MAXIM TECHNOLOGIES
A DIVISION OF TETRA TECH, INC.

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November 17, 2004

Ms. Patricia Pelke
U.S. Nuclear Regulatory Commission, Region III
Materials Licensing Branch
2443 Warrendale Road, Suite 210
Lisle, Illinois 60532-4352

Subject: Transmittal of Final Survey Report and Request for Termination of Materials License 24-17152-02

Dear Ms. Pelke:

Maxim Technologies, Inc. (Maxim) is in the process of decommissioning the parts of our facility licensed under Materials License 24-17152-02. On September 30 of this year, we received from your agency Amendment No. 19 to that license, releasing part of our facility and extending the duration of our licensing through December 31, 2004. The Final Status report submitted herewith is provided for your review in support of this request for release of the remainder of our facility and termination of License 24-17152-02.

The report submitted herewith addresses the remainder of our facility. Radiological surveys of the entire facility have been completed and no residual activity above the identified release criteria was found. The remaining waste materials which were stored at our facility have been disposed and a copy of Form NRC 314 addressing that disposition will be sent to you within a week.

We would appreciate any efforts that can be made to expedite this request. We are available at any time to discuss, supplement, or clarify our report and are willing to do so in person at your offices if you so request. We are copying Peter Lee of the Decommissioning Branch on this report, since he provided valuable assistance to us during our previous survey. If you have any questions or require any additional information, please feel free to call me or Max Gricevich, St. Louis Office Manager at 314-426-0880, or Dr. J. David Yesso at 513-939-3820.

Very truly yours,

Paul J. Smith
Radiation Safety Officer

Copy: Peter Lee
U.S. Nuclear Regulatory Commission, Region III
Decommissioning Branch
2443 Warrendale Road, Suite 210
Lisle, Illinois 60532-4352

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EXECUTIVE SUMMARY

Maxim Technologies, Inc. occupies a facility in St. Louis, MO which houses both laboratory operations and office space. At this facility, Maxim holds U.S. Nuclear Regulatory Commission (NRC) Materials License 24-17152-02. Operations using radioactive materials have been terminated and on 3/25/2004, the NRC was notified of the intent to decommission the facility and terminate the license. Maxim intends to exit the facility upon termination of the license. This final status survey report documents the decommissioning carried out by Maxim. The release criteria used are based on the license-termination screening levels published in the Federal Register (63 FR 64132) and listed in SECY-98-242. Licensed areas were identified as Class 2 areas as defined in MARSSIM, and surveys were planned and performed on the basis of that assumption. Survey grids were established throughout the facility. In licensed areas, scans with monitoring instruments were performed on 100% of the surfaces within each grid element. Direct measurements and smears were collected at a frequency of at least one data point in each 1-m x 1-m grid element. Direct measurements and smears for the interiors of fixed furnishings were collected at a frequency of one location inside a minimum of 20% of drawers and cabinet shelves. In non-licensed ("non-impacted") areas, scans were performed on horizontal surfaces, lower walls, items of furniture, and major equipment. In each room, regardless of size, at least one data point each was collected for horizontal surfaces, furniture, and high-contact locations. Based on these surveys, no part of the facility was demonstrated to exceed release criteria.

1.0 BACKGROUND INFORMATION

Maxim Technologies, Inc. holds U.S. Nuclear Regulatory Commission (NRC) Materials License 24-17152-02. The license authorizes possession and use of byproduct, source, and special nuclear material. The radioactive materials have been used in chemical, radiochemical, and geotechnical analyses and limited waste treatability studies. Operations using radioactive materials have been terminated and on 3/25/2004, the NRC was notified of the intent to decommission the facility and terminate the license. The licensed facility occupies space in a leased building. Maxim Technologies plans to vacate the building once the license has been terminated. This final status survey report documents the decommissioning activities and the surveys performed at this facility.

2.0 FACILITY INFORMATION

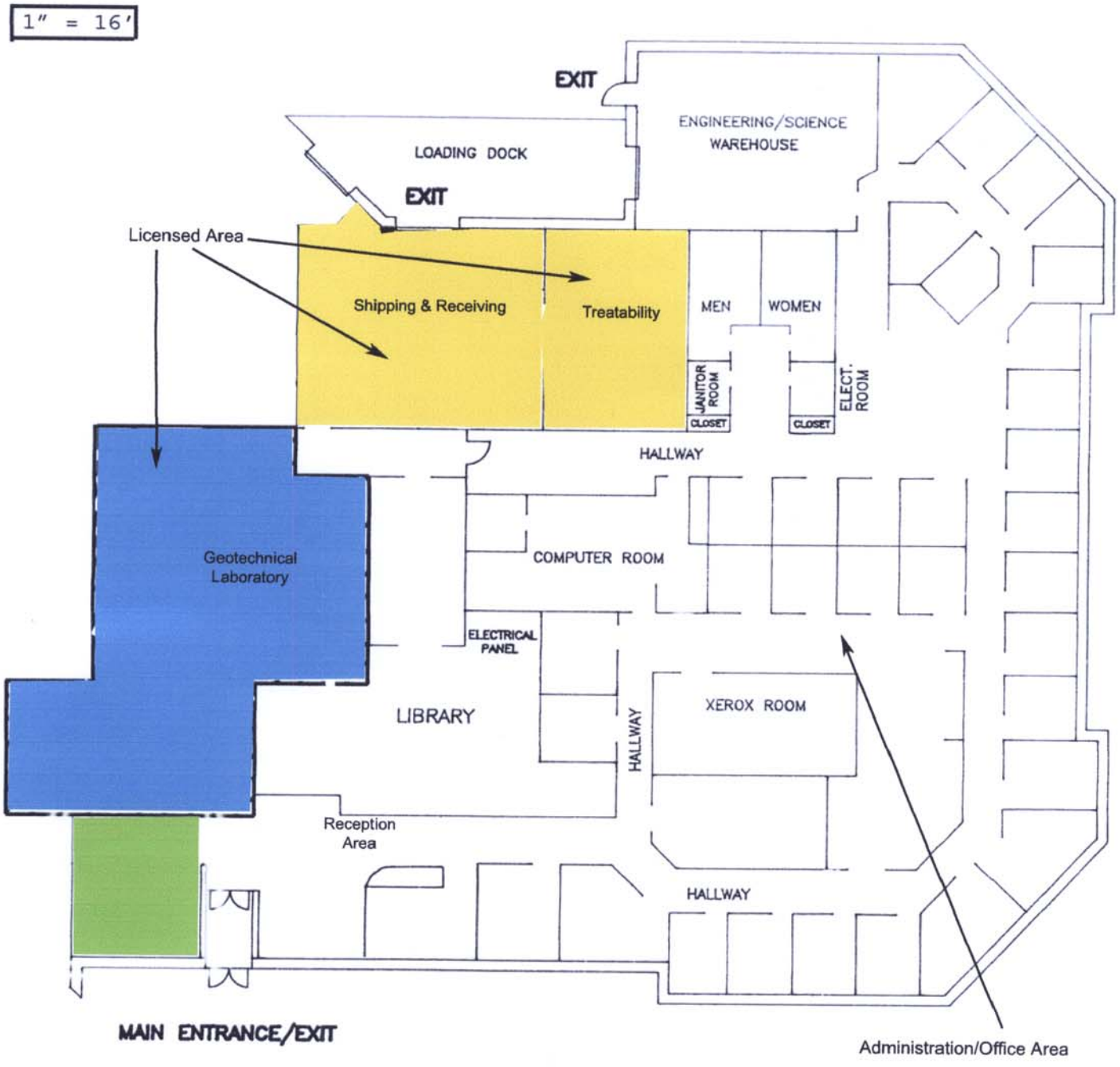
2.1 Facility Description

Maxim Technologies (Maxim) occupies a 13,046 square foot facility located at 1908 Innerbelt Business Center Drive in St. Louis, Missouri 63114-5700, a portion of which was licensed for the possession and use of radioactive materials. Operations with licensed materials began at this location in 1988. At that time, the company was known as Envirodyne Engineers and the facility totaled approximately 26,000 square feet. In 1990, the company's name was changed to Twin City Testing and it was changed again in 1995 to the current name of Maxim Technologies, Inc. The facility operated as a full service environmental company, including office operations as well as a laboratory performing inorganic, organic, geotechnical, and radiochemical analyses. The laboratory also had the capability to conduct laboratory-scale treatability studies on waste materials, including hazardous, radioactive, and mixed wastes. In February 1998, chemistry laboratory operations were terminated but a capability to perform treatability studies and geotechnical analyses on both radioactive and non-radioactive materials was retained. Portions of the former laboratory were surveyed in 1998 and were released by the NRC for unrestricted use. Those areas were subsequently leased to another tenant and Maxim's radioactive materials license was amended to include only that part of the originally licensed space still occupied by Maxim, totaling approximately 2500 square feet. (See Figure 1.)

In 2004, following notification to the NRC of the intent to decommission the facility and terminate the radioactive materials license, another tenant in the building expressed a desire to move into a portion of the Maxim space, including one laboratory (approximately 1350 square feet) that was included on the materials license, as well as approximately 500 square feet of unlicensed area. To accommodate this need, the radiological surveys of that area were expedited and Maxim Technologies requested and received an amendment to the license to remove that laboratory from the license prior to completing decommissioning of the remainder of the facility. That amendment was authorized on September 30, 2004.

The currently licensed portion of the facility covers 1248 square feet, consisting of a treatability laboratory (416 square feet) and a shipping and receiving area (832 square feet). In addition, there is a mezzanine area (460 square feet), constructed of metal-grid panels covered with plywood, over a portion of the shipping and receiving area. The mezzanine was used for storage of containerized radioactive samples and wastes and uncontaminated equipment. The facility floor plan is shown in Figure 1. No activities involving radioactive materials were performed outside of the licensed area. However, the surveys which are the subject of this report were performed throughout Maxim's facility, including both licensed and non-licensed areas.

Figure 1
Maxim Technologies' Facility



Unlicensed area removed from Maxim's lease, September 2004

Current Licensed Area

Licensed Area, released September 2004 and removed from Maxim's lease

The radioactive materials handled included a range of radionuclides. The sources of samples included industrial facilities, Department of Defense facilities, and Department of Energy facilities. Consequently, potential radionuclide contamination could have included fission and activation products, naturally occurring radioactive materials, and enriched uranium. The predominant radionuclides handled in the facility were Sr-90, Cs-137, U-238, U-234, and U-235. Also handled, but in lesser quantities, were Co- 60, Eu-154, Eu-155, Ra-226, Ra-228, Th-232, and Th-230. While the laboratory was licensed to handle transuranic radionuclides, no samples containing them were processed in the present location. Materials containing transuranic radionuclides were handled at a previous location and some wastes and unused samples from that work were stored in closed containers in the Shipping and Receiving Area of the current facility.

As described in a subsequent section of this report, all radioactive wastes were removed from Maxim's facility in October 2004.

In summary, Maxim's current facility totals 13, 046 square feet. Of that total, approximately 2600 square feet was licensed. Approximately 10, 500 square feet, not licensed, was and is used as office space and for equipment storage and maintenance. Of the 2600 square feet of licensed space, approximately 1350 square feet was removed from the license with NRC approval on September 30, 2004. This report focuses on the remaining 1250 square feet of licensed space plus the 10,500 square feet of unlicensed space. It addresses these areas in terms of their use as the Treatability Laboratory, Shipping and Receiving, and Administrative Areas.

2.2 Treatability Laboratory

The Treatability Laboratory has been used for treatability studies on wastes and waste matrices and geotechnical testing on soil samples. The Treatability Laboratory would be categorized as an impacted area, according to the definitions included in Consolidated NMMSS Decommissioning Guidance, NUREG-1757. Most of the materials that were handled in the laboratory were in the picocurie per gram and nanocurie per gram ranges, although occasional samples with concentrations in the microcurie per gram range were handled. Studies were also performed on non-radioactive materials. Cleanliness was important to operations to avoid compromising laboratory results through cross contamination between sample materials. Consequently, any spills of material on bench-tops and floors were cleaned promptly and the work areas were cleaned following completion of each project. A review of historical routine survey records indicated that the laboratory had little if any residual radioactive material at the time of the initiation of the final status survey. Any residual radioactive material would have been present as building surface contamination. None of the operations in the Treatability Laboratory would have contributed to subsurface soil contamination or other release from the facility.

The treatability laboratory was equipped with a hood. The duct from the Treatability Laboratory hood passed through the mezzanine area to tie into a plenum in another laboratory room, the Geotechnical Laboratory, which was removed from the Maxim license in September 2004. Initial surveys carried out in August of 2004 in the Treatability Laboratory indicated that the duct contained residual radioactive material. Additional survey measurements were collected along the length of the duct to determine the level of contamination. Samples of material collected in the duct were analyzed for specific radionuclides. The residual activity consisted of Cs-137 and Sr-90. Maxim Technologies personnel discussed the results with a representative of the U. S. Nuclear Regulatory Commission, Region III and it was determined that the residual activity in the ductwork was below termination screening criteria for those radionuclides and that its removal would not be required for a license termination. However, to

be consistent with the concept of ALARA, the ductwork was removed from the laboratory prior to initiating the final status survey.

2.3 Shipping & Receiving

The shipping and receiving area opens to a loading dock and provides the route for samples received for delivery to laboratories within the facility. No samples were processed in Shipping & Receiving or the mezzanine area. Packages holding containers of radioactive materials were received there and the packages opened so the containers could be distributed to the laboratory areas, but no sample processing took place there. Non-radioactive packages were also received in that area. The area was used to package containers of samples and wastes for shipment to other locations and for storage. Containers of radioactive materials were stored on the main floor of Shipping & Receiving and on the mezzanine. Spill records show that a section of the concrete floor in Shipping & Receiving area was contaminated in 1993 by liquid radioactive wastes leaking from drums containing wastes from the analysis of samples received from the Department of Energy's Fernald Closure Project. The predominant radionuclides were uranium and members of the uranium decay-chain. The spill was contained to a relatively small area of approximately 50 square feet. The area was cleaned using detergents and a solution of Radiacwash™. In the surveys, which are the subject of this report, the area was demonstrated to be below release levels. Because of the potential for additional contamination from handling packages of radioactive materials and wastes, Shipping & Receiving was categorized for this study as an impacted area, according to the definitions included in Consolidated NMMSS Decommissioning Guidance, NUREG-1757.

2.4 Administrative Areas

The administrative areas in the Maxim Technologies facility include miscellaneous administrative and support areas such as staff offices and cubicles, a break room, rest rooms, computer room, library, loading dock, and warehouse. These areas are shown on Figure 1. Radioactive materials were neither handled nor stored in these locations. Contamination has never been observed in these areas during routine radiological surveys. These locations were categorized as non-impacted areas for this survey, in accordance with the definitions included in Consolidated NMMSS Decommissioning Guidance, NUREG-1757.

3.0 RADIOLOGICAL RELEASE CRITERIA

The release criteria used for the Maxim Technologies facility were based on the license-termination screening levels published in the Federal Register (63 FR 64132) and listed in SECY-98-242. The Federal Register notice includes screening levels for beta- and gamma- emitting radionuclides only, and it does not list screening levels for alpha emitters. SECY-98-242 includes alpha emitters in a table of screening values, although the document notes that they are too restrictive to be useful, under most circumstances. However, because of the very low activity levels observed in the Maxim laboratory facilities, use of those alpha screening values is practical for this license termination. Because it was expected that most measurements would be indistinguishable from background, it was decided that the screening criteria would be applied to each measurement rather than using a statistical treatment of the data. This approach ensures that any observed residual activity exceeding the screening limits is removed, no matter how small the area in question might be.

The observed levels of residual radioactive material in the Maxim facility were, at most measurement locations, indistinguishable from background and it was not practical or necessary to perform nuclide-specific analyses. Consequently, surveys were based on gross activity measurements, with the

exception of the hood ductwork for which nuclide-specific analyses were possible and useful. The beta-emitting radionuclides with the highest activities handled at the facility were Sr-90 and Cs-137. The predominant alpha-emitting nuclides handled in the facility were U-238 and U-235. The screening levels for Sr-90 and U-235 were selected as the release criteria for gross-beta activity and gross-alpha activity, respectively. Table 1 summarizes the release criteria selected for this report. Table 1 values were selected to be used as the upper limit for any residual radioactive material found in the laboratory. Individuals performing the surveys performed a general cleaning of any grid element that exhibited contamination that was clearly above background.

Table 1
Release Criteria for Maxim Technologies Facility

Radionuclide	Total Alpha dpm/100cm^2	Removable Alpha dpm/100cm^2	Total Beta dpm/100cm^2	Removable Beta dpm/100cm^2
Sr-90	NA	NA	8.7E+03	8.7E+02
Cs-137	NA	NA	2.8E+04	2.8E+03
U-235	9.7E+01	9.7E+00	NA	NA
U-238	1.0E+02	1.0E+01	NA	NA
Gross Activity	9.7E+01	9.7E+00	8.7E+03	8.7E+02

4.0 SURVEY APPROACH

4.1 Impacted Areas (Licensed areas)

The Treatability Laboratory and the Shipping & Receiving area, including the mezzanine, were categorized as impacted areas in accordance with the definitions included in Consolidated NMMSS Decommissioning Guidance, NUREG-1757. Although, as noted above, the majority of the samples were environmental levels, there were a sufficient number of licensed materials handled here to present a potential for contamination. To avoid compromising laboratory results, care was taken during operations in the Treatability Laboratory to avoid cross-contamination between samples. That required that the work areas be kept clean. Radioactive materials were placed in sealed containers for storage or waste disposal following their handling and work areas were cleaned between projects. Consequently, the potential for contamination was low and residual contamination in excess of the screening limits was not expected. In addition, reviews of historical radiological surveys did not reveal any significant removable contamination or spills of radioactive material in this area. As discussed in Section 2.3, a spill of liquid radioactive waste occurred in the Shipping & Receiving area. The spill area was remediated to well below the termination screening criteria prior to initiating the final status survey.

Residual radioactive material in these areas would be present as building surface contamination. None of the operations in the facility would have led to subsurface soil contamination or other contaminant release. However, to be conservative, these areas were identified as Class 2 areas, as defined in MARSSIM, and surveys were planned and performed on the basis of that assumption.

Equipment and small mobile furnishings were surveyed and removed from the laboratory for release or disposal.

Because of the small sizes of the areas to be surveyed and the low potential for contamination, the survey was performed using the guidance described in the Consolidated NMMSS Decommissioning Guidance, Vol. 2, NUREG-1757, Appendix B (Simplified Approaches for Conducting Final Status Surveys).

Systematic surveys were performed on floors and on walls up to 2 m. For reference purposes, all vertical and horizontal surfaces were gridded using 1-m by 1-m grid elements. Schematic diagrams of the rooms were prepared showing the grid designations. Vertical faces of fixed cabinets and laboratory hoods were gridded in the same manner as wall surfaces. Fixed countertops were gridded and surveyed in a manner similar to the floors.

The Treatability Laboratory contains one laboratory hood. Interior panels were removed so that all surfaces that contacted the flow of air in the hood could be adequately surveyed. Surveys indicated that those panels contained some surface residual radioactive materials below the screening criteria. Because the hood was in poor operating condition, it was decided that the panels would be discarded rather than reinstalled in the hood. Hood surfaces that were beneath the removed panels were surveyed in the same manner as other horizontal and vertical surfaces.

One sink in the Treatability Laboratory was used to discharge small quantities of aqueous radioactive material to the sanitary sewerage system. None of the discharges exceeded the limits defined in 10 CFR 20.2003. To verify that the sinks and drains had not been contaminated, 100% of accessible sink surfaces were scanned. Direct measurements and smears were collected inside each sink and smear samples collected inside each sink-drain trap.

Scans were performed on 100% of the surfaces within each grid element. Direct measurements and smears were collected at a frequency of at least one data point in each 1-m x 1-m grid element. Direct measurements and smears for the interiors of fixed furnishings were collected at a frequency of one location inside a minimum of 20% of drawers and cabinet shelves.

4.2 Non-impacted Areas

The administrative areas of the Maxim Technologies facility were not licensed for the use of radioactive materials and none were handled or stored in those areas. However, to verify that contamination had not spread from the licensed portion of the building, survey measurements were performed in those areas. In locations within this category, the surveys included horizontal surfaces; high-contact vertical surfaces such as areas near light switches, doorknobs, and door jambs; and room furnishings such as desks, telephones, computers, and major pieces of equipment. The high-contact locations are the ones that are most likely to become contaminated should personnel enter the administrative or support areas with contamination on their hands or feet.

Scans were performed at select locations, generally near the impacted areas, where cross-contamination would be most likely to occur. In those areas, data were collected systematically, using a 1m x 1 m grid. In the remainder of the Administrative Areas, measurement locations were selected to be representative of various equipment categories (computer monitors, telephones, tops of file cabinets, etc), with an emphasis on high-contact locations. Where practical, both direct measurements and smear samples were collected at each location. Smear samples were not collected at locations on carpeted floors or the side of fabric-covered cubicle walls. Direct measurements were not taken if the shape of an item made that infeasible, or if the items were fragile. In those cases, smear samples were collected.

5.0 INSTRUMENTATION AND QUALITY ASSURANCE

Scanning and direct measurements were performed using portable survey instruments fitted with probes sensitive to both alpha and beta radiation. Each probe was calibrated for use with a specific instrument. Model numbers of instruments used are provided in Table 2. The specific probes and instruments used for the surveys were identified on survey documentation. Surveys were performed in accordance with Maxim Technologies procedures established for this program. Survey personnel received training on the procedures, survey techniques, and the associated survey plan and Maxim's Radiation Safety Officer coordinated and supervised survey events. Area scans were performed with scan rates of approximately 1/3 detector-width per second for alpha scans and 1/2 detector-width per second for the beta scans. Direct measurements were performed with the instrument in a simultaneous alpha-beta mode and the counting times were set to 2 minutes.

Smear samples were counted using an alpha/beta scaler capable of counting alphas and betas in a simultaneous mode. The counting time was set to 5 minutes. The system was calibrated by the instrument vendor and operated in accordance with the manufacturer's operating manual.

The detection limits of the instruments are presented in Table 2.

Table 2
Minimum Detectable Count Rates (MDCR) for Survey Instruments

Instrument Model	Use	Alpha Bkgd cpm	Alpha Eff	Beta Bkgd cpm	Beta Eff	Probe Area Cm^2	Alpha L_C counts	Alpha [a] MDCR dpm/100 cm^2	Beta L_C counts	Beta [a] MDCR dpm/100 cm^2	Alpha Scan[b] MDCR dpm/100 cm^2	Beta Scan[c] MDCR dpm/100 cm^2
Ludlum 2360/44-93	General Surveys	0.5	0.2	150	0.3	100	3	20	40	140	60	900
Ludlum 2929	Smear Counter	0.5	0.35	40	0.40	NA	4	6	33	35	NA	NA

a) Assumes a direct measurement counting time of 2 minutes.

b) MDCR assumes a scan rate of 1/3 detector width per second and a surveyor efficiency of 0.5. MARSSIM notes that a more meaningful characterization for an alpha scan is the probability of detecting a given contamination level while scanning. The probability of detecting alpha contamination at a level of 300 dpm/100cm^2 is 80%, with a scan rate of 1/3 detector width per second.

c) Assumes a scan rate of 1/2 detector width per second and a surveyor efficiency of 0.5.

Instrument performance was monitored by counting alpha and beta check sources at the beginning and end of each day's survey activities. The check-source responses were compared with previously established acceptance limits. Background levels for each instrument were based on an average of the measurements taken during the course of the surveys. Instruments were calibrated by the instrument vendor using Th-230 for alpha efficiency and both Sr-90 and Tc-99 for the beta efficiency. Gross-beta activities were calculated using the Sr-90 efficiencies.

Replicate scans, smears, and direct measurements were performed as a measure or check of instrument precision. However, the majority of measurements were below instrument detection limits, which precludes a statistical evaluation of the precision. The replicate measurements therefore

provided only a qualitative measure of the precision and a degree of confidence that the "less than detection limit" measurements are reliable. Approximately 10% of all measurements were selected as replicates.

6.0 SURVEY ACTIVITIES AND RESULTS

6.1 Background Determination

Background typically has two components, natural background and electronic or instrument background. Because the only type of contamination that could potentially be present in the facility would be building surface contamination, there is no need to analyze materials for the presence of natural radioactive materials. It is sufficient to determine background levels by making a series of measurements using the survey instruments in an area known to be uncontaminated. Such measurements will yield a background value that is a result of electronic noise. For the instruments used in this survey, alpha backgrounds were typically less than 1 count per minute. Beta backgrounds were typically less than 150 counts per minute. Net activity calculations used an average of multiple background measurements collected during the time period that the surveys were conducted.

6.2 Survey Results

6.2.1 Data Handling and Evaluation

Data for the direct measurements and the smear samples were converted to net activity (i.e., background subtracted) in units of dpm/100 cm^2 and the measurement total propagated uncertainty (TPU) calculated. The TPU was calculated at the 95% confidence level. Because they are intended only to provide an indication of elevated activity, surface-scan measurements were not converted to units of dpm/100 cm^2, background was not subtracted, and TPUs were not calculated. The results of the individual measurements are presented in the data tables of the Appendices.

As noted previously, the areas being surveyed were generally free of contamination and it was expected that most measurements would be indistinguishable from background. The majority of the measurements were found to be below detection limits, and all measurements were well below the screening criteria selected. Because of the large number of "less than detection limit" measurements, it was concluded that a statistical treatment of the data would be inappropriate and would add no value to the data evaluation. Instead, each measurement was compared against the applicable screening limit.

6.2.2 Treatability Laboratory

In the Treatability Laboratory, survey measurements were taken at a total of 188 locations: 29 walls, 13 hood surfaces, 73 cabinet faces, 31 countertops, 2 sinks, 3 sink traps, and 37 floor surface locations (including one floor drain). Measurement locations are shown in Appendix A. When individuals performing the surveys noted activity levels even slightly higher than those typically observed, those areas were decontaminated using either a mild detergent solution or a solution of Radiacwash™ and the measurements repeated. The data included in this report are the post-decontamination measurements.

The results of the individual measurements are also presented in Appendix A (Tables A-1 through A-5). The maximum activities in each category of measurement location are presented in Table 3. All of the measurements for removable alpha activities were indistinguishable from background, i.e., the net measured activity was less than or equal to the TPU. Only six measurements for removable beta were

distinguishable from background, two on the countertops, two on the floor, and two in the laboratory hood. The highest measurement was 43+/-22 dpm/100 cm^2 or approximately 5% of the screening limit.

Table 3
Maximum Surface Activity Levels for Treatability Laboratory

Location	Alpha Scan cpm/ 100cm^2	Beta Scan cpm/100 cm^2	Direct Alpha dpm/100 cm^2	Direct Alpha TPU[a] dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 Cm^2
Walls	3	160	10	12	50	71	1	3	17	21
Hoods	1	220	9	10	683	92	1	2	34	21
Cabinet Fronts	2	160	7	11	174	75	2	3	15	20
Countertops	2	220	17	14	151	74	4	4	34	21
Sinks/Traps	0	120	4	9	44	72	1	2	11	20
Floors	0	130	5	10	147	77	1	2	43	22

(a) TPU = total propagated uncertainty, at the 95% confidence level.

Two direct alpha measurements were distinguishable from background, both on countertop locations. The highest observed direct alpha measurement was 17+/-14 dpm/100 cm^2, or approximately 18% of the screening limit selected for total unknown alpha activity. There were 19 direct beta measurements distinguishable from background, four on countertops, one on a cabinet face, eight on the floors, and six in the hood. The maximum observed direct beta activity, located in the hood, was 683+/-92 dpm/100 cm^2, or approximately 8% of the screening limit. At locations outside the hood, the maximum observed direct beta measurement, on a cabinet face, was 174+/-75 dpm/100 cm^2, or 2% of the screening limit. The smear measurements from the two sink traps, and one duplicate, were indistinguishable from background.

All of the measurements in the Treatability Laboratory satisfy the release criteria listed in Table 1.

6.2.3 Shipping & Receiving

This section addresses the Shipping & Receiving area itself and the mezzanine area constructed above it. In Shipping & Receiving, survey measurements were taken at a total of 265 locations: 85 Shipping & Receiving walls, 91 Shipping & Receiving floor, 57 Mezzanine walls, and 32 Mezzanine floor locations, including stairs and stair landing areas. Measurement locations are shown in Appendix B. Whenever individuals performing the surveys noted activity levels higher than typically observed, those areas were decontaminated using either a mild detergent solution or a solution of Radiacwash™ and the measurements repeated. The area in which the 1993 spill had occurred, initially exhibited localized direct alpha contamination in excess of the selected screening limit. The maximum measurement was 144+/-37 dpm/100 cm^2. The area was cleaned using a Radiacwash™ solution, which reduced the alpha levels to below the screening limits. The data included in this report are the post-decontamination measurements.

The results of the individual measurements are also presented in Appendix B (Tables B-1 through B-4). The maximum activities in each category of measurement location are presented in Table 4. Only two of the measurements for removable alpha activities were distinguishable from background; that is, the net measured activity was greater than the TPU. One of those measurement locations was the

mezzanine floor and the other on the Shipping & Receiving floor. Both of those measurements were 5+/-4 dpm/100 cm^2, or approximately 52% of the screening limit. There were also two removable beta measurements that were distinguishable from background, one on a mezzanine wall and the other on a Shipping & Receiving wall. The highest removable beta measurement was 40+/-22 dpm/100 cm^2 or approximately 5% of the screening limit.

Table 4
Maximum Surface Activity Levels for Shipping & Receiving

Location	Alpha Scan cpm/100 cm^2	Beta Scan cpm/100 cm^2	Direct Alpha dpm/100 cm^2	Direct Alpha TPU[a] dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2
S/R Walls	4	240	17	14	98	72	2	3	40	22
S/R Floors	2	240	38	20	785	97	5	4	15	20
Mezzanine Walls	2	240	7	11	251	75	2	3	29	24
Mezzanine Floors	2	120	29	17	88	71	3	3	11	20

(a) TPU = total propagated uncertainty, at the 95% confidence level.

There were 23 direct alpha measurements with direct alpha activity levels above background, 2 on Shipping & Receiving walls, 12 on the Mezzanine floor, and 9 on the Shipping & Receiving floor. Those elevated activities on the Shipping & Receiving floor that exceed 20% of the screening limit selected for direct unknown alpha activity are all associated with the area in which the 1993 spill occurred. The highest observed direct alpha measurement on the Shipping & Receiving floor was 38+/-20 dpm/100 cm^2, or approximately 39% of the screening limit. The elevated alpha activity levels on the Mezzanine floor are not associated with any know spills of radioactive material. The highest direct alpha measurement on the Mezzanine was 29+/-47 dpm/100 cm^2, or 30% of the screening limit. The highest direct beta measurement on the Mezzanine floor was 88+/-71 dpm/100 cm^2, or approximately 1% of the screening limit.

Compared to the instrument background, the floors in Shipping & Receiving appear to retain a small amount of residual activity, although the maximum direct beta activity of 785+/- 97 dpm/100 cm^2 is less than 10% of the screening limit. The activity level varies across the room, ranging from the high of 785 dpm/100 cm^2 to a low of 65 dpm/100 cm^2. This is most likely a combination of two factors. First, in some localized spots, there may be activity associated with the 1993 spill, but the somewhat elevated activity covers a much larger area than the spill area. The second factor is that the Shipping & Receiving floor is unpainted concrete, which would be expected to contain natural beta-emitting radionuclides.

In an attempt to account for the natural activity in the concrete, a series of direct measurements were made in an adjacent facility that does not possess a radioactive materials license and does not handle any radioactive materials. It was anticipated that the concrete background measurements from that facility could be subtracted from the Shipping & Receiving results. However, the average of the "background" measurements, 321 dpm/100 cm^2 exceeded over 50% of the Shipping & Receiving measurements. This discrepancy is attributed to the varying sources of limestone and gravel used in concrete in the St Louis area. Consequently, using that data for a background subtraction was considered to be infeasible. Because the activity level was such a small fraction of the screening level, it was decided that no further investigation was warranted, and the net activity reported in the tables of

Appendix B is based on subtracting instrument background only. The measurements from outside of the Maxim Technologies facility are an indication that a portion of the elevated activity on the Shipping & Receiving floor may be a consequence of natural radioactivity.

All of the measurements in Shipping & Receiving, including the Mezzanine area, satisfy the release criteria listed in Table 1.

6.2.4 Administrative Areas

The Administrative Areas include office space, a warehouse area (including a mezzanine area), and support areas such as a lunchroom, utility closets, rest rooms, copier room, library, and conference rooms. As noted in Section 2.4, the Administrative Areas are considered to be non-impacted areas. Surveys were conducted in these areas to demonstrate whether there had been any significant cross-contamination from the licensed portions of the building. Systematic surveys including scans were performed at selected locations near the impacted areas. Random measurements were made elsewhere.

Measurements were made at 241 locations. These measurements included a combination of 94 scans, 205 direct measurements and 190 smears. The data have been separated into three categories: Office/Support Area Walls/Miscellaneous, Office/Support Area Floors, and Warehouse/Mezzanine Area. 103 measurements were for the Office/Support Area Walls/Miscellaneous, 61 were for the Office/Support Area Floors, and 77 were for the Warehouse/Mezzanine. The measurement locations are shown in Appendix C.

The results of the individual measurements are also presented in Appendix C (Tables C-1 through C-3). The maximum measurements for each of the three categories are presented in Table 5.

Table 5
Maximum Surface Activity Levels for Administrative Areas

Location	Alpha Scan cpm/100 cm^2	Beta Scan cpm/100 cm^2	Direct Alpha dpm/100 cm^2	Direct Alpha TPU[a] dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2
Warehouse & Mezzanine	0	130	12	13	264	79	1	3	10	20
Office/Support Areas – Walls	7	180	17	14	68	73	3	3	19	21
Office/Support Areas – Floors/Misc.	0	120	29	17	691	94	2	3	54	22

(a) TPU = total propagated uncertainty, at the 95% confidence level.

In the Warehouse/Mezzanine Area, there were 77 measurements for removable activity, none of which were distinguishable from background. This area also had 45 scans and 62 direct measurements. Eight of the measurement locations had direct alpha distinguishable from background and 19 had direct beta distinguishable from background. All of the elevated direct alpha and 16 of the elevated direct beta measurements were for unpainted concrete floors. Concrete is known to contain naturally occurring radionuclides, which most likely contribute to this elevated activity measurement. The highest direct alpha measurement was 29+/-17 dpm/100 cm^2, or approximately 30% of the selected screening limit. The highest direct beta measurement was 399+/-84 dpm/100 cm^2, or approximately 5% of the

screening limit. That measurement was at one of the floor locations. That is comparable average 321 dpm/100 cm^2 obtained from a series of measurements made in a neighboring facility to serve as an indication of concrete background. Of the three remaining elevated measurements, the highest was 264+/-79 dpm/100 cm^2, or 3% of the screening level. That measurement was on a work bench that will be removed from the facility.

The Office/Support Area walls/miscellaneous category includes building walls and door surfaces, as well as cubicle walls and small items of equipment such as door knobs, telephones, computers, desks, and cabinets. In this category there were 31 scans, 82 direct measurements and 100 removable activity measurements. None of the removable activity measurements were distinguishable from background. There were 82 direct measurements in this category. None of these measurements exhibited direct beta activity in excess of background. Two direct alpha measurements were greater than background, the highest of which was 17+/-14 dpm/100 cm^2, or approximately 18% of the selected screening limit.

The Office/Support Area floors had 18 scans, 13 smears, and 61 direct measurements. The number of smears was limited because much of the area is carpeted and smears from carpeted areas were not considered to be practical. None of the measurements for removable alpha were distinguishable from background. Three removable beta measurements exceeded background, with a maximum measurement of 54+/-22 dpm/100 cm^2, or approximately 6% of the screening limit.

Six direct alpha measurements were distinguishable from instrument background, with the maximum value of 29+/-17 dpm/100 cm^2, or approximately 30% of the screening limit. All of these elevated measurements are believed to be a consequence of natural radioactivity in the floor construction materials. All six measurements were taken on stone tiles in the facility reception area. Some of the measurements were taken in locations where there would be little traffic, such as in a seating area and behind the receptionist's desk. The activity measurements of the tiles are relatively uniform, regardless of the location, which indicates that cross contamination caused by foot traffic from the licensed areas is not likely to be the source of the activity.

Twenty-eight direct beta measurements were distinguishable from background. Of these, seven were for the stone tiles discussed in the previous paragraph and the elevated measurement is believed to be from naturally occurring radionuclides in the tile. The highest direct measurement for the tile was 691+/- dpm/100 cm^2, or 8% of the screening limit. Of the remaining 21 elevated measurements, the highest observed value was 195+/-80 dpm/100 cm^2, or 2% of the screening limit.

All of the measurements in Administrative Areas satisfy the release criteria listed in Table 1.

6.3 Records

Survey results and other records associated with this survey will be archived at Maxim's headquarters at 6178 Stratler Street, Murray, Utah 84107.

7.0 DISPOSITION OF LICENSED MATERIAL

Most of the licensed material possessed by Maxim technologies was consumed during analytical processes or returned to the laboratory's clients. At the time of the decision to terminate the license, a small quantity of material remained in the facility - a number of residual samples, some sealed calibration sources, standard solutions, analytical wastes, and miscellaneous laboratory wastes, such as glassware and paper. The residual samples were returned to the Rocky Flats Environmental

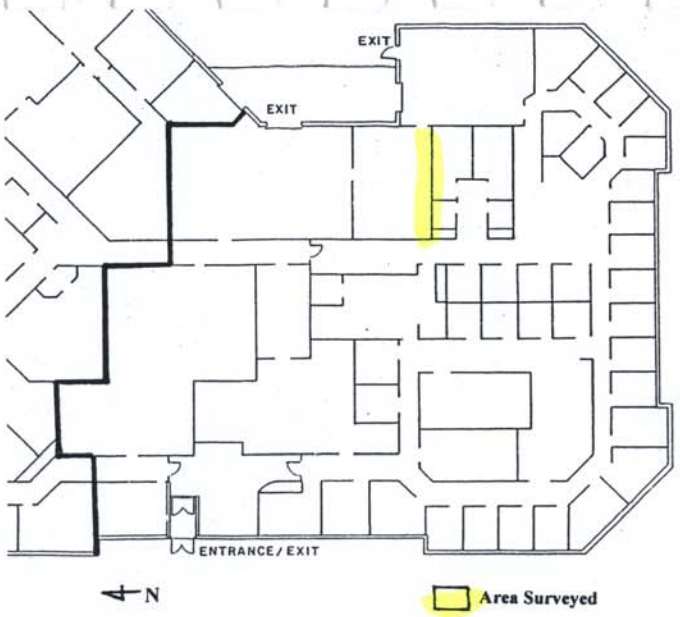
technology Site. Approximately 6.25 gallons of aqueous waste were discharged to the sanitary sewerage system in accordance with the provisions of 10 CFR 20.2003. The remaining material, consisting of 1548 pounds of dry solid radioactive waste, paper, plastic, glass, and metal and 21 pounds of radioactive aqueous liquid was disposed of as low-level radioactive waste through a waste broker, ADCO Services. The disposition of the material will be detailed on an NRC Form 314, which will be submitted within a week of the submittal of this report.

8.0 SUMMARY

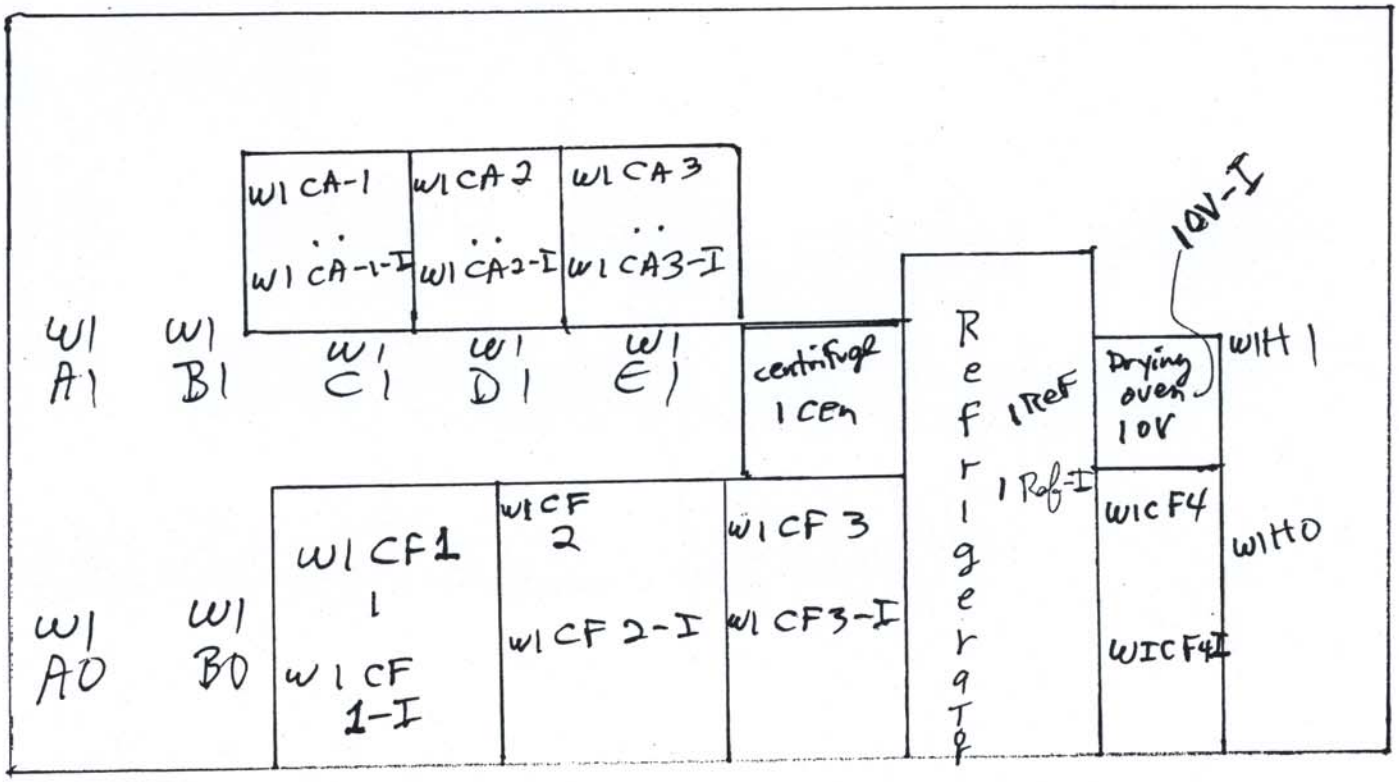
The survey results clearly demonstrate there is a negligible amount of residual radioactive material remaining in the Maxim Technologies facility. The highest activity measurements are well below the selected release criteria, with most of the measurements indistinguishable from background. All remaining radioactive wastes were removed from the facility and disposed of in accordance with applicable regulatory requirements. On the basis of these data, Maxim Technologies has concluded that the facility is acceptable for release.

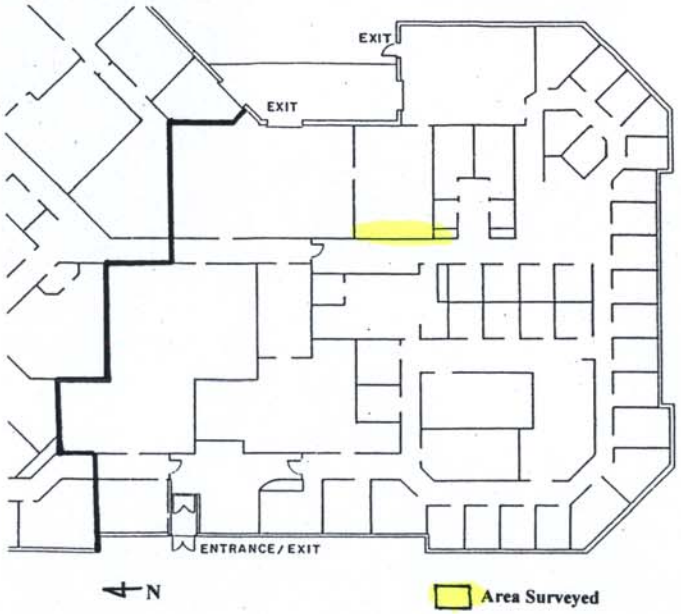
APPENDIX A

RADIOLOGICAL SURVEY LOCATIONS AND DATA TABLES TREATABILITY LABORATORY

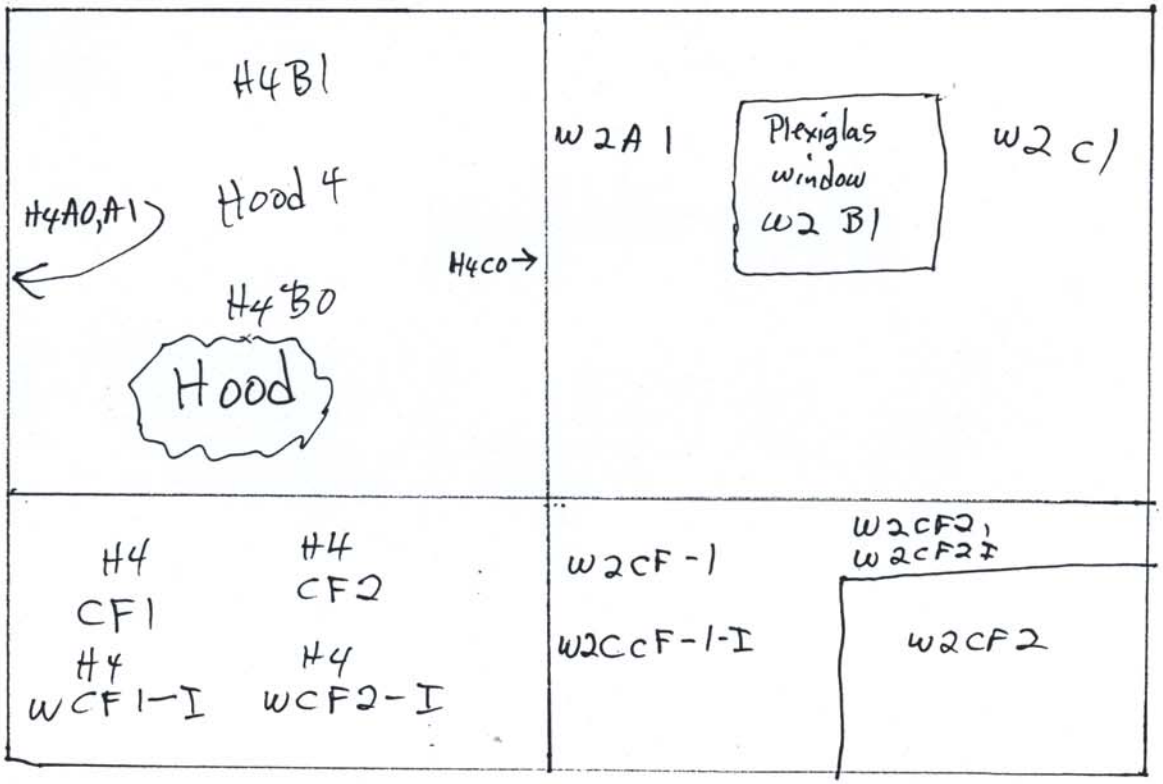


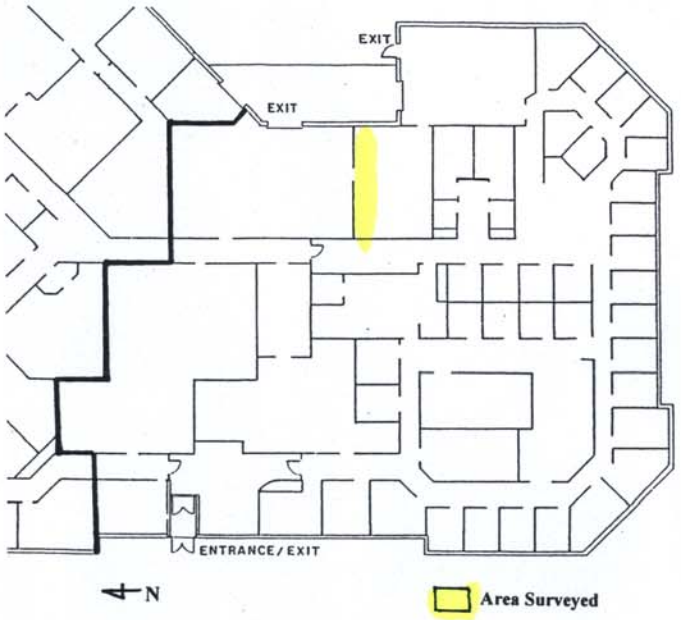
Treatability laboratory — Wall 1





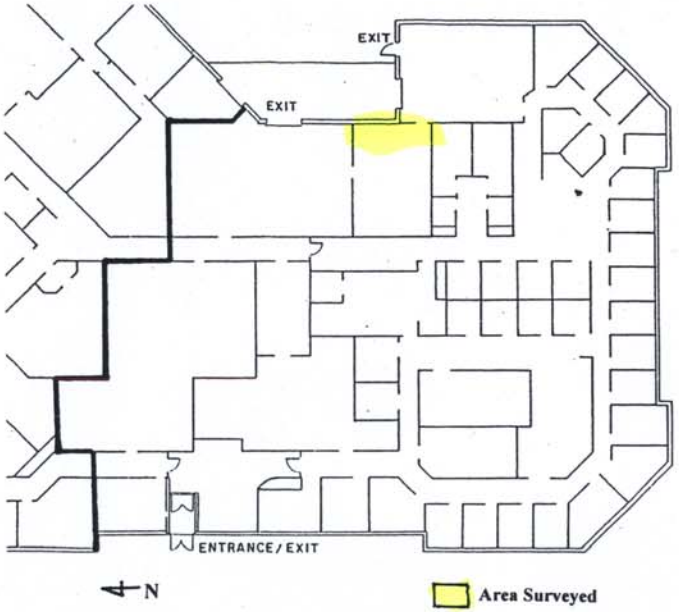
Treatability laboratory – wall 2

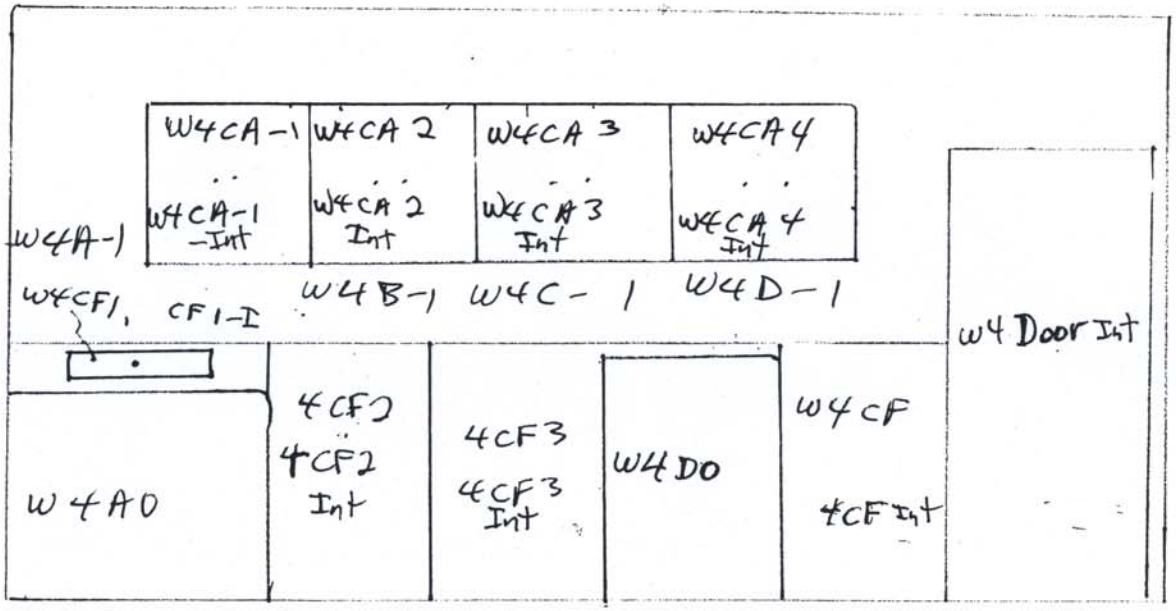


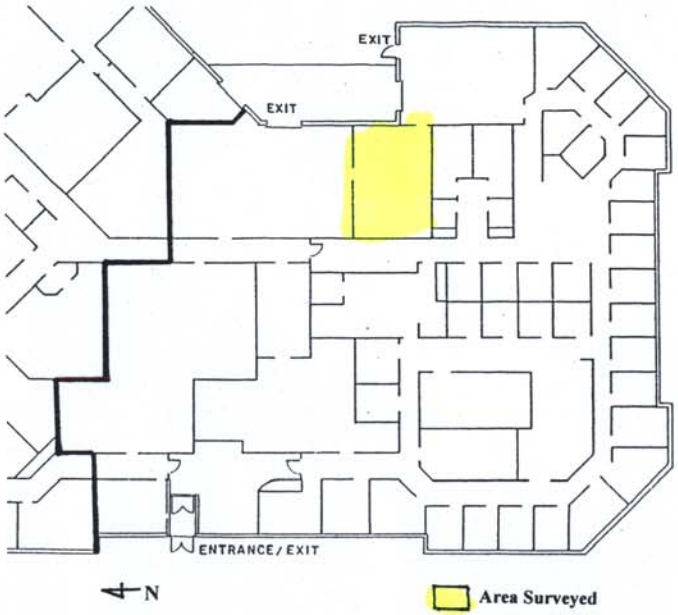


Treatability laboratory
wall 3

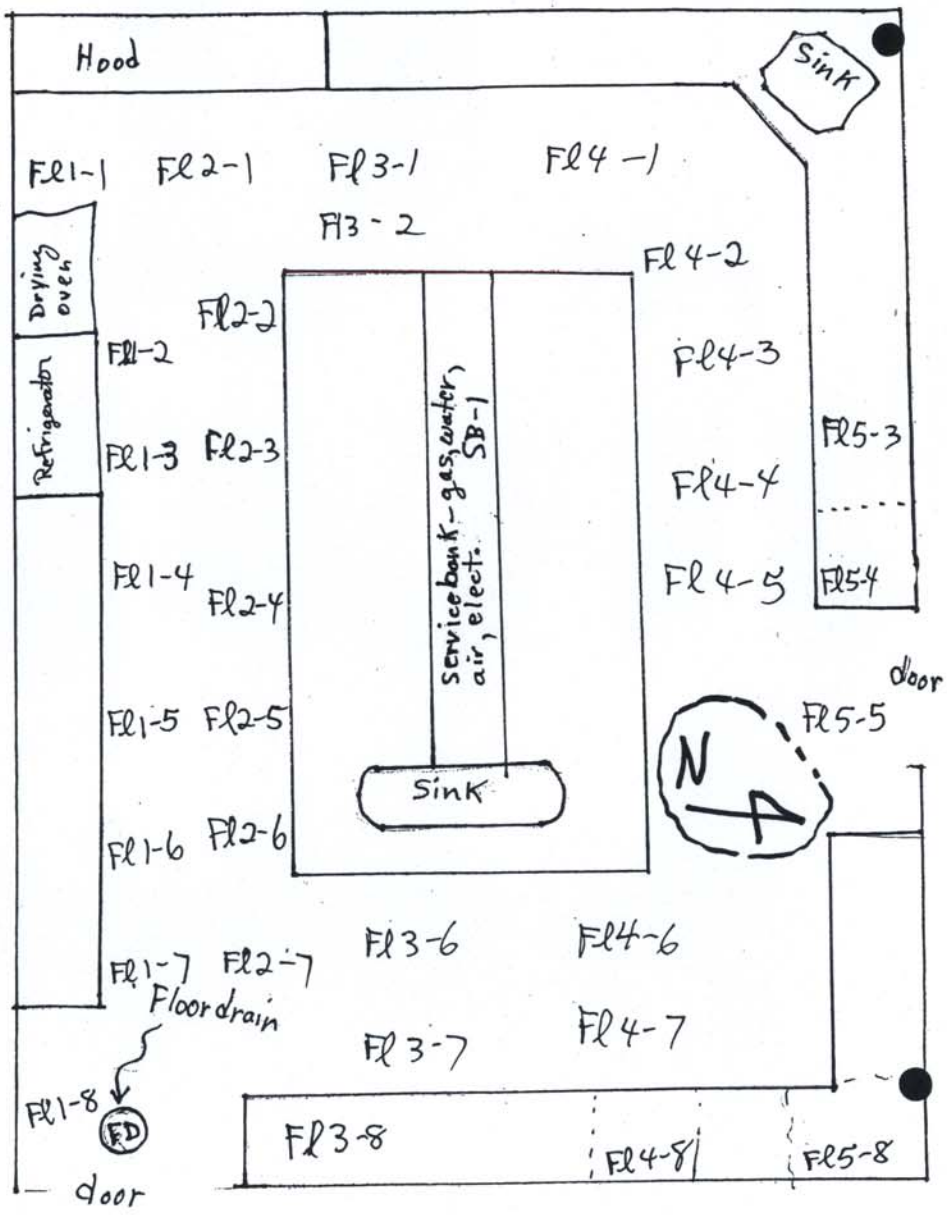
Treatability laboratory wall 4

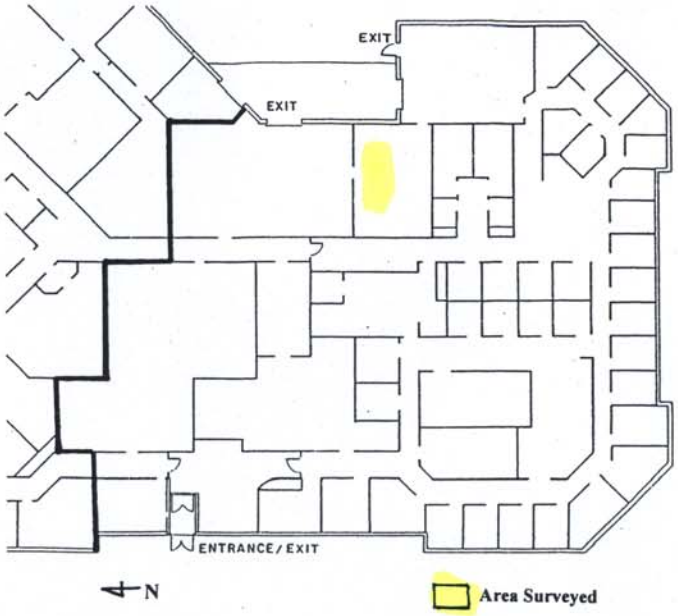




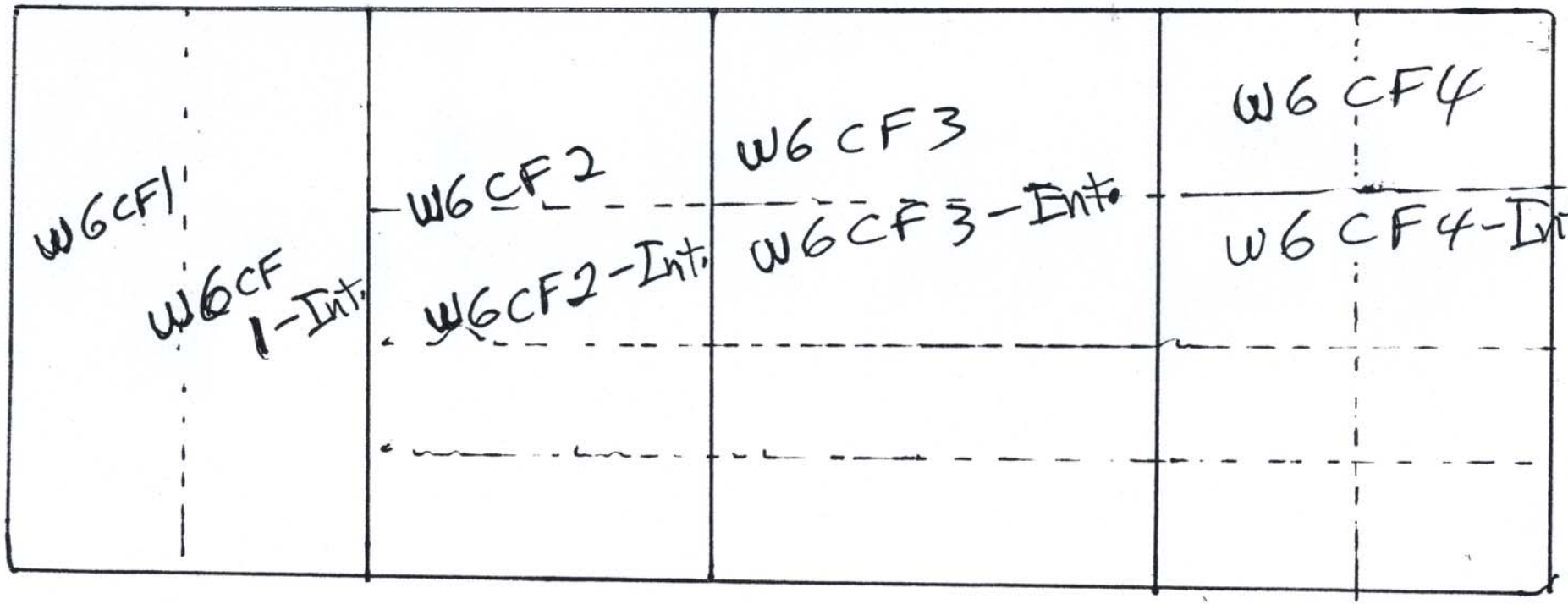


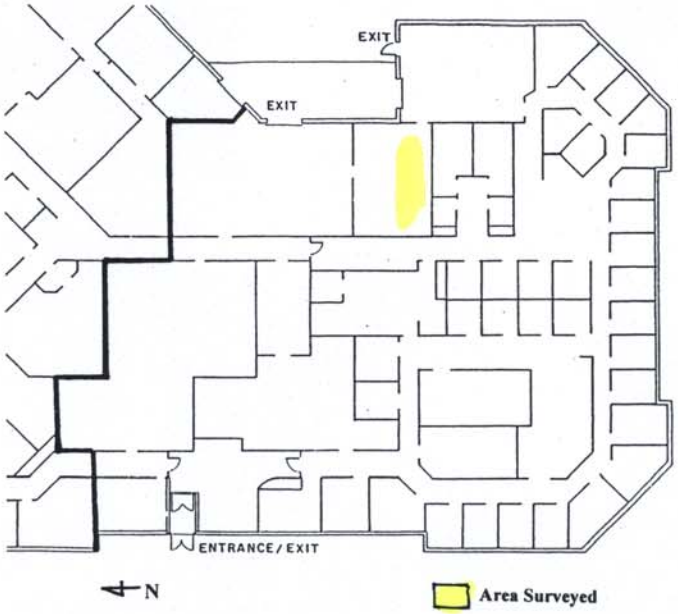
Treatability laboratory — Floor



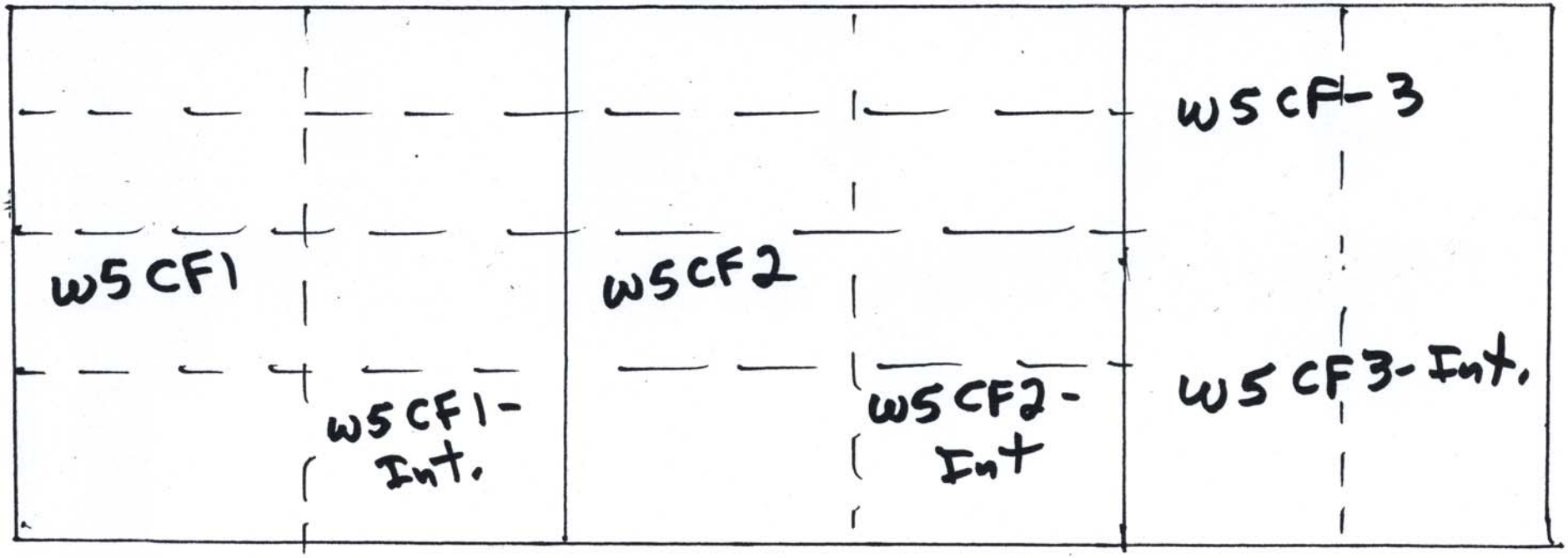


Treatability laboratory –
center countertop island –
North side cabinets

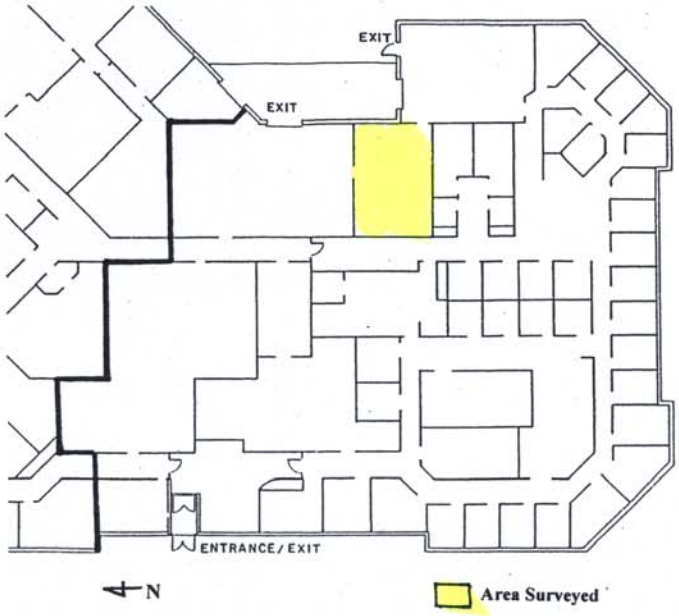




Treatability lab -
center countertop
island - South side cabinets



Treatability laboratory counter tops



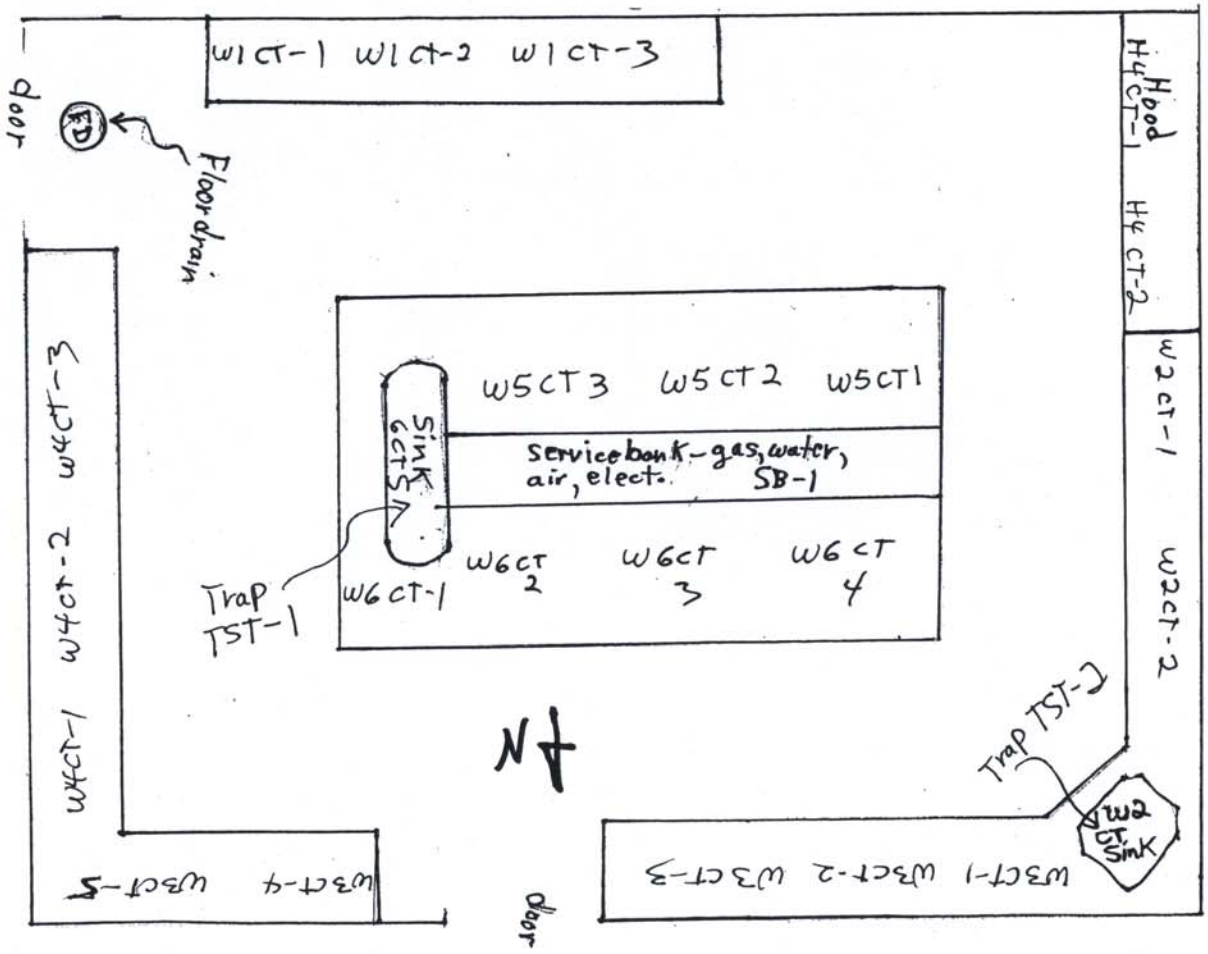


Table A-1: Treatability Laboratory Survey Results - Walls

Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
W1 A0	3	130	4	9	-22	70	0	2	8	20	
W1 A1	2	130	-3	2	-52	68	0	2	-8	19	
W1 B0	0	140	7	10	-41	69	-1	1	17	21	
W1 B1	3	160	2	7	-54	68	0	2	12	20	
W1 C1	3	160	2	7	16	71	1	2	1	20	
W1 D1	2	120	2	7	-60	68	-1	2	11	20	
W1 E1	1	130	-3	2	-17	70	1	2	7	20	
W1 H0	1	140	7	10	-25	69	0	2	2	20	
W1 H0 D	1	130	0	5	-41	69	0	2	-1	20	
W1 H1	3	140	4	9	-5	70	1	3	4	20	
W2 A1	0	120	-3	2	-21	70	-1	1	-2	20	
W2 B1	0	120	0	5	-81	67	-1	2	7	20	
W2 C1	0	120	0	5	-2	71	-1	2	9	20	
W3 A1	0	120	0	5	-2	71	-1	2	-1	20	
W3 C0	1	150	7	10	36	72	-1	2	-12	19	
W3 D0	0	110	5	10	-20	66	-1	2	5	20	
W3 D1	0	110	3	9	2	67	-1	2	-8	19	
W3 E 0	0	120	4	8	39	69	0	2	5	20	
W3 E1	0	110	2	7	-35	65	0	2	7	20	
W3 F1	0	110	-3	2	50	69	0	2	1	20	
W3 G1	0	110	0	5	-82	63	0	2	3	20	
W3 Door-Int	0	110	-2	6	-15	67	0	2	-7	19	
W4 A0	0	120	10	12	42	69	0	2	-7	19	
W4 A1	0	110	-3	2	39	69	0	2	3	20	
W4 B1	0	110	0	5	-20	66	1	3	0	20	
W4 C1	0	120	9	10	-39	65	0	2	-3	20	
W4 D0	0	120	3	9	-15	67	0	2	-5	20	
W4 D1	0	110	0	5	8	67	-1	2	5	20	
W4 Door-Int	0	120	-2	6	-11	67	-1	2	-2	20	

Table A-2: Treatability Laboratory Survey Results - Walls

Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
H4 A0	0	100	5	10	-68	64	1	2	10	20	
H4 A1	0	120	5	10	7	68	-1	2	3	20	
H4 ASB1	0	110	9	10	397	82	0	2	12	20	
H4 ASB2	1	220	2	7	683	92	0	2	13	20	
H4 ASB3	1	180	4	8	262	78	-1	1	20	21	
H4 ASB4	1	170	2	7	282	78	0	2	10	20	
H4 B0	0	140	0	7	-18	66	-1	2	10	20	
H4 B0 D	0	120	5	10	2	67	-1	2	8	20	
H4 B1	0	100	-2	6	2	67	0	2	7	20	
H4 C0	0	160	0	7	54	70	-1	2	5	20	
H4 CT1 D	0	110	3	9	130	73	0	2	34	21	
H4 D0	0	180	0	7	261	79	0	2	34	21	
Hood S	0	120	0	5	-82	67	-1	1	-2	20	Exterior hood sidewall

Table A-3: Treatability Laboratory Survey Results - Walls

Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
W1 CA1	0	110	-2	6	-46	65	-1	2	15	20	
W1 CA1-Int	0	110	5	10	-16	67	-1	2	-7	19	
W1 CA1-Int D	0	110	5	10	11	68	-1	2	-7	19	
W1 CA2	0	100	0	7	-85	63	-1	1	3	20	
W1 CA2-Int	0	120	0	7	-47	65	-1	1	-5	20	
W1 CA3	0	100	-4	3	-80	64	-1	2	6	20	
W1 CA3-Int	0	110	0	7	-15	67	0	2	3	20	
W1 CF1	0	160	0	7	174	75	-1	1	1	20	
W1 CF1-Int	0	110	-2	6	-67	64	0	2	1	20	
W1 CF2	0	160	0	7	23	68	-1	1	2	20	
W1 CF2-Int	0	110	-4	3	31	69	2	3	-3	20	
W1 CF3	0	110	3	9	-93	63	0	2	-1	20	
W1 CF3-Int	0	110	-2	6	-29	66	-1	1	9	20	
W1 CF4	1	130	-3	2	-21	70	0	2	9	20	
W1 CF4-Int	0	150	0	5	-32	69	0	2	-6	19	
W2 CF1	1	120	7	10	-119	65	0	2	-3	20	
W2 CF1 D	2	120	4	9	-128	65	-1	2	5	20	
W2 CF1 Int	0	120	-3	2	-8	70	-1	1	16	20	
W2 CF2	0	130	-3	2	-30	69	0	2	-4	20	
W2 CF2 Int	0	120	0	5	-8	70	0	2	-6	19	
W2 CF2 Int D	0	140	2	7	2	71	-1	1	7	20	
W3 CA1	0	110	-2	6	-86	63	0	2	0	20	
W3 CA1-Int	0	120	5	10	-55	65	-1	2	-5	19	
W3 CA2	0	120	-4	3	-121	61	-1	1	-16	19	
W3 CA2-Int	0	110	-2	6	-50	65	0	2	-10	19	
W3 CA3	0	110	0	7	-86	63	0	2	6	20	
W3 CA3-Int	0	110	-2	6	-64	64	-1	2	-1	20	
W3 CA3-Int D	0	110	-4	3	-10	67	-1	2	-14	19	
W3 CA4	0	110	0	5	-98	63	-1	1	-5	19	
W3 CA4 D	0	110	4	8	-76	64	0	2	-5	19	
W3 CA4-Int	0	110	0	5	-30	66	0	2	-7	19	
W3 CA5	0	110	2	7	-55	65	0	2	-3	20	
W3 CA5-Int	0	110	0	5	-30	66	-1	1	3	20	
W3 CF1	1	120	7	10	-98	66	-1	2	9	20	
W3 CF2	2	130	7	10	-41	69	0	2	-15	19	
W3 CF4	0	110	0	7	-31	66	1	2	-9	19	
W3 CF4-Int	0	120	5	10	41	69	1	3	4	20	
W3 CF4-Int D	0	120	6	9	-20	66	1	3	4	20	
W4 CA1	0	110	0	7	-37	66	-1	2	-6	19	
W4 CA1-Int	0	110	-4	3	-44	65	-1	1	-6	19	
W4 CA2	0	100	5	10	-81	63	1	2	-1	20	
W4 CA2-Int	0	100	0	7	2	67	1	2	12	20	
W4 CA3	0	110	7	11	-107	62	-1	1	0	20	
W4 CA3-Int	0	100	-4	3	-8	67	0	2	11	20	
W4 CA4	0	110	0	7	-68	64	-1	1	-13	19	

Table A-3: Treatability Laboratory Survey Results - Walls

Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
W4 CA4-Int	0	110	0	7	-11	67	-1	2	6	20	
W4 CA4-Int D	0	110	-2	6	-49	65	0	2	4	20	
W4 CF1	0	110	0	7	0	67	0	2	1	20	
W4 CF1-Int	0	110	0	7	0	67	-1	1	1	20	
W4 CF2	0	110	-2	6	-42	65	-1	1	13	20	
W4 CF2-Int	0	110	3	9	-24	66	-1	2	-1	20	
W4 CF3	0	120	-2	6	-36	66	1	2	-11	19	
W4 CF3-Int	0	120	3	9	65	70	0	2	-4	20	
W4 CF4	0	10	5	10	0	67	-1	1	-4	20	
W4 CF4-Int	0	110	-2	6	10	68	1	2	0	20	
W5 CF1	1	110	-3	2	-106	66	0	2	1	20	
W5 CF1-Int	1	150	4	9	5	71	0	2	-1	20	
W5 CF2	2	150	-3	2	-85	67	1	2	-2	20	
W5 CF2-Int	0	160	2	7	-28	69	1	2	3	20	
W5 CF3	1	160	7	10	-78	67	-1	2	7	20	
W5 CF3-Int	1	160	-3	2	30	72	1	2	9	20	
W6 CF1	0	110	5	10	-28	66	1	2	3	20	
W6 CF1-Int	0	110	5	10	20	68	0	2	-10	19	
W6 CF2	0	110	0	7	20	68	-1	2	5	20	
W6 CF2-Int	0	110	-2	6	26	69	-1	1	-1	20	
W6 CF3	0	110	0	7	-29	66	-1	2	0	20	
W6 CF3-Int	0	110	-2	6	-31	66	0	2	4	20	
W6 CF4	0	110	0	7	-36	66	0	2	-7	19	
W6 CF4-Int	0	110	0	7	29	69	0	2	-8	19	
H4 CF1	0	100	0	7	-39	65	0	2	-2	20	
H4 CF1 Int	0	110	-4	3	11	68	-1	2	-10	19	
H4 CF2	0	110	0	7	-26	66	-1	2	11	20	
H4 CF2 Int	0	120	3	9	46	69	0	2	7	20	

Table A-4: Treatability Laboratory Survey Results - Walls

Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
W1 CT1	0	100	14	13	151	74	1	2	-8	19	
W1 CT2	0	120	12	13	49	70	0	2	3	20	
W1 CT2 D	0	120	17	14	99	72	-1	1	-10	19	
W1 CT3	0	120	-2	6	50	70	0	2	7	20	
W2 CT1	0	140	-3	2	-6	70	0	2	14	20	
W2 CT2	0	120	0	5	19	71	-1	2	-1	20	
W3 CT1	0	120	0	5	36	72	-1	2	-8	19	
W3 CT1	0	100	-2	6	2	67	-1	1	-4	20	
W3 CT1 D	0	120	0	5	35	72	-1	1	-2	20	
W3 CT2	0	110	0	7	26	69	0	2	-10	19	
W3 CT3	0	110	-4	3	8	68	0	2	15	20	
W3 CT4	0	120	4	8	-11	67	1	3	-8	19	
W3 CT5	0	110	6	9	50	69	0	2	0	20	
W4 CT1	0	120	0	5	11	67	-1	2	8	20	
W4 CT2	0	110	4	8	-18	66	-1	2	-5	19	
W4 CT3	0	110	2	7	6	67	-1	2	-7	19	
W4 CT3 D	0	110	0	5	68	70	-1	2	11	20	
W5 CT1	1	180	2	7	71	74	-1	2	-3	20	
W5 CT1 D	2	160	0	5	41	72	3	3	10	20	
W5 CT2	0	150	-3	2	22	72	4	4	0	20	
W5 CT3	0	220	4	9	-13	70	1	3	-20	19	
W6 CT1	0	120	0	7	98	72	2	3	-3	20	
W6 CT2	0	110	0	7	16	68	1	2	-1	20	
W6 CT3	0	110	0	7	7	68	0	2	-7	19	
W6 CT3 D	0	120	0	7	42	69	1	2	0	20	
W6 CT4	0	110	0	7	0	67	0	2	2	20	
H4 CT1	0	160	0	7	-57	65	-1	2	2	20	
H4 CT1 D	0	110	3	9	130	73	0	2	34	21	
H4 CT2	1	150	-2	6	34	69	2	3	27	21	
SB 1	0	110	-2	6	-52	65	0	2	-4	20	
SB 1 D	0	110	-2	6	-59	65	0	2	-10	19	Service Bay (utilities)
W2 CT Sink	0	120	4	9	44	72	-1	1	11	20	Sink
W6 CT Sink	0	110	0	7	3	67	1	2	-6	19	Sink
TST-1	NA	NA	NA	NA	NA	NA	1	2	11	20	Trap -Sink W6 CT-Sink
TST-1 D	NA	NA	NA	NA	NA	NA	1	2	-3	20	Trap -Sink W6 CT-Sink
TST-2	NA	NA	NA	NA	NA	NA	1	3	-12	19	Trap -Sink W2 CT-Sink

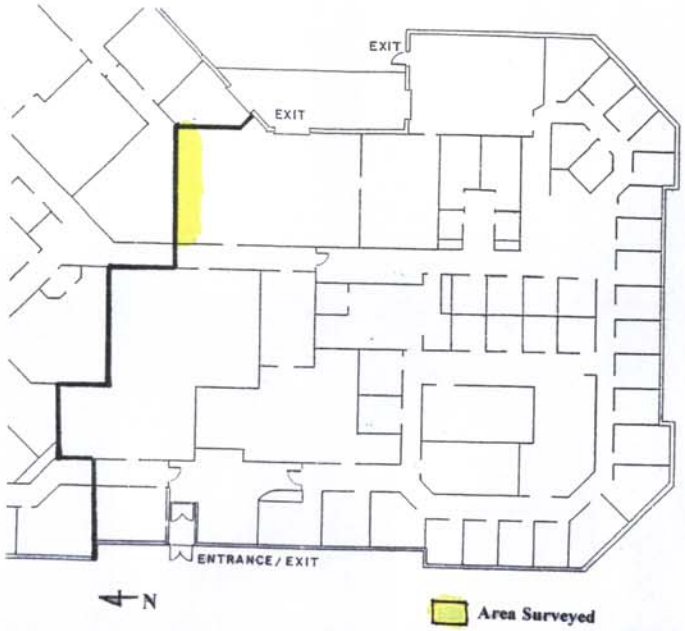
Table A-5: Treatability Laboratory Survey Results - Walls

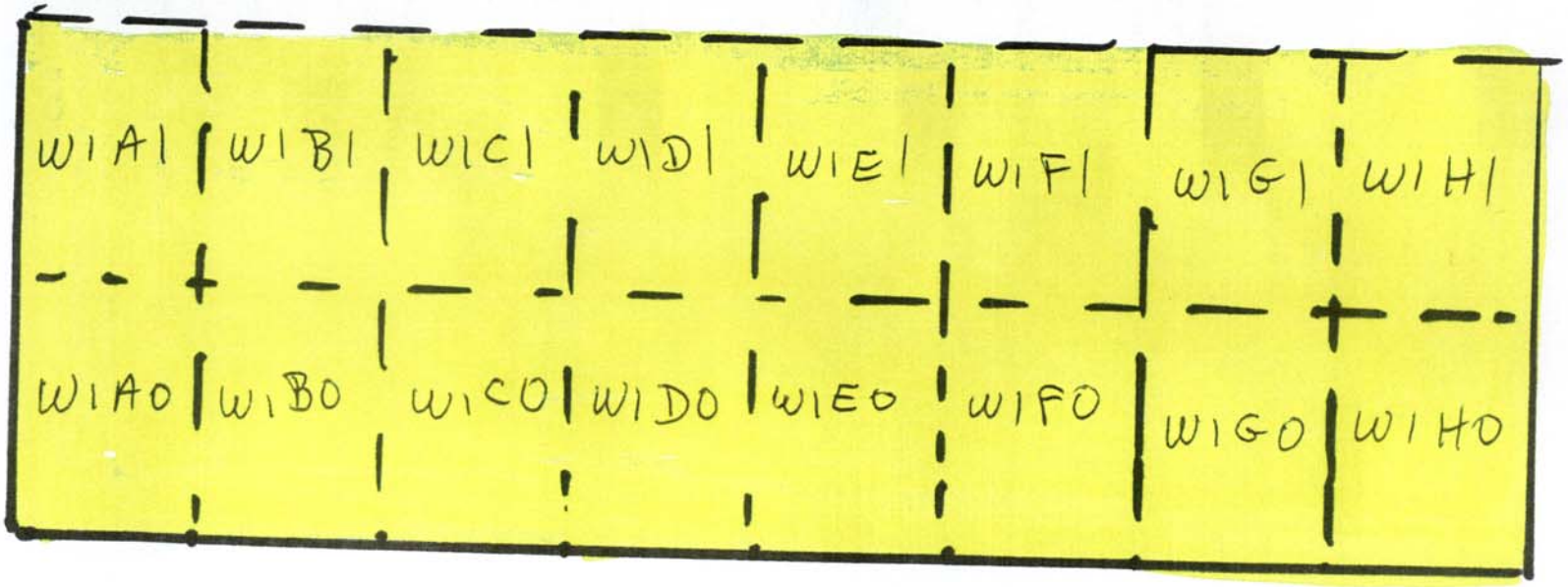
Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
FL 1-1	0	110	2	7	38	72	-1	1	15	20	
FL 1-2	0	110	-3	2	3	71	-1	2	0	20	
FL 1-3	0	120	-3	2	-19	70	-1	1	4	20	
FL 1-4	0	120	-2	6	37	69	-1	2	11	20	
FL 1-5	0	110	0	7	-33	66	0	2	13	20	
FL 1-6	0	120	-2	6	140	74	0	2	-21	19	
FL 1-7	0	110	-2	6	42	69	0	2	27	21	
FL 1-8	0	110	0	7	60	70	-1	1	2	20	
FL 1-8 D	0	120	3	9	16	68	-1	1	-3	20	
FL 2-1	0	120	4	9	92	74	-1	1	13	20	
FL 2-2	0	120	0	7	15	68	-1	2	3	20	
FL 2-3	0	120	0	7	75	71	-1	2	5	20	
FL 2-4	0	110	0	7	-20	66	0	2	-8	19	
FL 2-5	0	120	0	7	-18	66	-1	1	12	20	
FL 2-5 D	0	120	0	7	5	68	-1	1	2	20	
FL 2-6	0	120	0	7	55	70	-1	2	6	20	
FL 2-7	0	120	0	7	67	70	1	2	-13	19	
FL 3-1	0	110	4	9	147	77	0	2	43	22	
FL 3-2	0	110	5	10	39	69	0	2	-1	20	
FL 3-2 D	0	120	-2	6	62	70	0	2	4	20	
FL 3-6	0	100	0	7	81	71	1	2	0	20	
FL 3-6 D	0	110	3	9	13	68	-1	1	-1	20	
FL 3-7	0	120	3	9	50	70	-1	2	4	20	
FL 3-8	0	110	-2	6	36	69	0	2	-4	20	
FL 4-1	0	110	0	5	16	71	-1	2	-7	19	
FL 4-2	0	120	0	5	21	71	-1	1	3	20	
FL 4-3	0	120	4	9	-5	70	-1	1	7	20	
FL 4-4	0	110	-3	2	-6	70	0	2	-17	19	
FL 4-5	0	120	0	5	46	73	-1	1	2	20	
FL 4-6	0	120	-2	6	116	73	0	2	0	20	
FL 4-7	0	110	5	10	39	69	0	2	-4	20	
FL 4-8	0	120	5	10	96	72	-1	2	-3	20	
FL 5-3	0	120	0	5	19	71	-1	2	-8	19	
FL 5-4	0	120	-3	2	8	71	-1	2	-12	19	
FL 5-5	0	130	0	5	55	73	-1	2	-1	20	
FL 5-8	0	110	5	10	77	71	0	2	6	20	
FL Drain	NA	NA	NA	NA	NA	NA	-1	1	-1	20	Floor Drain

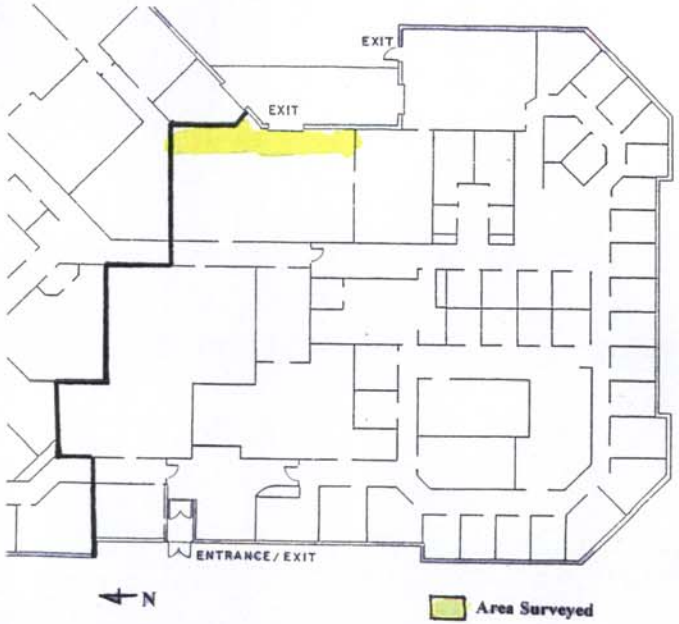
APPENDIX B

RADIOLOGICAL SURVEY LOCATIONS AND DATA TABLES SHIPPING & RECEIVING

Shipping & Receiving
wall 1 4 N







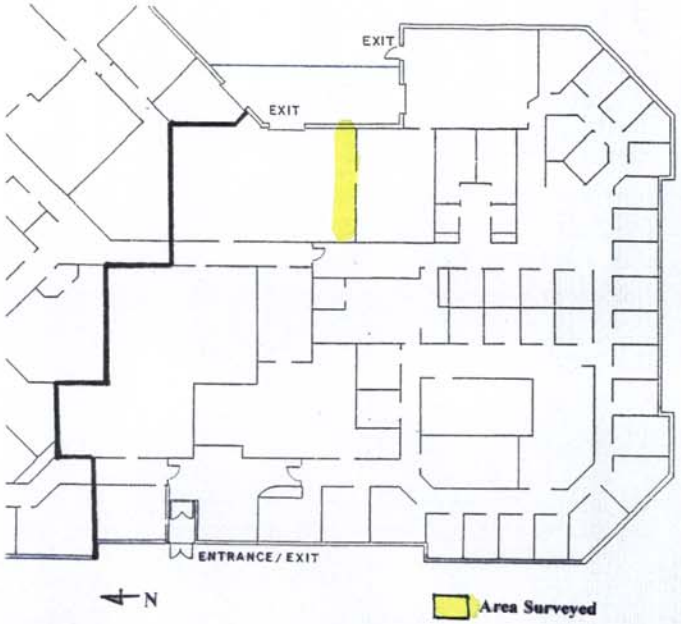
Shipping/Receiving
wall 2

N

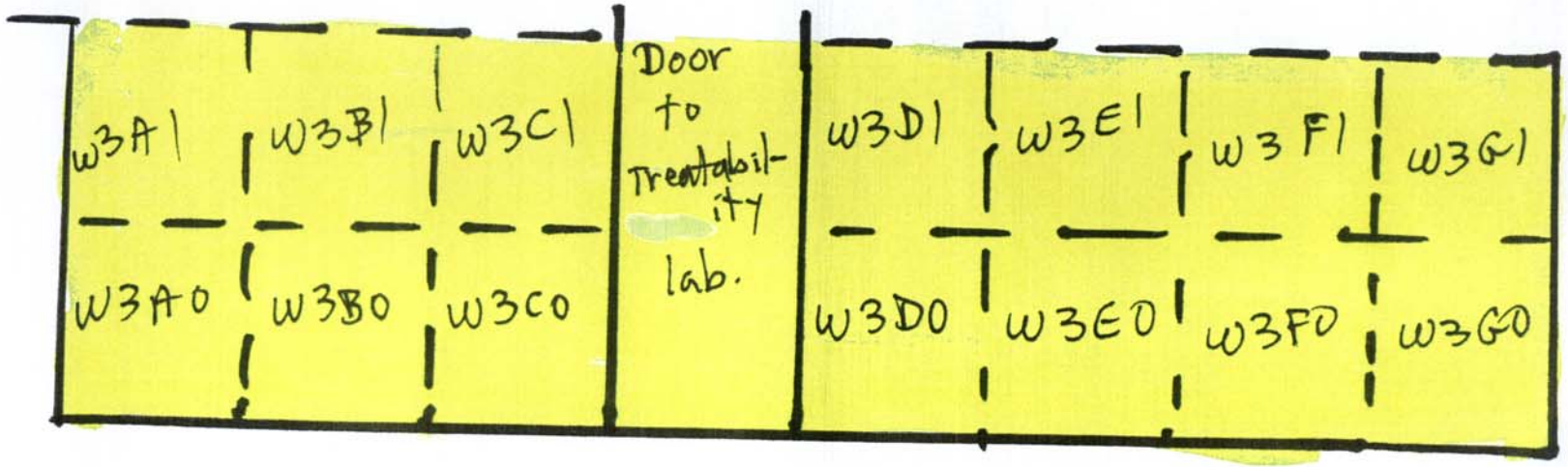
door to loading dock

W2A1 W2B1 W2C1 W2D1 W2E1 W2F1 W2G1 W2H1 W2I1 W2J1

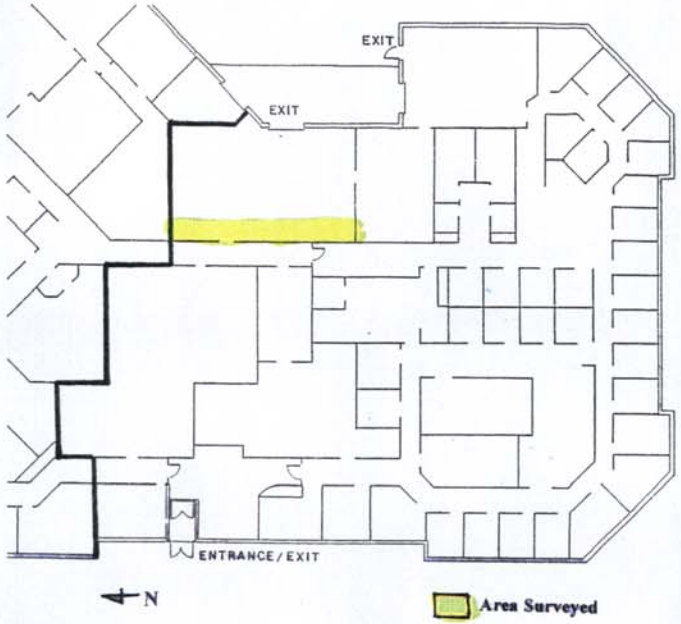
W2A0 W2B0 W2C0 W2D0 W2E0 W2F0 W2G0 W2H0 W2I0 W2J0

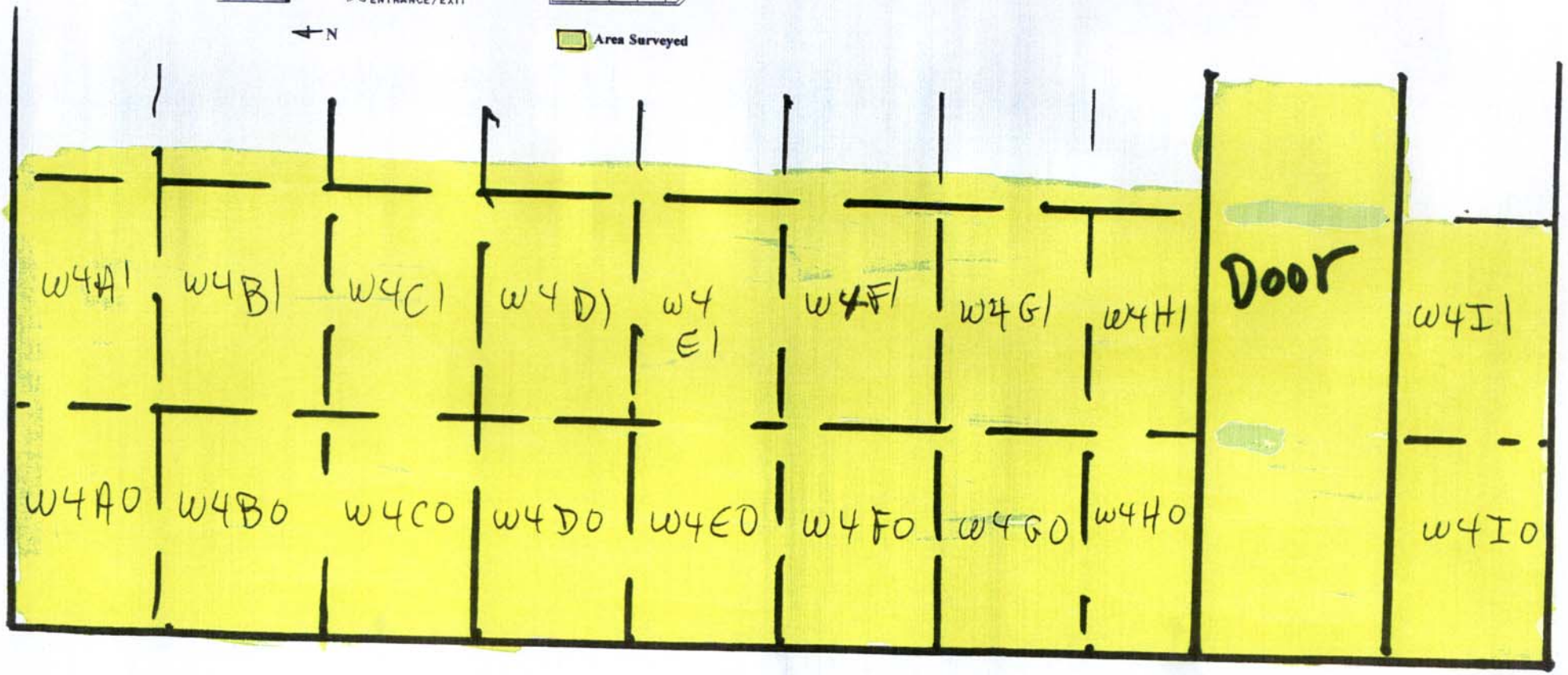


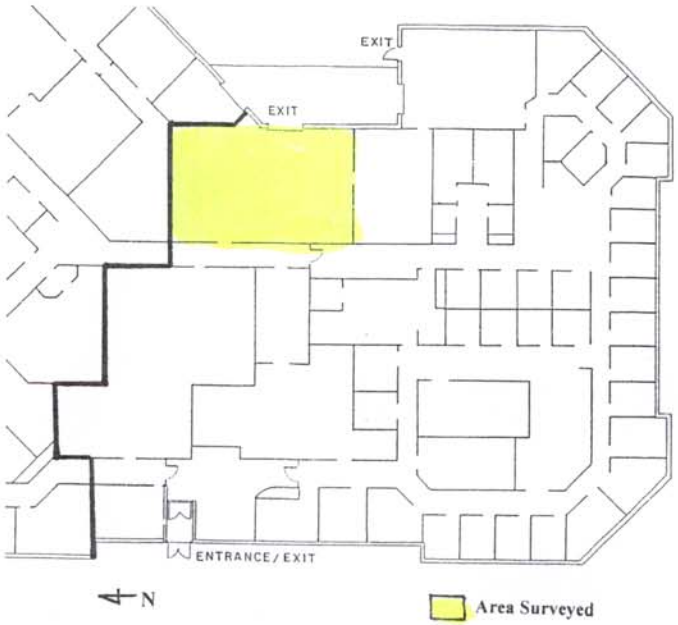
Shipping / Receiving wall 3



Shipping/Receiving
Wall 4
N →







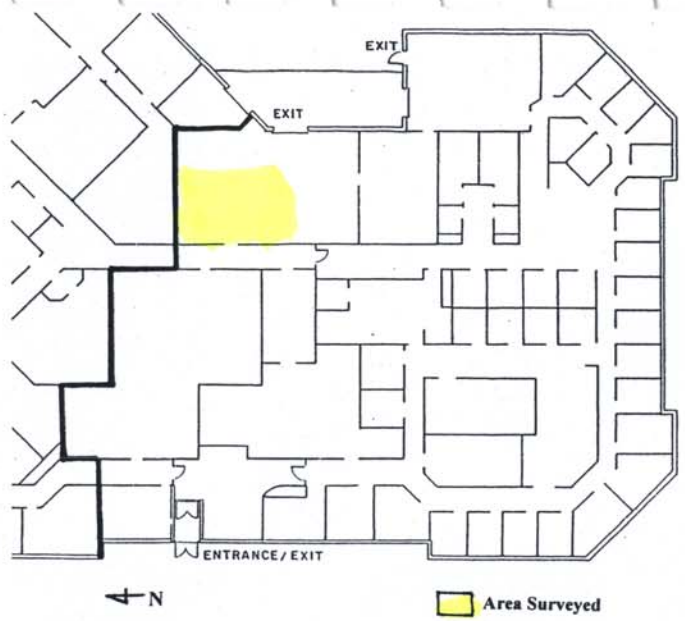
Shipping/Receiving Floor

N4

1 square = 1 m

A - door to treatability
B - door to loading dock
C - door to hallway
All grid points have prefix "Fl"

8-10	7-10	6-10	5-10	4-10	3-10	2-10	1-10
8-9	7-9	6-9	5-9	4-9	3-9	2-9	1-9
8-8 (C)	7-8	6-8	5-8	4-8	3-8	2-8	1-8
8-7	7-7	6-7	5-7	4-7	3-7	2-7	1-7 (B)
8-6	7-6	6-6	5-6	4-6	3-6	2-6	1-6
8-5	7-5	6-5	5-5	4-5	3-5	2-5	1-5
8-4	7-4	6-4	5-4	4-4	3-4	2-4	1-4
8-3	7-3	6-3	5-3	4-3	3-3	2-3	1-3
8-2	7-2	6-2	5-2	4-2	3-2	2-2	1-2
8-1	7-1	6-1	5-1	4-1 (A)	3-1	2-1	1-1

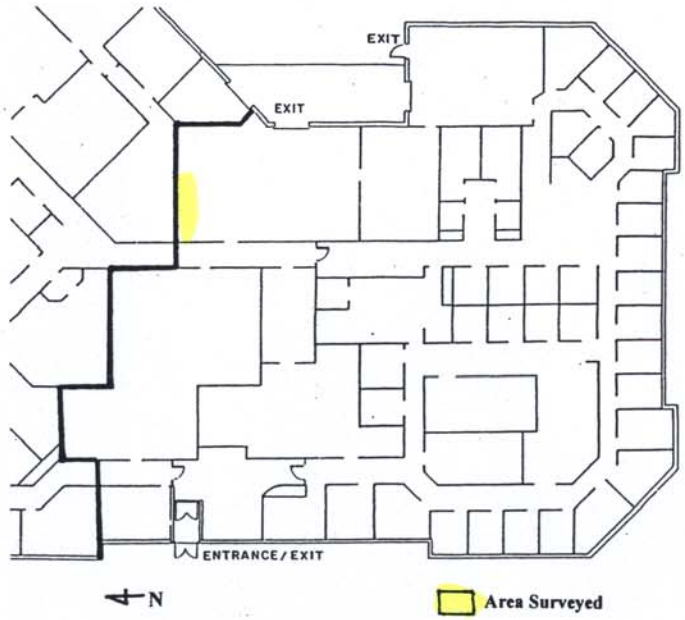


Shipping/Receiving

Mezzaning Floor

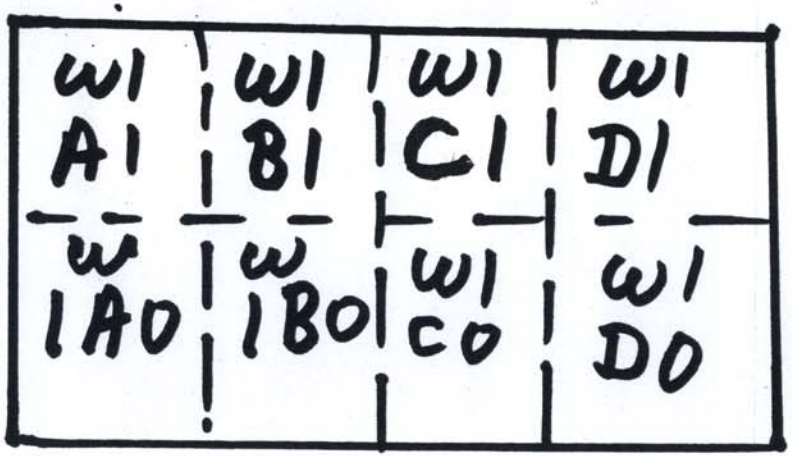
N

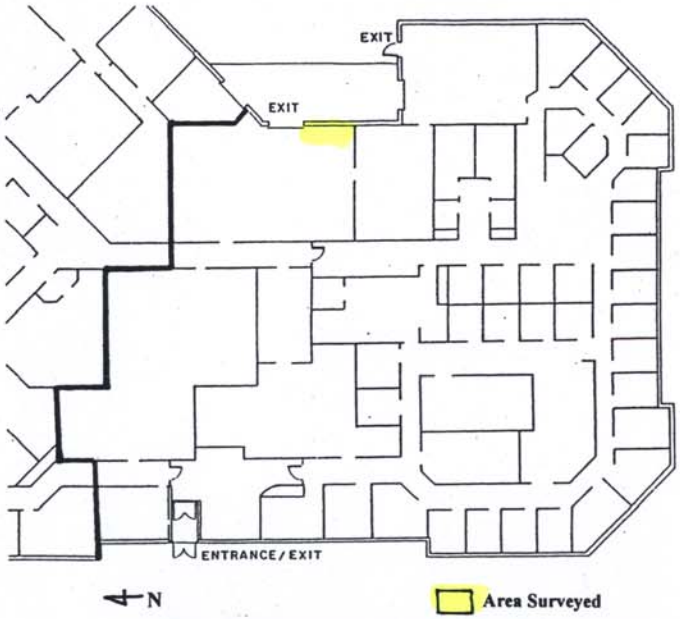
Fl 1-1	Fl 2-1	Fl 3-1	Fl 4-1	
Fl 1-2	Fl 2-2	Fl 3-2	Fl 4-2	SRS-6
Fl 1-3	Fl 2-3	Fl 3-3	Fl 4-3	SRS-5
Fl 1-4	Fl 2-4	Fl 3-4	Fl 4-4	SRS-4
Fl 1-5	Fl 2-5	Fl 3-5	Fl 4-5	SRS-3
				SRS-2
				SRS-1
		Fl L1		Fl L2



Shipping & Receiving Mezzanine Walls

Wall 1 (North Wall)

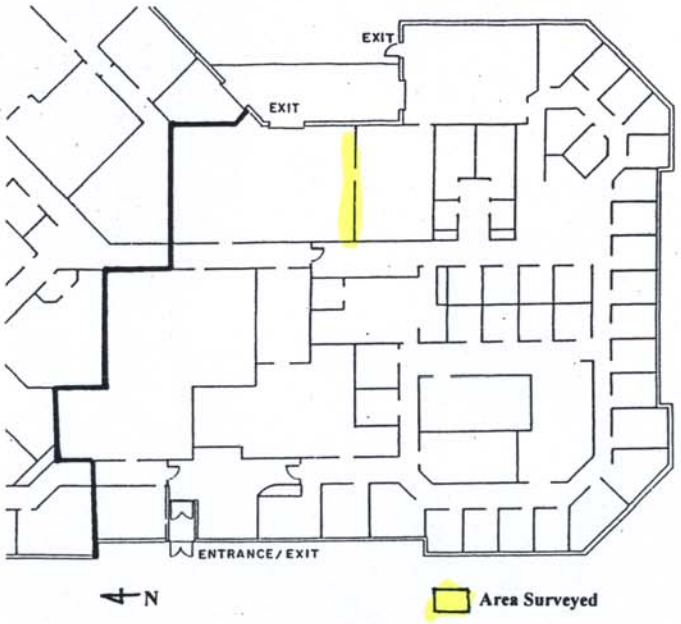




Shipping & Receiving Mezzanine Walls

Wall 2 (East Wall)

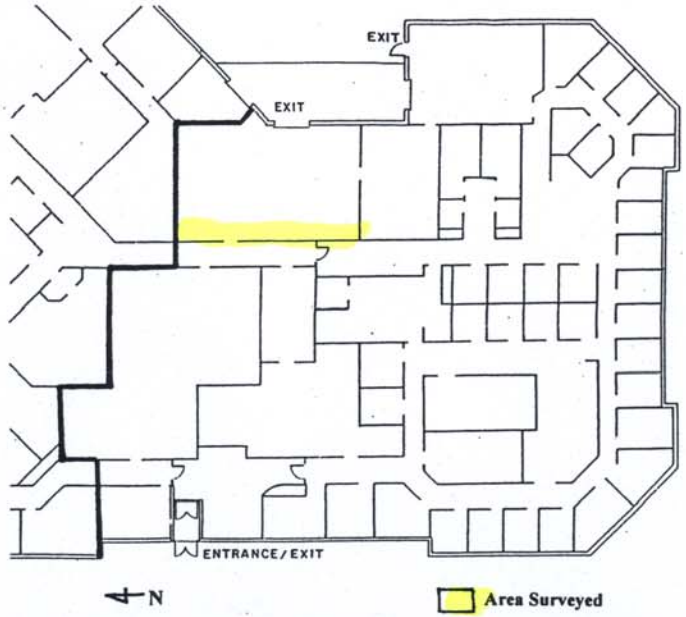
W2A1	W2B1	W2C1
W2A0	W2B0	W2C0



Shipping & Receiving Mezzanine Walls

Wall 3 (South Wall)

W3 A1	W3 B1	W3 C1	W3 D1	W3 E1	W3 F1	W3 G1	W3 H1
W3 A0	W3 B0	W3 C0	W3 D0	W3 E0	W3 F0	W3 G0	W3 H0



Shipping & Receiving Mezzamine Walls

Wall 4 (west wall)

W4 A1	W4 B1	W4 C1	W4 D1	W4 E1	W4 F1	W4 G1	W4 H1	W4 I1	W4 J1
W4A01	W4 B0	W4 C0	W4 D0	W4 E0	W4 F0	W4 G0	W4 H0	W4 I0	W4 J0

Table B-1: Shipping Receiving Area Survey Results - Walls

Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
W1 A0	0	160	0.5	7	16	68	-0.3	2	-13	19	
W1 A1	0	140	-1.9	6	-98	63	-0.3	2	4	20	
W1 B0	2	140	9.8	12	-117	62	-0.3	2	-6	19	
W1 B1	0	140	5.1	10	-57	65	-0.8	2	-4	20	
W1 C0	2	160	0.5	7	-91	63	-0.3	2	-4	20	
W1 C1	0	190	0.5	7	-90	63	-0.3	2	-4	20	
W1 D0	2	170	0.5	7	-42	65	-0.8	2	-12	19	
W1 D1	1	180	2.8	9	-72	64	-0.3	2	-7	19	
W1 E0	0	140	0.5	7	-104	62	0.8	2	1	20	
W1 E1	0	140	-1.9	6	-50	65	-0.8	2	-9	19	
W1 E1 D	2	160	-4.2	3	-86	63	-0.8	2	4	20	
W1 F0	1	130	-4.2	3	-72	64	-0.3	2	5	20	
W1 F1	1	160	-1.9	6	-98	63	0.3	2	10	20	
W1 G0	2	180	0.5	7	-46	65	0.8	2	0	20	
W1 G1	2	200	0.5	7	-60	64	-0.3	2	-4	20	
W1 H0	1	120	0.5	7	-21	66	1.4	3	6	20	
W1 H1	0	160	-1.9	6	-62	64	0.3	2	6	20	
W2 J0	4	200	2.5	13	59	90	0.3	2	-6	19	cinder block
W2 H0	2	220	-2.5	11	52	90	0.8	2	-2	20	cinder block
W2 H1	2	240	-2.5	11	95	92	0.3	2	13	20	cinder block
W2 H1 D	2	240	0.0	12	46	90	-0.8	2	9	20	cinder block
W2 I0	3	200	0.0	12	-6	88	0.3	2	1	20	cinder block
W2 I1	2	240	2.5	13	-5	88	0.8	2	-3	20	cinder block
W2 J1	2	240	0.0	12	85	91	1.4	3	7	20	cinder block
W2 A0	0	150	-4.2	3	98	72	2.0	3	10	20	drywall
W2 A1	0	130	-1.9	6	-42	65	0.3	2	13	20	drywall
W2 A1 D	1	120	0.5	7	-33	66	0.8	2	7	20	drywall
W2 B0	1	150	0.5	7	83	71	-1.4	1	1	20	drywall
W2 B1	0	120	2.8	9	16	68	0.8	2	16	20	drywall
W2 C0	1	140	2.8	9	-8	67	-0.3	2	13	20	drywall
W2 C1	1	140	0.5	7	36	69	-0.8	2	15	20	drywall
W2 D0	2	20	2.3	15	18	94	-0.8	2	11	20	cinder block
W2 D1	2	180	2.3	15	-50	92	1.4	3	8	20	cinder block
W2 D1 D	1	200	7.5	14	-28	92	2.0	3	1	20	cinder block
W2 E0	2	200	4.7	16	3	93	0.3	2	18	21	cinder block
W2 E1	3	210	9.8	15	39	95	-0.3	2	9	20	cinder block
W2 EP1	0	150	2.8	9	-3	67	-0.8	2	-4	20	electrical box
W2 EP2	1	150	2.8	9	-36	66	-0.3	2	10	20	electrical box
W2 EP3	1	120	-1.9	6	-59	65	-1.4	1	19	21	electrical box
W2 F0	0	110	-1.9	6	-33	66	0.3	2	-12	19	garage door
W2 F1	0	120	-1.9	6	2	67	0.8	2	18	21	garage door
W2 G0	1	110	0.5	7	-54	65	1.4	3	17	21	garage door
W2 G1	0	110	-4.2	3	-73	64	-1.4	1	13	20	garage door
W3 A0	0	110	2.0	7	65	73	-0.3	2	40	22	
W3 A1	0	120	2.0	7	-51	68	-0.8	2	16	20	

Table B-1: Shipping Receiving Area Survey Results - Walls

Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
W3 B0	0	110	2.0	7	-22	70	-0.3	2	10	20	
W3 B1	0	100	2.0	7	35	72	0.8	2	1	20	
W3 C0	0	110	2.0	7	8	71	-0.8	2	5	20	
W3 C0 D	0	110	2.0	7	22	72	0.8	2	-7	19	
W3 C1	0	110	-3.0	2	-35	69	0.3	2	1	20	
W3 D0	2	140	-1.9	6	8	68	0.3	2	-4	20	
W3 D0	0	110	2.0	7	24	72	1.4	3	5	20	
W3 D1	3	120	0.5	7	-28	66	-0.3	2	-13	19	
W3 D1	0	120	2.0	7	-54	68	-0.8	2	6	20	
W3 E0	0	140	2.8	9	-10	67	0.8	2	-4	20	
W3 E1	3	120	-1.9	6	-24	66	0.8	2	2	20	
W3 F0	2	160	5.1	10	-59	65	-1.4	1	13	20	
W3 F0 D	2	130	-4.2	3	5	68	-0.3	2	7	20	
W3 F1	2	120	2.8	9	-2	67	-0.3	2	-6	19	
W3 G0	1	150	0.5	7	64	70	0.3	2	2	20	
W3 G0	4	220	-3.0	2	-6	70	1.4	3	7	20	
W3 G0 D	1	140	-1.9	6	29	69	1.4	3	-8	19	
W3 G1	3	140	0.5	7	-16	67	-0.8	2	11	20	
W4 A0	2	160	6.9	10	0	71	-0.8	2	8	20	
W4 A1	1	180	6.9	10	-5	70	0.3	2	-6	19	
W4 B0	1	160	16.7	14	-62	68	-1.4	1	-3	20	
W4 B1	2	200	2.0	7	-13	70	-1.4	1	-11	19	
W4 B1 D	3	200	6.9	10	-60	68	-1.4	1	-3	20	
W4 C0	1	240	14.3	13	2	71	1.4	3	-2	20	
W4 C1	3	220	-0.5	5	-46	69	-0.8	2	-3	20	
W4 D0	2	220	9.4	11	-22	70	1.4	3	-11	19	
W4 D1	2	220	-3.0	2	-17	70	-0.8	2	-6	19	
W4 E0	4	160	0.5	7	-24	66	-1.4	1	-10	19	
W4 E1	4	180	2.8	9	21	68	-0.3	2	-14	19	
W4 F0	3	180	0.5	7	-70	64	0.3	2	-5	19	
W4 F1	3	160	2.8	9	-20	66	-0.8	2	-7	19	
W4 G0	3	170	7.5	11	-28	66	-0.8	2	-6	19	
W4 G1	0	180	7.5	11	-16	67	0.3	2	8	20	
W4 H0	0	140	5.1	10	-10	67	0.8	2	-11	19	
W4 H0 D	0	150	2.8	9	-20	66	-0.8	2	-5	20	
W4 H1	4	180	5.1	10	-44	65	0.3	2	-10	19	
W4 I0	0	200	0.5	7	-33	66	0.3	2	-5	19	
W4 I0 D	0	200	7.5	11	-85	63	0.3	2	-2	20	
W4 I1	1	200	-1.9	6	-37	66	-1.4	1	-8	19	
W4 Door 3	1	120	0.5	7	-64	64	-0.3	2	-22	19	interior surface

Table B-2: Shipping Receiving Area Survey Results - Floors

Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
FL 1-1	0	200	5.1	10	329	81	0.8	2	13	20	
FL 1-2	0	180	0.5	7	293	80	-0.3	2	-6	19	
FL 1-3	0	180	5.1	10	349	82	-1.4	1	6	20	
FL 1-3 D	0	160	9.8	12	305	80	-0.8	2	-2	20	
FL 1-4	0	180	12.1	13	322	81	0.8	2	5	20	
FL 1-5	0	110	7.5	11	360	82	0.8	2	0	20	
FL 1-6	0	110	28.5	17	365	83	-0.3	2	-3	20	
FL 1-6 D	0	120	7.5	11	406	84	2.0	3	0	20	
FL 1-7	0	120	14.5	13	419	85	-0.8	2	6	20	
FL 1-8	0	110	2.8	9	340	82	-0.3	2	2	20	
FL 1-9	0	120	9.8	12	353	82	0.3	2	-19	19	
FL 1-10	1	120	-4.2	3	221	77	-0.8	2	-2	20	
FL 2-1	0	180	7.5	11	322	81	-0.8	2	3	20	
FL 2-2	1	120	12.1	13	349	82	-0.3	2	4	20	
FL 2-3	1	110	2.8	9	370	83	-0.8	2	6	20	
FL 2-3 D	2	130	14.5	13	352	82	0.3	2	-12	19	
FL 2-4	1	120	33.2	19	331	81	-0.8	2	-13	19	
FL 2-5	1	120	5.1	10	373	83	0.3	2	5	20	
FL 2-6	1	120	2.8	9	397	84	0.3	2	0	20	
FL 2-7	1	110	-1.9	6	327	81	0.3	2	-1	20	
FL 2-8	0	110	16.8	14	358	82	0.3	2	-13	19	
FL 2-9	0	110	2.8	9	321	81	-0.3	2	-3	20	
FL 2-10	0	110	-1.9	6	101	72	0.3	2	-13	19	
FL 3-1	0	200	0.5	7	352	82	0.8	2	10	20	
FL 3-2	0	120	2.8	9	295	80	-0.3	2	1	20	
FL 3-2 D	1	120	2.8	9	326	81	-0.8	2	7	20	
FL 3-3	1	140	14.5	13	469	86	-0.3	2	-7	19	
FL 3-4	1	140	35.5	19	785	97	-0.3	2	13	20	
FL 3-5	0	140	37.9	20	739	96	-0.3	2	9	20	
FL 3-6	0	120	2.8	9	370	83	0.3	2	2	20	
FL 3-7	0	120	2.8	9	350	82	0.8	2	-7	19	
FL 3-8	0	110	9.8	12	427	85	-0.3	2	7	20	
FL 3-9	0	110	-1.9	6	161	74	2.0	3	-4	20	
FL 3-10	0	110	-4.2	3	85	71	0.3	2	-1	20	
FL 4-1	0	160	5.1	10	347	82	2.5	3	-14	19	
FL 4-2	0	120	5.1	10	427	85	0.8	2	-4	20	
FL 4-3	1	130	23.8	16	549	89	1.4	3	-4	20	
FL 4-4	1	140	0.5	7	414	84	-0.3	2	-7	19	
FL 4-5	0	120	9.8	12	365	83	1.4	3	5	20	
FL 4-6	0	110	2.8	9	422	85	0.8	2	2	20	
FL 4-6 D	0	120	5.1	10	350	82	0.3	2	-2	20	
FL 4-7	0	110	9.8	12	425	85	-0.3	2	6	20	
FL 4-8	0	100	2.8	9	329	81	-0.8	2	-4	20	
FL 4-9	0	110	-1.9	6	142	74	0.8	2	11	20	
FL 4-10	0	120	0.5	7	386	83	0.3	2	7	20	

Table B-2: Shipping Receiving Area Survey Results - Floors

Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
FL 5-1	0	100	-4.2	3	127	73	-0.8	2	15	20	
FL 5-2	0	110	-4.2	3	138	73	0.8	2	-4	20	
FL 5-2 D	0	110	-1.9	6	148	74	-1.4	1	-14	19	
FL 5-3	0	100	2.8	9	137	73	-0.8	2	10	20	
FL 5-4	0	110	-1.9	6	65	70	1.4	3	0	20	
FL 5-5	0	120	-4.2	3	164	75	-0.8	2	9	20	
FL 5-6	0	110	5.1	10	384	83	-0.3	2	-3	20	
FL 5-7	0	120	9.8	12	327	81	-0.3	2	-1	20	
FL 5-7 D	0	120	0.5	7	288	80	0.3	2	-9	19	
FL 5-8	0	110	2.8	9	339	82	-1.4	1	5	20	
FL 5-9	0	100	-4.2	3	101	72	-0.8	2	-8	19	
FL 5-9D	0	100	-4.2	3	121	73	-0.3	2	-7	19	
FL 5-10	0	120	-1.9	6	101	72	0.3	2	-8	19	
FL 6-1	0	100	-1.9	6	151	74	1.4	3	2	20	
FL 6-2	0	100	-1.9	6	114	72	0.3	2	-3	20	
FL 6-3	0	100	-1.9	6	148	74	0.3	2	-8	19	
FL 6-3 D	0	110	-4.2	3	160	74	0.3	2	-5	20	
FL 6-4	0	120	-4.2	3	121	73	0.8	2	-5	20	
FL 6-5	0	120	-4.2	3	148	74	0.3	2	9	20	
FL 6-6	0	110	0.5	7	274	79	-0.3	2	6	20	
FL 6-7	0	120	5.1	10	331	81	2.0	3	-4	20	
FL 6-8	0	110	-4.2	3	363	83	1.4	3	-21	19	
FL 6-9	0	120	-1.9	6	116	73	-0.8	2	-2	20	
FL 6-10	0	100	-1.9	6	83	71	-0.8	2	0	20	
FL 6-10 D	1	100	-1.9	6	125	73	-0.8	2	13	20	
FL 7-1	0	110	-4.2	3	161	74	-1.4	1	9	20	
FL 7-2	0	110	-4.2	3	182	75	0.3	2	1	20	
FL 7-3	0	110	-1.9	6	132	73	0.8	2	1	20	
FL 7-4	0	110	0.5	7	218	77	-0.8	2	5	20	
FL 7-5	0	120	-4.2	3	163	75	0.3	2	8	20	
FL 7-6	0	110	-4.2	3	192	76	-0.8	2	7	20	
FL 7-7	0	120	-4.2	3	153	74	0.8	2	6	20	
FL 7-8	0	110	-1.9	6	147	74	-0.3	2	3	20	
FL 7-9	0	100	-1.9	6	114	72	2.5	3	-7	19	
FL 7-10	0	100	-4.2	3	158	74	1.4	3	-7	19	
FL 8-1	0	100	2.8	9	99	72	0.3	2	1	20	
FL 8-2	0	110	-4.2	3	173	75	0.3	2	13	20	
FL 8-3	0	100	-1.9	6	138	73	-0.8	2	3	20	
FL 8-4	0	120	-4.2	3	147	74	0.8	2	-5	20	
FL 8-5	0	120	-1.9	6	176	75	-0.8	2	-2	20	
FL 8-6	0	120	-4.2	3	127	73	0.8	2	-1	20	
FL 8-7	0	120	-4.2	3	116	73	4.8	4	6	20	
FL 8-8	0	110	-4.2	3	158	74	0.3	2	-2	20	
FL 8-8 D	0	120	-1.9	6	122	73	0.8	2	-4	20	
FL 8-9	0	100	-4.2	3	147	74	0.3	2	12	20	

Table B-2: Shipping Receiving Area Survey Results - Floors

Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
FL 8-10	0	100	-4.2	3	109	72	-0.8	2	-4	20	

Table B-3: Shipping Receiving Area Survey Results - Mezzanine Walls

Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
W1 A0	1	120	0.5	7	-114	62	2.0	3	-7	19	
W1 A0 D	0	120	2.8	9	-112	62	0.8	2	0	20	
W1 A1	0	130	7.5	11	0	67	2.0	3	-1	20	
W1 B0	2	140	2.8	9	-49	65	-0.3	2	1	20	
W1 B1	1	140	0.5	7	-57	65	-0.3	2	0	20	
W1 C0	0	150	0.5	7	-54	65	1.4	3	14	20	
W1 C1	0	140	0.5	7	-64	64	-0.3	2	4	20	
W1 D0	0	160	0.5	7	-86	63	-0.3	2	14	20	
W1 D1	0	180	5.1	10	3	67	-0.3	2	14	20	
W2 A0	1	200	0.5	7	251	75	-1.4	1	10	23	
W2 A1	0	240	0.5	7	241	75	-0.3	2	22	23	
W2 B0	1	230	0.5	7	223	74	-1.4	1	15	23	
W2 B1	1	200	2.8	8	248	75	-0.8	2	9	23	
W2 C0	1	190	-1.9	5	112	69	-0.3	2	-3	22	
W2 C0 D	1	180	0.5	7	151	71	-1.4	1	0	22	
W2 C1	1	200	7.5	11	238	75	-0.8	2	29	24	
W3 A0	0	150	5.1	10	-28	63	0.3	2	8	23	
W3 A1	1	150	2.8	8	-15	63	-0.8	2	13	23	
W3 B0	1	140	0.5	7	49	67	-0.8	2	4	23	
W3 B1	1	160	0.5	7	64	73	-0.3	2	12	20	
W3 C0	1	140	5.1	10	65	67	-0.8	2	5	23	
W3 C1	2	150	2.8	8	37	66	0.3	2	7	23	
W3 D0	2	130	7.5	11	28	65	-0.3	2	-7	22	
W3 D1	0	150	2.8	8	-16	63	-0.8	2	7	23	
W3 E0	1	140	7.5	11	-88	60	-1.4	1	4	23	
W3 E1	2	140	-4.2	3	-16	63	-0.3	2	12	23	
W3 F0	1	140	0.5	7	-29	63	-1.4	1	7	23	
W3 F1	1	130	0.5	7	42	66	-1.4	1	15	23	
W3 F1 D	1	140	2.8	8	33	66	-0.8	2	6	23	
W3 G0	2	150	-4.2	3	-46	62	-0.8	2	1	22	
W3 G1	2	160	5.1	10	72	68	-0.3	2	-1	22	
W3 H0	0	120	2.8	8	-31	63	-1.4	1	-7	22	
W3 H1	2	150	0.5	7	-18	63	0.3	2	14	23	
W3 H1 D	2	140	0.5	7	-7	64	-0.8	2	-2	22	
W4 A0	0	120	0.5	7	-2	64	-1.4	1	9	23	
W4 A1	0	145	5.1	10	83	68	-1.4	1	7	23	
W4 B0	1	120	-1.9	5	-24	63	-0.8	2	3	23	
W4 B1	1	120	0.5	7	-23	63	0.3	2	-7	22	
W4 C0	1	130	-4.2	3	44	66	-0.3	2	15	23	
W4 C1	0	150	0.5	7	39	66	-0.8	2	8	23	
W4 C1 D	1	140	7.5	11	72	68	-1.4	1	2	22	
W4 D1	0	110	-0.5	4.9	69.7	70.0	-1.4	1	3	20	
W4 DO	0	120	-0.5	4.9	62.1	69.6	-1.4	1	3	20	
W4 E0	0	110	6.4	9.1	36.4	68.6	-0.8	2	6	20	
W4 E0 D	0	120	4.1	8.0	27.3	68.2	-0.3	2	6	20	

Table B-3: Shipping Receiving Area Survey Results - Mezzanine Walls

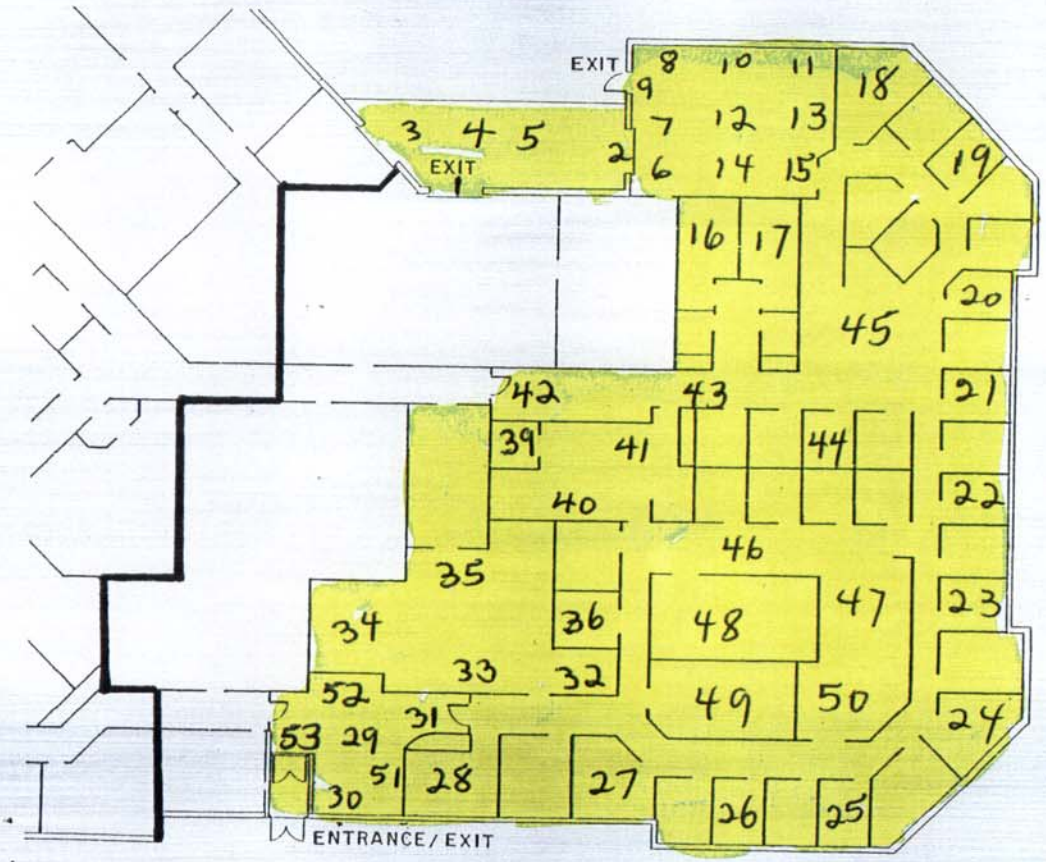
Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
W4 E1	0	120	1.8	6.6	69.7	70.0	-0.3	2	-3	20	
W4 F0	2	180	-1.9	6	-42	65	0.8	2	4	20	
W4 F1	1	160	-1.9	6	-39	65	-0.8	2	-2	20	
W4 F1 D	0	140	5.1	10	-41	65	3.1	3.33	-7	19	
W4 G0	1	160	0.5	7	-52	65	2.5	3	-21	19	
W4 G1	0	120	-1.9	6	-67	64	-0.3	2	0	20	
W4 H0	0	210	0.5	7	11	68	0.3	2	2	20	
W4 H1	1	200	0.5	7	-8	67	0.8	2	-5	20	
W4 I0	0	220	0.5	7	-72	64	-0.8	2	-5	20	
W4 I1	0	150	0.5	7	-10	67	-0.3	2	-7	19	
W4 J0	0	120	0.5	7	-65	64	0.3	2	-14	19	
W4 J1	0	160	2.8	9	-64	64	0.3	2	15	20	

Table B-4: Shipping Receiving Area Survey Results - Mezzanine Walls

Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
FL 1-1	0	110	7.5	11	-60	64	-0.3	2	-20	19	
FL 1-1 D	0	110	5.1	10	-50	65	0.3	2	-6	19	
FL 1-2	0	110	2.8	9	-39	65	0.8	2	-8	19	
FL 1-3	0	120	0.5	7	-5	67	-0.3	2	-22	19	
FL 1-4	1	120	14.5	13	-36	66	5.4	4	8	20	
FL 1-4	0	110	7.5	11	-11	67	0.8	2	-3	20	
FL 1-4 D	0	110	14.5	13	5	68	0.3	2	2	20	
FL 1-5	1	120	7.5	11	23	68	-1.4	1	-3	20	
FL 2-1	0	110	14.5	13	-36	66	0.3	2	-9	19	
FL 2-2	1	120	23.8	16	75	71	1.4	3	-13	19	
FL 2-3	1	110	23.8	16	88	71	-1.4	1	-10	19	
FL 2-4	0	110	5.1	10	-13	67	0.8	2	-11	19	
FL 2-4 D	1	120	23.8	16	28	69	0.3	2	8	20	
FL 2-5	1	110	0.5	7	-42	65	2.0	3	-17	19	
FL 3-1	1	120	16.8	14	54	70	-0.3	2	-8	19	
FL 3-2	0	110	19.2	15	29	69	0.8	2	0	20	
FL 3-3	0	110	5.1	10	0	67	1.4	3	-6	19	
FL 3-4	0	110	7.5	11	-20	66	-0.3	2	1	20	
FL 3-5	0	120	21.5	16	67	70	-0.3	2	11	20	
FL 4-1	1	110	12.1	13	-62	64	-0.3	2	-14	19	
FL 4-2	0	110	23.8	16	-15	67	0.3	2	-7	19	
FL 4-3	0	120	7.5	11	-42	65	-0.8	2	2	20	
FL 4-4	0	110	2.8	9	-47	65	0.3	2	-13	19	
FL 4-5	2	120	28.5	17	49	70	2.0	3	-6	19	
FL L-1	1	120	19.2	15	77	71	1.4	3	-13	19	Landing Area
FL L-2	0	110	5.1	10	-28	66	1.4	3	-4	20	Landing Area
SRS 1	NA	NA	NA	NA	NA	NA	-0.8	2	-7	19	Metal Grid Stairs
SRS 2	NA	NA	NA	NA	NA	NA	1.4	3	-3	20	Metal Grid Stairs
SRS 3	NA	NA	NA	NA	NA	NA	0.8	2	1	20	Metal Grid Stairs
SRS 4	NA	NA	NA	NA	NA	NA	-1.4	1	1	20	Metal Grid Stairs
SRS 5	NA	NA	NA	NA	NA	NA	0.3	2	-15	19	Metal Grid Stairs
SRS 6	NA	NA	NA	NA	NA	NA	-0.3	2	-8	19	Metal Grid Stairs

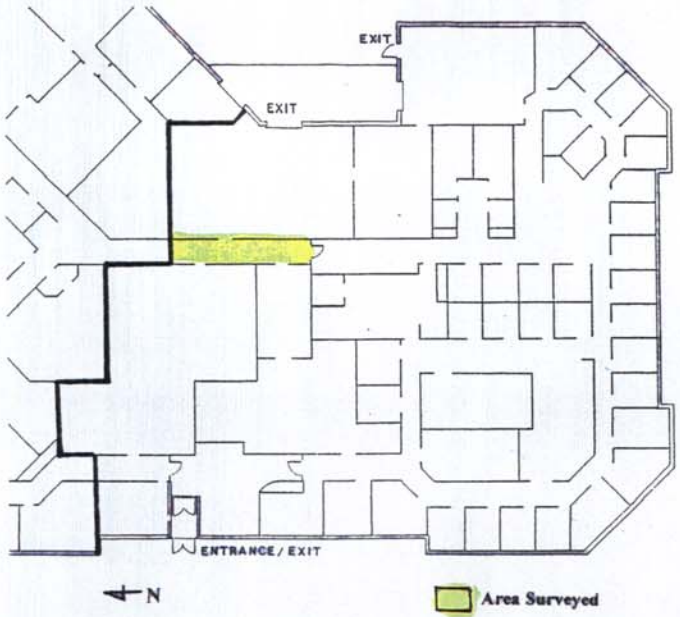
APPENDIX C

RADIOLOGICAL SURVEY LOCATIONS AND DATA TABLES ADMINISTRATIVE AREAS



General Office Area—Floor Samples (OF)
53 2-minute direct readings. Swipe samples taken on concrete and tile, not on carpet.

Hallway Floor Surveys



door to office area

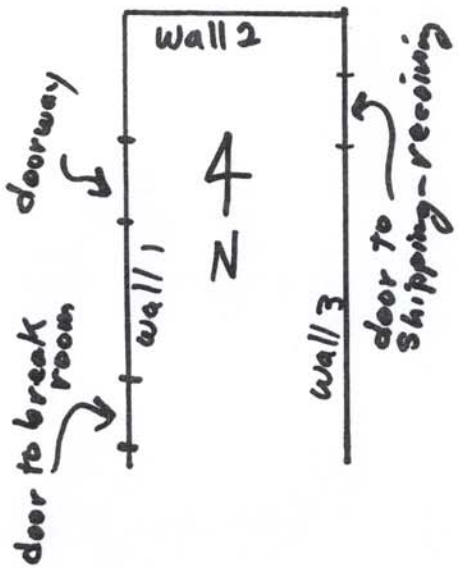
door to shipping/receiving

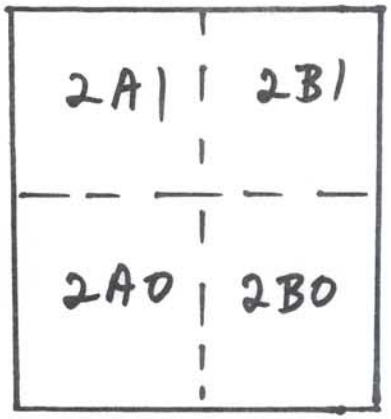
F2	F4	F6	F8	F 10	F12	F 14	F 16	F 18
F1	F3	F5	F7	F9	F 11	F13	F 15	F 17

door to geotech lab.

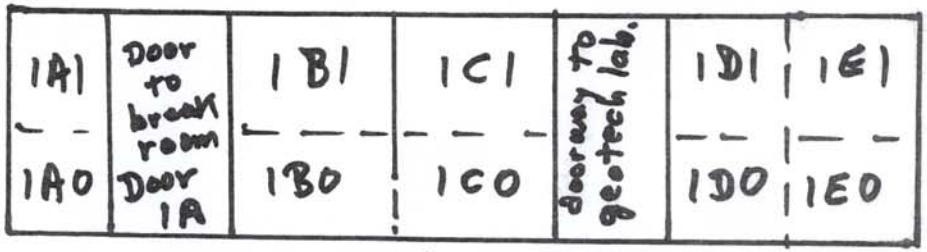
door to break room

Hallway Walls

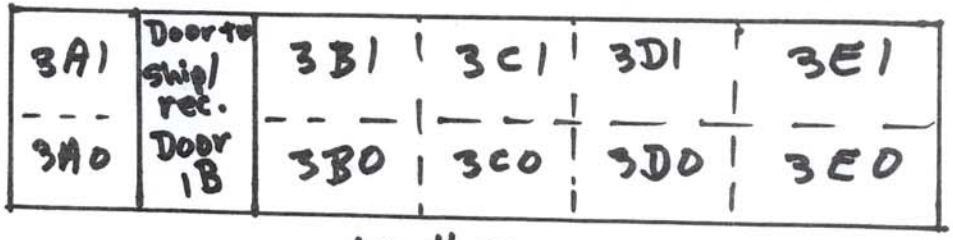




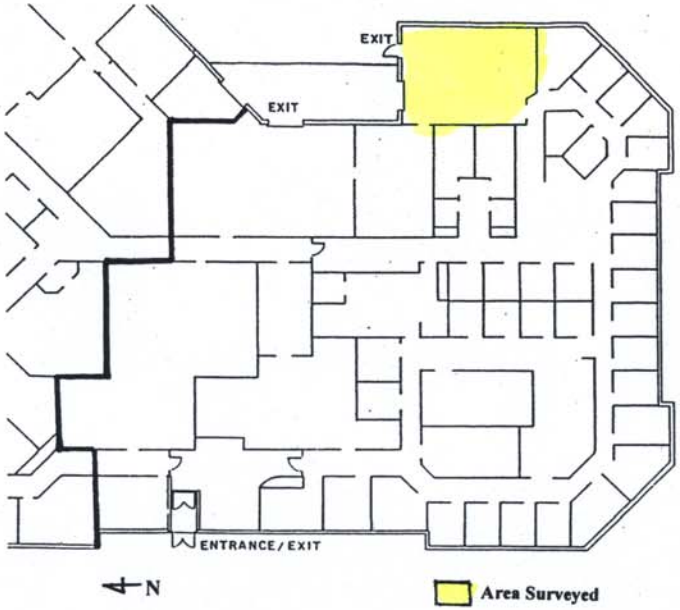
wall 2



wall 1



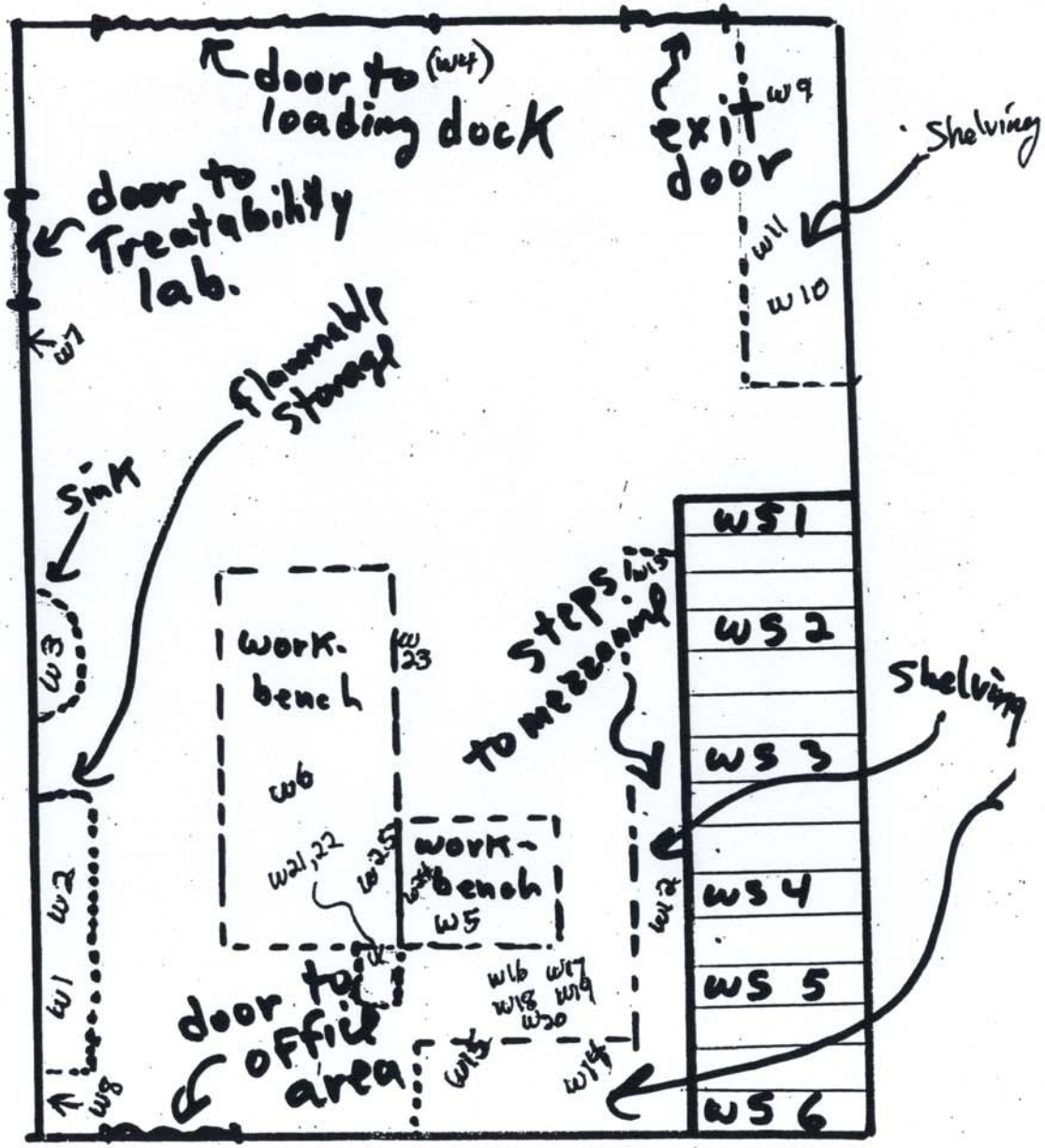
wall 3

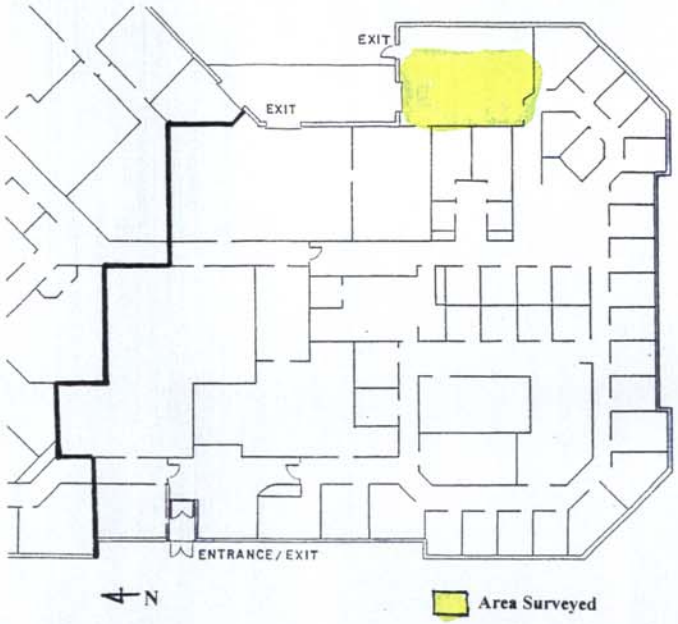


warehouse

6m x 8m

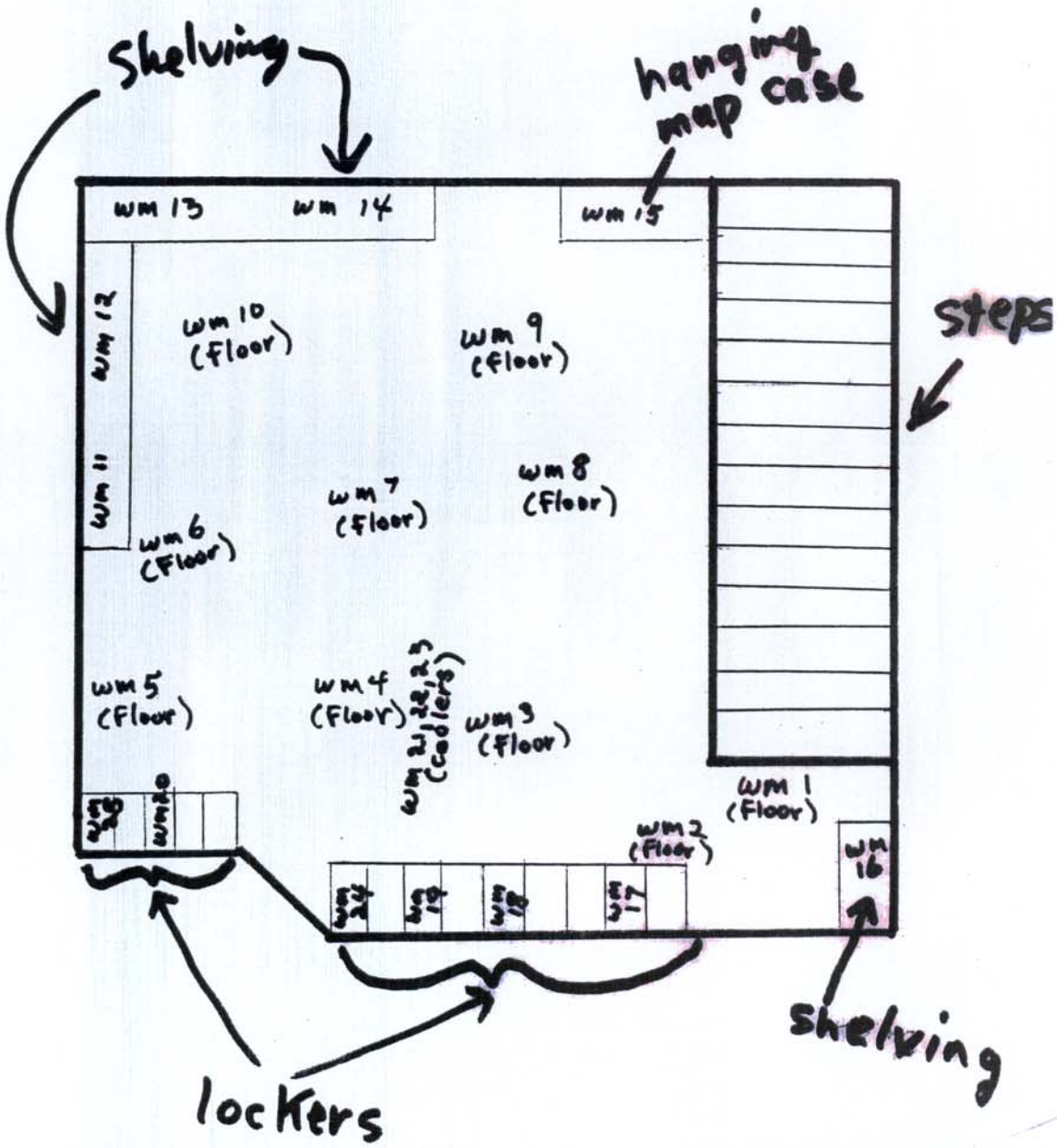
N4

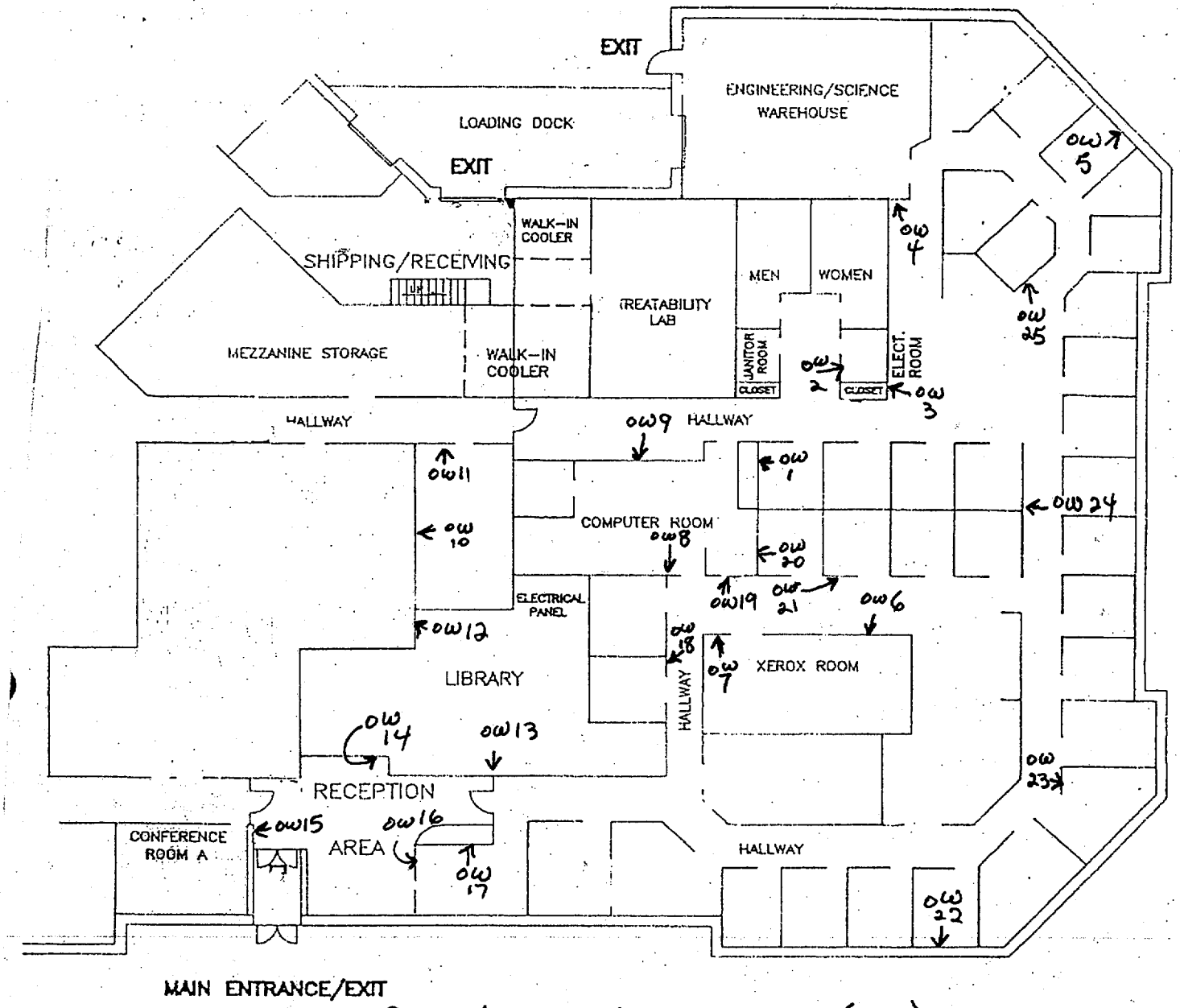




Warehouse
Mezzanine
5m x 5.5m plywood floor

N

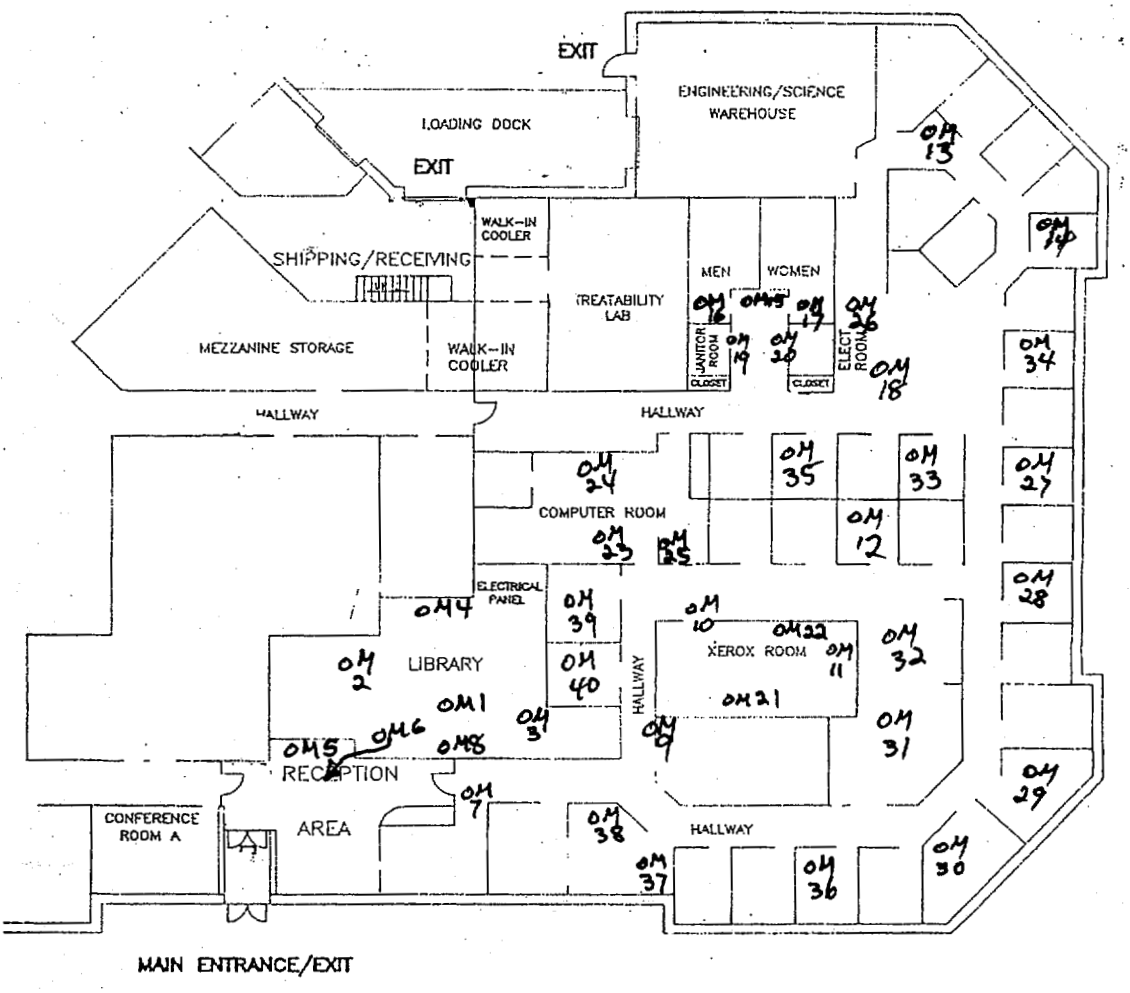




General Office Area – Walls (OW)

25 - 2-min. direct readings w. swipes

Sample pt.	Above Floor (m)	Sample pt.	Above Floor (m)	Sample pt.	Above Floor (m)	Sample pt.	Above Floor (m)
OW 1	1	OW 8	1	OW 14	1	OW 20	1
OW 2	1	OW 9	1.5	OW 15	1	OW 21	1
OW 3	1.5	OW 10	1	OW 16	.5	OW 22	1
OW 4	1.5	OW 11	1	OW 17	1.5	OW 23	1
OW 5	1	OW 12	1.5	OW 18	1	OW 24	1
OW 6	1.5	OW 13	1.5	OW 19	1	OW 25	1
OW 7	1.5						



General Office Area—Miscellaneous

2-minute direct readings, swipes ("so"=swipe only)

OM1 phone(SO)	OM9 door Handle (so)	OM17 Door Plate	OM25 Door knob	OM33 Phone (so)
OM2 table(so)	OM10 thermostat (so)	OM18 File Cabinet	OM26 Drafting table	OM34 Phone (so)
OM3 door handle (so)	OM11 Cabinet handle (so)	OM19 Door knob	OM27 Desktop	OM35 Computer
OM4 door handle (so)	OM12 Drafting table	OM20 Door knob	OM28 counter top	OM36 computer monitor
OM5 fax machine (so)	OM13 file cabinet	OM21 Countertop	OM29 Desktop	OM37 Desk top
OM6 phone	OM14 Desktop	OM22copier	OM30 File cabinet	OM38 computer monitor
OM7 door handle (so)	OM15 Water fountain	OM23 Countertop	OM31 Desk top	OM39 countertop
OM8 door handle (so)	OM16 Door plate	OM24 Countertop	OM32 Drafting table	OM40 countertop

Table C-1: Administrative Areas
Office Floors

Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
F1	0	110	0	7	-50	65	NA	NA	NA	NA	hall - carpet floor
F2	0	120	1	6	93	76	NA	NA	NA	NA	hall - carpet floor
F3	0	110	-2	6	49	70	NA	NA	NA	NA	hall - carpet floor
F4	0	110	6	9	195	80	NA	NA	NA	NA	hall - carpet floor
F5	0	100	0	7	132	73	NA	NA	NA	NA	hall - carpet floor
F6	0	120	1	6	68	75	NA	NA	NA	NA	hall - carpet floor
F7	0	120	3	9	55	70	NA	NA	NA	NA	hall - carpet floor
F8	0	120	3	7	78	75	NA	NA	NA	NA	hall - carpet floor
F9	0	110	0	7	60	70	NA	NA	NA	NA	hall - carpet floor
F10	0	110	-1	3	89	76	NA	NA	NA	NA	hall - carpet floor
F11	0	100	-2	6	60	70	NA	NA	NA	NA	hall - carpet floor
F12	0	100	6	9	93	76	NA	NA	NA	NA	hall - carpet floor
F13	0	110	3	9	34	69	NA	NA	NA	NA	hall - carpet floor
F14	0	110	11	11	55	74	NA	NA	NA	NA	hall - carpet floor
F15	0	100	0	7	24	68	NA	NA	NA	NA	hall - carpet floor
F16	0	120	-1	3	79	75	NA	NA	NA	NA	hall - carpet floor
F17	0	110	-2	6	70	71	NA	NA	NA	NA	hall - carpet floor
F18	0	100	-1	3	89	76	NA	NA	NA	NA	hall - carpet floor
OF 16	NA	NA	3	9	33	69	0	2	50	22	Tile Floor
OF 17	NA	NA	5	10	18	68	0	2	54	22	Tile Floor
OF 18	NA	NA	5	10	106	72	NA	NA	NA	NA	Carpet floor
OF 18 D	NA	NA	10	12	-23	66	1	2	7	20	Tile Floor
OF 19	NA	NA	5	10	-3	67	1	2	29	21	Tile Floor
OF 19 D	NA	NA	-2	6	67	70	NA	NA	NA	NA	Carpet floor
OF 20	NA	NA	5	10	98	72	NA	NA	NA	NA	Carpet floor
OF 20 D	NA	NA	3	9	55	70	NA	NA	NA	NA	Carpet floor
OF 21	NA	NA	-2	6	187	76	NA	NA	NA	NA	Carpet floor
OF 22	NA	NA	-2	6	67	70	NA	NA	NA	NA	Carpet floor
OF 23	NA	NA	3	9	83	71	NA	NA	NA	NA	Carpet floor
OF 24	NA	NA	0	7	101	72	NA	NA	NA	NA	Carpet floor
OF 25	NA	NA	3	9	28	69	NA	NA	NA	NA	Carpet floor
OF 26	NA	NA	3	9	24	68	NA	NA	NA	NA	Carpet floor
OF 26 D	NA	NA	0	7	23	68	NA	NA	NA	NA	Carpet floor
OF 27	NA	NA	-2	6	72	71	NA	NA	NA	NA	Carpet floor
OF 28	NA	NA	0	7	-5	67	NA	NA	NA	NA	Carpet floor
OF 29	NA	NA	24	16	632	92	-1	2	1	20	Stone tile
OF 30	NA	NA	19	15	653	93	0	2	-12	19	Stone tile
OF 30 D	NA	NA	14	13	691	94	0	2	-13	19	Stone tile
OF 31	NA	NA	29	17	567	90	0	2	-6	19	Stone tile
OF 32	NA	NA	3	9	28	69	NA	NA	NA	NA	Carpet floor
OF 33	NA	NA	3	9	75	71	NA	NA	NA	NA	Carpet floor
OF 34	NA	NA	-4	3	72	71	NA	NA	NA	NA	Carpet floor
OF 35	NA	NA	3	9	-2	67	NA	NA	NA	NA	Carpet floor
OF 36	NA	NA	0	7	59	70	NA	NA	NA	NA	Carpet floor
OF 37	NA	NA	3	9	31	69	1	3	-1	20	Tile Floor

Table C-1: Administrative Areas
Office Floors

Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
OF 38	NA	NA	3	9	28	69	0	2	-4	20	Tile Floor
OF 39	NA	NA	7	11	90	71	NA	NA	NA	NA	Carpet floor
OF 40	NA	NA	0	7	34	69	NA	NA	NA	NA	Carpet floor
OF 41	NA	NA	3	9	83	71	NA	NA	NA	NA	Carpet floor
OF 42	NA	NA	-2	6	68	70	NA	NA	NA	NA	Carpet floor
OF 43	NA	NA	-2	6	78	71	NA	NA	NA	NA	Carpet floor
OF 44	NA	NA	10	12	83	71	NA	NA	NA	NA	Carpet floor
OF 45	NA	NA	10	12	0	67	NA	NA	NA	NA	Carpet floor
OF 46	NA	NA	-4	3	29	69	NA	NA	NA	NA	Carpet floor
OF 47	NA	NA	5	10	78	71	NA	NA	NA	NA	Carpet floor
OF 48	NA	NA	0	7	-21	66	NA	NA	NA	NA	Carpet floor
OF 49	NA	NA	5	10	33	69	NA	NA	NA	NA	Carpet floor
OF 50	NA	NA	3	9	50	70	NA	NA	NA	NA	Carpet floor
OF 51	NA	NA	17	14	674	94	-1	2	5	20	Stone tile
OF 52	NA	NA	5	10	647	93	-1	1	-25	19	Stone tile
OF 53	NA	NA	19	15	625	92	-1	2	-4	20	Stone tile

Table C-2: Administrative Areas
Office Walls and Miscellaneous Locations

Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
OW 1	NA	NA	-2	6	-47	65	0	2	-4	20	drywall
OW 2	NA	NA	5	10	-80	64	0	2	7	20	drywall
OW 3	NA	NA	12	13	-52	65	1	2	3	20	drywall
OW 4	NA	NA	5	10	-60	64	1	3	-1	20	drywall
OW 5	NA	NA	7	11	62	70	3	3	-5	20	drywall
OW 6	NA	NA	-2	6	-39	65	1	2	2	20	drywall
OW 7	NA	NA	-4	3	-33	66	1	2	2	20	drywall
OW 8	NA	NA	5	10	-55	65	-1	2	-7	19	drywall
OW 9	NA	NA	10	12	-7	67	0	2	-1	20	drywall
OW 10	NA	NA	0	7	55	70	0	2	-2	20	drywall
OW 11	NA	NA	3	9	-26	66	-1	2	-4	20	drywall
OW 12	NA	NA	5	10	18	68	0	2	-30	18	drywall
OW 13	NA	NA	5	10	-73	64	0	2	6	20	drywall
OW 14	NA	NA	-2	6	-65	64	0	2	-9	19	drywall
OW 15	NA	NA	5	10	36	69	0	2	-1	20	drywall
OW 16	NA	NA	7	11	-20	66	1	2	-17	19	drywall
OW 17	NA	NA	-2	6	-78	64	2	3	-13	19	drywall
OW 18	NA	NA	3	9	-3	67	0	2	-13	19	drywall
OW 19	NA	NA	5	10	-23	66	0	2	1	20	drywall
OW 20	NA	NA	5	10	-67	64	0	2	-6	19	drywall
OW 21	NA	NA	-2	6	-60	64	NA	NA	NA	NA	cubicle -fabric
OW 22	NA	NA	0	7	68	70	3	3	-8	19	window sill
OW 23	NA	NA	5	10	-47	65	NA	NA	NA	NA	cubicle -fabric
OW 24	NA	NA	3	9	-42	65	NA	NA	NA	NA	cubicle -fabric
OW 25	NA	NA	5	10	-34	66	NA	NA	NA	NA	cubicle -fabric
W1 A0	0	110	3	7	27	73	1	2	-6	22	Hallway walls
W1 A1	0	100	8	10	-46	70	0	2	-2	22	Hallway walls
W1 B0	0	100	3	7	-98	68	1	3	-3	22	Hallway walls
W1 B1	0	110	3	7	-70	69	0	2	-11	22	Hallway walls
W1 C0	0	110	3	7	-13	72	1	3	5	23	Hallway walls
W1 C1	1	110	3	7	-76	69	1	2	-2	22	Hallway walls
W1 D0	0	110	6	9	-66	69	1	2	4	23	Hallway walls
W1 D0 D	0	110	-1	3	-43	70	1	2	-11	22	Hallway walls
W1 D1	0	100	8	10	-46	70	1	2	0	23	Hallway walls
W1 D1 D	0	110	6	9	-19	71	1	3	-6	22	Hallway walls
W1 E0	0	110	8	10	-21	71	1	2	-3	22	Hallway walls
W1 E0 D	0	110	8	10	16	73	1	2	-10	22	Hallway walls
W1 E1	0	110	3	7	-35	71	0	2	4	23	Hallway walls
W2 A0	0	100	3	9	-11	67	1	3	-6	19	Hallway walls
W2 A1	0	100	0	7	-13	67	-1	2	2	20	Hallway walls
W2 B0	0	110	5	10	-65	64	0	2	-14	19	Hallway walls
W2 B1	0	100	5	10	-60	64	0	2	-1	20	Hallway walls
W3 A0	0	100	-2	6	-13	67	1	3	0	20	Hallway walls
W3 A0 D	0	100	0	7	-3	67	0	2	-8	19	Hallway walls
W3 A1	0	100	0	7	-5	67	0	2	-6	19	Hallway walls
W3 B0	2	150	3	9	-23	66	0	2	-13	19	Hallway walls
W3 B1	3	180	0	7	-24	66	0	2	7	20	Hallway walls

Table C-2: Administrative Areas
Office Walls and Miscellaneous Locations

Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
W3 C0	3	180	5	10	3	67	0	2	5	20	Hallway walls
W3 C1	1	170	5	10	-37	66	1	2	0	20	Hallway walls
W3 D0	0	150	5	10	-20	66	1	2	-1	20	Hallway walls
W3 D1	2	170	5	10	-50	65	0	2	-5	19	Hallway walls
W3 E0	7	160	0	7	-80	64	0	2	-3	20	Hallway walls
W3 E0 D	6	170	3	9	-60	64	1	3	1	20	Hallway walls
W3 E1	7	180	-4	3	-11	67	0	2	-6	19	Hallway walls
Door 1A	2	130	1	6	-65	69	-1	2	-16	22	Hallway walls
Door 1B	1	120	3	7	-97	68	-1	2	-9	22	Hallway walls
OM 1	NA	NA	NA	NA	NA	NA	0	2	-20	19	phone
OM 2	NA	NA	NA	NA	NA	NA	1	2	-11	19	oval table
OM 3	NA	NA	NA	NA	NA	NA	-1	2	-7	19	door handle
OM 4	NA	NA	NA	NA	NA	NA	0	2	2	20	door handle
OM 5	NA	NA	NA	NA	NA	NA	2	3	-3	20	fax machine
OM 6	NA	NA	NA	NA	NA	NA	0	2	-7	19	receptionist phone
OM 7	NA	NA	NA	NA	NA	NA	1	2	6	20	door handle
OM 9	NA	NA	NA	NA	NA	NA	0	2	-12	19	copy room door handle
OM 10	NA	NA	NA	NA	NA	NA	1	3	5	20	thermostat #3
OM 10 D	NA	NA	NA	NA	NA	NA	1	2	-4	20	thermostat #3
OM 11	NA	NA	NA	NA	NA	NA	1	3	-6	19	Equip Cab Handle
OM 12	NA	NA	-4	3	-29	66	1	2	-13	19	drafting table
OM 13	NA	NA	0	7	39	69	0	2	1	20	top - file cabinet
OM 13	NA	NA	7	11	-24	66	1	2	-10	19	top - file cabinet
OM 14	NA	NA	-4	3	20	68	1	3	-9	19	desk top
OM 14 D	NA	NA	7	11	-42	65	-1	2	-7	19	desk top
OM 14 D	NA	NA	3	9	-39	65	1	2	2	20	desk top
OM 15	NA	NA	-4	3	-132	61	-1	2	-8	19	water fountain
OM 15 D	NA	NA	12	13	-21	66	1	2	8	20	water fountain
OM 16	NA	NA	NA	NA	NA	NA	0	2	-3	20	door plate men's room
OM 17	NA	NA	NA	NA	NA	NA	0	2	7	20	doorplate ladies room
OM 18	NA	NA	-2	6	-42	65	0	2	4	20	file cabinet
OM 19	NA	NA	NA	NA	NA	NA	0	2	-13	19	door knob - janitor's closet
OM 20	NA	NA	NA	NA	NA	NA	-1	2	-2	20	door knob - utlity room
OM 22	NA	NA	17	14	21	68	0	2	-5	19	copier
OM 22 D	NA	NA	14	13	2	67	1	3	-17	19	copier
OM 23	NA	NA	3	9	-23	66	0	2	10	20	countertop
OM 24	NA	NA	10	12	-26	66	0	2	13	20	countertop
OM 25	NA	NA	NA	NA	NA	NA	1	2	0	20	door knob
OM 26	NA	NA	0	7	2	67	1	2	12	20	drafting table
OM 27	NA	NA	5	10	-15	67	0	2	2	20	desk top
OM 28	NA	NA	5	10	-24	66	0	2	11	20	countertop
OM 29	NA	NA	7	11	28	69	0	2	-3	20	desk top
OM 30	NA	NA	3	9	-34	66	-1	2	7	20	file cabinet
OM 31	NA	NA	5	10	-5	67	1	2	0	20	desk top
OM 32	NA	NA	-4	3	-65	64	-1	2	19	21	drafting table
OM 33	NA	NA	NA	NA	NA	NA	0	2	9	20	phone

Table C-2: Administrative Areas
Office Walls and Miscellaneous Locations

Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
OM 33 D	NA	NA	NA	NA	NA	NA	0	2	4	20	phone
OM 34	NA	NA	NA	NA	NA	NA	0	2	0	20	phone
OM 34 D	NA	NA	NA	NA	NA	NA	0	2	9	20	phone
OM 35	NA	NA	-4	3	2	67	-1	2	4	20	desk top
OM 36	NA	NA	NA	NA	NA	NA	0	2	-9	19	computer monitor
OM 37	NA	NA	-4	3	-13	67	0	2	6	20	desk top
OM 38	NA	NA	NA	NA	NA	NA	0	2	-1	20	computer monitor
OM 38 D	NA	NA	NA	NA	NA	NA	0	2	-13	19	computer monitor
OM 39	NA	NA	-4	3	-65	64	1	3	-12	19	counter top
OM 40	NA	NA	-2	6	-52	65	0	2	-5	20	counter top

Table C-3: Administrative Areas
Warehouse and Mezzanine Area

Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
OF 1	NA	NA	12	13	321	81	-1	2	-12	19	Concrete Floor
OF 2	NA	NA	17	14	324	81	-1	2	0	20	Concrete Floor
OF 3	NA	NA	17	14	331	81	0	2	-9	19	Concrete Floor
OF 4	NA	NA	19	15	336	81	1	2	-13	19	Concrete Floor
OF 5	NA	NA	19	15	301	80	0	2	-16	19	Concrete Floor
OF 6	NA	NA	21	16	295	80	1	2	-6	19	Concrete Floor
OF 7	NA	NA	17	14	269	79	-1	2	-7	19	Concrete Floor
OF 8	NA	NA	5	10	252	78	-1	2	-13	19	Concrete Floor
OF 9	NA	NA	7	11	337	82	-1	2	-1	20	Concrete Floor
OF 9 D	NA	NA	29	17	334	81	-1	1	-9	19	Concrete Floor
OF 10	NA	NA	17	14	252	78	0	2	-4	20	Concrete Floor
OF 11	NA	NA	7	11	236	78	-1	2	-6	19	Concrete Floor
OF 12	NA	NA	10	12	345	82	2	3	-4	20	Concrete Floor
OF 13	NA	NA	3	9	365	83	1	3	9	20	Concrete Floor
OF 14	NA	NA	5	10	337	82	-1	2	0	20	Concrete Floor
OF 15	NA	NA	3	9	399	84	-1	2	3	20	Concrete Floor
WM 1	0	110	3	9	-16	67	0	2	-13	19	MezzanineFloor
WM 2	0	110	7	11	-36	66	0	2	-16	19	MezzanineFloor
WM 3	0	110	5	10	-15	67	1	2	-19	19	MezzanineFloor
WM 4	0	110	7	11	-37	66	-1	1	2	20	MezzanineFloor
WM 5	0	110	-2	6	-24	66	0	2	2	20	MezzanineFloor
WM 6	0	100	0	7	-10	67	1	2	-8	19	MezzanineFloor
WM 7	0	110	-2	6	28	69	0	2	-7	19	MezzanineFloor
WM 8	0	100	0	7	-24	66	0	2	-13	19	MezzanineFloor
WM 9	0	120	0	7	-15	67	0	2	-9	19	MezzanineFloor
WM 10	0	110	0	7	-16	67	1	3	-4	20	MezzanineFloor
WM 8 D	0	110	0	7	-24	66	0	2	-9	19	MezzanineFloor
WM 9 D	0	110	-2	6	-20	66	0	2	-4	20	MezzanineFloor
WM 11	0	100	3	9	-55	65	0	2	1	20	shelf
WM 12	0	100	-2	6	-85	63	0	2	-3	20	shelf
WM 13	0	100	0	7	-59	65	0	2	-10	19	shelf
WM 14	0	100	-2	6	-52	65	1	2	-11	19	shelf
WM 15	0	100	-2	6	-54	65	0	2	-4	20	map file
WM 16	0	100	-2	6	-21	66	1	2	-9	19	shelf
WM 17	0	100	3	9	-7	67	0	2	3	20	locker
WM 18	0	100	-4	3	-10	67	-1	2	1	20	locker
WM 19	0	110	3	9	-44	65	-1	2	8	20	locker
WM 20	0	100	0	7	-41	65	1	2	-3	20	locker
WM 21	0	110	0	7	-47	65	-1	2	5	20	sample cooler
WM 22	0	110	3	9	-39	65	0	2	-20	19	sample cooler
WM 23	0	120	0	7	-49	65	0	2	-9	19	sample cooler
WM 24	0	100	3	9	-36	66	0	2	-6	19	locker
WM 25	0	100	0	7	-46	65	0	2	-11	19	locker
WM 25 D	0	110	0	7	-49	65	0	2	-14	19	locker
WS-1	NA	NA	NA	NA	NA	NA	1	2	0	20	warehouse steps

Table C-3: Administrative Areas
Warehouse and Mezzanine Area

Grid Element	Alpha Scan (cpm)	Beta Scan (cpm)	Direct Alpha dpm/100 cm^2	Direct Alpha TPU dpm/100 cm^2	Direct Beta dpm/100 cm^2	Direct Beta TPU dpm/100 cm^2	Removable Alpha dpm/100 cm^2	Removable Alpha TPU dpm/100 cm^2	Removable Beta dpm/100 cm^2	Removable Beta TPU dpm/100 cm^2	Comments
WS-2	NA	NA	NA	NA	NA	NA	0	2	-4	20	warehouse steps
WS-3	NA	NA	NA	NA	NA	NA	-1	2	-5	20	warehouse steps
WS-4	NA	NA	NA	NA	NA	NA	0	2	10	20	warehouse steps
WS-5	NA	NA	NA	NA	NA	NA	-1	2	-11	19	warehouse steps
WS-6	NA	NA	NA	NA	NA	NA	0	2	-1	20	warehouse steps
W1	0	80	-2	6	-49	65	-1	2	-9	19	cabinet shelf
W2	0	90	0	7	-52	65	-1	2	-2	20	cabinet shelf
W3	0	110	7	11	91	71	-1	2	-5	19	sink
W4	0	110	-4	3	-67	64	0	2	-6	19	loading dock door
W5	0	130	3	9	264	79	0	2	-14	19	workbench
W5 D	0	110	12	13	264	79	1	3	-7	19	workbench
W6	0	120	0	7	2	67	-1	2	0	20	workbench
W7	0	120	-2	6	46	69	-1	2	-16	19	Wall
W8	0	110	3	9	65	70	0	2	-3	20	Wall
W9	0	110	-2	6	-23	66	0	2	-11	19	shelf
W10	0	110	-4	3	41	69	1	3	-13	19	shelf
W11	NA	NA	NA	NA	NA	NA	-1	2	1	20	generator
W12	0	110	-2	6	-65	64	0	2	0	20	shelf
W13	0	120	0	7	-7	67	0	2	-1	20	shelf
W14	0	110	-4	3	-64	64	0	2	-3	20	shelf
W15	0	110	0	7	-67	64	0	2	-12	19	shelf
W16	NA	NA	NA	NA	NA	NA	1	2	-15	19	sample cooler
W17	NA	NA	NA	NA	NA	NA	0	2	-7	19	sample cooler
W18	NA	NA	NA	NA	NA	NA	0	2	-22	19	sample cooler
W19	NA	NA	NA	NA	NA	NA	1	2	-16	19	sample cooler
W20	NA	NA	NA	NA	NA	NA	0	2	-10	19	sample cooler
W20 D	NA	NA	NA	NA	NA	NA	0	2	0	20	sample cooler
W21	0	110	-4	3	-49	65	-1	2	-11	19	cabinet
W22	0	110	0	7	67	70	-1	2	-9	19	cabinet
W23	NA	NA	NA	NA	NA	NA	-1	1	-16	19	tool chest
W24	NA	NA	NA	NA	NA	NA	0	2	-8	19	grinder
W25	NA	NA	NA	NA	NA	NA	0	2	-17	19	drill press

Align top of FedEx Shipping Label or ASTRA Label here.

FedEx emp: 365418 17NOV04 PRIORITY OVERNIGHT THU

TRK# 8341 8529 5854 FORM 0215 Deliver By: 18NOV04

60532 -IL-US ORD A2

NC ENLA

Customer: Seal only when using a FedEx Ship

40

200

FedEx Express *USA Airbill* FedEx Tracking Number 834185295854

MUR32

Form I.D. No. 0215 Recipient's Copy

RECIPIENT: PEEL HERE

1 From This portion can be removed for Recipient's records.

Date 11-17-04 FedEx Tracking Number 834185295854

Sender's Name Paul Smith Phone 314 426-0880

Company MAXIM TECHNOLOGIES INC

Address 1908 INNERBELT BUS CTR DR Dept./Floor/Suite/Room

City SAINT LOUIS State MO ZIP 63114

2 Your Internal Billing Reference 4509

3 To

Recipient's Name Patricia Pelke Phone

Company US Nuclear Reg Commission Region III

Address 2443 Warrendale Rd

To "HOLD" at FedEx location, print FedEx address. We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address Suite 210 Dept./Floor/Suite/Room

City Lisle State IL ZIP 60532-4352

4a Express Package Service *Packages up to 150 lbs.* Delivery commitment may be later in some areas.

- [X] FedEx Priority Overnight — Next business morning
- [ ] FedEx Standard Overnight — Next business afternoon
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations
- [ ] FedEx 2Day — Second business day
- [ ] FedEx Express Saver — Third business day

FedEx Envelope rate not available. Minimum charge: One-pound rate

4b Express Freight Service *Packages over 150 lbs.* Delivery commitment may be later in some areas.

- [ ] FedEx 1Day Freight* — Next business day
- [ ] FedEx 2Day Freight — Second business day
- [ ] FedEx 3Day Freight — Third business day

* Call for Confirmation:

5 Packaging * Declared value limit $500

- [ ] FedEx Envelope*
- [X] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak
- [ ] Other

6 Special Handling Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — Available only for FedEx Priority Overnight and FedEx 2Day to select ZIP codes
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight
- [ ] HOLD Saturday at FedEx Location — Available only for FedEx Priority Overnight and FedEx 2Day to select locations

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous Goods (including Dry Ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below. Obtain Recip. Acct. No.

- [X] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Total Packages Total Weight Total Charges

nly.

elle-Pal

04173217

MAXIM
TECHNOLOGIES
A DIVISION OF TETRA TECH, INC.

Final Status Survey Report

Submitted To

U.S. Nuclear Regulatory Commission

Materials License 24-17152-02

November 17, 2004

1908 Innerbelt Business
Center Drive
St. Louis, MO 63114

314-426-0880
314-426-4212 (fax)

MAXIM Technologies
A DIVISION OF TETRA TECH, INC.