



## Department of Energy

Oak Ridge Operations Office  
P.O. Box 2001  
Oak Ridge, Tennessee 37831—

October 22, 2001

Mr. Luther Gibson, Chair  
Oak Ridge Site Specific Advisory Board  
Post Office Box 2001, EM-90  
Oak Ridge, Tennessee 37831

Dear Mr. Gibson:

### **RESPONSE TO RECOMMENDATION CONCERNING PUBLIC INFORMATION ON THE U.S. DEPARTMENT OF ENERGY TOXIC SUBSTANCES CONTROL ACT INCINERATOR**

Thank you for your recommendation concerning improving the scope and format of information available to the public on the Toxic Substances Control Act (TSCA) Incinerator. As recommended, we will update the TSCA Incinerator fact sheet and develop a web site providing current information on the incinerator. These actions will be completed by December 14, 2001.

Also, as recommended, we have updated the status of recommendations from the 1998 Governor of Tennessee's Independent Panel to Review the Operation of the TSCA Incinerator. The update is enclosed, together with a brief overview of the purpose, goals, and history of the Governor's Panel.

We appreciate your continued interest in ensuring that complete, accurate and understandable information regarding the incinerator is available to stakeholders. Please call Joy Sager of my staff at 576-0850, if you have any questions.

Sincerely,

A handwritten signature in cursive script, appearing to read "Rodney R. Nelson".

Rodney R. Nelson  
Assistant Manager for  
Environmental Management

Enclosure

cc w/enclosure:  
Walter Perry, M-4, ORO

**ENCLOSURE**

**UPDATE OF THE STATUS OF RECOMMENDATIONS**

**GOVERNOR OF TENNESSEE'S INDEPENDENT PANEL  
TO REVIEW THE OPERATION OF THE DEPARTMENT OF ENERGY  
TOXIC SUBSTANCES CONTROL ACT INCINERATOR  
AT THE EAST TENNESSEE TECHNOLOGY PARK**

## OVERVIEW

In 1997, Governor Don Sundquist appointed an Independent Panel to review the operation of the Department of Energy's Toxic Substances Control Act (TSCA) Incinerator. The panel's goal was to "ensure that the TSCA incinerator is properly and legally operated, monitored and protective of human health and the environment." The panel was also charged with addressing concerns and issues raised by the public about the TSCA incinerator, such as those expressed in a 1997 series of newspaper articles.

The Panel, consisting of eight members from the fields of medicine, engineering, toxicology and law, held four open meetings in Oak Ridge, obtained public input, toured the TSCA incinerator, other parts of the East Tennessee Technology Park, and another private incinerator in the area, met with members of the medical profession, reviewed numerous reports and articles, and modeled the emissions from the TSCA incinerator stack. The Panel also employed an incinerator consultant to review the operation of the incinerator. The Panel's report was issued January 29, 1998.

The Panel concluded that "there are sick workers and members of the public who are not finding relief from their illnesses". However, the Panel also found "if the permissible levels of pollutants in the environment are deemed adequate to protect public health, and they must be to conform to the law, then the TSCA incinerator is not a major contributor to the illnesses seen in the Oak Ridge area." The Panel developed recommendations to improve the situation of sick workers and members of the public. The status of DOE action in response to the recommendations is provided in the attached table.

SEPTEMBER 2001 UPDATE

GOVERNOR OF TENNESSEE'S INDEPENDENT PANEL  
TO  
REVIEW THE OPERATION OF THE DEPARTMENT OF ENERGY TOXIC  
SUBSTANCES CONTROL ACT (TSCA) INCINERATOR  
AT THE EAST TENNESSEE TECHNOLOGY PARK

1.0 Public and Worker Health Recommendations	Status
<p>1.1 Studies related to metal uptake should be considered for future study because of current Health Studies Phase II findings about unknowns with respect to incineration of metals and the level of expressed concern.</p>	<p><b>JUNE 1999 STATUS:</b> All health-related studies to be conducted at Oak Ridge pursuant to a Memorandum of Understanding between the Department of Energy (DOE) and the Department of Health and Human Services are currently being discussed as part of establishing an agenda of public health activities for the site. A draft agenda for Oak Ridge (and all other DOE sites) has been released for public review and comment. Public health activity agendas for all sites in the DOE complex, including Oak Ridge, will be completed by September 30, 1999.</p> <p><b>SEPTEMBER 2001 STATUS:</b> Early in 2000, the Department of Health and Human Services, Centers for Disease Control and Prevention, Agency for Toxic Substances and Disease Registry, formed under the Citizens Advisory committee on Public Health Services Activities and Research at Department of Energy Sites, a new subcommittee called the Oak Ridge Reservation Health Effects Subcommittee (ORRHES). This Subcommittee provides advice on the selection, design, scope, prioritization, and adequacy of ATSDR's public health activities for the Oak Ridge Reservation. The Subcommittee helps prioritize public health issues and community concerns, advises ATSDR in the development of public health and community needs assessments, provides input in follow-up health activities and provides an opportunity for citizens to collaborate with agency staff members on the public health assessment process and activities.</p> <p>No specific additional actions are required.</p>

<p>1.2 What those ill persons from undefined sources need may be similar to what was described for multiple chemical sensitivity patients, such as review of medical history, ruling out other conditions, treatment of other conditions, if found, physical examination, advice on lifestyle, psychiatric treatment, and more, as appropriate.</p>	<p><b>JUNE 1999 STATUS:</b> In July 1996, an independent panel of three occupational medicine physicians was brought in to perform medical evaluation and consultation with approximately 53 sick workers from the East Tennessee Technology Park (ETTP). These physicians reviewed medical histories, performed physical examinations, and consulted with each worker regarding further testing and treatment. Timely, periodic communication has been ongoing between the doctors and all involved workers. A public meeting was conducted in March 1998 to report interim status. These ongoing medical consultations are expected to conclude in the third quarter of CY 1999.</p> <p><b>SEPTEMBER 2001 STATUS:</b> The results of the Lockett, Freeman and Bird study were provided in a July 31, 2000 report, <i>Summary Report of Findings, Oak Ridge, Tennessee, K-25 Worker Evaluations</i>.</p>
<p>1.3 Because of the complexities unique to past Oak Ridge Reservation (ORR) operations and the waste burden that remains, DOE should focus on areas of concern to employees and the public. The magnitude of the historical operations should be factored into the distribution of resources. A research agenda for ORR should be outlined with input from local, state, and federal governments, as well as workers, local physicians, and the public.</p>	<p><b>JUNE 1999 STATUS:</b> All health-related studies to be conducted at Oak Ridge pursuant to a Memorandum of Understanding between DOE and the Department of Health and Human Services are currently being discussed as part of establishing an agenda of public health activities for the site. A draft agenda for Oak Ridge (and all other DOE sites) has been released for public review and comment. Public health activity agendas for all sites in the DOE complex, including Oak Ridge, will be completed by September 30, 1999.</p> <p><b>SEPTEMBER 2001 STATUS:</b> See 1.1 above.</p>
<p>1.4 Stakeholders from the workforce and surrounding community should be included in the Environmental Health and Safety decision and evaluation process.</p>	<p><b>NO CHANGE IN STATUS:</b> The DOE Oak Ridge Operations Office (DOE-ORO) has a very active ongoing program to involve stakeholders in the decision and evaluation process. In April 1998, DOE-ORO appointed points of contact to work with the State of Tennessee regarding efforts to better understand the community's needs and desires in the decision and evaluation process.</p> <p>No specific additional actions are required.</p>
<p>1.5 DOE should issue a policy similar to the Nuclear Regulatory Commission's (NRC) "Freedom of Employees in the Nuclear Industry to raise Safety Concerns without Fear of Retaliation" (FR 24336, 1996) in order to encourage employees to raise and resolve safety concerns in an open environment.</p>	<p><b>NO CHANGE IN STATUS:</b> Existing DOE policies achieve the intent of this recommendation.</p> <p>No specific additional actions are required.</p>

<p>1.6 DOE and DOE contractor safety organization should implement "differing professional opinion" procedures (modeled on existing NRC procedures) and should develop, in cooperation with the independent organizations that license or certify many of their employed safety professionals, credible mechanisms to increase the individual accountability of those safety professionals, within their professions, for the ethical and competent performance of their workplace duties.</p>	<p><b>NO CHANGE IN STATUS:</b> Bechtel Jacobs Company LLC (BJC) assumed full responsibility for the Management and Integration activities on April 1, 1998. Many BJC (and DOE) safety professionals already belong to organizations and certifying bodies which establish ethical codes. Both DOE and BJC encourage professional development and the pursuit of certification and licensing by their safety and health professionals. BJC has initiated a new program to compensate professionals for the cost of maintaining their licensing and certifications. Review of command media resulted in no recommendations for change.</p> <p>Across the ORR, a differing professional opinion process is in place for Oak Ridge National Laboratory. For BJC and LMES, a differing professional opinion process is being added to enhance their existing peer review/ conflict resolution programs. This will be completed by September 1999. Differing professional opinion procedures are included in the DOE ORO Employee Concerns Program.</p> <p>No specific additional actions are required.</p>
<p>1.7 Monitoring, safety programs, medical evaluation, surveillance, and quality improvement programs should be given high priority to protect employees. Occupational health programs should not suffer as cutbacks and management changes occur at the ETPP. When changes occur in operations and staffing, program evaluation and training will be necessary. Physicians should be involved in the planning of medical surveillance programs and should be kept up-to-date on job descriptions and the particular hazards to which employees are exposed. Workers should be made aware of all funds available for medical examinations and treatment.</p>	<p><b>NO CHANGE IN STATUS:</b> Current DOE practice achieves the intent of this recommendation. No specific additional actions are required. The DOE Integrated Safety Management System (ISMS) establishes an integrated approach to ES&amp;H which provides a framework for ensuring continuity of effective programs, performance, and improvements. DOE is working with all interested parties to promote improvement in worker health past, present, and future.</p> <p>No specific additional actions are required.</p>
<p>1.8 All ORR facilities, including ETPP, have an information system in place regarding worker injuries and illnesses. Currently, the information is being gathered and compiled. However, to have a complete surveillance system, the information should be analyzed and there should be feedback to stakeholders.</p>	<p><b>NO CHANGE IN STATUS:</b> Current DOE contractor practices achieve the intent of this recommendation and will continue.</p> <p>No specific actions are required.</p>

<p>1.9 Currently, ORISE is compiling information for several DOE facilities other than those at ORR. Information for the labor force is analyzed and reported by occupational category, absences from work, diseases and injuries by diagnostic category, diagnoses by occupational categories, relative risk for all diseases and injuries by occupation, relative risk for selected disease and injury categories by occupation, and death among active workers. ORR facilities should be encouraged to participate in a similar surveillance program and review the findings with employee representatives.</p>	<p><b>JUNE 1999 STATUS:</b> DOE contractors at Y-12 and ORNL are now actively participating in DOE's Epidemiologic Surveillance Program. The first annual report for Y-12 will cover CY 1998. Contractors at ORNL are preparing data files for submission later this year. Action is being taken to bring BJC operations at the ETTP into the surveillance program during CY 1999.</p> <p><b>SEPTEMBER 2001 STATUS:</b> All three ORR facilities now participate in DOE's Epidemiologic Surveillance Program.</p> <p>No specific additional actions are required.</p>
<p><b>2.0 Health Risk Communications Recommendations</b></p>	<p><b>Status</b></p>
<p>2.1 The hazard communication program should include provision of information about hazardous materials specific to the workplace, exposure pathways, and current operations. Programs should utilize state-of-the-art educational delivery tools and methods, including those for communication of risks. Interactive, ongoing educational programs developed with consideration of each audience in terms of cultural and educational background is essential. The programs should be evaluated at regular intervals for content, understanding, and ability to address employee concerns. Workers, industrial hygienists, health physicists, and health care providers, including physicians, should be included in the planning and program delivery.</p>	<p><b>NO CHANGE IN STATUS:</b> The current DOE contractor hazard communication program achieves the intent of this recommendation and will be continued.</p> <p>No specific additional actions are required.</p>

3.0 Medical Care Availability Recommendations	Status
<p>3.1 Physicians are currently evaluating the illnesses of current and past employees. Some employees will require further medical evaluation or treatment. Employees who are found to be ill as a result of workplace exposures should be cared for under the provisions of workers' compensation by physicians trained in the appropriate specialty. LMES employees for whom the symptoms are not determined to be associated with workplace exposure, but for whom toxicological exposure is of concern, can be referred through their primary care providers to a toxicological specialist that LMES has now added to its physician panel.</p>	<p><b>NO CHANGE IN STATUS:</b> Current DOE contractor (LMES, BJC) programs meet the intent of this recommendation. Workers concerned about toxicological exposure have access to appropriate medical specialists.</p> <p>No specific additional actions are required.</p>
<p>3.2 LMES and subsequent contractors need to simplify and clarify the procedures for filing and receiving health insurance and worker compensation benefits.</p>	<p><b>NO CHANGE IN STATUS:</b> The process for filing and receiving health insurance and worker compensation benefits is complex and governed by regulatory requirements, which are for the most part outside the control of DOE contractors. The need to possibly enhance communications on the reason for denial of workers' compensation claims is recognized. BJC has established a single point of contact within their Human Relations organization to assist those involved with resolving any issues relative to benefits and worker compensation in a timely manner.</p>
<p>3.3 DOE should take responsibility for evaluating the terms of agreements with contractors and subcontractors to ensure that the spirit of health care provisions' for continuing employees' preexisting illnesses will be honored under the terms of the new contractor's benefits packages.</p>	<p><b>NO CHANGE IN STATUS:</b> Existing DOE procurement practices achieve the intent of this recommendation for successor contracts.</p> <p>No specific actions are required.</p>



4.0 TSCA Incinerator Operations	Status
<p>4.1 The four discontinued monitoring sites should be put back into operation. A new site should be added 600-900 meters southwest of the TSCA incinerator stack, near the nearest occupied building. This location is where maximum annual average concentrations are expected to occur within the ETPP site. The air monitoring program has demonstrated the capability to detect air pollutants due to site activities, and it should be continued to measure the safety of the current operations at the site. In the future, this air monitoring network (and the associated laboratory analytical work) might be maintained and operated by an independent third party (e.g., a consulting firm) reporting directly to the State, in order to enhance credibility among the workers and the public.</p>	<p><b>JUNE 1999 STATUS:</b> Five continuous sampling sites are now in operation. A new mobile ambient air station was placed in the recommended location. It is sited 600 meters southwest of the TSCA incinerator near the K1414 Garage. This location is within the on-site modeled maximum area of pollutant concentration due to emissions from the incinerator. The monitor was placed into operation on September 10, 1998 and will operate through the end of FY 1999. The new monitor specifically samples for arsenic, beryllium, cadmium, chromium, lead, and uranium. After review and evaluation of the collected data, it will be determined if further monitoring is warranted.</p> <p><b>SEPTEMBER 2001 STATUS:</b> The new ambient air monitoring status (K-8) was operational during FY 1999. Results of these analyses indicate that air concentrations at Station K-8 are similar to data found at Station K-2 that is located in the predominant downwind location from the TSCA Incinerator. Based on these data, monitoring at Station K-8 was discontinued on November 30, 1999. Station K-2, located northeast of the incinerator near the Wheat Church Community on Blair Road, will remain as being representative of the maximum pollutant concentration area for any location on or off-site. Results of monitoring at Stations K-2 and K-8 are found in the CY 1999 Oak Ridge Reservation Annual Site Environmental Report.</p>
<p>4.2 Radian Corporation is currently working on the modeling of emissions from the TSCA incinerator for the upcoming renewal of the RCRA permit for the facility. The current modeling protocol stipulates that receptors will all be located outside the Oak Ridge reservation boundary. Radian should be asked, in addition, to include a high-resolution grid of receptors within the boundary of the ETPP where people could be exposed during their working hours. The modeling analysis to be performed by Radian Corporation will provide additional information concerning the potential exposure to air pollutants from future TSCA operations. The modeling effort could also be extended to include all sources of toxic air pollutants in the area.</p>	<p><b>JUNE 1999 STATUS:</b> The modeling to include ETPP on-site workers as receptors will be conducted with information from the upcoming TSCA incinerator trial burn emissions data. A pre-test is scheduled for September 1999 and the actual trial burn for March 2000.</p> <p><b>SEPTEMBER 2001 STATUS:</b> The Trial Burn was completed in May 2001. Funding was requested for FY 2002 for the subject modeling. However, funding is not currently expected to be available.</p>

4.3

In addition to the ambient monitoring, LMES and DOE should determine if process emissions during upset conditions could cause acute or chronic health effects on community and worker populations. LMES and DOE should determine if stack emissions during trial burns of persistent and bioaccumulative compounds, as well as those of greatest inherent toxicity and largest volume, are within permissible limits. LMES and DOE should conduct additional environmental sampling around the incinerator to better characterize potential impacts from emissions.

**JUNE 1999 STATUS:** Acute and chronic health effects are assessed as part of the re-permitting process. BJC assumed responsibility from LMES for operation of the TSCA incinerator on April 1, 1998. The final risk assessment, which follows the trial burns, is scheduled for September 2000. The risk assessment will address chronic effects on the community from routine emissions and upset conditions. Additional risk assessment will be needed to address on-site workers. This additional work will be conducted with the results from the trial burn test. No decision has been reached regarding additional environmental sampling.

**SEPTEMBER 2001 STATUS:** The Trial Burn was completed in May 2001. Funding was requested for FY 2002 for the risk assessment for onsite workers. However, funding is not currently expected to be available.

4.4

LMES and DOE should continue to participate in development and testing of continuous emission monitors.

**JUNE 1999 STATUS:** DOE and BJC will continue to participate in the development and application of continuous monitoring technology for the incinerator. Several continuous emissions monitors (CEM) for metals were tested over the past two years. Current plans are to install three particulate matter CEMs during the summer of 1999 and conduct a six-month test to evaluate their performance. These tests are a joint venture between DOE and EPA. The test results will be used by EPA to finalize requirements for CEMs in the MACT standard.

No specific additional action items are required.

**SEPTEMBER 2001 STATUS:** The PM CEMs field testing was completed in October 2000. Results show that the two beta gauge monitors met the minimum performance specifications for predicting PM emissions. The light scattering device passed two of the three specifications. DOE will use the results to evaluate whether or not to deploy a PM CEMs at the incinerator.

A field evaluation of continuous monitors for mercury at the TSCA Incinerator is planned for FY 2002.

<p>4.5 A total hydrocarbon CEM and a continuous sampling filter device should be added to the TSCA incinerator.</p>	<p><b>JUNE 1999 STATUS:</b> A continuous sampling filter device for metal was installed and placed in operation in October 1998. Due to mechanical problems, the system was taken out of service. These problems were corrected and the system is back in operation.</p> <p>The MACT standard has been delayed (anticipated summer 1999). When the standard is issued, an appropriate plan will be developed to address requirements concerning hydrocarbon monitors.</p> <p><b>SEPTEMBER 2001 STATUS:</b> The continuous metal sampling device continues in operation.</p> <p><b>MACT Regulations:</b> On July 24, 2001, the United States Court of Appeals for the District of Columbia vacated the MACT regulations for hazardous waste combustors. However, EPA obtained an extension of the rule, which remains in effect. DOE is proceeding with FY 2002 activities required to comply with the MACT regulations, including preparation of a test plan and compliance report.</p> <p><b>THC CEM:</b> During the May 2001 Trial Burn, THC concentrations were measured using a portable sampling system. However, there were operational problems with the THC monitor throughout the Trial Burn, and the results are not considered compliance quality. Additional short term testing with a THC monitor will be considered to confirm performance relative to the MACT THC standard. It should be noted that the MACT regulations provide options for demonstrating compliance using either a carbon monoxide or THC continuous monitor and TSCA incinerator already has a continuous carbon monoxide monitor.</p>
<p>5.0 Transportation</p>	<p>Status</p>
<p>5.1 Consideration should be given by DOE to ensure continual, independent oversight of the TSCA incinerator-related shipments after the implementation of the new M&amp;I Contractor in Oak Ridge. This should include review of transportation arrangements from non-LMES sites, as well as those sites operated by LMES.</p>	<p><b>NO CHANGE IN STATUS:</b> Oversight requirements for transportation were reviewed. Beginning on January 7, 1999, all shipments to/from the ETTP required independent pre-shipment review by DOE transportation safety. Since January, seven TSCA shipments were reviewed by DOE with no problems found. In late April it was decided to waive the 100 percent preshipment reviews and continue with ongoing periodic DOE reviews.</p> <p>No specific additional actions are required.</p>