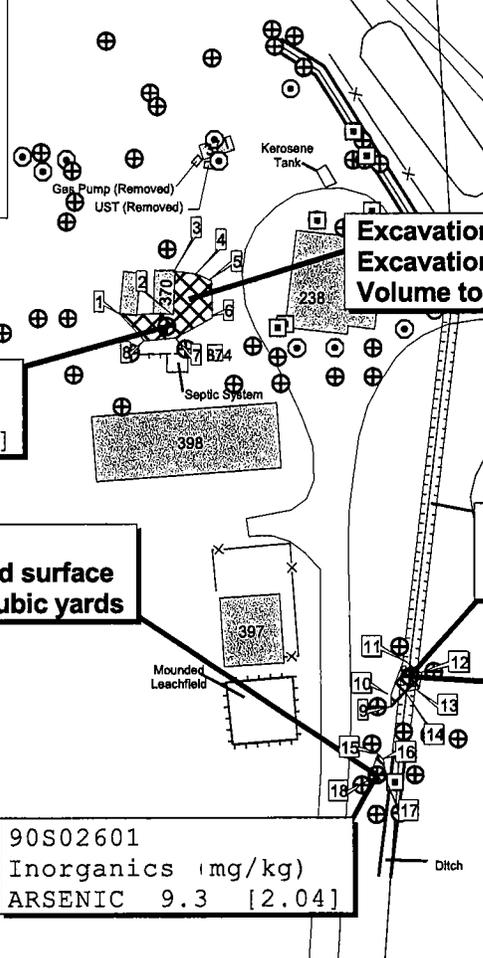
This information is provided for general guidance purposes only. The approximate area of excavation is shown on Figure E-1. The actual extent of excavation will be defined in the field by TtNUS with white spray-down paint (or equivalent) prior to the execution of the removal action.

The Remedial Action Contractor (RAC) shall be responsible for the following:

- The schedule and methods of excavation.
- All aspects of work-site health and safety.
- Identification and avoidance of all aboveground and underground utilities or other manmade structures.
- Waste characterization, transport (both on and off site), and disposal of all excavated soil.
- Notification of TtNUS and the Navy if observations indicate contaminants may extend beyond the planned lateral or vertical limits of the excavation.
- Depth of excavations is 1 foot below ground surface. Except where necessary for avoidance of structures or utilities, or where otherwise specified by TtNUS, the excavations should extend to the depths presented in Figure E-1.
- Excavated soil shall be stockpiled on, and covered with, heavy-duty polyethylene sheeting at the site. This shall be done in a manner to avoid the potential for contaminating surrounding soil or surface water. Alternately, soils may be stockpiled in properly covered roll-off containers.
- Stockpiling and combining of materials from different sites is permitted with prior approval of the BCT, if similar types and concentrations of contaminants are involved and were generated by similar processes.
- Materials used to backfill the excavation shall be from an uncontaminated source and be capable of supporting the same type of vegetation as the soil removed. The ground surface shall be restored to a similar or better condition than existed prior to excavation.

Notes:

1. Warning: Obtain utility clearance before excavation.
2. Extent of excavation to be marked by Tetra Tech NUS, Inc.
3. Removal will be conducted to depths as noted on label.
4. Contaminants of concern are Arsenic.
5. Waste characterization, transport, and disposal of excavated soil are the responsibility of the remedial action contractor.
6. Return site to pre-excavation conditions.
7. Provide proper support of excavation walls to protect adjacent buildings.
8. Remediation based on 95% UCL to achieve FDEP Residential.
9. Provide proper erosion and sedimentation controls.



CEF-P21-SS-017-01
Inorganics (mg/kg)
ARSENIC 10.9 [2.04]

Excavation area = 77 sq.ft.
Excavation to 1 ft. below land surface
Volume to be removed = 3 cubic yards

Excavation area = 860 sq.ft.
Excavation to 1 ft. below land surface
Volume to be removed = 32 cubic yards

Excavation area = 194 sq.ft.
Excavation to 1 ft. below land surface
Volume to be removed = 8 cubic yards

CEF-P21-SS-215-01
Inorganics (mg/kg)
ARSENIC 9.6 [2.04]

90S02601
Inorganics (mg/kg)
ARSENIC 9.3 [2.04]

Corner	Easting	Northing
1	372832.99	2146765.60
2	372861.95	2146765.35
3	372862.45	2146787.64
4	372973.74	2146786.11
5	372881.94	2146782.52
6	372882.19	2146763.30
7	372863.23	2146752.79
8	372846.57	2146751.25
9	372975.94	2146560.71
10	372975.78	2146566.89
11	372982.60	2146585.08
12	372992.02	2146577.93
13	372990.56	2146569.97
14	372984.06	2146568.51
15	372968.96	2146536.18
16	372971.72	2146532.94
17	372973.18	2146522.54
18	372963.76	2146522.22

Legend

- ⊕ Surface Soil Sample
- ⊗ Surface and Subsurface Soil Sample
- ⊠ Subsurface Soil Sample

- Buildings
- Excavation Area

Sample ID
FDEP Residential
Detection Concentration
Parameter

100 0 100 Feet

DRAWN BY	DATE
MJJ	29Mar02
CHECKED BY	DATE
COST/SCHEDULE-AREA	
SCALE AS NOTED	



REMOVAL ACTION DESIGN PLAN
SOIL EXCAVATION
SITE 21
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

CONTRACT NUMBER
0039

APPROVED BY _____ DATE _____

APPROVED BY _____ DATE _____

DRAWING NO.
FIGURE E-1

REV
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