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United States Department of Energy

Savannah River Site

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DIVISION OF SITE
ASSESSMENT & REMEDIATION

**Record of Decision
Remedial Alternative Selection for the
SRL Oil Test Site (080-16G) Operable Unit (U)**

CERCLIS Number: 83

WSRC-RP-2003-4164

**Revision 1
April 2004**

Prepared by:
**Westinghouse Savannah River Company LLC
Savannah River Site
Aiken, SC 29808**



Prepared for U.S. Department of Energy under Contract No. DE-AC09-96SR18500

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**Prepared for
U.S. Department of Energy
and
Westinghouse Savannah River Company LLC
Aiken, South Carolina**

RECORD OF DECISION
REMEDIAL ALTERNATIVE SELECTION (U)

SRL OIL TEST SITE (SRLOTS) (080-16G) (U)

OPERABLE UNIT

CERCLIS Number: 83

WSRC-RP-2003-4164
Revision 1

April 2004

Savannah River Site
Aiken, South Carolina

Prepared by:

Westinghouse Savannah River Company LLC
for the
U. S. Department of Energy under Contract DE-AC09-96SR18500
Savannah River Operations Office
Aiken, South Carolina

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DECLARATION FOR THE RECORD OF DECISION

Unit Name and Location

SRL Oil Test Site (080-16G) Operable Unit

Comprehensive Environmental Response, Compensation, and Liability Information System
(CERCLIS) Identification Number: 83

Savannah River Site

Comprehensive Environmental Response, Compensation, and Liability Act Identification
Number: SC1 890 008 989

Aiken, South Carolina

United States Department of Energy

The SRL Oil Test Site (SRLOTS) Operable Unit (OU) is listed as a Resource Conservation and Recovery Act (RCRA) 3004(u) Solid Waste Management Unit/Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) unit in Appendix C of the Federal Facility Agreement (FFA) for the Savannah River Site (SRS).

The FFA is a legally binding agreement between regulatory agencies United States Environmental Protection Agency (USEPA) and South Carolina Department of Health and Environmental Control (SCDHEC) and regulated entity (USDOE) that establishes the responsibilities and schedules for the comprehensive remediations of the SRS. The media associated with the SRLOTS OU are soil and groundwater. However, soil is the only medium addressed in this Record of Decision (ROD) for the SRLOTS OU. The groundwater beneath SRLOTS OU is being managed under the Central Shops Groundwater OU and, therefore, is not addressed in this ROD. The SRLOTS OU consists of two subunits: (1) the SRLOTS plots and (2) the Petroleum-Contaminated Soil Temporary Storage Area.

Statement of Basis and Purpose

This decision document presents the selected remedy for the SRLOTS OU located at the SRS in Barnwell County, South Carolina. The remedy was chosen in accordance with CERCLA, as amended by Superfund Amendments Reauthorization Act (SARA), and to the extent practicable,

the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This decision is based on the Administrative Record File for this site.

Because this remedy will not result in hazardous substances, pollutants, or contaminants remaining on site above levels that allow for unlimited use and unrestricted exposure, a five-year review will not be required for this remedial action.

The three parties concur with the selected remedy.

Description of the Selected Remedy

The selected remedy for the SRLOTS OU is No Action. Although chemical contaminants were identified, contaminant concentrations do not pose a risk to human health and the environment. The SRLOTS OU is capable of supporting unrestricted (residential) use without any remedial actions.

The RCRA Permit will be revised to reflect selection of the final remedy using the procedures under 40 Code of Federal Regulations (CFR) Part 270 and South Carolina Hazardous Waste Management Regulation (SCHWMR) R.61-79.264.101; 270.

Statutory Determinations

Hazardous substances have been released at the site; however, their concentrations do not pose a risk to human health and the environment based on unrestricted (residential) usage and unlimited exposure. Therefore, no remedial action is necessary to ensure protection of human health and the environment. Because the selected remedy for the SRLOTS OU is No Action, a Certification Checklist is unnecessary.

4/26/04

Date

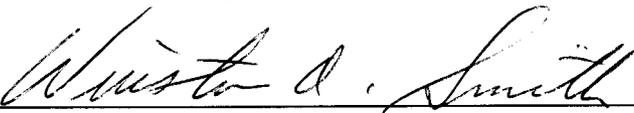
for



Jeffrey M. Allison
Manager
U. S. Department of Energy
Savannah River Operations Office

4/28/04

Date



Winston A. Smith
Director
Waste Management Division
U. S. Environmental Protection Agency - Region IV

8/5/04

Date



Robert W. King, Jr.
Deputy Commissioner
Environmental Quality Control
South Carolina Department of Health and Environmental Control

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DECISION SUMMARY
REMEDIAL ALTERNATIVE SELECTION (U)

SRL OIL TEST SITE (SRLOTS) (080-16G) (U)

OPERABLE UNIT (U)

CERCLIS Number: 83

WSRC-RP-2003-4164
Revision 1

April 2004

Savannah River Site
Aiken, South Carolina

Prepared By:

Westinghouse Savannah River Company LLC
for the
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Savannah River Operations Office
Aiken, South Carolina

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LIST OF ACRONYMS AND ABBREVIATIONS

ac	acre
ARAR	applicable or relevant and appropriate requirement
bls	below land surface
BRA	baseline risk assessment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act, 1980
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
cm	centimeter
CMCOC	contaminant migration constituent of concern
CMCOPC	contaminant migration constituent of potential concern
CMS/FS	corrective measures study/feasibility study
COC	constituent of concern
COPC	constituent of potential concern
CPT	cone penetrometer testing
CSM	conceptual site model
CSSL	Central Shops Sewage Sludge Lagoon
DPT	direct push technology
ECODS	Early Construction and Operational Disposal Site
FFA	Federal Facility Agreement
ft	feet
gal	gallon
ha	hectare
HHCOC	human health constituent of concern
HI	hazard index
HQ	hazard quotient
HSWA	Hazardous and Solid Waste Amendment
in	inch
km	kilometer
km ²	square kilometer
L	liter
m	meter
MCL	maximum contaminant level
mi	mile
mi ²	square mile
NCP	National Oil and Hazardous Substances Pollution Contingency Plan

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

NEPA	National Environmental Policy Act
NPL	National Priorities List
OU	operable unit
PCB	polychlorinated biphenyl
PRG	Preliminary Remediation Goals
PTSM	principal threat source material
RBA	risk-based activity
RBC	risk-based concentrations
RCRA	Resource Conservation and Recovery Act, 1976
RfD	reference dose
RFI	RCRA Facility Investigation
RI	Remedial Investigation
ROD	Record of Decision
SE	Site Evaluation
SRLOTS	SRL Oil Test Site
SARA	Superfund Amendments Reauthorization Act
SB/PP	Statement of Basis/Proposed Plan
SCDHEC	South Carolina Department of Health and Environmental Control
SCHWMR	South Carolina Hazardous Waste Management Regulation
SRFS	Savannah River Forest Service
SRS	Savannah River Site
SVOC	semi-volatile organic constituent
TAL	target analyte list
TCL	target compound list
TES	threatened endangered species and sensitive species
TPH	total petroleum hydrocarbons
USC	unit specific constituent
USDOE	United States Department of Energy
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound
WSRC	Westinghouse Savannah River Company LLC

I. SAVANNAH RIVER SITE AND OPERABLE UNIT NAME, LOCATION, AND DESCRIPTION

Unit Name, Location, and Brief Description

SRL Oil Test Site (080-16G) Operable Unit

Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Identification Number: 83

Savannah River Site

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Identification Number: SC1890008989

Aiken, South Carolina

United States Department of Energy

Savannah River Site (SRS) occupies approximately 800 km² (310 mi²) of land adjacent to the Savannah River, principally in Aiken and Barnwell counties of South Carolina (Figure 1). SRS is located approximately 40 km (25 mi) southeast of Augusta, Georgia, and 32 km (20 mi) south of Aiken, South Carolina.

The United States Department of Energy (USDOE) owns SRS, which historically produced tritium, plutonium, and other special nuclear materials for national defense and the space program. Chemical and radioactive wastes are byproducts of nuclear material production processes. Hazardous substances, as defined by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), are currently present in the environment at SRS.

The Federal Facility Agreement (FFA) (FFA 1993) for SRS lists the SRL Oil Test Site (SRLOTS) (080-16G) Operable Unit (OU) as a Resource Conservation and Recovery Act (RCRA)/CERCLA unit requiring further evaluation. The SRLOTS OU required further evaluation through an investigation process that integrates and combines the RCRA Facility Investigation (RFI) process with the CERCLA Remedial Investigation (RI) process to determine the actual or potential impact to human health and the environment resulting from releases of hazardous substances to the environment.

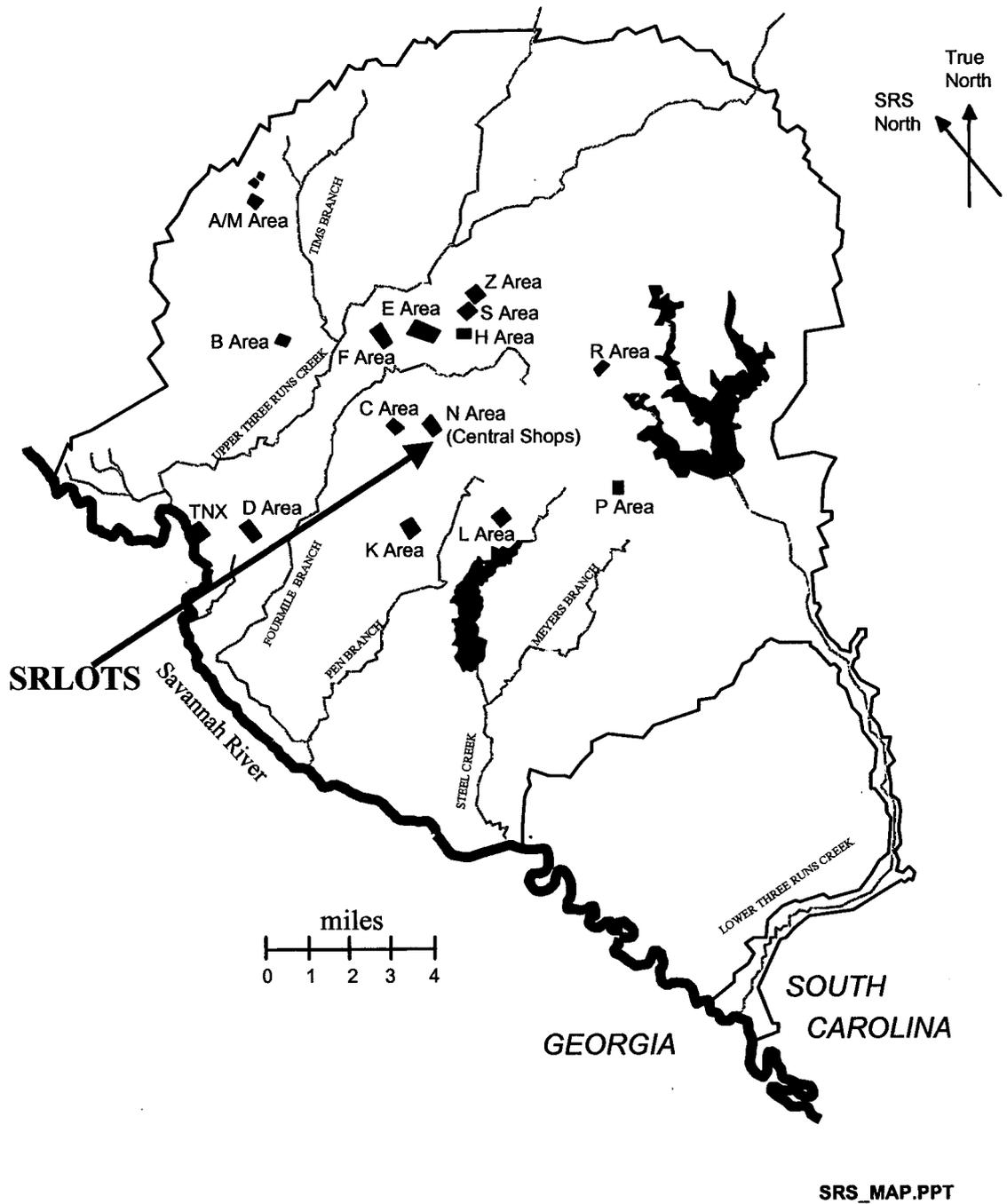


Figure 1. Location of the SRLOTS OU at SRS

II. SITE AND OPERABLE UNIT COMPLIANCE HISTORY

SRS Operational and Compliance History

The primary mission of SRS has been to produce tritium, plutonium, and other special nuclear materials for our nation's defense programs. Production of nuclear materials for the defense programs was discontinued in 1988. SRS has provided nuclear materials for the space program as well as for medical, industrial, and research efforts up to the present. Chemical and radioactive wastes are byproducts of nuclear material production processes. These wastes have been treated, stored, and in some cases, disposed of at SRS. Past disposal practices have resulted in soil and groundwater contamination.

Hazardous wastes handled at SRS are managed under RCRA, a comprehensive law requiring responsible management of hazardous waste. Certain SRS activities require South Carolina Department of Health and Environmental Control (SCDHEC) operating or post-closure permits under RCRA. SRS received a RCRA hazardous waste permit from SCDHEC, which was most recently renewed on September 30, 2003. Module VIII of the Hazardous and Solid Waste Amendments (HSWA) portion of the RCRA permit mandates corrective action requirements for non-regulated solid waste management units subject to RCRA 3004(u).

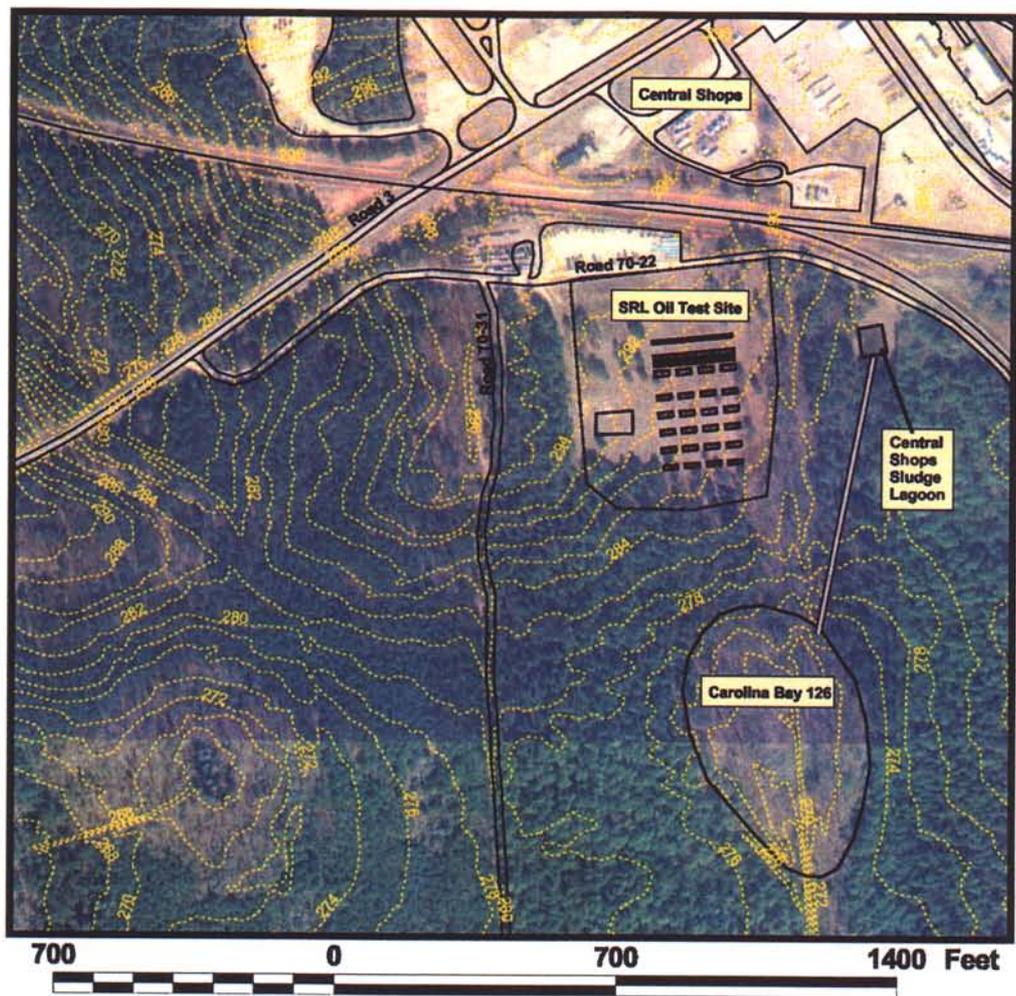
On December 21, 1989, SRS was included on the National Priorities List (NPL). The inclusion created a need to integrate the established RFI program with CERCLA requirements to provide for a focused environmental program. In accordance with Section 120 of CERCLA 42 USC Section 9620, USDOE negotiated an FFA (FFA 1993) with the United States Environmental Protection Agency (USEPA) and SCDHEC to coordinate remedial activities at SRS as one comprehensive strategy to fulfill these dual regulatory requirements. USDOE functions as the lead agency for remedial activities at SRS, with concurrence by USEPA - Region IV and SCDHEC.

Operable Unit Operational and Compliance History

The SRLOTS OU is located within N Area (Central Shops), approximately 600.0 m (1,970 ft) south of the industrial area (Figure 2). As shown in Figure 3, there are two subunits within the SRLOTS OU: (1) the SRLOTS plots and (2) the Petroleum-Contaminated Soil Temporary Storage Area. The groundwater beneath the SRLOTS OU is not included as a subunit of SRLOTS OU since the groundwater has been separated from this OU and placed in the Central Shops Groundwater OU. The test plots include 24 test plots (12 oil test plots and 12 control plots), measuring 3.7 x 10.7 m (12 x 35 ft) each; two hydraulic fluid/paint thinner test plots, measuring 3.0 x 70.0 m (10 x 230 ft) each; and one unknown waste test plot, measuring 3.0 x 70.0 m (10 x 230 ft). The Petroleum-Contaminated Soil Temporary Storage Area is located in the southwest corner of the unit and measures 27.4 x 18.3 m (90 x 60 ft). The total area of potential impact is approximately 0.16 ha (0.4 ac) out of the total area of approximately 0.80 ha (2.0 ac).

The test plot area was created in 1975 to evaluate the capability of native soil organisms to bioremediate petroleum fluids. Waste oils were obtained from offsite sources to ensure that no radiological constituents were present. No initial characterization was conducted on the waste oils applied to the soil. The 12 original oil test plots were tilled prior to and after each application of waste. A total of 9,160 L (2,631 gal) of machine cutting oil, obtained from an offsite source, was sprayed on the test plots in two successive 415 L (110 gal) applications per plot. Commercial agriculture fertilizers were then applied to the test and control plots.

In 1976, 3,120 L (824 gal) of waste hydraulic fluid and 4,169 L (1,101 gal) of paint thinner were randomly applied to the tilled surface of the two hydraulic fluid/paint thinner test plots, located approximately 5.0 m (16 ft) north of the original oil test plots. Chlorinated solvents were not applied as part of this test. A test plot identified as "unknown material" is located approximately 8.0 m (26 ft) north of the hydraulic fluid/paint thinner plots. There are no records documenting the origin or history of this "unknown material" test plot or the type and quantity of waste applied.



**SRL Oil Test Site (080-16G)
 Location of SRL Oil Test Site**

- | | |
|---|--|
|  OTS Plots |  Roads |
|  OTS Fence |  2 ft Contour |
|  OTS Ditch |  CSSL Ditch |



Figure 2. Location of the SRLOTS OU at Central Shops

The Petroleum-Contaminated Soil Temporary Storage Area received approximately ten truckloads of petroleum-contaminated soil in April 1990. The soil was placed on plastic sheeting and stored at this location until June 1990 when it was removed from the unit. There are no records of the origin or final disposition of the soil. The storage area has remained inactive since the soil was removed.

Three other units located near the SRLOTS OU are not a part of the SRLOTS OU (for locations, refer to Figure 3). The Miscellaneous Rubble Pile, located adjacent to the SRLOTS, is a Site Evaluation (SE) unit. This rubble pile was created on the perimeter of a laydown yard, which existed during the early operations of Central Shops. An SE report has been submitted for the Miscellaneous Rubble Pile. Another SE unit, Early Construction and Operational Disposal Site (ECODS) N-2, was located just outside the fence west of the SRLOTS OU. Sampling of the SE unit has been completed and an SE report has been submitted. The third unit, the Central Shops Sewage Sludge Lagoon (CSSL), is located to the east of SRLOTS OU. This was addressed as a separate OU, and the Record of Decision (ROD) (WSRC 2002), which recommended no action, was approved. As shown in Figure 3, there are three berms which surround the test plot area. These berms prevent the surface water runoff from entering the test plot area.

The SRLOTS OU is located in the Fourmile Branch Watershed (see Figure 4). The OU is a 0.8 ha (2 ac) grass field surrounded on three sides by wooded areas. A railroad track lies north of the unit in the Central Shops industrial area. The ground surface at the unit is at an elevation of approximately 88.0 m (289 ft) above mean sea level. The topography gently slopes in a south-southeast direction.

Central Shops is in the broad interfluvial area at the divide between the Pen Branch and Fourmile Branch watersheds. The surface water divide is to the east of the SRLOTS OU, so the unit is within the Fourmile Branch watershed (Figure 4). A drainage ditch, located outside of the SRLOTS OU southeastern fence line, drains to Carolina Bay No. 126 (Schalles et al. 1989), which is approximately 122.0 m (400 ft) south of the SRLOTS OU.

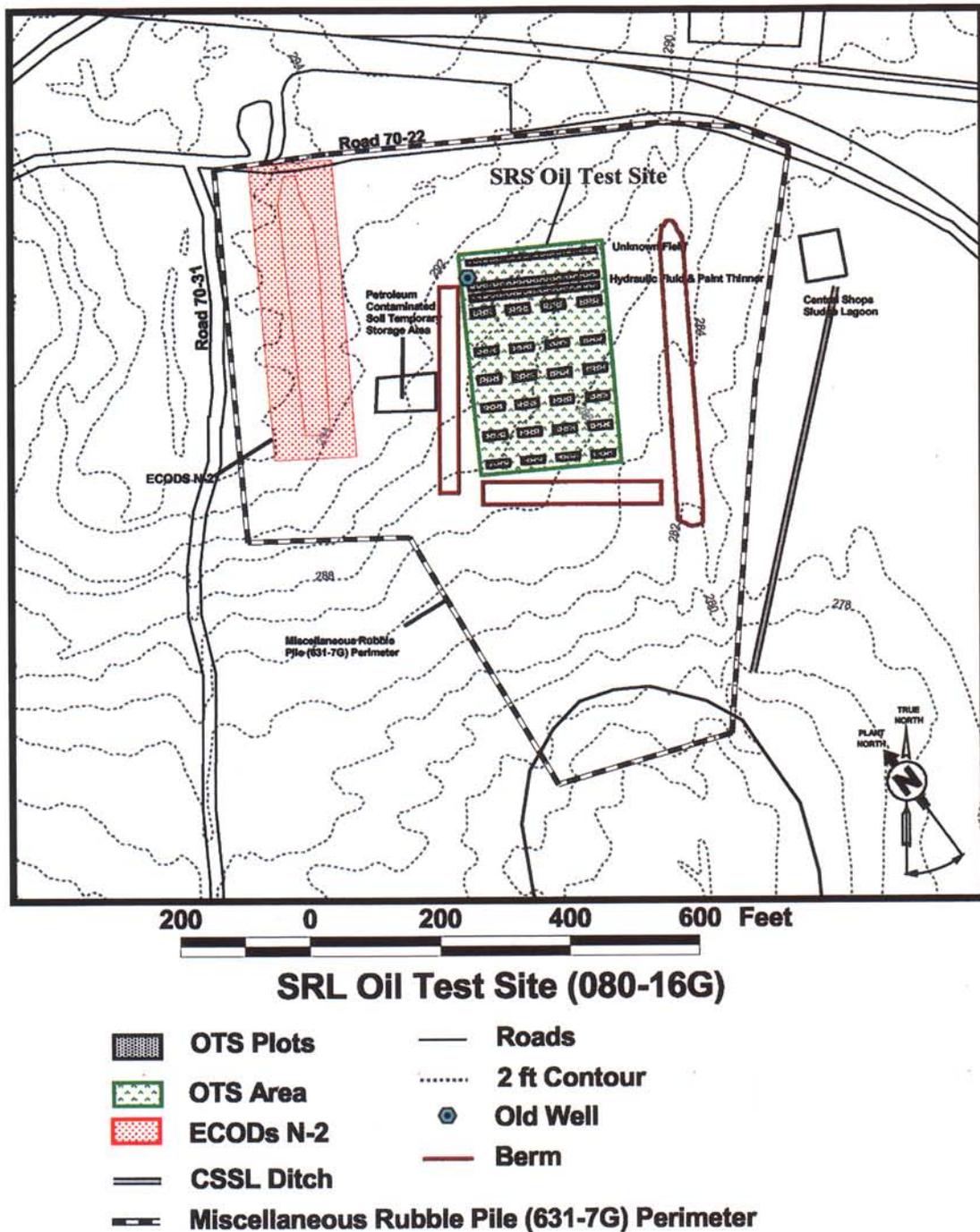


Figure 3. Diagram of the SRLOTS OU

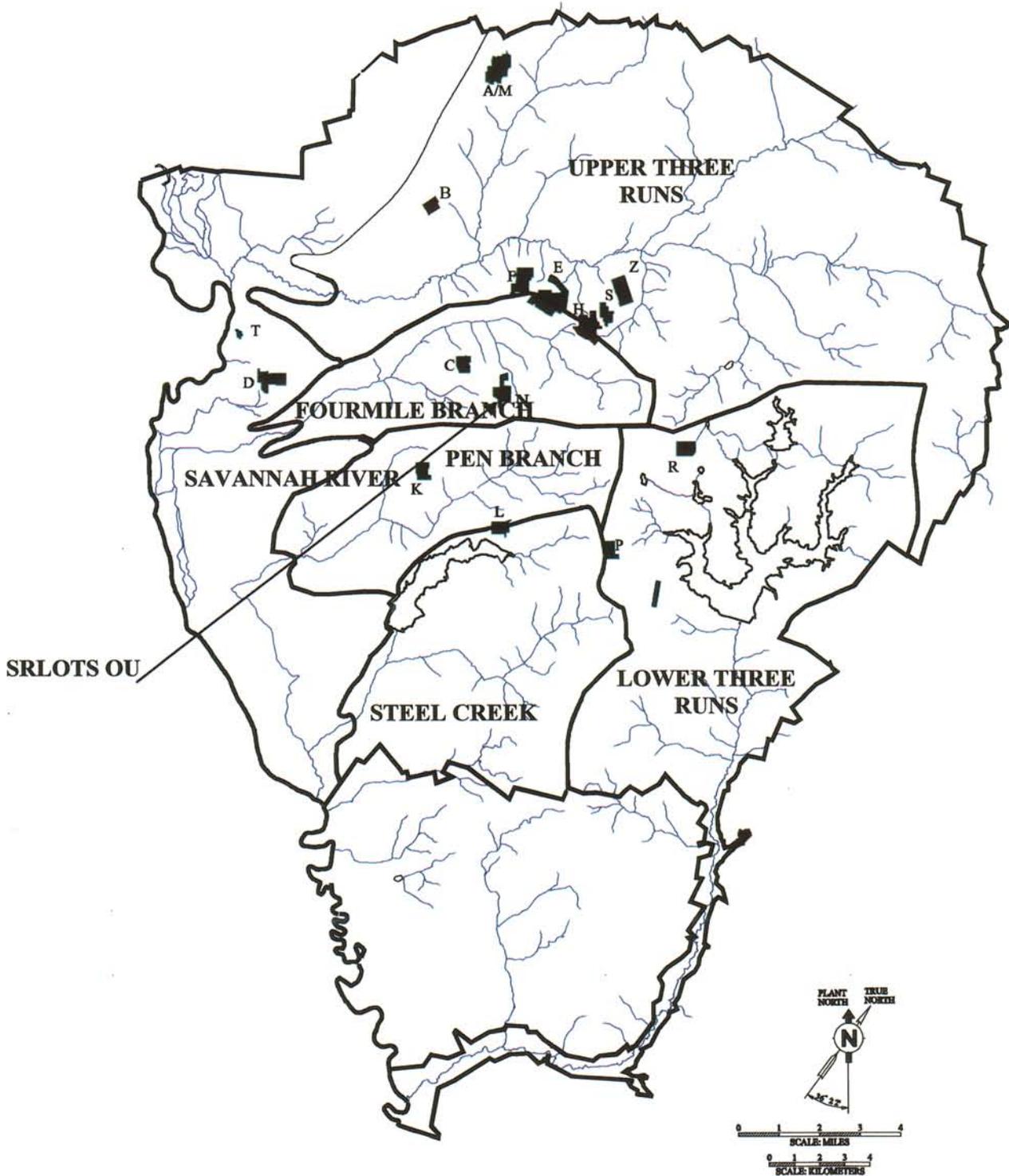
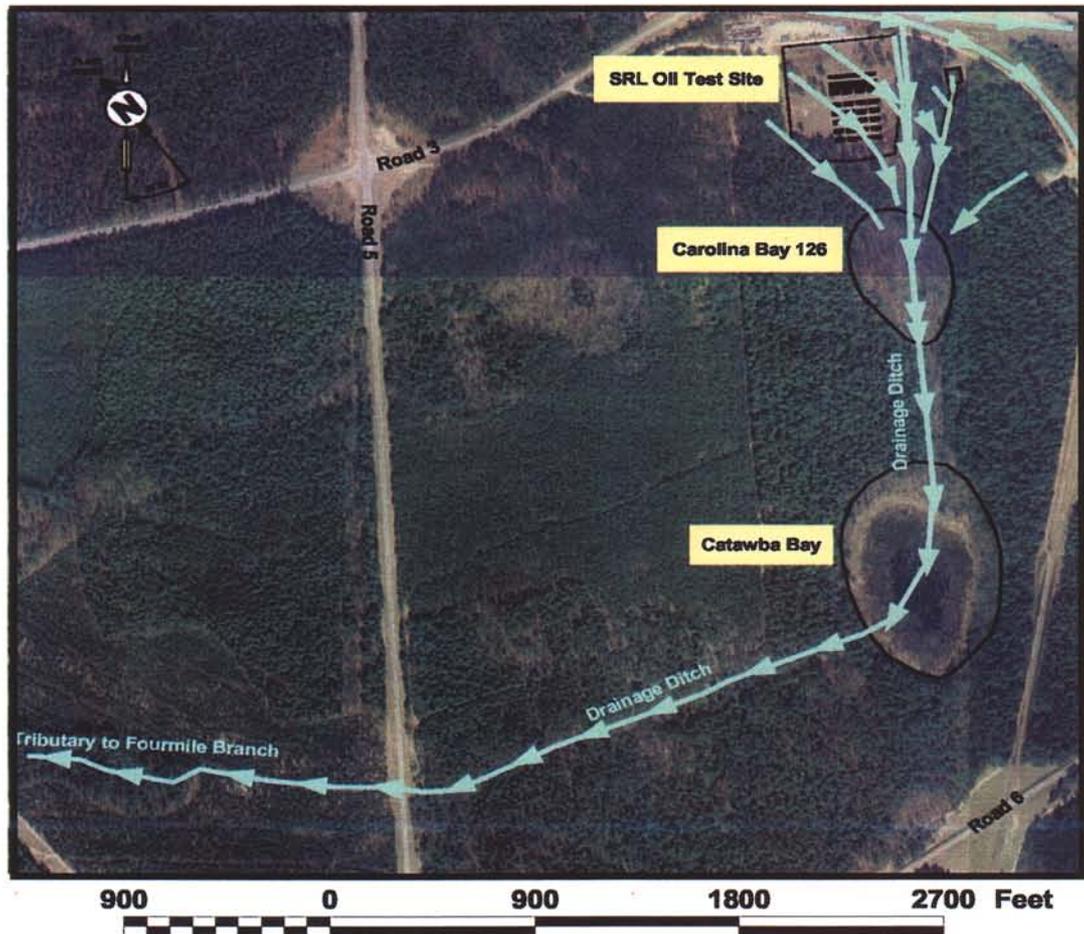


Figure 4. Location of the SRLOTS OU in the Fourmile Branch Watershed

Surface water drainage pathways in the vicinity of SRLOTS OU are shown on Figure 5. Drainage from the SRLOTS OU area flows to Carolina Bay 126, then to Catawba Bay, and finally to a tributary of Fourmile Branch. The drainage ditch is not a part of the SRLOTS OU and was evaluated as a part of the CSSL OU.

The unit is currently covered with grass/weeds and young trees, and the surrounding area is partially wooded. There are no ditches or surface waters on the SRLOTS OU. No structures (except three groundwater monitoring wells) or utilities exist at the unit. The SRLOTS OU is surrounded by a barbed wire fence.

Soil types found in the vicinity of the SRLOTS OU include Udorthents and Dothan sand (Figure 6) (SCS 1990). The soil type within the SRLOTS OU area is Udorthents. Udorthents soils are disturbed and typically are heterogeneous materials derived as spoil or refuse from excavations and major construction operations. The soil type in the wooded area around the SRLOTS OU is Dothan sand. Dothan sands are well-drained soils found on the broad ridge tops and smooth side slopes of the Coastal Plain and in areas intermingled with the Sand Hills. Typically, the surface layer is brown sand about 17.8 cm (7 in) thick. The subsoil from a depth of about 17.8 to 30.5 cm (7 to 12 in) is yellowish-brown sandy loam. From 30.5 to 96.5 cm (12 to 38 in), it consists of yellowish-brown sandy clay loam that has a few red and brown mottles. From 96.5 to 165.1 cm (38 to 65 in), it consists of strong brown and yellowish-brown sandy clay loam that has red, brown, and gray mottles and more than 5 percent nodules of plinthite (chemically induced hard pan material common in highly leached sandy soil with high iron content). Dothan sand has a low organic matter content and a moderate available water capacity. It is moderately acid to very strongly acid in the layers above the plinthite and ranges to extremely acid below those layers. Permeability is moderately slow in the subsoil. In the Dothan sands, a perched water table may be present 0.9 to 1.5 m (3 to 5 ft) below land surface (bls) for brief periods in winter and early spring.



SRL Oil Test Site (080-16G)
Surface Water Drainage to Fourmile Branch

Figure 5. Surface Water Drainage Pathways in the Vicinity of SRLOTS OU

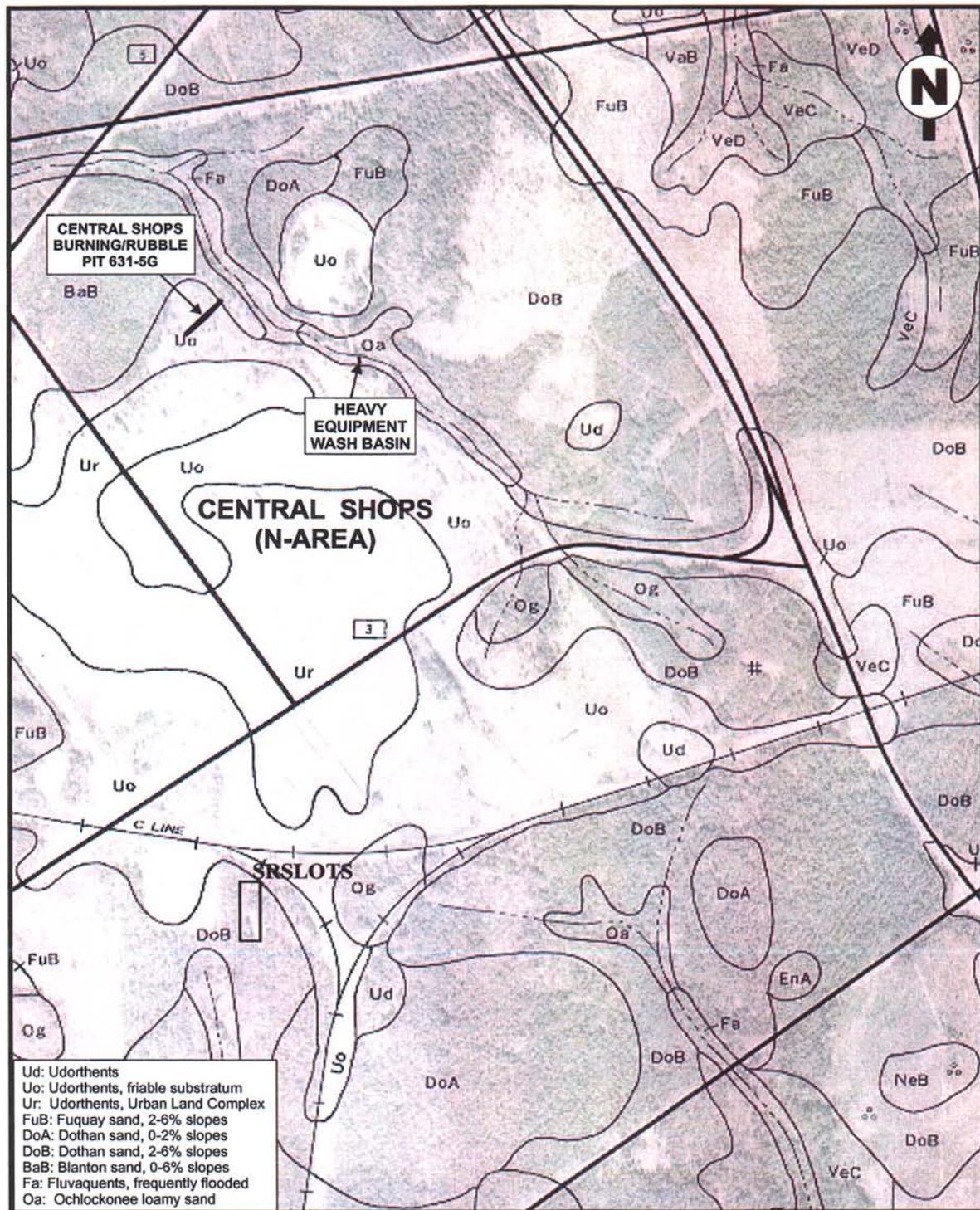


Figure 6. Map of Soils at the SRLOTS OU

There are three groundwater monitoring wells in the immediate vicinity of the SRLOTS OU. Therefore, unit-specific hydrogeologic information was obtained from soil borings and monitoring wells at the nearby CSSL. Soil borings at the SRLOTS and CSSL indicate that the vadose zone is composed primarily of sands, silty sands, and clayey sands with lesser amounts of finer grained material. Direct push technology (DPT) lithology pushes and soil sampling boreholes were used to identify a competent clay layer at approximately 2.1 to 3.0 m (7 to 10 ft) bls. The thickness of this layer is variable across the site, ranging from approximately 0.6 to 3.0 m (2 to 10 ft). This variability is typical of fluvial deposits. The result is discontinuous sand lenses or channel deposits, resulting in a complex sequence of varying horizontal and vertical hydraulic conductivity. The clay interval limits vertical migration of water and contaminants and has resulted in the formation of a transient perched water zone.

The SRLOTS OU is a maintained and routinely mowed field. It is dominated by weeds (i.e., *Lespedeza* and *Sericea*) and grasses (i.e., Bahia and Panic grasses). There are a few scattered trees on the unit, including pines, oaks, and cherry. There is a Carolina bay approximately 122.0 m (400 ft) southeast of SRLOTS OU (see Figure 5). Ground vegetation in the Carolina bay is limited, likely due to periodic flooding.

The plant community types at SRS depend on topography, soil type, moisture, and disturbance activities (Workman and McLeod 1990). The dominant species at SRLOTS OU is loblolly pine (*Pinus taeda*). Other tree species in the area include water oak, willow oak, sweetgum, and red maple (*Acer rubrum*). Understory species noted include cherry (*Prunus spp*), wax myrtle (*Myrica cerifera*), American holly (*Ilex opaca*), and privet (*Ligustrum spp.*).

While the SRLOTS OU is on the margin of an active industrial area, it potentially offers habitats for a variety of species. Wildlife species such as the white-tailed deer (*Odocoileus virginianus*), wild turkey (*Meleagris gallopavo*), squirrels (*Sciurus*

carolinensis), small rodents, and many songbirds could utilize the area. A variety of reptiles can also be expected to occur in this area.

A gray fox (*Urocyon cinereoargenteus*) was observed at the SRLOTS OU. Additionally, deer tracks were noted during the site walkdown. Other mammals likely to utilize the area include opossum (*Didelphis virginiana*) and bobcat (*Felis rufus*). Various small mammals are likely to inhabit the area. These include the old field mouse (*Peromyscus polionotus*), eastern harvest mouse (*Reithrodontomys humulis*), eastern cottontail (*Sylvilagus floridanus*), southern flying squirrel (*Glaucomys volans*), short-tailed shrew (*Blarina carolinensis*), and southeastern shrew (*Sorex longirostris*).

During the site reconnaissance, wild turkey tracks and feathers were noted at the SRLOTS OU. An American Crow (*Corvus brachyrhynchos*) call was heard. A northern cardinal (*Cardinalis cardinalis*) was also observed in the surrounding forest during recent reconnaissance of the nearby CSSL OU. Other avian species likely to utilize the SRLOTS OU include birds common to the SRS: mockingbird (*Mimus polyglottos*), eastern meadowlark (*Sturnella magna*), Carolina wren (*Thryothorus ludovicianus*), field sparrow (*Spizella pusilla*), eastern bluebird (*Sialia sialis*), American goldfinch (*Carduelis tristis*), bobwhite (*Colinus virginianus*), and mourning dove (*Zenaida macroura*). These species are non-migratory and are likely to be permanent residents in the region. Migratory birds may utilize the area only temporarily or seasonally. These may include species such as indigo bunting (*Passerina cyanea*), American robin (*Turdus migratorius*) and eastern kingbird (*Tyrannus tyrannus*) in summer, or northerly breeding species such as song sparrow (*Melospiza melodia*) and white-throated sparrow (*Zonotrichia albicollis*) in winter.

Reptiles likely to occur in the study area include terrestrial snakes such as the southern black racer (*Coluber constrictor*) and common kingsnake (*Lampropeltis getulus*), as well as lizards such as the six-lined racerunner (*Cnemidophorus sexlineatus*) and green anole (*Anolis carolinensis*). Southern toads (*Bufo terrestris*) and other terrestrial species may occur anywhere in the area.

No threatened and endangered species (TES) survey of SRLOTS OU was conducted; however, during June and August of 1999, a TES species field survey was performed at the nearby CSSL OU by the Savannah River Forest Station (SRFS). In addition to field surveys, SRFS files were examined to determine past or present occurrences of any TES at or in the vicinity of the unit. Records reviewed included aerial photographs, vegetative stand data, soil information, and existing TES records. No resident TES were detected during the field surveys, and none were noted in the other sources referenced. In general, the disturbed nature of the SRLOTS OU and proximity to active industrial activities limit the potential for TES.

No water well that can be used as a drinking water source exists at or near the vicinity of the SRLOTS OU.

The *Savannah River Site Future Use Project Report* (USDOE 1996) presents SRS stakeholders with preferred future land use recommendations. The report recommends that the SRLOTS area be designated for future industrial use (see Figure 7).

Removal Action

No removal action of any kind has taken place at the unit; however, in 1990 the petroleum-contaminated soil, which was stored on plastic sheeting in 1990, was removed from the waste unit. Presently, the SRLOTS OU is an inactive waste unit.

III. HIGHLIGHTS OF COMMUNITY PARTICIPATION

Both RCRA and CERCLA require that the public be given an opportunity to review and comment on the draft permit modification and proposed remedial alternative. Public participation requirements are listed in South Carolina Hazardous Waste Management Regulation (SCHWMR) R.61-79.124 and Sections 113 and 117 of CERCLA 42 USC Sections 9613 and 9617. These requirements include establishment of an Administrative Record File that documents the investigation and selection of the remedial alternatives for addressing the SRLOTS OU soil and groundwater.

The SRS Public Involvement Plan (USDOE 1994) is designed to facilitate public involvement in the decision-making process for permitting, closure, and selection of remedial alternatives. The SRS Public Involvement Plan addresses requirements of RCRA, CERCLA, and the National Environmental Policy Act, 1969 (NEPA). SCHWMR R.61-79.124 and Section 117(a) of CERCLA, as amended, require the advertisement of the draft permit modification and notice of any proposed remedial action and provide the public an opportunity to participate in the selection of the remedial action. The Statement of Basis/Proposed Plan (SB/PP) for the SRLOTS (080-16G) OU, Revision 0 (WSRC 2003b), a part of the Administrative Record File, highlights key aspects of the investigation and identifies the preferred action for addressing the SRLOTS OU.

The FFA Administrative Record File, which contains the information pertaining to the selection of the response action, is available at the following locations:

U.S. Department of Energy
Public Reading Room
Gregg-Graniteville Library
University of South Carolina – Aiken
171 University Parkway
Aiken, South Carolina 29801
(803) 641-3465

Thomas Cooper Library
Government Documents Department
University of South Carolina
Columbia, South Carolina 29208
(803) 777-4866

The RCRA Administrative Record File for SCDHEC is available for review by the public at the following locations:

The South Carolina Department of
Health and Environmental Control
Bureau of Land and Waste
Management
8911 Farrow Road
Columbia, South Carolina 29203
(803) 896-4000

Edisto Savannah District
Environmental Quality Control Office
206 Beaufort Street, Northeast
Aiken, South Carolina 29802
(803) 641-7670

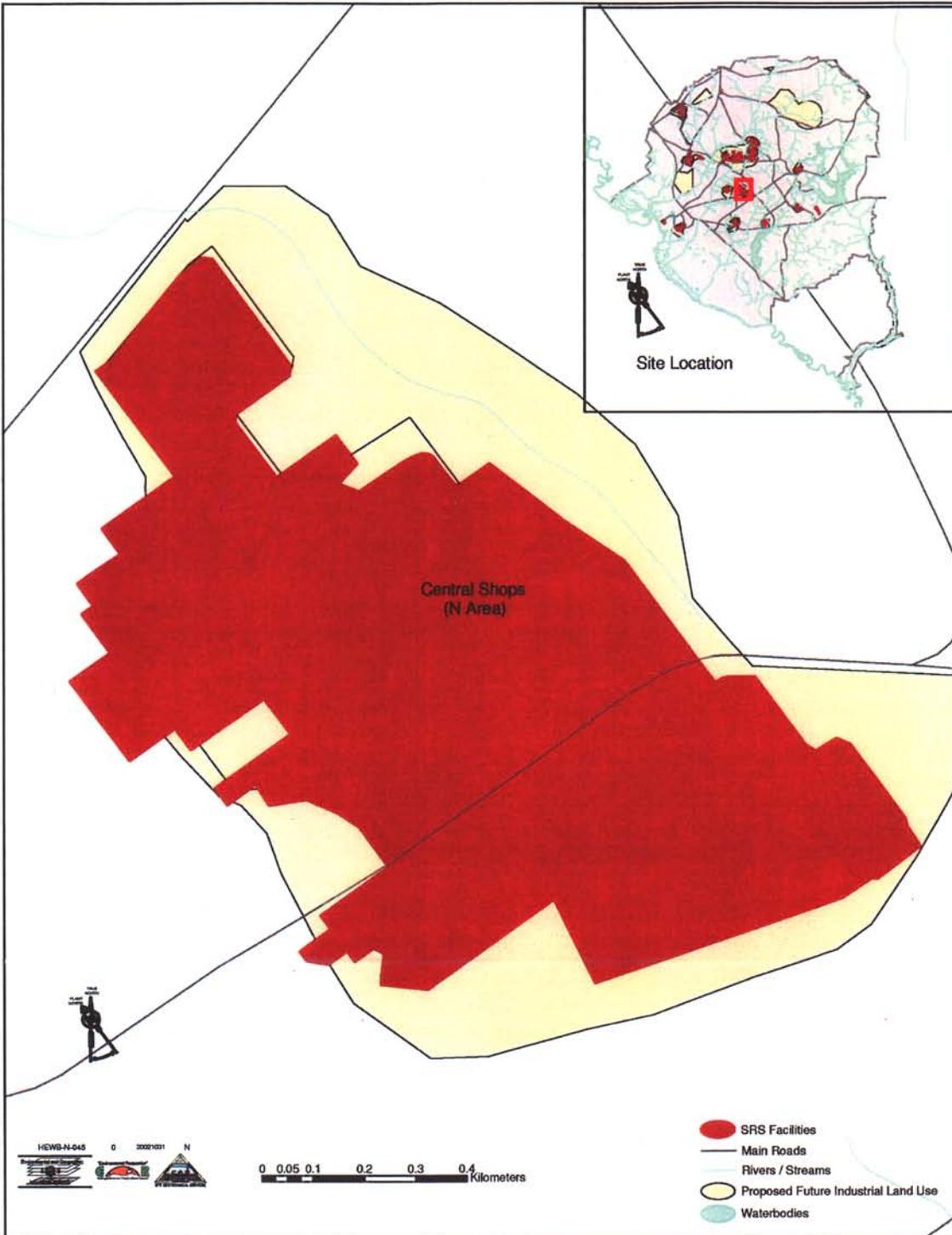


Figure 7. Land Use Map for the Central Shops (N Area)

The public was notified of the public comment period through the *SRS Environmental Bulletin*, a newsletter sent to citizens in South Carolina and Georgia, and through notices in the *Aiken Standard*, the *Allendale Citizen Leader*, the *Augusta Chronicle*, the *Barnwell People-Sentinel*, and *The State* newspapers. The public comment period was also announced on local radio stations.

The SB/PP 45-day public comment began on December 18, 2003, and ended on January 31, 2004. No comments were received during the public comment period.

IV. SCOPE AND ROLE OF THE OPERABLE UNIT WITHIN THE SITE STRATEGY

Due to the complexity of multiple contaminant areas, the SRS is divided into integrator operable units (IOUs) for the purpose of managing a comprehensive cleanup strategy. Waste units within an IOU are evaluated and remediated individually.

The SRLOTS OU is located within the Fourmile Branch IOU (Fourmile Branch Watershed, see Figure 1), which is not a "source control" unit; i.e., the unit does not contain contaminated soil that could act as a source of future contamination to the groundwater through leaching. In addition to the SRLOTS OU, there are many OUs within the Fourmile Branch Watershed. All the source control and groundwater OUs located within this watershed will be evaluated to determine their impacts, if any, to the associated streams and wetlands. SRS will manage all source control units to prevent impact to the watershed. Upon disposition of all OUs within the Fourmile Branch IOU, a final comprehensive ROD for the Fourmile Branch Watershed will be pursued.

Groundwater

The groundwater beneath the SRLOTS OU is not included in this unit and is included in a separate OU, the Central Shops (N Area) Groundwater OU.

Soils

The risk assessments revealed that the risk to human health and the environment at SRLOTS OU, based on unrestricted (residential) land use, is negligible. No refined constituents of concern (COCs) have been identified for human health or ecological receptors at the SRLOTS OU. Since no refined COCs are associated with SRLOTS OU, a No Action remedy is recommended for the unit. This means no action will be taken at SRLOTS OU, and this unit will remain in its present condition.

V. OPERABLE UNIT CHARACTERISTICS

Conceptual Site Model for the SRLOTS

The conceptual site model (CSM) for the SRLOTS OU is presented in Figure 8. The review of the information contained in the Final Report, *Soil and Gas Sampling in Old Ellenton, the SRLOTS, the Fire Training Area, and the Miscellaneous Chemical Basin* (Microseeps Ltd. 1986) and other related publications contained in Appendix A of the *RFI/RI Work Plan with Risk Assessment* (WSRC 2003a) revealed that the primary source of potential contamination at SRLOTS OU included waste oils/fluids applied to the soil in the test plots. The petroleum-contaminated soil that was placed on plastic sheeting at a temporary storage area for three months was removed.

Primary Source and Release Mechanisms

The primary release mechanisms for the SRLOTS OU are presented in Figure 8. Potential contamination may have been released from the primary sources by the following mechanisms:

- deposition of hazardous materials (waste oils/fluids) on the ground surface
- infiltration/percolation of water contaminated by contact with waste oils/fluids

There are no primary source materials present at the unit so these release mechanisms are no longer a potential source of contamination. However, the primary release mechanisms might have potentially impacted the secondary sources.

Secondary Source and Release Mechanisms

Environmental media impacted by the release of potential contamination from the primary sources become secondary sources. Potential secondary sources of contamination at the SRLOTS OU include surface soil (0 to 0.3 m [0 to 1 ft]) bls, subsurface soil (0 to 1.2 m [0 to 4 ft]) bls, and deep soil (>1.2 m [>4 ft]) to groundwater.

The potential secondary source could have released contamination to other media through a variety of secondary release mechanisms, including the following:

- release of volatile constituents from the soil (volatilization)
- generation of contaminated fugitive dust by wind or other surface soil disturbance
- biotic uptake into flora and fauna
- leaching of contaminants from subsurface and deep soil to groundwater

The unit has a vegetative cover, so flora and fauna were considered potentially significant secondary release mechanisms to human receptors and higher trophic level ecological receptors.

Exposure Pathways, Exposure Routes, and Receptors

Contact with contaminated environmental media creates the exposure pathways to human health and ecological receptors that are evaluated in a BRA. The following potential exposure pathways were identified at the SRLOTS OU:

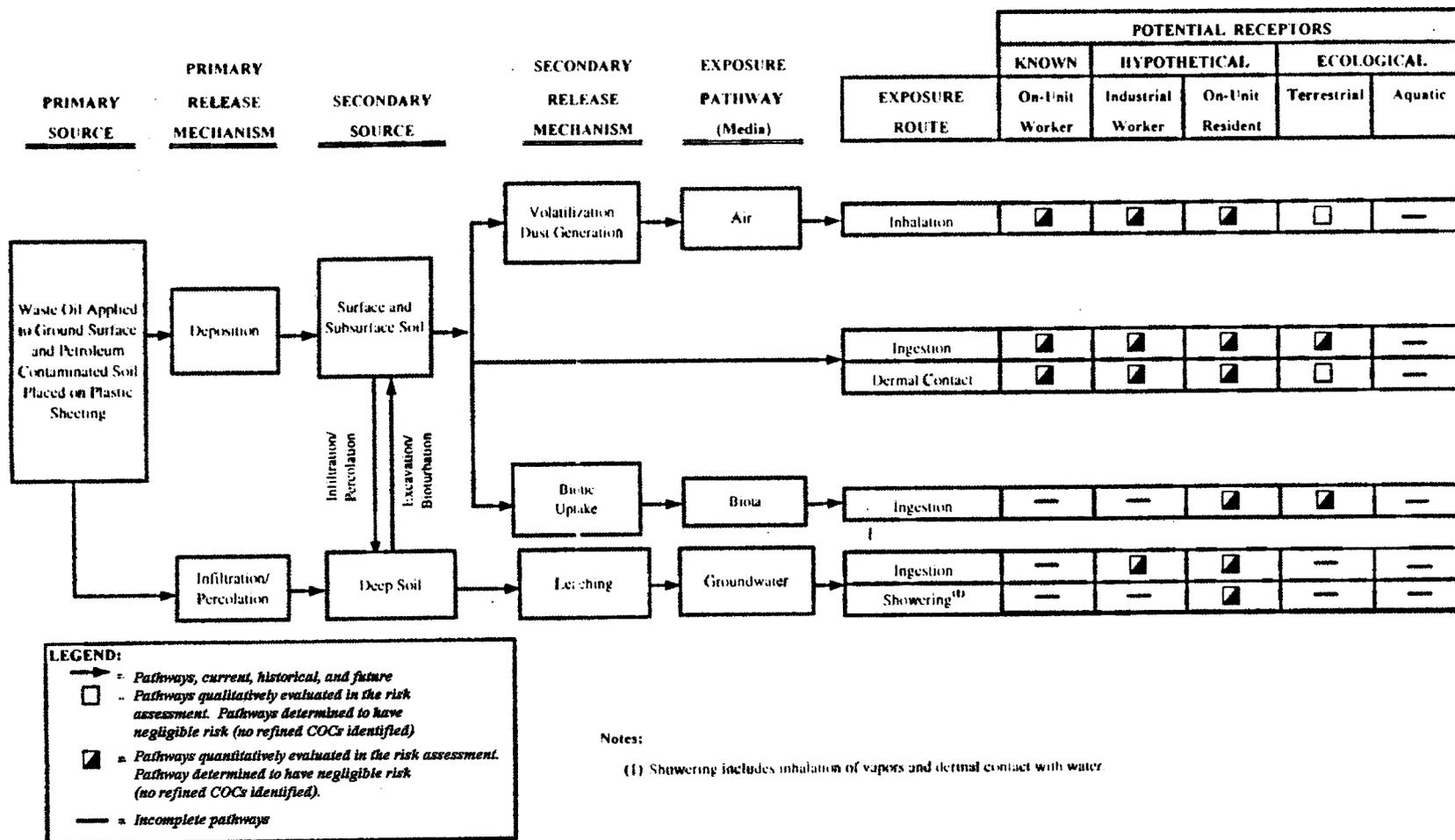


Figure 8. Conceptual Site Model for the SRLOTS OU

- ambient air (vapors and particulates) in the vicinity of the SRLOTS OU
- biota in the vicinity of the SRLOTS OU
- surface, subsurface, and/or deep soil in and around the SRLOTS OU
- groundwater contaminated by infiltration of contaminated water to the water table

The exposure route is the way a receptor comes into contact with a contaminant. Potential exposure routes for human and ecological receptors at the SRLOTS OU included the following:

- inhalation of volatile emissions and airborne dust from soil
- ingestion of contaminated media, including soil, groundwater, vegetation, and homegrown produce
- dermal contact with soil

Human receptors include the following:

- current on-unit workers occasionally in the area
- future industrial workers
- future on-unit residents (adult and child)

Ecological receptors include the following terrestrial organisms:

- earthworms, short-tailed shrews, American robins, and red tailed hawks

Media Assessment

The RFI/RI Work Plan (WSRC 2003a) contains detailed information and analytical data for all the investigations conducted and samples taken in the media assessment of the SRLOTS OU. This document is available in the Administrative Record File (see Section III of this document).

The investigations/evaluations conducted to characterize SRLOTS OU comprised a preliminary unit evaluation that included review of the soil-gas survey conducted in 1986. Additional investigations included a unit screening as a part of pre-work plan field investigations, screening level sampling, confirmatory definitive-level sampling, data-gap sampling, migration analyses sampling, including core penetrometer testing (CPT) and a radiological survey. Existing data and documents pertaining to SRLOTS OU were also reviewed. These investigations/evaluations are briefly described in the following sections.

Soil Investigation

The soil investigations of the SRLOTS OU were conducted in several stages. The major activities included the following:

- Existing/Previous Investigations

These included review of reports and available information pertaining to the SRLOTS OU. Specifically, the results of the soil-gas survey conducted in 1986 were reviewed. During soil-gas surveys, 65 locations were sampled for soil-gas hydrocarbons. Additionally, soil samples were collected from 12 locations and analyzed for gasoline-range hydrocarbons. Soil-gas sample locations and soil sample locations are shown in Figure 9.

- Screening-Level Sampling

During 1997, screening-level samples were obtained from 36 locations in and around the SRLOTS OU to determine the nature and extent of contamination at the waste unit (see Figure 11). Of the 36 locations, three were at background locations, 23 were in the test/control plots, and 10 were in the Petroleum-Contaminated Soil Temporary Storage Area. Soil samples from 0 to 0.3 m (0 to 1 ft) and 0.3 to 1.2 m (1 to 4 ft) bls were obtained from each location. The samples were analyzed for target compound list (TCL) volatile organic compounds (VOCs), TCL semivolatile organic compounds (SVOCs), pesticides/polychlorinated biphenyls (PCBs), target analyte list (TAL) inorganics, and diesel-range and gasoline-range total petroleum hydrocarbons (TPH).

VOCs, SVOCs, inorganics and diesel-range TPH were detected.

- Confirmatory Definitive-Level Sampling

In 1998, confirmatory definitive-level sampling was conducted (see Figure 10). The sampling plan was designed using data quality objectives established for a BRA. The objective of this sampling activity was to substantiate data obtained from previous unit studies and provide data on the types and extent of contaminants. Sampling performed in 1998 was biased to provide definitive data at those locations where contaminants were detected during the 1997 screening-level sampling. The 1998 data were collected in part to verify the 1997 analytical results and to provide validated data to evaluate risk to human health and the environment. During the confirmatory investigation, seven locations were sampled (one background, five oil test plots, and one Petroleum-Contaminated Temporary Soil Storage Area). The 0 to 0.3 m (0 to 1 ft) and 0.3 to 1.2 m (1 to 4 ft) intervals were sampled at these locations. At the background location and two unit locations, the 1.2 to 2.0 m (4 to 7 ft) and 2.0 to 3.0 m (7 to 10 ft) intervals were also sampled. Twenty samples were collected and analyzed for TCL VOCs, TCL SVOCs, pesticides/PCBs, TAL inorganics, and diesel- and gasoline-range TPH.

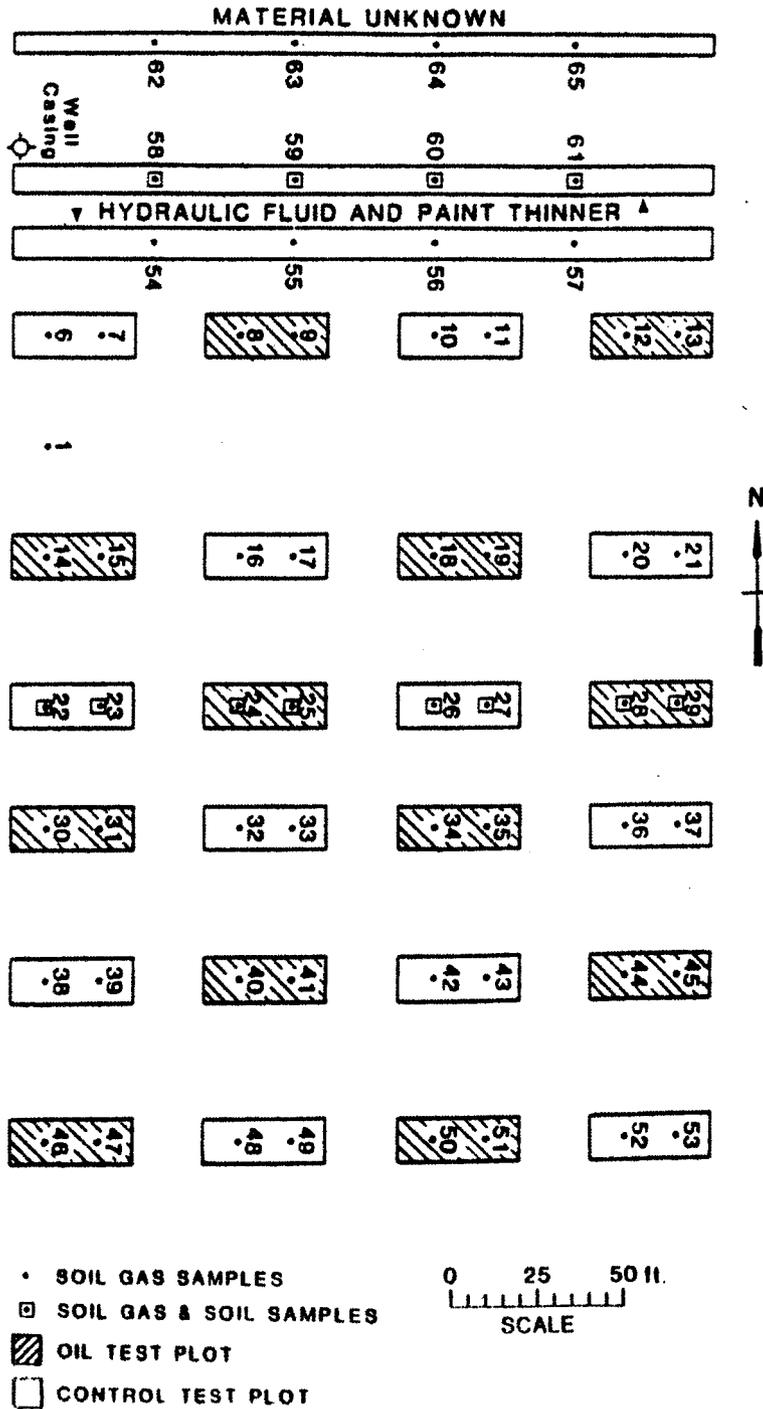
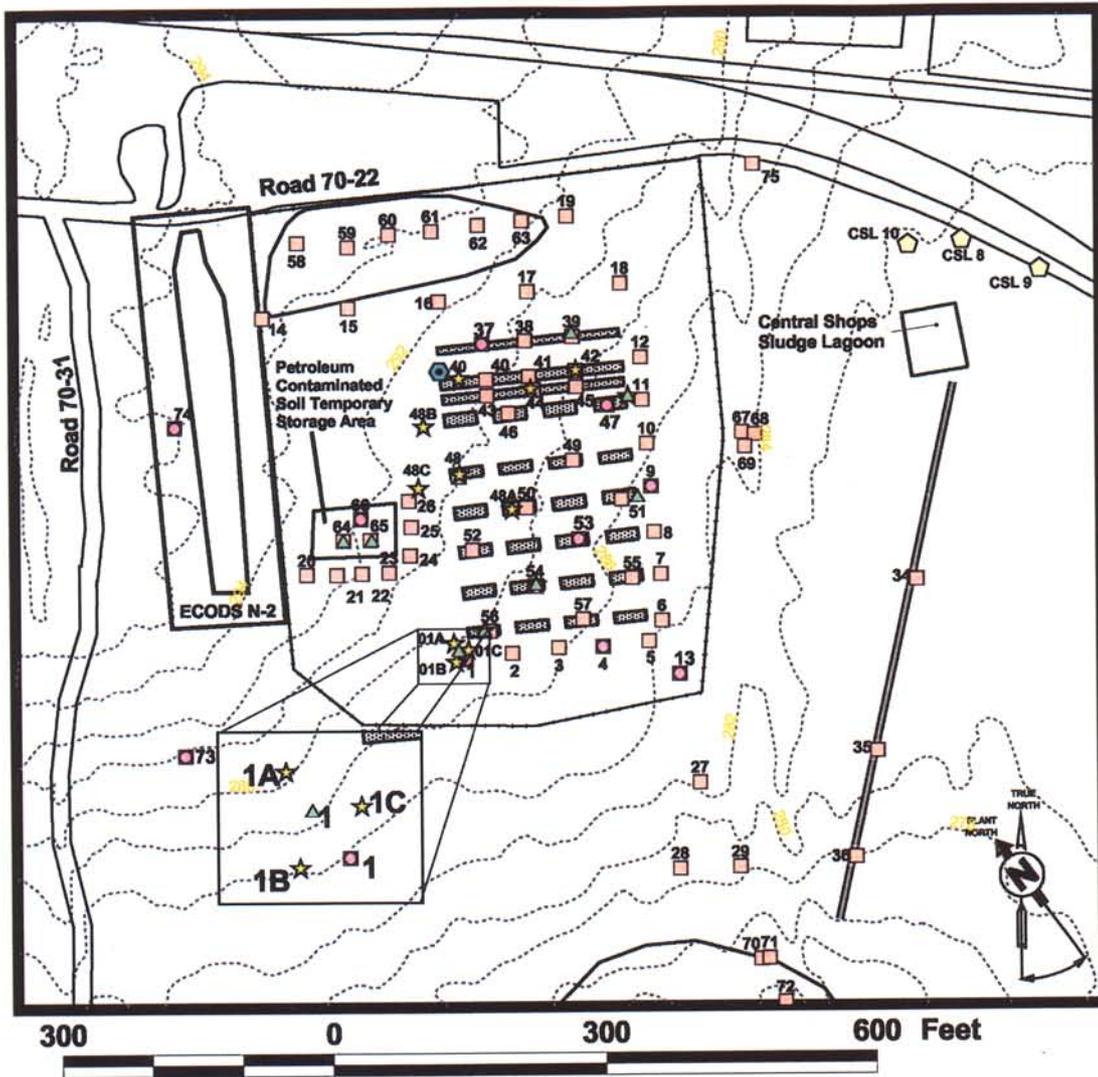


Figure 9. 1986 Soil-Gas Survey Locations at the SRLOTS OU



SRL Oil Test Site (080-16G)
Summary Map of Sampling Locations

- | | | |
|------------------------|--------------|--------------------------------|
| □ 1997 Samples | ▨ OTS Plots | — Roads |
| ○ 1998 Samples | — OTS Fence | — 2 ft Contour |
| ▲ July 2000 Samples | — OTS Ditch | ☆ Old Well |
| ☆ October 2000 Samples | — CSSL Ditch | ◊ CSSL Background Soil Samples |

Figure 10. Pre-characterization Soil Sampling Locations at the SRLOTS OU

It was determined that the data set from the 1998 sampling event was not large enough to support defensible risk assessment conclusions for all of the test plots. Additional sampling was conducted in the vicinity of the hydraulic fluid/paint thinner/oil test plots and temporary storage area to increase the size of the data set for statistical purposes and to add locations for nature and extent purposes.

Additional definitive-level sampling was conducted at 12 locations at the SRLOTS OU in July 2000 (for sampling locations, see Figure 10).

- **Data-Gap Sampling**

At the Work Plan scoping meeting on September 27, 2000, it was determined that the following data-gaps needed to be addressed by collecting samples from the following: deep soil (>1.2 m [4 ft]) to properly evaluate potential contaminant mobility in the paint thinner/hydraulic fluid plots,

- groundwater from the old well (for location, see Figure 10) at the unit, which was identified as a potential conduit for contamination to the water table, and
- area surrounding sampling location 01 to verify that there is no buried waste at that location.

To satisfy these data gaps, additional soil sampling and an investigation of the old well were conducted in October 2000. Forty-six samples were collected at 13 locations at the SRLOTS OU. Samples were taken at depths ranging from 1.2 to 15.2 m (4 to 50 ft) bls. All samples were analyzed for TCL VOCs and SVOCs. Additionally, some of the samples were also analyzed for TAL inorganics, pesticides/PCBs, and TPH. The data from this event are provided in the Analytical Data Validation Report (WSRC 2001). These data and interpretation of the results of this study are included in the RFI/RI Work Plan (WSRC 2003a).

The investigation of the old well in the vicinity of the test plots showed that the well consisted of gray, plastic, 10.1 cm (4 in) riser pipe with a steel surface casing. The well was open to a depth of 12.2 m (40 ft) above the water table and had been partially abandoned. No surface seal was apparent, and there was no cover or identification markings. The well has since been abandoned by over reaming and backfilling the hole with grout from 17.5 m (57 ft) bls to surface.

- **Contaminant Migration Analysis Sampling**

Based on the data discussed above, additional investigation was required to supplement the existing data set with information to refine the contaminant migration analysis, confirm that no radiological contamination is present at SRLOTS OU, and address uncertainty regarding the old well with respect to contaminant migration.

Sampling to support the contaminant migration analysis consisted of the following:

- soil-gas sampling at 31 locations to define the extent of the high concentration of TPH identified at boring G48 in deep soil (2.0 to 3 .0 m [7 to 10 ft]) intervals (see Figure 11), installation and sampling of 3 groundwater monitoring wells and 23 DPT locations to define the water table surface and determine whether VOCs have leached from SRLOTS OU soils into groundwater (Figure 12),
- collection of geotechnical samples from monitoring well borings to provide site-specific data for the contaminant migration model and determine whether VOCs have leached from the soil into the groundwater,
- performance of CPTs at 13 locations (Figure 13), and
- performance of a radiological survey to confirm that no radiological contamination is present at SRLOTS OU.

Additionally, the old well (described above) was abandoned to ensure that the borehole does not provide a conduit for contaminant migration.

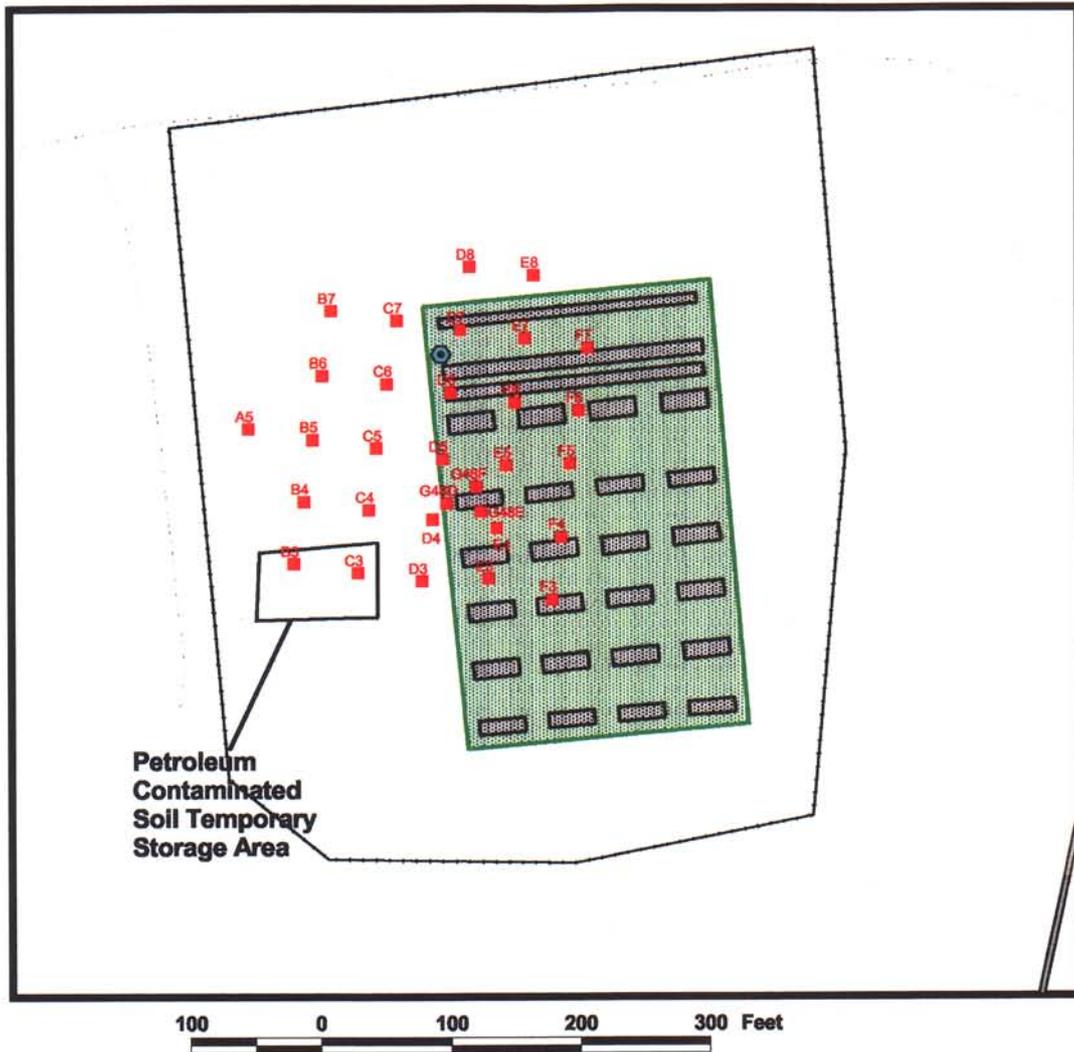
Groundwater Investigations

Groundwater sampling has been conducted at SRLOTS OU to fill data gaps in the contaminant migration analysis. Three monitoring wells (NOT-1D, -2D, and -3D) were installed and sampled to verify that the CMCOPCs (tetrachloroethene, dichloromethane, 1, 1, 2-trichloroethane and bis (2-ethylhexyl) phthalate) have not migrated to groundwater as predicted by the contaminant migration model for the SRLOTS OU. None of the CMCOPCs were detected in groundwater greater than their respective maximum contaminant levels (MCLs) which verifies that there is no impact to groundwater from the SRLOTS OU. Since the groundwater beneath the SRLOTS OU is being addressed under a separate unit, the Central Shops Groundwater OU, discussion of groundwater is not included in this ROD.

Media Assessment Result

Standard SRS characterization and risk assessment (human health and ecological) protocols were applied to the unit data for surface, subsurface and deep soil exposure groups to identify the COCs associated with the SRLOTS soils. Unrestricted (residential) land use was applied in calculating the human health risks. The calculated risks were below the USEPA target range of 1.0×10^{-4} to 1.0×10^{-6} . CMCOCs were identified through contaminant fate and transport analyses.

The acceptable range of 1.0×10^{-4} to 1.0×10^{-6} is for site-related exposure and represents the incremental probability of an individual's developing cancer over a lifetime as a result of exposure to a carcinogen. An excess lifetime cancer risk of 1.0×10^{-6} indicates that an individual experiencing the reasonable maximum exposure estimate has a 1 in 1,000,000 (one million) chance of developing cancer as a result of site-related exposure.



SRL Oil Test Site (080-16G) Soil Plug Locations



Figure 11 2001-2002 Soil-Gas Sampling Locations at the SRLOTS OU

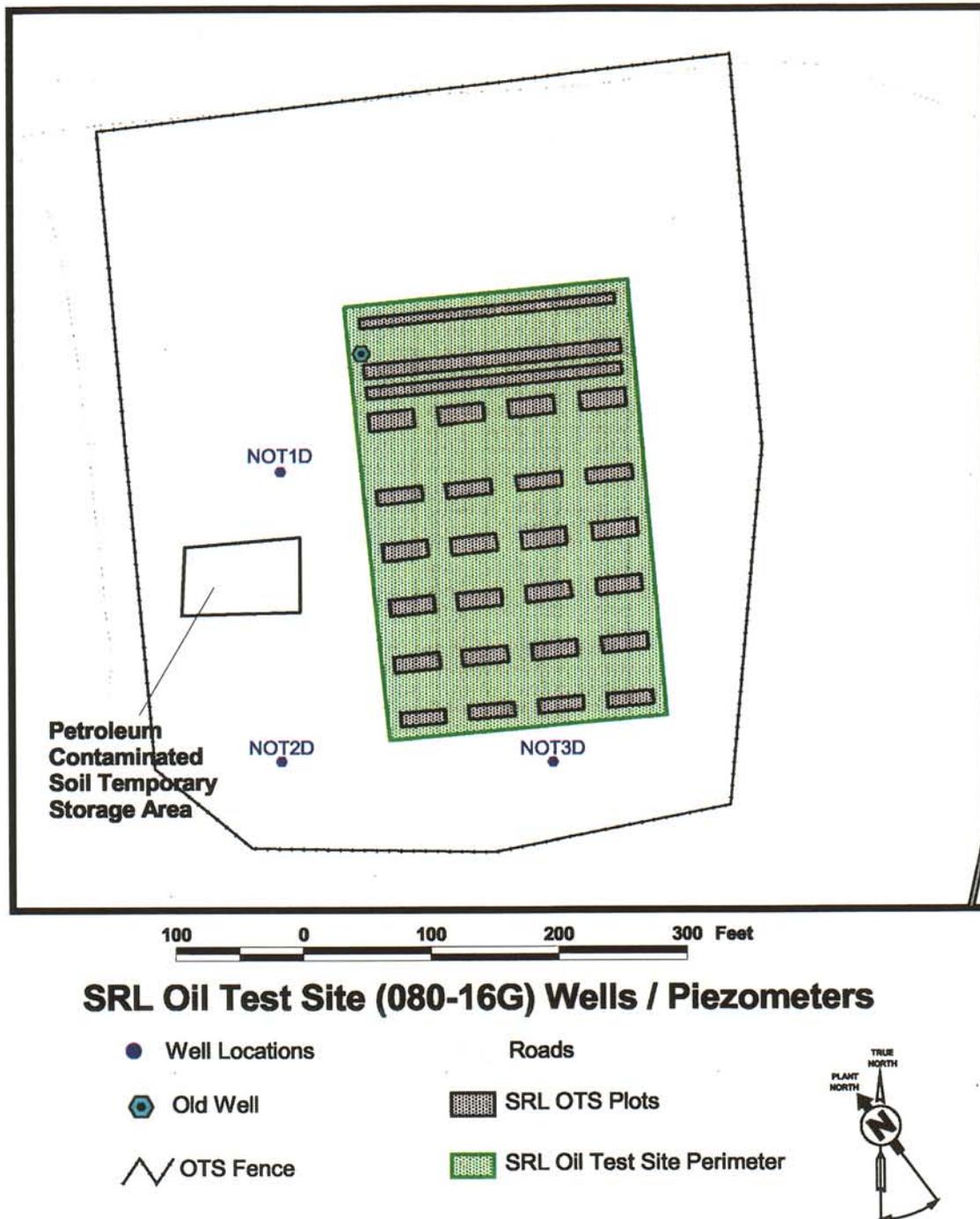
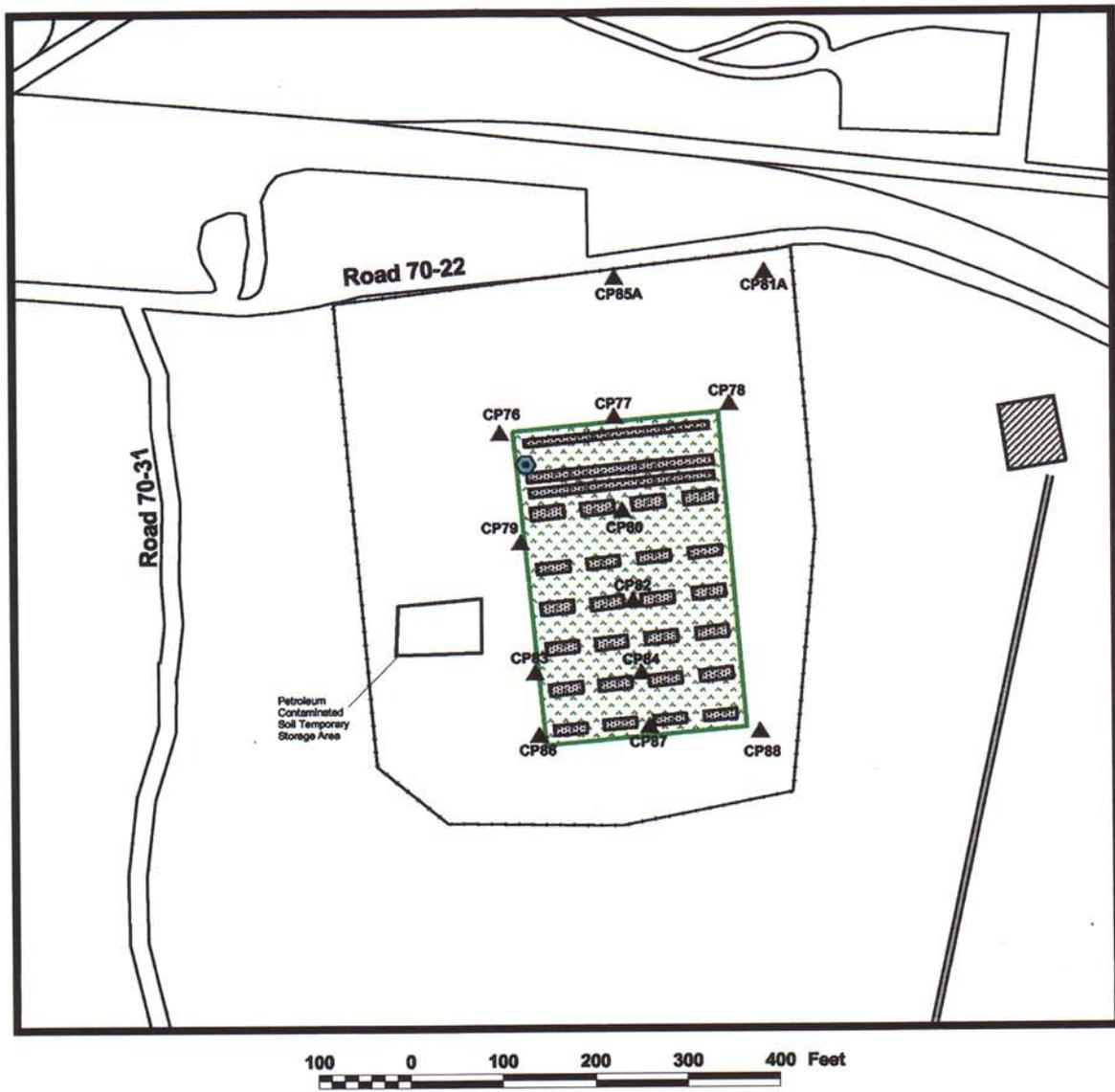


Figure 12. 2001-2002 Groundwater Monitoring Well Locations at the SRLOTS OU



SRL Oil Test Site (080-16G) CPT Locations

- | | | |
|-----------------|-------------------------------|--|
| ▲ CPT Locations | ∩ Roads | |
| ⬢ Old Well | ▨ CSSL Lagoon Area | |
| ∩ OTS Fence | ▤ SRL OTS Plots | |
| ∩ CSSL Ditch | ▤ SRL Oil Test Site Perimeter | |

Figure 13. 2001-2002 CPT Groundwater Sampling Locations at the SRLOTS OU

This is referred to as an “excess lifetime cancer risk” because it would be in addition to the risks of cancer individuals face from other causes such as smoking or exposure to too much sun. The chance of an individual’s developing cancer from all other causes has been estimated to be as high as one in three. Likewise, the cancer risk of 1.0×10^{-4} indicates a chance that 1 in 10,000 (ten thousand) will develop cancer.

The potential for noncarcinogenic effects is evaluated by comparing an exposure level over a specified time period (e.g., lifetime) with a reference dose (RfD) derived for a similar exposure period. An RfD represents a level that an individual may be exposed to that is not expected to cause any deleterious effect. The ratio of exposure to toxicity is called a hazard quotient (HQ). An $HQ < 1$ indicates that a receptor’s dose of a single contaminant is less than the RfD and that toxic noncarcinogenic effects from that chemical are unlikely. The hazard index (HI) is generated by adding the HQs for all COCs that affect the same target organ (e.g., liver) or that act through the same mechanism of action within a medium or across all media to which a given individual may reasonably be exposed. An $HI < 1$ indicates that, based on the sum of all HQs from different contaminants and exposure routes, toxic noncarcinogenic effects from all contaminants are unlikely. An $HI > 1$ indicates that site-related exposures may present a risk to human health.

No refined COCs were identified. Refined COCs are finally selected COCs and are determined by examining each COC on a case-by-case basis as being from a discernable source, unit-related, and consistent with the conceptual site release model. The results of the characterization and assessment have been summarized in the RFI/RI Work Plan (WSRC 2003a).

Table 1 provides the results from the screening process used to determine the refined COCs to be retained for further remedial action at the SRLOTS OU. The process entailed the following steps:

1. From the detected constituents, unit-specific constituents (USCs) were identified. USCs were determined by comparing each constituent concentration found in the soil against its respective twice average background concentration for all depth intervals.
2. The USCs were used to determine the preliminary CMCOCs. CMCOCs were determined in accordance with SRS contaminant migration protocols.
3. The risk-based preliminary COCs (human health constituents of concern [HHCOCs] and ecological COCs) were determined in accordance with CERCLA guidance and protocols.
4. The applicable or relevant and appropriate requirement (ARAR) COCs were determined using RCRA/CERCLA screening values/standards.
5. PTSM was evaluated by screening the maximum concentration or activity of each USC against either the USEPA Region IX Preliminary Remediation Goals (PRGs) or risk-based activity (RBA). PTSM was also evaluated based on the contaminant's potential for migrating to the groundwater.
6. All the preliminary COCs were carried into a formal uncertainty analysis to determine if there were any refined COCs.

Conclusion

No refined COCs have been identified as a result of the RFI/RI Work Plan with Risk Assessment investigations at the SRLOTS OU. No PTSM and no RCRA listed or characteristic hazardous wastes exist at the unit. No mobile or highly toxic materials are associated with the SRLOTS OU. No problems warranting action are associated with ARARs, PTSM, human health analysis, ecological analysis, or contaminant migration analysis performed for the SRLOTS OU. Therefore, no remedial action is necessary at the SRLOTS OU to ensure protection of human health and the environment. The

Table 1. Constituent of Concern Selection for SRLOTS OU

USC	ARAR	PTSM		Contaminant Migration		Human Health		Ecological		Refined
	COC	COC (Toxicity)	COC (Mobility)	COPC	COC	COPC	COC	COPC	COC	COC
TAL Inorganics	(none)	(none)	(none)						(none)	(none)
Aluminum						X		X		
Antimony										
Arsenic				X	X	X	X			
Barium										
Beryllium										
Calcium								X		
Chromium										
Cobalt										
Cyanide										
Iron								X		
Lead								X		
Magnesium								X		
Manganese				X	X			X		
Mercury										
Selenium										
Sodium								X		
Vanadium								X		
Zinc										
TCL Semivolatiles										
2-Methylnaphthalene										
4-Nitrophenol										
Acenaphthene										
Anthracene										
Benzo(a)anthracene										
Benzo(b)fluoranthene										
Benzo(g,h,i)perylene										
Benzo(k)fluoranthene										
Bis(2-ethylhexyl) phthalate				X				X		
Carbazole										
Chrysene										
Di-n-butyl phthalate										
Di-n-octyl phthalate								X		
Dibenzo(a,h)anthracene										
Dibenzofuran										
Fluoranthene										
Fluorene										
N-Nitrosodiphenylamine										
Naphthalene										
Phenanthrene										
Pyrene										

COPC – constituent of potential concern

Table 1. Constituent of Concern Selection for SRLOTS OU (Continued)

USC	ARAR	PTSM		Contaminant Migration		Human Health		Ecological		Refined
	COC	COC (Toxicity)	COC (Mobility)	COPC	COC	COPC	COC	COPC	COC	COC
TCL Volatiles										
1,1,1-Trichloroethane								X		
1,1,2-Trichloroethane				X						
1,1-Dichloroethene								X		
1,2-Dichloroethene (total)										
Acetone										
Bromodichloromethane										
Carbon disulfide										
Chlorobenzene										
Chloroform								X		
Dichloromethane				X						
Ethylbenzene										
TPH - Diesel Range						X		X		
TPH - Gasoline Range						X				
Tetrachloroethene				X						
Toluene										
Xylenes (total)										
TCL Pesticides/PCBs										
Aldrin										
Endosulfan II										
Methoxychlor (Mariate)								X		
p,p'-DDE										
p,p'-DDT										

SRLOTS OU is capable of supporting unrestricted (residential) use without any remedial action.

Site-Specific Factors

No site-specific factors requiring special consideration that might affect the No Action remedial decision are present at the site.

Contaminant Transport Analysis

The vadose zone contaminant migration CSM used for the analysis of contaminant fate and transport is presented in Figure 14. The analysis was based on the lithological information, groundwater levels, and geotechnical data collected from investigations

conducted in 2000 through 2002. The results of the migration model reveal that the concentrations of constituents detected in the SRLOTS OU soils will not exceed their maximum contaminant levels (MCLs) or risk-based concentrations (RBCs) within the 1,000-year modeling period. The MCL is the maximum concentration of a substance allowed in water that is delivered to any user of a public water supply as required by the Safe Drinking Water Act. The CSM identified no refined CMCOCs. Therefore, the SRLOTS OU soils do not pose a migration threat to groundwater.

VI. CURRENT AND POTENTIAL FUTURE SITE AND RESOURCE USES

Land Uses

Current Land Use

Currently, the SRLOTS OU is an inactive waste unit. It is located within N Area (Central Shops), approximately 600.0 m (1,970 ft) south of the industrial area (see Figure 2). Access to SRS is controlled by USDOE. Access to the SRLOTS OU is restricted within the SRS boundaries.

The SRLOTS OU is a grass field surrounded on three sides by wooded areas. A railroad track lies north of the unit. Access to the SRLOTS OU is by a gravel road off of SRS 70-22 (see Figure 2). Access to the unit is limited by a fence that surrounds the unit.

The potential receptor for exposure to constituents associated with the SRLOTS OU is the known on-unit worker who comes to the area on an infrequent or occasional basis. Known on-unit workers are defined as SRS employees who work at or in the vicinity of the SRLOTS OU under current land use conditions. A known on-unit worker may be a researcher, environmental sampler, or other SRS personnel who work in close proximity to the unit. Although these receptors may be involved in the excavation or collection of contaminated media, they would be using SRS procedures and protocols to minimize exposure to potential contaminants.

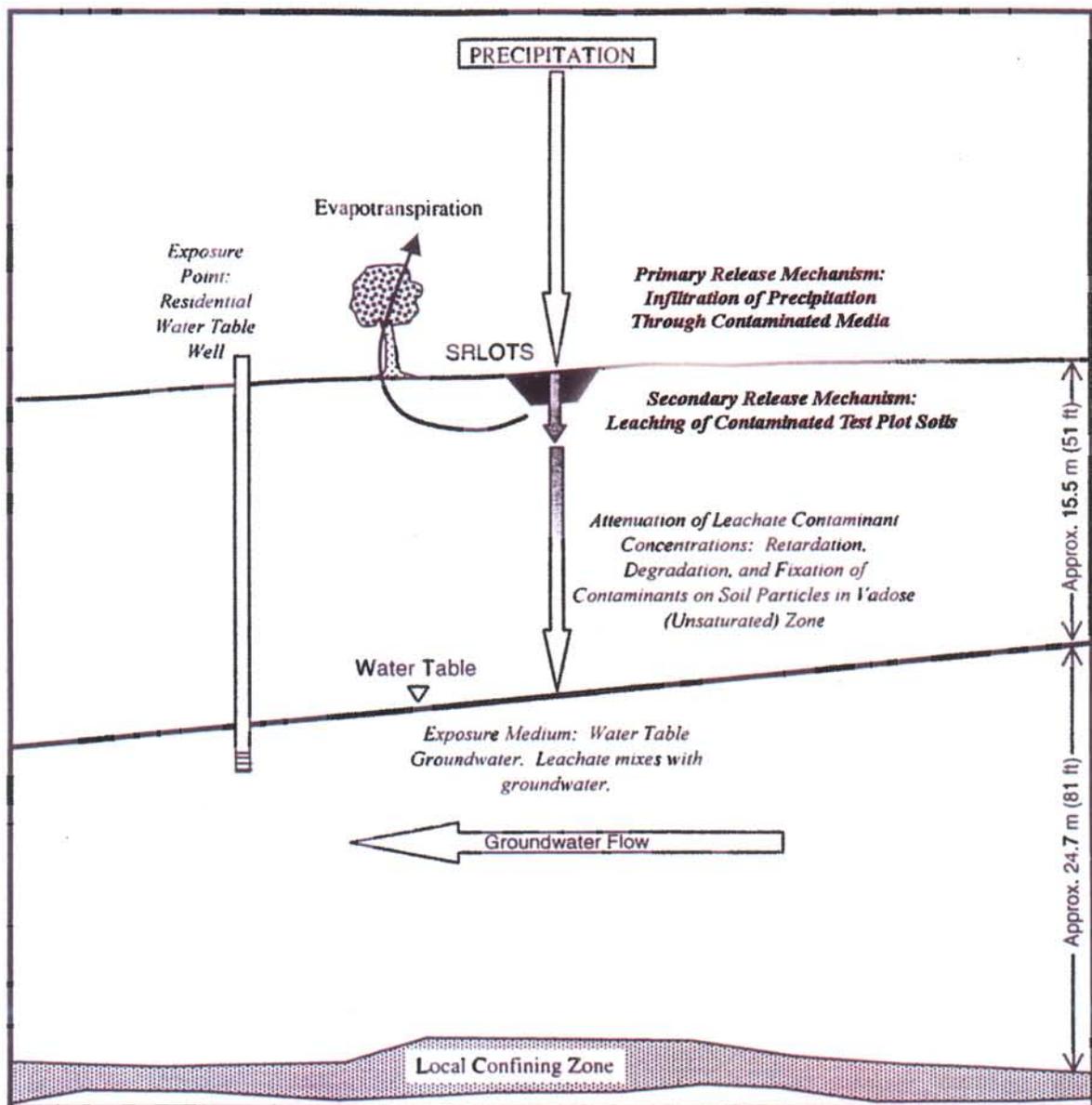


Figure 14. Contaminant Migration Conceptual Site Model for the SRLOTS OU

Future Land Use

According to the *Savannah River Site Future Use Project Report* (USDOE 1996), the preferred future land use for the area where the SRLOTS OU is located is designated as industrial with buffer (see Figure 7). Therefore, the potential receptors for exposure to constituents associated with the SRLOTS OU include the hypothetical on-unit industrial worker and hypothetical on-unit resident (adult and child).

The hypothetical on-unit industrial worker is an adult who works in an outdoor industrial setting that is in direct proximity to the contaminated media for the majority of his or her time. The hypothetical on-unit residents include adults and children who are exposed to all the contaminated media (both indoors and outdoors).

Groundwater Uses/Surface Water Uses

Groundwater beneath the SRLOTS OU is not used for any type of human consumption. Furthermore, the groundwater associated with SRLOTS OU has been separated from the OU and placed in the Central Shops Groundwater Operable Unit. Future use of the groundwater will be addressed by the Central Shops Groundwater Operable Unit ROD. The groundwater that flows beneath the SRLOTS OU is discharged into the Fourmile Branch.

There are no distinct surface water features on the unit and no drainage or surface runoff features that indicate that the surface runoff is being used for irrigation or any other beneficial uses.

VII. SUMMARY OF OPERABLE UNIT RISKS

As a component of the CERCLA process, a BRA was performed and included in the RFI/RI Work Plan (WSRC 2003a) for the SRLOTS. The BRA included human health and ecological risk assessments. Unrestricted (residential) land use was applied in

calculating the risks. The results of the risk assessments are summarized in the following paragraphs.

Summary of the Human Health Risk Assessment

A review of the analytical data contained in the RFI/RI Work Plan with Risk Assessment for the SRLOTS (WSRC 2003a) indicates that the data are of sufficient quality for use in the risk assessment evaluation.

Based on the existing analytical data, an evaluation was conducted to estimate the human health and environmental problems that could result from the current physical and waste characteristics of the SRLOTS OU. The results of the assessment indicated that the concentrations of all the constituents analyzed were below USEPA RBCs, and the calculated risks were below the USEPA target risk range of 1.0×10^{-4} to 1.0×10^{-6} (or HQs less than 0.1 for non-cancer constituents); hence, no refined HHCOCs are associated with SRLOTS OU. (For an explanation of carcinogenic and noncarcinogenic risk values, refer to the media assessment result section). Consequently, no health risks to current or future residents that warrant remedial action are posed by the SRLOTS OU. The SRLOTS OU is suitable for unrestricted use.

Summary of Ecological Risk Assessment

The purpose of the ecological risk assessment component of the BRA is to evaluate the likelihood that adverse ecological effects may occur or are occurring as a result of exposure to unit-related constituents based on a line-of-evidence approach. The ecological risk assessment has concluded that no refined COCs are associated with the SRLOTS OU and, therefore, the unit poses a negligible risk to the ecological receptors.

Summary of Contaminant Fate and Transport Analysis

The results of the contaminant migration and conceptual model (see Figure 15) reveal that the concentrations of the constituents detected in the SRLOTS OU soils will not

exceed their MCLs or RBCs within the 1,000 year modeling period. Hence, there are no refined CMCOCs associated with SRLOTS OU.

Discussion of PTSM

The concept of principal threat waste as developed by USEPA (USEPA 1991) was applied to USCs. No PTSM COCs associated with SRLOTS OU were identified based on toxicity on mobility.

Risk Assessment Summary

The risk assessments and contaminant fate and transport analysis establish that the risk associated with the SRLOTS OU is below the acceptable range of 1.0×10^{-4} to 1.0×10^{-6} so that the unit can support unrestricted land use. Additionally, it is concluded that no PTSM exists at the unit. No mobile or highly toxic materials are associated with the SRLOTS OU.

Conclusion

The SRLOTS OU poses no current or potential threat to human health or the environment based on unlimited exposures and unrestricted land use. Therefore, no remedial action is required.

VIII. EXPLANATION OF SIGNIFICANT CHANGES

No significant changes were made to this ROD since no comments were received during the public comment period for the SB/PP (WSRC 2003b).

IX. RESPONSIVENESS SUMMARY

Since no comments were received during the public comment period, the Responsiveness Summary to address the comments is not provided.

X. POST-ROD DOCUMENT SCHEDULE AND DESCRIPTION

No remedial action will be performed at the SRLOTS OU; therefore, a schedule for post-ROD cleanup activities is not provided.

XI. REFERENCES

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