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**EVALUATION OF URANIUM GEOCHEMICAL
ANOMALIES IN THE GREENVILLE, SC,
AREA, GREENVILLE 1° x 2° QUADRANGLE
(GREENVILLE AND GREER)**

**NATIONAL URANIUM RESOURCE
EVALUATION PROGRAM**

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ANOMALIES IN THE GREENVILLE, SC,
AREA, GREENVILLE 1° x 2° QUADRANGLE
(GREENVILLE AND GREER)**

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**NATIONAL URANIUM RESOURCE
EVALUATION PROGRAM**

Approved by

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EVALUATION OF URANIUM GEOCHEMICAL ANOMALIES IN THE GREENVILLE, S.C. AREA,
GREENVILLE 1° x 2° QUADRANGLE (GREENVILLE AND GREER)

ABSTRACT

The Savannah River Laboratory (SRL) was involved in the National Uranium Resource Evaluation (NURE) from 1974 through 1981. The SRL role was to design and conduct and report the data from a geochemical reconnaissance of almost half the continental United States. The purpose of the work was to provide a basis for evaluation of the uranium potential of areas and to identify areas meriting some conventional geologic followup. More than 275,000 samples of stream sediment, soil, vegetation, and ground or surface water were collected in the program.

As part of the development program to support interpretation of the geochemical data, SRL conducted a series of field studies to verify anomalies identified in the reconnaissance data. Subcontractors were selected to conduct field scintillometer surveys, compile geologic maps, collect additional samples, or provide other services as needed for a given study.

This report presents the results of a small study in the Greenville 1° x 2° quadrangle. The study was conducted for SRL by Kenneth A. Sargent. This study is one of a series designed to provide a basis for interpretation of SRL regional geochemical reconnaissance data. It contains the results of a four-channel gamma spectrometer survey of an area around Greenville, South Carolina. The report is issued in draft form, without detailed technical and copy editing. This was done to make the report available to the public before the end of the NURE program.

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MICROFICHE

Greenville tables
Greer tables

SUMMARY

The area of investigation (see Fig. 1) lies within the Inner Piedmont belt of the Southeastern Piedmont physiographic province. The study area consists of a biotite hornblende granodiorite unit, probably of early Paleozoic age, surrounded by a sillimanite schist-amphibolite biotite gneiss-muscovite schist unit and a migmatite biotite gneiss-amphibolite granitic gneiss unit. Small, simple pegmatites that appear to be related to the metamorphic rock occur widely throughout the study area.

The survey results are tabulated on microfiche and displayed on segments of 15' quadrangle maps as percentile plots of the calculated elemental data. These plots are calculated for each quadrangle separately, and the reader is cautioned to view the quadrangles separately.

The strongest anomaly is situated just northeast of the city of Greenville, South Carolina. Other strong anomalies exist near Greer and in the south-central part of the southwest quarter of the Greer, South Carolina, 15' quadrangle.

FIGURE 1. Location Map of the Study Area

NW 1/4 Greenville, S.C. 15' Quadrangle

Site Location Map

FIGURE 2. Site Location Map of the NW 1/4 Greenville, SC, 15' Quadrangle

FIGURE 3. Uranium/Thorium Percentile Rankings for the NW 1/4 Greenville, SC, 15' Quadrangle

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Site Location Map

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Site Location Map

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FIGURE 27. Uranium/Thorium Percentile Rankings for the SW 1/4 Greer, SC, 15' Quadrangle

FIGURE 28. Uranium Percentile Rankings for the SW 1/4 Greer, SC, 15' Quadrangle

82° 7' 30"

82° 15'

34° 52' 30"

34° 52' 30"

34° 45'

82° 15'

34° 45'

82° 7' 30"

★ 99.5	○ 50-84
◆ 98.6-99.5	○ 16-50
● 96-98.6	○ 0-16
⊙ 84-96	• below detection limit

SW 1/4 Greer, S.C. 15' Quadrangle

Thorium

FIGURE 29. Thorium Percentile Rankings for the
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FIGURE 33. Thorium Percentile Rankings for the
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