

FORT WAINWRIGHT

CERCLA FEDERAL FACILITY AGREEMENT DELIVERABLE DOCUMENT

ACTION MEMORANDUM

SUBJECT: Action Memorandum for a Department of Army Time-Critical Removal Action at the Communications Site (a/k/a Taku Gardens Housing Expansion Area), and Imposition and Maintenance of Interim Land Use Controls, Fort Wainwright National Priorities List (NPL), Federal Facility Site, Fort Wainwright, Alaska.

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SITE ID: **CERCLIS - AK6210022426**
SSID - 10C7

I. PURPOSE

The purpose of this Action Memorandum is to document approval for a Time Critical Removal Action (TCRA) for upland soil contaminated with polychlorinated biphenyls (PCBs) and the imposition and maintenance of interim land use controls at the Communications Site (a/k/a Taku Gardens) within the Fort Wainwright Federal Facility NPL Site, located at Fort Wainwright, Alaska.

The removal action took place in September 2005 under urgent circumstances and is thus being documented after the fact, herein, now that sufficient time is available to do so. The actions taken soon after the discovery of PCB contamination consisted of the removal of high concentrations of PCB-contaminated soil and the installation of fencing and warning signs. These actions meet the criteria for initiating a removal action under the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR 300.415, as well as the requirements outlined in the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

Interim land use controls have been established for the Communications Site to assure safety and human health. Specifically, the Commander, U.S. Army Garrison Alaska has directed that residential occupancy will not be allowed in the housing at the Communications Site until all investigation and required cleanup is complete. The lifting of this restriction will be coordinated with both EPA Region X and the Alaska Department of Environmental Conservation (ADEC), as signatories to the Fort Wainwright's Federal Facility Agreement (FFA). The prohibitions to residential occupancy have been incorporated into the installation real property use master plan.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

1. Removal Site Evaluation

PCB-contaminated soil was discovered by construction crews in June 2005, while excavating at construction site 52, which is located in the southwestern corner of the Communications Site. Potential contamination was identified through field screening procedures employed for the entire construction site. Initial laboratory tests proved inconclusive, warranting a second round of sampling and analysis, which reveal very high PCB concentrations in the soil (up to 110,000 ppm) at the site 52 location (See Figure 1) and minor concentrations of other hazardous constituents.

2. Physical Location

The entire source area known as the Communications Site is located within the cantonment area of Fort Wainwright, Alaska. The entire area encompasses approximately 54 acres and is contained within an area bounded by Neely Road to the north, the Alaska Railroad to the east, Alder Avenue to the south, and White Street to the west. A military family housing complex borders the construction site to the west. PCB-contaminated soil was initially discovered while excavating for Housing Unit 52 foundation, consisting of approximately 1/2 acre in the southwestern portion of the housing complex construction site. The area was roped off to exclude any entry. The Exclusion Zone was later expanded, and now encompasses approximately five acres of the southwest corner of the housing project site.

3. Background and Site Characteristics

In 2004, a preconstruction environmental survey was accomplished, showing that much of the site was a 1950s era military landfill. Minor concentrations of PCB contamination (< 2 ppm) were detected in two bore samples. Subsequent step out sampling conducted prior to construction did not confirm the presence of PCBs. To facilitate the environmental survey, the Army cleared surface vegetation. During that process, a considerable amount of metal waste and some military munitions debris was uncovered. Army munitions experts confirmed that the munitions debris items did not contain any explosive materials.

Construction began in spring 2005. Additional metal debris and POL contamination was discovered on the site. As required by the contract, the contractor developed and implemented a screening process to detect possible contamination encountered during site excavation. The PCB contamination at construction Site 52 was discovered as a consequence of employing these procedures.

After initial discovery of the PCB contamination, only construction Site 52 was marked with warning tape and the contractor was instructed to keep workers out of the area. At some point following initial discovery of the PCB, construction crews entered the restricted area and spread contaminated soil by using the Site 52 soil to accomplish overfill work at other areas generally within the Exclusion Zone of Taku Gardens construction site. Upon discovery, the Army initiated an investigation. The contaminated soil was located through surface soil sampling, and returned to the Site 52. The Exclusion Zone was expanded to include seven additional excavation sites, and the Exclusion Zone was fenced and warning signs posted.

Historical photographs and records indicate that, beginning in the mid 1940s, the Communications Site was used for multiple purposes, including a salvage and reclamation yard. Temporary military barracks and offices were constructed in the early 1950s and were subsequently dismantled. A separate operation, the communications site, was located in the southwestern corner of the area during this period of time. Previous locations of radar systems are visible in some historic aerial photographs. When military operations ended, a portion of the land was developed into personal use garden plots and the remaining area was allowed to return to its natural state of vegetation. Little other historical information about the site is known and research is ongoing. Except for personal use garden plots contained on a few acres in the southwestern corner, the source area remained undeveloped for the last few decades until 2002-2003 when it was selected as the construction site for future military family housing.

In accomplishing the investigation to locate the moved PCB contaminated soil, the Army discovered that the site also contained other types of contamination including POL waste, solvents and munitions waste components. As a consequence, in 2006, the Army initiated a Preliminary Source Evaluation in compliance with the Fort Wainwright Federal Facility Agreement. A report of the findings of this undertaking was released in February 2007.

Fort Wainwright is a federally-owned facility managed by U.S. Army Garrison, Fort Wainwright, which is an installation-level command overseen by its higher headquarters U.S. Army Garrison, Alaska.

4. Release or Threatened Release into the Environment of a Hazardous Substance, or Pollutant or Contaminant

Available information indicates that, at some point in the past, PCB was released at the Communication Site. Sampling results of tests conducted across the site are recorded in the Preliminary Source Evaluation Narrative Report (2006). The test results showed PCB concentrations in soil as high as 115,000 ppm at Site 52.

Test results also indicated that additional contaminants may be present in subsurface soil and ground water at the source area. Site investigations indicate that large amounts of waste materials were buried at the site at some point in the distant past. This waste material was comprised of an extensive amount of scrap metal, which included some military munitions components and 55-gallon drums containing unknown residue. Removal of these buried waste materials is the subject of ongoing discussions with regulators. In addition, POL contamination was discovered in the northwestern portion of the site during construction; soil gas sampling of this area is scheduled for 2007.

The Army transitioned from removal to remedial response activities in accordance with 40 CFR 300.415(g) and the Fort Wainwright Federal Facilities Agreement in late 2005. An amendment to the Fort Wainwright Federal Facilities Agreement was signed by USEPA, ADEC and the Army in February 2007, and formally recognizes the Communication Site as Operable Unit 6.

5. National Priorities List (NPL) Status

The Communications Site is part of the Fort Wainwright Federal Facility Site, listed on the National Priorities List on August 30, 1990.

6. Maps, Pictures, and Other Graphic Representations: Attached map (See Figure 2) shows where the Exclusion Zone now lies in relation to the entire construction site, as well as shows other areas of potential concern. Maps also show the relationship of the entire site within the Fort Wainwright boundaries. (See Figure 3) In addition, existing construction debris piles are noted on the attached maps.

B. Actions to Date

1. Previous Actions

Investigations

Pre-construction geotechnical surveys were conducted at the Communications Site in late 2003 and 2004. Survey test results showed some amount of low-level PCB contamination. Unobtrusive geophysical testing was also done during this time frame, indicating several large areas of buried metal debris of an undetermined nature.

Following the discovery of PCBs in soil at Site 52 ranging from just above 1 to 115,000 ppm in July 2005, a sampling and analysis plan was jointly developed and approved by the Army, EPA and ADEC to determine the extent of the PCB contamination. In carrying out the plan, surface soil samples were collected and wipe samples were taken of construction and playground equipment, and of nearby houses. Temporary groundwater monitoring wells were installed to determine the migration potential of the PCBs. Soil borings, field screening and laboratory analyses were also carried out under the plan. The results of the sampling indicated that the highest concentrations of PCBs was largely limited to soil at or near the surface in a 5-acre section of the southwestern corner of the construction site, specifically Site 52. Surface sampling at Site 52 indicated that this was a localized historical source and was exposed due to the site clearances to a 2' depth from the prior surface. Any concentration greater than 1 ppm found

elsewhere on the site was solely due to contaminated soil inadvertently moved from Site 52, as discussed above.

In addition to PCB contaminated soil, petroleum contaminated soil was also discovered on the construction site. The source of the petroleum contamination is unknown but site investigation indicates it was not associated with any underground storage tank. Soil with petroleum concentrations exceeding state cleanup requirements was either removed for off-site treatment or stockpiled pending treatment, in a vacant lot near the installation Defense Reutilization & Marketing Office.

There remains on site stockpiles of metal debris excavated from the foundation work. These scrap piles were sifted through during the 2006 field season; that work is documented in the Preliminary Source Evaluation II. Remaining metals will be properly disposed of during the 2007 field season.

In early 2006, the site was temporarily divided into five sub-areas in consultation with the ADEC and the EPA) based on potential chemicals of concern, historical activities and available non-classified information. The boundaries and associated buildings for the five sub-areas are defined on Figure 4, and the Preliminary Source Evaluation 2 (PSE2) work plan was developed in accordance with FFA procedures. The PSE2's site evaluation was conducted through the summer field season. Based on the construction contractors' field notes and photographs of items uncovered by the contractor during 2005, the Army ordnance experts concluded the site could also contain discarded munitions components. For this reason, munitions experts were hired as part of the 2006 PSE2 field work to ensure site safety and proper identification of munitions components. The area where munitions items were found is Area A (See Figure 4). Several munitions components were found in both the test trenches and piles of construction debris, located in debris piles in the Northern Area of the site. Environmental and ordnance experts reviewed the materials from the piles, and whenever an unidentifiable or potential munitions item was found military ordnance experts were called to the site for a final decision on its disposition. All munitions components discovered during 2006 were taken off-site and disposed of by military ordnance experts. Technical documents generated by or on behalf of the agencies include:

- Draft Preliminary Source Evaluation Narrative Report, August 2006 (Oasis)
- Field Sampling Plan, Revision 3, August 2006 (North Wind)
- Final Revision, Delineation and Remediation of Contaminated Soil, Groundwater and Debris at Stryker Brigade Cantonment Areas, Accident Prevention Plan, August 2006 (North Wind)

- Accident and Prevention Plan and Site Safety and Health Plan, Jul/Aug 2006 (North Wind)
- FWA-102 Former Communication Site (Taku Gardens) Work Plan Addendum, Spring 2006 (North Wind)
- FWA-102 Former Communication Site (Taku Gardens), Field Data Report February 2006 (North Wind)
- Draft Revision 1, Site Characterization and Remediation Work Plan, Fort Wainwright, Alaska, June 2005 (North Wind)

Response Actions

Following the August 2005 laboratory confirmation that Site 52 contained PCB contamination, excavated soil piles were covered and dust control measures put in place to prevent contamination from spreading beyond the suspected source area.

In September 2005, much of the 54-acre Communications Site was fenced to restrict access, and warning signs were posted. Additional fencing was also installed around the approximately 5-acre PCB exclusion area, to separately control access to that area of the site. Warning signs were posted along the perimeter of the exclusion area.

In September 2005, approximately 230 cubic yards of excavated soil, weighing about 478,000 pounds and containing the highest known PCB concentration levels, was removed directly from the Communications Site and shipped out-of-state to a permitted hazardous waste landfill in Oregon for proper disposal. The removal was resource limited, but did reduce the highest potential threats to site workers and nearby residents. The remaining PCB soil was stockpiled within the PCB exclusion area and properly covered with plastic sheeting. This soil is planned for removal during the upcoming 2007 field season.

In November 2006, a permanent 8-foot tall chain link fence, with barbed wire across the top, replaced the 5-foot fence around the perimeter of the 54 acre site, with the exception of approximately 0.3 miles. The existing 6-foot fence along this stretch was replaced with a permanent 8-foot high chain link fence with barbed wire in Spring 2007. Signs were placed every 100 feet of the enclosing fence, stating: *Restricted Area, Keep Out*.

As part of Army's response action, and as a condition for approval of this Action Memorandum, Fort Wainwright has placed interim land use controls on the Communications Site pursuant to the U.S. Army Alaska Institutional Controls Standards Operating Procedures (SOPs). The land use controls prohibit residential use and occupancy of the newly constructed housing units until all

investigation and cleanup required under CERCLA is complete and coordination has been undertaken with requisite federal and state regulators. These land use controls (LUCs) shall be maintained in the installation master plan IAW AR 210-20. The following land use controls shall remain in effect until such time as demonstrated that inhabitants may safely inhabit the structures built on the Communications Site:

- Land use restrictions prohibiting residential occupation of the site until all investigation and cleanup required under CERCLA to protect human health and the environment is complete and regulator coordination has been undertaken.
- Fencing and warning signs will be maintained around the perimeter of the site to restrict access.
- Groundwater restrictions prohibiting the drilling and use of water wells for potable water, fire suppression, irrigation or other consumptive purposes.
- Land use restrictions prohibiting soil disturbing activities associated with construction or renovation of new or existing facilities to include residential and commercial construction, road repair and realignment, utility work, digging, trenching, excavation, paving or drilling of soil borings, except when such activities are carried out in accordance with an Excavation Clearance Request approved by the Army in consultation with EPA and ADEC. In cases of emergency, standard reporting requirements and practices will be followed.

At the point that residential occupation is permitted, these interim LUCs will be reconsidered and long-term use restrictions may be imposed as part of a CERCLA remedy. Regulator coordination and ADEC and EPA concurrence would be sought prior to the imposition of such remedial LUCs.

Community Relations

On 31 August 2005, U.S. Army Garrison Alaska conducted a press conference where local media were provided information about the conditions discovered on the construction site.

On 6 September 2005, a public meeting was held at Fort Wainwright to inform Fort Wainwright residents and members of the surrounding community about site conditions. The EPA and ADEC remedial project managers participated in the meeting. Information was provided about general PCB hazards and potential PCB exposures. At the meeting the Army agreed to sample neighboring houses, playgrounds, and anything else residents may be concerned with.

Results of the residential sampling were delivered by hand to the residents in September 2005. The results showed no PCB contamination above risk based levels (1 ppm) outside the construction area. Newsletters are planned to update residents and the community of the current status of this site.

Community relations will be implemented in accordance with the Fort Wainwright Federal Facility Agreement. In addition, the Community Involvement Plan will be revised to include Operable Unit 6, and newsletters will be sent to the surrounding community.

2. Current Actions

Both EPA Region X and ADEC are currently reviewing the final PSE1 and draft PSE2 reports. When complete, the regulators and Army will evaluate the results, in accordance with the FFA process. During the upcoming 2007 field season, Army will begin work on a remedial investigation and feasibility study (RI/FS), which will include site-specific risk assessments and will be submitted as FFA deliverable documents. During the drafting of these documents, Army will coordinate with both EPA Region X and ADEC to ensure that any outstanding concerns are being addressed in the RI/FS. Additional removals where PCB contamination is greater than 1 ppm are also planned for the 2007 field season; these actions will be coordinated in accordance with the FFA parties.

The housing units that have been constructed on the Communications Site are vacant and will remain so until deemed safe for habitation.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Conditions at the Communications Site in September 2005 presented an immediate potential threat to public health or welfare or to the environment, thereby meeting the criteria for a time critical removal action as set forth in 40 CFR 300.415(b). This NCP requirement concerns the need to address actual or potential exposure to human populations from hazardous substances and to address possible migration of such contamination. The Communications Site sits next to a residential neighborhood. Tests showed that soil excavated within specific sections of the PCB exclusion area (Site 52) contained PCB concentrations as high as 111,000 ppm, so the PCB levels in stockpiled excavated soil in the exclusion area could potentially be quite high, even if diluted. These high concentrations of PCBs posed a potentially unacceptable risk if inadvertently inhaled or ingested. Also, the exposed excavated soil could have been released into the neighboring environment by being carried off the site by wind, storm water or snowmelt, so the removal action was undertaken to address any unacceptable risks posed by potential migration of contamination.

IV. ENDANGERMENT DETERMINATION

Given the very high concentrations of PCB at Site 52 and potential mobility of the excavated soil stockpiled within the PCB exclusion area, Army determined that it must conduct a removal action of the PCB-contaminated soil to address an unacceptable risk to public health and the environment.

V. CONSISTENCY DETERMINATION

The removal actions described in this Action Memorandum are otherwise appropriate and consistent with any future response action that may be taken. The removal of PCB-contaminated soil will not interfere with any future response activity that may be needed to address other possible soil and groundwater contamination that may be on the construction site, nor limit the possible range of alternative courses of action that may be available for this site. The completed removal action includes the implementation of interim land use controls to ensure protection of human health.

1. Engineering Evaluation/Cost Analysis (EE/CA)

Because the response actions were time critical, an Engineering Evaluation/Cost Analysis is not required.

2. Applicable or Relevant and Appropriate Requirements (ARARs)

The removal action elements involving the September 2005 disposal of PCB-contaminated soil attained or exceeded all ARARs to the extent practicable. Two factors were applied to determine whether the identification and attainment of ARARs was practicable: (1) the exigencies of the situation; and (2) the scope of the removal action to be taken.

Federal ARARs:

The following is a summary of Federal ARARs identified to date for the removal action elements involving the September 2005 disposal of PCB-contaminated soil:

Toxic Substances Control Act regulations [40 CFR Part 761] provides cleanup and disposal options for PCB remediation waste including PCB-contaminated soil, and provides guidance for institutional controls of PCB contaminated areas [40 CFR § 761 Subpart G].

U.S. Department of Transportation (DOT) requirements, 49 CFR Parts 171 through 180, relating to transportation of hazardous materials to off-site disposal facilities.

State of Alaska ARARs:

18 AAC §62.310 (transportation of hazardous materials) has been identified as a State applicable ARAR.

3. Project Schedule

The removal of PCB-contaminated soil, and the installation of fencing and warning signs, took place in September of 2005. The interim institutional controls for the Site, including the amendment of the installation master plan, will be considered effective upon all Parties signing this Action Memorandum.

VI. ESTIMATED COSTS:

Total cost for the removal of PCB-contaminated soil and the installation of fencing and warning signs is approximately \$340,000. Additional costs associated with the implementation of the institutional controls consist primarily of Army management costs, which are expected to be less than \$10,000. All costs of the removal action have been and will continue to be funded by the Department of Army.

VII. OUTSTANDING POLICY ISSUES: None

VIII. RECOMMENDATION

This decision document represents the selected removal action for the Communications Site in Fort Wainwright, Alaska, developed in accordance with CERCLA and the NCP section 300.415(b)(2) criteria for a removal. This decision is based on the administrative record for the site.

Future response actions at the Communications Site are subject to regulator coordination in accordance with the Ft. Wainwright FFA. This includes the imposition and maintenance of the interim land use controls described herein. Specifically, Fort Wainwright will maintain the prohibition against residential use of the Communications Site as part of its real property master plan until all investigation and cleanup required under CERCLA to protect human health and the environment is complete and regulator coordination has been undertaken. This commitment was also outlined in letters from COL Shutt, dated September 25, 2006, to both EPA Region X

and ADEC. Any decision to occupy this housing site will be first coordinated with EPA Region X and ADEC to ensure that all parties agree that the Communications Site may be used for residential purposes.

APPROVED:

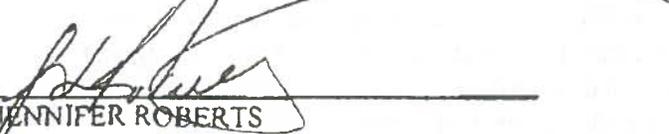
For the Army:



DAVID L. SHUTT
Colonel, U.S. Army
Commander, U.S. Army Garrison, Alaska

CONCURRING:

For ADEC:



JENNIFER ROBERTS
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Alaska Department of Environmental Conservation

For EPA:

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U.S. Environmental Protection Agency, Region 10

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APPROVED:

For the Army:



DAVID L. SHUTT
Colonel, U.S. Army
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CONCURRING:

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For EPA:



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3.3 Master Plan Regulations, Army Regulation 210-20 - IC3

The Army issued a new regulation, Master Planning for Army Installations, AR 210-20, on July 13, 1987, updating an earlier regulation dated January 26, 1976. AR 210-20 "establishes the requirement for an installation master plan and planning board and specifies procedures for developing, submitting for approval, updating, and implementing the installation master plan." IC3 provides for comprehensive planning at Army installations and not only allows, but requires, incorporation of existing land-use and conditions into the Master Plan. IC3 provides a framework for comprehensive planning through the use of component plans, which include, but are not limited to, the following:

- Natural Resources Plan
- Environmental Protection Plan
- Installation Layout and Vicinity Plan
- Land-use Plan
- Future development Plan

The overall objective is to provide each installation with a master plan through the integration of each component plan into the installation master plan. The component plans form a series of narrative, tabular and graphic plans. Their integration into an installation master plan provides many benefits as outlined in AR 210-20, including "the mechanism for ensuring that installation projects are sited to meet operational, safety, physical security, and environmental requirements." PTA Office of the Chief Engineer in the Public Works Directorate is in charge of the master plan. A key component of the PTA master plan is the Arsenal Land-use map.⁴⁸

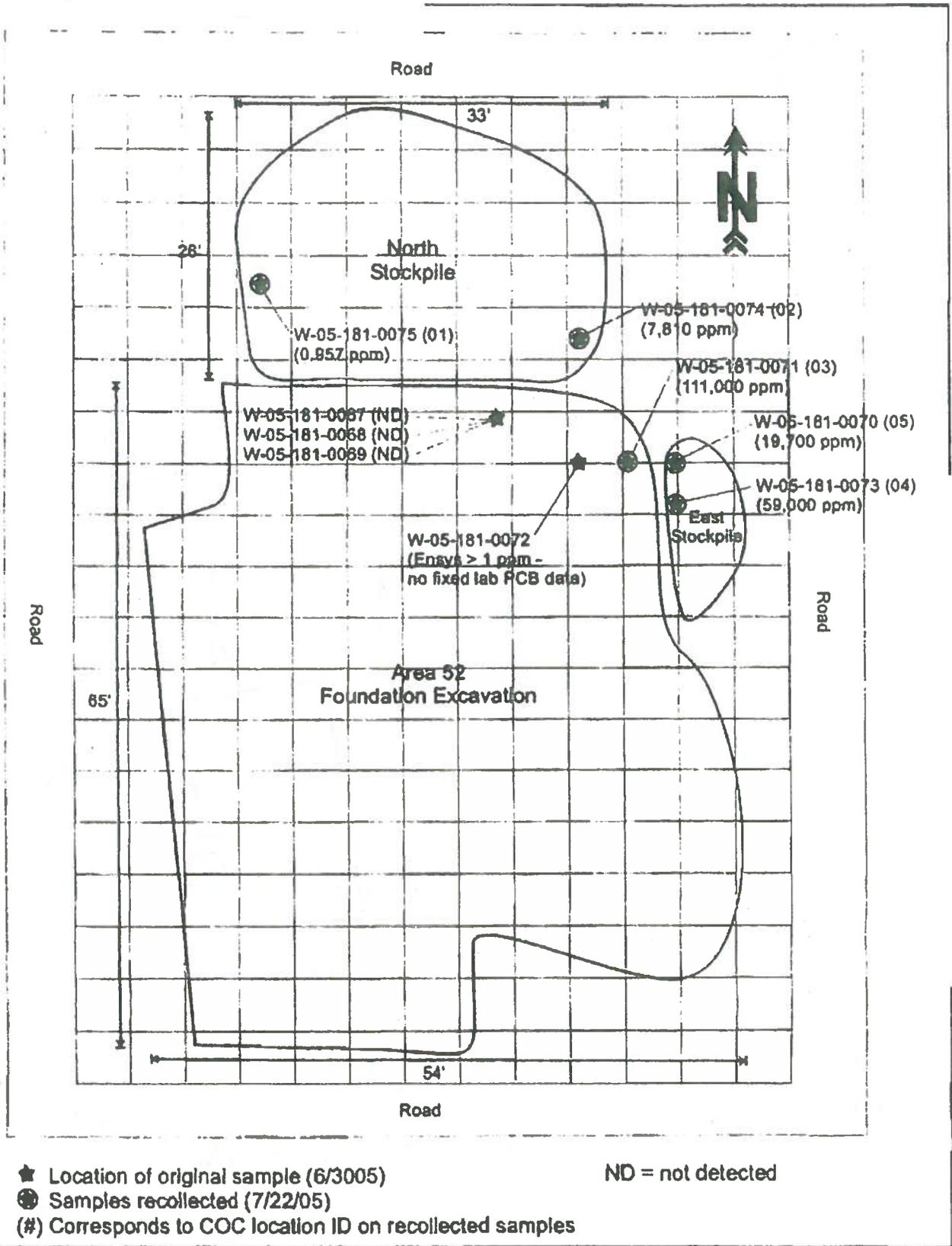


Figure 1
Area 52 Sampling Locations
and Aroclor 1260 Results

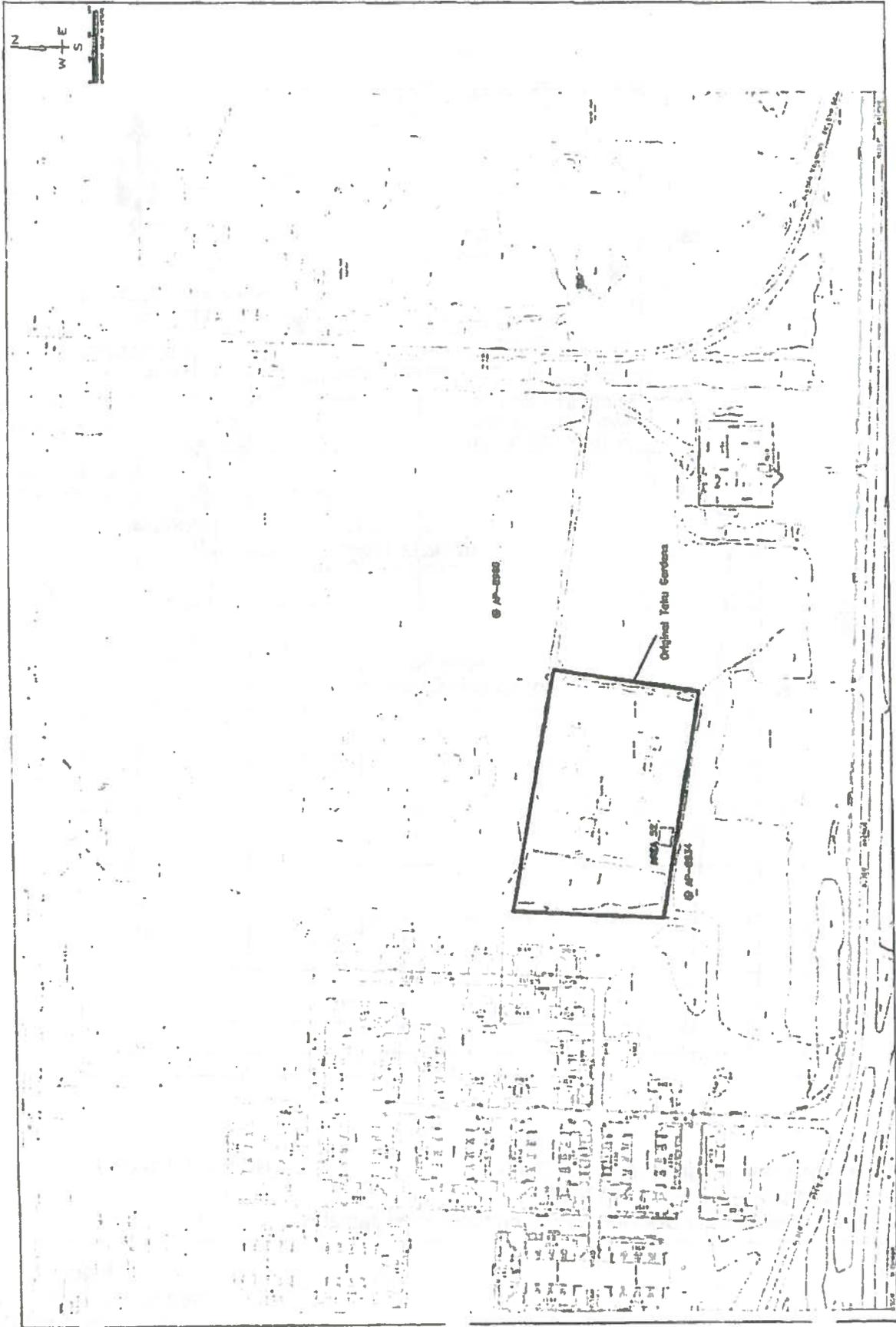


Figure 2
Exclusion Zone

