



*Many Voices Working for the Community*

# Oak Ridge Site Specific Advisory Board

---

7/15/2005

Mr. Steve McCracken  
Assistant Manager for Environmental Management  
DOE-Oak Ridge Operations  
P.O. Box 2001, EM-90  
Oak Ridge, TN 37831

Dear Mr. McCracken:

## **Recommendation for Standardized Language Submitted to Land Record Authorities of Land with Notices of Contamination**

At our July 13, 2005, meeting, the Oak Ridge Site Specific Advisory Board approved the enclosed recommendation.

We appreciate your consideration of this recommendation and look forward to receiving your response. We respectfully request a response.

Sincerely,

A handwritten signature in cursive script that reads "Kerry Trammell".

Kerry Trammell, Chair

Enclosures

cc/enc: Dave Adler, DOE-ORO  
Pat Halsey, DOE-ORO  
Connie Jones, EPA Region 4  
Melissa Nielson, DOE-HQ  
John Owsley, TDEC  
Ralph Skinner, DOE-ORO



## **Oak Ridge Site Specific Advisory Board Recommendation for Standardized Language Submitted to Land Record Authorities of Land with Notices of Contamination**

---

### **Background**

In late 1942, the federal government gained title to 52,000 acres (later 59,000 acres) of land in Roane County and Anderson County in Tennessee by right of eminent domain for the purpose of constructing research, development, and production plants associated with the then classified Manhattan Project. The Oak Ridge Reservation is now about 35,000 acres of which about 4,000 have some contamination.

The diverse activities continued after World War II until the present. It is the considered judgment of the Department of Energy (DOE) and the informed public that, for reasons of worker safety and cost, some of the contamination should remain on the Oak Ridge Reservation after proper precautions are taken. As a result, after an aggressive remediation campaign, ending nominally in 2015, the Oak Ridge Reservation will accommodate the residual wastes of several radioactive and physical operations. These include wastes from research and development reactors, radioactive processing facilities, three uranium enrichment facilities, a weapons production facility, an historic radioactive waste disposal facility for the northeastern United States known as the Southern Regional Burial Ground, and a permanent, engineered waste storage facility.

The profile of radioactive and stable elemental waste indicates two time regimes: (1) short term (300 years)—tritium, cesium, cobalt, etc.; and (2) long term (1 million years +)—plutonium-239, uranium-235, uranium-238, and stable but toxic metals. The largest manmade deposit is 30 million pounds of uranium-238 in shallow graves; nearly 1 million curies of strontium and cesium are stored grouted in deep, isolated aquifers residing in very old shale. A total of about 3,500 acres are involved in waste repositories of one kind or another; much of it requires hydrologic isolation due to high groundwater levels and surface waters. There is one volatile organic compound plume of significance and several smaller ones of various contaminants.

Five areas, designated as residually contaminated or once contaminated, span two Tennessee counties: Roane and Anderson. All of these areas lie within the incorporated area of the City of Oak Ridge, which is the local land use authority. Federal activities are largely exempt from city regulation. Several residential areas abut the Oak Ridge Reservation, and one is sufficiently close as to warrant concern but does not evidence substantial exposure.

The wet climate and karstic geology of the region ensure that radioactive waste is in contact with groundwater during at least the wet season, making hydraulic isolation and groundwater treatment a “must.” One river system (Clinch/Tennessee) and several tributaries (one with mercury contamination of its floodplain passing through Oak Ridge residential areas) give ample opportunity for the water exposure route to affect the communities of several downstream counties. Fortunately the historic, main-channel contaminations of off-site waterways are buried beneath old sediments and are safe if not disturbed, although polychlorinated biphenyls (PCBs) are a ubiquitous concern.

The bottom line is that long term stewardship (LTS) of these areas is an absolute necessity to preserve engineering integrity and long-term protection of human health and the environment. The anticipated time span over which the integrity of the disposal facilities must be maintained is basically forever. One crucial element of LTS is the long-term preservation of the essential information that these hazardous areas exist,

what they comprise, and what precautions must be taken in the future to ensure protection of human health and the environment if these waste storage facilities are ever unknowingly breached.

Central to the concept of LTS is the perpetual responsibility of the federal government to maintain these waste sites in a condition that will protect human health and the environment. Central to the concept of storing the essential information is that the federal government may, in the distant future, fail to fund an active LTS effort.

In 1998, the End Use Working Group proposed an LTS program that ensured the integrity of disposal sites, and in 1999, the Stewardship Working Group published a more detailed report on the same system.

Society has a system in place that records titled ownership of land and any encumbrances on that title. The End Use Working Group and the Stewardship Working Group reasoned: What better place to store vital land information than in the system society uses to store necessary land information? These two groups found that a legal foundation for waste disposal had been established that requires essential information be filed with the county register of deeds and also with the local authority for land use [40 CFR 264.119; 40 CFR 264.116; 42 USC 9620 (h) (3); TDEC Rules 1200-1-11.05 (7) (j) (2); TDEC Rules 1200-1-11.05 (7) (g); TCA 68-212-106,-225]. All that remains is to establish a system that meets the needs of LTS.

## **Discussion**

The proposed system would function in the following manner (most of which is already in place):

- 1) At the time of Resource Conservation and Recovery Act and Comprehensive Environmental Response, Compensation, and Liability Act waste site closure pursuant to existing law and DOE agreement, an environmental notice including a plat map describing the site and its restrictions would be filed by DOE with the appropriate county register of deeds and called to their attention to ensure that the property assessor is aware of the plat. At the same time notice would be given by DOE to the local land use and control authority, the City of Oak Ridge, supplying essentially the same information. Upon the ownership transfer of any waste site at any later date, DOE will append the required information to the land transfer deed and file it with the register of deeds.
- 2) The appropriate county property assessor will immediately capture the plat map and ancillary descriptive information as a parcel in the property assessor's database. The ancillary information should be augmented at this time as needed to make future users aware of the waste hazard and any restrictions.
- 3) In the normal quarterly update cycle, the parcel information will be transferred to the City of Oak Ridge's geographic information system (GIS), at which time the ancillary parcel information will be augmented by descriptive information supplied by the local land use authority.
- 4) In the normal yearly update cycle, the parcel information will be transferred to the Tennessee State Parcel Mapping System, where it is available to a wide variety of state planning and land use agencies.
- 5) As notices of contamination and plat maps are filed, DOE will conduct quality assurance on the data in the several systems to ensure that the system is functioning properly with consistent data entry. After completion of the filing, DOE will ascertain that data does not disappear from the system.

If DOE adopts this system, the implementation steps will be minimal and are listed below:

- 1) By documented procedure, formalize the submission of the environmental notices and transfer deeds with regards to content and submit a cover sheet (see attachment) requesting that the

instrument type be “environmental notation” and that the land be designated as a parcel in the property assessor’s database. The cover sheet should also state any specific terminology required in specific data fields. This uniformity will facilitate computerized searching.

- 2) Initiate the practice of notifying the City of Oak Ridge of the closure or sale of any site, alerting them of the need to supply ancillary information at the appropriate time.
- 3) Verify that these parcels and ancillary information occur appropriately in the Tennessee State Parcel Mapping System.
- 4) Institute appropriate quality assurance to verify that new entries in all four databases (City of Oak Ridge, Anderson and Roane Counties, Tennessee State Parcel Mapping System) are properly entered and old entries have not been lost. Failure to ensure uniform nomenclature will make entries in all databases difficult to locate.

The implementation steps should be included in the forthcoming LTS implementation plan being produced by DOE Oak Ridge Operations.

Adoption of the following recommendation will provide better quality assurance that will standardize search terms, providing for more dependable and complete searches; the subsequent land records will be more accurate; and information regarding property containing contamination can be found easily by public or private parties interested in specific land parcels.

### **Recommendation**

To ensure the uniformity of nomenclature necessary to obtain successful and complete searches in the computer systems of the City of Oak Ridge, Anderson County, Roane County, and Tennessee State Parcel Mapping System, the Oak Ridge Site Specific Advisory Board recommends that DOE:

- 1) institute use of the attached cover letter (or equivalent) for the transmittal of environmental notices to the registers of deeds and property assessors,
- 2) submit to the City of Oak Ridge as the “local land use authority” the information required by the several federal and state laws pertaining to contaminated lands (a copy of the submittal to the register of deeds should suffice), and
- 3) initiate quality assurance procedures for the county and state systems involved.

Note that compliance with the requirement (40 CFR 264.116,-119; TCA 68-212-106,-225; TDEC Rules 1200-1-11.05) under item 2 is for informational purposes only to alert the local authorities of contaminated land. The submission of this information should be accompanied by agreed upon, additional text to be used in descriptive fields of the city’s GIS system, namely, the Land Use and Zoning fields of the Property Details window. A land use (zoning) subcategory for the “federal use” (FAR) zone to be used to describe the waste areas would be useful to specify the special land use.

**Cover Sheet for Registration of**

---

(Remediation Site Name\*)

Date: \_\_\_\_\_

To: Office of the Register of Deeds

To facilitate document searches, in registering this document please use the following Search and Document Description Terms in the fields appearing on the “Hit List” and “Detail Information” screens.

- 1) Document Type: “Environmental Notice” (ENVN expands to Instrument Code)
- 2) Grantor “United States of America Department of Energy”  
Remediation Site Name
- 3) Grantee Same as Grantor
- 4) Comment “Restricted Use Notice”
- 5) Legal Description “Notation on Ownership Record”

Please pass this cover sheet to the Property Assessor’s Office to ensure the involved land is registered as a Parcel in the Property Assessor Geographic Information System.

To: Office of the Property Assessor

To alert the public to the unique nature of this parcel, please use the following Parcel Description Terms in the fields appearing on the Property Assessor Appraisal Form:

- 1) Additional Description Remediation Site Name = (See above)
- 2) Notes Environmental Notice, “Contaminated Parcel”

---

Federal Facility Agreement Project Manager

\* Authority for Remediation Site Name is Appendix C of the Federal Facility Agreement, August 28, 2003 – Comprehensive Environmental Response, Compensation, and Liability Act Areas (Affected Solid Waste Management Unit Number)