McGraw Construction Facilities (Southside)
Solid Waste Assessment Report

SWMU/AOC NUMBER: 194

REGULATORY STATUS: SWMU

LOCATION: This SWMU is south of the C-333 building, outside the plant security fence at the Paducah Gaseous Diffusion Plant.

APPROXIMATE DIMENSION OR CAPACITY: 600' x 900'

PRESENT FUNCTION: Open Field – Previous Site of McGraw Construction Facility – Since Demolished.

PRESENT OPERATIONAL STATUS: No operations are ongoing at the site; however, a portion of the site east of the Hobbs access road and south of the C-100 Parking Lot is planned as the location of the DUF_6 Conversion Facility. Construction activities associated with the DUF_6 Conversion Facility are scheduled to begin in the spring of 2004.

DATES OPERATED: Approximately 1951 through the mid 1950s.

BRIEF HISTORY: This unit consisted of buildings for support of original plant construction. Buildings/activities located in this area included Administration Building, Cafeteria, Boiler House, Guard Headquarters, Hospital, and Purchasing. None of the facilities exist at this time. This unit is located outside the security fence adjacent to the plant.

Key Actions

- Waste Area Grouping (WAG) 28 site investigation fieldwork initiated in 1999.
- Soil boring samples obtained as part of the Northeast Plume Investigation, which was composed of the Site Evaluation of SWMUs 193 and 194 and the Groundwater Phase IV Investigation in 1995.
- Sampled as part of the WAG 28 Remedial Investigation in 1999. Completed fieldwork for WAG 28 in 2000.
- Re-assessed for site characterization in support of building the proposed DUF_6 Conversion Facility on a portion of the SWMU.

SITE/PROCESS DESCRIPTION: Location of buildings and activities during original plant construction in the early 1950s. The facilities and associated structures were torn down following end of construction. The area was graded and has been maintained as a grassy area since that time. No known uses of the area have occurred since the original construction.

WASTE DESCRIPTION: Possible concrete footers and debris may remain below grade. No known disposal of hazardous constituents.

WASTE QUANTITY: Unknown

SUMMARY OF ENVIRONMENTAL SAMPLING DATA: The Northeast Plume Investigation was conducted in 1995 to identify possible sources of contamination associated with various buildings and operations within SWMU 194. The results of this investigation indicated potential metal contamination but no volatile or Trichloroethene (TCE) contamination. The WAG 28 Remedial Investigation/Feasibility Study conducted in 1999 focused on potential metals contamination of SWMU 194 based on the previous study and the process knowledge of the activities conducted in this area by the McGraw Construction Facilities. This study noted the sporadic presence of some metals at slightly above background levels. These metals include Aluminum, Beryllium, Cadmium, Calcium, Iron, Lead, Magnesium, Sodium, Vanadium, and Zinc.

Additional site characterization was conducted in 2000 in support of the DUF_6 Conversion Project. The results of this investigation are documented in *DUF_6 Conversion Facility Site Characterization Report, Paducah Gaseous Diffusion Plant, Paducah, Kentucky (BJC/PAD-207)*. This report further confirmed that the soils in this area are not contaminated with TCE or any other "F" listed wastes.

The data contained in the aforementioned studies have been assessed for risk. The results are documented in Baseline Human Health Risk Assessment and Screening Ecological Risk Assessment for the Proposed Site of the DUF_6 Conversion Facility, Including the Eastern Portion of SWMU 194, McGraw Construction Facilities (South Side), at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky (DOE/OR/07-1928&D1).

Significant results of the baseline human health risk assessment (BHHRA) and screening ecological risk assessment (SERA) were

- the soil at the proposed site of the DUF_6 Conversion Facility and that portion of SWMU 194 overlain by the proposed site has been sufficiently characterized to support construction and operation of the DUF_6 facility. ,
- the risks to the health of the most likely future users of the proposed site from exposure to soil containing site-related chemicals of concern (COCs) fall within the acceptable risk range, and
- adverse impacts from contamination in soil to ecological receptors are not expected.

The BHHRA initially identified cancer risks and hazards for industrial workers in excess of the generally acceptable risk range for site-related exposures. The BHHRA identified 12 COCs for the current and future industrial worker and default excavation worker, the scenarios most consistent with the proposed future use of the site. These COCs included seven inorganic chemicals, one class of organic compounds, and four radionuclides. Subsequent evaluation of these COCs reduced the list of site-related COCs to two radionuclides, ^{137}Cs and ^{238}U. A closer examination of the COCs determined that much of this risk was due to an analysis that used toxicity values that were provisional or had been withdrawn, that included infrequently detected analytes, and that included analytes present at naturally occurring levels. The risk from the two COCs (^{137}Cs and ^{238}U) determined to be site-related fell to values that were well within the generally acceptable risk range for site-related exposures and were close to *de minimis* levels.

The SERA identified 12 inorganic chemicals and 14 organic compounds but no radionuclides in surface soil as contaminants of potential concern for ecological receptors. The inorganic chemicals were aluminum, arsenic, barium, beryllium, calcium, chromium, copper, lead, nickel, silver, vanadium, and zinc. The organic compounds included several PAHs and phthalates. The SERA also determined that the proposed site (i.e., open grassy field) contained no critical habitat for wildlife found at the PGDP. The construction of the DUF_6 Conversion Facility and supporting structures would cover the site surface and modify habitat to such an extent that the presence of these chemicals would be of little ecological concern.

RELEASE SUSPECTED: No documented releases.

DESCRIPTION OF RELEASE AND MEDIA AFFECTED:

GROUNDWATER:	None known
SURFACE WATER:	None known
SOIL:	None known
ECOLOGY:	None known

DOCUMENTATION OF NO RELEASE:

- No documented releases.

PRG COMPARISON: N/A

IMPACT ON OR BY OTHER SWMUS OR AOCS: SWMUs 164 and 193 are located adjacent to this SWMU. SWMU 536 is contained within SWMU 194.

WASTE AREA GROUPING ASSIGNMENT: 28

OPERABLE UNIT ASSIGNMENT: GWOU/SSOU

- This unit has been placed in the Surface Soils Operable Unit for further evaluation and/or remediation as a potential contributor to groundwater contamination.
- This unit has been placed in the Groundwater Operable Unit for further evaluation and/or remediation as a potential contributor to groundwater contamination.

REFERENCES:

1995 -*Northeast Plume Preliminary Characterization Summary Report* (DOE/OR/07-1339&D2)

1998 - *Work Plan for Waste Area Grouping 28 Remedial Investigation/Feasibility Study and Waste Area Grouping 8 Preliminary Assessment/Site Investigation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (DOE/OR/07-1592&D2)

2000 - Remedial Investigation Report for Waste Area Grouping 28 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky (DOE/OR/07-1846&D1)

2001 - *DUF_6 Conversion Facility Site Characterization Report, Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (BJC/PAD-207)

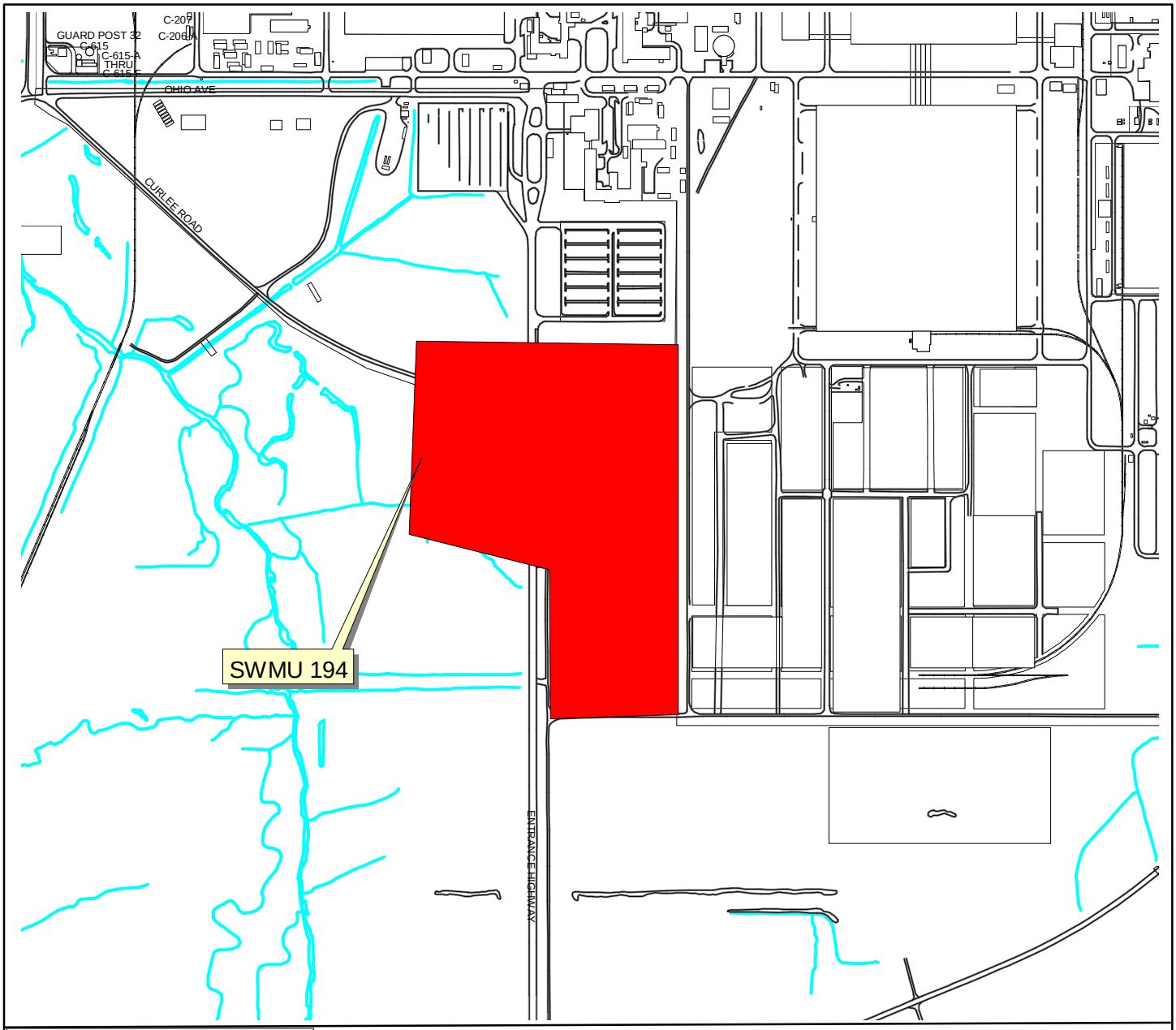
2001 - *Baseline Human Health Risk Assessment and Screening Ecological Risk Assessment for the Proposed Site of the DUF_6 Conversion Facility, Including the Eastern Portion of SWMU 194, McGraw Construction Facilities (South Side), at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (DOE/OR/07-1928&D1

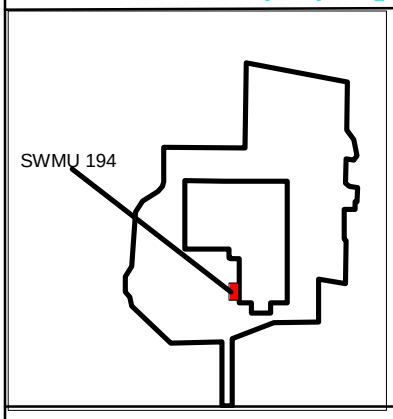
DATE OF ORIGINAL SAR: 6/11/93

DATE OF SAR REVISION: 8/28/03

August 2003

McGraw Construction Facilities (Southside)
SWMU 194





LEGEND:

- SWMU 194 Area
- Buildings

0 400 800 Feet

TRUE NORTH
20°
PLANT NORTH

U.S. DEPARTMENT OF ENERGY
DOE OAK RIDGE OPERATIONS
PADUCAH GASEOUS DIFFUSION PLANT

BECHTEL JACOBS COMPANY LLC
MANAGED FOR THE US DEPARTMENT OF ENERGY UNDER
US GOVERNMENT CONTRACT DE-AC-05-98OR22700
Oak Ridge, Tennessee• Paducah, Kentucky• Portsmouth, Ohio

SWMU 194 McGraw Construction Facilities (South-Side)

CDM

FIGURE No. c5ac90002sk175.apr
DATE 8-8-03