NRC FORM 313 (10-2005) 10 CFR 30, 32, 33, 34, 35, 36, 39, and 40

U.S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR MATERIAL LICENSE

APPROVED BY OMB: NO. 3150-0120 EXPIRES: 10/31/2008

Estimated burden per response to comply with this mandatory collection request: 4.4 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY
OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555-0001

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:

IF YOU ARE LOCATED IN:

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, MISSISSIPPI, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:

LICENSING ASSISTANCE TEAM
DIVISION OF NUCLEAR MATERIALS SAFETY
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TX 76011-4005

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S.NUCLEAR REGULATORY COMMISSION JURISDICTIONS.

1. THIS IS AN APPLICATION FOR *(Check appropriate item)*

- ☐ A. NEW LICENSE
- ☑ B. AMENDMENT TO LICENSE NUMBER 24-26366-01
- ☐ C. RENEWAL OF LICENSE NUMBER

2. NAME AND MAILING ADDRESS OF APPLICANT *(Include ZIP code)*

High Energy Devices, LLC
26 Hollenberg Court
Bridgeton, MO 63044

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

High Energy Devices, LLC
26 Hollenberg Court
Bridgeton, MO 63044

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Michael C. Brower

TELEPHONE NUMBER

(314) 291-0036

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL
a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.

9. FACILITIES AND EQUIPMENT.

10. RADIATION SAFETY PROGRAM.

11. WASTE MANAGEMENT.

12. LICENSE FEES *(See 10 CFR 170 and Section 170.31)*
FEE CATEGORY 3M | AMOUNT ENCLOSED $

13. CERTIFICATION. *(Must be completed by applicant)* THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39, AND 40, AND THAT ALL INFORMATION CONTANED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

CERTIFYING OFFICER – TYPED/PRINTED NAME AND TITLE	SIGNATURE	DATE
Michael C. Brower, Radiation Safety Officer	Michael C Brower RSO / Terry Foster CEO	12-22-07

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			$		
APPROVED BY				DATE	

NRC FORM 313 (10-2005) PRINTED ON RECYCLED PAPER

RECEIVED DEC 2 9 2006

HIGH ENERGY DEVICES

December 22, 2006

Mr. Kevin Null
Materials Licensing Branch, Region III Office
U.S. Nuclear Regulatory Commission
Suite 210
2443 Warrenville Road
Lisle, IL 60532-4352

RE: License Number: 24-26366-01, Facility Decommissioning, Please Expedite

Dear Mr. Null:

In late August, I notified USNRC Region III of our intention to decommission the High Energy Devices, LLC facility located at 45D Progress Parkway in Maryland Heights, Missouri, and relocate the licensed material facility to the new location located at 26 Hollenberg Court, Bridgeton Missouri 63044. This is an update to the August notification letter.

The move has been completed, effective December 18, 2006 and we should begin operations at the new facility very soon. R. M. Wester & Associates, Inc. overseen the move and surveyed equipment and items prior to the transfer. Items not meeting the free release criteria for radiation and contamination levels were packaged and transported by West Star Industries, Inc. to the new facility.

Enclosed are the decommission survey and decommission plan of the fixed facility performed by R. M. Wester & Associates, Inc. for your review. The results of the decommission survey show that activities associated with the former facility are below the reported unrestricted release criteria.

Please decommission the former facility located at 45D Progress Parkway and remove it from the USNRC Material License belonging to High Energy Devices, LLC.

Thank you for your assistance in these matter. Please do not hesitate to contact R. M. Wester & Associates, Inc. if you have questions or comments on the above.

Sincerely,
High Energy Devices, LLC

Michael C. Brower, RSO/President/CEO

Michael C. Brower
Radiation Safety Officer

cc. Mr. Anthony S. Kirkwood, USNRC, Washington DC

HIGH ENERGY DEVICES, LLC
45D Progress Parkway • Maryland Heights, MO 63043
Phone: 314.434.5191 • Fax: 314.434.8184
Email: info@highenergydevices.com
www.highenergydevices.com

R. M. WESTER *and ASSOCIATES, INC.*
215 INDACOM DRIVE - ST. PETERS, MISSOURI 63376
(636) 928-9628 - FAX (636) 928-9857

Radiological Decommissioning Survey and Implementation Plan for High Energy Devices, LLC

December 18, 2006

Prepared by:

R. M. Wester & Associates, Inc.

Decommissioning Plan

1. EXECUTIVE SUMMARY

a. Review Procedures

i. No response from applicant required.

b. Acceptance Criteria

i. Licensee Name and Address

(1) Licensee Name: High Energy Devices, LLC

(2) Licensee Address: 45 D Progress Parkway, Maryland Heights, Missouri

(3) Radiation Safety Officer (RSO): Mike Brower

ii. Site Location and Address

(1) See paragraph 1b(2), above

iii. Site Description

(1) High Energy Devices, LLC is located within a one story building used for manufacturing purposes. The facility is located within a larger industrial building complex in the suburbs of Saint Louis, Missouri.

iv. Summary of Licensed Activities

(1) The facility, located at 45 D Progress Parkway, Maryland Heights Missouri, is housed within a multi-room manufacturing area for the manufacture of gas discharge tubes used in Department of Defense (DOD)/Military, medical and industrial environments. Licensed materials are reportedly only used in the R. A. Room where liquids are dried in place inside sealed, manufactured devices. Machining of exterior housing assemblies occurs in the Production Area outside the R. A. Room. Licensed materials used within the facility include beta-gamma emitters of the following nuclides, forms and quantities: Cesium-137, Nickel-63, Krypton-85 in both sealed, manufactured sources, and liquids in milli-Curie quantities regarding total possession limits. Total quantities of radioactive materials contained within each manufactured device are reported as approximately 0.4 micro-Curies, or less. No spillage of radioactive materials has occurred during licensed operations. The license holder desires to relocate their USNRC licenses to a new location and to radiological decommission the pre-existing facility for unrestricted release not later than December 2006. A decommissioning survey of building surfaces and fixed, non-removable equipment is proposed for free release of the facility.

v. Nature and Extent of Contamination at the Site

(1) Only contamination of significant activity and areal coverage is expected within the R. A. Room. Lower contamination activity and areal coverage are only expected sporadically in remaining impacted areas. See Enclosure 2 for scoping survey.

(2) The probability for contamination spreading to areas outside the R. A. Room is expected to be minimal, based upon conversation with the license RSO, due to the

dried and confined nature of the spots outside the R. A. Room.

vi. Decommissioning Objective Proposed by the Licensee
(1) A scoping, characterization, post remedial, and final status survey of impacted areas within the facility complex is proposed to disprove radionuclide residual beyond release criteria. Any remediation, post remediation surveys will be performed based upon characterization survey findings.

vii. Site DCGLs and DCGL Determination
(1) DCGLs.
(a) Fixed Contamination– Beta-Gamma Contamination
(i) 1100 dpm/100 cm^2 as maximum for any single location
(ii) 220 dpm/100 cm^2 as maximum average

(b) Removable Contamination–Beta-Gamma Contamination
(i) 220 dpm/100 cm^2

viii. ALARA Evaluations Performed to Support the Decommissioning

ix. Proposed Initiation and Completion Dates of Decommissioning
(1) Project start date: August 2006
(2) Proposed end date: December 31, 2006

x. Post Remediaiton Activities
(1) Post remedial activities will be performed to achieve the release criteria for affected building and equipment surfaces.

xi. Decommissioning Plan Amendment Statement
(1) The licensee requests that the radioactive material license be amended to incorporate the decommissioning plan.

c. Evaluation Findings
i. Radionuclides, maximum activities and quantities, authorized use

Byproduct Material	Chemical/Physical Form	Max Quantity
Cesium-137	Any	5 mCi
Nickel-63	Any	5 mCi
Krypton-85	Any	5 mCi
Cesium-137	Sealed	5 mCi
Nickel-63	Sealed	5 mCi
Krypton-85	Sealed	5 mCi

ii. Nuclide Usage
(1) To be used in the manufacturing of gas discharge tubes

iii. Location and Storage

(1) Nuclides located within the R. A. Room and production area outside the R. A. Room. All nuclide usage outside of the R. A. Room are contained within gas discharge tubes.

iv. Facility Scaled Drawings

(1) See Enclosure 1 for facility architectural drawings.

v. License Amendments Since Last Renewal

(1) Current license amendment is Number 3. Prior amendments on file with USNRC.

2. FACILITY OPERATING HISTORY

a. License Number/Status/Authorized Activities

i. Current License Number is: 24-26366-01, Amendment No. 3, Expiration Date: August 31, 2012

b. License History

i. Given in paragraph 1b(4), above

c. Previous Decommissioning Activities

i. No previous facility decommissioning activities reported by licensee at this location.

d. Spills

i. No previous radioactive material spills reported by licensee.

e. Prior On-Site Burials

i. No previous on-site burials reported by licensee.

3. FACILITY DESCRIPTION

a. Site Location and Description

i. Licensed facility located at 45 D Progress Parkway, Maryland Heights Missouri

ii. Impacted and Non-Impacted Area classification and survey scope are identified below. See Enclosure 1 for facility map.

iii. Class 1 Areas include the following. See Enclosure 1 for facility map.

(1) R. A. ROOM – Specifically, the R. A. focus includes:

Floor – Floor Surfaces encompassing a 10x12 ft rectangle utilizing grid areas of approximately 1 meter square

Walls – Wall surfaces up to approximately 7 feet in height surveyed utilizing grid areas of approximately 1 meter square

iv. Class 2 Areas Identified Include the following. See Enclosure 1 for facility map.

(1) R. A. ROOM ENTRANCE – Specifically, the R. A. Room Entrance includes:

Floor – Floor Surfaces encompassing a 4x6 ft rectangle utilizing grid areas of approximately 1 meter square

Walls – Wall surfaces up to approximately 7 feet in height surveyed utilizing grid areas of approximately 1 meter square

(2) SEALING MACHINE AREA (No. 1) – Specifically, the Sealing Machine area focus includes:

Floor – Floor Surfaces encompassing a 4 ft square around the equipment item utilizing grid areas of approximately 1 meter square.

(3) SEALING MACHINE AREA (No. 2) – Specifically, the Sealing Machine area focus includes:

Floor – Floor Surfaces encompassing a 4x3 ft rectangle around the equipment item utilizing grid areas of approximately 1 meter square

(4) CAPPING TABLE AREA – Specifically, the Capping Table Area focus includes:

Floor – Floor Surfaces encompassing a 5 ft square around the equipment item utilizing grid areas of approximately 1 meter square

(5) LATHE AREA – Specifically, the Lathe Area focus includes:

Floor – Floor Surfaces encompassing a 4x6 ft rectangle around the equipment item utilizing grid areas of approximately 1 meter square

Walls – Wall surfaces up to approximately 7 feet in height surveyed utilizing grid areas of approximately 1 meter square

(6) LATHE AREA – Specifically, the Lathe Area focus includes:

Floor – Floor Surfaces encompassing a 4x4 ft square around the equipment item utilizing grid areas of approximately 1 meter square

Walls – Wall surfaces up to approximately 7 feet in height surveyed utilizing grid areas of approximately 1 meter square

(7) VACUUM FURNACE AREA – Specifically, the Vacuum Furnace Area focus includes:

Floor – Floor Surfaces encompassing a 6x6 ft square around the equipment item utilizing grid areas of approximately 1 meter square

(8) HEAVY DUTY FURNACE AREA – Specifically, the Heavy Duty Furnace Area focus includes:

Floor – Floor Surfaces encompassing a 4x10 ft rectangle around the equipment item utilizing grid areas of approximately 1 meter square

v. Class 3 Areas include the following. See Enclosure 1 for facility map.

(1) SAND BLASTING ROOM. Specifically, the Sand Blasting Room focus includes:

Floor – Limited sampling of grid surfaces, encompassing approximately 12 ft square

Walls – Limited sampling of grid surfaces

(2) COERZIMETER ROOM. Specifically, the Coerzimeter Room focus includes:

Floors – Limited Sampling of grid surfaces, encompassing approximately 10x12 ft

(3) MICROWAVE ROOM. Specifically, the Microwave Room focus includes:

Floor – Limited sampling of grid surfaces, 16x20 ft rectangle

Walls – Limited sampling of grid surfaces

(4) RECEIVING AREA. Specifically, the Receiving Area focus includes:

Floor – Limited sampling of grid surfaces, encompassing approximately 13x19 ft rectangle

Walls – Limited sampling of grid surfaces

(5) RAW MATERIALS STOCK. Specifically, the Raw Materials Stock focus includes:

Floor – Limited sampling of grid surfaces, encompassing approximately 23x39 ft rectangle

Walls – Limited sampling of grid surfaces

(6) FURNACE ROOM. Specifically, the Furnace Room focus includes:

Floor – Limited sampling of grid surfaces, encompassing approximately 28x32

ft rectangle

(7) ACID ROOM. Specifically, the Acid Room focus includes:

Floor – Limited sampling of grid surfaces, encompassing approximately 23x39 ft rectangle

(8) UTILITIES AREA. Specifically, the Utilities Area focus includes:

Floor – Limited sampling of grid surfaces, encompassing approximately 7 ft square

Walls – Limited sampling of grid surfaces

(9) FINISH GOODS AREA. Specifically, the Finish Goods Area focus includes:

Floor – Limited sampling of grid surfaces, encompassing approximately 12x13 ft rectangle

Walls – Limited sampling of grid surfaces

(10) MFG ENG. OFFICE. Specifically, the MFG Eng. Office focus includes:

Floor – Limited sampling of grid surfaces, encompassing approximately 8x10 ft rectangle

Walls – Limited sampling of grid surfaces

(11) RDG. OFFICE. Specifically, the Rdg. Office focus includes:

Floor – Limited sampling of grid surfaces

Walls – Limited sampling of grid surfaces

(12) WC MEN/ WC WOMEN BATHROOMS. Specifically, the Bathroom focuses include:

Floor – Limited sampling of grid surfaces, encompassing approximately two 4 ft squares

Walls – Limited sampling of grid surfaces

(13) WC AREA (Walk In Closets). Specifically, the WC AREA focus includes:

Floor – Limited sampling of grid surfaces, encompassing approximately four 4 ft squares

Walls – Limited sampling of grid surfaces

vi. Non-Impacted Areas include the following.
(1) All other portions of the facility area including the building exterior immediately adjacent to regress points are not included in the survey scope.

b. Population Distribution
i. Population demographics consistent with urbanized suburb characterized by St. Louis area.

c. Current/Future Land Use
i. Current and future land use is for industrial manufacturing complex.

d. Meteorology and Climatology
i. Midwestern USA

e. Geology and Seismology
i. Midwestern USA

f. Surface Water Hydrology
i. No input

g. Groundwater Hydrology
i. No input

h. Natural Resources
i. No Input

i. Ecology/Endangered Species
i. No input

4. RADIOLOGICAL STATUS OF FACILITY

a. Contaminated Structures
i. R. A. Room Surfaces. See Scoping Survey, Enclosure 2, for details.

b. Contaminated Systems and Equipment
i. R. A. Room Equipment. See Scoping Survey, Enclosure 2, for details.

c. Surface Soil Contamination
i. Not included in survey scope

d. Subsurface Soil Contamination
i. Not included in survey scope

e. Surface Water
i. Not included in survey scope

f. Groundwater
   i. Not included in survey scope

5. DOSE MODELING EVALUATIONS

a. Unrestricted Release using Screening Criteria
   i. Building surfaces
      (1) Achievement of the release criteria for building surfaces should be attainable using standard remediational techniques, including cleaning solvents and surface abrasion, as needed.

   ii. Surface Soil
      (1) Non applicable within survey scope

b. Unrestricted Release using Site-Specific Information
   i. Non applicable within survey scope

c. Restricted Release using Site-Specific Information
   i. Non applicable within survey scope

d. Release Involving Alternate Criteria
   i. Non applicable within survey scope

6. ALTERNATIVES CONSIDERED AND RATIONALE FOR CHOSEN ALTERNATIVE

a. Alternatives Considered
   i. Non applicable within survey scope

b. Rationale for Chosen Alternative
   i. Non applicable within survey scope

7. ALARA ANALYSIS

a. ALARA analysis is based upon scoping survey radiation and contamination results.

8. PLANNED DECOMMISSIONING ACTIVITIES

a. Contaminated Structures
   i. Decontaminate building surfaces exceeding release criteria identified in characterization survey.

b. Contaminated Systems and Equipment
   i. Decontaminate and/or package equipment items according to DOT radiological regulations prior to transport to new licensed facility.

c. Soil
   i. Soil survey is not included in proposed survey scope.

d. Surface and Groundwater
   i. Groundwater assay is not included in proposed survey scope.

e. Schedules

Date Range	Activity	
August 1 – August 9, 2006	Site Historical Assessment	✓
August 21 – August 31, 2006	License Amendments to Add New Facility	✓
August 21 – August 31, 2006	Decommission Outline Preparation and Mailing	✓
September 5 – October 31, 2006	NRC Review and Decommission Outline Finalization	✓
November 1 – November 22, 2006	Characterization Survey	✓
November 20 – December 22 2006	Characterization Survey Analysis and Reporting	✓
December 20 – December 22, 2006	Decontamination and Remediation Survey(s)	N/A
December 20 – December 22, 2006	Final Survey Documentation and Review (Characterization Report)	Encl. 2
December 22, 2006	Submission to USNRC	✓
December 31, 2006 – Completion	USNRC Review and Amendment Finalization	

9. PROJECT MANAGEMENT AND ORGANIZATION

a. Decommissioning Management Organization

i. RSO

ii. Senior Health Physicists(s). Responsible for project oversight and execution.

iii. Health Physicist(s). Responsible for radiation survey execution and survey documentation.

iv. Radiological Technician(s). Responsible for radiation survey.

v. Ancillary personnel. Responsible for equipment moving and logistics.

b. Decommissioning Task Management

i. The senior health physicist verbally tasks the health physicists regarding project execution. The subordinate health physicists then verbally train the radiological technician(s) and ancillary personnel regarding safe execution of the project until proficiency. Quality control is accomplished by the senior health physicist upon work review.

c. Decommissioning Management Positions and Qualifications

i. Senior Health Physicist. Master in physics, or greater, with commensurate experience in health physics decommissioning surveys.

d. Training
   i. Health Physicists. Master in physics with commensurate experience in health physics decommissioning surveys from military, civilian or DOD agencies.

e. Contractor Support
   i. No sub contracting of health physics surveys indicated. Sub contracting of equipment moving logistics will be performed by a licensed radiological hauler for source materials, waste and equipment items exceeding the radiological DCGLs. Sub contacting of equipment moving logistics for items meeting the radiological DCGLs will be performed by a general transport contractor after radiological release is given.

10. RADIATION SAFETY AND HEALTH PROGRAM

a. Radiation Safety Controls and Monitoring for Workers
   i. Workplace Air Sampling Program
      (1) Radioactive gas containers will be shut off prior to radiological survey. No other gaseous release monitors are indicated.

   ii. Respiratory Protection Program
      (1) Not used within survey

   iii. Internal Exposure Determination
      (1) Use of bioassay, if indicated by radiation survey of personnel after survey completion.

   iv. External Exposure Determination
      (1) External dose determination is performed by use of an OSL dosimeter provided by NVLAP accredited dosimetry laboratory.

      (2) External dose exposure determination is performed by use of portable GM and scintillation detection equipment of personnel (frisk) and work area exposure rates.

   v. Summation of Internal and External Exposures
      (1) Dose summation will be performed by NVLAP accredited dosimetry laboratory based upon occupational monitoring provided.

   vi. Contamination Control program
      (1) Contamination control will utilize PPE (Shoe covers, lab coat, gloves) where necessary

   vii. Instrumentation Program
      (1) Instrument Calibration. Calibration of instruments will follow the guidelines of 10 CFR 35.61, "Calibration of Survey Instruments." at least annually.

      (2) Function Checks. Instrument consistency checks will be performed before and after the survey. Consistency will not vary by more than 10% check source precision.

(3) Portable Radiation Survey Instrumentation.
(a) Ludlum Model 3 with 44-1 probe for high sensitivity beta exposure.

(b) Ludlum Model 3 with 44-9 probe for general beta-gamma sensitivity.

(c) Optional: Ludlum Model 19 with internal scintillation detector for low energy gamma exposure.

(4) Wipe Analysis
(a) Performed using Packard Tri-Carb Series LSA. MDA approximately 10 dpm

b. Nuclear Criticality Safety
i. Non applicable

c. Health Physics Audits and Record-Keeping Program
i. Contamination, ALARA surveys, and audits will be maintained within facility RSO files.

11. ENVIRONMENTAL MONITORING PROGRAM

a. Environmental ALARA Evaluation Program
i. No response provided.

b. Effluent Monitoring Program
i. Remedial supplies used during analysis and decontamination will be containerized and disposed within the facility waste stream.

c. Effluent Control Program
i. No effluent generation is expected during decommissioning activities.

12. RADIOACTIVE WASTE MANAGEMENT PROGRAM

a. Solid Radioactive Waste
i. Only low level contaminated supplies are expected during remediation of a minority of surface areas. These supplies will be bagged and maintained within the facilities waste stream.

b. Liquid Radioactive Waste
i. Scintillation cocktail containing a minority of wipe samples collected during decommissioning activities containing low level activities will be included within the facilities waste stream for disposal by a licensed radiological waste contractor.

c. Mixed Waste

13. QUALITY ASSURANCE PROGRAM

a. Organization.
i. Senior health physicist

ii. Health Physicist(s)

iii. Radiological assistants/technician(s)

b. Quality Assurance Program
   i. Survey quality is monitored by at least one subordinate health physicist while on site and by the senior health physicist upon project completion. Radiation level equipment quality control is maintained by periodic source consistency checking. Contamination level equipment quality control is maintained using control standard protocol measurement comparison to known standard activities. Transient spikes in LSA equipment are eliminated using reproducibility testing.

   ii. Project reporting is reviewed by the senior health physicist after survey completion. Any discrepancies are readdressed with the survey crew.

c. Document Control
   i. Survey documentation is maintained on NAS computer databases at the health physics contractors office location with backup to redundant NAS.

d. Control of Measuring and Test Equipment
   i. See Paragraphs 10.7 (1,2), 13b, above

e. Corrective Action
   i. Corrective action is accomplished by the senior health physicist and/or, health physicist through verbal feedback with the subordinate physicist and/or radiological technicians regarding survey insufficiencies upon detection.

f. Quality Assurance Records
   i. Decommissioning survey records are maintained at least five years in by the radiological contractor performing the decommissioning surveys either in active files or stored archives. The new licensed facility client will maintain all decommissioning records for the duration of the license.

g. Audits and Surveillance
   i. Control of licensed materials will be performed by licensed facility staff while the radiological contractor performs the decommissioning surveys.

14. FACILITY RADIATION SURVEYS

a. Release Criteria
   i. See paragraph 1.7, above

b. Characterization Surveys
   i. One hundred percent coverage of surface grid areas by radiation and contamination survey is proposed for Class 1 areas using approximately 1 meter square rectilinear area grids. Class 2 and Class 3 areas will receive sampling of at least 10% areal coverage using approximately 1 meter square rectilinear area grids. Non-Impacted areas will be surveyed for radiation and contamination survey of at least 10 percent of sampled grid surfaces randomly using approximately 1 meter square rectilinear grids. Wipe surface areas will

measure varying from 100 cm^2 to 300 cm^2.

ii. The survey will be based upon guidance given in NUREG 1575, "Multi-Agency Radiological Survey and Site Investigation Manual" (MARSSIM)

iii. Radiation ambient background activities will be measured at the threshold to the facility exterior. Contamination background activities will be made using controlled standard protocols.

iv. Statistical tests to determine survey measurements regarding the release criteria will be based upon the sign test comparison for release criteria.

v. Any additional elevated areas discovered, which were not identified during the scoping survey, will be individually addressed.

c. Remedial Action Support Surveys
   i. Fixed building surfaces will undergo a remedial action surveys until decontaminated to at or below the release criteria.

   ii. Removable equipment surfaces exceeding the release criteria will either undergo remedial action surveys until decontaminated to at or below the release criteria or be packaged according to DOT radiological regulations prior to transport to the new licensed facility.

d. Final Status Survey Design
   i. Final status survey will proceed using the conditions given in paragraph 14b, above.

e. Final Status Survey Report
   i. A sampling of at least 10% of grid areas will be randomly sampled for radiation and contamination level measurements to disprove activities associated with former facility nuclide usage. The survey will follow the guidelines of paragraph 14b, above.

15. FINANCIAL ASSURANCE

a. Financial assurance is the responsibility of the licensed facility prior to the decommissioning survey.

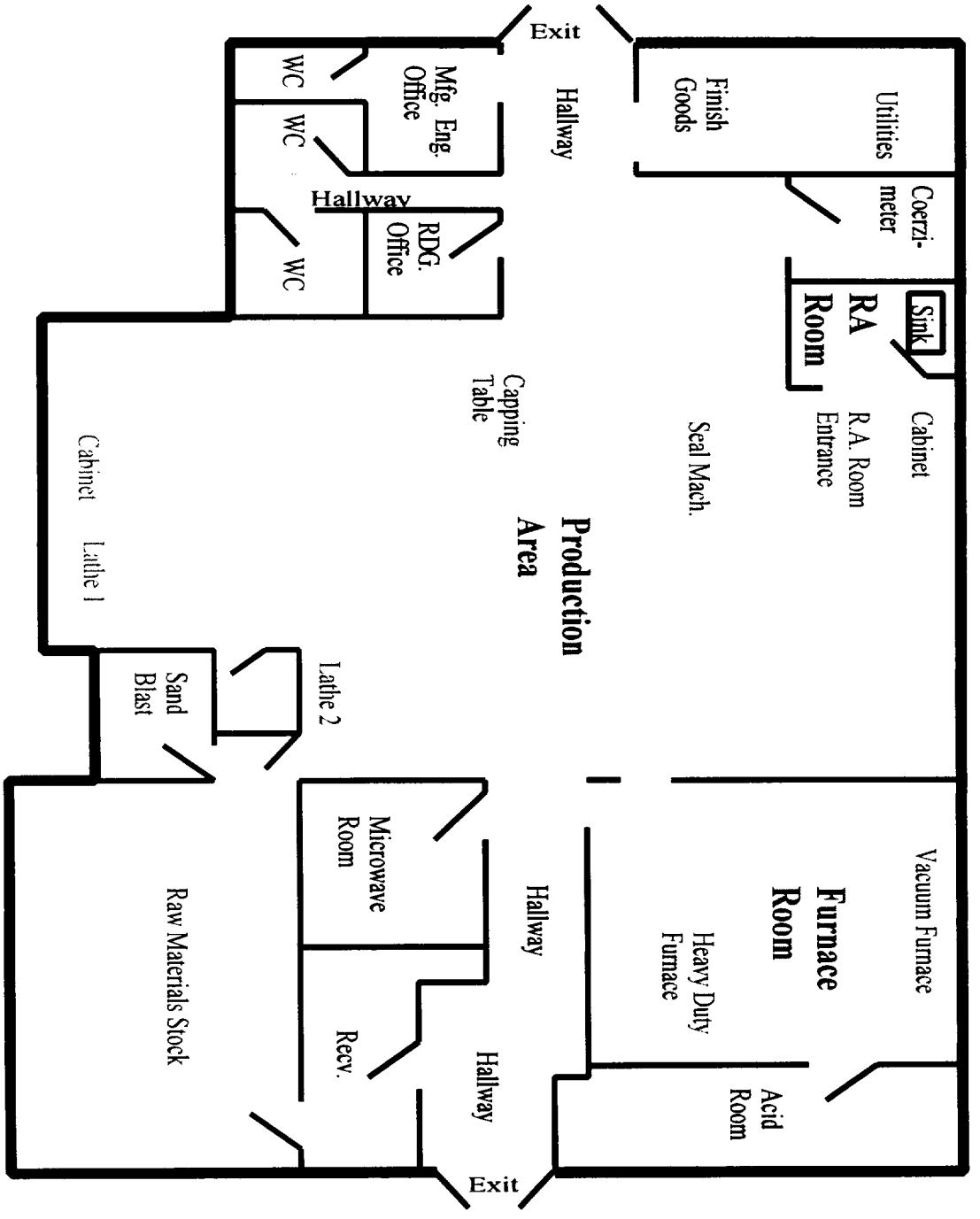
16. RESTRICTED USE/ALTERNATE CRITERIA

a. Non applicable

ENCLOSURE 1

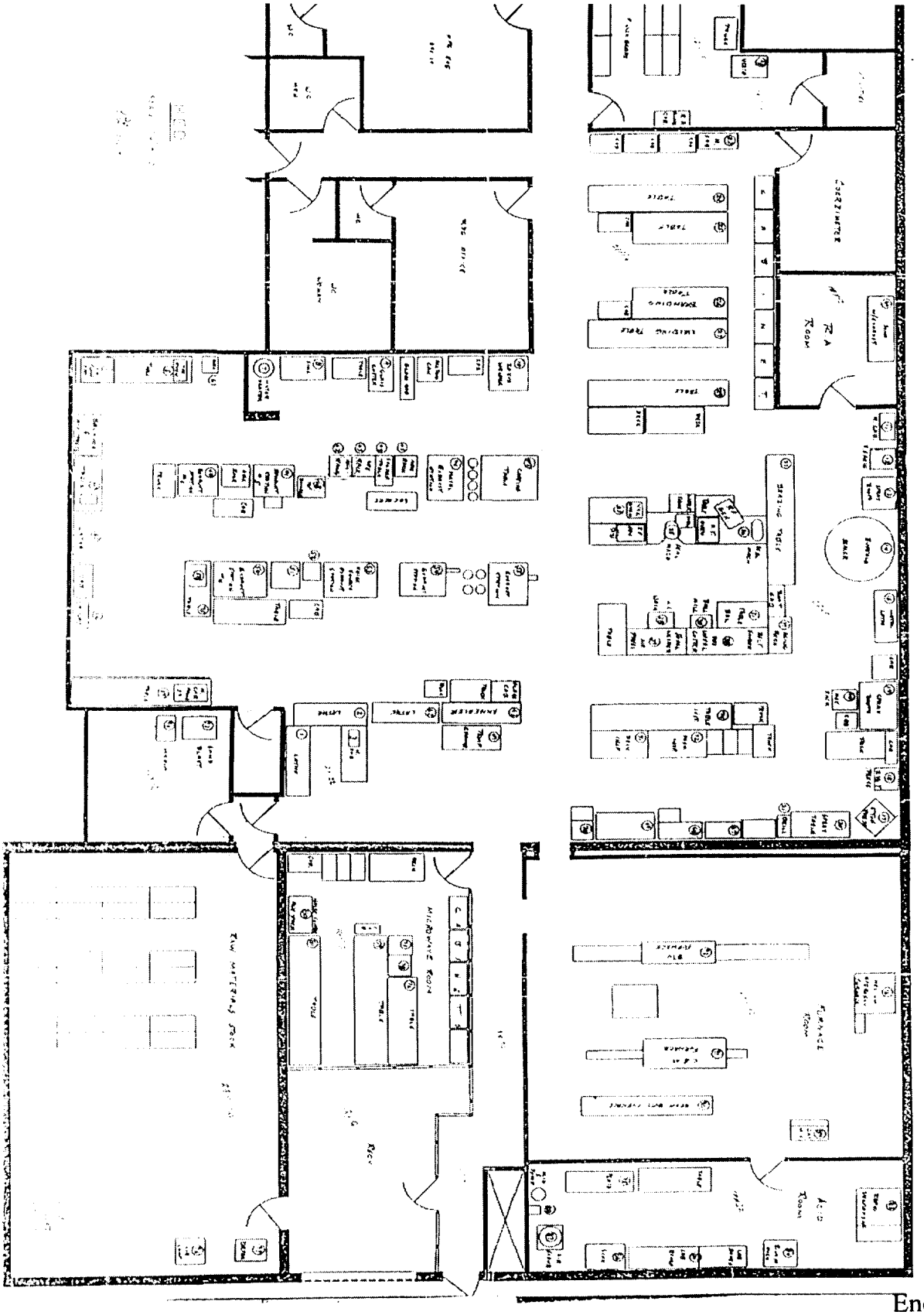
High Energy Devices, 45D Progress Parkway, Maryland Heights MO

Figure 1: Current/Pre-Existing Facility Layout



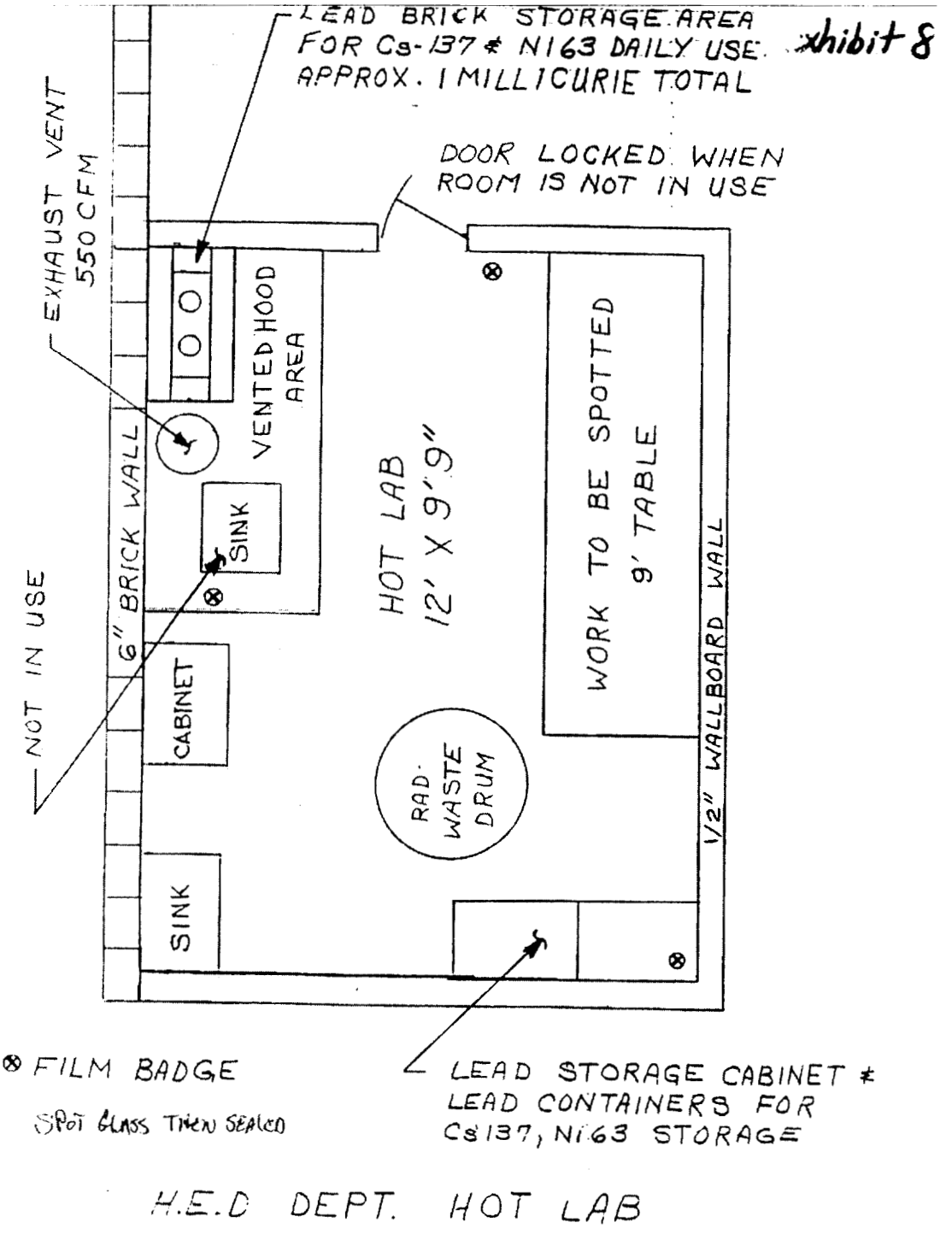
Note: Not drawn to scale

Figure 2: Pre-Existing Equipment Layout



Encl. 1

Figure 3: Pre-Existing R. A. Room Layout (e.g. Hot Lab)



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Scoping/Characterization Survey Report
High Energy Devices
45 D Progress Parkway

December 22, 2006

Survey:

The survey is based upon guidance given in NUREG 1575 (MARSSIM). Release Criteria: 1100 dpm/100 cm^2 maximum fixed contamination with 220 dpm average fixed contamination and 220 dpm/100 cm^2 removable contamination. The survey was started on November 1, 2006 by Kenneth Barnes (Health Physicist), Tjaden Meyer (Health Physics Technician), and Bob Lowes (Health Physics Technician) continued by Kenneth Barnes and Ken Bachmann (Health Physicist) on November 21, 2006 and finished on December 20, 2006 by Kenneth Barnes.

All areas were surveyed with a Ludlum Model 19 (SN 87193, Calibrated September 21, 2006) except the fume hood exhaust flu which was surveyed with a Ludlum Model 3 (SN 140026, Calibrated October 23, 2006) with a 44-9 probe (SN PR086884). Affected areas with suspected contamination were also surveyed with a Ludlum Model 3a (SN 86910, Calibrated November 20, 2006) with a 44-1 probe, (SN PR247608, C-14 beta efficiency 19.5 %, 6921cpm measured using a 35520 dpm C-14 standard). The results of the survey are given with the attached maps at the end of the report.

Background readings were taken at the main entrance to the facility. The readings are:

Ludlum Model 19.....6 μR/hr
Ludlum Model 3.....10 μR/hr
Ludlum Model 3a.....200 cpm/1026 dpm

The R. A. Room is the only class 1 area. This room was surveyed with a 1 square meter grid pattern on the walls and floor. The exhaust flu of the fume hood was also wiped and checked with a 44-9 probe.

Although not historically a class 2 area extra survey data was taken in the Raw Materials Stock Room. This is where the finished product was stored. The Finished Goods Room listed on the map was never used for storage and was a break room at the time the facility stopped production.

There were several class 2 areas that were surveyed. These class 2 areas were based on interviews with the RSO to determine where possible contamination might occur. They were all surveyed at 75% or more combined coverage of floors and walls with 1 square meter grid elements. The details of these are given in the maps at the end of the report. These areas include the following:

R. A. Room Entrance, Seal Machine (36), Seal Machine (35), Capping Table, Lathe (61), Lathe (1), Vacuum Furnace, and Heavy Duty Furnace.

All other areas at the facility were considered class 3. These class 3 areas are:

Sand Blasting Room, Coerzimeter Room, Microwave Room, Receiving Area, Raw Materials Stock, Furnace Room, Acid Room, Utilities Area, Finish Goods Area, Mfg Eng Office, RDG Office, WC's, WC Men, WC Women, Hallways, and Production Area (which is split into 4 detailed maps).

Analysis:

Wipes:

All wipes were analyzed for beta emission with the Packard Tri-Carb 2100 TR Liquid Scintillation Analyzer (SN 416174, Calibration checked daily, Gross Beta background 11.4 cpm with a 0 to 2000 kev window, MDA 8.3 dpm). The results are given in the attached tables at the end of the report. The most likely surface contamination is from Ni-63 and Cs-137 so the 60.2% efficiency of H-3 (99187cpm counted using a 164857 dpm H-3 standard and a 0 - 18.5 kev window)was used for calculated the dpm of the wipes, rather than the higher expected efficiency for Cs-137. Note that H-3 has a lower beta energy than Ni-63 so this gives a slight overestimate of the actual contamination. When the spectrums of the most elevated samples were reviewed, they indicated that the contamination is due to a combination of Ni-63 and Cs-137.

Data:

The recorded data is presented in tabular form with accompanying maps to show the locations of all grid elements. Note that all Ludlum Model 19 and Ludlum Model 3 with 44-9 Probe readings are given in the table as taken with no background correction. The Ludlum Model 3a with 44-1 Probe and Wipe readings are given as net readings with the background subtracted out.

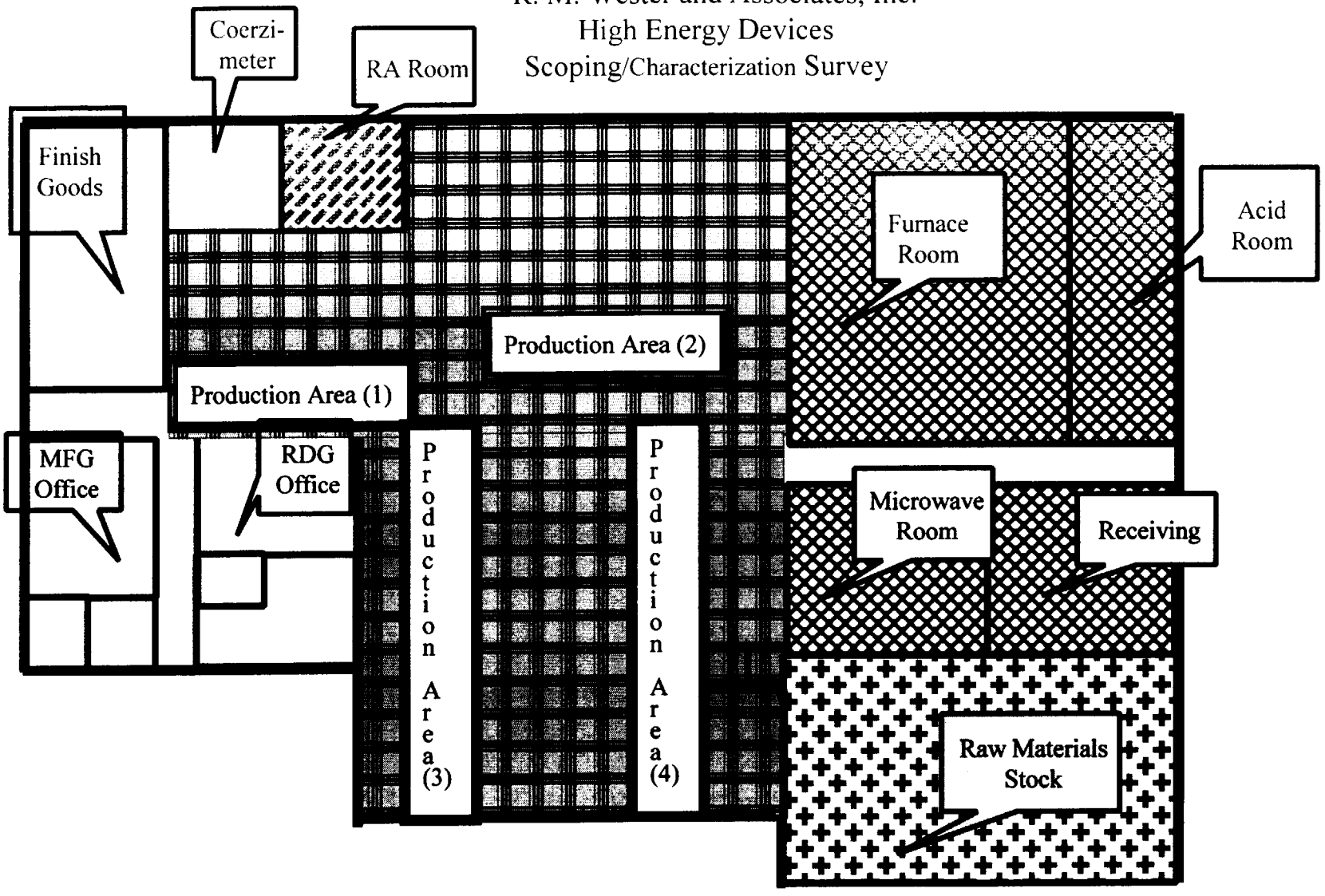
Conclusion:

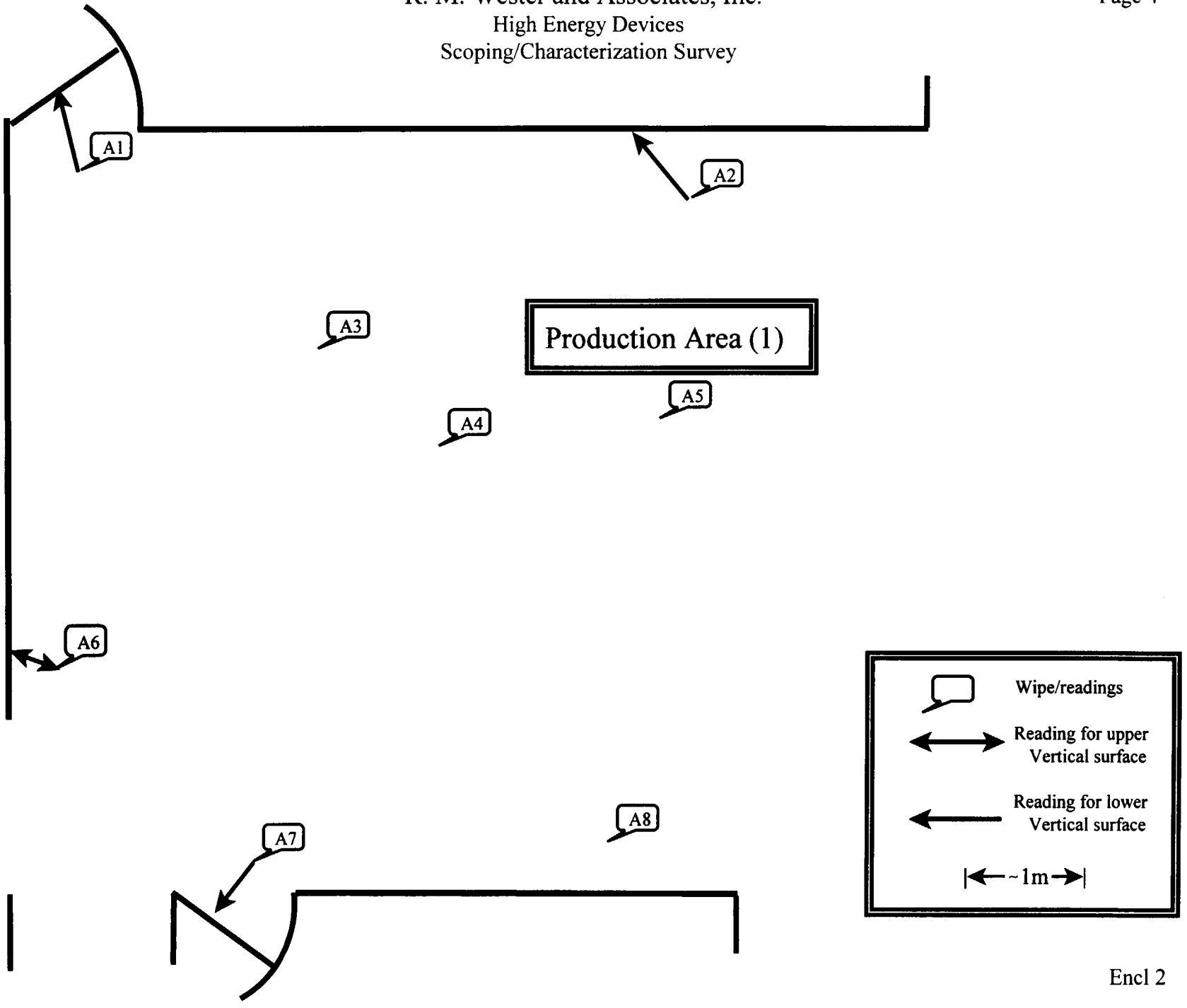
The levels of radiation and radioactive contamination found are well below all stated release criteria. All contamination levels are at least 50% below the stated release criteria of 1100 dpm/100cm^2 maximum for single location fixed Beta-Gamma contamination, 220 dpm/100 cm^2 average fixed contamination and removable contamination of 220 dpm/100 cm^2. There is no need for any decontamination of the facility.

Report and Analysis by:

Kenneth Barnes
Health Physicist

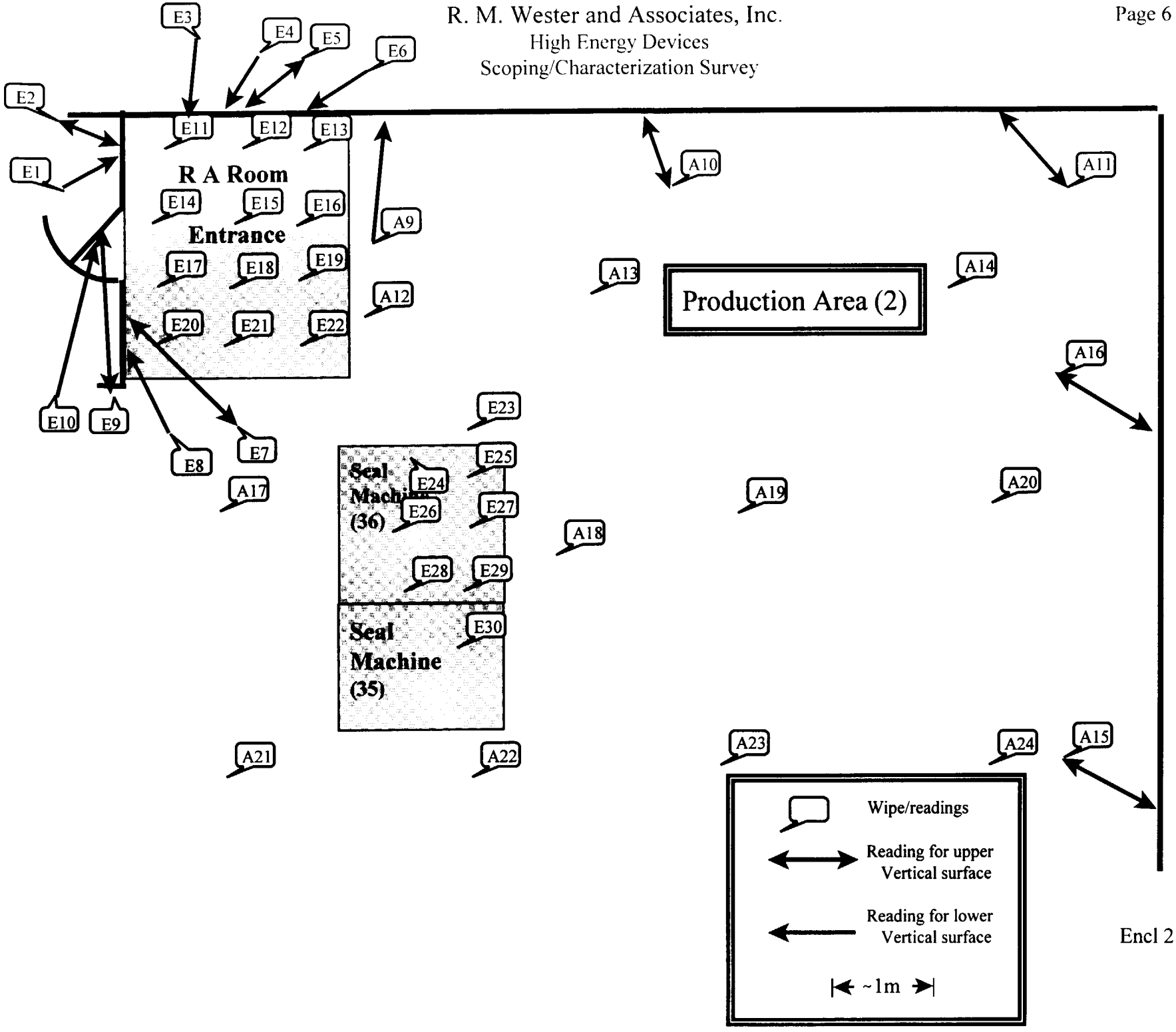
R. M. Wester and Associates, Inc.
High Energy Devices
Scoping/Characterization Survey




A1
A2
A3
Production Area (1)
A5
A4
A6
A7
A8
Wipe/readings
Reading for upper Vertical surface
Reading for lower Vertical surface
~1m

Encl 2

Location	Map Grid Element	Model 19 Probe 44-9 µR/hr	Model 3 Probe 44-1 Net dpm	Wipe Net dpm/100cm2	Wipe Net pCi/100cm2
Production Area (1)	A1	8		28.1	12.6
Production Area (1)	A2	7		<=8.3	<=3.7
Production Area (1)	A3	7		38.4	17.3
Production Area (1)	A4	5		<=8.3	<=3.7
Production Area (1)	A5	6		11.6	5.2
Production Area (1)	A6	4		<=8.3	<=3.7
Production Area (1)	A7	8		<=8.3	<=3.7
Production Area (1)	A8	6		<=8.3	<=3.7


E1
E2
E3
E4
E5
E6
E7
E8
E9
E10
E11
E12
E13
E14
E15
E16
E17
E18
E19
E20
E21
E22
E23
E24
E25
E26
E27
E28
E29
E30
A9
A10
A11
A12
A13
A14
A15
A16
A17
A18
A19
A20
A21
A22
A23
A24
R A Room
Entrance
Production Area (2)
Seal Machine (36)
Seal Machine (35)
Wipe/readings
Reading for upper Vertical surface
Reading for lower Vertical surface
~1m

Encl 2

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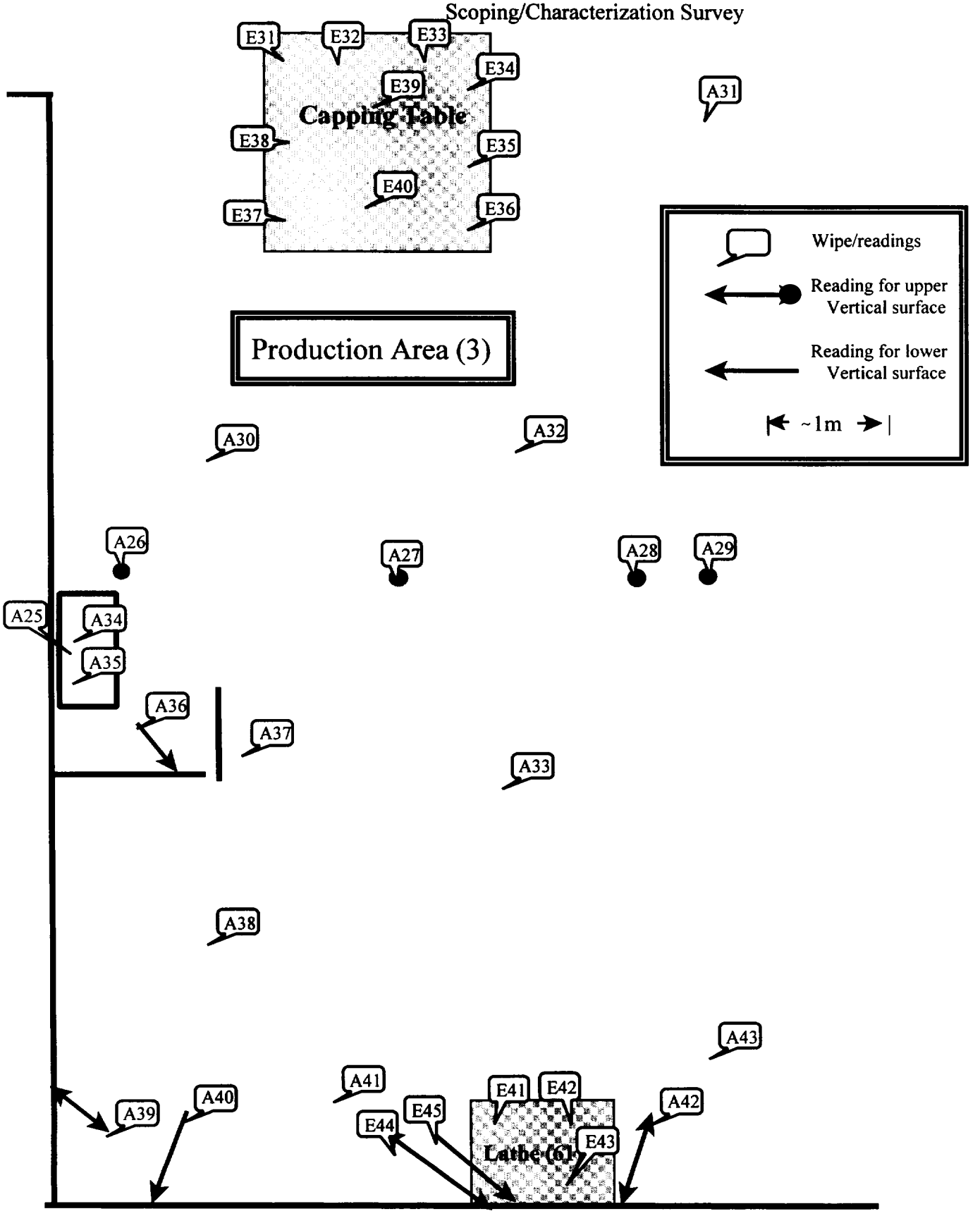
Location	Map Grid Element	Model 19 Probe 44-9 µR/hr	Model 3 Probe 44-1 Net dpm	Wipe Net dpm/100cm2	Wipe Net pCi/100cm2
Production Area (2)	A9	7		<=8.3	<=3.7
Production Area (2)	A10	8		<=8.3	<=3.7
Production Area (2)	A11	8		<=8.3	<=3.7
Production Area (2)	A12	9		<=8.3	<=3.7
Production Area (2)	A13	6		<=8.3	<=3.7
Production Area (2)	A14	7		<=8.3	<=3.7
Production Area (2)	A15	6		<=8.3	<=3.7
Production Area (2)	A16	8		<=8.3	<=3.7
Production Area (2)	A17	7		<=8.3	<=3.7
Production Area (2)	A18	7		<=8.3	<=3.7
Production Area (2)	A19	6		<=8.3	<=3.7
Production Area (2)	A20	6		<=8.3	<=3.7
Production Area (2)	A21	7		<=8.3	<=3.7
Production Area (2)	A22	8		<=8.3	<=3.7
Production Area (2)	A23	6		<=8.3	<=3.7
Production Area (2)	A24	8		<=8.3	<=3.7
RA Room Entrance	E1	6	0	19.9	9.0
RA Room Entrance	E2	6	0	<=8.3	<=3.7
RA Room Entrance	E3	8	256	<=8.3	<=3.7
RA Room Entrance	E4	8	256	<=8.3	<=3.7
RA Room Entrance	E5	7	0	<=8.3	<=3.7
RA Room Entrance	E6	8	256	<=8.3	<=3.7
RA Room Entrance	E7	5	256	<=8.3	<=3.7
RA Room Entrance	E8	5	256	<=8.3	<=3.7
RA Room Entrance	E9	5	256	<=8.3	<=3.7
RA Room Entrance	E10	6	0	29.2	13.2
RA Room Entrance	E11	6	0	26.7	12.0
RA Room Entrance	E12	6	0	<=8.3	<=3.7
RA Room Entrance	E13	6	256	<=8.3	<=3.7
RA Room Entrance	E14	7	256	<=8.3	<=3.7
RA Room Entrance	E15	5	256	<=8.3	<=3.7
RA Room Entrance	E16	6	0	<=8.3	<=3.7

R. M. Wester and Associates

High Energy Devices

Scoping/Characterization Survey

Location	Map Grid Element	Model 19 Probe 44-9 µR/hr	Model 3 Probe 44-1 Net dpm	Wipe Net dpm/100cm2	Wipe Net pCi/100cm2
RA Room Entrance	E17	6	256	<=8.3	<=3.7
RA Room Entrance	E18	6	0	<=8.3	<=3.7
RA Room Entrance	E19	6	0	<=8.3	<=3.7
RA Room Entrance	E20	6	0	<=8.3	<=3.7
RA Room Entrance	E21	6	0	9.8	4.4
RA Room Entrance	E22	6	0	28.7	12.9
Seal Machine (36)	E23	7	0	<=8.3	<=3.7
Seal Machine (36)	E24	6	256	<=8.3	<=3.7
Seal Machine (36)	E25	7	0	<=8.3	<=3.7
Seal Machine (36)	E26	6	256	29.6	13.3
Seal Machine (36)	E27	7	0	<=8.3	<=3.7
Seal Machine (35)	E28	6	256	<=8.3	<=3.7
Seal Machine (35)	E29	6	256	<=8.3	<=3.7
Seal Machine (35)	E30	6	0	<=8.3	<=3.7


E31
E32
E33
E34
E39
Capping Table
E38
E35
E40
E37
E36
A31
Wipe/readings
Reading for upper Vertical surface
Reading for lower Vertical surface
~1m
Production Area (3)
A30
A32
A26
A27
A28
A29
A25
A34
A35
A36
A37
A33
A38
A43
A41
E41
E42
A39
A40
E45
A42
E44
E43
Lathe (6)

Encl 2

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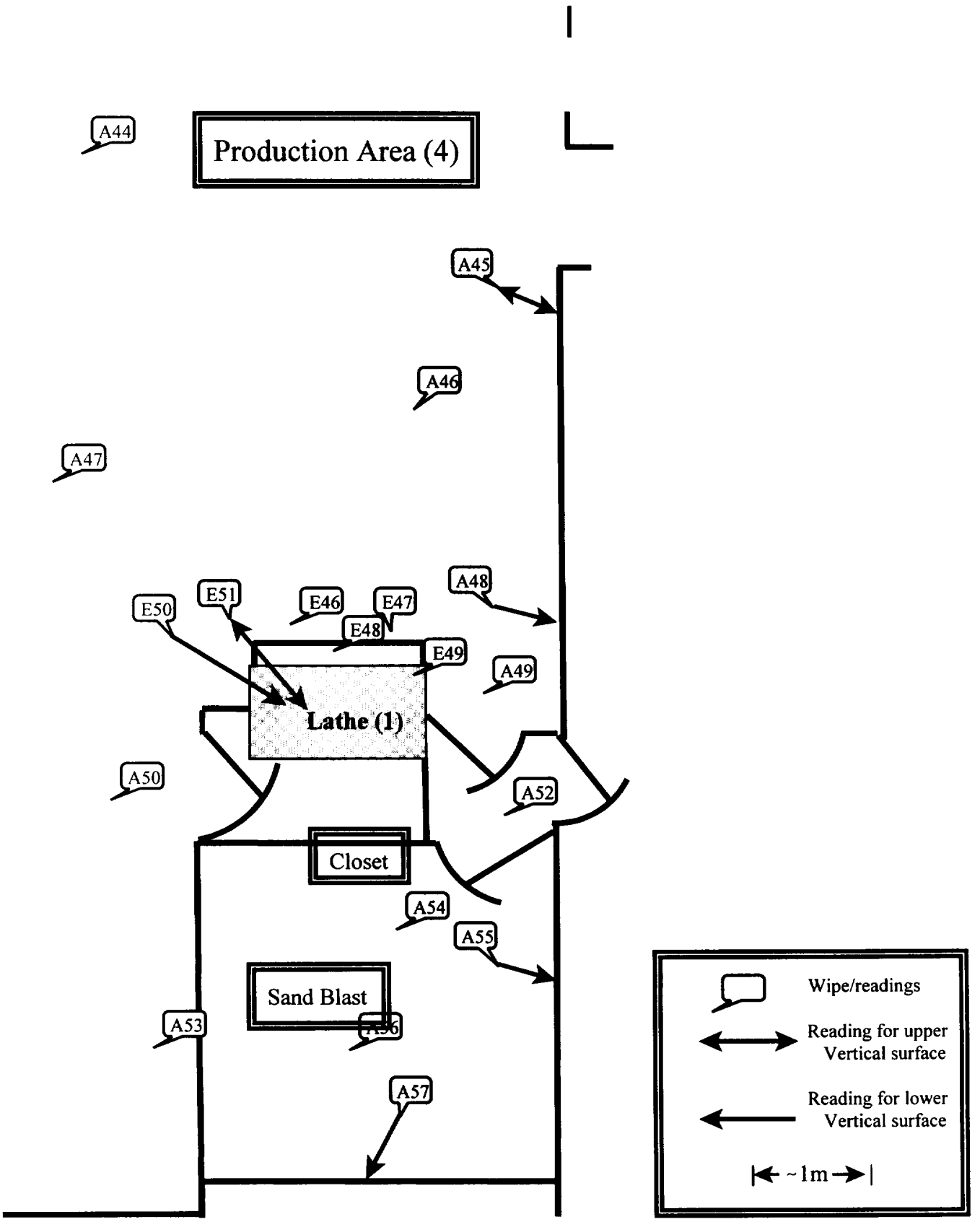
High Energy Devices
Scoping/Characterization Survey

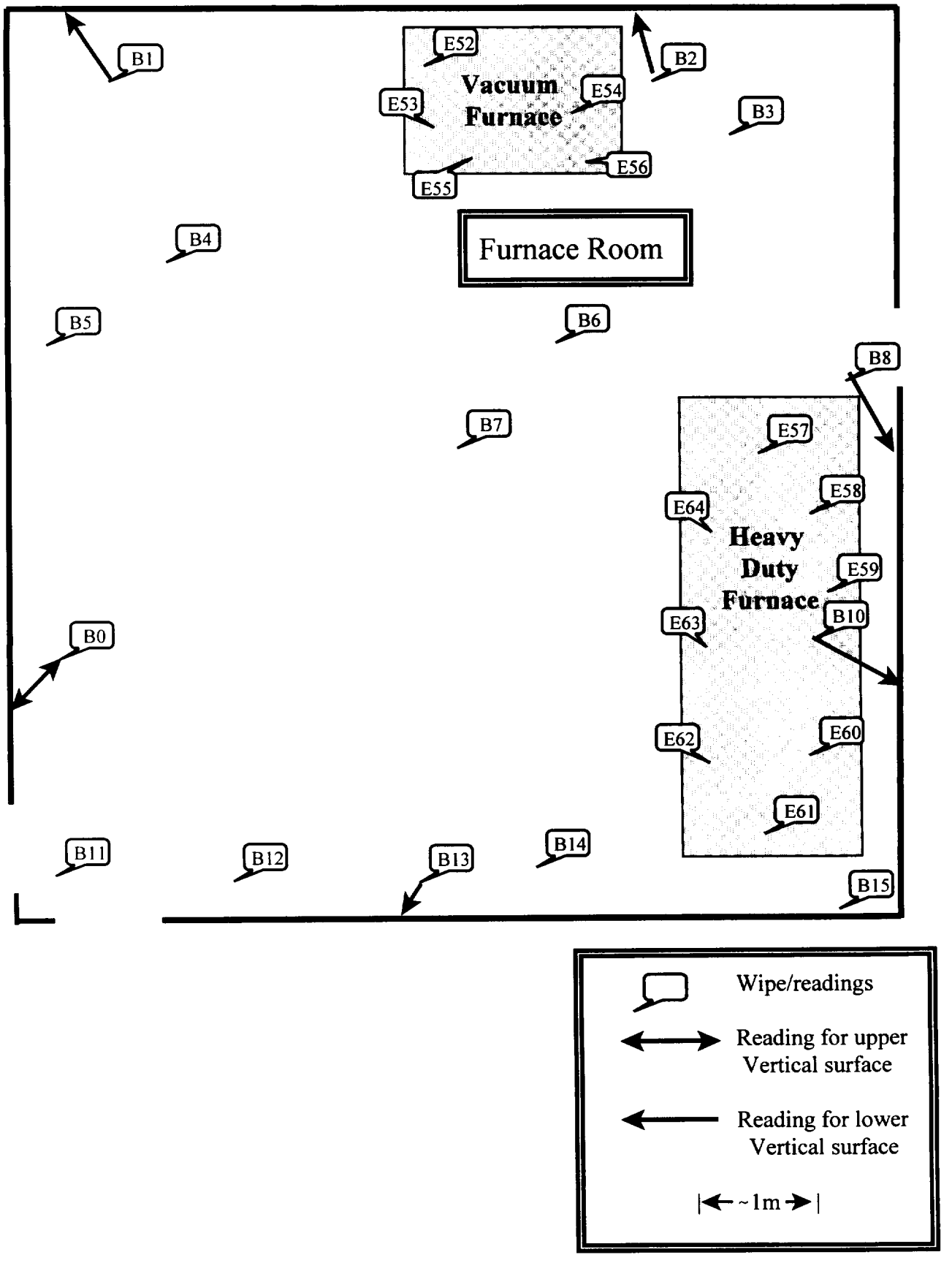
Location	Map Grid Element	Model 19 Probe 44-9 µR/hr	Model 3 Probe 44-1 Net dpm	Wipe Net dpm/100cm2	Wipe Net pCi/100cm2
Sink Drain/Trap	A25	6		<=8.3	<=3.7
Drain	A26	7		<=8.3	<=3.7
Drain	A27	6		<=8.3	<=3.7
Drain	A28	5		<=8.3	<=3.7
Drain	A29	5		<=8.3	<=3.7
Production Area (3)	A30	6		<=8.3	<=3.7
Production Area (3)	A31	8		<=8.3	<=3.7
Production Area (3)	A32	6		<=8.3	<=3.7
Production Area (3)	A33	5		26.9	12.1
Sink	A34	10		<=8.3	<=3.7
Sink	A35	8		<=8.3	<=3.7
Production Area (3)	A36	4		<=8.3	<=3.7
Production Area (3)	A37	5		<=8.3	<=3.7
Production Area (3)	A38	5		<=8.3	<=3.7
Production Area (3)	A39	5		<=8.3	<=3.7
Production Area (4)	A40	6		<=8.3	<=3.7
Production Area (3)	A41	7		55.5	25.0
Production Area (3)	A42	8		<=8.3	<=3.7
Production Area (3)	A43	5		<=8.3	<=3.7
Capping Table	E31	5	256	65.1	29.3
Capping Table	E32	6	256	<=8.3	<=3.7
Capping Table	E33	5	256	<=8.3	<=3.7
Capping Table	E34	5	256	<=8.3	<=3.7
Capping Table	E35	6	0	<=8.3	<=3.7
Capping Table	E36	8	0	<=8.3	<=3.7
Capping Table	E37	6	0	<=8.3	<=3.7
Capping Table	E38	5	256	<=8.3	<=3.7
Capping Table	E39	6	0	<=8.3	<=3.7
Capping Table	E40	6	0	<=8.3	<=3.7
Lathe (61)	E41	6	0	<=8.3	<=3.7
Lathe (61)	E42	5	256	30.6	13.8
Lathe (61)	E43	6	0	<=8.3	<=3.7
Lathe (61)	E44	6	256	12.0	5.4
Lathe (61)	E45	6	0	<=8.3	<=3.7

Encl 2


A44
Production Area (4)
A45
A46
A47
E50
E51
E46
E47
E48
E49
A48
A49
Lathe (1)
A50
A52
Closet
A54
A55
Sand Blast
A53
A56
A57
Wipe/readings
Reading for upper Vertical surface
Reading for lower Vertical surface
~1m

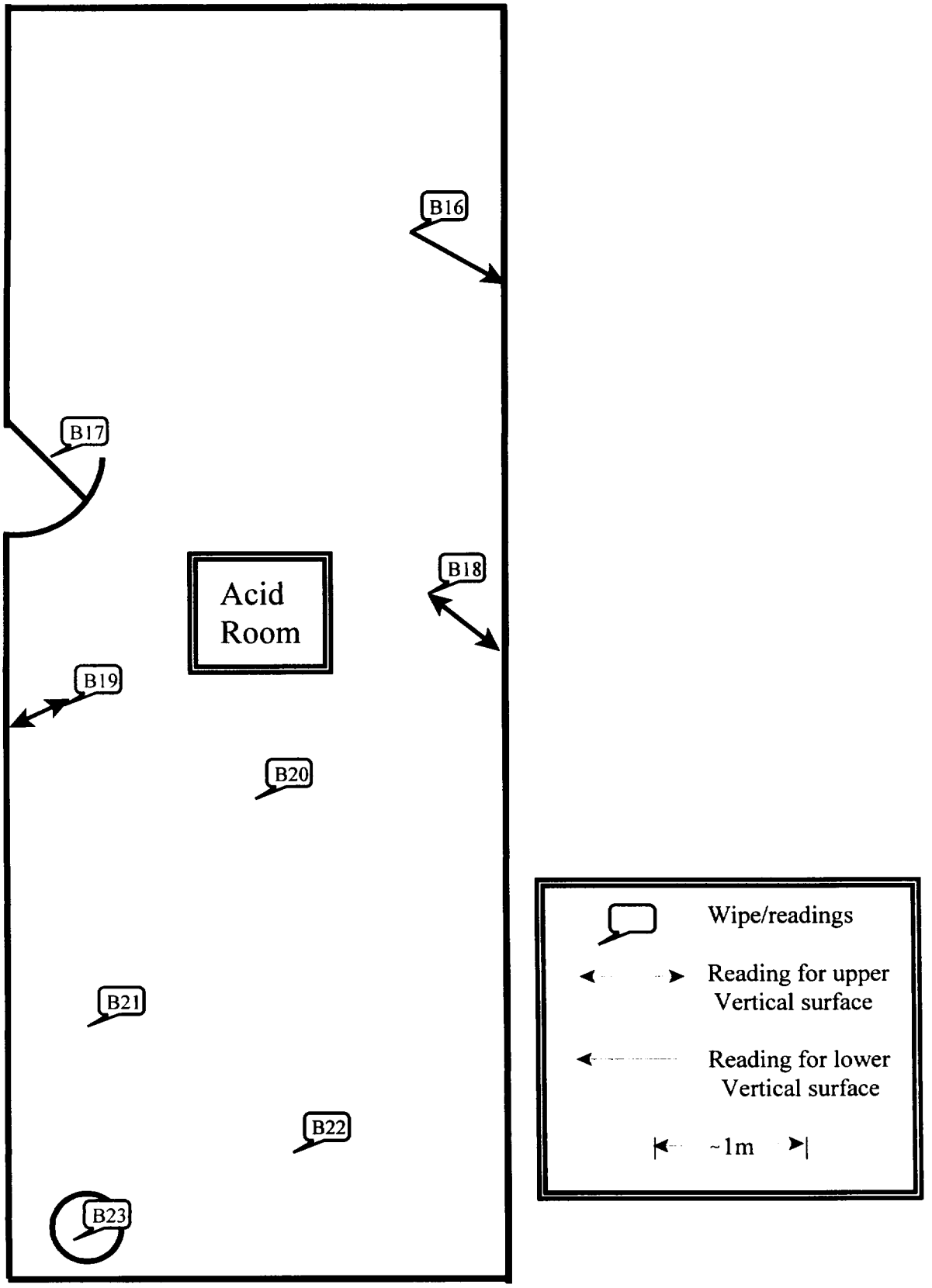
Encl 2

Location	Map Grid Element	Model 19 Probe 44-9 µR/hr	Model 3 Probe 44-1 Net dpm	Wipe Net dpm/100cm2	Wipe Net pCi/100cm2
Production Area (4)	A44	7		<=8.3	<=3.7
Production Area (4)	A45	7		29.4	13.2
Production Area (4)	A46	7		18.4	8.3
Production Area (4)	A47	6		<=8.3	<=3.7
Production Area (4)	A48	9		<=8.3	<=3.7
Production Area (4)	A49	8		<=8.3	<=3.7
Production Area (4)	A50	5		<=8.3	<=3.7
Production Area (4)	A51	7		<=8.3	<=3.7
Production Area (4)	A52	8		71.1	32.0
Sand Blast	A54	8		8.8	4.0
Sand Blast	A55	7		<=8.3	<=3.7
Sand Blast	A56	8		<=8.3	<=3.7
Sand Blast	A57	7		<=8.3	<=3.7
Lathe(1)	E46	8	0	<=8.3	<=3.7
Lathe(1)	E47	5	256	<=8.3	<=3.7
Lathe(1)	E48	6	0	<=8.3	<=3.7
Lathe(1)	E49	8	0	<=8.3	<=3.7
Lathe(1)	E50	6	0	<=8.3	<=3.7
Lathe(1)	E51	7	256	<=8.3	<=3.7


B1
E52
Vacuum Furnace
E53
E54
B2
B3
E55
E56
B4
Furnace Room
B5
B6
B8
B7
E57
E58
E64
Heavy Duty Furnace
E59
E63
B10
B0
E62
E60
E61
B11
B12
B13
B14
B15
Wipe/readings
Reading for upper Vertical surface
Reading for lower Vertical surface
~1m

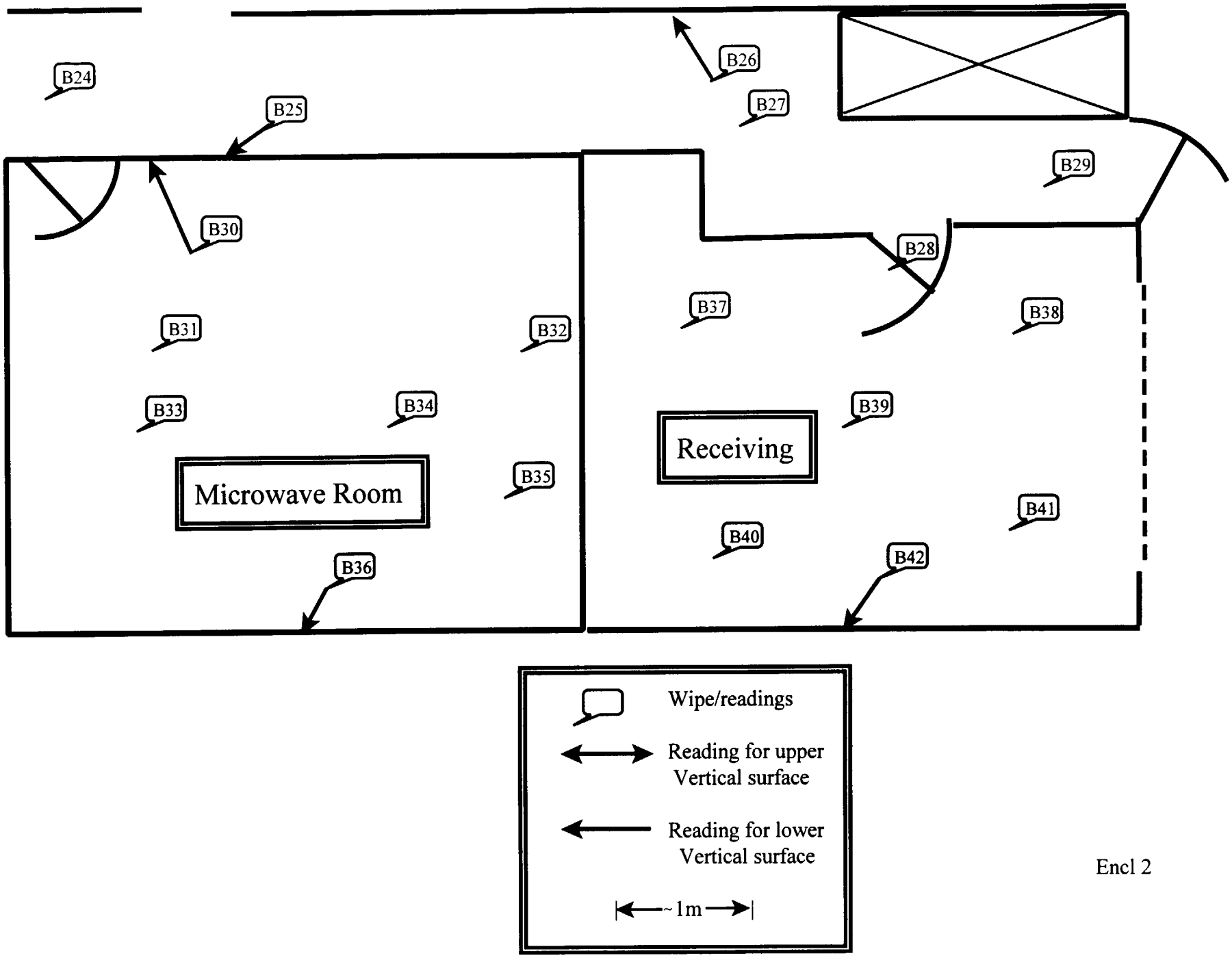
Encl 2

Location	Map Grid Element	Model 19 Probe 44-9 µR/hr	Model 3 Probe 44-1 Net dpm	Wipe Net dpm/100cm2	Wipe Net pCi/100cm2
Furnace Room	B1	8		<=8.3	<=3.7
Furnace Room	B2	7		<=8.3	<=3.7
Furnace Room	B3	4		<=8.3	<=3.7
Furnace Room	B4	6		<=8.3	<=3.7
Furnace Room	B5	7		<=8.3	<=3.7
Furnace Room	B6	7		<=8.3	<=3.7
Furnace Room	B7	7		<=8.3	<=3.7
Furnace Room	B8	6		<=8.3	<=3.7
Furnace Room	B9	9		<=8.3	<=3.7
Furnace Room	B10	6		<=8.3	<=3.7
Furnace Room	B11	6		<=8.3	<=3.7
Furnace Room	B12	8		<=8.3	<=3.7
Furnace Room	B13	9		<=8.3	<=3.7
Furnace Room	B14	8		<=8.3	<=3.7
Furnace Room	B15	9		<=8.3	<=3.7
Vacuum Furnace	E52	9	256	<=8.3	<=3.7
Vacuum Furnace	E53	8	256	<=8.3	<=3.7
Vacuum Furnace	E54	8	256	11.3	5.1
Vacuum Furnace	E55	8	256	<=8.3	<=3.7
Vacuum Furnace	E56	9	0	<=8.3	<=3.7
Heavy Duty Furnace	E57	6	256	<=8.3	<=3.7
Heavy Duty Furnace	E58	6	0	<=8.3	<=3.7
Heavy Duty Furnace	E59	5	256	<=8.3	<=3.7
Heavy Duty Furnace	E60	5	0	<=8.3	<=3.7
Heavy Duty Furnace	E61	5	0	<=8.3	<=3.7
Heavy Duty Furnace	E62	6	256	<=8.3	<=3.7
Heavy Duty Furnace	E63	6	0	<=8.3	<=3.7
Heavy Duty Furnace	E64	6	256	<=8.3	<=3.7


B16
B17
Acid Room
B18
B19
B20
B21
B22
B23
Wipe/readings
Reading for upper Vertical surface
Reading for lower Vertical surface
~1m

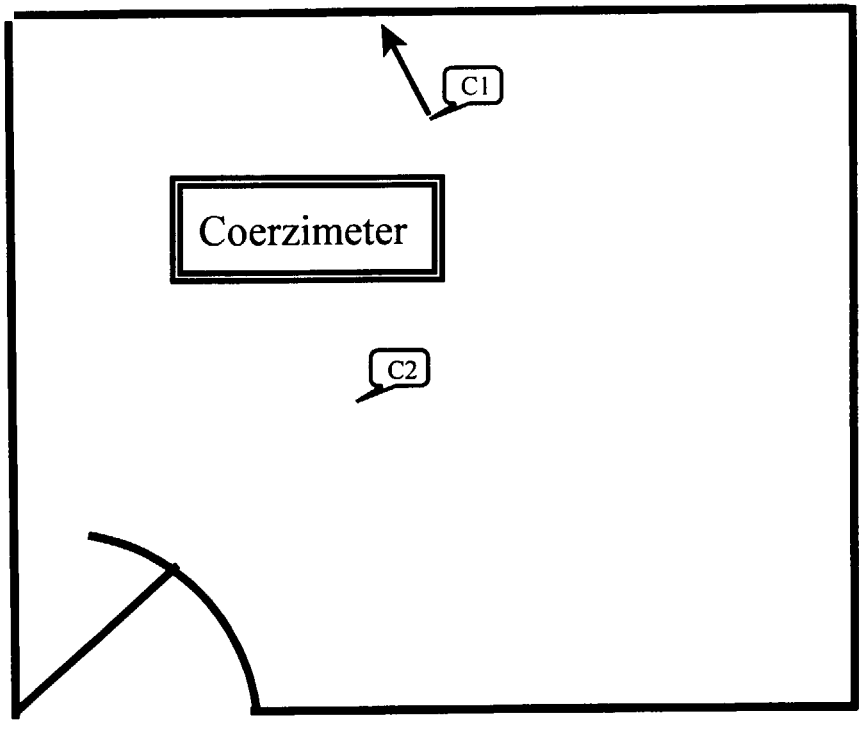
Encl 2

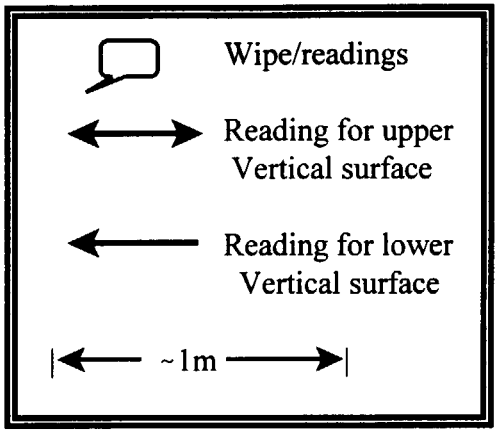
Location	Map Grid Element	Model 19 Probe 44-9 µR/hr	Model 3 Probe 44-1 Net dpm	Wipe Net dpm/100cm2	Wipe Net pCi/100cm2
Acid Room	B16	6		<=8.3	<=3.7
Acid Room	B17	8		<=8.3	<=3.7
Acid Room	B18	9		<=8.3	<=3.7
Acid Room	B19	5		<=8.3	<=3.7
Acid Room	B20	6		<=8.3	<=3.7
Acid Room	B21	5		<=8.3	<=3.7
Acid Room	B22	9		<=8.3	<=3.7
Sump	B23	9		<=8.3	<=3.7


B24
B25
B26
B27
B29
B30
B28
B31
B32
B37
B38
B33
B34
B39
Microwave Room
Receiving
B35
B41
B40
B42
B36
Wipe/readings
Reading for upper Vertical surface
Reading for lower Vertical surface
~1m

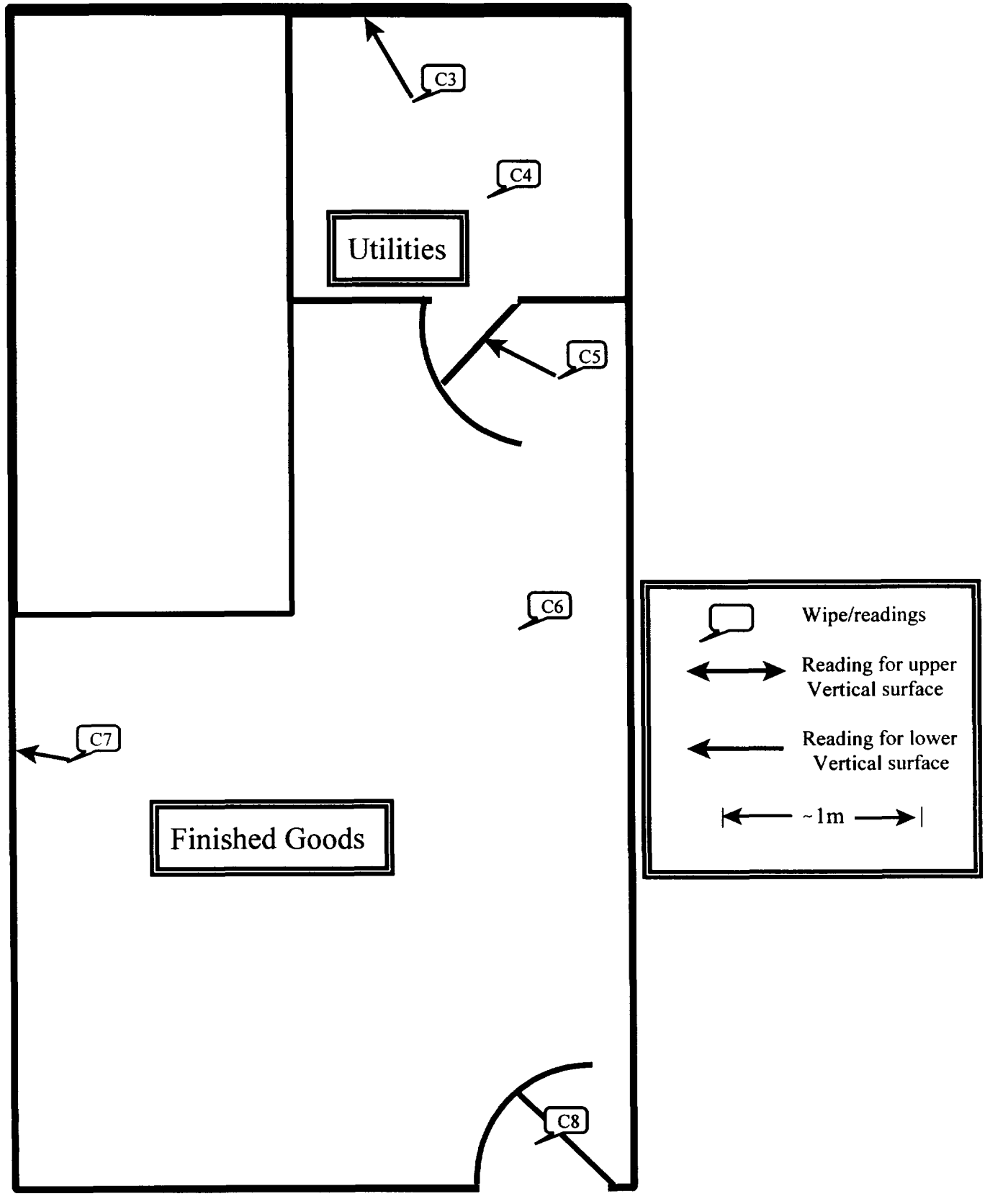
Encl 2

Location	Map Grid Element	Model 19 Probe 44-9 µR/hr	Model 3 Probe 44-1 Net dpm	Wipe Net dpm/100cm2	Wipe Net pCi/100cm2
Hallway	B24	7		<=8.3	<=3.7
Hallway	B25	7		<=8.3	<=3.7
Hallway	B26	6		<=8.3	<=3.7
Hallway	B27	6		<=8.3	<=3.7
Hallway	B28	5		<=8.3	<=3.7
Hallway	B29	6		<=8.3	<=3.7
Microwave Room	B30	6		<=8.3	<=3.7
Microwave Room	B31	7		<=8.3	<=3.7
Microwave Room	B32	5		<=8.3	<=3.7
Microwave Room	B33	8		<=8.3	<=3.7
Microwave Room	B34	7		<=8.3	<=3.7
Microwave Room	B35	7		<=8.3	<=3.7
Microwave Room	B36	8		61.0	27.5
Receiving	B37	8		<=8.3	<=3.7
Receiving	B38	8		<=8.3	<=3.7
Receiving	B39	6		<=8.3	<=3.7
Receiving	B40	8		<=8.3	<=3.7
Receiving	B41	5		<=8.3	<=3.7
Receiving	B42	7		<=8.3	<=3.7


C1
Coerzimeter
C2

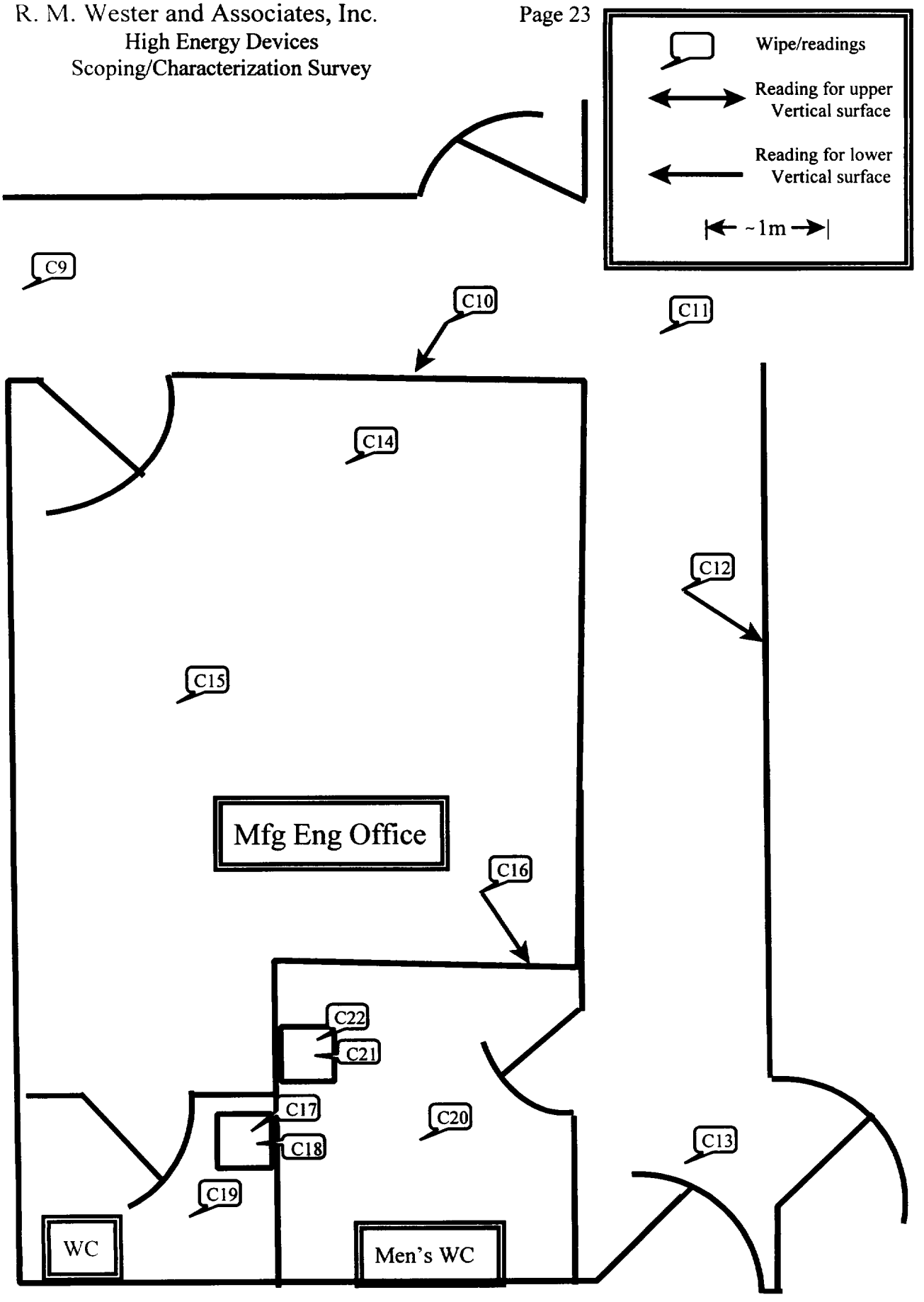

Wipe/readings
Reading for upper
Vertical surface
Reading for lower
Vertical surface
~1m

Location	Map Grid Element	Model 19 Probe 44-9 µR/hr	Model 3 Probe 44-1 Net dpm	Wipe Net dpm/100cm2	Wipe Net pCi/100cm2
Corzimeter	C1	6		<=8.3	<=3.7
Corzimeter	C2	7		<=8.3	<=3.7


C3
C4
Utilities
C5
C6
C7
Finished Goods
C8
Wipe/readings
Reading for upper Vertical surface
Reading for lower Vertical surface
~1m

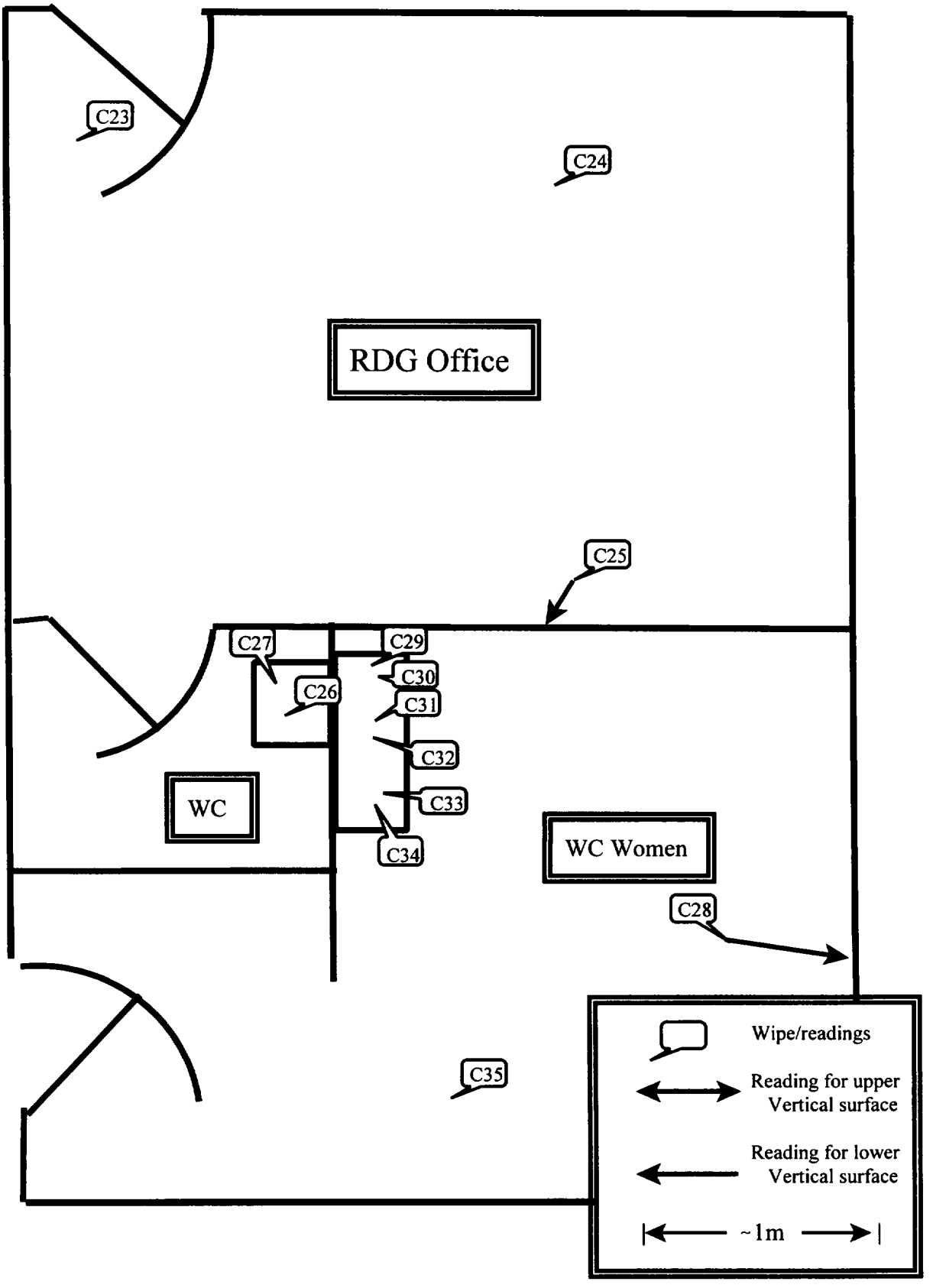
Encl 2

Location	Map Grid Element	Model 19 Probe 44-9 µR/hr	Model 3 Probe 44-1 Net dpm	Wipe Net dpm/100cm2	Wipe Net pCi/100cm2
Utilities	C3	6		<=8.3	<=3.7
Utilities	C4	6		<=8.3	<=3.7
Finished Goods	C5	5		<=8.3	<=3.7
Finished Goods	C6	5		<=8.3	<=3.7
Finished Goods	C7	6		<=8.3	<=3.7
Finished Goods	C8	6		<=8.3	<=3.7


Wipe/readings
Reading for upper Vertical surface
Reading for lower Vertical surface
~1m
C9
C10
C11
C14
C12
C15
Mfg Eng Office
C16
C22
C21
C17
C20
C18
C13
C19
WC
Men's WC

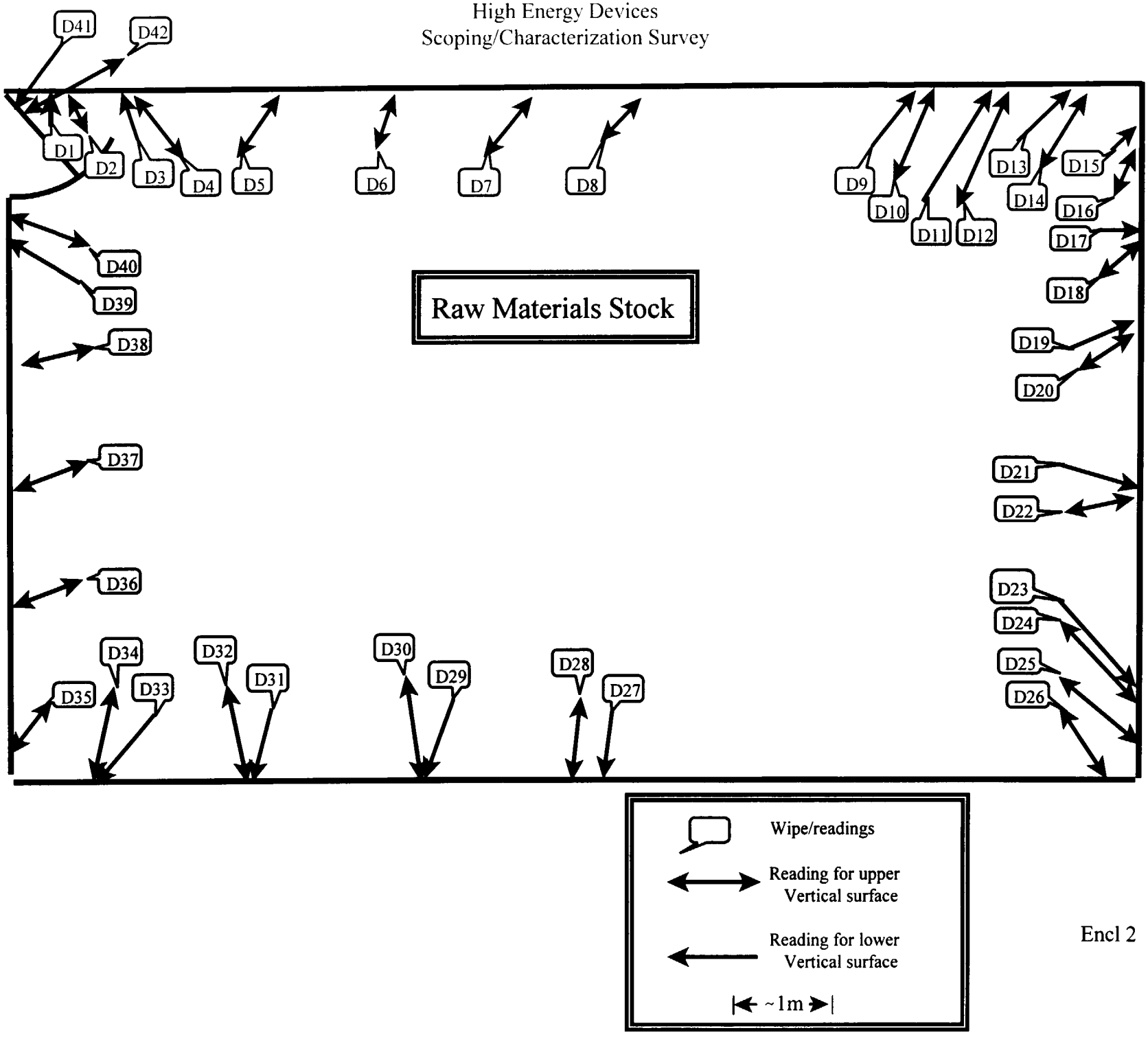
Encl 2

Location	Map Grid Element	Model 19 Probe 44-9 µR/hr	Model 3 Probe 44-1 Net dpm	Wipe Net dpm/100cm2	Wipe Net pCi/100cm2
Hallway	C9	5		<=8.3	<=3.7
Hallway	C10	5		<=8.3	<=3.7
Hallway	C11	6		<=8.3	<=3.7
Hallway	C12	5		<=8.3	<=3.7
Hallway	C13	5		<=8.3	<=3.7
MFG Office	C14	5		<=8.3	<=3.7
MFG Office	C15	5		<=8.3	<=3.7
MFG Office	C16	5		<=8.3	<=3.7
Sink	C17	5		<=8.3	<=3.7
Drain	C18	6		<=8.3	<=3.7
Men's WC	C19	5		<=8.3	<=3.7
Men's WC	C20	5		<=8.3	<=3.7
Sink	C21	6		<=8.3	<=3.7
Drain	C22	6		<=8.3	<=3.7

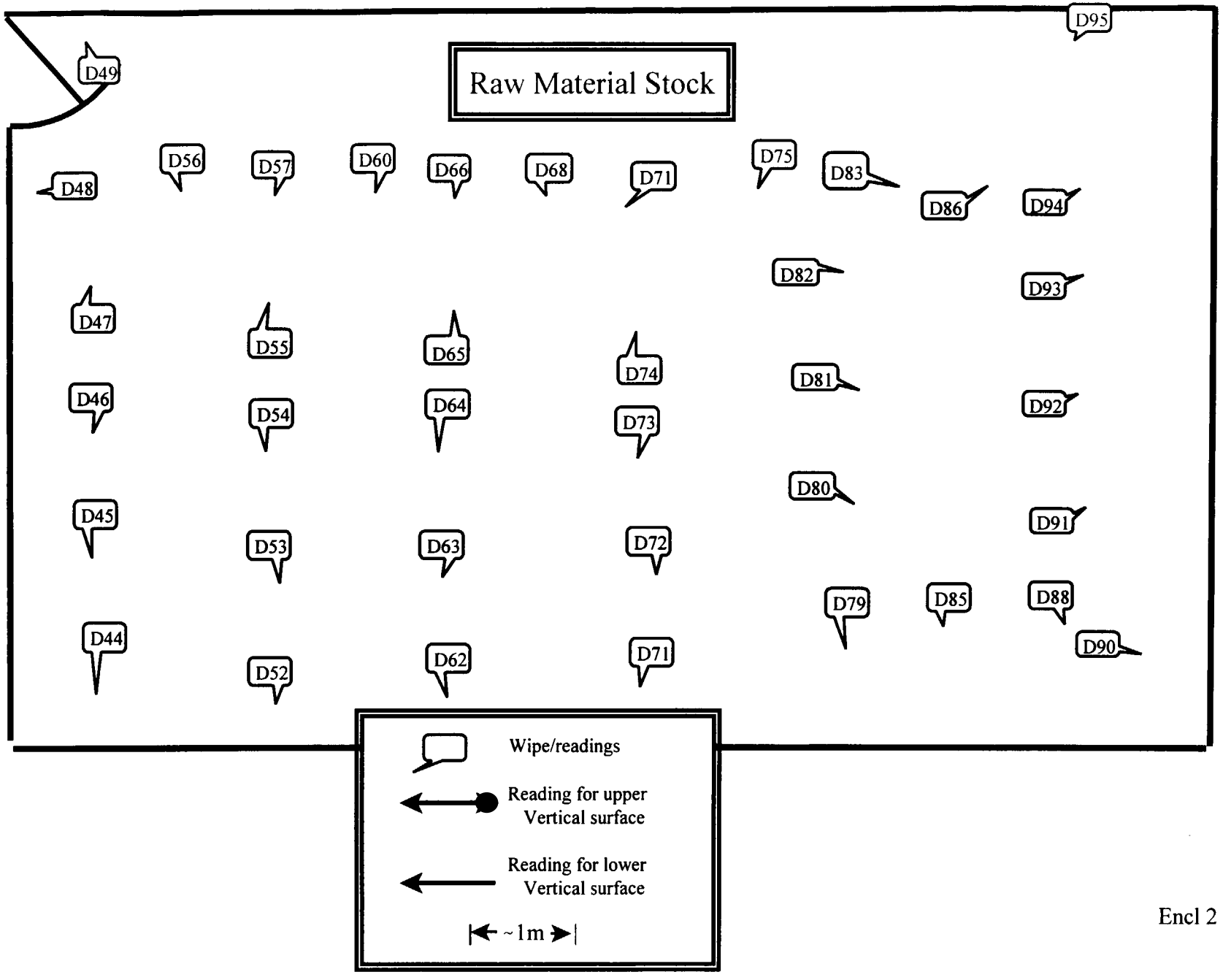

C23
C24
RDG Office
C25
C27
C29
C30
C26
C31
C32
WC
C33
C34
WC Women
C28
C35
Wipe/readings
Reading for upper Vertical surface
Reading for lower Vertical surface
~1m

Encl 2

Location	Map Grid Element	Model 19 Probe 44-9 µR/hr	Model 3 Probe 44-1 Net dpm	Wipe Net dpm/100cm2	Wipe Net pCi/100cm2
RDG Office	C23	5		<=8.3	<=3.7
RDG Office	C24	5		<=8.3	<=3.7
RDG Office	C25	5		<=8.3	<=3.7
Sink	C26	5		<=8.3	<=3.7
Drain	C27	5		<=8.3	<=3.7
Women's WC	C28	6		<=8.3	<=3.7
Sink	C29	6		<=8.3	<=3.7
Drain	C30	6		10.8	4.9
Sink	C31	5		18.6	8.4
Drain	C32	6		<=8.3	<=3.7
Sink	C33	5		<=8.3	<=3.7
Drain	C34	6		<=8.3	<=3.7
Women's WC	C35	6		<=8.3	<=3.7


D41
D42
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
D13
D14
D15
D16
D17
D18
D19
D20
D21
D22
D23
D24
D25
D26
D27
D28
D29
D30
D31
D32
D33
D34
D35
D36
D37
D38
D39
D40
Raw Materials Stock
Wipe/readings
Reading for upper Vertical surface
Reading for lower Vertical surface
~1m

Encl 2

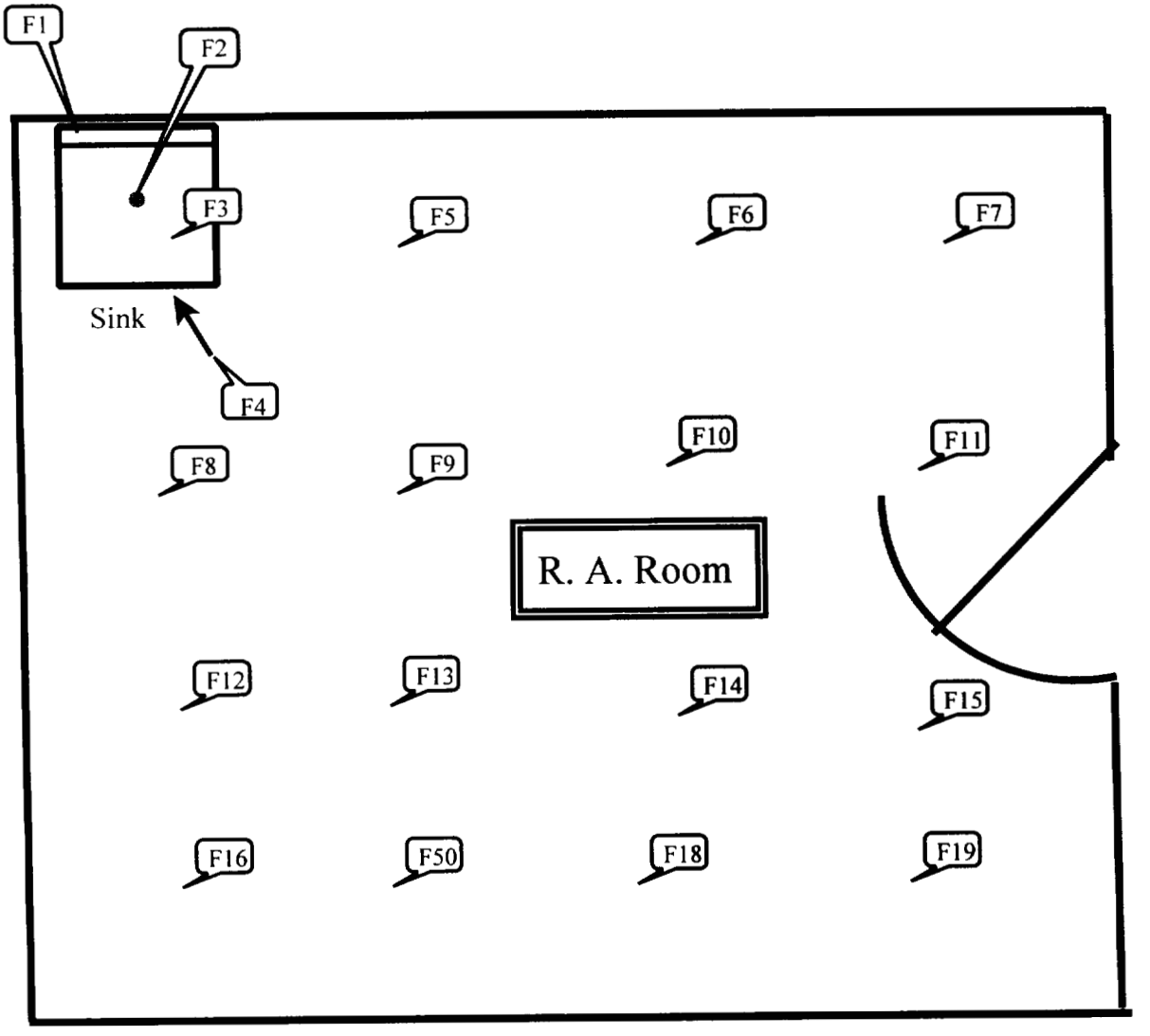

Raw Material Stock
D95
D49
D48
D56
D57
D60
D66
D68
D71
D75
D83
D86
D94
D82
D93
D47
D55
D65
D74
D81
D46
D54
D64
D73
D92
D80
D45
D53
D63
D72
D91
D79
D85
D88
D44
D52
D62
D71
D90
Wipe/readings
Reading for upper Vertical surface
Reading for lower Vertical surface
~1m

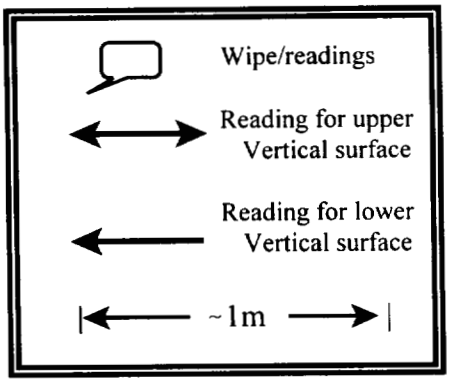
Encl 2

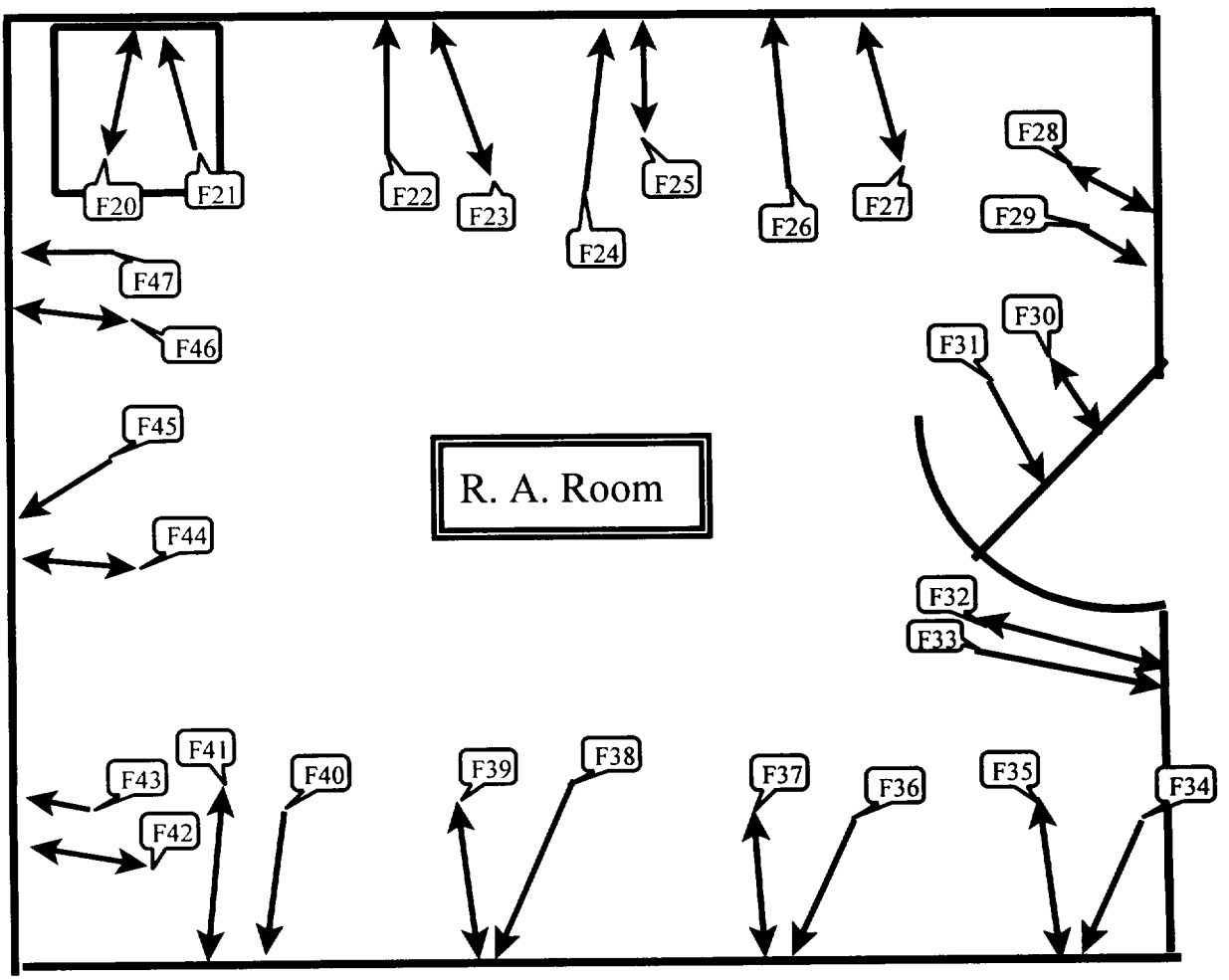
Location	Map Grid Element	Model 19 Probe 44-9 µR/hr	Model 3 Probe 44-1 Net dpm	Wipe Net dpm/100cm2	Wipe Net pCi/100cm2
Raw Materials Stock	D1	6	0	<=8.3	<=3.7
Raw Materials Stock	D2	6	0	<=8.3	<=3.7
Raw Materials Stock	D3	7	256	<=8.3	<=3.7
Raw Materials Stock	D4	7	0	<=8.3	<=3.7
Raw Materials Stock	D5	6	256	<=8.3	<=3.7
Raw Materials Stock	D6	7	0	<=8.3	<=3.7
Raw Materials Stock	D7	6	0	<=8.3	<=3.7
Raw Materials Stock	D8	6	0	<=8.3	<=3.7
Raw Materials Stock	D9	6	256	<=8.3	<=3.7
Raw Materials Stock	D10	7	0	<=8.3	<=3.7
Raw Materials Stock	D11	6	0	<=8.3	<=3.7
Raw Materials Stock	D12	6	0	<=8.3	<=3.7
Raw Materials Stock	D13	6	0	<=8.3	<=3.7
Raw Materials Stock	D14	6	0	<=8.3	<=3.7
Raw Materials Stock	D15	6	0	<=8.3	<=3.7
Raw Materials Stock	D16	6	0	<=8.3	<=3.7
Raw Materials Stock	D17	5	0	<=8.3	<=3.7
Raw Materials Stock	D18	0	256	<=8.3	<=3.7
Raw Materials Stock	D19	6	0	<=8.3	<=3.7
Raw Materials Stock	D20	6	0	<=8.3	<=3.7
Raw Materials Stock	D21	5	0	<=8.3	<=3.7
Raw Materials Stock	D22	5	0	<=8.3	<=3.7
Raw Materials Stock	D23	6	0	<=8.3	<=3.7
Raw Materials Stock	D24	5	0	<=8.3	<=3.7
Raw Materials Stock	D25	6	256	<=8.3	<=3.7
Raw Materials Stock	D26	6	0	<=8.3	<=3.7
Raw Materials Stock	D27	6	0	<=8.3	<=3.7
Raw Materials Stock	D28	7	0	<=8.3	<=3.7
Raw Materials Stock	D29	7	256	<=8.3	<=3.7
Raw Materials Stock	D30	8	513	<=8.3	<=3.7
Raw Materials Stock	D31	7	0	<=8.3	<=3.7

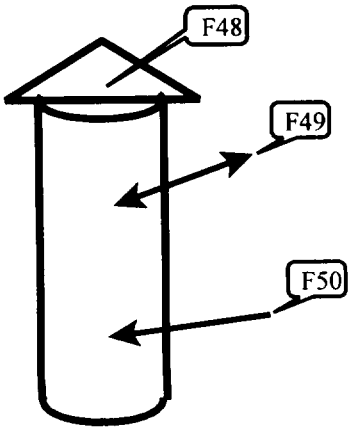
Location	Map Grid Element	Model 19 Probe 44-9 µR/hr	Model 3 Probe 44-1 Net dpm	Wipe Net dpm/100cm2	Wipe Net pCi/100cm2
Raw Materials Stock	D32	7	0	<=8.3	<=3.7
Raw Materials Stock	D33	6	0	<=8.3	<=3.7
Raw Materials Stock	D34	7	0	<=8.3	<=3.7
Raw Materials Stock	D35	7	0	<=8.3	<=3.7
Raw Materials Stock	D36	7	0	<=8.3	<=3.7
Raw Materials Stock	D37	8	256	<=8.3	<=3.7
Raw Materials Stock	D38	7	256	<=8.3	<=3.7
Raw Materials Stock	D39	7	0	<=8.3	<=3.7
Raw Materials Stock	D40	8	0	20.3	9.1
Raw Materials Stock	D41	6	0	<=8.3	<=3.7
Raw Materials Stock	D42	6	0	<=8.3	<=3.7
Raw Materials Stock	D43	8	0	<=8.3	<=3.7
Raw Materials Stock	D44	8	0	<=8.3	<=3.7
Raw Materials Stock	D45	7	0	<=8.3	<=3.7
Raw Materials Stock	D46	8	0	<=8.3	<=3.7
Raw Materials Stock	D47	7	0	<=8.3	<=3.7
Raw Materials Stock	D48	7	0	<=8.3	<=3.7
Raw Materials Stock	D49	6	0	<=8.3	<=3.7
Raw Materials Stock	D50	7	0	<=8.3	<=3.7
Raw Materials Stock	D51	6	0	<=8.3	<=3.7
Raw Materials Stock	D52	6	0	<=8.3	<=3.7
Raw Materials Stock	D53	6	0	<=8.3	<=3.7
Raw Materials Stock	D54	7	0	<=8.3	<=3.7
Raw Materials Stock	D55	7	0	<=8.3	<=3.7
Raw Materials Stock	D56	6	0	<=8.3	<=3.7
Raw Materials Stock	D57	7	0	<=8.3	<=3.7
Raw Materials Stock	D58	7	0	<=8.3	<=3.7
Raw Materials Stock	D59	6	0	<=8.3	<=3.7
Raw Materials Stock	D60	7	0	<=8.3	<=3.7
Raw Materials Stock	D61	7	0	10.1	4.6
Raw Materials Stock	D62	7	0	<=8.3	<=3.7

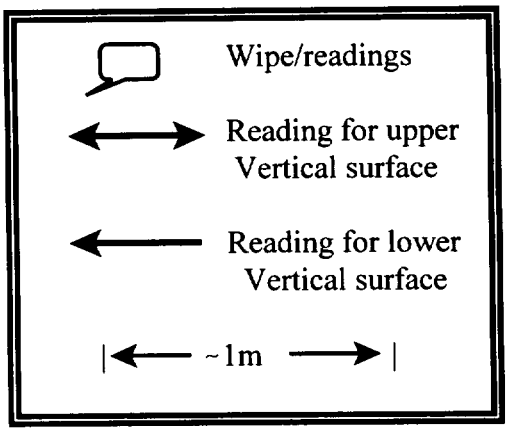
Location	Map Grid Element	Model 19 Probe 44-9 µR/hr	Model 3 Probe 44-1 Net dpm	Wipe Net dpm/100cm2	Wipe Net pCi/100cm2
Raw Materials Stock	D63	6	256	92.7	41.8
Raw Materials Stock	D64	6	256	<=8.3	<=3.7
Raw Materials Stock	D65	6	513	<=8.3	<=3.7
Raw Materials Stock	D66	7	0	<=8.3	<=3.7
Raw Materials Stock	D67	7	256	<=8.3	<=3.7
Raw Materials Stock	D68	7	0	<=8.3	<=3.7
Raw Materials Stock	D69	7	0	<=8.3	<=3.7
Raw Materials Stock	D70	6	0	<=8.3	<=3.7
Raw Materials Stock	D71	7	0	<=8.3	<=3.7
Raw Materials Stock	D72	7	0	<=8.3	<=3.7
Raw Materials Stock	D73	7	0	<=8.3	<=3.7
Raw Materials Stock	D74	6	0	<=8.3	<=3.7
Raw Materials Stock	D75	7	0	<=8.3	<=3.7
Raw Materials Stock	D76	7	0	<=8.3	<=3.7
Raw Materials Stock	D77	7	0	<=8.3	<=3.7
Raw Materials Stock	D78	6	0	<=8.3	<=3.7
Raw Materials Stock	D79	6	0	<=8.3	<=3.7
Raw Materials Stock	D80	6	0	<=8.3	<=3.7
Raw Materials Stock	D81	7	0	<=8.3	<=3.7


F1
F2
F3
F5
F6
F7
Sink
F4
F8
F9
F10
F11
R. A. Room
F12
F13
F14
F15
F16
F50
F18
F19


Wipe/readings
Reading for upper Vertical surface
Reading for lower Vertical surface
~1m


F20
F21
F22
F23
F24
F25
F26
F27
F28
F29
F30
F31
F32
F33
F34
F35
F36
F37
F38
F39
F40
F41
F42
F43
F44
F45
F46
F47
R. A. Room

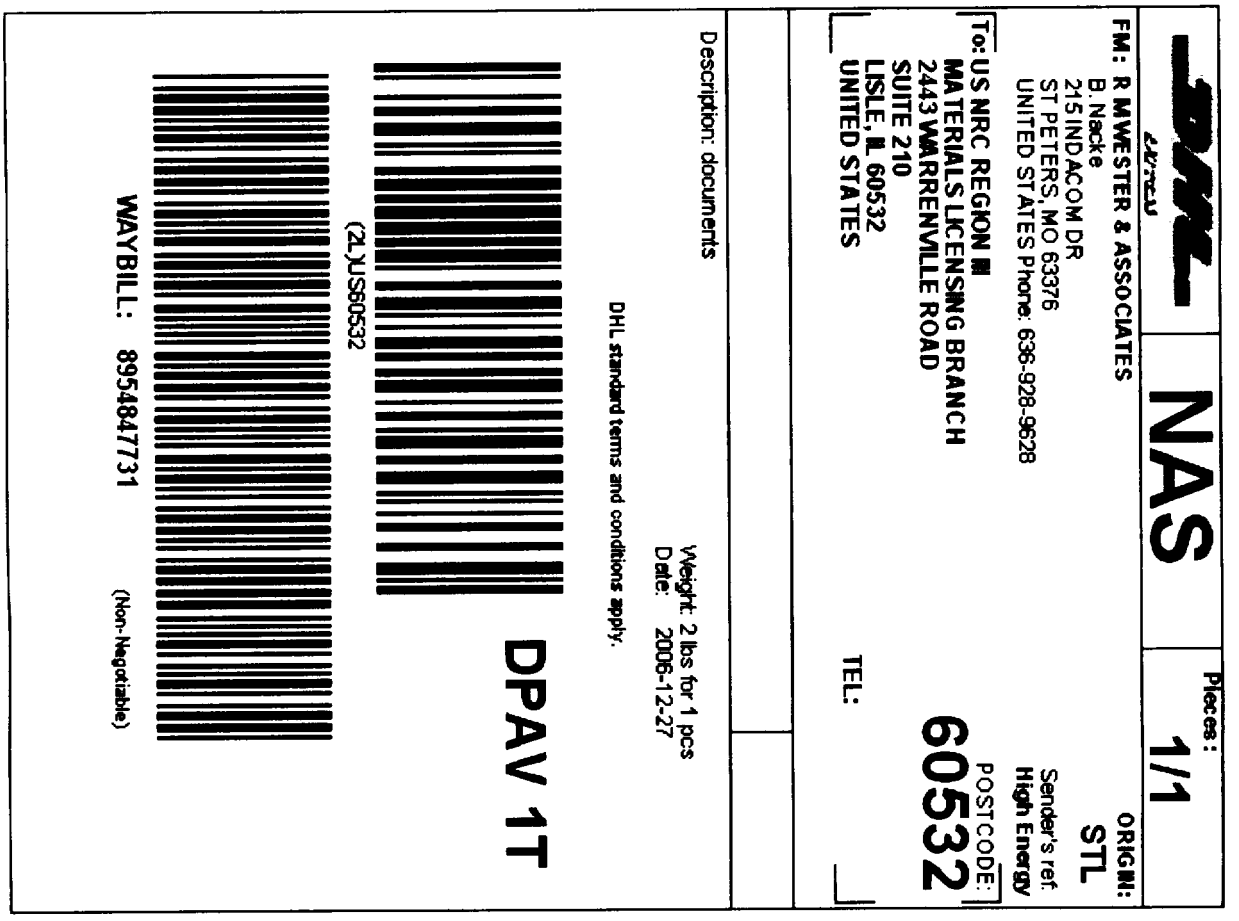

F48
F49
F50


Wipe/readings
Reading for upper Vertical surface
Reading for lower Vertical surface
~1m

Encl 2

Location	Map Grid Element	Model 19 Probe 44-9 µR/hr	Model 3 Probe 44-1 Net dpm	Wipe Net dpm/100cm2	Wipe Net pCi/100cm2
RA Room	F1	6	0	<=8.3	<=3.7
RA Room	F2	6	0	<=8.3	<=3.7
RA Room	F3	6	0	<=8.3	<=3.7
RA Room	F4	6	0	<=8.3	<=3.7
RA Room	F5	7	0	40.7	18.3
RA Room	F6	7	0	<=8.3	<=3.7
RA Room	F7	8	0	<=8.3	<=3.7
RA Room	F8	7	0	<=8.3	<=3.7
RA Room	F9	6	0	11.0	4.9
RA Room	F10	7	0	41.5	18.7
RA Room	F11	7	0	<=8.3	<=3.7
RA Room	F12	7	0	41.5	18.7
RA Room	F13	7	0	<=8.3	<=3.7
RA Room	F14	7	0	<=8.3	<=3.7
RA Room	F15	7	0	<=8.3	<=3.7
RA Room	F16	7	0	<=8.3	<=3.7
RA Room	F17	7	0	38.0	17.1
RA Room	F18	6	0	<=8.3	<=3.7
RA Room	F19	7	0	<=8.3	<=3.7
RA Room	F20	8	0	66.9	30.2
RA Room	F21	7	0	<=8.3	<=3.7
RA Room	F22	8	0	<=8.3	<=3.7
RA Room	F23	7	0	<=8.3	<=3.7
RA Room	F24	8	0	<=8.3	<=3.7
RA Room	F25	7	0	<=8.3	<=3.7
RA Room	F26	8	0	10.8	4.9
RA Room	F27	8	0	<=8.3	<=3.7
RA Room	F28	7	0	<=8.3	<=3.7
RA Room	F29	7	0	13.8	6.2
RA Room	F30	6	0	11.0	4.9
RA Room	F31	6	0	<=8.3	<=3.7

Location	Map Grid Element	Model 19 Probe 44-9 µR/hr	Model 3 Probe 44-1 Net dpm	Wipe Net dpm/100cm2	Wipe Net pCi/100cm2
Sink	F32	7	0	<=8.3	<=3.7
Drain	F33	6		<=8.3	<=3.7
Sink	F34	7	0	<=8.3	<=3.7
RA Room	F35	7	0	<=8.3	<=3.7
RA Room	F36	6	0	<=8.3	<=3.7
RA Room	F37	7	0	<=8.3	<=3.7
RA Room	F38	6	0	<=8.3	<=3.7
RA Room	F39	7	0	<=8.3	<=3.7
RA Room	F40	6	0	<=8.3	<=3.7
RA Room	F41	6	0	<=8.3	<=3.7
RA Room	F42	6	0	<=8.3	<=3.7
RA Room	F43	6	0	<=8.3	<=3.7
RA Room	F44	6	0	<=8.3	<=3.7
RA Room	F45	7	0	36.4	16.4
RA Room	F46	6	0	<=8.3	<=3.7
RA Room	F47	6	0	10.3	4.6
Fume Hood Exhaust	F48	10		11.0	4.9
Fume Hood Exhaust	F49	10		26.9	12.1
Fume Hood Exhaust	F50	10		<=8.3	<=3.7



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