New MCR Operations integration

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Summary

MCR Upgrade

- Motivation (recall)
- Project scope and status
- Phase 1 ad 2

Operations integration

- Motivation (recall)
- Benefits
- Implementation
- Preparation (Shutdown 09, Run-10, ☐Shutdown 10, Run-11)

MCR Upgrade: benefits

- Create **space** for operations integration
- Increase space for existing operations (Injectors, NSRL for NASA, RHIC program, BLIP operations)
- Prepare for planned RHIC upgrades (EBIS, ERL, RHIC-II, MeRHIC…)
- Creating a **better working environment** for personnel on shift, ergonomics and safety(help in staff recruitment and retention)
- Make MCR a showcase for the Laboratory (funding agencies, visitors, community)
- Free office space by creating a place for the operations and maintenance groups

Overview

1st floor

2nd floor

Project scope and status - 1

REMOVALS

Stripping high-bay, including (unplanned) asbestos remediation

ARHITECTURAL

38x94 non-combustible (1h FR) building

Outside stairs, windows, sides, stairs-cover

2nd floor corridor

Computer floor

Drop ceiling

Kitchen

ELECTRICAL

Fire alarm

Power

Communications (telephones, network, PA)

MECHANICAL

Air Conditioning *(critical path for October 2009 occupancy 1st floor)*

Plumbing

Fire protection

STAGED: **1st floor** (2009), **2nd floor**(2010) (except when not cost-effective)

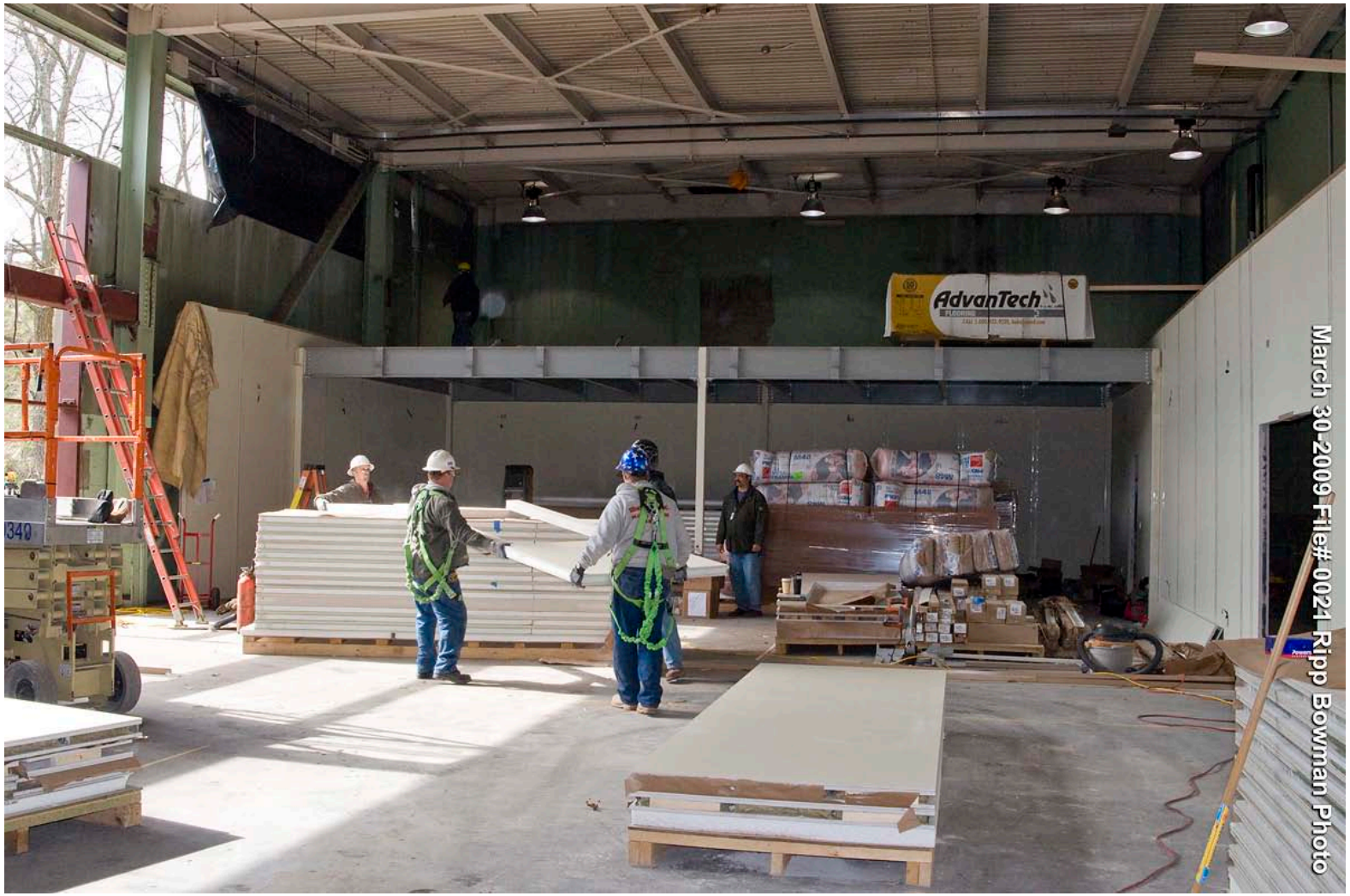
Project scope - 2

- Controls (Controls – MCR integration meetings)
- Access Controls (plan - critical path - shutdown 2010)
- Computing
- Networking
- Consoles (9-10 month - soon on critical path for 2010)
- Office furniture

Integration

- Cryo controls
- MMPS controls
- CAS controls

Building construction in High Bay



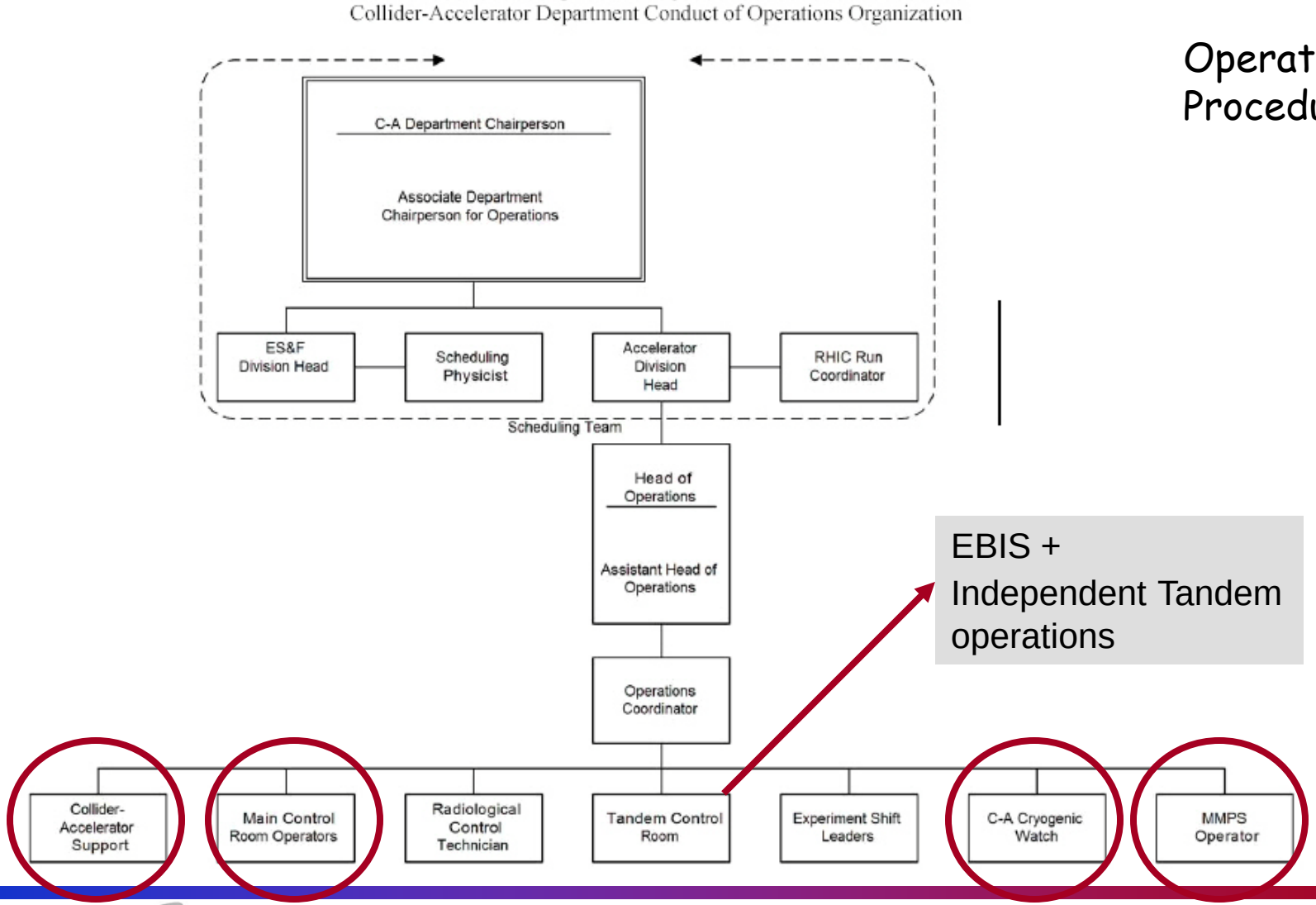
Siding work

Siding outside

First floor offices

Second floor - MCR

C-AD Operations Integration



Operation Procedure 2.1

EBIS + Independent Tandem operations

Operations integration - CAD

- Consolidation shift operations (MCR, MMPS, Cryogenics, CAS)

	Present	Interim	After integration
MCR	3	3	3
MMPS	1	1	0 ?
Cryo	2	1	1
CAS	2	2	2

- Move shift personnel to MCR for **routine operations**:

  Improve efficiency and communications

  Reduce overall personnel on shift

- **Cryogenics** and **MMPS control rooms** will remain in place for **specialized operations** (cool-down, warm-up, Siemens start-up, specialized trouble-shooting, etc.)

Operations – other facilities

Compared operations of similar accelerator complexes:

- CERN (PS, SpS, LEP, LHC)
- DESY
- JLAB
- SLAC
- Fermilab (Tevatron + injectors)

COMMON TRENDS:

- Integration, consolidations of operations
- Central Control Room (digital only)
- State of the art displays and design

Integration preparation

Cryo and **CAS** have identified what they need in the new MCR.

CRYO knows how they want their space to be configured.

CAS: PLC connection for their EAGAL II device.
support of the substation crash panel
support the crane control panel.

We need to work out **an integration plan** with Cryo, CAS and Siemens.
Phased: Shutdown 09 – Run10 – Shutdown10 – Run11

Effectiveness of the integration could be aided by integrating "services" software displays (see CERN):

- ground faults
- water systems alarms
- water systems controls etc.

(Discussion along these lines has started in MCR-Controls integration meetings)