NRC FORM 313 (5-1997)
10 CFR 30, 32, 33
34, 35, 36, 39 and 40

U. S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0120 EXPIRES: 7/31/1999

Estimated burden per response to comply with this information collection request: 7 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Forward comments regarding burden estimate to the Information and Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0120), Office of Management and Budget, Washington, DC 20503. NRC may not conduct or sponsor, and a person is not required to respond to, an information collection unless it displays a currently valid OMB control number.

APPLICATION FOR MATERIAL LICENSE

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

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

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

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:

IF YOU ARE LOCATED IN:

CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA, RHODE ISLAND, OR VERMONT, SEND APPLICATIONS TO:

LICENSING ASSISTANT SECTION
NUCLEAR MATERIALS SAFETY BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA, PUERTO RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:

ATLANTA FEDERAL CENTER
U S. NUCLEAR REGULATORY COMMISSION, REGION II
61 FORSYTH STREET, S.W., SUITE 23T85
ATLANTA, GEORGIA 30303-3415

IF YOU ARE LOCATED IN:

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

MATERIALS LICENSING SECTION
U S. NUCLEAR REGULATORY COMMISSION, REGION III
801 WARRENVILLE RD.
LISLE, IL 60532-4351

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

NUCLEAR MATERIALS LICENSING SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TX 76011-8064

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

1. THIS IS AN APPLICATION FOR *(Check appropriate item)*
   - [X] A. NEW LICENSE
   - [ ] B. AMENDMENT TO LICENSE NUMBER _____
   - [ ] C. RENEWAL OF LICENSE NUMBER _____

2. NAME AND MAILING ADDRESS OF APPLICANT *(Include Zip code)*
   Schulz Electric Company
   30 Gando Dr
   New Haven, CT 06513

3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED
   30 Gando Dr
   New Haven, CT 06513

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION
   William Newell
   TELEPHONE NUMBER
   203-562-5811

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

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

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

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

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

9. FACILITIES AND EQUIPMENT.

10. RADIATION SAFETY PROGRAM.

11. WASTE MANAGEMENT.

12. LICENSEE FEES *(See 10 CFR 170 and Section 170.31)*
    FEE CATEGORY 3N
    AMOUNT ENCLOSED $ 3,300

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

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

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

CERTIFYING OFFICER – TYPED/PRINTED NAME AND TITLE	SIGNATURE	DATE
Robert C. Davis, President		4-27-05

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			$		
APPROVED BY				DATE	136933

NRC FORM 313 (5-1997)

NMSS/RGNI MATERIALS-002

5. RADIOACTIVE MATERIAL

	a. Element and mass number	b. Chemical and/or physical form	c. Maximum amount that will be possessed at any one time.
1	Any byproduct material with atomic numbers 1 through 96	Contaminated equipment, material and associated waste	Not to exceed 10 millicuries per radioisotope and 1 curie total.
2	Any special nuclear material	Contaminated equipment, material and associated waste	Not to exceed 10 microcuries per radionuclide and 100 microcuries total

The radioactive material possessed will be in the form of mixed fission, corrosion and activation products (byproduct material) present as contamination of equipment that Schulz Electric will possess for the purposes described in Section 6 below. Also present, as contamination, might be trace quantities of special nuclear material.

Trace amounts of source material that might be present will be possessed under the terms of 10 CFR 40.13 Unimportant Quantities of Source Material, or under the general license issued in 10 CFR 40.22 Small Quantities of Source material.

At no time will the quantity of radioactive material possessed exceed the quantity that requires decommissioning funding in accordance with 10 CFR 30.35(d), 10 CFR 40.36(b) or 10 CFR 70.25(d).

Pursuant to 10 CFR 30.35(g), Schulz Electric will maintain drawings and records important to decommissioning and transfer these records to a new licensee before licensed activities are transferred, or assign the records to the appropriate NRC Regional Office before the license is terminated.

. .

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

The licensee will

- Receive contaminated electric motors and associated components from nuclear power plants and other licensees;
- Decontaminate these components;
- Overhaul and repair these components;
- Package, survey, label and manifest these components;
- Transport these components to properly licensed consignees, or;
- Present them to common carriers for transport to properly licensed consignees
- Dispose of radioactive waste produced during these processes.

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

The RSO

The Radiation Safety Officer (RSO) for this license will be John Dougherty. His resume of training and experience is contained in Attachment A.

Authorized Users (AU)

Licensed radioactive material at Schulz Electric will be used by or under the supervision of the RSO or an Authorized User. Authorized Users for this license will be:

Charles W. Eldridge
Nuecell Butler
William Newell

Resumes of the training and experience of the Authorized Users are contained in Attachment A.

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

Before using licensed materials, individuals working in or frequenting restricted areas will have successfully completed the Classroom Training portion of the training courses described below.

Training for Authorized Users (AUs)

Initial classroom training will be in the form of lecture, videotape, or self-study that emphasize practical subject matter important to the safe handling of licensed materials. Duration of initial AU training will be two hours. The technical level of the presentation will be commensurate with the duties of the individual and the expected hazards encountered during routine and emergency conditions.

Frequency of AU Training

Authorized Users will receive training at the following frequencies:

- Initially upon appointment as an AU and before assuming duties with, or in the vicinity of, radioactive materials;
- Whenever there is a significant change in duties, regulations, or the terms and conditions of the license;
- Annually for refresher training.

Training for Radiation Workers

Initial classroom training will be in the form of lecture, videotape, or self-study that emphasize practical subject matter important to the safe handling of licensed materials. Duration of initial Radiation Worker training will be two hours. The technical level of the presentation will be commensurate with the expected hazards encountered during routine and emergency conditions.

Untrained radiation workers may have access to the Restricted Areas only if escorted by a trained Radiation Worker or Authorized User.

Frequency of Radiation Worker Training

Radiation Workers will receive training at the following frequencies:

- Initially upon employment as a Radiation Worker, and before assuming unsupervised duties with, or in the vicinity of, radioactive materials;
- Whenever there is a significant change in duties, regulations, or the terms and conditions of the license;
- Annually for refresher training.

Radiation Safety Training Topics

Initial training and annual refresher training for all of the above-identified categories will include a selection of the topics listed below.

- Fundamentals of Radiation Safety:
  - Characteristics of radiation;
  - Units of radiation dose and quantity of radioactivity;
  - Hazards of exposure to radiation;
  - Levels of radiation from licensed material;
  - Methods of controlling radiation dose (time, distance, and shielding);
  - ALARA concept.
- Radiation Detection Instruments:
  - Operation;
  - Calibration;
  - Limitations of radiation survey instruments;
  - Radiation survey techniques for measuring radiation field;
  - Radiation survey techniques for measuring removable/fixed contamination;
  - Handling and proper use of personnel monitoring equipment.
- Radiation Protection Equipment and Use:
  - Proper use of protective equipment;
  - Decontamination of contaminated protection equipment.
- NRC regulations (10 CFR 19 and 20).
- NRC regulations (10 CFR 31, 32, 34, 35, 36, 39, 40, 70, and 71) as applicable.
- Licensee's operating and emergency procedures.
- Case histories relevant to operations.
- Course Examination (Didactic):
  - Successful completion of closed-book written/oral examination depending on the complexity and hazards of authorized activities;
  - Review of incorrect answers with student.
- On-the Job Training and Examination (Practical):
  - On-the-job training done under the supervision of a qualified individual (AU, RSO, or manufacturer's representative authorized by NRC or an Agreement State) that includes supervised hands-on experience performing the task authorized on the license that are commensurate with the expected hazards during routine and emergency conditions;
  - Practical examination consisting of an assessment by the RSO to ensure that each proposed AU is qualified to work independently and that each individual is knowledgeable of the radiation safety aspects of licensed activities. This may be demonstrated by observing the proposed AU perform licensed activities.
- Discussion and/or drill on emergency procedures.
- Retraining on areas found to be deficient in both the practical and didactic areas.

Duration of Training

Initial training for AUs and for Radiation Workers will have a minimum duration of two (2) hours.

Training of Ancillary Personnel

This category includes individuals whose assigned duties involve minimal exposure to radiation and/or radioactive material, and who in the course of their employment are likely to receive in a year an occupational dose of radiation less than 500 mrem DDE. Ancillary personnel may include clerical, housekeeping, security, customers' personnel or staff member working under the supervision and direction of the licensee's RSO or AU at the time licensed materials are possessed (incident to providing services) under this license, and other similar types of personnel whose duties may require them to work in the vicinity of radioactive material, whether they are escorted or not by authorized users.

These individuals will be provided with sufficient information about radiation hazards and the appropriate precautions they should take when working in the vicinity of licensed material. Schulz Electric will assess each individual's involvement with licensed material on a case-by-case basis and provide appropriate training.

Untrained ancillary personnel may have access to the Restricted Areas only if escorted by a trained Radiation Worker.

Classroom Course Instructor Qualifications

The person conducting the training will be a person who meets the qualifications for RSO or Authorized User on the license and is familiar with the licensee's program. The instructor who provides classroom training to individuals in the principles of radiation and radiation safety must have knowledge and understanding of these principles beyond those obtainable in a course similar to the one given to prospective authorized users. Individuals who provide instruction in the hands-on use of licensed materials must have training and experience that would qualify them to be authorized users, or should possess a thorough understanding of the licensee operations.

9. FACILITIES AND EQUIPMENT

Facilities

The Schulz Electric Co. building comprises approximately 43,500 ft^2, of which approximately 10,000 ft^2 is office space and 33,500 ft^2 is the shop area. Within the shop area, a 1,650-ft^2 area will be the restricted area, where licensed material will be received and decontaminated. See Attachment B-2. This area will be referred to hereafter as the Decontamination Area or Decon Area. One third of this space will be a radiologically clean transition, storage and dress area. A full-height, stick-built wall equipped with a rollup door and a personnel access door separates the dress area from the Decon Area. Decon work will take place in the balance of this space. The other walls in the Decontamination Area are of concrete block construction. All walls in this area will be sheathed in stainless steel up to a height of 20 feet. The outside long wall of this area is equipped with three roll-up doors, two in the potentially contaminated area and one in the clean transition area. These doors cannot be opened from the outside. Refer to the attached drawing (Attachment B). The Site Plan showing the location of the wastewater storage tank is Attachment C.

Periodically, the High Bay area (see Attachment B-1) of the unrestricted area will have to be utilized for disassembly of large contaminated components before they have been decontaminated. In these cases, the High Bay area will be prepared by using standard contamination control measures such as covering the floor with sheet material to prevent contamination of the floor. The component to be disassembled, packaged to contain any loose contamination, will be transported by forklift from the Decontamination Area roll-up door to the High Bay roll-up door. The High Bay rollup door will be closed before the packaging is removed from the component. After disassembly, the parts will be appropriately covered or contained to prevent the spread of contamination, then transported by forklift back to the Decontamination Area. The contamination control measures in the High Bay area will be removed and the area will be surveyed and decontaminated as necessary before regular (non-radiological) work is resumed.

Decontamination of components will always be done in the Decontamination Area. It will primarily be accomplished by a cryogenic cleaning system (CO_2 Blaster), although periodically, a sandblasting booth may be set up and used. Other methods of decontamination may also be employed if approved by the RSO.

Finally, a steam cleaning system may be utilized. This will be accomplished with the component sitting on a 10-foot by 10-foot steel grid on top of a catch tank approximately 8 inches deep. Condensate collected in the catch tank will be pumped through a mixed-resin bed to a holding tank. This water purification system is described in Section 11 of this application.

All decontamination work will be done with the roll-up doors closed.

Contaminated protective clothing will be laundered by UniTech Services Group, Inc., 295 Parker Street, Springfield, MA 01151 (MA License 03-56291), or by another appropriately licensed vendor. No on-site contaminated laundry facility is anticipated.

Radioactive waste produced will be stored in drums or other suitable containers within the Decontamination Area, or in other secure areas as designated by the RSO.

The Restricted Area is a secure area. Unauthorized entry into this area is unlikely. Each point of access into this area will be posted with the appropriate radiation warning sign. All licensed material will be used and stored in accordance with the requirements of 10 CFR 20.1801 and 1802, and in such a was as to keep radiation doses to workers and to the public below the regulatory limits and ALARA.

Personal Protective Equipment

The protective clothing required for those performing decontamination consists of: rubber gloves, coveralls, shoe covers and respirators. A step-off pad will be utilized at the exit from the Decon Area, and self-frisking will be required prior to exit.

10. RADIATION SAFETY PROGRAM.

Licensed activities will be conducted only by individuals qualified by training and experience to do so.

External Personal Monitoring

Personal dosimeter badges in the form of optically stimulated luminescence (OSL) badges will be provided by Landauer, which is NVLAP certified. Each AU and Radiation Worker will be provided with one of these badges. These badges will be exchanged on a quarterly basis.

We have done a prospective evaluation and determined that unmonitored individuals are not likely to receive, in one year, a radiation dose in excess of 10% of the allowable limits in 10 CFR Part 20.

Internal Monitoring

No adult radiation worker at Schulz Electric is likely to receive in 1 year an intake in excess of 10% of the applicable ALIs for ingestion and inhalation. Therefore no routine bioassay program will be established. Air sampling and respiratory protection programs will be in place to ensure that there will be limited internal dose to workers.

A backup bioassay program will be instituted to address incidents that might involve significant inhalations or ingestions of radioactive material.

Radiation Monitoring Instruments

Schulz Electric will possess the following radiation detectors:

Table 10-1. Instruments available at Schulz Electric.

Make/Model	Type	Purpose	Minimum Quantity
Ludlum Model 3 with Ludlum Model 44-9	Thin-window G-M count-rate meter	Personnel contamination monitoring; direct surface contamination monitoring	2
Ludlum Model 3 with Ludlum Model 44-6	Sidewall G-M detector	General area exposure rate monitoring; package surveys.	2
Ludlum Model 12 with Ludlum Model 43-5	Alpha scintillation detector	Personnel contamination monitoring; direct surface contamination monitoring	2
Ludlum Model 2929 with Ludlum 43-10-1	Scaler-ratemeter with dual phosphor detector	Evaluation of wipes and air samples	1
DF 14MA/S	Low flow rate air sampler	Area air sampling	2

DF 14MA/S or similar	Low flow rate air sampler	Discharge duct air sampling	1

These detectors will be calibrated annually for the radiation measured by a vendor licensed by NRC or by an Agreement State to perform such services. One such vendor is RSA Laboratories Division of Radiation Safety Associates, Inc., 21 Pendleton Drive, Hebron, CT 06237; NRC License 06-30007-01.

We reserve the right to upgrade our survey instruments as necessary without amending our license.

Ordering Licensed Material

Ordering licensed material and package receipt and opening will follow the model procedures in NUREG-1556, Vol. 18, Appendix K. Licensed material will be in the form of contaminated electrical components, to be possessed by Schulz Electric for purposes of decontamination, repair and return to the owner.

Safe Use of Radionuclides And Emergency Procedures

Prior to first receipt of licensed radioactive material under this license, Schulz Electric will develop, implement, and maintain operating and emergency procedures This radiation safety program will be in the form of a *Radiation Safety Manual.* It will be developed and written, and the contents included in initial AU and Radiation Worker training, prior to first receipt of licensed radioactive material. The *Manual* will be reviewed annually for completeness and accuracy by the RSO. The RSO may modify this *Manual* without amending the license so long as the changes do not degrade the quality of the program.

This *Radiation Safety Manual* will contain information and/or procedures on the following topics:

1. Organizational structure and responsibilities of
    a. RSO
    b. Aus
    c. Radiation Workers
    d. Ancillary personnel
2. Description of facilities and equipment
    a. Restricted area
    b. Unrestricted area
3. ALARA
4. Dose limits and personal dosimetry
5. Training
6. Personal monitoring
    a. Bioassay

7. Contamination control
    a. Use of PPE
        i. Step-off pads
        ii. Self-frisk
    b. Prevention pf personnel contamination
        i. Personnel decontamination procedures
    c. Receiving and unpackaging contaminated components
8. Posting areas
9. Labeling containers
10. Receipt of radioactive material
    a. Notify RSO
    b. Confirm shipping documentation
    c. Surveys
    d. Opening packages
    e. Records
11. Equipment decontamination procedures
    a. Cryogenic cleaning
    b. Steam cleaning
    c. Sand blasting
    d. Other methods
12. Transfer of equipment from the Decon Area to other work areas inside the Restricted Area
13. Storage of licensed material
14. Control, security, and accountability of licensed material
15. Air sampling
    a. Work areas
    b. Ventilation discharge
16. Respiratory protection
17. Use of the HEPA-filtered ventilation system
18. Contamination and radiation surveys
19. Methods for preventing the release of contaminated material and equipment to unrestricted areas
20. Security of licensed material
21. Radioactive waste
    a. Minimization
    b. Storage
    c. Disposal
    d. Holding tank sampling
    e. Sewer disposal
22. Shipping of refurbished equipment
    a. Packaging
    b. Radiological surveys
    c. Labeling
    d. Manifesting
23. Record keeping
    a. Dosimetry
    b. Training

c. Routine and special surveys
d. Receipt, transfer and disposal of licensed material
    i. Waste disposal records
e. Annual audits
f. Incidents
g. Decommissioning

24. Annual program audit
25. Emergency Procedures
    a. Spills
    b. Fire
    c. Explosion
    d. Notifications

Additionally, administrative procedures will be established for:

- Obtaining an agreement with customers outlining the responsibilities of both the customer and Schulz Electric, when performing service operations at a customer's facility
- Identifying and reporting to NRC defects and noncompliance as required by 10 CFR 21.21(a) of this chapter.
- Identifying and reporting to NRC defects and noncompliance (see Table 8.4 for a description of the typical incident notifications required by NRC regulations);

Radiation Surveys

Radiation surveys will be performed weekly when contaminated components are present in the Decon Area that are not packaged and labeled for transport. These surveys will be performed with a Sidewall G-M detector such as the Ludlum Model 44-6 with the Ludlum Model 3.

Removable Contamination Surveys

Wipe surveys will be performed:

- After each shipment has been decontaminated
- Weekly in the Decon Room while unpackaging, disassembly, decontamination and repackaging operations are in process.
- Monthly in the rest of the restricted area, where work on client parts has taken place during that month.
- Quarterly in areas outside the restricted area such as access ways to the restricted area, lavatories, coffee areas, lunch rooms and the like.
- As required when receiving or shipping packages of radioactive material.
- After equipment decontamination has been accomplished to ensure that the equipment meets the limits for movement into the repair shop.

Wipe surveys will be evaluated using a Ludlum Model 2929 with Ludlum 43-10-1. This is a phoswich detector capable of quantifying both alpha and beta emissions from a sample.

Surveys For Total Contamination

Direct contamination surveys will be performed on decontaminated equipment and components prior to their release from the Decon Area.

Release Criteria

When decontaminating components prior to release into the unrestricted shop areas, an attempt will be made to reduce contamination levels to as low as reasonably achievable (ALARA) levels. When removal of all contamination is not reasonable achievable, the release limits contained in Table 10-2 below will be used. Parts or components that meet these criteria can have work performed on them outside the Decon Room without any direct radiological controls applied.

Self-frisking will be performed by each individual who exits the potentially contaminated section of the Decon Room, after the protective clothing has been removed but before proceeding into the rest of the Restricted Area.

Direct surveys for contamination will be performed using a Ludlum Model 3 count-rate meter with a Ludlum Model 44-9 thin-window G-M detector and a Ludlum Model 12 with Ludlum Model 43-5 alpha scintillation detector. These instruments are also available for self-frisking.

Table 10-2. Criteria for release of equipment from the Decon Area.

NUCLIDES [A]	AVERAGE [BCF]	MAXIMUM [BDF]	REMOVABLE [AF]
U-nat, U-235, U-238, and Associated decay products	5,000 dpm α/100 cm^2	15,000 dpm α/100 cm^2	1,000 dpm α/100 cm^2
Transuranics, Ra-226, Ra-228,Th-230, Th-228, Pa-231, Ac-227, I-125, I-129	100 dpm/100 cm^2	300 dpm/100 cm^2	20 dpm/100 cm^2
Th-nat, Th-232, Sr-90, Ra-223, Ra-224, U-232, I-126, I-131, I-133	1000 dpm/100 cm^2	3000 dpm/100 cm^2	200 dpm/100 cm^2
Beta-gamma emitters (nuclides with decay modes other than alpha emission or spontaneous fission) except Sr-90 and others noted above	5000 dpm β-γ/100 cm^2	15,000 dpm β-γ /100 cm^2	1000 dpm β-γ/100 cm^2

[A] Where surface contamination by both alpha- and beta-gamma-emitting nuclides exists, the limits established for alpha- and beta-gamma-emitting nuclides should apply independently.

[B] As used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute observed by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.

[C] Measurements of average contaminant should not be averaged over more that 1 square meter. For objects of less surface area, the average should be derived for each such object.

[D] The maximum contamination level applies to an area of not more that 100 cm^2 .

[E] The amount of removable radioactive material per 100 cm^2 of surface area should be determined by wiping that area with dry filter or soft absorbent paper, applying moderate pressure, and assessing the amount of radioactive material on the wipe with an appropriate instrument of known efficiency. When removable contamination on objects of less surface area is determined, the pertinent levels should be reduced proportionally and the entire surface should be wiped.

[F] The average and maximum radiation levels associated with surface contamination resulting from beta-gamma emitters should not exceed 0.2 mrad/hr at 1 cm and 1.0 mrad/hr at 1 cm, respectively, measured through not more that 7 milligrams per square centimeter of total absorber.

Air Sampling

The only area in which airborne contamination might be generated is in the Decontamination Area, and this might only occur during dry decontamination activities. Sandblasting, the most aggressive of the anticipated dry decontamination methods, will be performed within a temporary tent. A HEPA filtration system will take suction on the Decon area and will discharge 85% of the filtered air back into the clean dress-up area. The remaining 15% of the filtered air will be discharged to the environment. This discharge stack will be equipped with an isokinetic probe, in-line sample filter, and air sampler to collect a representative sample of the discharged air. Air discharges will be held to less than the concentrations listed in 10 CFR 20 Appendix B, Table 2, Column 1. Records of all discharges of licensed material to air will be maintained.

This system will run at a minimum during sandblasting operations or when other dry decontamination methods are in use.

Air samples will be taken in the following areas at the specified frequencies:

1. Decon Area during sandblasting operations and when other dry decontamination methods are being employed;
2. Clean dress area once per shift when the HEPA filter/blower unit is operating and dry decontamination methods are being employed.

Contamination in Unrestricted Areas

The goal is to have no detectable contamination in the unrestricted areas of the facility. If contamination is found, the affected area will be decontaminated promptly and resurveyed. If it is not possible to get to background levels, the remaining amounts will be reduced to less than the levels listed in Table 10.2 and ALARA.

Survey Record Requirements

Each survey record will include the following:

- A diagram of the area or component surveyed or a list of items and equipment surveyed;
- Specific locations on the survey diagram where wipe tests were taken;
- Ambient radiation levels with appropriate units;
- Contamination levels with appropriate units;
- Make and model number of instruments used;
- Calibration due date for instruments used;
- Background levels;
- Name of the person making the evaluation and recording the results
- Survey date.

Personal Contamination Incidents

A record of contamination levels observed and procedures followed for incidents involving contamination of individuals will be made and retained. The record will include:

- Names of individuals involved,
- Description of work activities,
- Instruments used including calibration information
- Calculated dose,
- Probable causes (including root causes),
- Steps taken to reduce future incidents of contamination,
- Times and dates,
- Surveyor's signature.

Transportation

All licensed radioactive material shipped by the licensee, or presented to common carriers for shipment will be in accordance with the requirements of 10 CFR 71 and 49 CFR. ALARA concerns will be addressed prior to, during, and after transporting any radioactive material. Individuals who prepare packages for shipment will receive training in accordance with training required in 49 CFR 172, Subpart H.

11. Waste Management

Solid radioactive waste will not be treated or compacted on site. It will be stored in appropriately labeled containers for shipment and disposal through a licensed radioactive waste broker. All radioactive waste will be will be stored in accordance with the requirements of 10 CFR 20.1801 and 1802, and in such a was as to keep radiation doses to workers and to the public below the regulatory limits and ALARA.

Wastewater produced during steam cleaning and collected in the catch tank will be filtered or decanted to remove insoluble particles, then sent to the building wastewater-holding tank (Figure 11.1). This tank will be sampled periodically and sent to the building wastewater holding tank. See Attachment B-3 for the location of this underground tank. Water from this tank is eventually released to the municipal sanitary sewerage system. The concentration of radionuclides in this wastewater will be less than the average monthly concentration listed in 10 CFR 20 Appendix B Table C, with a sum-of-the-ratios test applied. If the water exceeds the sewer discharge concentration limits, the water will be recirculated through the filter and ion exchanger to further reduce the concentration of radionuclides. Total quantity of licensed material released into the sanitary sewerage system in a year will not exceed 1 Ci of all radioisotopes combined.

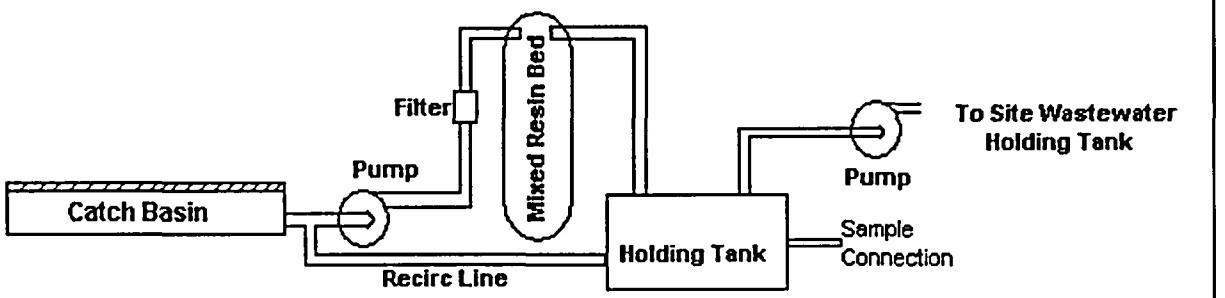


Figure 11.1. Conceptual drawing of the water treatment system in the Decon Room. Not to scale.

The location of the building wastewater-holding tank is indicated on the enclosed facility drawing.

Records of all waste disposals will be maintained.

12. LICENSE FEES

An application fee of $3,300 for a Category 3N (Services for other licensees) license is enclosed with this application.

List of Attachments

A Resumes of RSO and Authorized Users

B-1 Schulz Electric Building floor plan

B-2 Detail of the Restricted Area.

B-3 Detail of the building wastewater holding tank (underground).

ATTACHMENT A

Resumes of RSO and Authorized Users

JOHN J. DOUGHERTY
JackDougherty@schulzelectric.com

EDUCATION AND TRAINING

MBA, University of New Haven
New Haven, Connecticut
BSME, Bachelor of Science in Mechanical Engineering
New Jersey Institute of Technology

EXPERIENCE

Schulz Electric Company, New Haven, Connecticut Oct 98 - Present
Program Coordinator. Provide and maintain the necessary liaison between customer, Schulz National Sales, Schulz Production Department and Schulz QA Department on all quotations and purchase orders to all Nuclear Power Plants for Safety Related (10CFR50, Appendix B) and Environmentally Qualified electric motors. These are large electric motors (1 HP-7000 HP) (15 lbs-30 tons) found in very critical applications. Generated in-house quotations for all items supplied to any nuclear power station. Followed all nuclear jobs through production, inspection, testing and shipping to expedite when necessary and to insure that the customer was constantly aware of job status. Contracted and arranged for all dedicated freight carriers to and from all nuclear utilities and radiological decontamination centers. Coordinated and supported customer review of all necessary Schulz documentation. Currently the OSHA Director of Safety.

American Technology, Inc., Shelton, Connecticut Feb 92 – Oct 98
Product Design Engineer. Through the proficient use of AutoCAD (release 14), designed ultrasonic metal welding machines. Also designed the unique fixture required to hold and position the parts to be welded. Each welding machine sold required specific fixturing for its particular application and for its incorporation into a production line setup. Followed parts and assemblies through manufacture, inspection, assembly and test and successfully resolved issues, which invariably creep into any manufacturing system. My product responsibility included ultrasonic plastic tube sealers (for cosmetics, toothpaste, etc.) and ultrasonic metal tube sealers (for refrigeration). Developed a uniform format and a "plain English" style in a complete rewrite of all company operator manuals. Am also proficient in the use of MS Word, Excel and Access, as well as familiar with MS Power Point.

Peerless Nuclear Corporation, Stamford, Connecticut Apr 80 – Feb 02
Project Manager. Successfully provided the technical liaison between customers, sub contractors and in-house personnel in the areas of design, manufacture, assembly, testing, inspection (MIL-Q-9858), contractual issues, progress payments and schedules. Directed the efforts of draftsmen designers and electromechanical technicians. Am extensively familiar with the entire system of governmental military and federal specifications. Generated numerous procedures and drawings for the manufacture and

testing of mechanical parts. My product responsibility included sophisticated differential pressure detectors and resistance temperature detectors, which were used throughout the ships of the U.S. Navy.

United Nuclear Corporation, Uncasville, Connecticut Jun 75 – Apr 80
Senior Engineer. Chaired a company-wide materials review board that assured product was free of all contamination material. Participated in subcontractor quality system audits per MIL-Q-9858. Approved subcontractor manufacturing and inspection techniques. Prepared material requisitions from customer contracts, drawings, and specification. Company products were nuclear reactors for the U.S. Navy.

Newport News Shipbuilding & Dry Dock Company
Newport News, Virginia Jun 70 – Jun 75
Engineer. Successfully passed an in-house, 13 week, safety related, RAD-CON course. Supported the design of engine room equipment for nuclear submarines. Product responsibility included the four 22-ton, 16", double-poppet, Hull and Backup, Main Sea Water Valves for the lead ship of the Navy's High-Speed Attack (Los Angeles Class) submarines. Successfully worked with local manufacturing personnel as well as engineers in competitor shipyards on design problems.

Charles Eldredge
[redacted]

EDUCATION AND TRAINING

AA, Nuclear Technology, University of Phoenix
Radcon Maintenance A-661-0111, Radiological Controls Monitor School
Naval Nuclear Power School

EXPERIENCE

Schulz Electric Company, New Haven, Connecticut Jan 01 - Present
Electric Motor Mechanic/Field Service Technician. Perform troubleshooting, repair, overhaul, maintenance, installation and removal of AC and DC motors, pumps, and generators in shop and at various facilities, including documentation of work performed and parts required for repair. Qualified to perform Nuclear motor repairs in both decontamination facilities and Nuclear Power Plants.

SIMA, Mayport, FL March 98 – Jan 01
Rigging Shop Foreman/Crane Operations Supervisor. Scheduled, performed, and coordinated all machinery removal and installation, long and short term. Supervised over 20 personnel in the day-to-day operations of the Rigging Shop. Trained and certified shop technicians to operate Mobile Cranes.

USS South Carolina March 96 – Feb 98
Quality Assurance Supervisor/Nuclear Power Plant Operations Supervisor. Ensured adherence to Steam and Reactor Plant Cleanliness maintenance standards. Supervised the safe operation of all watch stations within the Propulsion Plant. Scheduled and performed mechanical maintenance on Primary and Secondary systems.

USS Puget Sound May 93 – Feb 96
Radiological Controls Shift Supervisor/Radiological Controls Monitor. Responsible for the safe completion of all Radiological work within the Nuclear Support Facility, including conducting pre-work briefings, issuance of personnel exposure monitoring, review of all surveys and documentation, and tracking of all Radiological work packages. Responsible for ensuring compliance to the Radiological Controls and Water Chemistry manuals while performing Radiological work, including perfoming radiological surveys, taking smears and documentation. Performance of weekly radiation and contamination surveys throughout the NSF, daily calibration of survey instruments, and documentation of Radioactive materials generated. Responsible for the transfer and storage, and surveying of radioactive liquid generated in the NSF. Decontamination of all anti-contamination clothing used within the NSF, the subsequent release surveys, and the removal of all waste generated. Ensured that all personnel entering and exiting control points maintain awareness of their exposure and all areas on survey maps where exposure may occur, tracking of all items entering the area, tracking of dosimetry, and ensuring no contamination spreads between boundaries.

Instrumental in the surveying, documentation, decontamination, and release of the entire NSF and associated equipment upon the USS Puget Sound's decommissioning.

USS Theodore Roosevelt March 90 – March 93
Maintenance Mechanic/Chief Machinery Operator. Performed corrective and preventive maintenance in the Propulsion Plant. Supervised and operated the Machinery Room, including Turbine Generators, Evaporator/Distilling Plants, Water Purification systems, and Air Compressors.

Nuecell Butler

EDUCATION AND TRAINING

Radiation Worker Training Duratek
Radiation Worker Training Unitech Facilities
Radiation Worker Training Three Rivers Community College
for Nuclear Engineering Technology
Radiation Protection Technology, Naval Nuclear Power School

EXPERIENCE

Schulz Electric Company, New Haven, Connecticut Oct 2000 - Present
Quality Assurance Engineer. Ensure that personnel under direction are suitably trained and qualified to perform the tasks to which they are assigned. Interface with production and engineering personnel for development of technical evaluations, procedures and instructions.

US Navy, 1990 – 1998
Qualified as a nuclear electrician aboard the SSBN George Bancroft (SSBN 643)
Supervised discharge valve maintenance during the required periodicities, which required set up of radiation/contamination boundaries and ensured that radiation/contamination rules and regulations were enforced. During spill/contamination engineering drills, set up boundaries and directing routes that led contaminated watch standers to the decontamination station with minimum contamination of the engineering spaces. Trained junior electricians about the locations of hot spots located in the reactor compartment once the SSBN 643 was in decommissioning status. Also ensured that no one in my division exceeded their quarterly dose rate therefore maintaining their eligibility to stand watch. Section leader during the removal of the reactor fuel cells which entailed training the watch section on radiological controls and ensuring that radiological controls were adhered to.

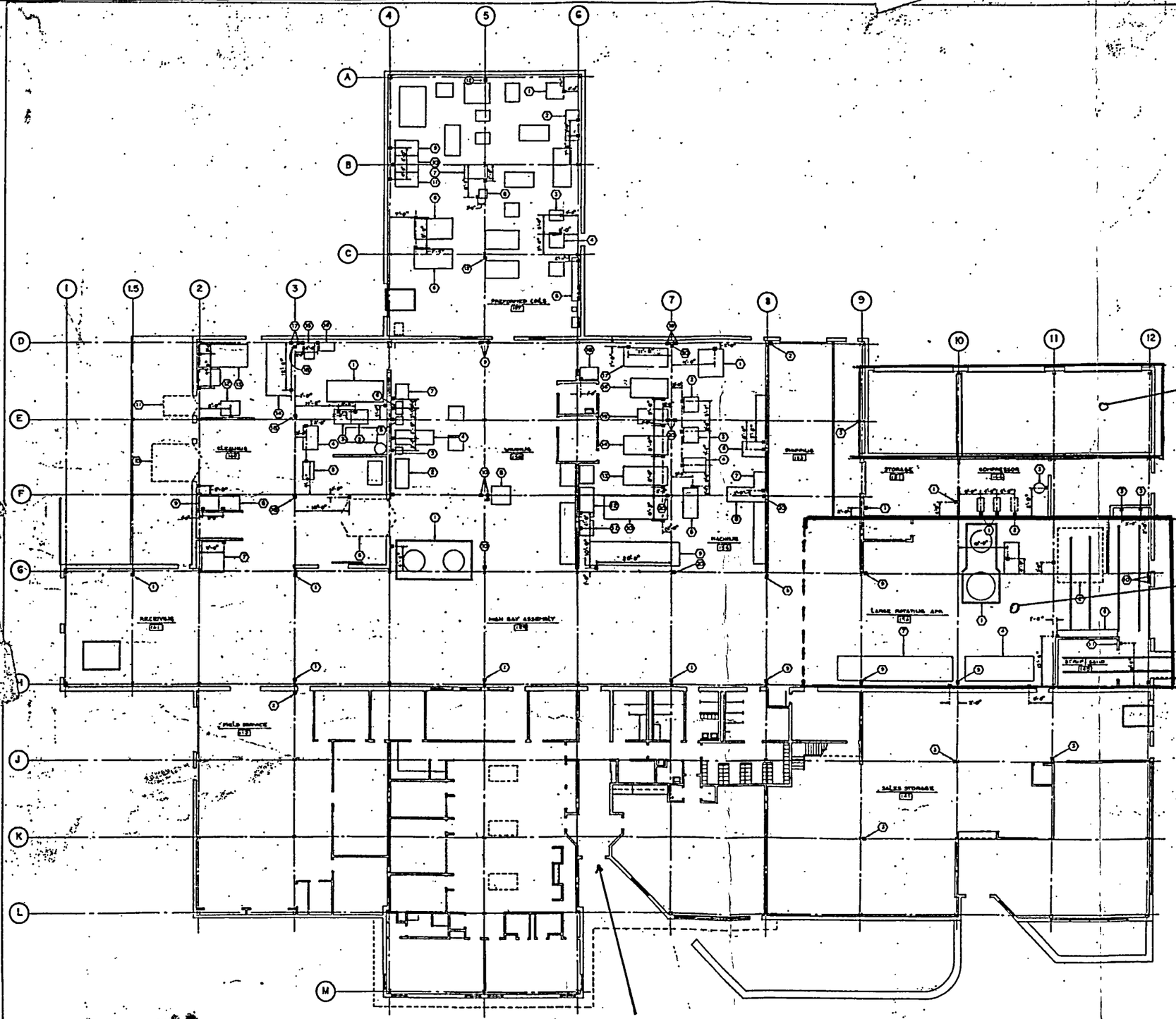
Attachment B

Schulz Electric Co. Building Floor Plan

B-1 Complete Floor Plan

B-2 Restricted Area Detail

B-3 Building Waste Water Storage Tank



OWNER'S EQUIPMENT ROUGHING PLAN

SCALE: 1/4"=1'-0"

Attachment B-1

B= CONDUIT STUB-UP

NOTE:
SEE ORIGINAL CONTRACT DRAWING EE-5 FOR EQUIPMENT LEGEND (1), (2), ETC.

ISSUES & REVISIONS

NO	DATE	DESCRIPTION
	7-21-86	ISSUED

CONSULTANTS

G. D. & D. INC.
CONSULTING ENGINEERS
HAMDEN, CONNECTICUT

SEAL

EDWARD SAAD & ASSOCIATES
ARCHITECTS

SCHULZ ELECTRIC CO.
MIDDLETOWN AVENUE
NEW HAVEN, CONNECTICUT

DATE: 7-21-86

SHEET TITLE:
OWNER'S EQUIPMENT ROUGHING PLAN

SCALE: NOTED

SHEET NO.
EER-1

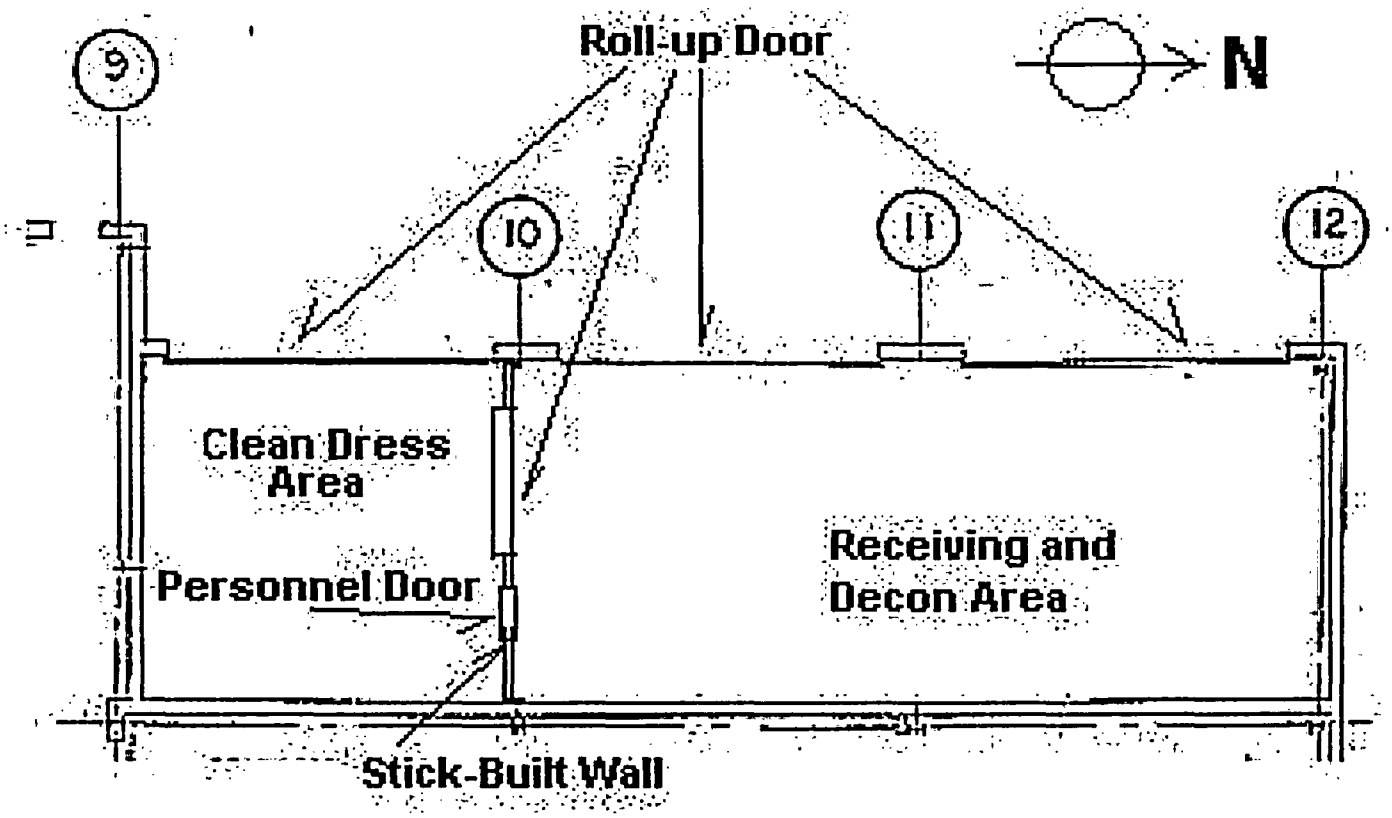


Figure B-2. Detail of the Restricted Area. 1,650-ft^2

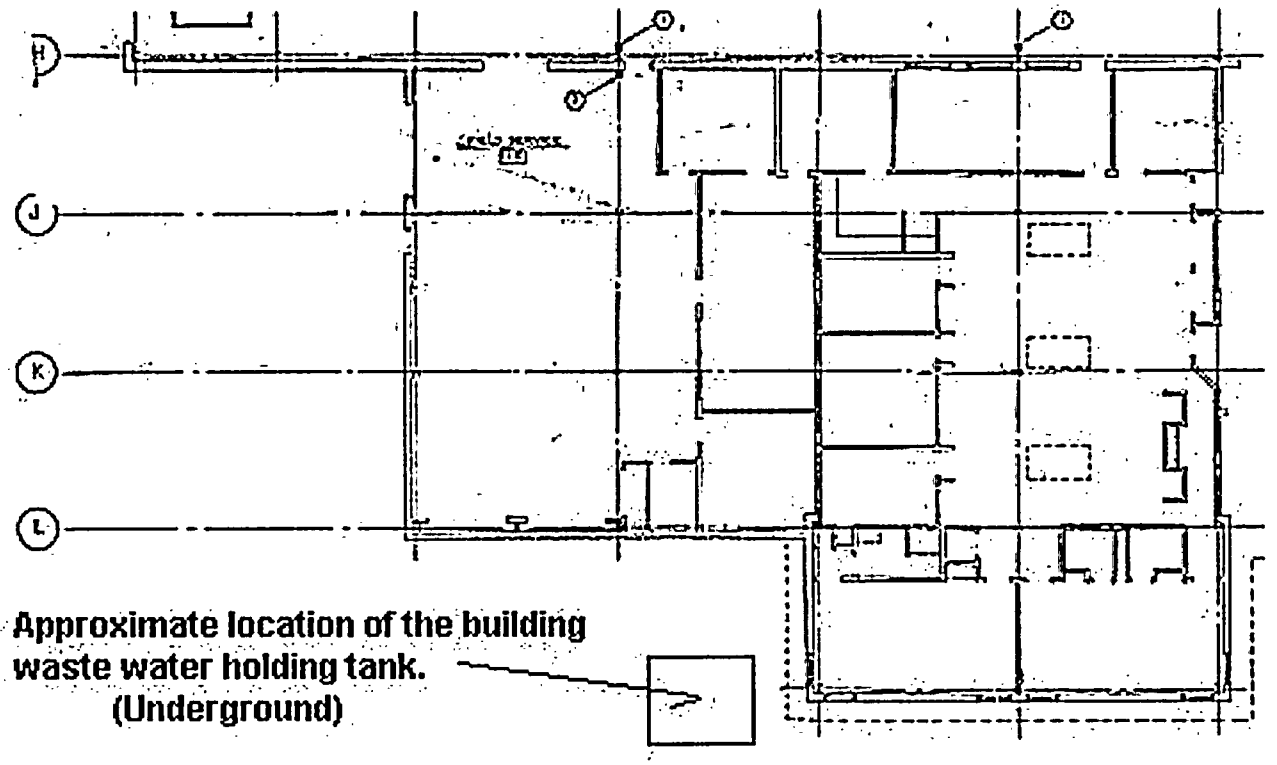


Figure B-3. Detail of the building wastewater holding tank (underground). Not to scale.

This is to acknowledge the receipt of your letter/application dated

4/27/2005, and to inform you that the initial processing which includes an administrative review has been performed.

New License Application (03036931

☒ There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

☐ Please provide to this office within 30 days of your receipt of this card

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A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 136933.
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.

NRC FORM 532 (RI)
(6-96)

Sincerely,
Licensing Assistance Team Leader

	:	(FOR LFMS USE)
	:	INFORMATION FROM LTS
BETWEEN:	:	----------
	:	
License Fee Management Branch, ARM	:	Program Code: 03219
and	:	Status Code: 3
Regional Licensing Sections	:	Fee Category: _____
	:	Exp. Date: 0
	:	Fee Comments: _____
	:	Decom Fin Assur Reqd: _

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED
   Applicant/Licensee: SCHULZ ELECTRIC COMPANY
   Received Date: 20050429
   Docket No: 3036931
   Control No.: 136933
   License No.: 06-31045-01
   Action Type: New Licensee

2. FEE ATTACHED
   Amount: $3,300.00
   Check No.: 22118

3. COMMENTS

Signed Rebecca Jurnod
Date 4/29/2005

B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered /__/)

1. Fee Category and Amount: _____

2. Correct Fee Paid. Application may be processed for:
   Amendment _____
   Renewal _____
   License _____

3. OTHER _____
   _____

Signed _____
Date _____