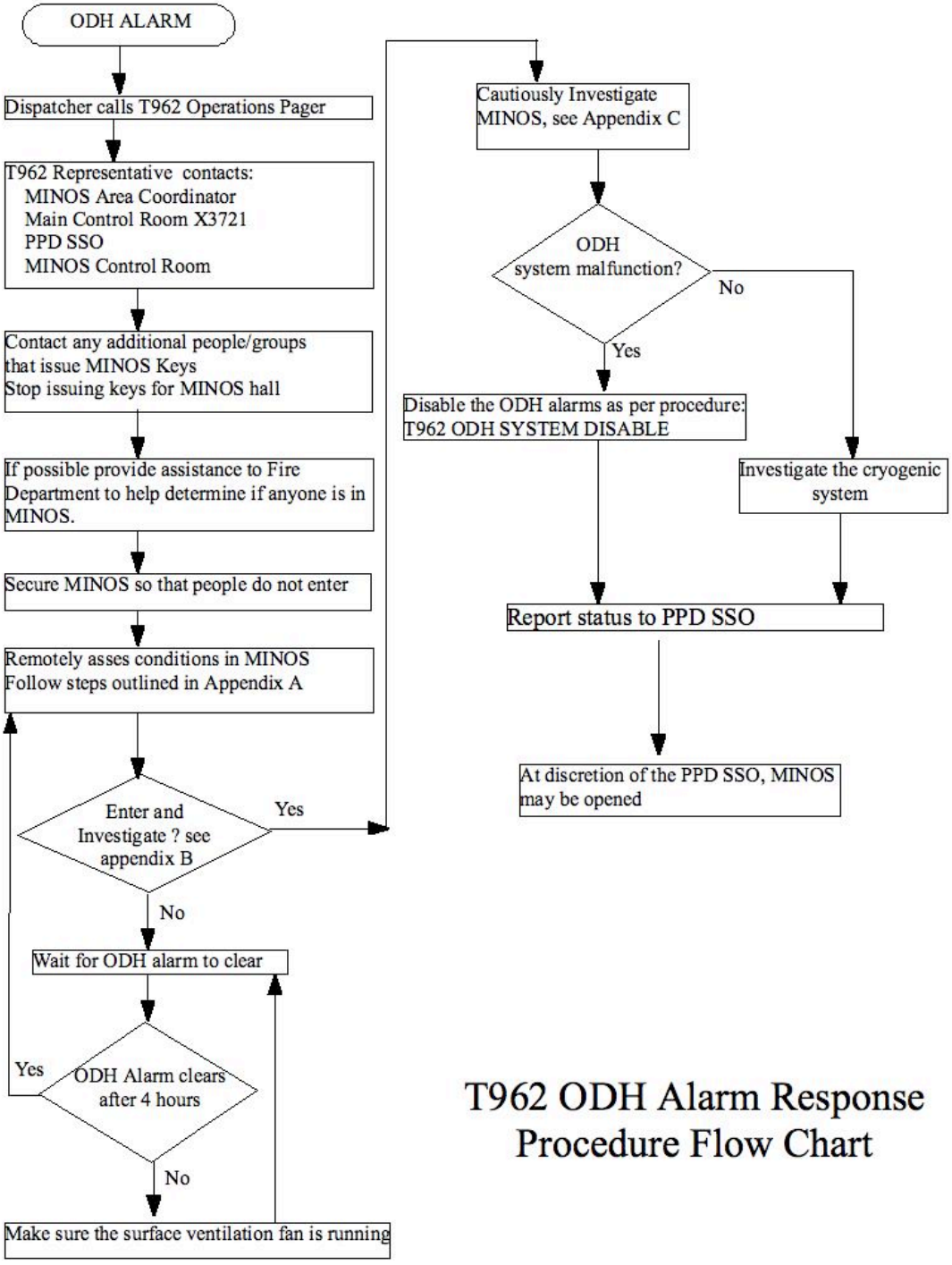
T962 ODH Alarm Response Procedure

May 5, 2009

This procedure is for T962 ODH alarm response. The procedure is described in the flow chart on the next page. Appendices A, B and C provide detailed information for this procedure.



T962 ODH Alarm Response Procedure Flow Chart

Appendix A
Remotely Assess T962 System Status.

Remotely monitor the ODH status display of the T962 slow control system. Look at both the present conditions and the cryogenic system data-logging records. Take note of the following:

1. Cryostat pressure normal?
2. Were there recent large changes in cryostat liquid argon level?
3. Is at least one mixing fan running?
4. ODH_TROUBLE in alarm?
5. Observe oxygen readings displayed .
6. Is the automatic vent valve open?
7. Look other readings for abnormal or unusual conditions.
8. Cryostat main vacuum normal?
9. Look at MINOS Hall web cams for frost or fog.

Appendix B
Criteria For Entry Into MINOS to Investigate

Except for Fire Department rescue operations, Fermilab rules prohibit entry into MINOS, if it known to or suspected of having an oxygen concentration less than 19.5%. Exceptions to this rule are possible but require a written plan submitted by the PPD division office for approval to the Fermilab Directorate.

The decision to enter the MINOS hall to investigate an ODH alarm requires approval of the PPD/SSO in consultation with the T962 Operations Manager. At the request of the MINOS Hall Area Coordinator the PPD Mechanical Department will provide advice and assistance in this matter.

If, by chance, the Fire Department has already entered MINOS for rescue operations and found the oxygen concentration to be greater than 19.5 % , then approval may be granted to investigate the alarm.

If all the following criteria is met then the PPD SSO may authorize cautious investigation of MINOS hall.

1. no recent significant loss of argon level in cryostat.
2. cryostat pressure normal (below 5 psig)
3. no suspicious abnormal operating conditions
4. At least one ODH mixing fan running
5. No vapor fog or frost observed on the MINOS hall web cams.

A decision to enter into MINOS for investigation may be based upon criteria other than that listed above. Personnel from the PPD Mechanical department will provide assistance as needed to help determine if it is safe to investigate MINOS.

The MINOS hall ventilation system is not required to be working in order to have an ODH 0 classification in the MINOS hall. However The 4000 cfm ventilation fan EAV-4 located on the surface will provide 1 air change per hour for the combined MINOS hall and access tunnel. If there ever were a real ODH problem this fan will greatly help mix the argon with air and remove the argon/air mixture from MINOS. The operation of the fan is monitored by Medisys under FESS.

Appendix C
MINOS Investigation

Two people minimum required to investigate MINOS hall. Anyone entering MINOS to investigate an ODH alarm must have Fermilab ODH training and be trained in the use of the oxygen monitor being used. All people must stay in close contact with each other while in MINOS hall. Each person must carry a portable oxygen monitor. If ay any time any portable oxygen monitor goes into alarm all people must immediately evacuate to the surface.

At the lower elevator foyer, each person pick out and carry an emergency escape pack.

Open the door into MINOS hall closest to the elevator. Check the oxygen concentration above waist level and within 1 foot of the floor. Wait at the door for at least 30 seconds before proceeding .

Every 50 feet, stop and check the oxygen concentration above waist level and within 1 foot of the floor. Pause for at least 30 seconds before proceeding .

Once at the T962 cryostat is reached and the oxygen concentration in MINOS as measured by the portable oxygen monitors is greater than 19.5%, follow the procedure
T962 ODH SYSTEM DISABLE.doc