Department of Energy

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MAR 24 1998

DOE-0608-98

Mr James A. Saric, Remedial Project Director
U.S. Environmental Protection Agency
Region V-5HSF-5J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Mr. Thomas A. Schneider
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402

Dear Mr. Saric and Mr. Schneider:

WORK PLAN FOR THE INSTALLATION OF THE FERNALD ENVIRONMENTAL MANAGEMENT PROJECT AESTHETIC BARRIER

In August of 1997, a Natural Resource Restoration Plan (NRRP) was submitted to your office and the Fernald Natural Resource Trustees for review and comment. In response to recommendations made by the Fernald Citizens Advisory Board (FCAB), the first project proposed in the NRRP was the installation of aesthetic barriers to minimize the visibility of site activities. After considering these recommendations and the input of other stakeholders, the Department of Energy, Fernald Environmental Management Project (DOE-FEMP) proposes to install trees as an aesthetic barrier along Willey Road, east of the FEMP's South Access Road. The barrier will minimize the view of the excavation associated with the Borrow Area and will serve as the first step in minimizing view of the On-Site Disposal Facility (OSDF) in the long term, as recommended by the FCAB.

The enclosed work plan outlines the plan for implementation of the Aesthetic Barrier Project. Assuming that certification of that portion of Area 1, Phase II is complete in late summer of 1998, the installation of the barrier will occur in fall 1998.

If you have any questions, please contact Kathleen Nickel at (513) 648-3124.

Sincerely,

Johnny Reising

FEMP:Nickel

Johnny W. Reising
Fernald Remedial Action
Project Manager

Enclosure: As Stated

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INSTALLATION OF AESTHETIC BARRIER WORK PLAN

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

MARCH 1998

U.S. DEPARTMENT OF ENERGY
FERNALD AREA OFFICE

20900-WP-0001
Revision B
DRAFT

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TABLES AND FIGURES

ACRONYMS AND ABBREVIATIONS

DOE	Department of Energy
FCAB	Fernald Citizens Advisory Board
FEMP	Fernald Environmental Management Project
FRESH	Fernald Residents for Environmental Safety and Health
OSDF	On-Site Disposal Facility

1.0 INTRODUCTION

The Fernald Environmental Management Project (FEMP) is proceeding with the design and implementation of many aspects of site remediation. Throughout the process of site remediation, more areas of the FEMP will be disturbed due to excavation and construction activities. Some disturbed areas will be visible to residents living and traveling around the FEMP. The Fernald Citizens Advisory Board (FCAB) recommended in a letter dated February 19, 1997 that steps be taken to minimize the visual impact of site remediation surrounding the site. After receipt of the FCAB recommendation, other stakeholder groups were consulted about the possibility of planting trees as an aesthetic barrier to restrict the view to some areas of the site that will be undergoing extensive excavation. Considering the generally favorable input that has been received, this work plan has been developed to outline a plan for installing the barrier.

2.0 ALTERNATIVES CONSIDERED

There are three alternatives that were considered to accomplish the goal of providing an aesthetic appeal while restricting the view of remediated site areas. The three alternatives considered were: Alternative 1 - Structural Barrier; Alternative 2 - Aesthetic Barrier With Berm; and Alternative 3 - Aesthetic Barrier Without Berm.

Alternative 1 would consist of constructing a structure similar to a highway noise barrier. Alternative 1 was not considered desirable due to the high cost of purchase and installation and lack of aesthetic appeal. Alternative 2 would consist of planting coniferous and flowering trees in alternating frequency on a soil berm. The construction of a soil berm to support vegetation as an aesthetic barrier was considered, but was not selected due to lack of sufficient quantity of soil on-property in the near-term and the expense of importing soil to the site. Alternative 3 would consist of planting coniferous and flowering trees in alternating frequency without a constructed soil berm. Alternative 3 was the selected alternative since the planting of woody overstory would provide sufficient height to serve as an aesthetic barrier in the near-term.

2.1 LOCATION OF SELECTED ALTERNATIVE

The area selected for the implementation of Alternative 3 is the area adjacent to Willey Road and east of the South Access Road (Figure 1). This area will be utilized starting in FY 1999 to acquire borrow material for the On-Site Disposal Facility (OSDF). Both the Borrow Area and the OSDF area are visible from Willey Road. Therefore, this area was considered the highest priority for installing an aesthetic barrier.

Other locations of the site were also considered for implementing the selected alternative, but were not selected based on impracticality. These areas consist of the northeast portion of the site (south of the intersection of S.R. 126 and the north access road) and west of the South Access Road (Figure 1). The OSDF and site preparation activities are visible from State Route 126 in the area near the North Access Road. However, elevations in this area preclude restriction of viewing site activities. As construction of the OSDF proceeds and final elevations are established in these areas, future restoration projects will evaluate the practicality of utilizing woody overstory to provide an aesthetic barrier. However, no action is being proposed at this time. The area west of the South Access Road was also considered for

installation of an aesthetic barrier. However, few activities are proposed in this area in the long term. Currently, the installation of a pipeline to support the Aquifer Restoration Project's extraction well system is underway west of the South Access Road. However, once completed, there are no plans for large scale excavation in this area. If this area is identified at a later date for borrow material or some other ground-disturbing activity, then the installation of an aesthetic barrier will be revisited.

3.0 BARRIER DESIGN

The aesthetic barrier will be installed after the completion of soil certification in the southern most portion of Area 1, Phase II (Figure 1). The general approach for installing the aesthetic barrier is to utilize the existing grade to support the installation of trees. Coniferous and deciduous trees will be of sufficient height to provide some immediate screening from site activities. The conifers (i.e., evergreen) will provide an immediate year round barrier with deciduous flowering trees providing diversity of species and aesthetic appeal.

Eastern White Pines approximately 10 - 12 feet in height will be planted in two alternating rows approximately 10 feet apart (Figure 2). Alternating rows will provide for little separation between each pine. The pines will not be planted any closer than 10 feet to avoid overcrowding in later years that could lessen the chances for survival of the stand. In addition to the pines, two alternating rows of deciduous trees will be planted to the south of the pines (i.e., the side visible from Willey Road) to provide the stand with diversity of species and color. A combination of trees that provides flowering in the spring (Crabapple) and vivid color in the fall (e.g., Red Maple, River Birch, Red Oak) will be planted in a random pattern to enhance the aesthetics of the barrier (Table 1).

Planting will occur utilizing standard methods to optimize survival of the trees. A hole approximately twice the width of the root ball will be excavated utilizing a mechanical auger. The trees will be planted with the top of the root ball slightly above the surface of the ground. Peat moss, fertilizer and water will be added to the soil removed from the hole as part of backfilling. After backfilling, the trees will be staked for approximately one year. During dry periods, the trees will be watered as labor becomes available to improve the chances for survival. During periods of adequate rainfall, no additional water will be added.

4.0 COST AND SCHEDULE

The installation of the aesthetic barrier is estimated at approximately $45,000. The installation of the aesthetic barrier is targeted for September of 1998. The completion of certification activities in the southern portion of Area 1, Phase II is scheduled to be complete in June 1998. If certification activities are not complete, the installation of the barrier will be delayed until certification of that portion of the site is complete. The optimal time for planting trees is in the fall and winter months (if weather permits) when trees are focusing on root growth, therefore, installation of the trees in September will optimize the chances for survival of the trees. However, the trees could be planted in the spring if delays preclude fall planting.

5.0 HEALTH AND SAFETY REQUIREMENTS

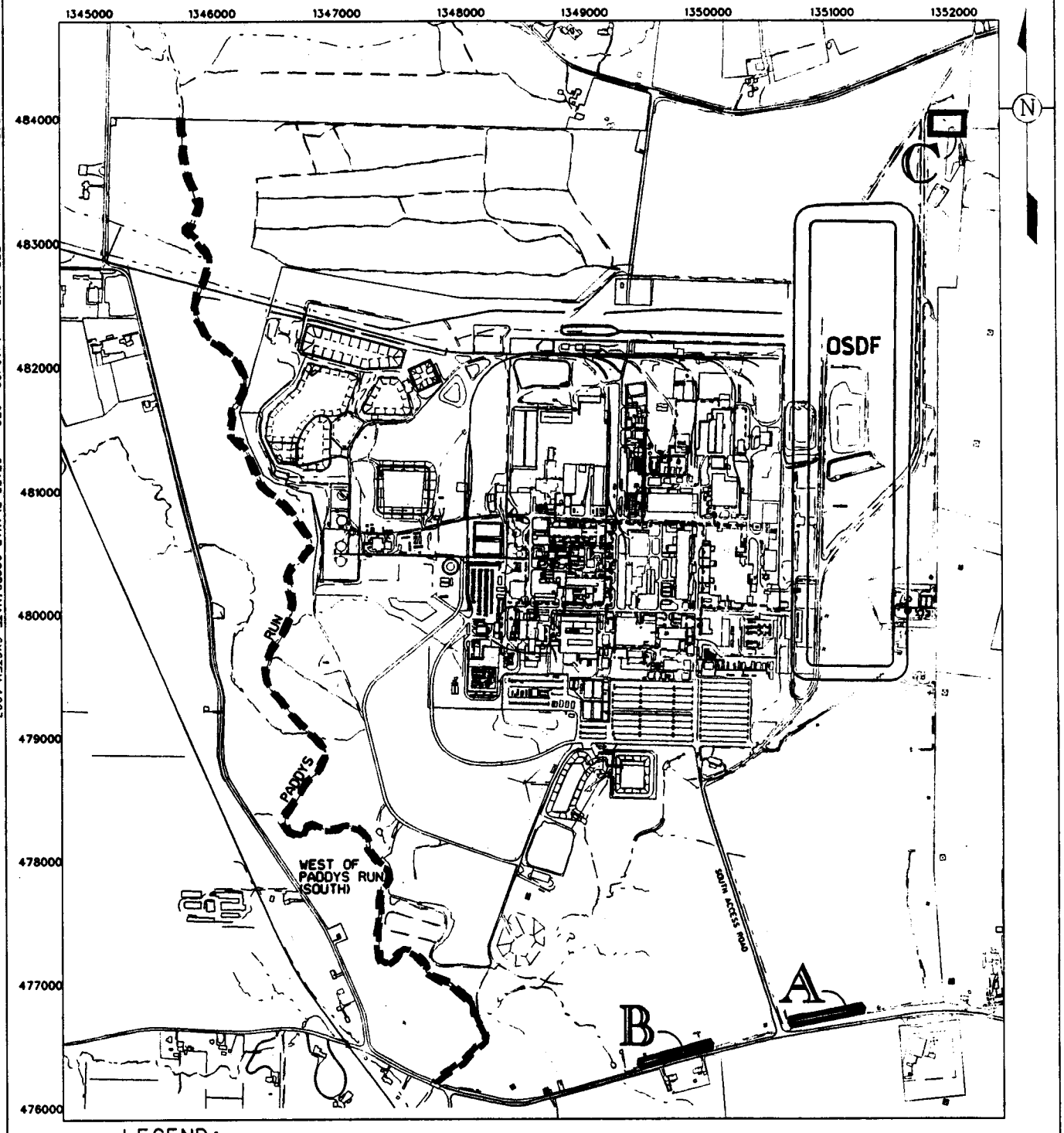
All personnel working on this project will be briefed on and comply with the Project-Specific Health and Safety Matrix. The Field Safety Contact will ensure that each participant has been briefed on the applicable permits and the Project-Specific Health and Safety Matrix, as applicable.

6.0 STAKEHOLDER INPUT

As stated previously, the FCAB initially made recommendations regarding the installation of an aesthetic barrier. After the recommendation was made, the Department of Energy (DOE) discussed the idea with a number of additional stakeholder groups. The Ross Township Trustees and several local landowners were consulted regarding the idea of a barrier. Discussions are pending with the Crosby Township Trustees, Community Reuse Organization and FRESH. While views did vary on the configuration and types of trees that should be utilized, no single group or individual opposed the idea of an aesthetic barrier.

TABLE 1
TREE SPECIFICATION LIST

Scientific Name	Common Name	Size	Quantity
Pinus strobus	White Pine	1.5" caliper	117
Malus coronaria	American Crabapple	1.5" caliper	10
Acer rubrum	Red Maple	1.5" caliper	10
Liriodendron tulipifera	Tulip Poplar	1.5" caliper	10
Betula nigra	River Birch	1.5" caliper	10
Quercus rubra	Red Oak	1.5" caliper	10
Fraxinus pennsylvanica	Green Ash	1.5" caliper	10
Crataegus sp.	Hawthorn	1.5" caliper	11
Cornus florida	Flowering Dogwood	1.5" caliper	7

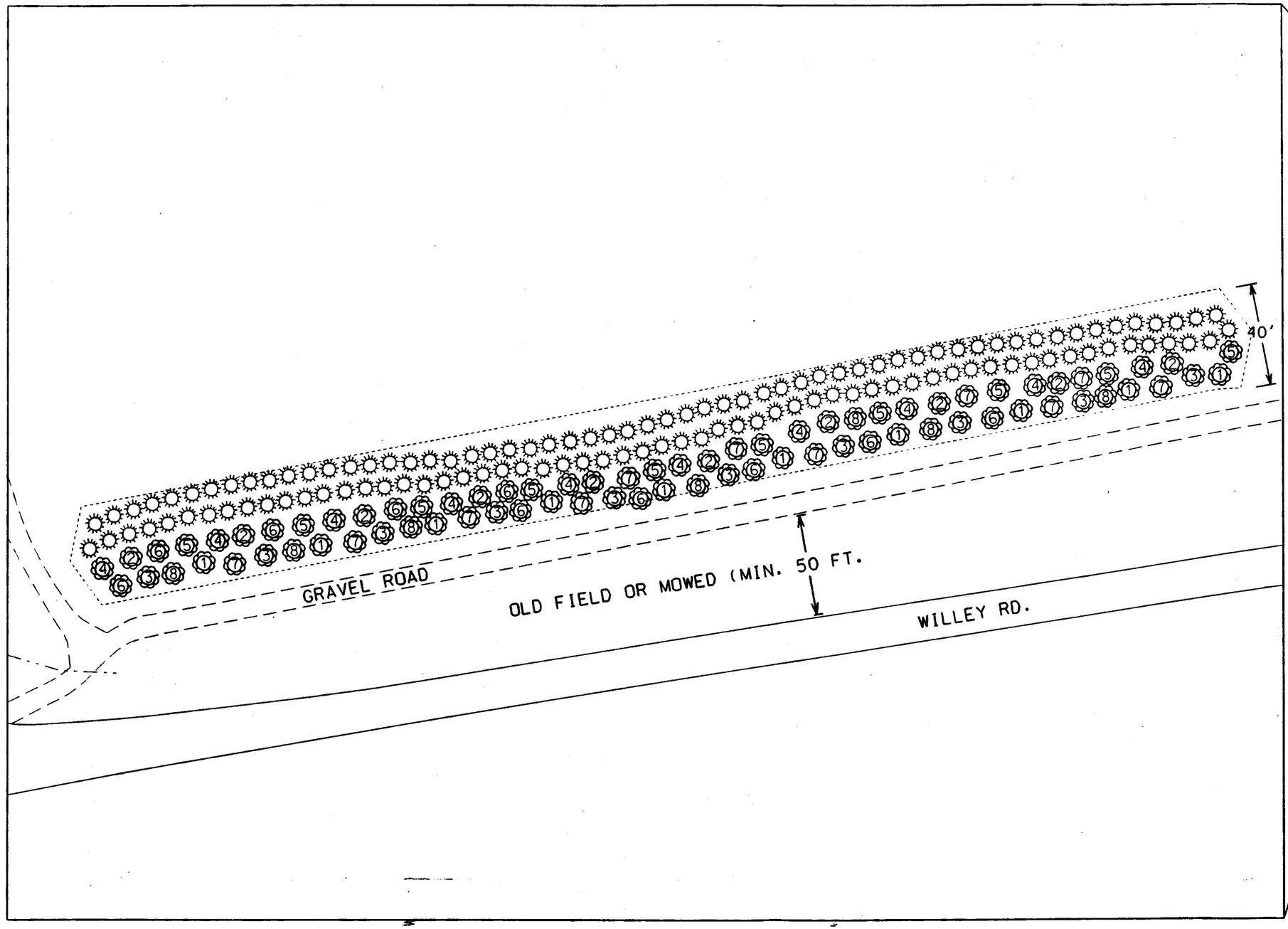


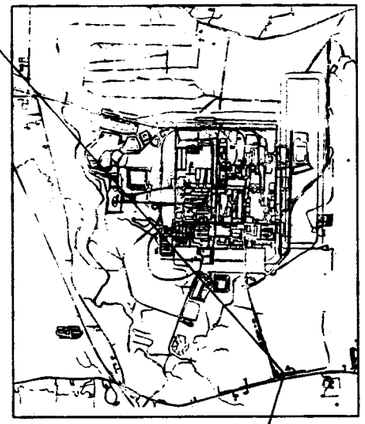
LEGEND:

A SELECTED LOCATION OF AESTHETIC BARRIER
B WEST OF SOUTH ACCESS ROAD
C NORTH EAST PORTION OF THE SITE NORTH ACCESS ROAD

SCALE
1200 600 0 1200 FEET

FIGURE 1. CONSIDERED LOCATIONS OF AESTHETIC BARRIER





KEY PLAN

LEGEND:

------ RESTORATION PROJECT AREA

EVERGREENS:

☼ WHITE PINE

FLOWERING/VIVID COLOR TREES

1- AMERICAN CRABAPPLE
2- RED MAPLE
3- TULIP POPLAR
4- RIVER BIRCH
5- RED OAK
6- GREEN ASH
7- HAWTHORN
8- FLOWERING DOGWOOD

SCALE

0 40 80 FEET

DRAFT

FILE NAME usr1/res/res3256/skg10b.dgn 11x17 cru5 11-18-97 GES

FIGURE 2. AESTHETIC BARRIER ALONG WILLEY ROAD