# Muon Collider-Neutrino Factory Collaboration Target Design Meeting

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## Equipment Decommissioning and Disposition

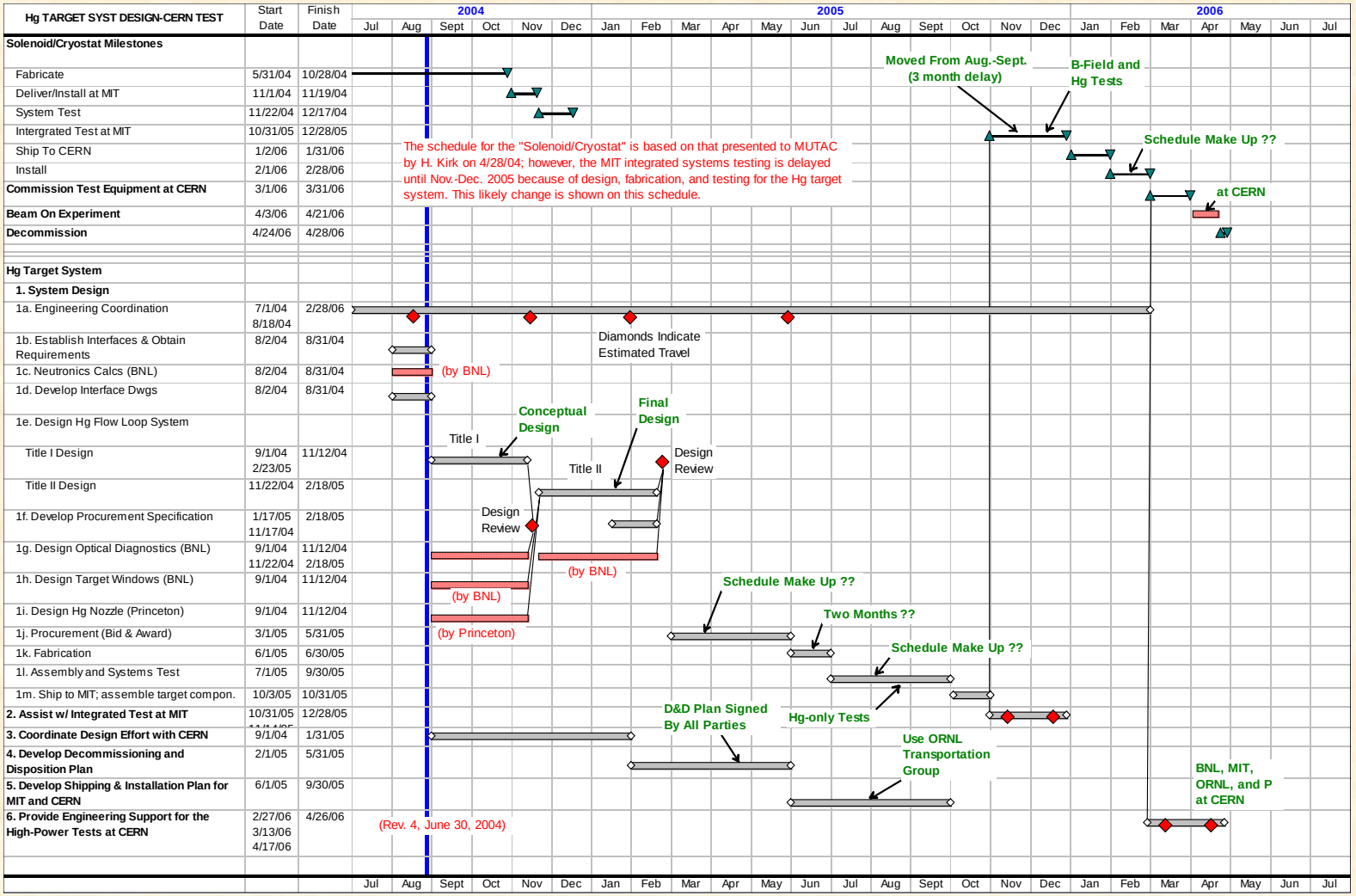
September 1, 2004

Oak Ridge National Laboratory

NUCLEAR SCIENCE AND TECHNOLOGY DIVISION
OAK RIDGE NATIONAL LABORATORY
U.S. DEPARTMENT OF ENERGY

UT-BATTELLE

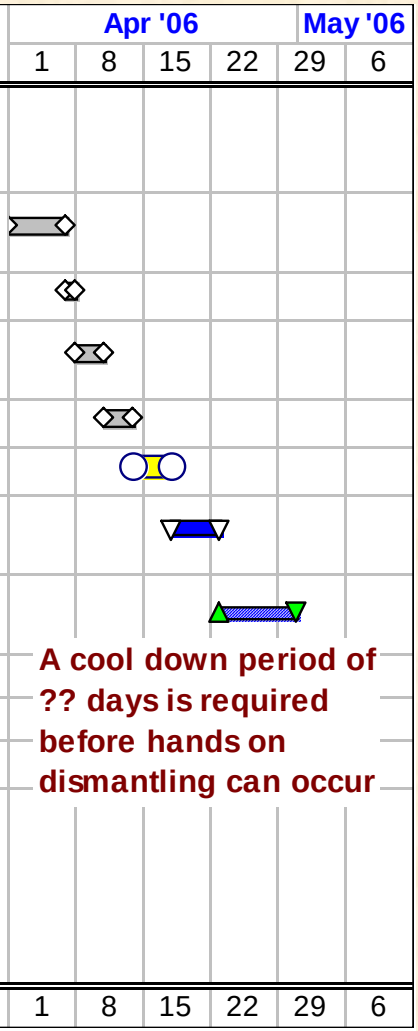
# Schedule for Target System Development and Testing



# April 2006 is Assumed for Tests at CERN

- Establish requirements for disposal
  - What equipment
  - Who is responsible
  - Where does it go
  - When is it safe to handle

| Activity Name | Start Date | Finish Date |
|---|---|---|
| **CERN Tests and Equipment Disposition** | | |
| Install magnet and target components in tunnel | 4/1/06 | 4/6/06 |
| Connect all services; install Hg | 4/7/06 | 4/7/06 |
| System tests (power, cryo, Hg jet, diagnostics ...) | 4/8/06 | 4/10/06 |
| Proton beam tuning tests | 4/11/06 | 4/13/06 |
| High Power Tests - 40 pulses | 4/14/06 | 4/17/06 |
| Additional time available for tests | 4/18/06 | 4/22/06 |
| Dismantle equipment and relocate in tunnel area | 4/23/06 | 4/30/06 |
| Remaining activities: remove and pack Hg; place target components in shielded container; place magnet/cryostat in shielded container | | |

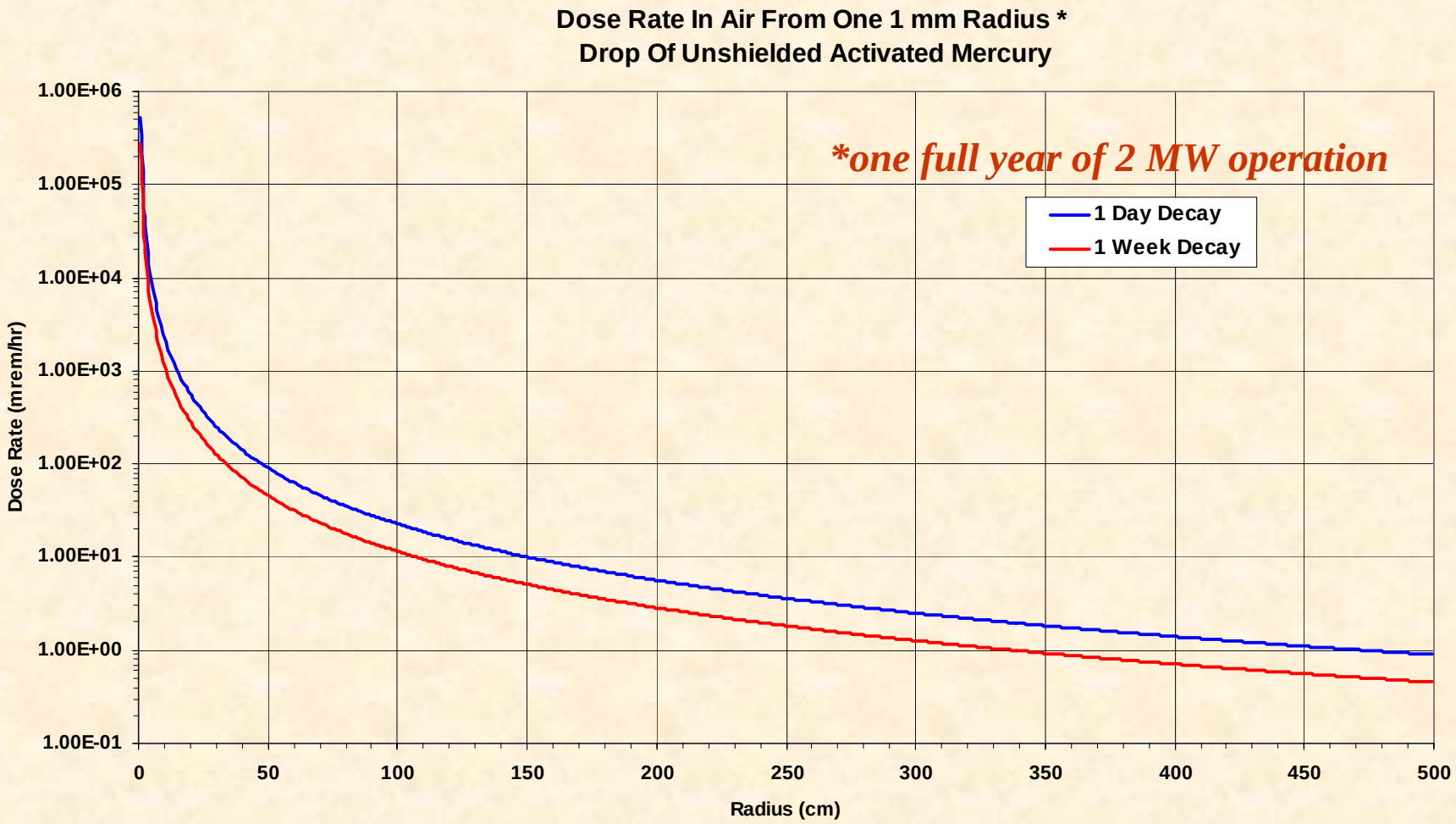


# Preliminary Test/Disposal Plan
# -for discussion only-

- Set up and check out equipment at CERN – 10 days
- Beam tuning/alignment – 3 days
- Beam-on-target testing – 4 days (10 pulses/day)
- Additional time available for beam tests – 4 days
- Dismantle equipment and move away from the beam line – 7 days
- D&D plan signed by all parties

***Equipment remains in TT2A tunnel for ??? days before final disposition***

# Activated Hg Dose Rate Plot



# Preliminary List of Components for D&D

| Component | Cool Down Period | Disposal Location | Point Of Contact |
|---|---|---|---|
| Magnet/cryostat | ?? | MIT ?? | P. Titus/MIT |
| Power leads and coolant lines | ?? | MIT ?? | P. Titus/MIT |
| Liquid nitrogen (1500 liters) | ?? | CERN | J. Lettry/CERN |
| Target system, including windows and diagnostic components | ?? | ORNL | T. Gabriel/ORNL |
| Mercury (6 liters ??) | ?? | ORNL | T. Gabriel/ORNL |
| Electrical leads for pump and fiber optics leads for diagnostics | ?? | ORNL | T. Gabriel/ORNL |
| Beam dump | ?? | CERN | J. Lettry/CERN |
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