

**NAS PENSACOLA  
CATEGORY VI- SITE 24  
PHASE II  
SAMPLING AND ANALYSIS PLAN ADDENDUM**

Additional field activities **are** proposed to perform Phase II of the Site **24** Site Assessment Investigation. The purpose of Phase II is to delineate the extent of inorganic and organic parameters detected in site soil, and confirm inorganic and organic parameter concentrations detected in site groundwater, during Phase I. Proposed Phase II activities include the completion of additional soil borings with associated soil sampling, the resampling of permanent wells installed during Phase I, and sample analyses using DQO level III laboratory methods for soil and confirmatory CLP level analyses for groundwater. Proposed sample locations, investigation methodologies, and analytical methods **are** presented below.

#### Sample Locations

As shown on the attached Figure 1,3 Phase II soil borings (locations 1 through 3) **are** proposed along the site's western border to determine the extent of elevated parameter concentrations (inorganics, pesticides/PCBs, and BNAs) detected during Phase I at boring location **024S0003**. Additionally, borings are proposed around the site's perimeter (locations 4 through 13) to determine the outermost aerial extent of elevated parameter concentrations detected generally across the site's central portion during Phase I.

**This** Phase II approach is intended to provide a worst-case scenario for potential soil remediation volume considerations. The reason for placing borings significantly "outboard" is to assure maximum probability of obtaining unimpacted soil. Sufficient information will be available from assessment of the site's interior to determine if soil remediation is necessary. Given the outer boring analytical **data**, calculation of impacted soil volume for potential removal can follow a conservative approach, with later refinement and adjustment based on confirmation sampling during the remedial action phase.

Two additional downgradient shallow wells **are** proposed at locations **14** and **15** to determine the northern extent of groundwater PRG exceedences detected at well locations 024GS01 and 024GS06 during **Phase I**.

#### Investigation Methodology

Borings for collecting **soil** samples will **be** completed with **stainless-steel** hand augers (as performed during Phase I) in accordance with Section **4.4** of the CSAP. Due to the shallow depth to groundwater (approximately **5** to **8** feet bls) at the site, recommended **soil** sample intervals for determining the vertical extent of potential contamination **are as** follows: **0-1** foot bls, **1-3 feet** bls, and **3-5** feet bls.

The additional shallow well will be installed using hollow-stem-auger drilling techniques (as performed during Phase I) in accordance with Section **5.3** of the CSAP. Well development will be performed with either a centrifugal or peristaltic pump until measured groundwater field parameters (temperature, pH, and specific conductivity) and turbidity have stabilized **as** specified in Section **5.4** of the **CSAP**.

Groundwater samples will **be** collected from the **six** permanent shallow wells installed during Phase I, and the newly installed seventh well, to confirm previously detected **parameters** exceeding PRGs. Samples will be collected in accordance with Section **6.1** and **6.3** of the CSAP using low-flow "quiescent" sampling techniques with a peristaltic pump, and dedicated teflon tubing and glass transfer **bottles**.

#### Analytical Methods

**Analytical** methods *are* chosen to target **parameters** for which detected concentrations exceeded PRGs during Phase I.

soil

Arsenic, beryllium, and manganese analyses using SW-846 methods 7060 and 6010 are proposed for all **soil** sample locations due to the widespread detection of **elevated** inorganics (arsenic and manganese). Despite the fact that **immunoassay** results were negative in the site's central portion, **pesticide/PCB** analyses using SW-846 method **8080** are **also** proposed for all Phase II locations due the **lack** of information regarding the **actual** pesticide mixing/handling **area** location. BNA parameter analysis using SW-846 method **8270** is **also** proposed for locations 1 through 3 **to** delineate the extent of elevated concentrations of these compounds detected (location 024S0003) during Phase I.

Groundwater

With the exception of **PRG** **exceedences** in the site's northwestern portion (and the installation of the Phase II shallow wells), confirmation sampling is proposed to confirm the presence of relatively low level inorganic, VOC, and pesticide concentrations detected during Phase I. Inorganic parameter (aluminum, antimony, arsenic, cadmium, iron, and manganese), VOC, and pesticide analyses **are** proposed for all Phase II groundwater samples. **These** analyses will be **performed** using CLP TAL/TCL methods. Full TAL/TCL list analyses **are** recommended for groundwater samples collected from newly installed Phase II wells (locations 14 and **15**).

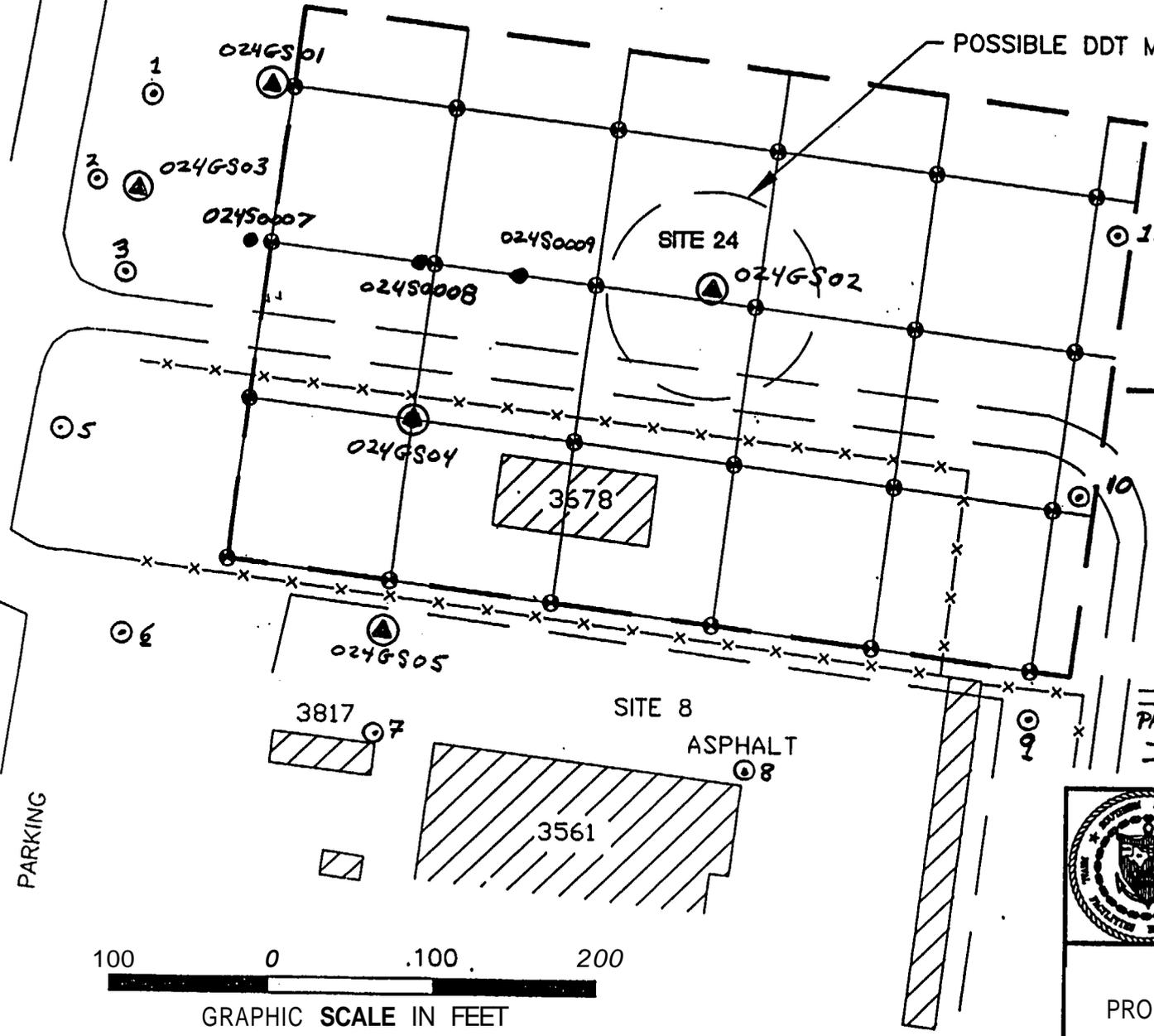
102' 7"  $\Delta$  14  
13  
 $\Delta$  0246S06

4  $\odot$   $\Delta$  15

$\odot$  12



POSSIBLE DDT MIXING AREA



LEGEND

- SITE BOUNDARY
- Phase I {
  - $\odot$  Screening SOIL BORING- PESTICIDE ANALYSIS
  - $\bullet$  Soil Boring
  - $\circ$  SHALLOW MONITORING WELL / Soil Boring
  - TREES
  - BUILDING
  - x-x- FENCE
  - == UNPAVED ROAD
- Phase II {
  - $\Delta$  Proposed Soil Boring
  - $\Delta$  Proposed Shallow Monitoring Well



SAMPLING AND ANALYSIS PLAN  
NAS PENSACOLA  
PENSACOLA, FLORIDA

FIGURE 1  
PROPOSED SAMPLING LOCATIONS  
SITE 24



SOURCE: MODIFIED FROM E & E 1992