

DOCUMENT REVISION STATUS

ISSUE NUMBER	DESCRIPTION OF CHANGE	DATE	ECN #
-	INITIAL RELEASE	4/20/07	N/A

APPROVALS

APPROVED: PROCESS ENGINEERING: *Eric E. ...* DATE: 4/30/2007

APPROVED: ENGINEERING MANAGER: *M. ...* DATE: 4/30/07

APPROVED: MANUFACTURING MANAGER: *Raff ...* DATE: 4-30-07

APPROVED: QUALITY ASSURANCE MANAGER: *B. ...* DATE: 5/4/07

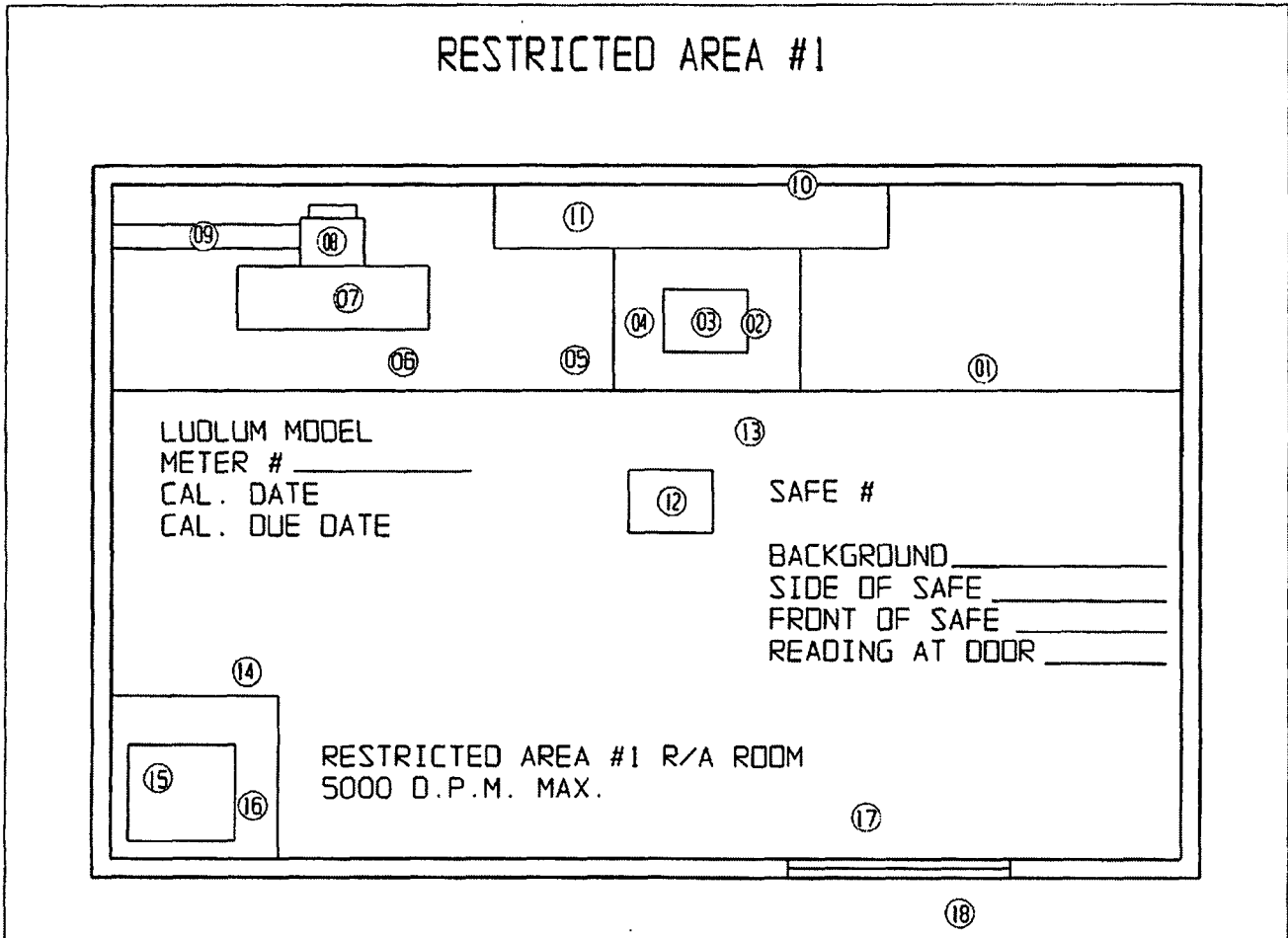
1.0 PURPOSE:

- 1.1 To provide instructions and a schedule for surveying of all radioactive material preparation and use areas, storage areas and exposed materials (i.e. clothing).

2.0 PROCEDURE:

- 2.1 All preparation and use areas will be surveyed each day of use with a low-range survey instrument (as appropriate for radionuclides used) and decontaminated if necessary.
- 2.2 Individuals shall monitor hands, shoes, clothing and work surfaces with a low-range survey instrument (as appropriate for radionuclides used) for contamination after each use of radioactive material or before leaving the restricted area and decontaminate as necessary.
- 2.3 Laboratory areas where only small quantities of radioactive material are used [less than 7.4MBq (200 μ Ci)] or areas where material is in storage only will be surveyed monthly.
- 2.4 Waste storage areas and all other laboratory areas [those using greater than or equal to 7.4MBq (200 μ Ci)] will be surveyed weekly.
- 2.5 The weekly and monthly surveys will consist of:
- a. A measurement of radiation levels with a survey meter sufficiently sensitive to detect 1.0 μ Sv (0.1mrem) per hour for the radionuclide involved.
 - b. A series of wipe tests to measure contamination levels. The method for performing wipe tests will be sufficiently sensitive to detect [3.7Bq (220dpm) per 100cm², beta/gamma], for the contaminant involved. Wipes for areas of use or other high-background areas will be removed to a low-background area for measurement.
- 2.6 If contamination is detected, the area will:
- a. Be cleaned or posted and restricted from use if the contamination level exceeds [75Bq (5000dpm) per 100cm², beta/gamma] or;
 - b. Be covered, cleaned or identified to all employees if the contamination level exceeds [15Bq (1000dpm) per 100cm²] but is less than [75Bq (5,000dpm) per 100cm², beta/gamma].
- 2.7 Records of all area survey results, including negative results, will be kept for five (5) years after each survey. The record will include:
- a. Manufacturer, model and serial number of instruments used to perform surveys and analyze wipe tests.
 - b. Date of the survey.
 - c. A drawing of the area surveyed identifying relevant features such as active storage areas, active waste areas, etc. See Figures 1-4.
 - d. Measured dose rates (in units of sieverts or mrem per hour) keyed to locations on the drawing.
 - e. Detected contamination levels [in units of Bq/100cm², dpm/100cm² or microcuries/100cm²] keyed to locations on the drawing.
 - f. Corrective action taken in the case of contamination or exposure rates in excess of action levels or the regulations, reduced contamination levels or dose rates after corrective action and any appropriate comments.
 - g. The initials of individual performing the survey.

Figure 1: Restricted Area (1) RA Room



- | | | | |
|------------------------|-------|----------------------|-------|
| ① BENCH | _____ | ⑩ WALL | _____ |
| ② BASE OF MICROSCOPE | _____ | ⑪ LIGHTS | _____ |
| ③ MICROSCOPE | _____ | ⑫ CHAIR | _____ |
| ④ TRAY NEAR MICROSCOPE | _____ | ⑬ FLOOR BY WORKBENCH | _____ |
| ⑤ BENCH BY TRAY | _____ | ⑭ COMPACTOR | _____ |
| ⑥ BENCH BY GLOVE BOX | _____ | ⑮ TOP OF SAFE | _____ |
| ⑦ TOP OF GLOVE BOX | _____ | ⑯ INSIDE SAFE (DOOR) | _____ |
| ⑧ MOTOR | _____ | ⑰ FLOOR BY DOOR | _____ |
| ⑨ DUCT | _____ | ⑱ FLOOR OUTSIDE DOOR | _____ |

ALL WIPES ARE ANALYZED ON A L.S. COUNTER FOR REMOVABLE CONTAMINATION. ALL REPORTS ARE IN D.P.M. MODEL # A2700TR...SER # 414328
LSC CALIBRATED DAILY USING NIST STANDARDS H2...C14 AS WELL AS BKG STANDARDS

REVISED 07/25/05
REVISED 06/19/00
REVISED 01/22/96
REVISED 02/24/95
REVISED 02/14/95
REVISED 07/28/93
REVISED 03/20/85
REVISED 03/29/83

Figure 2: Restricted Area (2) Pump Room

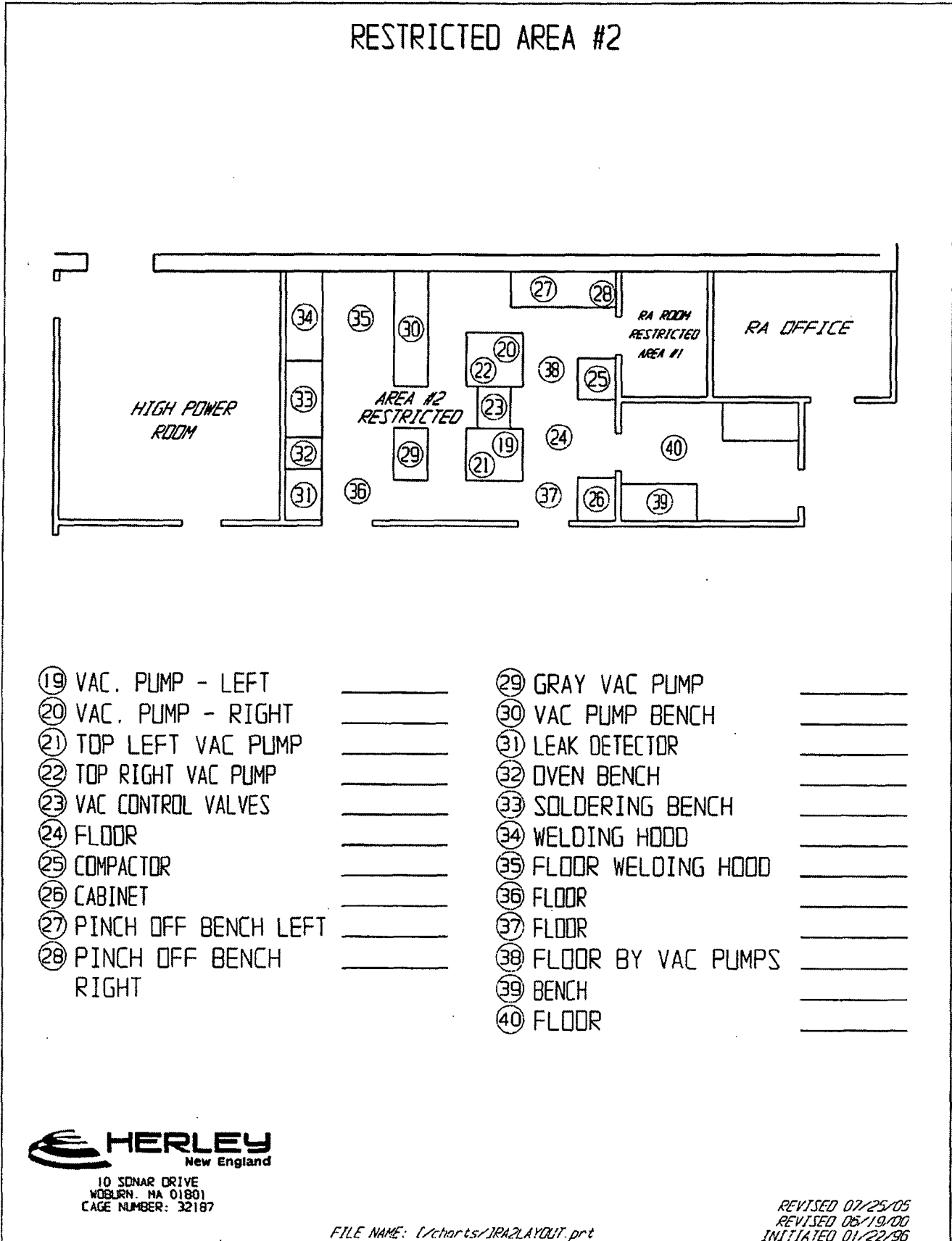


Figure 3: Lab Facility

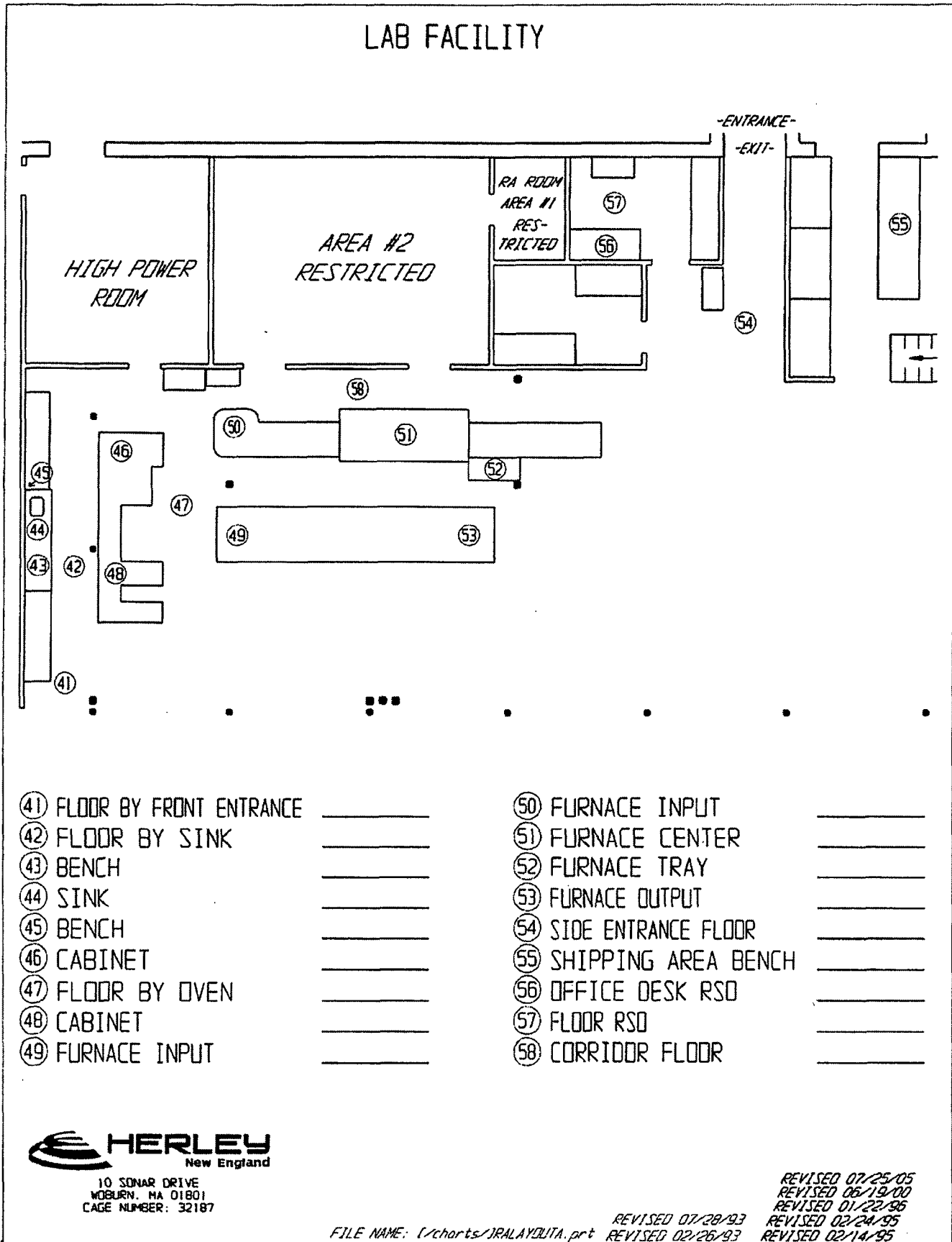
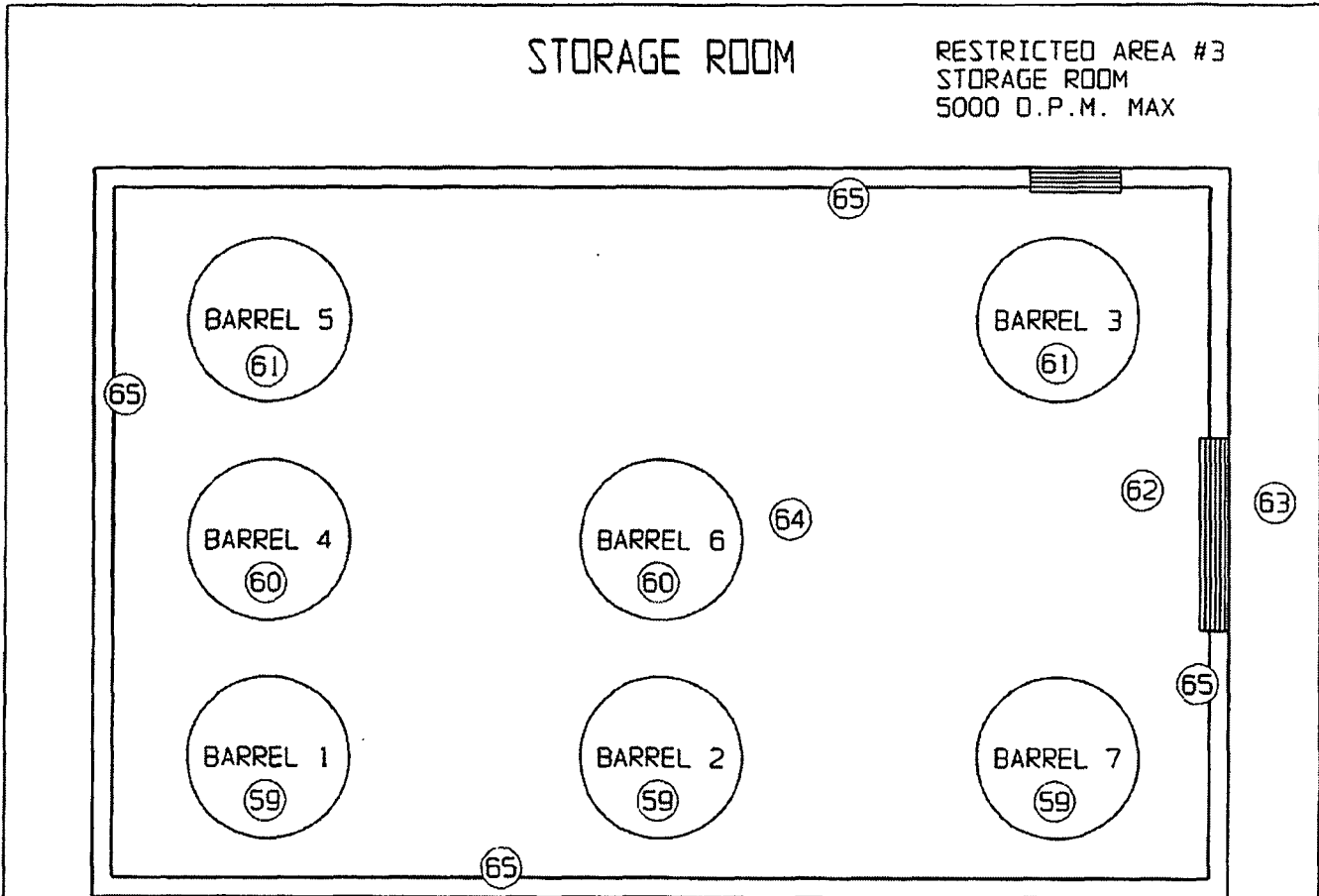


Figure 4: Storage Room



- ⑤⑨ BARRELS 1,2,7 _____
- ⑥⑩ BARRELS 4,6 _____
- ⑥① BARRELS 3,5 _____
- ⑥② FLOOR BY DOOR _____
- ⑥③ FLOOR OUTSIDE DOOR _____
- ⑥④ CENTER FLOOR _____
- ⑥⑤ FAN MOTOR _____