



Oak Ridge Office



EM Environmental Management
safety ✦ performance ✦ cleanup ✦ closure



Integrated Facility Disposition Project Planning for Completion of the Oak Ridge Reservation Cleanup

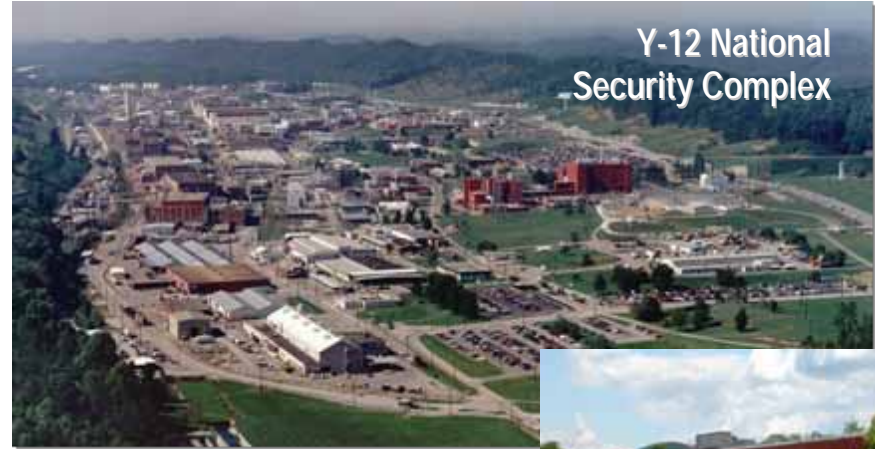
A cooperative effort between EM, NNSA, NE, and Science

J. T. Howell, US Department of Energy

May 14, 2008

Modernization has transformed the Oak Ridge Reservation

Oak Ridge Office



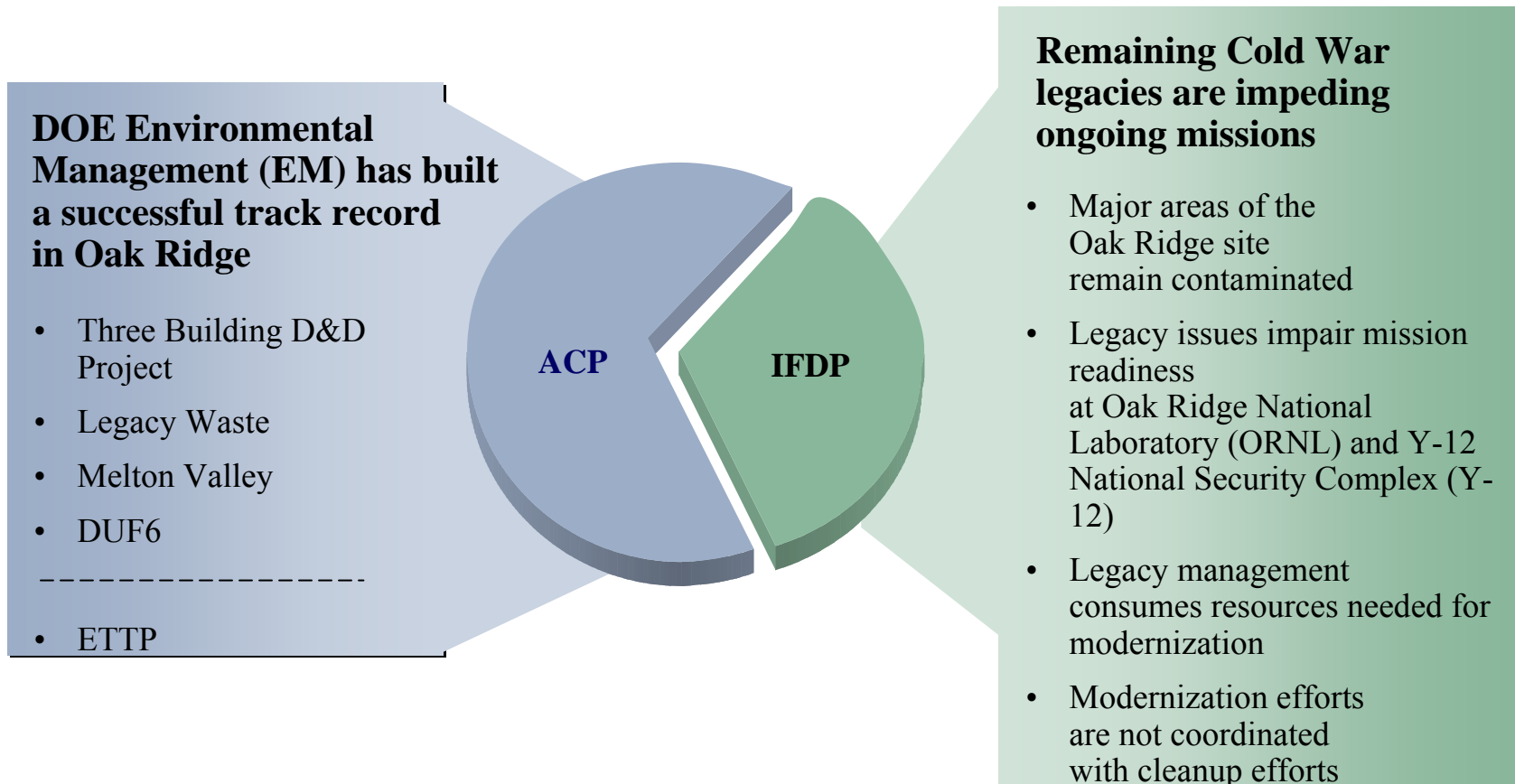
Oak Ridge National Laboratory



Oak Ridge Institute for Science and Education



Completing the Accelerated Cleanup Program (ACP), beginning the Integrated Facility Disposition Project (IFDP)



IFDP Scope

Scope not under contract

- Remaining EM baseline
 - D&D & Remedial Actions
 - O&M / closure EMWMF
- New EM cleanup scope
 - Excess contaminated facility D&D and subsurface soil remediation within Y-12 and ORNL
 - Allows modernization and revitalization

IFDP is the integration of programs, scope, risk and funding for common objectives.

EM baseline scope under existing contracts

- ETTP closure
- Melton Valley completion
- Selected high priority sites
- O&M / expansion of EMWMF
- TRU waste processing
- U-233 disposition
- O&M of waste treatment facilities

IFDP

- Resequenced EM baseline
 - D&D of 439 buildings 5.4M gsf
 - Remediate 247 sites
 - O&M / expansion and closure of EMWMF
 - Reconfiguration / construction of waste treatment and disposal facilities
 - O&M of waste treatment & disposal facilities
 - S&M of facilities transferred to EM

2002

2008

2020

IFDP integrates remaining EM baseline cleanup activities with legacy issues to enable modernization and reduce risk to ongoing missions at ORNL and Y-12. ₅

IFDP Scope

- Complete the Oak Ridge Environmental Management Cleanup mission and support the NNSA, SC, and NE missions
 - D&D of excess facilities at ORNL and Y-12
 - Treatment and disposition of legacy materials/waste, including remote-handled and transuranic materials/waste
 - Soil and groundwater remedial actions
 - Reconfiguration of waste management facilities and utilities at ORNL and Y-12
 - Surveillance and maintenance of excess facilities
 - Waste treatment and disposal operations

Facilities Proposed for inclusion in the Integrated Facility Disposition Project (IFDP)



IFDP Facilities by Site and Program Office

Site	EM	NE	NNSA	SC	Total	Excess Space (ft ²)
ORNL	202	1	0	124	327	1.5 M
Y-12	15	1	79	17	112	3.9 M
IFDP Total	217	2	79	141	439	5.4 M

Note: Includes ancillary facilities that were estimated in CD-0 but not listed in the facility count

Estimated cost range is \$4 - \$8 billion (unescalated) with a target completion range of 15 – 20 years

D&D will produce $>2,000,000$ yd³ of debris

- Characterization
- Deactivation
- Abatement
- “Hardened” facility demolition
- Large facility demolition
- Traffic interface
- Site Restoration



Heavy equipment and
dump trucks will be
operating on site



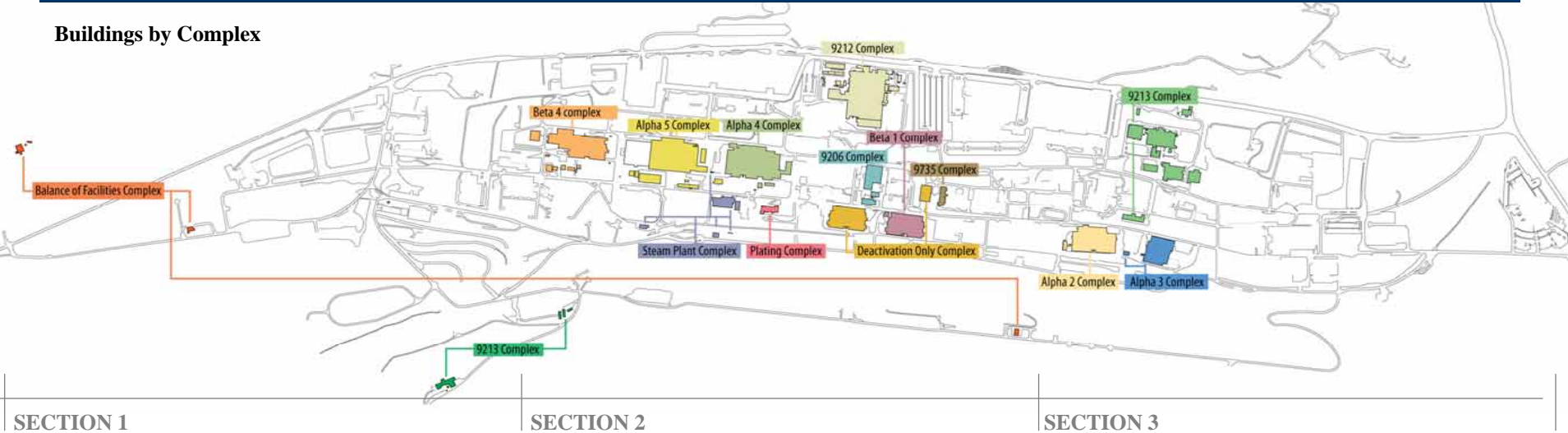
D&D of 1.5M ft² of facilities at ORNL

327 Facilities at ORNL



D&D of 3.9 M ft² at Y-12

Buildings by Complex



112 Facilities at Y-12

Average size of process buildings is 350,000 ft²



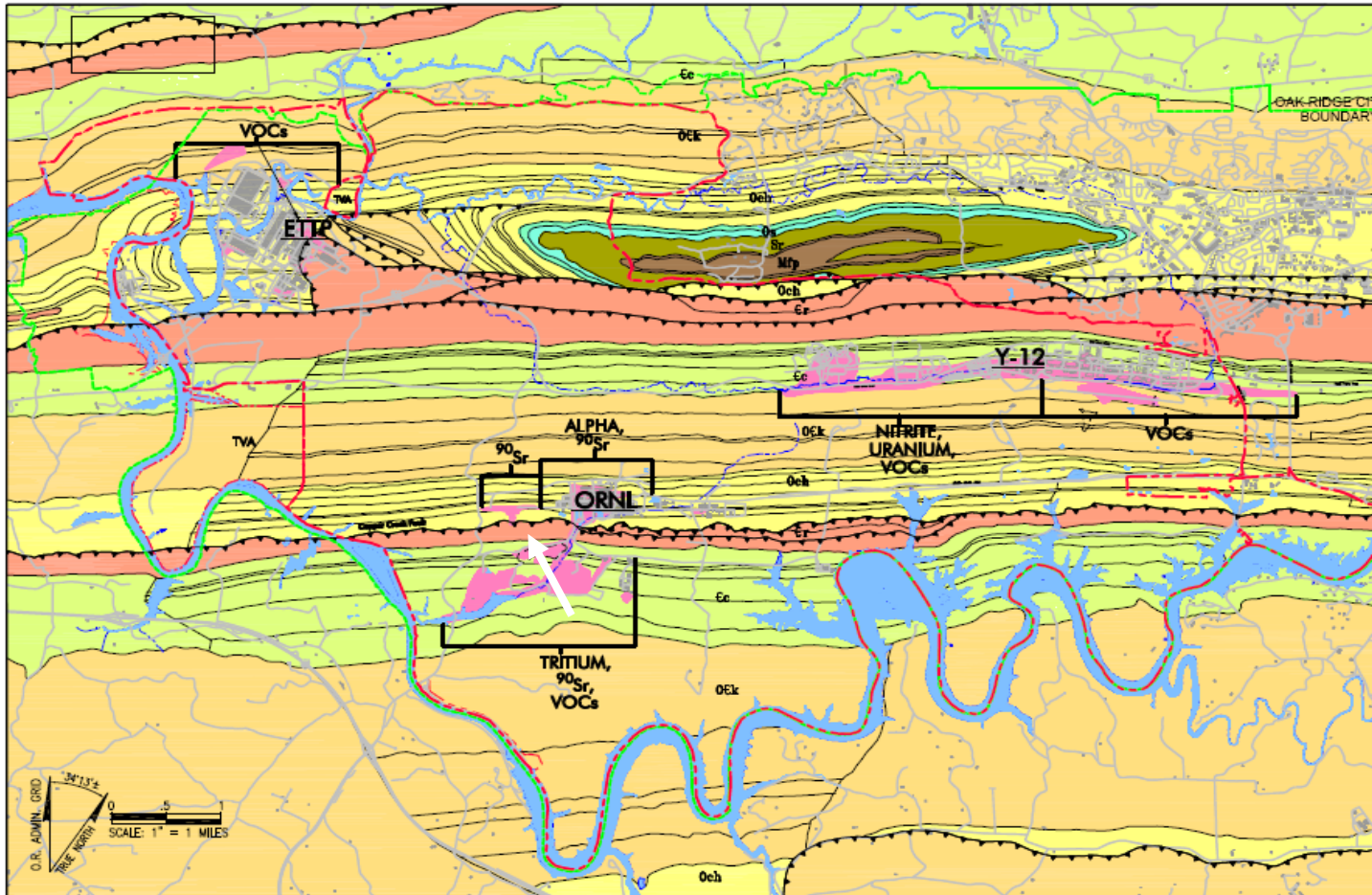
Processing of legacy materials and wastes



- Characterization
- Processing
- Packaging
- Disposal
- High radiation levels



Remedial action will generate at least 1,000,000 yd³ of soils



- Final Records of Decision
- Characterization
- Performance modeling
- Excavation, packaging, transport
- Site stabilization

Location, extent, and primary contaminants of major groundwater plumes on the ORR

Facility Reconfiguration

ORNL

- LLLW, Process, Gaseous, and Sanitary waste systems
- RH solids processing

- Design and construction
- Startup
- Regulatory activities

Y-12

- Solid waste handling
- Liquid treatment
- Utilities



ORNL Process Waste System



Y-12 Utilities

Surveillance and maintenance of over 400 excess facilities

- Reactors, hot cells, process facilities, etc
- Nuclear, Radiological, Industrial
- Inspections
- Utilities

- Roof Repairs
- Structural or utilities failure
- Mold, asbestos, PCB, Be, Pb, Hg
- Discovery of unexpected materials



**Roof Collapse
Building 3026**



**Steam Line Leak
Building 9201-5**

Waste Operations to support IFDP

ORNL

- CH&RH LLW/ TRU, Mixed, Haz waste disposal
- LLLW, Process, Gaseous, & Sanitary waste systems

- Operations
- Maintenance
- Regulatory activities

Y-12

- Sanitary/Industrial Landfill
- Environmental Waste Management Facility (EMWMF)



TRU Waste Processing Center



EMWMF

Project Challenges

- Major challenge faced by the Integrated Facility Disposition Project is conducting major cleanup operations in the midst of ongoing mission operations
 - Close proximity to substantial employee populations and operations may present health and safety risks
 - Complex and extensive infrastructure and systems interconnected to the surplus facilities and contiguous active operations
 - Conduct of cleanup in high security areas



IFDP Project Status and “Next Steps”

- CD-0 (Mission Need Approved July 20, 2007)
- CD-1 (Alternative Selection and Cost Range) document preparation ongoing
 - Integrated Project Team established and working
 - Effort ~ 99 % complete
 - Target for submittal to HQ is May 19, 2008
- Obtain CD-1 Approval: September 2008
- Develop CD-2/3A (Establish Performance Baseline and Begin Construction) package for HQ Approval: FY09 – FY10 timeframe





