FINDING OF NO SIGNIFICANT IMPACT

LEASE OF LAND AND FACILITIES AT THE EAST TENNESSEE TECHNOLOGY PARK, OAK RIDGE, TENNESSEE

AGENCY: U.S. DEPARTMENT OF ENERGY

ACTION: FINDING OF NO SIGNIFICANT IMPACT

SUMMARY: The U.S. Department of Energy (DOE) has completed an environmental assessment (DOE/EA-1175) for the proposed expansion of its Reindustrialization Program, whereby land and facilities at the East Tennessee Technology Park (ETTP) would be leased for industrial and business uses. Based on the results of the impacts analysis reported in the EA, DOE has determined that the proposed action is not a major Federal action that would significantly affect the quality of the human environment within the context of the National Environmental Policy Act of 1969 (NEPA).Therefore, preparation of an environmental impact statement (EIS) is not necessary, and DOE is issuing this Finding of No Significant Impact (FONSI).

PUBLIC AVAILABILITY OF EA AND FONSI: The EA and FONSI may be reviewed at and copies of the documents obtained from

U.S. Department of Energy
Public Reading Room
American Museum of Science and Energy
Oak Ridge, Tennessee 37830
Phone: (423) 241-4780.

FURTHER INFORMATION ON THE NEPA PROCESS: For further information on the NEPA process, contact

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BACKGROUND: The ETTP is comprised of the former Oak Ridge Gaseous Diffusion Plant (K-25) Site, the K-25 Area of Responsibility, and Parcel ED-1 of the Oak Ridge Reservation (ORR). In January 1996, DOE began a "reindustrialization" program for the purpose of leasing vacant, underutilized, and/or inactive facilities at the ETTP to the Community Reuse Organization of East Tennessee (CROET), which in turn has

subleased or plans to sublease these facilities to private commercial firms or other organizations for industrial, commercial, office, research and development, manufacturing and industrial applications. The proposed action is DOE's expansion of the leasing program over the next several years. The impacts analysis in the EA addresses leases for property and/or facilities in the heavily industrialized portions of ETTP and in adjacent areas that are part of the ETTP Area of Responsibility. DOE's environmental restoration activities would continue concurrently with reindustrialization pursuant to the 1992 Federal Facilities Agreement (FFA) signed by DOE, the Tennessee Department of Environment and Conservation (TDEC) and the U.S. Environmental Protection Agency (EPA), and until FFA milestones are met.

In the past few years, federal funds to support environmental restoration activities on the DOE Oak Ridge Reservation (ORR) have decreased, and this trend is likely to continue. The proposed action is intended to assist DOE in meeting FFA objectives by reducing the costs to DOE of surveillance and maintenance by leasing facilities, and in some instances by having lessees decontaminate facilities. In this way, DOE realizes cost savings which further FFA activities and enhances its ability to accelerate cleanup. As a result, DOE expenditures for environmental restoration may be reduced by private expenditures, and cost savings may be redirected to additional environmental restoration actions. Whether or not a lessee assists in decontamination or remediation, DOE would still benefit from decreased expenditures for federal surveillance and maintenance at ETTP. As a secondary benefit, the proposed program would populate ETTP with environmentally acceptable industries that would offer local employment opportunities.

ALTERNATIVES: In addition to the proposed action, impacts were also evaluated for the no-action alternative. If no action is taken, vacant or underutilized land and facilities at ETTP would not be leased by DOE for commercial or business uses. Ongoing and planned environmental restoration; waste management; occupational training and development; and technology demonstration, development and transfer activities would continue at ETTP until projects are completed or transferred to another site and until agreements in the FFA are met (i.e., the site meets those regulatory standards agreed upon in the FFA). Two alternatives dismissed from further consideration were (1) sale of ETTP land and facilities to a non-federal buyer and (2) transfer of ETTP land and facilities to another federal agency. Neither of these alternatives would achieve the objective of the proposed action: to accelerate environmental restoration at the ETTP.

ENVIRONMENTAL IMPACTS:

NO ACTION

Environmental restoration and waste management activities at ETTP would continue regardless of whether the proposed action is implemented. The potential impacts of proposed restoration actions, which would be implemented according to a schedule prioritized on the basis of risk, would continue to be

evaluated during the CERCLA environmental review process before they are implemented. The potential effects of newly proposed waste management facilities would continued to be evaluated in accordance with either the CERCLA or NEPA environmental review process before they are implemented.

Land Use. Facility and land uses at ETTP would remain unchanged if no action is taken. Environmental restoration activities would continue until the site meets the conditions specified in the decision documents prepared pursuant to the FFA. Thus, previously contaminated areas of the site may become suitable for reuse.

Air Quality. The TSCA Incinerator would continue to treat mixed wastes whether or not the proposed action is implemented. Thus, there would be no net change in air quality impacts for either no action or the proposed action as a result of TSCA Incinerator operation. Annual site environmental monitoring reports for the ORR have reported minimal air quality impacts from ORR activities and facility operations. Airborne particulates (fugitive dust) from remediation activities would be the same whether or not the proposed action is implemented.

Water Resources. Disturbance of soils during environmental restoration and waste management activities increases the potential for erosion and sediment suspension in precipitation runoff to surface waters and percolation to groundwater. Use of best management practices, such as runoff barriers and detention basins, minimizes adverse impacts from sedimentation. Remediation of contaminated soils and groundwater at ETTP may ultimately improve the quality of soils and water resources at the site.

Ecological Resources. With no action and continued environmental restoration at ETTP, remediation of contaminated soils and groundwater may restore previously disturbed habitat to a condition suitable to support native flora and fauna. If no action is taken, three parcels of presently unoccupied land in the K-25 Area of Responsibility would not be available for lease. As a result, ecological succession would progress in these areas until they eventually return to a natural state, similar to other undisturbed areas on the ORR, which may increase habitat and foraging area in this portion of the ETTP.

Socioeconomics. Under no action, the workforce engaged in environmental restoration, waste management, and other miscellaneous DOE activities at ETTP would be dependent upon federal funds available for these programs. With no action, however, leased facilities would not offer potential employment opportunities for displaced federal and federal contractor workers. If recent and project federal downsizing continues, local workers may move out of the Oak Ridge area. If so, the local economy would experience a decline in the purchase of goods and services and sales tax revenue. If the workforce at ETTP remains stable through the completion of environmental restoration at ETTP, the traffic load in the commuting area and related noise impacts would not change.

Cultural Resources. If no action is taken, structures in the ETTP that are scheduled to be demolished by DOE's Office of Environmental Management in accordance with CERCLA documents prepared pursuant to the steps established in the ORR Cultural Resources Management Plan, as practicable,

would be removed from productive use. However, cost savings would be realized by DOE from decreased surveillance and maintenance of demolished structures.

Health and Safety. Already low occupational and public radiological and chemical exposures and associated risk would continue to decline as CERCLA remediation of contaminated areas at ETTP continues. When restoration is complete and FFA goals met, exposures would be less than they are currently. No action would have no effect on the progress of remediation toward the objective of lessening occupational and public risk. The risk of accidents associated with current conditions (e.g., spills, uranium hexafluoride cylinder storage) would remain.

PROPOSED ACTION

Land Use. If the proposed action is implemented, leased facilities and/or land would continue to be used for industrial and/or business purposes, which is compatible with past uses of the site.

Air Quality. The results of air-quality modeling indicate that violations of National Ambient Air Quality Standards (NAAQS) would not be expected from potential tenant operations at ETTP. The modeling analysis was based on a bounding scenario that assumed pollutant emissions would arise from 10 stacks of varying height and other dimensions that served the combined industrial operations of two waste and metal recycling and treatment facilities, a ceramic parts manufacturing facility, and a nuclear fuel fabrication facility at ETTP. For this scenario, the greatest increase expected would be in the ambient 24-hour average for SO_2, which would increase by 6% of the NAAQS.

With regard to Clean Air Act Prevention of Significant Deterioration standards, estimated 24-hour incremental emissions of NO_2 and PM-10 from ETTP at the location where concentrations would be greatest were 10% or less of those allowed for Class II areas and 1% or less of those allowed for the Great Smoky Mountains National Park, a Class I area. The 24-hour increment for SO_2 at the point of maximum concentration increase was estimated to be 24% of the total allowable Class II PSD increment. When this is multiplied by 3 to provide a conservative estimate of increments that would result from much heavier industrialization than planned, 72% of the allowable 24-hour Class II increment for SO_2 would be consumed. Plumes from other area sources that could contribute to cumulative Class II PSD SO_2 increments are located such that they are unlikely to substantially intersect a plume from ETTP moving north or northwest toward those receptor(s) where the contribution to SO_2 concentration is highest. Therefore, the cumulative effect of all PSD sources (as defined in 40 CFR 51.166) would be unlikely to result in exceedances of the total allowable 24-hour Class II PSD increment for SO_2. Results indicated that the highest percentage of an allowable Class I PSD increment was related to the 3-hour SO_2 concentration. For the Great Smoky Mountains National Park, 12% of the allowable 3-hour Class I PSD increment for SO_2 would be consumed

Water resources. Sediment runoff from erosion during land disturbance and contaminants in stormwater runoff could degrade surface water quality, unless properly controlled. Tenants at ETTP would

be required by TDEC to implement Best Management Practices and if necessary, to construct stormwater runoff control structures (e.g., retention basins). State stormwater runoff permits may be required for certain types of facilities or activities.

Domestic and industrial wastewater, both of which are regulated by TDEC in National Pollutant Discharge Elimination System (NPDES) effluent permits, would probably be generated from tenant operations at ETTP. Industrial facilities would be required by state permits to incorporate design features to minimize contaminants in effluent discharges to surface waters. At ETTP, TDEC permits may allow effluent discharges to Poplar Creek or the Clinch River within pre-established limitations for physical, chemical, and biological parameters. The ETTP Sewage Treatment Plant could be used to handle some of the domestic wastewater effluents. Some of the industrial wastewater generated from tenants may be handled by the ETTP Central Neutralization Facility; however, modifications to the NPDES permit would be required. Production of industrial wastewater is process-specific, but with proper containment and treatment techniques, the environmental impact would be minimal.

With the exception of potential contamination from chemical spills, groundwater at ETTP would not be adversely affected by tenant operations. Potable water is already provided to the site, and wells would not be drilled for groundwater use or wastewater disposal.

Ecological resources. Impacts from operation of commercial and industrial facilities at ETTP would likely be minimal to terrestrial and aquatic ecosystems, provided air and water permit limits are consistently met and solid wastes are properly managed. Construction would have limited adverse impacts on terrestrial habitats within the ETTP and the surrounding ETTP Area of Responsibility, which comprises a buffer area around the site. The use of native species for revegetating disturbed areas after construction would have a positive impact on the terrestrial ecosystem. Osprey (state-listed threatened species) currently nest on one building at the K-25 Site. If new buildings were erected near the nest site, the Tennessee Wildlife Resources Agency would be consulted to determine restrictions that may be needed to preclude or minimize impacts to the birds.

Significant habitat alteration would not be expected in any aquatic ecosystems. Leases would require that wetlands be avoided completely wherever possible and/or that mitigation measures be effected to prevent or minimize direct and indirect adverse impacts. In addition, future actions by DOE or tenants in floodplains and wetlands must comply with DOE or other agency (e.g., Army Corps of Engineers) requirements for evaluating impacts of their activities on floodplains and wetlands.

Socioeconomics and environmental justice. For this analysis, it was assumed that 2,500 job opportunities would be created by tenant operations, based on the types of industries that may locate at ETTP. However, new employment would be offset by recent and projected downsizing at ETTP and other DOE Oak Ridge facilities. Thus, a net increase in direct employment in the impact area is not anticipated, and in-migration, population growth, and demands for public services and housing would be negligible. Conversely, the proposed action may benefit the community because new tax revenues would be generated

in the form of sales and use taxes paid by businesses and industries for items purchased or used within the impact area. In addition, DOE intends to continue its payments-in-lieu-of-taxes to local governments, even if land and buildings are leased to other tenants.

As adverse impacts are not expected for any resource area, disproportionate adverse impacts on minority or economically disadvantaged populations in the Oak Ridge area would not result from the proposed action.

Transportation. The proposed action would have minimal impact on the traffic on most roads surrounding ETTP. Traffic volume on State Route (SR) 95 would increase slightly above an acceptable level of service. Future improvements would need to be made to alleviate the traffic introduced by the proposed action. Although the volume of truck traffic may increase from activities associated with ETTP, most of it would be distributed throughout the day and would not be concentrated during peak hour commuter traffic periods. Thus, future truck trips are not expected to have a significant impact on future traffic.

Noise. Noise from construction and operation would be confined to the ETTP and surrounding ORR areas and would not be expected to interfere with daily activities of nearby residents, the closest of which is about 0.8 mile away. Traffic noise would not exceed the Federal Highway Administration limit, and no appreciable traffic noise impact would result from the associated future traffic within the study area.

Cultural resources. Each lease undertaking would require a DOE-Oak Ridge Operations determination of effect on identified *National Register of Historic Places* (NRHP)-included or -eligible properties. If an adverse impact is determined, procedures involving agreement with the State Historic Preservation Officer (SHPO) and review by the Advisory Council on Historic Preservation (ACHP), including any required mitigation measures needed to address the adverse impacts, would be conducted. To ensure that the potential effects of the individual leases are thoroughly considered, consultation with the SHPO would be conducted on a lease-by-lease basis, as necessary, for those structures that are listed in or eligible for inclusion in the NRHP.

Health and Safety. Tenant industries would be required by state and federal regulators to have appropriate environmental permits with limitations designed to protect public and worker health and safety. Lessees' workers have been defined by DOE as "co-located workers" as they are physically present at a DOE site with DOE and contractor personnel. As such, they are appropriately trained before entering the site and are protected through appropriate controls and oversight. These workers are not considered members of the general public. Individuals working in leased space at ETTP are and will continue to be afforded the same level of safety and health protection found at any other industrial park. It is the lessee's responsibility to operate in a safe and protective manner. However, under certain scenarios, additional controls are maintained by DOE as a part of its ongoing operations at ETTP.

Operations of industries such as those evaluated in this EA may have radiological and chemical releases. Estimated radiological doses to the public would only be a small fraction of DOE's public exposure limit and would not be considered a health concern. Radiation doses to workers would be well below the

Nuclear Regulatory Commission's occupational limit and also below the DOE's more stringent public limit. No unique chemical exposures would be anticipated. All activities would comply with applicable Occupational Safety and Health Administration regulations. Therefore, the proposed action would not significantly impact occupational health and safety.

Accidents. Tenants would be subjected to consequences of potential accidents from hazards currently found at the site, such as stored uranium hexafluoride cylinders, and typical industrial accidents (e.g, falls, spills, vehicle accidents). Significant changes in the frequency and nature of accidents at ETTP and the potentially exposed population size would not be expected.

Cumulative Impacts. Cumulative impacts are those of the proposed action in combination with impacts of other reasonably foreseeable actions near ETTP and in the region. DOE reviewed the following actions as to their potential interaction with reindustrialization actions: (1) development of Parcel ED-1 as an industrial park, (2) construction of a Knoxville Bypass (interstate highway) that would connect Interstate (I)-75 with I-40, (3) widening of SR 58, (4) continuation of the Sewage Sludge Land Application Program at specific locations on the ORR, (5) development of a CERCLA waste disposal facility on the ORR, (6) development of other nearby industrial parks, and (7) dredging for improved use of the ETTP barge terminal.

The latter three actions were dismissed from consideration in the analysis of cumulative impacts for the following reasons. DOE has not made a decision about the feasibility of developing a CERCLA waste disposal facility on the ORR nor where it would be located. Because of these unknowns, it was not included in the analysis. Development of other industrial or commercial sites in the region were not included in the cumulative impacts analysis because most potentially developable sites are sufficiently distant from ETTP that cumulative interactions are unlikely. Finally, development of Parcel ED-1, construction of a Knoxville Bypass, widening of SR 58, and activities of the sewage sludge program are not likely to impact the Clinch River and Watts Bar Reservoir, with the exception of Knoxville Bypass bridge crossings, which would be downstream of ETTP. Likewise, no reindustrialization actions other than dredging for improved barge terminal use have the potential to adversely affect the Clinch River or Watts Bar Reservoir. Thus, in combination with other actions, there is little potential for cumulative impacts to the river. The impacts of future dredging will be considered in a future NEPA review when lessees' apply for a Section 404, Clean Water Act, permit from the COE and approval by TVA and other agencies that comprise the interagency task force that reviews proposed permitting actions that may affect Watts Bar.

Construction of the Knoxville Bypass and freeway interchanges and widening of SR 58 would produce particulate matter emissions during disturbance of soils. These would be temporary and easily minimized by application of wetting agents during dry periods. If bypass construction occurs concurrently with construction or excavation at ETTP, ambient concentrations of particulates may increase in the immediate vicinity. Mobile source emissions would be expected to increase after the beltway is constructed. Operation of industries at Parcel ED-1 were included in the background values for the air quality analysis

presented in Sect. 4.2.2.2, with the conclusion that the addition of Parcel ED-1 industries would have little consequence on air quality.

Very little construction-related disturbance of natural soils would occur at ETTP except for clearing of existing vegetation and grading on Parcels 1, 2 and 4. Use of best management practices and erosion/sedimentation controls during construction would minimize siltation in onsite surface waters. Discharges of sanitary and industrial wastewaters from ETTP and Parcel ED-1 would be required by TDEC to comply with NPDES permit requirements. Thus, adverse cumulative impacts from routine discharges are not likely to further degrade surface water quality. Reindustrialization of ETTP may contribute to future land application of sewage sludge. Sludge from the ETTP sewage treatment plant may be transported to the city of Oak Ridge sewage treatment plant. Impacts of this program are evaluated in a separate NEPA review, which examined the incremental impacts from ETTP and found them to be insignificant. Because groundwater will be not be used by ETTP or ED-1 tenants for industrial consumption or waste disposal, cumulative impacts would not be anticipated.

The loss of habitat attributed to reindustrialization and that associated with development of Parcel ED-1 may continue to reduce the biological diversity of the ORR and the conservation value of this area.

The cumulative number of jobs created by reindustrialization and the other actions considered could result in in-migration of workers, with a subsequent increase in demand for housing and public services in the Oak Ridge and surrounding counties. In particular, commercial development along the Knoxville Bypass and SR 58 is likely to increase with road improvements, creating additional jobs. These would, in turn, create indirect jobs in the community. It would be incumbent upon local planning agencies to carefully consider approval of development proposals and requests for zoning changes to allow for expansion of services and housing to meet increased demands.

Development of Parcel ED-1 in the immediate vicinity of ETTP would require additional highway capacity improvements on SR 95 from the junction with SR 58 to Wisconsin Avenue in Oak Ridge. However, it is very unlikely that both projects would reach 100% of their anticipated employment potential by 2010. The proposal to widen SR 58 to four lanes from Gallaher Bridge to its intersection with I-40 may have a beneficial impact on traffic flow. Development of the Blue Route of the Knoxville Bypass would reduce the local surface street truck traffic in the vicinity of ETTP rather than increase local traffic, because the proposed Knoxville Bypass would provide a better link between I-40 and I-75.

Cumulative impacts from other actions are not anticipated to adversely affect cultural resources at ETTP, on the ORR, and regionally. All federal actions on the ORR would be subject to prior DOE, SHPO, and, possibly, ACHP review and approval in accordance with the provisions of the DOE-ORO Cultural Resources Management Plan.

During state and federal permitting processes for new facilities, cumulative impacts of pollutant emissions on worker and public health would be considered. The combination of emissions from ETTP and nearby facilities (e.g., Parcel ED-1) would not be allowed to exceed permissible limits that are intended to

protect human health and the environment. With the future development of Parcel ED-1 or other facilities near ETTP, workers would be at increased risk for exposure to accidental chemical releases. Standard industrial accidents would increase proportionally to the increase in industries or facilities in the area. Further development of surrounding land could cause an increase in the number of people that could be exposed to off-site releases from large accidents. However, the accidents from existing conditions (e.g., cylinder yards) are unlikely and other, more common accidents would not have large consequences.

DETERMINATION: Based on the findings of this EA, DOE has determined that the proposed expansion of DOE's Reindustrialization Program to lease of land and facilities at East Tennessee Technology Park does not constitute a major Federal action that would significantly affect the quality of the human environment within the context of the National Environmental Policy Act. Therefore, preparation of an environmental impact statement is not required.

Issued at Oak Ridge, Tennessee, this 1st day of December 1997.

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