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THE MEMPHIS DEPOT
TENNESSEE

ADMINISTRATIVE RECORD
COVER SHEET

AR File Number 713

Memphis Depot
Dunn Field
Action Memorandum
Former Pistol Range, Site 60

October 2002
Rev. 1

CH2MHILL

U.S. Army Engineering and Support Center, Huntsville

U.S. Army Engineering and Support Center, Huntsville
Contract No. DACA87-94-D-0009
Task Order No. 13

EM020020027ATL

DEFENSE LOGISTICS AGENCY
DEFENSE DEPOT SUSQUEHANNA PENNSYLVANIA
OL, MEMPHIS
2163 AIRWAYS BOULEVARD
MEMPHIS, TENNESSEE 38114

IN REPLY REFER TO DDSP-D

October 11, 2002

MEMORANDUM FOR THE ADMINISTRATIVE RECORD FOR DUNN FIELD

SUBJECT: Rev. 1 Action Memorandum – Former Pistol Range, Site 60, Dunn Field

The final (Rev. 1) Action Memorandum for the former Pistol Range, Site 60 on Dunn Field of the Memphis Depot is attached. This document incorporates information on the Site 60 removal action developed in the Site 60 Engineering Evaluation/Cost Analysis document. The document also contains a Responsiveness Summary from all comments received during the public comment period.

For more information, please contact Clyde Hunt or me at (901) 544-0617.

JOHN P. DE BACK
BRAC Environmental Coordinator

Attachment:
Final (Rev. 1) Action Memorandum, Site 60, Dunn Field

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DDC (Memphis) (2 CDs)
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ACTION MEMORANDUM

Former Pistol Range

Site 60

Defense Distribution Center (Memphis), Dunn Field

Site Status: Closed Pistol Firing Range
Category of Removal. Non-Time Critical Removal Action
CERCLIS ID: TN4 201 002 0570
Site ID 60

I. Purpose

The purpose of this Action Memorandum is to request and document approval of the proposed removal action described herein for the former Pistol Range at the Dunn Field of the Defense Distribution Center (Memphis) (also referred to the Memphis Depot) located at 2613 Airways Boulevard, Memphis, Tennessee, 38114. The Memphis Depot is in Shelby County.

II. Site Conditions and Background

A. Site Description

1. Removal Site Evaluation

The Memphis Depot (formerly known as Defense Distribution Depot Memphis, Tennessee and referred to in this document as the Depot) is a former US Defense Department supply depot The facility was in operation from World War II until its closure in 1997 The Depot is divided into two major units - the Main Installation and Dunn Field.

Dunn Field was divided into three separate areas as part of the Dunn Field Remedial Investigation (RI) to assist the investigation of previous activities (CH2M HILL, July 2002). These areas are known as the Northeast Open Area, Disposal Area, and Stockpile Area. This document is concerned with the Northeast Open Area only.

Within the northeastern quadrant of the Northeast Open Area contains Site 60 - Pistol Range Impact Area and Bullet Stop and the adjacent Site 85 - Pistol Range Building and Temporary Pesticide Storage Building Although this document is focused towards Site 60, the proximity of Site 85 will result in removal activities being conducted there as well.

Contamination within Site 60 and 85 primarily consists of contaminated surface soil Historical information, on-site inspection, and the results of surface soil sampling during the RI from Site 60 and the adjacent Site 85 suggest that the following removal action will be conducive to transfer the sites for the planned future unrestricted use:

- Remove brush, trees, and overgrowth from the former backstop area and the metal target racks and associated support system;

- Demolition of Building 1184, including the pistol stand, and concrete slabs that are in the footprint of the excavation, and
- Remove areas of contaminated surface soil identified by surface soil sampling within the footprint of the former pistol range

2. Physical Location

The Memphis Depot is located in Memphis, Tennessee (Figure 1), consists of approximately 642 acres and includes the Main Installation (MI), which includes open storage areas, warehouses, military family housing, and outdoor recreational areas, and Dunn Field, which includes former mineral storage and waste disposal areas. The major features of the Depot are shown in Figure 2 The Depot lies approximately 5 miles east of the Mississippi River and just northeast of the Interstate 240–Interstate 55 junction in the south-central portion of Memphis, approximately 4 miles southeast of the central business district and one mile northwest of Memphis International Airport (Figure 1). Airways Boulevard borders the MI portion of the Depot on the east and provides primary access to the MI. Dunn Avenue, Ball Road, and Perry Road serve as the northern, southern, and western boundaries of the MI, respectively.

Dunn Field, comprising 64 acres of primarily undeveloped land, is immediately adjacent, across Dunn Avenue, to the north-northwest portion of the MI. Dunn Field is bounded by the Illinois Central Gulf Railroad and Person Avenue to the north, Hays Road to the east, and Dunn Avenue to the south Dunn Field is partially bounded to the west by: (1) Kyle Street, (2) Memphis Light Gas and Water (MLGW) powerline corridor (which bisects Dunn Field), (3) undeveloped property; and (4) a commercial trucking facility (Figure 2).

3. Site Characteristics

Site 60 is located approximately 400 feet south of the north fence surrounding Dunn Field (Figure 3) and 90 feet west of Building 1184 The boundary of the site has been estimated using historical aerial photography, which also indicate that the site was constructed between 1953 and 1958. Records from the former Memphis Depot identify Site 60 as a former pistol range used for marksmanship training No additional information is available about previous uses of this area There is no documented evidence that this site was ever used for the storage or disposal of hazardous or toxic materials. The time period that Site 60 was used for target practice is unknown, but the Installation Assessment report (USATHMA, 1982) states that the "area was abandoned in the late 1970s and the building [1184] is currently being used for pesticide storage "

From historical documents, Site 85 appears to be the building located at the former pistol range Site 85 is the Pistol Range Building (Building 1184) that served as an office and control point for Site 60 and is located immediately adjacent to the pistol stand and Site 60 area (see Figure 4) Reportedly during activities at Dunn Field, this building also served as a location for temporary storage of pesticide containers. No additional information is available about previous uses of this area. Building 1184 is no longer used for temporary storage of pesticides

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

At Site 60 and the adjacent Site 85, 6 surface soil samples were collected during the RI and analyzed for pesticides, PCBs and metals Soil from the pistol range was sieved onsite during the sampling event, verifying the presence of lead bullets and casings. Of the 6 surface soil samples analyzed for lead, 5 samples contained lead concentrations that exceeded the background value of 30 milligrams per kilogram (mg/kg) The lead concentrations ranged from 39 2 mg/kg to 2,100 mg/kg, with the maximum value recorded in samples from the former Pistol Range

Other metals detected in soil samples from the Pistol Range include beryllium, cadmium, chromium, copper, and zinc. A total of four pesticides were detected in six surface soil samples from Sites 60 and 85. DDT, DDD, dieldrin, and endrin Figure 8-5 in Section 8 of the Dunn Field RI report (CH2MHILL, July 2002) presents the locations within the Northeast Open Area where samples were collected for pesticides analysis, and highlights the pesticides with concentrations above background or with any detectable concentration if no background concentration is available

The Dunn Field RI report stated that dieldrin, DDD, and DDT were detected across the Northeast Open Area, but are not associated with discrete releases from source areas within the Northeast Open Area In the past, these pesticides were sprayed routinely on grassy areas and around buildings, and a wide range of variability was observed (CH2M HILL, 1999, Main Installation RI Report) The Dunn Field RI report also stated that the high dieldrin concentration near the Former Pistol Range (6085D) may result from increased application in this area because of frequent activity and is not indicative of releases specifically from pesticide handling at Site 85.

PCBs (Aroclor 1260) were detected in 3 of 6 samples analyzed; however, all results were reported as estimated with a "J" qualifier, and none were reported above the background value of 0 11 mg/kg.

5. NPL Status

The Memphis Depot was placed on the National Priorities List (NPL) in October 1992, and must fulfill the requirements under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Contingency Plan (NCP). The Depot is under the jurisdiction of the Tennessee Department of Environment and Conservation (TDEC) and EPA Region IV.

A sitewide remedial investigation and feasibility study (RI/FS) have been finalized (July 2002) or submitted for review (August 2002), respectively, in accordance with CERCLA and the NCP to evaluate human health and environmental risk, and to screen for potential remedial actions

Proposed removal actions outlined in this Action Memorandum, however, are actions the Memphis Depot decided to voluntarily pursue to remove readily accessible chemical contamination at Site 60 to facilitate property transfer. Additional remedial action requirements are not expected for the Northeast Open Area, based upon the results of the risk assessment conducted as part of the RI.

B. Other Actions

1. Previous Actions

Previous removal actions at Dunn Field have included removals outside of the Site 60 area These activities were conducted as non-time critical removal actions under CERCLA An EE/CA was performed by Parsons Engineering Science, Inc in June 1999 to· (1) assess whether CWM contamination was migrating from the CWM disposal pits at Dunn Field; (2) analyze risk management alternatives; and (3) recommend feasible CWM remedial alternatives for contaminants found to be present The recommended alternative for the three identified areas of concern at Dunn Field was Alternative 4, excavation and removal of CWM UXB International, under contract with USACE - Huntsville, conducted the removal action from mid-2000 to mid-2001 at Sites 1, 24-A, and 24-B

Other surface soil removal actions have occurred at the MI, including removals at Parcels 35 and 28 (in 2000), Building 949 (in 2001), the former cafeteria area (in 1998), and the housing area (in 1998) The Building 949 removal action on the MI involved removal of lead contaminated soil down to one foot, similar to the activity for Site 60. In each case, excavation and removal of the contaminated material was the remedial method This method was preferred over others because of the low amount of material to be removed and remediated Other methods were found to be too costly because of equipment and time requirements. Cleanup limits for these projects were based on risk-based criteria

2. Current Actions

There is a groundwater extraction system on the western perimeter of Dunn Field that has been in place and operational since 1999. There will be no concurrent soil actions on Dunn Field.

III. Threats to Public Health, Welfare, or the Environment

A. Threats to Public Health or Welfare

The expected land use of Sites 60 and 85 located within the Northeast Open area of Dunn Field is unrestricted. All users of the site are not expected to encounter any residual contamination that would pose an unacceptable risk from past uses of the Northeast Open Area

Lead contamination in surface soil is the greatest potential concern to human health The maximum recorded lead concentration in surface soil at the Northeast Open Area is 2,100 mg/kg, with an estimated arithmetic mean of 196 mg/kg The maximum concentration was detected in sample Location 6085D from Site 60. All lead concentrations for Site 60 and the entire Northeast Open Area, except the maximum, are below a residential exposure-based screening level of 400 mg/kg and an industrial worker exposure-based target concentration of 1,536 mg/kg (CH2M HILL, July 2002). The lead is possibly associated with spent bullets in the firing range, as the elevated concentrations were limited to this area. The maximum observed lead levels at the site are expected to pose health hazards for any of the receptors mentioned because both screening levels have been exceeded

B. Threats to the Environment

According to Section 9 – Baseline Risk Assessment of the Northeast Open Area, within the Dunn Field RI, the only potential threats to the environment were from concentrations of dieldrin and chromium The risk was based on the American Robin as the target receptor. The risk assessment stated that it is unlikely that the robin would forage exclusively within the bounds of the Northeast Open Area, or that dieldrin and chromium would be uniformly distributed in surface soil, or that these chemicals would be 100 percent bioavailable in organic soil. In addition, the dietary components of the robin were conservatively estimated to support a worst case exposure to dieldrin; however, its actual diet is likely to differ (and is known to include more fruit and seeds at some times of the year) and the availability of preferred food items at the Northeast Open Area is expected to be low as a result of routine mowing activities. Based on this evaluation, the risk assessment concluded that no further assessment of ecological risk associated with contaminants at the Northeast Open Area was warranted

IV. Endangerment Determination

Contamination has been detected in excess of residential screening criteria within the Site 60 area The Memphis Depot has elected to perform the following removal actions to remove readily accessible contamination so that the property may be transferred for future unrestricted use:

- Clearing and grubbing of the bushes and trees that have grown in and around Site 60.
- Removal of up to 12-inches of soil for all areas of contaminated surface soil within the perimeter of Site 60 where previous sampling suggests the presence of surface soil contamination in excess of residential screening criteria.
- Removal of up to 24 inches of surface soil from the former bullet stop area within the perimeter of Site 60.
- Removal of Building 1184 (Site 85), as well as all other metal emplacements including the pistol stand and target racks.

V. Proposed Actions and Estimated Costs

A. Proposed Actions

To expedite this removal action, the BRAC Cleanup Team (BCT) for the Memphis Depot determined that the process of a full analysis of available alternatives for Site 60 was not necessary. Instead, this removal action would be based upon previous, similar EE/CA and feasibility study activities at the Memphis Depot, especially those conducted for Parcels 35 and 28 and the surface soils on the Main Installation (e.g , Building 949) in Functional Unit (FU) 4. The documentation and activities for those two removals were used as the basis for selection of the remedial alternative at Site 60. Sections 3, 4, and 5 of the final EE/CA document for the Old Paint Shop and Maintenance Area, Parcels 35 and 28 (CH2M HILL, August 1999) identify, analyze, and compare the alternatives The method recommended as the primary remedial alternative included excavation and removal of surface soil

contamination in excess of risk-based industrial and residential screening criteria. The excavation and removal method was selected because (1) this alternative would effectively meet risk-based cleanup criteria and decrease residual effects, (2) the alternative is technically appropriate and feasible, and (3) costs were acceptable The MI Soils Feasibility Study (FS) (CH2M HILL, July 2000) also identified several remedial alternatives for removal of lead contaminated surface soil at various locations (e.g , Building 949) on the MI. Section 4 of the FS identified excavation, transportation, and off-site disposal as being protective of human health and the environment via contaminant reduction to industrial worker exposure levels acceptable to appropriate land use. The alternative was also found to be permanent, timely in implementation, and cost-effective. Further, the MI Record of Decision (ROD) (CH2M HILL, September 2001) provided that, for Building 949, excavation and removal is the preferred alternative for remediation due to its expediency, permanence, and moderate cost The reader is referred to these documents for specific information related to the alternative evaluation and selection process

As identified by the BCT, the one objective that is to be accomplished by this non-time critical removal is that Site 60 should, after the removal is completed, be available for unrestricted use Based on these requirements, the parameters of previous removal actions, and successful implementation of those previous removal actions, excavation, transportation, and offsite disposal of all contaminated surface soil and debris at Site 60 (including the removal of Building 1184 [Site 85]) was selected by the BCT as the most effective and efficient method.

1. Description of Proposed Action

The proposed removal action includes the following elements

- Clearing and grubbing of the bushes and trees that have grown in and around Site 60 Removal of roots from former tree locations and removal of potentially contaminated soil from the root balls.
- In-situ soil characterization sampling for lead constituents across Site 60, based on a grid pattern deteremined by the RA contractor, prior to excavation resulting in direct load-out of the material when mobilization occurs.
- Removal of 12-inches of soil for all areas (except Area C in Figure 5) of contaminated surface soil within the perimeter of Site 60 where previous sampling suggests the presence of surface soil contamination in excess of residential screening criteria, and the presence of spent bullet and casings have been found
- Removal of up to 24 inches of surface soil from Area C within the perimeter of Site 60, as shown in Figure 5, as this area served as the bullet stop while the site was used as a pistol range.
- Removal of Building 1184 (Site 85), as well as all other metal emplacements including the pistol stand and target racks.
- Confirmatory sampling from all excavations to ensure that. (1) no additional contaminated soil above residential screening criteria (lead at 400 mg/kg) is present, and (2) spent bullets are not present

- Replacement of excavated areas (primarily Areas A and B) with clean (laboratory tested), backfill soil The source of this soil is the backstop area.
- Engineering controls to minimize fugitive dust and stormwater releases as well as all water related to decontamination procedures

2. Contribution to Remedial Performance

The proposed removal action will remove residual surface soil contamination to the extent necessary to facilitate transfer of the property for unrestricted use. Removal of the soil will support a No Further Action determination for surface soil for Site 60 and the Northeast Open Area within the upcoming Record of Decision document for Dunn Field Action will be required for groundwater underlying Dunn Field and some subsurface areas of the Northeast Open Area may be targeted for soil vapor extraction as part of the Dunn Field Remedial Action for subsurface soil.

3. Description of Alternative Technologies

Onsite and offsite treatment alternatives to excavation and removal may be potentially viable from a technical perspective, but in consideration of previous removal actions at the Memphis Depot and the relatively small volume of soil and low cost of landfill disposal, other treatment options would not be cost-effective As a result, no treatment alternatives to landfill disposal were considered

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

The proposed removal action is based on removal action requirements and an alternatives evaluation documented in the *Final Memphis Depot Dunn Field Engineering Evaluation/Cost Analysis, Former Pistol Range, Site 60*, dated July 2002, and information and decisions made prior to publication of that document.

5. Applicable or Relevant and Appropriate Requirements

The following list of applicable or relevant or appropriate requirements (ARARs) was developed based on the scope of work to be performed during the removal action:

- The excavation and disposal of soil that contains RCRA-restricted waste may trigger the RCRA land disposal restrictions (LDRs). In general, RCRA's LDRs were established for waste streams that differ significantly from Superfund wastes. Because the LDRs are not based on treating wastes that contain soil and debris, a treatability variance may be appropriate. Under a treatability variance, alternative treatment levels based on data from actual treatment of soil, or best management practices (BMPs) for debris, become the "treatment standard" that must be met To determine if the soils are to be disposed of in a hazardous or solid waste landfill, a toxicity characteristic leaching procedure (TCLP) test is conducted on representative soil samples to determine if a waste is characterized as hazardous per Title 40 of the *Code of Federal Regulations* Part 261 Subpart C (40 CFR 261C). The excavation and off-site disposal of soil and debris that contain a RCRA hazardous waste must comply with transporter regulations under 40 CFR 263C). A transporter under Subtitle C is defined as any person engaged in off-site transportation of hazardous waste within the United States Such transportation requires a manifest under 40 CFR 262

- Applicable Occupational Safety and Health Administration (OSHA) health and safety regulations will be followed during removal actions Workers performing the activities will be properly trained and under appropriate medical supervision Appropriate personal protective equipment (PPE) will be used and appropriate safe work practices will be followed This includes OSHA 29 CFR 1926.62, which also addresses when employees must follow mandatory hand-washing procedures and when full-body showers are required, and when employers must make available medical exams for workers as well as testing for blood lead levels There are provisions for removing workers with high blood lead levels from jobs involving lead exposure

- Lead contaminated materials, if any will be managed in accordance with appropriate OSHA, EPA, State of Tennessee and Memphis and Shelby County Health Department/Pollution Control Division requirements.

- Lead contaminated soils will be removed as necessary to achieve cleanup standards, as described in Description of Proposed Action above.

- Emissions to air during excavation and/or on-site treatment may require compliance with the substantive requirements of Tennessee Rule 1200-3-1, which includes requirements for the control of fugitive dust emissions, among others.

6. Project Schedule

The US Army Corps of Engineers, Mobile District, currently has a remedial action contractor under contract to perform remedial actions at the Memphis Depot. The procurement procedures for this action are being completed during development of this document

Current projections indicate that the removal work will begin during the late fall of 2002 and completion of the work in winter of 2002/2003.

B. Estimated Costs

The conceptual level cost estimate for the proposed removal action is $300,000 This cost estimate includes a direct capital cost (for example, cost of remedial action workplan development, labor for oversight, mobilization, excavation, transportation, and disposal) of $240,000 and indirect costs as project management and contingency for $60,000. Indirect costs are assumed to be 25% of the capital costs

These costs are order-of-magnitude capital costs Order-of-magnitude estimates are made without detailed engineering data and included estimates of major cost components and quantities, typical costs for similar work, cost curves, and scale-up or scale-down factors or ratios. It is normally expected that estimates of this type would be accurate to within plus 50 percent to minus 30 percent. The final costs of this project will depend on actual labor and material costs, competitive market conditions, final project costs, implementation schedule, and other variable factors As a result, the final project costs will vary from the estimates presented herein

VI. Expected Change in the Situation Should Action Be Delayed or Not Taken

As long as surface soil contamination at Site 60 remains, there is potential for migration of surface contaminants via surface water drainage or dust. The presence of contaminant-laden surface soils presents a hazard to users of the Northeast Open Area.

VII. Outstanding Policy Issues

The work is being funded fully by the Defense Logistics Agency. No policy issues concerning cost sharing or EPA funding are involved for the removal action

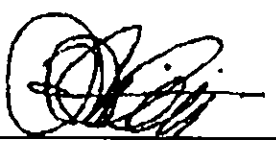
VIII. Enforcement

The proposed removal action is a non-time critical removal action voluntarily being undertaken by the Depot. It is not an enforcement action; however, review and oversight of the removal action by TDEC and EPA are expected Since it is a voluntary action, an Enforcement Addendum is not required.

IX. Recommendation

This decision document represents the selected removal action for Site 60, and the Memphis Depot, developed in accordance with CERCLA, as amended, and is consistent with the NCP The decision is based on the administrative record for the site

Conditions at the site meet the NCP Section 300 415(b) (2) criteria for a removal action and I recommend approval of the proposed removal action



30 Oct 2002

R.J RITCHIE
Captain, SC, USN
Commander

(Date)

FIGURES

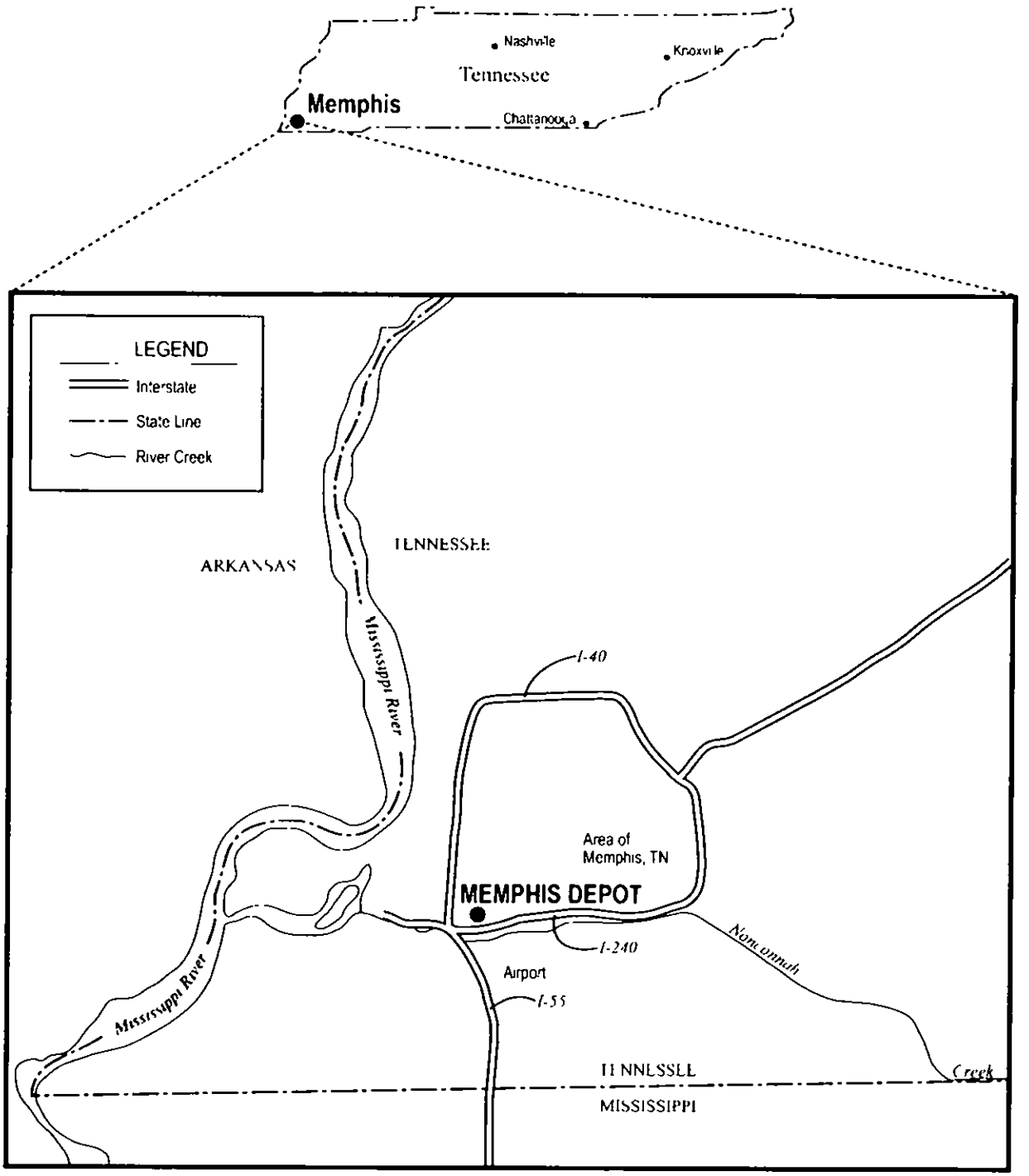


FIGURE 1
MEMPHIS DEPOT LOCATION IN THE MEMPHIS METROPOLITAN AREA
REV 0 DUNN FIELD - SITE 60 ACTION MEMORANDUM

N

LEGEND

Site Boundary

0 500 1000 Feet

SCALE IS APPROXIMATE

Figure 2
MAJOR FEATURES OF THE DEPOT
Aerial Photo Date: 1997
Rev. 0 Dunn Field - Site 60 Action Memorandum

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ATL \Boomer\Projects,3\Memphis\spors\dunnfield_aerial.apr

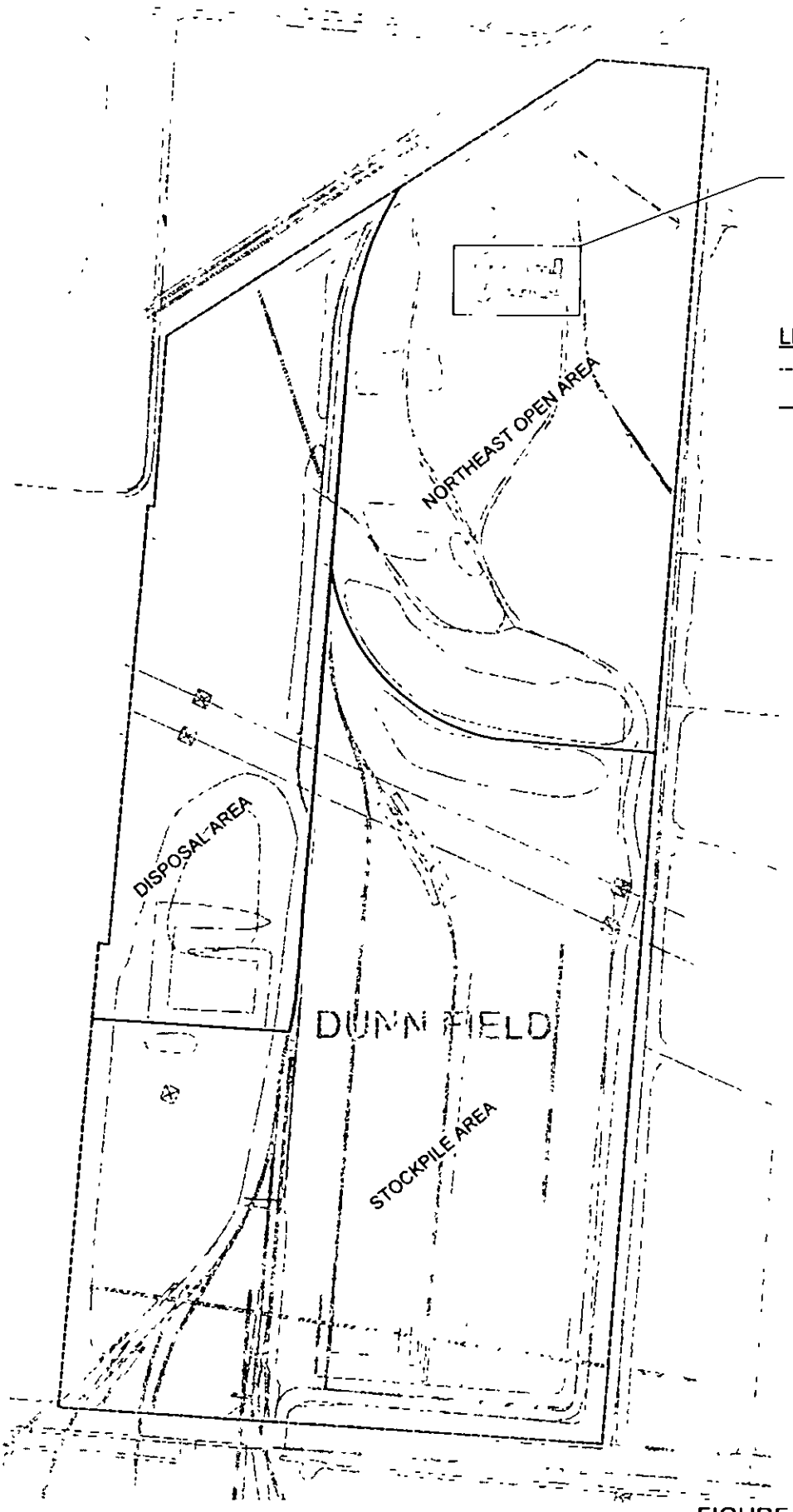

FIGURE 3
Area Designations at Dunn Field
Rev 0 Dunn Field - Site 60 EE/CA
ACTION MEMORANDUM

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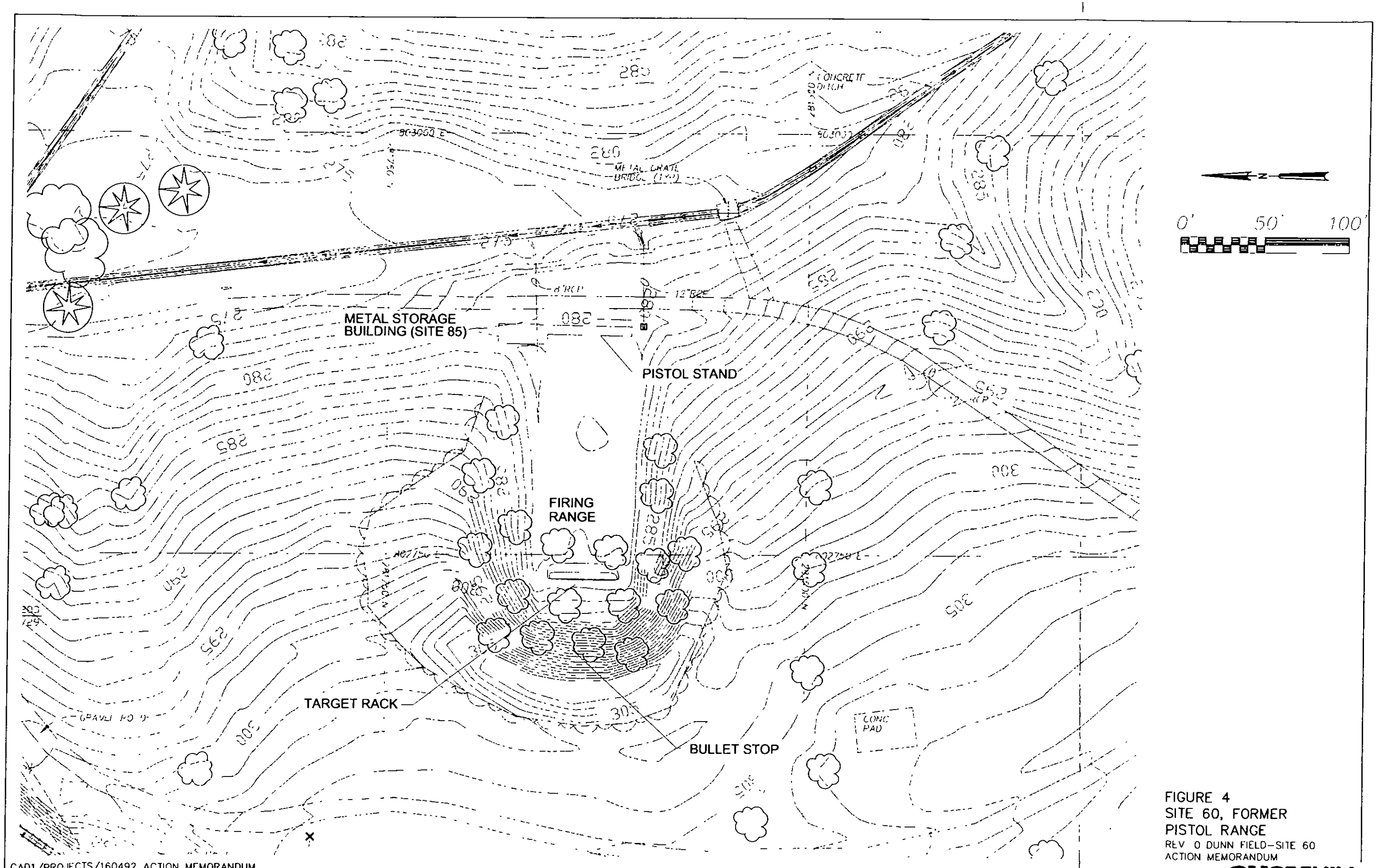
ATL/CAD1/PROJECTS/1160492 ACTION MEMORANDUM



CAD1/PROJECTS/160492 ACTION MEMORANDUM

FIGURE 4
SITE 60, FORMER PISTOL RANGE
REV 0 DUNN FIELD–SITE 60
ACTION MEMORANDUM

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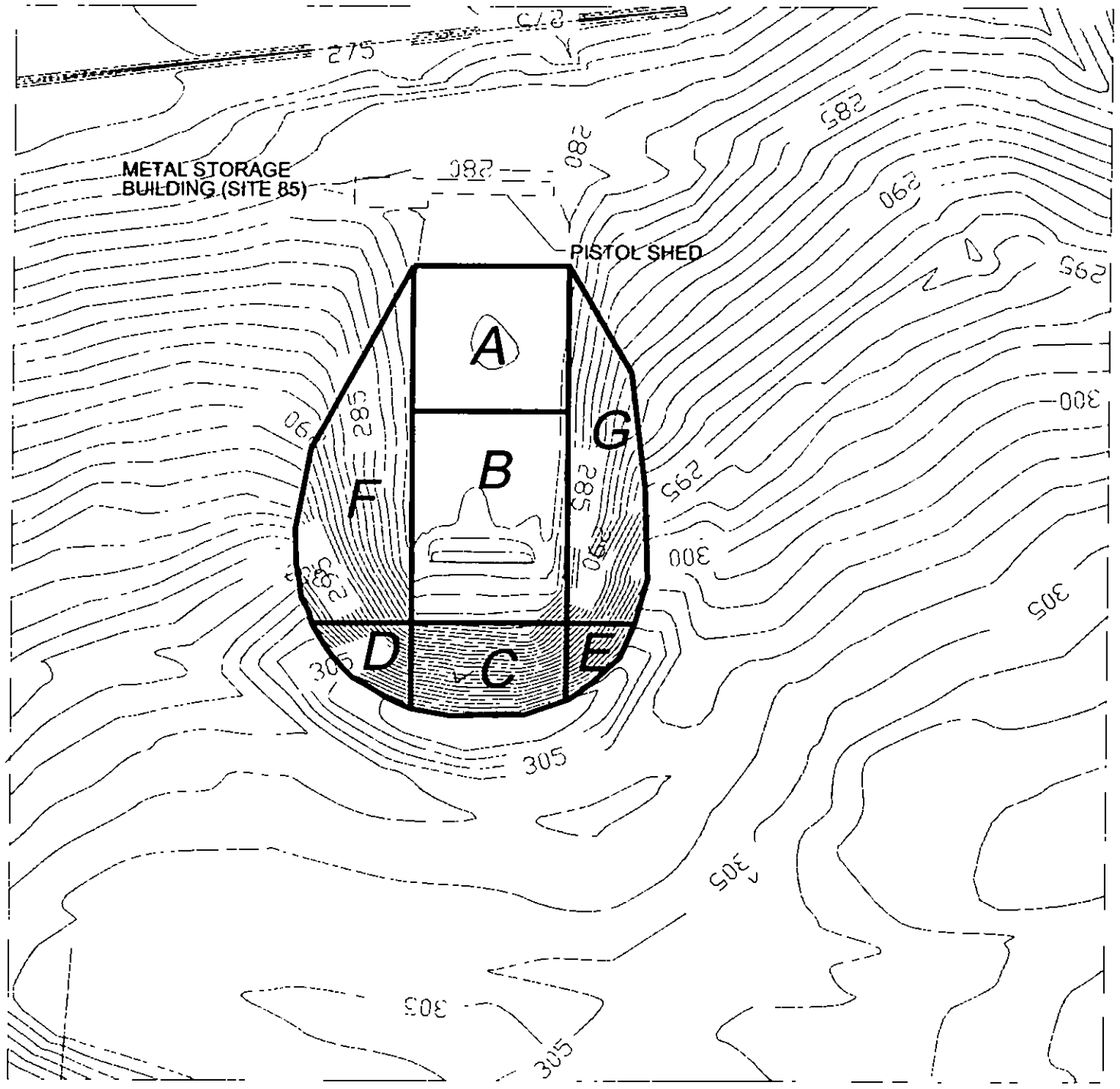

N

0' 50' 100'

LEGEND

AREA A = 3563 7 SF
AREA B = 5298 6 SF
AREA C = 2576 1 SF
AREA D = 1000 0 SF
AREA E = 620 5 SF
AREA F = 4646 1 SF
AREA G = 3708 4 SF

FIGURE 5
EXCAVATION AREA
REV 0 DUNN FILLD-SITE 60
ACTION MEMORANDUM

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CAD1/PROJECTS/160492 ACTION MEMORANDUM

ATTACHMENT 1

RESPONSIVENESS SUMMARY

RESPONSIVENESS SUMMARY

Engineering Evaluation/Cost Analysis

Former Pistol Range, Site 60

Defense Distribution Center (Memphis) - Dunn Field

The Defense Logistics Agency (DLA)prepared an Engineering Evaluation and Cost Analysis (EE/CA) for the removal of soil containing lead at Site 60 on Dunn Field. This report documents and recommends a cleanup alternative. DLA placed the EE/CA into the three Depot Information Repositories in mid-July. On July 25, 2002 a 30-day public comment period began. DLA conducted a public meeting to describe the proposed action and solicit comments on August 15, 2002. The public provided 29 verbal comments at this meeting. There were no other comments received during the 30-day public comment period This summary replies to all twenty-nine comments. Twenty-three of the comments apply directly to the proposed action in the EECA Two of these twenty-three are duplicate comments. This summary provides responses to the remaining four comments that are not applicable to the proposed action at the end.

The following comments are directly applicable to the proposed action:

1. **How will you manage the containment of the contaminated lead impacted soil and wastewater during the excavation of lead impacted soil at Site 60?**

The Remedial Action contractor for this project, Jacobs Engineering, Inc., (Jacobs) will perform an in-situ characterization of the soils prior to the start of any excavation activities for disposal characterization purposes only. The areas to be sampled will be centered on the previously identified area of highest lead contamination. The analysis of each of these samples would include a full toxicity characteristic leachate procedure (TCLP) analysis for metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, and herbicides. The results of this analysis will confirm the presence or absence of hazardous levels of lead and other substances in the soil. Jacobs will then identify and contact the appropriate disposal facilities to arrange for their acceptance of these soils. Jacobs will excavate the soils only after this acceptance.

The excavated soil will be loaded directly from each excavation site into trucks for transport to the permitted disposal facility. No temporary stockpiling of soil will occur. After the excavation, the equipment used will be cleaned and the water will be collected, placed in 55-gallon drums, sampled and analyzed, and disposed of properly after obtaining the analytical results. We anticipate there will be two drums or less.

2. **Will the level of cleanup of the lead impacted soil removal project at Dunn Field meet the required safety standards to ensure the protection of the safety and health of the community and workers?**

The Remedial Action contractor for this project, Jacobs Engineering, Inc., will conduct this work according to the health and safety standards used by the Office of Safety and Health Administration (OSHA) for environmental and construction projects. This means that all site workers that could potentially be exposed to lead contaminated soil will be trained to recognize and prevent possible exposure to themselves and the surrounding community. Jacobs Engineering will develop a site-specific Health and Safety Plan containing standards for use by all personnel and subcontractors.

3. **Will a containment tent (like the vapor containment structure used during the CWM project) be in place during the lead removal project to ensure the protection of young children who are the most impacted by lead exposure?**

This removal project will not require a containment tent because the lead contamination in the soil can not volatilize or vaporize into the atmosphere, and therefore can not spread through the air.

Throughout the removal process, our contractors will follow the best environmental practices outlined in the Removal Action Health and Safety Plan to minimize the generation of dust. These include wetting dry areas, covering loaded trucks, and covering excavated soil.

4. **Do you have special measures in place to ensure the protection of lead exposure for the children in the Depot community during this lead removal project?**

The health and safety of the community and our workers during this removal action is our top priority. Throughout the removal process, our contractors will follow the environmental practices outline in the Removal Action Health and Safety Plan to minimize the generation of dust. These include wetting dry areas, covering loaded trucks, and covering excavated dirt. Fencing already in place surrounding Dunn Field, will prevent passersby from entering the removal project area We are confident these measures will protect the public and our workers from any risks associated with lead-contaminated soil.

5. **I am requesting 90 more days for the public comment period to allow the community the opportunity to dissect the information included in this EE/CA.**

The Depot advertised the public comment period through paid advertisements, announcements at RAB meetings, and provided in-depth articles and information to the public through EnviroNews. The Defense Logistics Agency is satisfied that the community has been given appropriate time and opportunities to comment on the EE/CA.

6. **What safety levels are required for the workers involved in the lead removal project at Dunn Field? Will the workers wear HAZMAT suits and other safety gear?**

The workers will be using modified Level D personal protective equipment as required by OSHA. This provides the appropriate level of protection against potential exposure to

workers during the removal process. Workers will not be required to wear HAZMAT suits because the nature and extent of the contamination at the site does not require this level of protection.

7. Has water from the lead-impacted soil penetrated the Memphis Sand Aquifer? Have run-offs and contaminated soil filtered into our drinking water system impacted other layers or aquifers underground?

Extensive sampling results from the Dunn Field Remedial Investigation indicated that the Memphis aquifer has not been affected by lead contamination on Dunn Field Contamination has been found in the loess deposits and the fluvial sands For more information, please review Sections 14 and 15 of the July 2002 Dunn Field RI report. These sections describe all groundwater sample results for Dunn Field, including the detection of lead. Remedial alternatives for groundwater in the area of Dunn Field will be addressed separately in the Feasibility Study for Dunn Field.

8. Is there a land use policy in place for Dunn Field?

Recommendations for land use policies will be made based on the scientific data presented in the Proposed Plan and approved in the Record of Decision These documents are not yet completed for Dunn Field. This removal action will allow for a recommendation of unrestricted use for the Northeast Open Area of Dunn Field.

9. What measures do DLA have in place to ensure that the City of Memphis remains accountable for the land use of former Depot property?

When required, DLA prepares Land Use Control Implementation Plans (LUCIPs) for all former Memphis Depot properties. Typically, the enforcement will consist of deed restrictions on leases and contracts of sale, zoning laws, and annual inspections with oversight from the Environmental Protection Agency and the Tennessee Department of Environment and Conservation

10. Will Dunn Field be categorized as strictly industrial?

The Northeast Open Area of Dunn Field will be identified for unrestricted use after completion of the Site 60 removal action. Memphis/Shelby County will make any future zoning decisions for this area. The remainder of Dunn Field is expected to remain as currently zoned by Memphis-Shelby County, which is Light Industrial.

11. Will the community be assured that the cleanup at Dunn Field is thorough and that all hazardous chemicals have been removed? How many inches of soil do you plan to excavate during the lead removal project?

Soil samples taken on Dunn Field indicated that lead was present in surface soil at the former pistol range. As stated in the Site 60 Engineering Evaluation and Cost Analysis (EE/CA) document, the greatest depth of soil removal will be approximately 24 inches. Once the removal is completed, the base and walls of the excavation area will be sampled to define the need for additional soil removal.

12. Can the DDMT-CCC get copies of all of the documents involved in the lead removal project at Dunn Field?

Copies of all Depot documents are available in the Depot's three Information Repositories. The current Memphis Depot policy allowing the DDMT-CCC to check out documents will remain in effect. As a current RAB member, the President of the DDMT-CCC receives personal copies on CD ROM of all primary documents concerning the environmental cleanup activities at the Memphis Depot.

13. What is an EE/CA for Dunn Field Site 60?

EE/CA is the acronym for Engineering Evaluation/Cost Analysis. The EE/CA for Dunn Field Site 60 presents information on the environmental conditions of the former pistol range on Dunn Field and provides an evaluation and selection of the cleanup alternative to remove lead-contaminated soil at the site.

For a complete explanation of the EE/CA process, we recommend that you consult the following document from EPA: *Transmittal of Guidance on Conducting Non-Time Critical removal Actions Under CERCLA* (Publication 9360.0-32, August 6, 1993) This document is available through the EPA's Office of Solid Waste and Emergency Response.

14. What is the process in place to stop the excavation of lead at Dunn Field should logistics and procedures change during the excavation that has not been available for community review?

The removal of lead-contaminated soil at the former pistol range uses techniques that are frequently used at most excavation and cleanup projects. The DLA will notify the community if unexpected conditions alter those methods outlined in the EE/CA

15. Who is the contact person for the community to call during this excavation?

The contact person for the community to call during this excavation is Clyde E. Hunt, Jr., Remedial Program Manager. He can be reached by phone at (901) 544-0617. Alma Black Moore from the Depot's Community Relations Office can be reached at (901) 544-0613. She can direct any questions you may have to the appropriate technical staff.

16. What are the carcinogenic affects of the lead found at the former pistol range on Dunn Field? If materials are available for review, where are they located?

The carcinogenic effects of lead found at Site 60 on Dunn Field would be similar to direct lead exposure where present in the environment. It is recommended that you consult this webpage. http //www.epa.gov/ttn/atw/hlthef/lead.html for additional information on lead in the environment and the results of exposure. In addition, please consult Section 9 of the July 2002 Dunn Field Remedial Investigation report available at the Depot Information Repositories

17. Will the public be allowed the opportunity to respond to the responses that DLA will provide in the Responsiveness Summary?

The Responsive Summary represents the end of the question and answer period for the removal action at Site 60

18. Are you aware that lead is not the only hazardous material located on Dunn Field?

The lead removal project is one of many cleanup projects that will occur at Dunn Field, as described in the Dunn Field Feasibility Study, which will be submitted as Final in late Fall 2002 Please refer to the July 2002 Dunn Field Remedial Investigation report available at the Depot Information Repositories. This report will provide a summary of all of the substances found at Dunn Field.

19. Will you and have you tested for other hazardous chemicals at Dunn Field? Is there a monitoring process in place to monitor the air, soil and land surrounding Dunn Field around the community?

Please refer to the July 2002 Dunn Field Remedial Investigation (RI) report available at the Depot Information Repositories. This document provides a comprehensive assessment of the environmental conditions on Dunn Field. Soil samples were taken from Dunn Field for the RI, as well as several locations within the community. In addition, several off-site groundwater monitoring wells have been installed in the community to gather data about the extent of impacted groundwater in the area.

Based on the contaminants detected at Dunn Field and the results of the Baseline Risk Assessment (as presented in the July 2002 Dunn Field RI report), there is no requirement to monitor the air, soil, and land surrounding Dunn Field.

20. Have the police department and fire department been notified of this project?

The health and safety measures that will be in place during this removal activity will protect the community and our workers. Based on the nature of the activities and procedures to be conducted at Site 60, there is no reason to notify the police and fire departments of this project.

21. What is the emergency evacuation plan should a worst-case scenario occur?

The local Emergency Agency listed under Memphis Government in the telephone book provides emergency evacuation procedures. The Health and Safety Plan, which will be written by the Remedial Action contractor, will contain the emergency evacuation plan for any onsite emergencies during the Site 60 removal action.

22. When will the Responsiveness Summary be in the Information Repositories?

The anticipated date for the Responsiveness Summary to be available in the Information Repositories is October 2002.

23. Will the public be allowed the opportunity to respond to the responses that DLA will provide in the Responsiveness Summary?

The Responsive Summary represents the end of the question and answer period for the removal action at Site 60

The following comments are not applicable to the proposed action:

1. **Has the Memphis Depot discovered where the off-site contamination was coming from onto Dunn Field and has the Depot contained the contamination?**

Not at this time, however, there are plans to conduct an investigation into the source of the contamination of groundwater off the northeastern portion of Dunn Field This portion of the groundwater contaminant plume is effected by the existing groundwater extraction system at Dunn Field.

2. **What are the plans to remove other harmful contaminants from Dunn Field?**

The Dunn Field Feasibility Study, submitted to the Memphis Depot BRAC (Base Realignment and Closure) Cleanup Team for review in draft form in August 2002, presents information on the alternatives that will be used to remove other contaminants from Dunn Field. Once this document is completed, a proposed plan is written and put out for public comment

DLA will conduct a Public Comment Meeting to allow the community the opportunity to comment on the cleanup alternatives identified in the proposed plan. A response summary and a Record of Decision (ROD) will be prepared. After the ROD is approved, a Remedial Design is developed, followed by the site-specific Remedial Action. All of these documents will be available for public review in the Depot's three Information Repositories located at the Depot, the Memphis/Shelby County Health Department and Cherokee Branch Library.

3. **Has there been any health studies or assessments of the cancer and death rate of former Depot employees?**

In 1995, the Agency for Toxic Substances and Disease Registry (ATSDR) completed a Public Health Assessment, which was updated in late 1999 with new sampling data. This updated report is available for public review in the Memphis Depot's three Information Repositories. Any questions about the ATSDR Public Health Assessment can be directed to Mr. Ben Moore, ATSDR Regional Representative at (404) 562-1784.

4. **What has DLA done to help former employees with health concerns that may have been the result of their employment at the Depot?**

DLA works closely with the Agency for Toxic Substances and Disease Registry (ATSDR), the Memphis/Shelby County Health Department and the Department of Labor in an effort to identify health concerns that may be related to environmental conditions

ATSDR is the agency responsible for responding to public health questions, and works in association with the local Health Department to provide appropriate health education and assistance to the community

Former workers who have health concerns should contact the Department of Labor or any active federal facility to request a CA-1 form You must obtain assistance from your physician in completing the form. The Department of Labor will review the form and advise you of what to do.

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