Department of Energy

Portsmouth/Paducah Project Office
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FEB 22 2010

Mr. W. Turpin Ballard
U.S. Environmental Protection Agency, Region 4
Federal Facilities Branch
61 Forsyth Street
Atlanta, Georgia 30303

PPPO-02-377-10

Mr. Edward Winner, FFA Manager
Kentucky Department for Environmental Protection
Division of Waste Management
200 Fair Oaks Lane, 2nd Floor
Frankfort, Kentucky 40601

Dear Mr. Ballard and Mr. Winner:

TRANSMITTAL OF THE REPLACEMENT PAGES FOR THE ENGINEERING EVALUATION/COST ANALYSIS FOR THE C-340 METALS REDUCTION PLANT COMPLEX AND THE C-746-A EAST END SMELTER AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-0131&D2

Reference: Letter from R. Knerr to W. T. Ballard and E. Winner, "Transmittal of the Engineering Evaluation/Cost Analysis for the C-340 Metals Reduction Plant Complex and the C-746-A East End Smelter at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky (DOE/LX/07-131&D2)," (PPPO-02-270-10), dated January 25, 2010

Please find enclosed the replacement for page 18 of the *Engineering Evaluation/Cost Analysis for the C-340 Metals Reduction Plant Complex and the C-746-A East End Smelter at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (EE/CA), DOE/LX/07-0131&D2 (EE/CA). Figure 7 on page 18 of the EE/CA submitted on January 25, 2010 (Reference) was incorrect. The enclosed replacement page corrects Figure 7, which now includes a call-out showing an expanded view of the C-746-A East End Smelter, including the warehouse area and the West End Smelter. A title page and certification page for the new figure also are enclosed.

If you have any questions or require additional information, please contact Rob Seifert at (270) 441-6823.

Sincerely,

Reinhard Knerr
Paducah Site Lead
Portsmouth/Paducah Project Office

Enclosures:
1. Certification Page
2. Revised title page
3. Page 18 replacement

cc w/enclosures:
AR File/Kevil

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CERTIFICATION

Document Identification: ***Errata Pages for Engineering Evaluation/Cost Analysis for the C-340 Metals Reduction Plant Complex and the C-746-A East End Smelter at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky,*** **DOE/LX/07-0131&D2**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Paducah Remediation Services, LLC
Operator

Paul Weltate, for

Dennis Ferrigno, PM, Site Manager
Paducah Remediation Services, LLC

2/22/10
Date Signed

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

U.S. Department of Energy (DOE)
Owner

Reinhard Knerr, Paducah Site Lead
Portsmouth/Paducah Project Office

2/22/10
Date Signed

ERRATA SHEET

Engineering Evaluation/Cost Analysis for the
C-340 Metals Reduction Plant Complex and the
C-746-A East End Smelter at the
Paducah Gaseous Diffusion Plant,
Paducah, Kentucky
DOE/LX/07-0131&D2, issued January 2010

The following two corrections should be incorporated into the document.

1. Title Page – added revised date
2. Figure 7, Page 18 – inserted correct figure

DOE/LX/07-0131&D2
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Engineering Evaluation/Cost Analysis for the C-340 Metals Reduction Plant Complex and the C-746-A East End Smelter at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky

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Engineering Evaluation/Cost Analysis for the C-340 Metals Reduction Plant Complex and the C-746-A East End Smelter at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky

Date Issued—January 2010

Date Modified—February 2010

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Deleted: 2009

Prepared for the
U.S. DEPARTMENT OF ENERGY
Office of Environmental Management

Prepared by
PADUCAH REMEDIATION SERVICES, LLC
managing the
Environmental Remediation Activities at the
Paducah Gaseous Diffusion Plant
under contract DE-AC30-06EW05001

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would be present as solid uranyl fluoride compounds on surfaces in the facility. The uranium currently in the facility is depleted uranium at 0.0015 wt % uranium-234 (^{234}U) and 0.2 wt % uranium-235 (^{235}U) with the remainder being uranium-238 (^{238}U). Various radionuclides are present as surface contamination. Beta-gamma contamination consists entirely of uranium and plutonium daughters and strontium-90 (^{90}Sr). Alpha contamination other than uranium consists entirely of plutonium-238 (^{238}Pu).

Chemical hazards known to exist or suspected of being present prior to deactivation in the C-340 Complex include, but may not be limited to, the following:

- Uranium compounds in various stages of fluorination;
- Sloughing paint potentially containing lead and/or other heavy metals and PCBs;
- Asbestos-containing materials (ACM) (asbestos is present throughout the facility as part of the original building construction);
- Mercury;
- Metals-contaminated dusts (potentially containing lead, arsenic, and beryllium;
- Material contained in process piping and vessels (Mg and MgF_2 are stored in the facility in feed hoppers and equipment);
- HF and various intermediaries;
- Corrosive chemicals such as fluorides, potassium, hydroxides, etc.;
- PCBs; and
- Volatile organic compounds.

A portion of these hazardous substances are expected to be removed during deactivation of the C-340 Complex. At the completion of deactivation, remaining contaminants are expected to include radiological contamination on the structure, PCBs in paint, and transite on external walls at the C-340 Complex. Additionally, minor quantities of hazardous substances such as circuit boards or similar items for which access was not feasible or potentially would have been unsafe for site workers could remain in the facility.

2.3 C-746-A EAST END SMELTER

The C-746-A North Warehouse is a one-floor pre-fabricated steel building with a poured 8-inch wire-reinforced concrete floor area of approximately 72,000 ft^2 (6,690 m^2). The building is approximately 600 ft (183 m) long, 120 ft (36.6 m) wide, and 30 ft (9.1 m) high at the highest peak. The facility is located in the northwest portion of the PGDP complex and is inside the security fence, as shown in Figure 7. Figure 8 is a photograph of the exterior of the facility.

2.3.1 C-746-A East End Smelter Description

C-746-A structure is divided into three sections:

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<#>C-340 Complex Contamination¶
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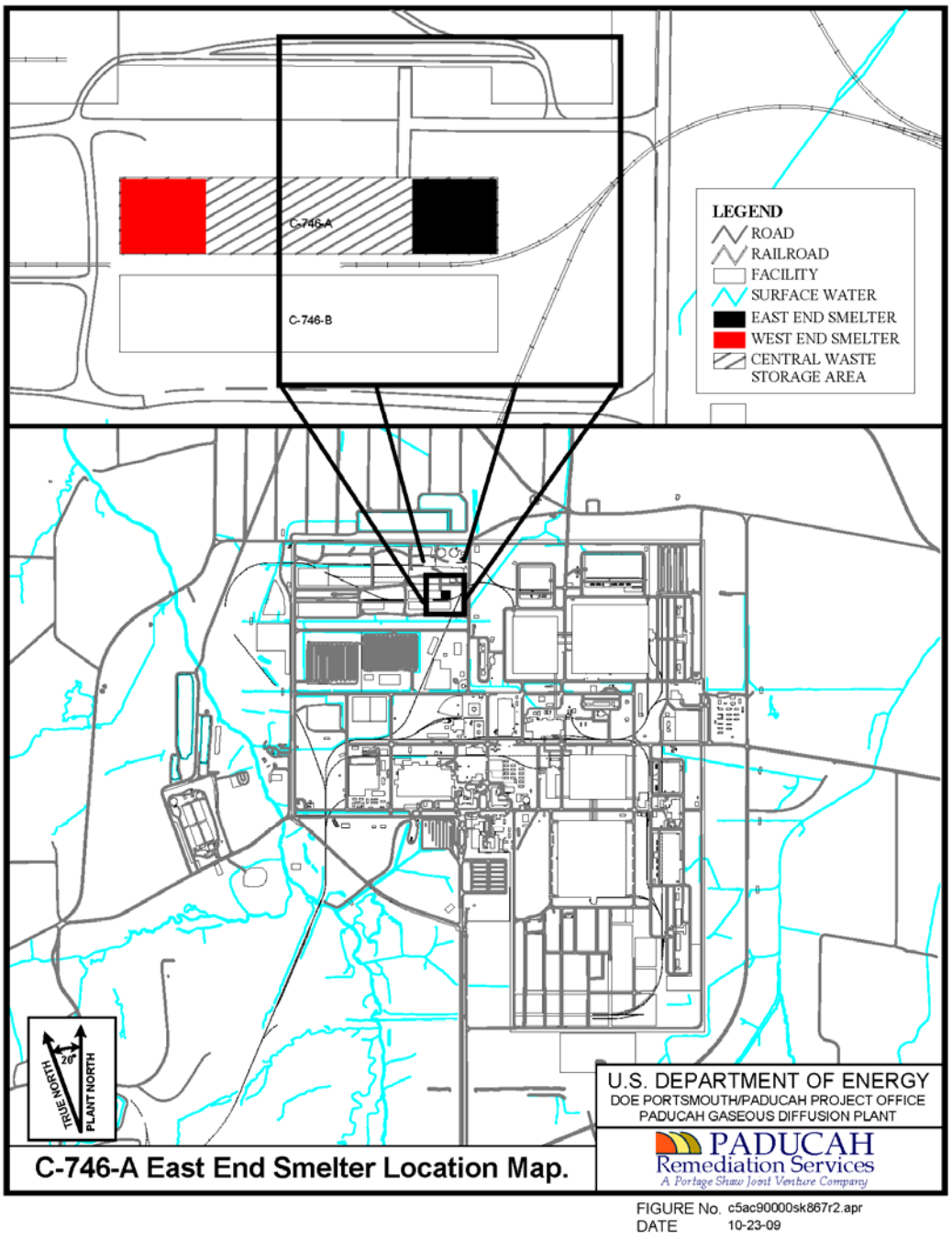

Figure 7. Location of the C-746-A East End Smelter

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C-746-A structure is divided into three

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<#>East end smelter area¶
<#>West end smelter area (demolished in 2008)¶
<#>Central waste storage and treatment area¶

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The east end of C-746-A was used to recover metal from various pieces of equipment. The east end area is used to store excess equipment such as empty drums and depressurized gas cyli... [71]

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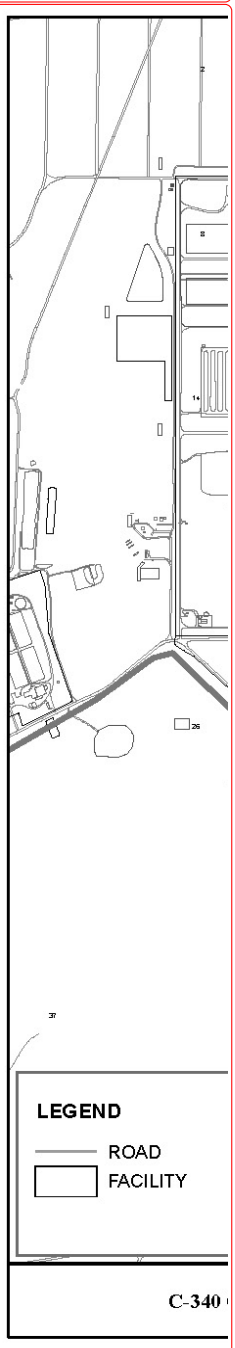

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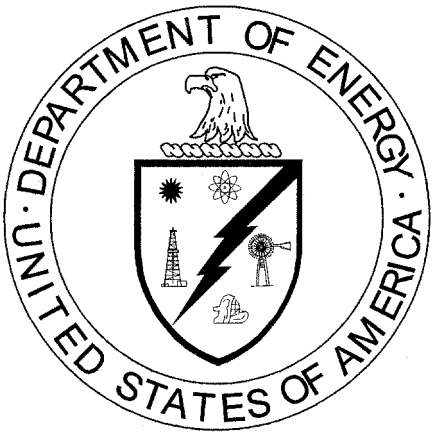

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Engineering Evaluation/Cost Analysis for the C-340 Metals Reduction Plant Complex and the C-746-A East End Smelter at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky

Date Issued—January 2010

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Prepared for the
U.S. DEPARTMENT OF ENERGY
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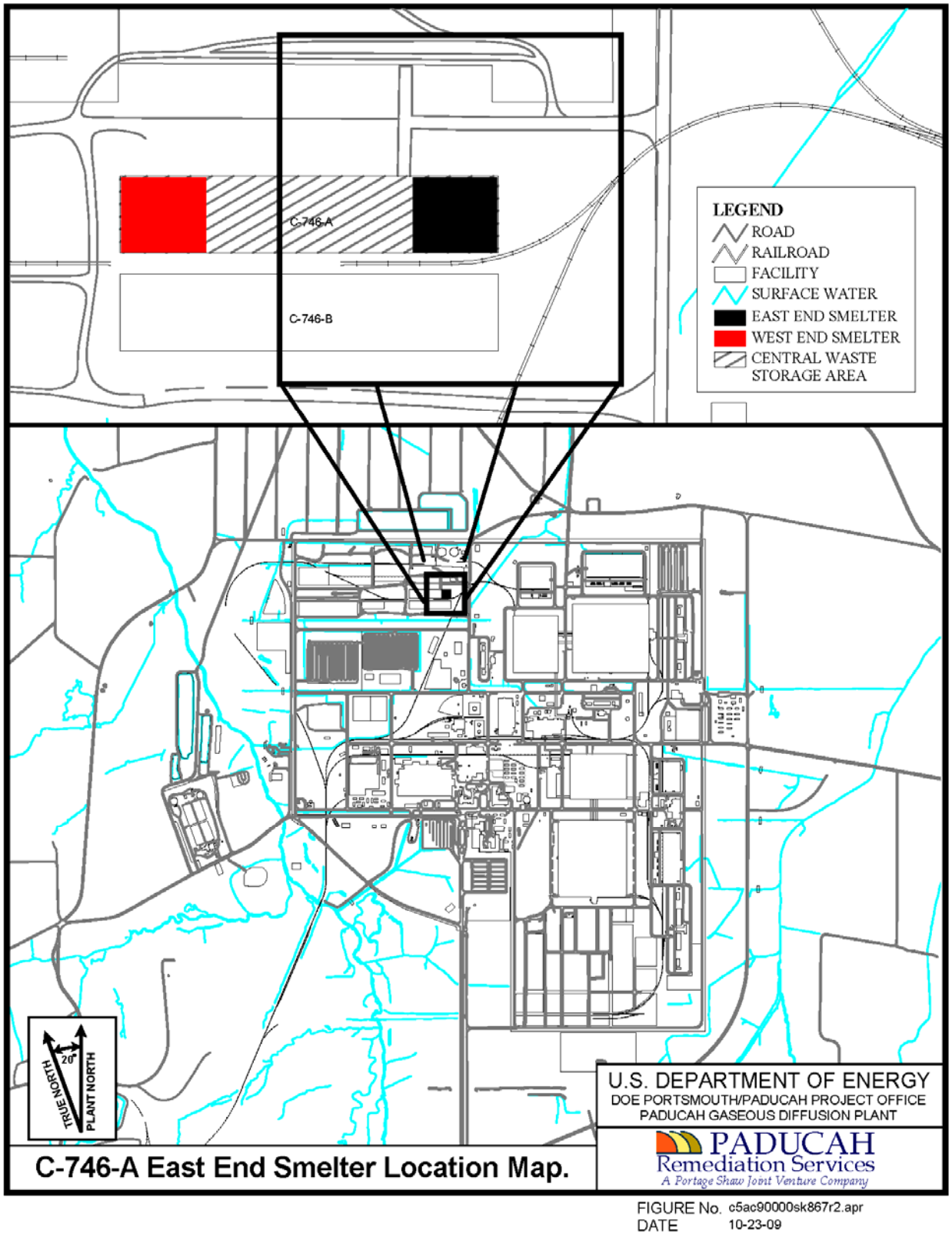

Figure 7. Location of the C-746-A East End Smelter